

## PUBLICATIONS

### AISC Releases New Edition of *Seismic Design Manual*

Designers and fabricators can now access the most comprehensive information for performance-based seismic design with the 3rd Edition AISC *Seismic Design Manual*, now available at [www.aisc.org/publications](http://www.aisc.org/publications). This new edition of the manual has been expanded with additional information and design aids to help engineers navigate the design of steel and composite seismic resisting systems (SFRS). It includes discussion and practical guidance on applying the latest versions of AISC's core standards—the 2016 *Specification for Structural Steel Buildings* (ANSI/AISC 360), 2016 *Seismic Provisions for Structural Steel Buildings* (ANSI/AISC 341), 2016 *Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications* (ANSI/AISC 358) and the 15th Edition *Steel Construction Manual*. Produced as a high-quality, vinyl softcover, the new edition is now available at a new, lower price of \$100 for members and \$200 for non-members.

“The new AISC *Seismic Design Manual* provides engineers with useful tools, detailed examples and extensive explanation to facilitate the design of structures complying with the AISC 341 *Seismic Provisions*,” explained Rafael Sabelli, chair of the AISC seismic manual subcommittee and director of seismic design at Walter P Moore. “AISC brought together a team of dedicated volunteers, including experts in structural and connection design and developers of the seismic provisions, to develop this manual and ensure its utility for practicing engineers.”

The new edition contains more than 60 examples that demonstrate how to design the key members and connections for the most commonly used SFRS. The examples go beyond just seismic-specific checks to also demonstrate the full design, limit state by limit state. The manual is a valuable resource not only for those who design in the seismic world, but for anyone interested in learning the procedures used for designing members, connections and systems.

“One of the goals of the AISC *Seismic Design Manual* is to be a valuable resource for all building design engineers, including

those who infrequently do seismic design,” noted Mark Holland, chairman of the AISC committee on manuals and chief engineer at Paxton and Vierling Steel Co. “Users will find it well organized, complete, accurate and a very useful tool.”

Some of the major updates in the new edition include:

- Part 1 now includes a sample set of plan and detail drawings showing how the designer can indicate the seismic force-resisting system to the steel fabricator and erector. The tables in this part also incorporate the latest in larger rolled steel shapes and high-strength steel grades as they are permitted in various seismic applications.
- Design examples have been developed in Part 4 for special moment frame (SMF) systems to reflect updates to the *Seismic Provisions*. These examples provide guidance for bracing a beam in a moment frame, designing a bolted flange plate connection and designing a special truss moment frame system.
- The new design examples in Part 5 address multi-tiered ordinary concentric braced frames and connection design for buckling-restrained braced frames. The *Seismic Provisions* updates to ordinary and special composite shear wall systems are reflected in Part 7.
- Part 9 of the manual contains the *Seismic Provisions* and *Prequalified Connections*. These standards represent the latest innovations in engineering research, design and construction of steel buildings in seismic regions. In the 2016 *Seismic Provisions*, the inclusion of provisions for multi-tiered braced frames addresses a common seismic system for single-story and multi-story industrial building structures. Allowing the use of partial-joint-penetration (PJP) groove welds in the column splices of SMFs reduces the efforts of both fabrication and erection during construction of these seismic systems. Further clarifications in the requirements for continuity plates and web doubler plates in SMF panel zones reduce material congestion and minimize the cost of this reinforcement where it is required.

“This is a resource that all design engineers should have on their desk,” added Cynthia Duncan, AISC director of engineering. “There is a chapter on  $R = 3$  systems, as well as coverage of most types of steel seismic-force resisting systems included in the *Seismic Provisions*. There are more than 800 pages of comprehensive design examples demonstrating how to apply the provisions to the various systems from analysis to member and connection design.”

The 2016 *Seismic Provisions* and *Prequalified Connections* documents, along with all other AISC standards, are available for free download at [www.aisc.org/specifications](http://www.aisc.org/specifications).

Furthermore, designers can visit the technical resources page that is specific to seismic applications at [www.aisc.org/technical-resources/seismic](http://www.aisc.org/technical-resources/seismic). A number of other useful resources that supplement the use of the *Seismic Design Manual* and the *Steel Construction Manual* are available at [www.aisc.org/publications](http://www.aisc.org/publications). AISC also posts archival NASCC conference proceedings, many of which are on the topic of seismic design, at [www.aisc.org/educationarchives](http://www.aisc.org/educationarchives).



## People and Companies

• **DeSimone Consulting Engineers** has opened a new office in Houston. The expansion will position the firm to better serve both existing clients and an expanding portfolio of clients in Texas and the Southwest. In other DeSimone news, **Luis Ramirez** has been promoted to principal and **Michael Schwarz** has been promoted to senior associate, both in the firm's structural design practice.

