ASCE WISCONSIN SECTION
Northwest Branch

2017 WI SECTION ANNUAL MEETING

09.28.2017

La Crosse Center

SOUTH HALL
300 HARBORVIEW PLAZA
LA CROSSE, WI 54601

KEYNOTE ADDRESS

CRAIG SCHIEFELBEIN

Co-Founder of Paragon Development Systems
Entrepreneur. Leader. Batman.

SPEAKING ON ETHICS

TOM THIBODEAU

Distinguished Professor of Servant Leadership, Viterbo University

HOTEL INFORMATION

RADISSON HOTEL
200 Harborview Plaza
La Crosse, WI 54601
P: 608.784.6680
P: 800.333.3333

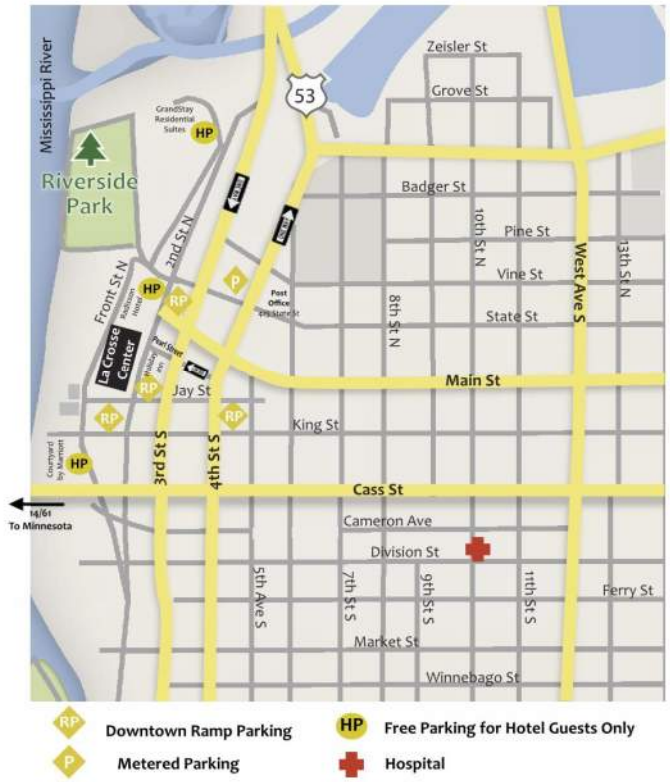
COURTYARD BY MARRIOTT
500 S Front St.
La Crosse, WI 54601
P: 608.782.1000
P: 800.321..2211

HOLIDAY INN HOTEL & SUITES
200 Pearl Street
La Crosse, WI 54601
P: 608.784.4444
P: 800.465.4329

HAMPTON INN HOTEL & SUITES
511 Third Street North
La Crosse, WI 54601
P: 608.791.4004

HOME2 SUITES BY HILTON
210 Jay Street
La Crosse, WI 54601
P: 608..881.6666

Map of Downtown Parking Near the La Crosse Center



WELCOME

TIME	SCHEDULE	ROOM
7:15 - 8:00	REGISTRATION & EXHIBITS	LOBBY
8:00 - 9:15	WELCOME & KEYNOTE ADDRESS	DINING
9:15 - 9:30	BREAK & EXHIBITS	LOBBY
9:30 - 10:20	TECHNICAL SESSION 1	BREAKOUT ROOMS
10:20 - 10:35	BREAK & EXHIBITS	LOBBY
10:35 - 11:25	TECHNICAL SESSION 2	BREAKOUT ROOMS
11:25 - 11:35	BREAK & EXHIBITS	LOBBY
11:35 - 1:10	LUNCH & ETHICS	DINING
1:10 - 1:40	AWARDS	DINING
1:40 - 1:50	BREAK & EXHIBITS	LOBBY
1:50 - 2:40	TECHNICAL SESSION 3	BREAKOUT ROOMS
2:40 - 3:00	BREAK & EXHIBITS	LOBBY
3:00 - 6:00	TECHNICAL SESSION 4 (BOAT TOUR)	RIVERSIDE PARK

