

2017 National ABC Conference – Pre-Conference Workshops

W-06: Project and Technology Review of Proven Advanced Technologies

Wednesday, December 6, 2017 – 1:00 p.m. to 5:00 p.m.

Introduction:

This workshop provides up-to-date information on successful implementation of several Proven Advanced Technologies listed as resources on the ABC-UTC website. These technologies have been recommended by various State DOTs across the country. Technology representatives will present recent projects supported by the states. The ABC aspects of the projects, the time savings offered by the technologies, and the overall time and cost savings for future applications will be described. Lessons learned and new ideas to further advance the ease of application and understanding of these innovative ABC technologies will be included. Available funding programs will be discussed.

Workshop Organizer:

Kay Jimison, Intelligent Engineering – SPS North America

Program:

1:00 p.m.	Welcome and Introduction to Workshop	Moderator – Kay Jimison
1:10 p.m.	Proven Advanced Technologies Initiative	Mary Lou Ralls, P.E.
1:20 p.m.	Programs / Funding in Support of Innovations	Romeo Garcia, C.P.M.
1:30 p.m.	Solving Issues (from an Owner’s Perspective)	John Holt, P.E.
1:45 p.m.	Sandwich Plate System (SPS) Decks	Rolando Moreau, M.Eng. / Doug Davis, P.E.
2:15 p.m.	Press-Brake-Formed Tub Girders	Greg Michaelson, Ph.D.
2:45 p.m.	<i>Break</i>	
3:00 p.m.	Lightweight Concrete: With Nearly 100 Years’ Experience - A Proven Tool for ABC	Reid Castrodale, Ph.D., P.E.
3:30 p.m.	Precast Segmental Bridges	Garrett Hoffman, P.E.
4:00 p.m.	NEXT Beam	Rita Seraderian, P.E.
4:30 p.m.	Folded Steel Plate Girder System	Bob Elliott, P.E.
5:00 p.m.	Adjourn	

Speakers & Bios, W-06: Project and Technology Review of Proven Advanced Technologies

Kay Jimison, jimison@ie-sps.com (**Organizer & Moderator**)

Kay is Senior Vice President for SPS North America, a division of Intelligent Engineering, the developer of the "Sandwich Plate System (SPS)" technology. She offers over 30 years of experience in the advancement, acceptance, and implementation of new technologies and innovations, working with local, state, and federal government for approvals, as well as private and military applications.

Reid W. Castrodale, Ph.D., P.E., reid.castrodale@castrodaleengineering.com

Reid is a structural engineering consultant specializing in prestressed concrete, lightweight concrete, and ABC. He currently serves as Managing Technical Editor of *ASPIRE*, the concrete bridge magazine; as the Bridge Consultant for the Georgia/Carolinas Chapter of PCI; and as Director of Engineering for both the Expanded Shale, Clay and Slate Institute and STALITE, a lightweight aggregate manufacturer. He is a graduate of Georgia Tech and received a Masters and Ph.D. from the University of Texas at Austin. Reid has worked as a bridge engineer at Ralph Whitehead Associates (now STV) and the Portland Cement Association.

Doug Davis, P.E., davis.mceo@rrohio.com

Doug is the Muskingum County Engineer in Zanesville, Ohio since 2005. He is both a licensed Professional Engineer and Professional Surveyor. Doug's professional experience includes water, wastewater, structures, roadway, land development and project management. He is a graduate of Ohio State University with a Bachelor's of Science in Civil Engineering. Doug has sat on boards of the County Engineers Association and the Ohio State University Civil Engineering Alumni Board. He is an Adjunct Professor at Ohio University in Athens, Ohio and Zane State College in Zanesville, Ohio.

Robert Elliott, Jr. P.E., Robert.Elliott@cdrmaguire.com

Bob is the Assistant Manager of the Transportation Department in charge of the Structures Group for CDR Maguire's Pittsburgh, PA office where he has worked since 2010. He has over 22 years of experience in bridge, roadway, and other non-transportation structure projects. He is a 1994 graduate of Pennsylvania State University with a B.S. in Civil Engineering.

