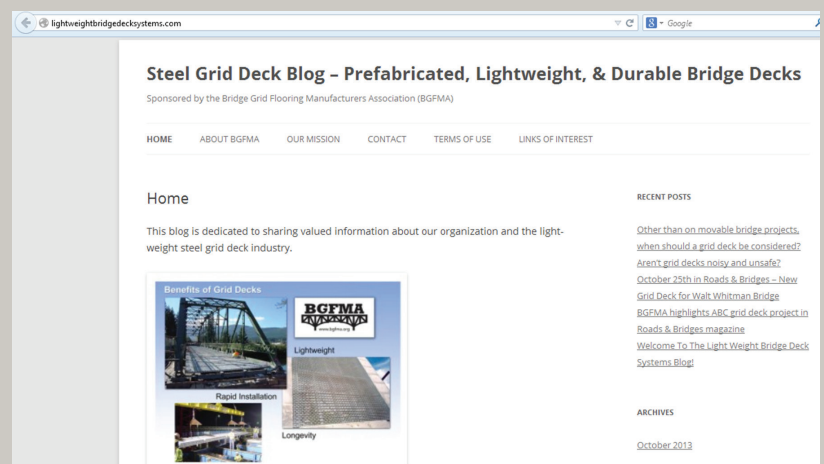


Survey/iPad Winner

First of all, we would like to extend a big thank you to everyone who visited the BGFMA website and completed our short online survey in March; your time and feedback is appreciated. Also, congratulations to **Michael McDonagh** of **Parsons Brinckerhoff** who was the lucky winner in our iPad giveaway.

BGFMA Blog

We recently launched the blog website lightweightbridgedecksystems.com, and encourage everyone with general grid deck inquiries to check out the new site. Here you can search previously posted topics, including questions and answers that may provide the information you are looking for. You can also comment on any of the existing posts so that we can respond to the thread with additional information on the topic if needed. Our goal is to continue to grow this blog over the next year, so the more dialog we receive from users, the quicker it will develop as a useful tool for everyone.



Why Specify BGFMA Fabricators?

We would like to address one question that we often get from potential grid users: “**why is it important to purchase grid deck systems from a BGFMA member company?**” The answer is simple: to ensure that a project goes smoothly, with quality products delivered on time and meeting all demands of the project and customer. The BGFMA has policies in place that require member fabricators to meet many qualification standards, including experience, quality control and on-time delivery. Fabricating members are also required to own/operate an AISC certified manufacturing facility. In addition, member companies employ individuals with decades of industry experience designing, detailing and manufacturing grid deck systems which often plays a key role in making sure that projects are successful.

2014 ASCE/AISC National Student Steel Bridge Competition

The **BGFMA** was once again a proud sponsor of the **National Student Steel Bridge Competition (NSSBC)**, hosted this year at the University of Akron.

