

IN MEMORIAM

Dorothy Owen, First Female AISC Board Member, Dies at 81

Dorothy “Dottie” Anne Greene Owen of Columbia, S.C., passed away recently at the age of 81. She served in leadership roles on various industry boards, including Colonial Cos., Inc., the state and national boards of BB&T, Commercial Metals Co. and South Carolina State Ports Authority. She was the first woman to serve on AISC’s Board of Directors (from 1982 to 1986).

Owen was born on December 16, 1934, in Blowing Rock, N.C. An alumna of Furman University, she went on to earn a master’s degree from Appalachian State University. Early in her career, she worked in higher education, teaching at both Anderson College and Wake Forest University. Later, her career path led to administration roles in the regional steel industry. She met her husband, Franklyn Deming Owen, Jr., the second generation of leadership for Owen Steel Co., Inc. (an AISC member and certified fabricator), while working for U.S. Steel.

When Franklyn died in 1982, Dorothy became the company’s chairwoman of

the board—including its 10 subsidiaries in South Carolina, Georgia, Florida and Virginia—and served in this role until 1994. She also served on many community and higher education boards and received several honors, including Life Membership-University of South Carolina Alumni Association, Woman of Valor from the Diabetes Association, the Girl Scouts Women of Distinction award and the YWCA 1994 Tribute to Women in Industry Award, and was twice recognized in *Working Woman* magazine as one of the “Top 50 U.S. Women in Business.”

She is survived by three children and four grandchildren.



IN MEMORIAM

Robert Beauchamp, Past NISD President, Dies

Robert Beauchamp, a prolific contributor to AISC and a past president of the National Institute of Steel Detailing (NISD), passed away this summer at the age of 65.

Beauchamp was born in Montreal, Quebec, Canada, where he lived his entire life. After graduating from high school in the late 1960s, he found his way into the



world of steel detailing, attending a trade school where he studied architectural and structural detailing. He gained most of his experience working for steel

fabrication shops in the Montreal area, until he founded his first company, R.B. Designs, in 1976. He started exploring the U.S. market in 1979 and never stopped. He was most recently president of Datadraft Structural Detailing Systems, Inc., an AISC member.

In addition to AISC, Beauchamp was an enthusiastic supporter of all steel-related organizations, including the New England Steel Detailers Association (NESDA) and the Canadian Institute of Steel Construction (CISC). He served as NISD’s president from 2007 to 2011 and previously served as vice president and secretary/treasurer. He was active on NISD’s Guidelines and NASCC Committees, founded its Quebec Chapter and conceptualized its website.

He is survived by four children and one grandchild.

People and Firms

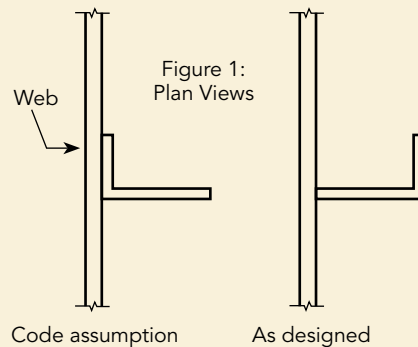
• The **Steel Erectors Association of America (SEAA)** elected four new officers to its Board of Directors this summer. These individuals will serve two-year terms, concluding in 2018. **David Schulz**, president of **Schulz Iron Works, Inc.**, has been elected vice president—industry representative. In 2017, Schulz will become president elect, in line to succeed current SEAA president, **Josh Cilley**. **Carrie Sopuch-Gulajan**, president of **Construction Insurance Agency, Inc.**, has been elected vice president, associate representative. Remaining in the position of treasurer is **Geoffrey Kress**, vice president of **Gardner-Watson Decking, Inc.**, and president of **G&G Distributors, Inc.** **Chris Legnon**, a senior sales manager at AISC member **Cooper Steel Fabricators, Inc.**, was named to the position of secretary.

• **McLaren Engineering Group**, a full-service firm with eight engineering divisions, announced the promotion of **Jeremy D. Billig, PE**, to vice president and New York City regional director. With over a decade of experience in structural analysis and design, inspections and renovations, Billig has managed a number of large, complex projects since joining the company and holds a Master of Engineering degree in structural engineering from Cornell University.

Blind Spot

I was disappointed in the June Steel Interchange response to the engineer in training (EIT) looking for more guidance, so that he is not just blindly plugging numbers into equations (visit www.modernsteel.com to see the question and response). While your response was likely driven in part by legal considerations, I believe it sends the wrong message. No, he is not allowed to design without supervision, but that is no excuse for ignorance; even good engineers get it wrong. On one of my first jobs, I was told to design the webs on a large bidirectional plate girder slab (15 ft deep \times 240 ft \times 240 ft with webs at about 30 ft centers both ways and with angles for the vertical stiffeners) using an equivalent of AASHTO *Bridge Design Code* (the formulae were identical). I did this, but like the EIT, felt uncomfortable as I did not *really* understand what I was doing, despite a plate buckling course at university. Tracking down the background papers, the code formulae were based on the angles being placed with one leg adjacent to the web so it could be riveted, and not the way we

were using them with the toe welded to the web, a common ship building practice (Figure 1). Very different cases from a buckling perspective.