Romeo Garcia, C.P.M., Romeo.Garcia@dot.gov

Romeo is a Bridge Construction Engineer in the Office of Infrastructure with the Federal Highway Administration (FHWA) in Washington, D.C. In his 42 years with FHWA he has served in various leadership and engineering positions in eight states across the country (Illinois, Oklahoma, Maryland, Virginia, Georgia, Kentucky, New Jersey, and Minnesota); positions have included Engineering Programs Team Leader, Division Bridge Engineer, Assistant Operations Engineer, and Assistant Highway Design Squad Leader. Additionally, Romeo has worked for MnDOT in their bridge design unit. He holds a B.S.C.E. Degree from the University of Minnesota and an M.P.A. Degree from Rutgers University, and he is a Certified Public Manager.

Garrett Hoffman, P.E., ghoffman@figgbridge.com

Garrett is the Regional Director for FIGG's northeast office in Pennsylvania. He has over 25 years of experience designing and managing major bridge projects across the United States. His bridge design experience ranges from steel beam bridges to long-span bridges across major rivers. Garrett was the Design Manager of two recent design/build projects in the Northeast. He received his

undergraduate degree in Civil Engineering from Old Dominion University and Master Degree in Civil/Structural Engineering from the University of Pittsburgh. He is a registered Professional Engineer in Pennsylvania and in six additional states.

John M. Holt, P.E., john.holt@hdrinc.com

John is a Senior Bridge Engineer with HDR, Inc. Prior to joining HDR in 2015, he worked at the Texas Department of Transportation's Bridge Division as a bridge designer, State Bridge Standards Engineer and became Director of Bridge Design. John served on SCOBS T-7 from 2012 to 2015. He has 31 years of bridge design and project management experience throughout the state of Texas. His design experience includes prestressed concrete girders, curved steel plate girders, curved steel tub girders, post-tensioned concrete and steel box straddle caps, and related highway structures.

Greg Michaelson, Ph.D., michaelson@marshall.edu

Greg is an Assistant Professor in the Weisberg Division of Engineering at Marshall University. He completed his Ph.D. at West Virginia University in 2014. In 2011, he was named a recipient of the NSF Graduate Research Fellowship. Greg's research interests include efficiency and economics of steel bridge design, finite element modeling, modular/accelerated bridge construction, and experimental investigation of structural systems.

Rolando Moreau, M.Eng., moreau@ie-sps.com

Rolando is an M.Eng. Structural Engineer with the Bridge Division of Intelligent Engineering since 2014 and holds the position of Bridge Lead. He has designed SPS bridge deck solutions for the rehabilitation of historic truss structures, ABC bridge projects, pedestrian bridges and in-situ reinforcement of orthotropic steel deck using SPS Overlay. These designs have been completed for bridge structures in the United States, Canada, Luxembourg, Germany, and Australia.

Mary Lou Ralls, P.E., ralls-newman@sbcglobal.net

Mary Lou is an engineering consultant and principal of Ralls Newman, LLC in Austin, Texas. She is also the ABC-UTC's Director of Technology Transfer. Ralls earned BSCE and MSE degrees from The University of Texas at Austin prior to joining the Texas Department of Transportation. At TxDOT she worked in various engineering positions before being appointed the State Bridge Engineer and Director of the Bridge Division in 1999. After 20 years of TxDOT service, Ralls began consulting to advance innovative technologies including accelerated bridge construction.

Rita Seraderian, P.E., rseraderian@pcine.org

Rita is Executive Director of the Precast/Prestressed Concrete Institute Northeast. For the past 27 years she has provided design assistance on all aspects of precast concrete construction. Rita has organized, hosted, and spoke at numerous seminars and workshops on the use of precast/prestressed concrete products and systems. She facilitates the PCI Northeast Bridge Technical Committee, which developed the Northeast Extreme Tee (NEXT) Beam and has membership including the New England and New York Departments of Transportation. She became a Fellow of the Precast Prestressed Concrete Institute in 2009. Rita has a B.S. Degree in Civil Engineering from the University of Massachusetts and a M.S. Degree in Civil Engineering from Northeastern University in Boston. She is a registered Professional Engineer in the State of Massachusetts.