



103rd Purdue Road School

*Transportation
Conference
& Expo*

March 6–9, 2017



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Complimentary Internet service is provided. The network name is "attwifi" and no password is needed.



Welcome to Purdue Road School Transportation Conference and Expo

Last year we celebrated the 102nd Purdue Road School with record-breaking attendance and a wide range of sessions that reflected the diverse transportation modes represented in the program.

Road School continues to provide participants with opportunities to obtain Professional Development Hours (PDHs) toward licensing requirements. Last year, 935 attendees recorded 7,228 PDHs with Purdue Conferences. In 2017, over 150 available sessions with PDH credit are available. We are again offering 4 hours of distance learning for sessions on Indiana Statutes and Ethics for Professional Engineering, scheduled for Monday and Wednesday.

Many of you may have noticed that the impact of the technical program lasts well beyond the three-day event. Since 2011 we have archived Road School presentations in the Purdue Libraries' online repository, and in 2015 we added Road School proceedings dating back to 1924. To date these proceedings and presentations have been downloaded more than 165,000 times. This impact would not be possible without the strong participation of colleagues and stakeholders who have shaped the program, which this year includes more than 150 presentations involving nearly 300 speakers and moderators.

Darcy M. Bullock, Ph.D., P.E.

Professor of Civil Engineering and
Director of Joint Transportation Research Program
Purdue University

John E. Haddock, Ph.D., P.E.

Professor of Civil Engineering and
Director of Indiana Local Technical Assistance Program
Purdue University

Opening Session

Tuesday, 9:00–10:50 AM

LOEB Theater, Stewart Center

MODERATOR

Mike Piggott

Director, Community Relations
Purdue University

WELCOME

Steve Abel

Associate Vice President for Engagement
Purdue University

INTRODUCTORY REMARKS

John Haddock

Director, Local Technical Assistance Program
Purdue University

KEYNOTE SPEAKERS

Tim Brown

Indiana State Representative, House District 41

Luke Kenley

Indiana State Senator

Chris L. McBarnes

Mayor, City of Frankfort

Joe McGuinness

Commissioner, Indiana Department of Transportation

COFFEE WITH EXHIBITORS

Tuesday, 7:00–8:45 AM

North & South Ballrooms, Purdue Memorial Union

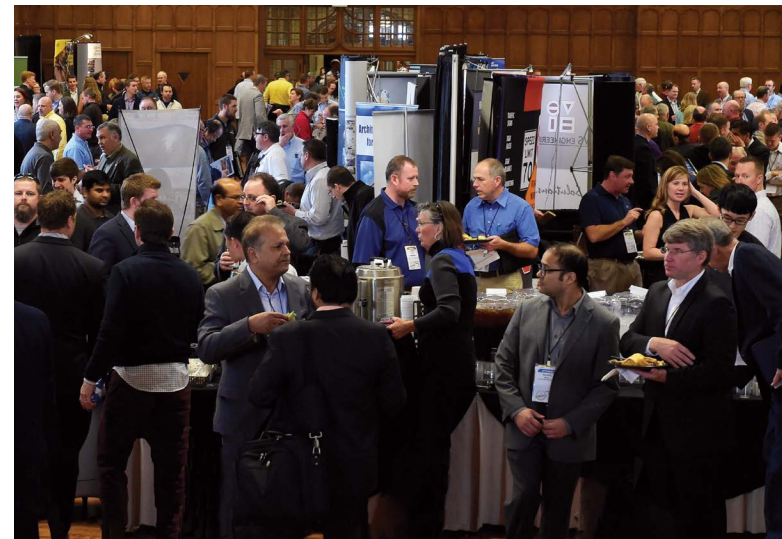
Please join our exhibitors for coffee prior to the Opening Session.

EXHIBITOR LUNCHEON

Tuesday, 11:00 AM–1:50 PM

North & South Ballrooms, Purdue Memorial Union

The annual exhibitor luncheon provides an opportunity for attendees to visit with the exhibitors and enjoy a light lunch buffet. Name badges are required for admission.



