

In this edition of the *Gridline*, we conclude our spotlight on BGFMA certified member company individuals whose many years of experience can be valuable to provide sound advice during plan preparation, fabrication and installation.

Meet Chris Davis

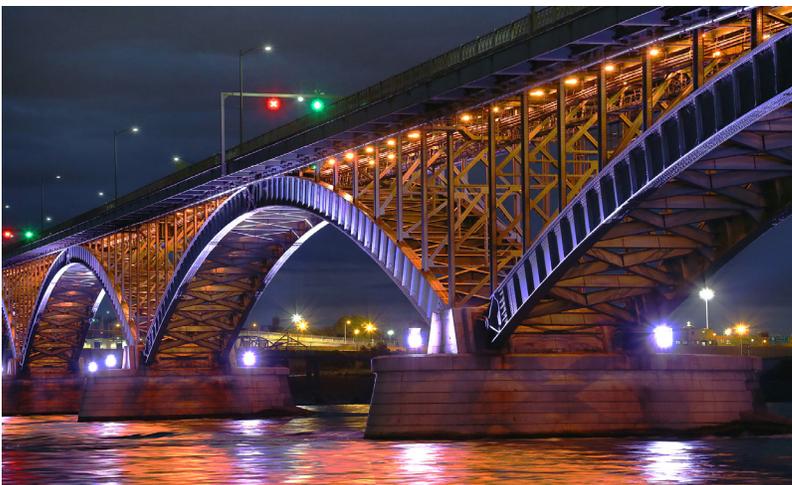
Chris hails originally from coastal Connecticut and ventured south to attend **Vanderbilt University**. He went on to graduate from Vanderbilt with a dual major bachelor of science in Psychology and Political Science. He is also currently pursuing an MBA with marketing specialization through **La Salle University**.

Upon graduation in 1994, Chris began his career in Pittsburgh with **Ben-shaw, Inc.**, a manufacturer of custom-engineered electric motor control equipment. He rose through the ranks in Purchasing, Inventory Management and Inside Sales roles before becoming the Southwest Regional Sales Manager based out of Phoenix, AZ. Chris enjoyed gaining versatile applications experience working with designers and end users across several market segments including water treatment, mining, energy and industrial.



Chris Davis

With an opportunity to move back east, Chris helped launch a steel fabrication business, **International Deck Systems International (IDSI)** in Pittsburgh, PA which focused on manufacturing steel grid bridge decking and other fabrication and machining services. As the National Sales Manager, Chris helped establish IDSI as a versatile and respected fabricator with AISC and BGFMA certifications. Chris also championed the diversification of the company into branch markets and products to complement the core business.



Peace Bridge, NY

In 2008, Chris left IDSI to join **L.B. Foster's Fabricated Bridge Products Division**. As the General Manager of Sales and Marketing, Chris has seen the division's volume quadruple during his tenure. To complement their steel grid deck product line, he spearheaded the group's entry into the stay-in-place bridge deck form product line and its establishment as a reliable supplier of bridge railing and barrier systems. In addition to the expansion of the business, Chris takes great pride in his team's involvement on such important projects as the **Newburgh-Beacon, Walt Whitman and Peace Bridge** rehabilitations.

Outside of work, Chris enjoys all sports, exercising, golfing and outdoor activities with his wife, two children and their incredibly excitable Labrador-hound mix.

I-895 over Patapsco River Flats Gets Ultra-Light Bridge Deck

A partially filled concrete grid bridge deck was selected as a major component of the solution for the lightweight superstructure replacement on **I-895** over Patapsco River Flats for the **Maryland Transportation Authority (MDTA)**.

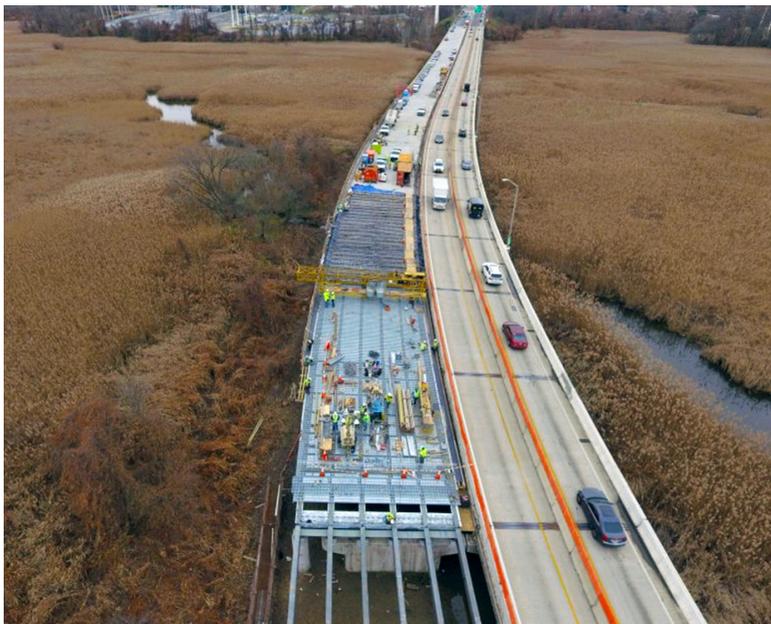
Rummel, Klepper & Kahl, LLP (RK&K) of Baltimore, MD secured the design for the superstructure replacement which follows an earlier project performing maintenance and repair to preserve the existing bridge substructure in the environmentally-sensitive marshland. Due to the limited load capacity of the substructure and the desire to maintain an HS-20 design live load, RK&K specified a deck weight not to exceed 50 pounds per square foot utilizing 4500 psi, 100 pcf all lightweight concrete while still providing a 2” integral concrete overfill.