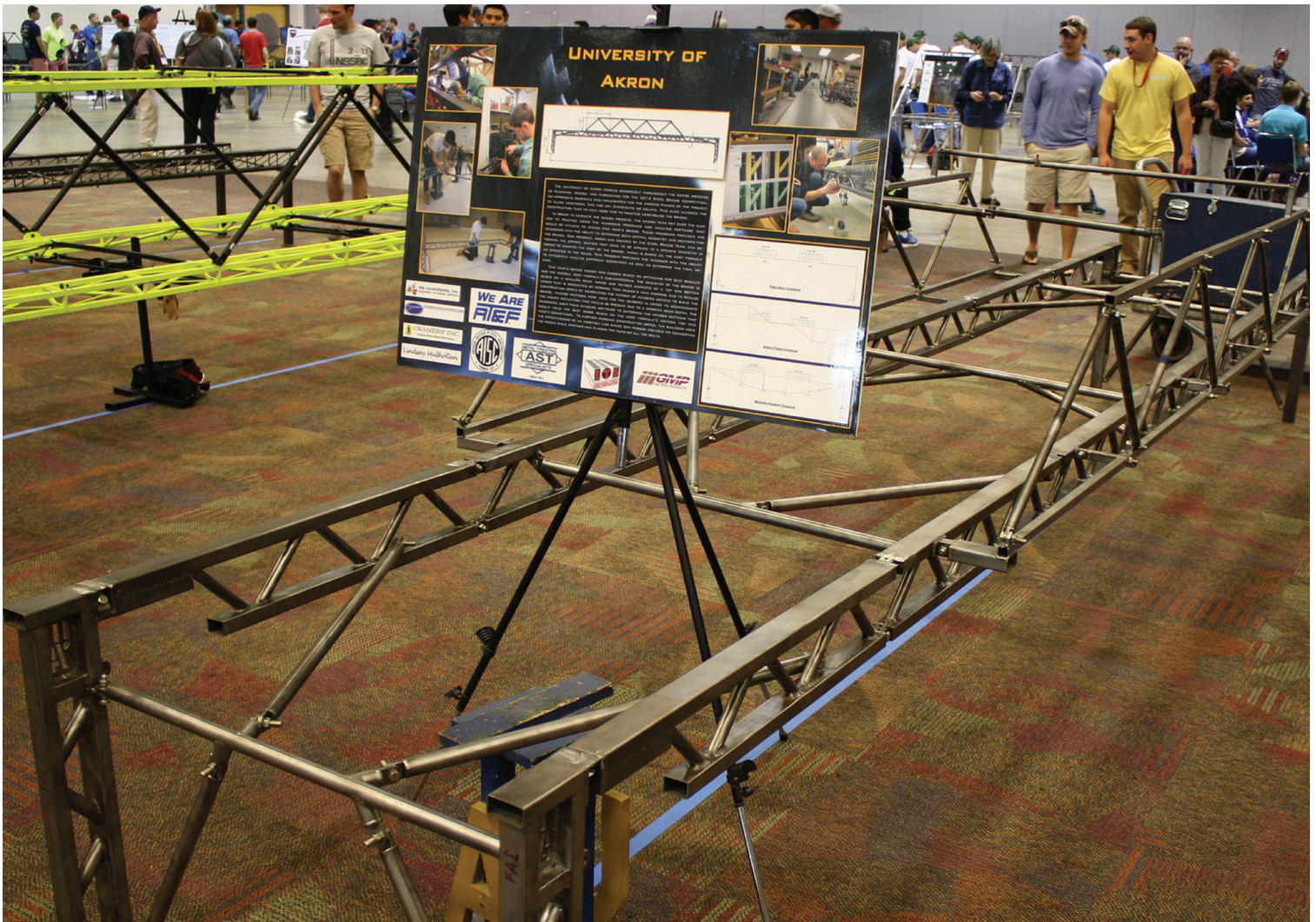
Forty-seven universities from across the United States, Mexico, and Canada participated in the competition, which took place on May 23-24th. (continued next page)

2014 ASCE/AISC National Student Steel Bridge Competition



2014 NSSBC Champions - University of California, Davis

Only the top few teams from each regional conference were invited to take part in national competition, so great job to all of the teams that qualified. Special congratulations to the student team from the **University of California, Davis**, who was crowned the overall winner.



New Memorial Lift Bridge Utilizes Lightweight Exodermic® Deck

The original **Memorial Bridge**, a through-truss lift bridge that carried US 1 over the Piscataqua River between Portsmouth, NH and Kittery, ME, was opened in 1923 in dedication to the sailors and soldiers of New Hampshire who participated in World War I. The bridge served commuters for 88 years before it was finally closed to vehicular traffic in 2011, due to structural issues that were common to bridges of this age. It was determined that the bridge was beyond a state of economical repair, and the replacement project began in 2013.

Bridge replacement was carried out through a design-build contract with the selected team of **Archer Western** and **HNTB** heading up the project for the **New Hampshire DOT** and **Maine DOT**.

The new bridge design boasts a similar look to the old structure, yet incorporates many modern engineering innovations and efficiencies, such as a lightweight and durable **Exodermic®** deck. The strength of the Exodermic® system also allowed the design engineers to span the deck across floorbeams, eliminating the need for stringers which saved additional weight and cost.



Caption Needed?

Not only was weight savings critical because it's a movable span, but also due to the innovative construction method used to deliver the project. The **10,000 square foot lift span** was completely fabricated offsite and floated into place to accelerate the project, which was completed one month ahead of the 19 month pledged delivery schedule. The modern design and creative delivery method shortened the construction schedule considerably, as typical projects of this magnitude and complexity often take months longer to complete.