TUESDAY

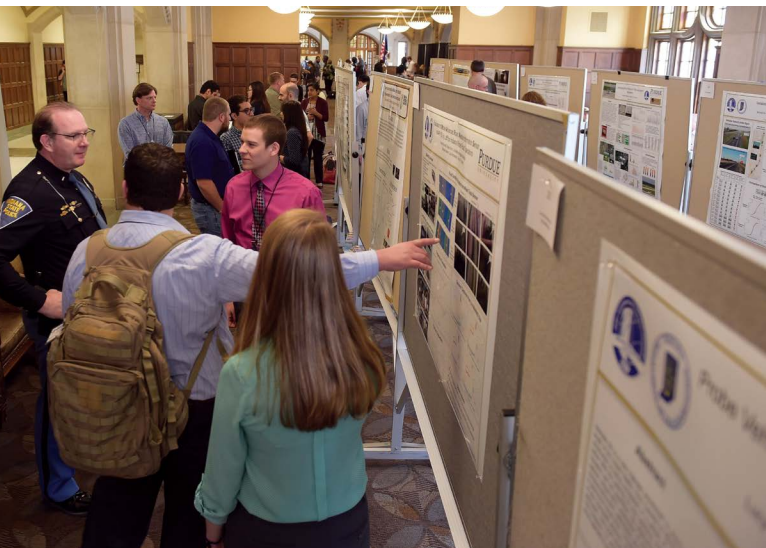
SCHEDULE OF EVENTS

STUDENT POSTER SESSION

Tuesday, 11:00 AM - 1:50 PM
Purdue Memorial Union

Adjacent to the South Ballroom (in the southwest corner of the Purdue Memorial Union), look for the following students, who will be exhibiting posters highlighting recent research activities:

Andrew Balmos	Drake Krohn	Sharlan Montgomery
David Boruff	Cristhian Lizarazo-Jimenez	Miguel Montoya
Davis Chacon-Hurtado	Lisa Lorena Losada Rojas	Raul Pineda
Sikai Chen	Wesley Major	Most Sultana
Naizhong Cui	Jijo Mathew	Lucy Richardson
Syedali Ghahari	Margaret McNamara	Cheng Wang
Thomas Hall	Michelle Mekker	Soojin Yoon
Kyle Jackson	Flavio Mendonca	



WEDNESDAY

SCHEDULE OF EVENTS

ROAD SCHOOL LUNCHEON

Wednesday, 11:30 AM–12:50 PM
North & South Ballrooms, Purdue Memorial Union

Tickets are sold in advance. A limited number of \$25 tickets may be released at 10:00 AM on the day of the luncheon. Please inquire at the Road School registration desk in the Purdue Memorial Union.

Governor Eric Holcomb, Keynote Speaker

Eric Holcomb was elected governor following an unprecedented 106-day campaign and was sworn in on January 9, 2017. Prior to his election as governor, Eric served as Indiana's Lt. Governor.

He is a veteran of the United States Navy and was a trusted advisor to both Governor Mitch Daniels and Senator Dan Coats.

Throughout his career in public service, Eric has earned the reputation of being a consensus builder. He has worked with Hoosiers from all walks of life to build support for a number of initiatives and is the author of the book *Leading the Revolution*, which outlines the successes of the Mitch Daniels approach to campaigning and governing.



Eric is a graduate of Pike High School in Indianapolis and Hanover College in southeastern Indiana, where he majored in U.S. history with a focus on the Civil War and Reconstruction. A student of history, he is a collector of presidential signatures and currently has documents signed by 41 of our nation's 44 presidents.

A lifelong Hoosier, Eric has traveled extensively throughout Indiana and has made a jump shot in each of the state's 92 counties.

THURSDAY

SCHEDULE OF EVENTS

ASSOCIATIONS BREAKFAST & MEETING

Thursday, 7:30 AM–12:00 PM
South Ballroom, Purdue Memorial Union

A joint association breakfast meeting will start at 7:30 AM on Thursday in the Purdue Memorial Union South Ballroom. Following the breakfast, associations will convene for their own meetings in the assigned rooms in Stewart Center.