TECHNICAL SESSION 1

LOCATION	TOPIC	PDH
A	CONSTRUCTION / GEOTECHNICAL:	1.0
B	GEOTECHNICAL:	1.0
C	STRUCTURES: Lateral Analysis: Right Way, Wrong Way with Software	1.0
D	ENVIRONMENTAL & WATER RESOURCES: Wetlands: History, Value, Regulation	1.0

TECHNICAL SESSION 2

LOCATION	TOPIC	PDH
A	CONSTRUCTION: Milwaukee Bucks Arena Long Span Roof Erection	1.0
B	GEOTECHNICAL: Structure Support on Laterally Swept Piles	1.0
C	LEADERSHIP & MANAGEMENT: Civil Engineers' Role in Advocacy & Public Policy	1.0
D	TRANSPORTATION & DEVELOPMENT: Sharing the Road — NACTO Urban Bike Design Guide	1.0
E	ENVIRONMENTAL & WATER RESOURCES: Surface Water, Groundwater, and Their Interplay with the Public Trust Doctrine in Wisconsin	1.0

TECHNICAL SESSION 3

LOCATION	TOPIC	PDH
A	**GEOTECHNICAL:** **September 2016 Flooding**	1.0
B	**LEADERSHIP & MANAGEMENT:** **CEO Round Table — Three CEOs from Wisconsin Firms**	1.0
C	**TRANSPORTATION & DEVELOPMENT:** **Innovative and Collaborative US 14 Corridor Improvements**	1.0
D	**ENGINEERS WITHOUT BORDERS:** **El Aquacate Pedestrian Bridge**	1.0

TECHNICAL SESSION 4

LOCATION	TOPIC	PDH
RIVERSIDE PARK	LA CROSSE QUEEN BOAT TOUR	2.0

SESSION DETAILS

KEYNOTE SPEAKER

Speaker: Craig Schiefelbein, Co-Founder of Paragon Development Systems

Topic: Inspiration to Innovation

Abstract: Only when one sees the human need purpose of their organization and role, can they fully impact the quality of life of others. This is the mindset that prompts true innovation, "wow" customer experience and the building of a legacy that matters.

ETHICS SPEAKER

Speaker: Tom Thibodeau, Distinguished Professor of Servant Leadership, Viterbo University

Topic: Positive Power of Servant Leadership

Abstract: Servant leadership is meaningful, ethical, and practical. When people are doing meaningful work, they are engaged. When people are doing ethical work, they are doing what is right and good and just every day. And when people do what is practical, they see the results of their good work. Servant leadership is both timely and timeless.

TECHNICAL SESSION 1 DETAILS

Construction / Geotechnical (Tech Session 1A)

Speakers: Jon Scholz (Senior Project Executive at Gillbane Building Company) and Jeremy Thomas, PE (Geotechnical Engineer at AECOM)

Topic: Milwaukee City Hall Foundation Restoration

Abstract: Milwaukee City Hall was built in the late 1890's with a foundation system of untreated timber piles. Progressive settlement has been observed in the structure. In response the City of Milwaukee entered into a Design-Build agreement with Gilbane Building Company and AECOM to develop a solution to stabilize the building in order to provide an additional 100 years of useful life for the structure. The Milwaukee City Hall Foundation Restoration project is a multi-year and multi-phase project to replace all of the foundation under the historic City Hall Building. This presentation will provide an overview of the foundation restoration design, and present an overview of the construction logistics / sequencing required to implement the project while keeping City Hall operations fully functioning.

Geotechnical (Tech Session 1B)

Speaker: Bill Wuellner, PE (Senior Geotechnical Consultant CGC, Inc.)

Topic: Pushing the Envelope without Getting Burned

Abstract: Drawing on over 40 years of geotechnical experience in the Madison area, three brief case histories will be discussed showing how unconventional solutions were successfully used to meet clients' budget limitations on sites involving compressible subsoils. Some of the frank discussions with our clients on the risks of the various alternatives will be described in each case. The case histories include 1) the reconstruction of a house foundation in a flood-prone area underlain with thick deposits of compressible soils; 2) a two-story office building supported on shallow foundations above as much as 20 ft of undocumented fill; and 3) a mechanically stabilized earth wall faced with tabular-shaped boulders built on soft, slightly organic clays adjacent to a wetland.