• Earlier this year, the **SmithGroup Equity, Diversity and Inclusion (EDI) Scholarship Program** was established to support and mentor students from historically underrepresented demographics in the disciplines of architecture, interior design, planning, landscape architecture and engineering. The program's mission is to provide these students with the opportunity to attain their professional goals while advancing the AEC industry and improving the built environment. The scholarship winners were selected from a pool of candidates who spent their summers as interns in SmithGroup offices around the United States. Each winner will receive a one-time award of \$6,000 to offset their tuition costs. The engineering and architecture scholarship recipients are as follows:

**Lorena De Almeida** is a senior at Calvin College working towards a BS in engineering, with a civil and environmental concentration. She will graduate in May 2019. Lorena spent her summer at SmithGroup's Madison office.

**Qudus Lawal** is a senior at the University of Illinois at Chicago and intends to graduate in December with a BS in civil engineering. Qudus interned in the Chicago office.

**Everritt Phillips** is a senior at the University of Michigan and will earn his BS in architecture in May 2019. Everritt served as an intern in SmithGroup's Detroit office.

## MEMBERSHIP

### AISC Board Approves New Full Members

Akins Manufacturing, LLC	Albuquerque, N.M.
Apex Metal Fabricating and Machine Co.	Toledo, Ohio
Clark Industrial, Inc.	Missoula, Mont.
E & Y General Construction Group Corp.	Staten Island, N.Y.
General Foundries, Inc.	North Brunswick, N.J.
Hambric Steel and Fabricators, Inc.	Albany, Ga.
KMA Steel, LLC	Albia, Iowa
Madlyn Metal Fab, LLC dba JT Metal Fab	Vancouver, Wash.
Mageba USA, LLC	Pottstown, Pa.
McAlister Welding and Fabricating, Inc.	Glassboro, N.J.
Mesa Fab Inc.	Pueblo, Colo.
Mike's Precision Welding, Inc.	Temecula, Calif.
Modern Shade, LLC	Austin, Texas
RJ Russo, LLC	Phoenix, Ariz.
Simpson Strong-Tie Co., Inc.	Riverside, Calif.
Southern Steel Fabricators, Inc.	Monroe, La.
Staley Steel, LLC	Pilot Point, Texas
Tuscarora Rigging, Inc.	Huntingdon, Pa.
Valley Mechanical, Inc.	Rossville, Ga.

## UNIVERSITIES

### University of Illinois Engineers Without Borders Chapter to Build Bridge in Malawi

The University of Illinois Urbana-Champaign student chapter of Engineers Without Borders, a nonprofit that designs infrastructures across the world in disenfranchised communities, is currently working on a project in Malawi.

UIUC's project began in 2014 with the goal of becoming the chapter's first structural project. The group is designing a footbridge over the Lunzu River in Chilaweni, Malawi, to allow community members to safely travel to and from their community.

Over the past four years, the student chapters have spent time surveying Malawi, collecting data and meeting with

the community to decide which area most needed their design expertise. The team is now ready to design a steel footbridge, with plans to erect it next summer.

The chapter is looking for a variety of sponsors to raise the remaining \$37,000 of its \$40,000 construction budget. ARCO/Murray, Baldrige and Associates Structural Engineering, Inc., and W.E. O'Neil Construction have already donated. The team is also looking for more engineers to volunteer at least an hour a week to work with the students on the design. If you're interested in sponsoring or volunteering, contact [ewb.uiuc.malawi@gmail.com](mailto:ewb.uiuc.malawi@gmail.com).

# news

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## CONSTRUCTION MARKET

### SEAA Endorses Policies to Restore America's Workforce Development System

The Steel Erectors Association of America (SEAA) recently joined other industry stakeholders in publicly supporting seven policy recommendations to make the United States the world leader in workforce development.

Developed from the research report *Restoring the Dignity of Work: Transforming the U.S. Workforce Development System into a World Leader*, the seven policies are:

1. Establish and strengthen awareness of U.S. career opportunities.
2. Revitalize our work-based learning programs.
3. Measure performance and involvement in workforce devel-

opment when awarding construction contracts.

4. Redefine how we measure the quality of our nation's secondary education system.
5. Increase participation of underrepresented groups in career and technical education through career and college readiness.
6. Establish and expand collaboration between industry, education and government.
7. Develop more balanced funding among post-secondary, technical and higher education.

The report can be viewed at [www.nccer.org](http://www.nccer.org).

## AISC

### AISC Unveils New Tagline and Membership Logos

For more than a decade, AISC has proudly proclaimed, "There's Always a Solution in Steel!" Recently, AISC introduced a new tagline: "Smarter. Stronger. Steel." At the same time, the organization has rolled out a new, cleaner look to its printed materials, including modernized, simplified versions of AISC logos for full, associate and professional members. AISC has a long, committed history of service to the structural steel industry,

and the new tagline and logos build upon this foundation to focus and strengthen AISC's and its members' communications with the industry.

AISC members can access the logos at [www.aisc.org/membership](http://www.aisc.org/membership) under Member Resources and are encouraged to use them for their marketing and communications materials.