Dr. Tom Turpin, Speaker

- **IACT—Indiana Association of Cities and Towns** – Stewart Center, Room 202
- **AIC—Association of Indiana Counties** – Stewart Center, Room 204
- **IACHES—Indiana Association of County Engineers and Highway Supervisors** – Stewart Center, Room 206
- **IACC—Indiana Association of County Commissioners** – Stewart Center, Room 214A
- **Surveyors Association** – Stewart Center, Room 214B
- **Aviation Association Indiana** – Stewart Center, Room 214C
- **Indiana Chapter of American Traffic Safety Services** – Stewart Center, Room 214D
- **APWA—American Public Works Association** – Stewart Center, Room 278
- **ISC—Indiana Street Commissioners** – Stewart Center, Room 279
- **ADA Coordinators' Association** – Stewart Center, Room 218B
- **Indiana Association of City Engineers** – Stewart Center, Room 218A
- **Indiana Chapter of American Planning Association** – Stewart Center, Room 218C
- **Indiana MPO Council** – Stewart Center, Room 218D

OTHER EVENTS

OTHER ROAD SCHOOL EVENTS

INDIANA LTAP

Visit Indiana LTAP in Stewart Center, Room 307, to receive a free print copy of LTAP's 2017 Directory of Indiana State, County, City, and Town Officials. An electronic copy of the directory is also available for download at LTAP's website (www.purdue.edu/inltap). The mobile directory app has been updated and is available at the iTunes Store for iPhones and at Google Play for Android phones.

ITE INDIANA ROAD SCHOOL DINNER/BANQUET

Wednesday, 5:30-8:00 PM
PMU 240 (East Faculty Lounge), Purdue Memorial Union

For additional information, please visit <http://www.indianaite.org>.



THANK YOU

HOURS

ROAD SCHOOL PLANNING



Thank you! During the past six months, hundreds of volunteer hours have been invested in developing the technical program. In addition to expressing our appreciation to the speakers and moderators listed in the program, we would like to thank the following individuals for participating in the planning meetings and reviews that shaped this year's program.

Barb Alder	Richard Hedgecock	Craig Parks
John Beery	Katie Hendryx	Kym Pelfree
David Benefiel	Laura Hilden	Alan Plunkett
Laura Britton	Jeff Hill	Jennifer Pyrz
Bridget Brunton	Mike Holowaty	Anne Rearick
Michael Buening	David Holt	Michael Rowe
Darcy Bullock	David Holtz	Britni Saunders
Mike Byers	Debbie Horton	Carol Shelby
Jon Clodfelter	Sarah Hubbard	Laura Slusher
Pat Conner	Jeremy Hunter	Bill Smith
Ed Cox	William Knopf	Randy Strasser
Rich Domonkos	Opal Kuhl	Doug Valmore
Jay DuMontelle	Bob McCullouch	Jay Wasson
Katie England	Mark Miller	Ashley Watson
Louis Feagans	Gary Mroczka	Tim Wells
Kenny Franklin	Thomas Murtaugh	Robert Wynkoop
Jeremy Grenard	Roy Nunnally	Stephanie Yager
John Haddock	Dan Osborn	

PROFESSIONAL DEVELOPMENT/CONTINUING EDUCATION

Professional Development Hours (PDHs)/Continuing Education Units (CEUs) are available for applicable sessions. Attendance at the entire session is required for credit. Two different options are available for recording/reporting your PDHs/CEUs.

HOW TO OBTAIN YOUR PDH/CEU STATEMENT

- You may retain a self-reporting, Professional Development Hours Credit Statement for your own records (available at registration).
- You may modify your registration and receive an event specific PDH/CEU statement from Purdue University. By modifying your registration, you certify that you attended all sessions selected.
- Below are instructions on how to modify your registration to receive an event specific PDH/CEU statement from Purdue University.
 1. Visit <http://tinyurl.com/2017RS-RegModification> at the conclusion of Road School.
 2. Log in and complete the requested fields (First Name, Last Name, Email Address, Confirmation Number) exactly as they are reflected on your registration confirmation.
 3. After logged in, click on the "Modify" button on the "Confirmation" tab.
 4. You will advance to the "Personal Information and Contact Information" page. Scroll to the bottom and click on the "Next" button.
 5. The list of sessions, ordered by Day and Presentation, will appear on the next page. Select the session(s) you attended and then click on the "Next" button at the bottom of the page.
 6. Follow the prompts to continue and complete the PDH/CEU recording process.

An event-specific PDH/CEU statement will be sent to your registration email address on April 18, 2017.