TECHNICAL SESSION 1 DETAILS

Structures (Tech Session 1C)

Speaker: Sam Rubenzer, PE (President of FORSE Engineering)

Topic: Lateral Analysis: Right Way, Wrong Way with Software

Abstract: Structural Engineers are relying more and more on finite elements models for analysis and design. Understanding the different options available for modeling is paramount in ensuring the best model is created to imitate reality and give engineers the best possible design. This presentation looks at finite element properties of members, plates, diaphragms, and boundary conditions (how they connect) to other finite elements and support conditions. The review covers different options for lateral loading on structural models. Again, the types of lateral loads and how they are applied to the finite elements is in need of careful consideration. It is necessary to also understand capabilities, limitations and options for modeling lateral elements and the differences between programs. Also, I will explore how the differences in loading and modeling features of elements that distribute load to other elements in the models. Often engineers make the mistakes assuming that all FE programs have the same capabilities and limitations. In reality, all FE programs are different and require a learning curve to know the differences.

Environmental & Water Resources (Tech Session 1D)

Speaker: Nick Schaff (Environmental Coordinator, WisDOT NW Region)

Topic: Wetlands: History, Value, Regulation

Abstract: Why do we think of wetlands the way we do? What value do they provide, and why are they protected? How are wetlands protected and how does that protection impact our highway system?

TECHNICAL SESSION 2 DETAILS

Construction (Tech Session 2A)

Speaker: Adam Mentink (Project Manager, JP Cullen)

Topic: Milwaukee Bucks Arena Long Span Roof Erection

Abstract: JP Cullen, Wisconsin's largest steel erecting general contractor, presents the details of the erection plan required to erect the (9) long span trusses at the new Milwaukee Bucks Arena that will re-vitalize the Milwaukee Entertainment District. The session will discuss the engineered erection procedure and sequence established including secondary members, temporary bracing, and shoring towers required to support the roof structure until the permanent roof bracing was in place. Due to the "cantilevered" North and South roof edge design, other aspects such as the concrete gutters along the North and South roof edges also needed to be considered as part of the engineered roof erection plan, as these areas needed to be started prior to the roof diaphragm being complete. Due to the surrounding structure already erected and the tight site restrictions with only having an "ice rink" size erection and steel laydown area, the session will include details on the crane modeling required to ensure the correct equipment was used and the site conditions were exactly as planned at every stage of the erection process.

TECHNICAL SESSION 2 DETAILS

Geotechnical (Tech Session 2B)

Speaker: Matthew R. Glisson, PE (Braun Intertec) and Morgan L. Race, PhD (Braun Intertec)

Topic: Structure Support on Laterally Swept Piles

Abstract: Most driven pile projects have plumbness limits from 1/4 inch per foot (MoDOT, USACE, PDCA) to 1/2 inch per foot (MnDOT, PDCA) to control bending stresses. For two projects, the project teams performed static load testing to evaluate performance of piles with sweep. Located in Grand Forks, North Dakota, one project used 9.625-inch diameter pile with a wall thickness of 0.395 inch and lengths of about 130 to 160 feet. Measured pile sweep (offset distance of the pile toe from the pile top) was between 12 and 17 inches. Static load testing indicated that the piles could support the design load with axial deflection of less than 1 inch but only provided about 80 to 90 percent of the ultimate resistance at axial deflections of about 1.7 to 1.9 inches. Located in Shakopee, Minnesota, the other project also used 9.625-inch diameter pile but with a wall thickness of 0.352 inch and lengths around 50 to 90 feet. Here, the measured sweep varied between about 24 and 68 inches. Load testing indicated that these piles could provide the required design resistance with less than 0.3 inch of axial deflection, and support the required ultimate resistance with about 0.5 to 0.6 inch of axial deflection. Based on these two projects, the magnitude of pile sweep appears to have less influence on a pile's performance than an apparent unbraced length phenomenon in the weaker soils.