This is not an isolated example. We all have blind spots, and we don't always realize they are areas of weakness. Fortunately, two factors have tended to limit the number of failures:

1. Most structures never see their design loads.
2. As one engineer said, "Steel is smarter than most of its designers."

Will this continue? Materials are getting stronger, structures and codes more complex, budgets and schedules more compressed, analysis more sophisticated

and designs more automated. Buckling and fatigue, areas where steel tends to be less forgiving and many engineers are weak, are becoming more important than ever.

Writing clear, unambiguous codes and guides is very difficult. There are many trade-offs between accuracy and ease of use. Easy-to-use codes are usually safer because a more conservative approach is commonly taken and misinterpretations tend to be fewer, but they can result in less efficient structures in some cases.

—*Ralph Watts, PEng, PE*

A Bridge to the Working World

I read your August article on the National Student Bridge Design Competition, "Proven in Provo" (available at www.modernsteel.com), and I thought you would find it interesting that two of our young engineers—a project manager and an estimator—were previously captains of the steel bridge team at Université Laval. They now work at Supermétal and are both great assets!

—*Sylvie Boulanger, PEng, PhD*
Vice President, Technical Marketing
Supermétal Structures, Inc.

SEISMIC NEWS

SMDI and AISC Help Establish Steel Diaphragm Initiative

The Steel Market Development Institute, a business unit of the American Iron and Steel Institute (AISI), and AISC have partnered together with several industry organizations and academic institutions to establish the Steel Diaphragm Innovation Initiative (SDII), a multi-year effort to advance the seismic performance of steel floor and roof diaphragms used in structural steel buildings through better understanding of diaphragm-structure interaction, innovative design approaches and new 3D modeling tools that provide enhanced capabilities to designers.

SDII investors include SMDI, AISC, the Steel Deck Institute (SDI), the Steel Joist Institute (SJI) and the Metal Building Manufacturers Association (MBMA). Additional partners in SDII include the Cold-Formed Steel Research Consortium

(CFSRC), which is comprised of researchers and engineers from The Johns Hopkins University, Virginia Tech, Northeastern University, and Walter P. Moore and Associates. The research team was awarded a three-year grant from the National Science Foundation commencing September 2016. SDII will be managed by the Cold-Formed Steel Research Consortium.

Benjamin Schafer, PE, PhD, director of CFSRC, announced that a new website, www.steeli.org, has been launched to keep the design community informed of advancements resulting from the research, as well as to provide an educational tool for those interested in learning more about the use and design of steel deck diaphragms.

The new website introduces engineers and other design professionals to the seismic design of steel deck,

provides web resources for steel deck diaphragms, discusses the past performance of tested steel deck diaphragms and explores challenges in simplified models for steel deck.

CENTURY CLUB UPDATE

Here are three more AISC member fabricators over 100 years old:

- ▶ Drake-Williams Steel, Omaha
- ▶ Western Structural Company, Moline, Ill.
- ▶ W&WIAFCO Steel, Little Rock, Ark.

If you know of another 100-year-old fabricator, please contact Carly Hurd, AISC's director of membership, at hurd@aisc.org.

MEMBER NEWS

High Steel Structures Encourages Kids to Explore Bridge Building

AISC member and certified fabricator High Steel Structures in Lancaster, Pa., recently hosted a five-day camp at the Lancaster Science Factory for kids in grades 4 through 8 to explore bridge design and construction. The event provided hands-on experiences with field-related technologies and activities like welding and bolting, as well as a tour of High Steel's facility.

"I've learned how to make bridges more stable and durable, and how to

make arches," said camper Ava Ludewig. "It's really interesting because it's really hands-on, and you're doing a lot of stuff you don't get to do every day."

Ronnie Medlock, vice president of technical services at High Steel Structures, explained, "In order for kids to really get the experience of bridge building they need to see it, touch it and feel it. The technology involved such as welding, the scale of what we do with steel, it's not something you

can appreciate in terms of looking at just pictures. Touching the steel, seeing the giant girders and the welding makes them gain an appreciation for those technologies and techniques and also generates interest. Of course, bridges are a part of our community, and we want them to understand and appreciate the bridges in their community."

Watch the story, reported by Blue-Ridge 11, at <https://youtu.be/eVTMh2bxTjY>.

RESEARCH

New Research Aims to Advance Composite Shear Walls

AISC is working with the Charles Pankow Foundation and other academic and industry partners on a three-year research project to advance the state of the art for concrete-filled composite plate shear walls (CF-CPSWs). The collaborative project aims to generate

experimental data and numerical models and lead to design guidelines for individual and coupled CF-CPSW core wall structures as a way to optimize the design and speed the construction schedule of high-rise buildings.

The principal investigator for the

\$600,000 research project is Amit Varma of Purdue University. Additional partners include Ron Klemencic of Magnusson Klemencic Associates, Jim Malley of Degenkolb Engineers, Ron Hamburger of Simpson Gumpertz and Heger and Peter Timler of Supreme Group.