ARCHIVES

ROAD SCHOOL PUBLICATIONS ON PURDUE E-PUBS

In 2011 we began digitally archiving Road School presentations with authors' permission in Purdue e-Pubs, the Purdue Libraries' open access repository. In 2015 we archived the proceedings of previous Road Schools dating back to 1924. You may access the presentations and proceedings here: <http://docs.lib.purdue.edu/roadschool/>.

TOP 10 PRESENTATION DOWNLOADS*

Presentation	Author(s)	Year	No.
Best Practices in Contract Administration	Bren George-Nwabugwu	2013	11,621
Concrete Pavement: Selections of Concrete Materials	Jerry Larson	2011	6,576
Design and Construction of Auger Cast Piles	Malek Smadi	2015	4,337
Proper Design Details for PCC Pavement Performance	Mike Byers	2011	3,570
Drainage Ditches: All Shapes and Sizes	Kent Wamsley	2012	3,406
The Importance of Performing Route Surveys in the State of Indiana	Rodney Kelly, Chester Parsons, Grant Niemeyer	2013	3,351
Dynamic Cone Penetrometer (DCP)	Nayyar Zia Siddiki	2012	3,196
Culvert Slip Lining	Scott Brown, Darin Duncan, Stephen Ritzler, Sam Martin	2011	3,089
Traffic Signal Advance Pre-emption Design Within 200 Feet of Active Railroad Crossings	Greg Richards	2012	2,119
Planning for Trail Facilities: Design Standards for Shared Use Paths	Jason Griffin	2012	2,074

*As of December 31, 2016.

ARCHIVES

ROAD SCHOOL PUBLICATIONS ON PURDUE E-PUBS

2017 Road School presenters can stop by the Purdue Libraries exhibit area on the second floor of Stewart Center to submit their presentations either before or after their session. The archived presentations provide a valuable resource after Purdue Road School is conducted, as demonstrated by the more than 165,000 downloads of the presentations and proceedings to date.



ROAD SCHOOL READERSHIP DISTRIBUTION



At-a-Glance Schedule

Tuesday, 7:00 AM–4:50 PM

MAR 7

7:00–8:45 AM
Coffee With Exhibitors
Purdue Memorial Union
North & South Ballrooms

9:00–10:50 AM
Opening Session
Loeb Theater
Stewart Center

11:00–11:50 AM
Technical Sessions

11:00–1:50 PM
Exhibitor Luncheon & Poster Session
Purdue Memorial Union
North & South Ballrooms

1:00–4:50 PM
Technical Sessions

Wednesday, 8:30 AM–4:50 PM

MAR 8

8:30 AM–11:20 AM
Technical Sessions

11:30–12:50 PM
Road School Luncheon
Purdue Memorial Union
North & South Ballrooms

1:00–4:50 PM
Technical Sessions

Thursday, 7:30 AM–12:00 PM

MAR 9

7:30 AM–12:00 PM
Associations
Purdue Memorial Union
South Ballroom
Breakfast at 7:30 AM
*Meetings directly after
breakfast speaker*

Monday, 2:00–3:50 PM

MAR 6

Ethics Classes
Loeb Theater, Stewart Center

Technical session locations and descriptions are listed on the pages that follow.

TIME
2:00–2:50 PM

ROOM
LOEB

PDH: 1

99A. Indiana Statutes and Rules

This course explains the statutes regulating Indiana professions and the role of the Registration Board for Professional Engineers in administering the statutes and rules for engineers. It also provides an overview of recent changes to the NCEES Model Law and Model Rules and fulfills the rule requiring 1 hour on Indiana Statutes and Rules.

SPEAKER

Vincent Drnevich, Purdue University

MODERATOR

Jay Wasson, Purdue University

TIME
3:00–3:50 PM

ROOM
LOEB

PDH: 1

100A. Ethics and the Indiana Law for Professional Engineers

This course explains why ethics is important, gives an overview of professional codes of ethics, describes professional conduct requirements in the Indiana Statutes and Rules, provides guidelines and examples for making value-laden decisions, and shows the value of professional and technical societies in maintaining ethical health fitness. It fulfills the rule requiring 1 hour on ethics applicable to the practice of professional engineering in Indiana.