TECHNICAL SESSION 2 DETAILS

Leadership & Management (Tech Session 2C)

Speaker: Yash Wadhwa, PE (State of Wisconsin—Commissioner of Railroads)

Topic: Civil Engineers' Role in Advocacy & Public Policy

Abstract: Civil engineers design, build, and maintain the infrastructure that supports our modern society. These include our roads and bridges, railroads, sea ports, airports, drinking and wastewater treatment systems, and the infrastructure for a cleaner environment. As Professional Engineers, we have an obligation to hold paramount the health, safety, and welfare of the general public in our work. Because of our training and knowledge, civil engineers are uniquely well-suited to effectively advocating for our infrastructure in public policy. This session will focus on how we, as engineers, can be a resource to our elected officials; and how we can be effective advocates in the political process and legislative development. It will also provide insight into role of the Office of the Commissioner of Railroads in Wisconsin's rail infrastructure.

Transportation & Development (Tech Session 2D)

Speaker: Tom Lynch, PE, PTOE (Stand Associates, Inc.)

Topic: Sharing the Road — National Association of City Transportation Officials (NACTO) Urban Bike Design Guide

Abstract: While curb and gutter and street pavement have remained the same over the last 50 years, there is a renaissance of new ways to safely accommodate bicycles and pedestrians. The National Association of City Transportation Officials (NACTO) Urban Bike Design Guide, now in its second edition, summarizes the new and innovative treatments available to urban designers. Measures such as buffered bike lanes, left side bike lanes, bike boxes, two-stage turn queue boxes, and cycle tracks are just some of the treatments being used in urban settings. This workshop will summarize the library of options now open to designers as they consider accommodating all modes on urban streets.

TECHNICAL SESSION 2 DETAILS

Environmental & Water Resources (Tech Session 2E)

Speaker: Donald Gallo, PE (Husch Blackwell LLP)

Topic: Surface Water, Groundwater, and Their Interplay with the Public Trust Doctrine in Wisconsin

Abstract: From Husch Blackwell's Technology, Manufacturing & Transportation team, Donald Gallo brings 25 years of legal experience and more than 40 years of engineering experience specializing in environmental engineering. His session will review Wisconsin Statute regarding groundwater withdrawals and the Wisconsin Constitution's public trust doctrine. Gallo will then discuss the permitting of high-capacity wells.

TECHNICAL SESSION 3 DETAILS

Geotechnical (Tech Session 3A)

Speaker: Travis Mikshowsky, PE (Wisconsin Department of Transportation)

Topic: September 2016 Flooding

Abstract: In September 2016, the counties that are managed by the Wisconsin DOT – La Crosse Office were affected by a significant rainfall event. This was the peak of what had been a substantially wet year. The results were flooding and embankment slides that directly affected the state highway system. Once the rain had subsided, the real work had begun. This presentation summarizes the rainfall event, the damage that was done in four of the most severe areas, and the coordination/repair solutions that were used to repair the roadways and keep them operating in a safe and efficient manner.

TECHNICAL SESSION 3 DETAILS

Leadership & Management (Tech Session 3B)

Panelists:

- Michael F. Davy, PE (President, Davy Engineering Co. and Davy Laboratories, La Crosse, WI)
- Gilbert Hantzsch, PE (President, MSA Professional Services, Inc., Baraboo, WI)
- Thomas W. Sigmund, PE (Executive Director, NEW Water, Green Bay, WI)

Moderator: Harry Farchmin, PE (Principal, MxGrp, Inc., Brookfield, WI – Chair WI Section ASCE Leadership & Management Technical Committee)

Topic: CEO Round Table—Three CEOs from Wisconsin Firms

Abstract: This session will provide a lively and valuable discussion from three Chief Executive Officers of prominent Wisconsin engineering organizations. These leaders will be giving their perspectives on topics such as:

- Key issues impacting engineering
- Future trends in engineering
- Accommodating generations in the workforce
- Impact of new technologies
- Skill sets and competencies needed
- Public and private funding for infrastructure
- Attendees questions

TECHNICAL SESSION 3 DETAILS

Transportation & Development (Tech Session 3C)

Speakers: Scott A. Hasburgh, PE (Mead & Hunt, Inc.) and Dustin J. Wolff, AICP (Mead & Hunt, Inc.)