McLean Contracting Company of Glen Burnie is replacing the substructure in leap-frog fashion with roughly 177,000 square feet of galvanized grid deck panels supplied by BGFMA certified fabricator **L.B. Foster** of Pittsburgh, PA. All work is being conducted from the bridge deck. The first stage of bridge work entailed replacement of the northbound spans by diverting traffic to the southbound spans where single lane bi-directional traffic was maintained. The substructure is primarily made up of two-span continuous units approximately 110’ in length separated by a strip seal expansion joint. McLean is capitalizing



I-895 Project - Grid Deck Installation (Photos Courtesy of McLean Contracting)

on the design consistency to replace one unit at a time before advancing to the next unit. Cranes are positioned ahead of construction to remove and install the superstructure while the crew and equipment advance from behind.

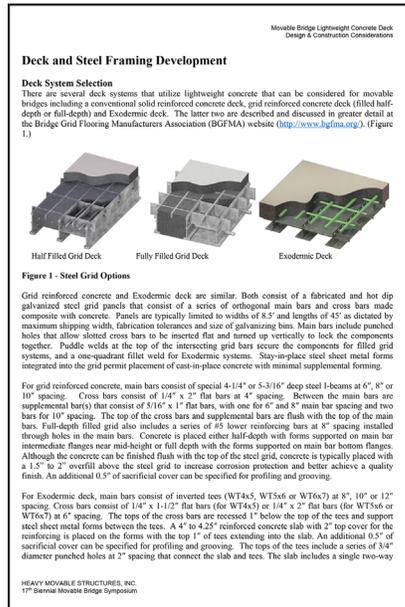


As a toll authority, the **MDTA** is sensitive to the impact of construction projects on their customers. Although **accelerated bridge construction (ABC)** was not a requirement for this project, grid reinforced concrete decks have long been utilized by toll agencies to accelerate the speed of construction for this reason. McLean project superintendent Jay Musser indicates that there was a small learning curve, but much to his liking, the use of prefabricated grid panels have definitely sped up the cast-in-place concrete installation pace beyond what he could expect from conventional construction.

McLean has finished superstructure replacement of the northbound spans which now carries the bidirectional traffic while the southbound spans are being replaced. Construction is expected to wrap up in the middle of 2019.

Hardesty & Hanover and BGFMA Co-Present at Seventeenth Biennial Symposium

George Patton, P.E., MSCE of Hardesty & Hanover, LLC and Philip Gase, P.E., Engineering and Marketing Manager for the BGFMA collaborated on the presentation of “*Movable Bridge Lightweight Concrete Deck Design and Construction Considerations*” at the Heavy Movable Structures, (HMS) Inc. Seventeenth Biennial Symposium held this past October in Orlando, FL.



HMS Paper Excerpt: Grid Deck Options

George is a Principal Associate with Hardesty & Hanover's Tampa, FL Office. He has 30 years' experience as a Bridge Engineer and Movable Bridge Specialist and is considered an expert in lightweight bridge deck systems. The paper is a comprehensive look at the latest design strategies for movable bridges with lightweight concrete deck systems with an emphasis on bascule spans with **Exodermic®** decks, and the various design and construction aspects that must be considered for successful implementation. A link to the paper can be found on the BGFMA website at bgfma.org/bulreports.htm.



HMS
HEAVY MOVABLE
STRUCTURES



George Patton



Philip Gase

Best Wishes to Outgoing BGFMA Executive Director, Mark R. Kaczinski, P.E.

Please join the BGFMA members in wishing good fortune to Executive Director, Mark R. Kaczinski, P.E., MSCE as he announced his retirement from the D.S. Brown Company effective at the end of 2018. Mark earned a B.S. in Civil Engineering from Lafayette College, Easton, PA in 1983 and went on to work as a structural engineer for Modjeski & Masters in Mechanicsburg, PA until 1988. He later became a research engineer at Lehigh University in Bethlehem, PA where he received his M.S. in Civil Engineering in 1991. He came to D.S. Brown in 1996 to become the Vice President of Engineering and Technical Marketing while finishing NCHRP Report 402, “*Fatigue Design of Modular Bridge Expansion Joints*,” under the tutelage of the late Robert Dexter, PhD, P.E. While at D.S. Brown, in addition to being the BGFMA Executive Director, Mark has supervised an engineering department staff of approximately 25 engineers and detailers and has been instrumental incorporating D.S. Brown products on signature projects such as the San Francisco Oakland Bay and Tacoma Narrows Bridges to name a few. Tom Lewis, Vice President of Sales and Marketing for D.S. Brown, has been elected as the new BGFMA Executive Director.



Mark Kaczinski

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:

International Bridge Conference (IBC)	June 10 - 13	National Harbor, MD
New York City Bridge Conference	August 26 - 27	NYC
ABC-UTC Conference	December 12 - 13	Miami, FL



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