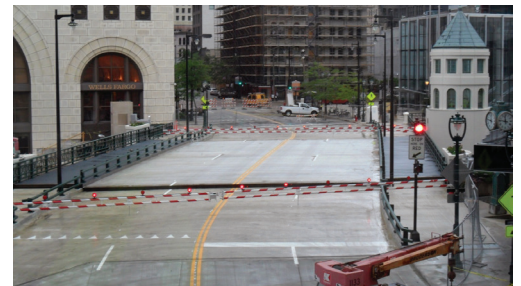
Exodermic® Deck System Revitalizes Two Downtown Milwaukee Bridges

In 2012, the City of **Milwaukee** and the **Wisconsin Department of Transportation** completed the rehabilitation of Wisconsin Avenue over the Milwaukee River and the reconstruction of Juneau Avenue over the Milwaukee River. Both bridges now have vertical lift center spans operated by four hydraulic cylinders.



Juneau Avenue Bridge

The **Wisconsin Avenue lift bridge** was originally constructed in 1975 and due to accelerated corrosion from deicing salts, the structure was downgraded to a sufficiency rating of 49. The rehabilitation project corrected deficiencies to raise the sufficiency rating to over 80 and extend the life of the bridge by at least 10 years. On the other hand, the **Juneau Avenue single span, double leaf bascule**, originally constructed in 1953 and now with a sufficiency rating of two, was removed and replaced.

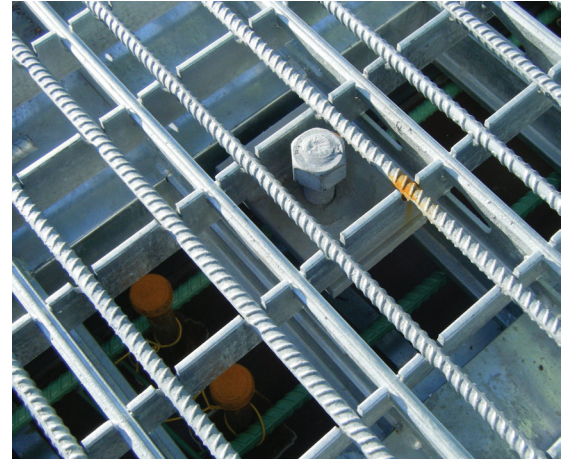


Wisconsin Avenue Bridge

An **Exodermic®** deck was strategically selected for both structures because of the weight saving advantage. For the reconstructed Juneau Avenue structure, the lighter deck translated to savings in structural steel, the required hydraulic cylinder capacity, and substructure size. For the Wisconsin Avenue structure, in addition to the savings in hydraulics, the weight savings permitted the structure to be rehabilitated, rather than a more costly option of replacement. For both structures, the deck choice provides a closed riding system that is quiet, protects the structure, and is friendly to bicycles and pedestrians alike.

Grid Facts

We are often asked how grid panels are set and leveled on the supporting steel stringers or floorbeams before concrete is placed (or closure pours are made for precast). It is actually very simple; a majority of grid deck panels are detailed and fabricated with **built-in leveling devices** within the grid panels. These leveling devices consist of a threaded nut or plate attached to the steel grid deck, with a leveling bolt threaded through, extending down to the top of the steel supports which can be turned in or out to raise and lower the panel to the proper elevation. These leveling devices are rigid enough to support the weight of the steel grid and concrete provided they are located properly. For typical cast-in-place grid deck panels up to 9-ft wide, we recommend at least three (3) leveling devices per supporting beam per panel, located at the first interior main bar and on a bar at, or close to the centerline of the panel. The detail would be similar for standard precast panels less than 9-ft wide, except that only two leveling devices would be required per panel per supporting beam (centerline device can be omitted). Please note, when moving the panels horizontally in place, it is important to use a crane to keep the full dead load off of the leveling bolt to avoid bending or breaking the device.



Grid Deck Panel Leveling Device

The topic of leveling devices will be featured in an upcoming BGFMA Techline bulletin, but if you are looking for additional information now, feel free to contact us at bgfma@bgfma.org.

More Information

If you would like to receive more information about the features and benefits of grid deck systems, please contact us at **1-877-257-5499** or bgfma@bgfma.org. We are also available to make presentations at your office and can offer continuing education credits for professional engineers as a registered provider in New York and Florida.

BGFMA Tradeshow Schedule

Please visit **BGFMA members** at our exhibit booth during the following upcoming bridge engineering conferences:

Heavy Movable Structures Symposium	September 15-18	New Orleans, LA
APC/PennDOT Fall Seminar	November 19-21	Hershey, PA
ABC-UTC Conference	December 3-5	Miami, FL



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