Topic: Innovative and Collaborative US 14 Corridor Improvements

Abstract: Rehabilitation of major roadways is never a simple proposition, but upgrades to a section of USH 14 required a unique amount of collaboration and expertise. A commuting corridor for WisDOT and downtown for Cross Plains, each had their own design ideas and the term success would be defined differently. Mead & Hunt bridged this gap through four years of collaboration—with agencies, the business community and a dozen stakeholder groups—and two let construction projects to deliver a new corridor that exceeded all expectations. Traffic flow was improved by refining access points and reconstructing signalized intersections. As the main artery through Cross Plains, pedestrian mobility was enhanced with reconfigured crosswalks and several high-visibility Rectangular Rapid Flash Beacons. Through progressive design procedures, numerous existing businesses slated for acquisition remained open, increasing the tax base by $10 million before the construction of USH 14 was even complete. The biggest challenge, the federally protected Black Earth Creek adjacent to the roadway, is considered one of the best trout streams in Wisconsin. Collaborating with the WDNR to protect the sensitive habitat, the storm sewer system design not only reduced the number of outfalls, but utilized an innovative underground rock crib basin to cool the run-off before entering the creek, paramount to the ecology of the Class I trout stream. As a failsafe, backwards-pitched drain pipes were integrated to enable run-off to cool in the basin until the next storm pushes it into the creek. Through careful consideration of local, state and environmental interests, the Mead & Hunt team enhanced the environment and the heart of Cross Plains.

TECHNICAL SESSION 3 DETAILS

ENGINEERS WITHOUT BORDERS (Tech Session 3D)

Speakers: Esther Baas and Jessica Thayer, EWB, Marquette University Chapter

Topic: El Aguacate Pedestrian Bridge

Abstract: In order to get to the city center of the community of El Aguacate in Joyabaj, Quiche, Guatemala, half of the population must cross El Rio Aguacate. Fearful of the river, students and parents alike no longer even attempted crossing after heavy rains. Thus, they needed a solution to safely cross El Rio Aguacate. Because the municipality of Joyabaj lacked the engineering expertise and funding to provide them with a sustainable solution, the community reached out to Engineers Without Borders for their assistance. The Marquette University Chapter designed a 24---meter span, cable---suspended pedestrian bridge to solve their problem.

Over the course of the design and construction of El Aguacate Pedestrian Bridge, the students learned invaluable skills. For many, this was the first time they took part in an engineering project from start to finish. The students learned how to lead, solve problems, and respond quickly to design and field changes. Most importantly, the students learned the value that their engineering skills can have on the world, and how to utilize them in the future.

TECHNICAL SESSION 4

La Crosse Queen Boat Tour (2.0 PDHs)

The La Crosse Queen is a modern day replica of the grand riverboats which used to ply the Mississippi in the early 1900's. She is one of the few 'true' paddle wheelers still in operation in the country today, which means the propulsion is strictly executed through the sternwheels. The ASCE boat tour will include a pass through the twin 'Blue Bridges' a La Crosse downtown landmark. While steaming north through town, we'll pass a Canadian Pacific Railroad swing bridge, which was originally built in the late 1800's. We will also pass underneath the newest Mississippi River crossing at the I-90 Dresbach bridge. The turnaround point will be after locking through the U.S. Army Corps of Engineer's Lock and Dam #7. As we pass each of these locations, a speaker will provide details concerning the history, construction, and upkeep. A cash bar and light food will be available on the tour. Only the first 140 guests will be able to attend, so please sign up early. The tour will run rain or shine and the top deck is open air so please plan appropriately.

Photo: Royalbroil "La Crosse Queen Leaving Dock", 2009

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NOTES

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