SPEAKER

Vincent Drnevich, Purdue University

MODERATOR

Jay Wasson, Purdue University

TIME
1:00–1:50 PM

ROOM
ST. THOMAS
CLASSROOM 3

PDH: 1

1. Screening Overweight Vehicles: Allowable Ranges of Axle Configurations

In this session we discuss a new simple method for screening overweight vehicles. Load effects from a set of rating vehicles and typical permit vehicles were directly compared, and allowable ranges of axle configurations—axle weights and axle spacings—were developed to facilitate permitting decisions. Hence, a truck can be safely permitted if its axle weights and axle spacings fall within any of the allowable ranges of the screening axle configurations.

SPEAKERS

Mark Bowman, Purdue University
Goran Milutinovic, Purdue University

MODERATOR

Jose Ortiz, FHWA

2. How to Make Your Way Through a Historic Bridge Project

In this session we review the Historic Bridge Programmatic Agreement in Indiana, outlining the process for Select and Non-Select bridges. Alternative analysis templates, project examples, design criteria, and INDOT Design Manual updates will be discussed.

SPEAKERS

Ed Spahr, INDOT
Mary Kennedy, INDOT
Keith Hoernschemeyer, FHWA
Michelle Allen, FHWA

MODERATOR

Jose Ortiz, FHWA

TIME
2:00–2:50 PM

ROOM
ST. THOMAS
CLASSROOM 3

PDH: 1

TIME
3:00–3:50 PM

ROOM
ST. THOMAS
CLASSROOM 3

PDH: 1

3. Post-Tensioning Lessons Learned

This session is an overview of post-tensioning design concepts, specifications, and construction practices. The two presenters have recent experience with post-tension design through the recently constructed bridges on US 31 over Kern Road in South Bend and the I-69 northbound ramp to SR 37 in Fishers. Topics to be discussed with include efficient uses of post-tensioning, critical design concepts, pre-construction meetings, contractor certification requirements, documentation of construction activities, and safety during tensioning operations.

SPEAKERS

Jay Ridens, United Consulting
Brian Frederick, United Consulting

MODERATOR

Jose Ortiz, FHWA

TIME
4:00–4:50 PM

ROOM
ST. THOMAS
CLASSROOM 3

PDH: 1

4. MSE Wall Design and Construction Policy Updates

This session is intended for designers and construction personnel. We will discuss updates in policy, including constructability, designer responsibilities, and plan requirements, as well as the review process.

SPEAKERS

Athar Khan, INDOT
David Holtz, INDOT
Anne Rearick, INDOT

MODERATOR

Jose Ortiz, FHWA

TIME
1:00–1:50 PM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

5. Load Capacity of Open-Ended Pipe Piles for Sagamore Parkway Bridge

This session presents the results of the load testing done for the new Sagamore Parkway bridge over the Wabash River. The bridge is founded on large (24-inch) steel pipe piles. Some piers are on open-ended pipe piles, the design of which is particularly challenging because of the complex mechanics of soil plug-pile interaction. Discussion includes the innovative design and performance of the load tests, the results, and the improvements of design methods resulting from lessons learned.

SPEAKERS

Rodrigo Salgado, Purdue University
Monica Prezzi, Purdue University
Mir Zaheer, INDOT

MODERATOR

Rick Marquis, Volpe

TIME
2:00–2:50 PM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

6. The Indiana Peak Discharge Determination System

The Indiana Department of Natural Resources, Division of Water, reviews numerous peak flood discharge requests for both INDOT and county highway projects. Recently the DNR introduced the Indiana Peak Discharge Determination System (IPDDR), which is an online tool for designers to evaluate and submit discharge requests to the DNR for their approval. In this session we go over the mechanics of using the tool and provide tips on how to obtain an acceptable submittal.

SPEAKERS

Bryan Denman, Indiana Department
of Natural Resources
David Knipe, Indiana Department
of Natural Resources

MODERATOR

Rick Marquis, Volpe

TIME
3:00–3:50 PM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

7. Tools for Improved Decision Making in Project Delivery

This presentation provides an overview of the ongoing implementation efforts for GeoTechTools, which contains a technology selection system to aid project managers, planners, resident engineers, consultants, and contractors in identifying potential solutions to project delivery issues. These tools factor typical project constraints and work to mitigate common risks seen in all project phases..

SPEAKER

Silas Nichols, FHWA

MODERATOR

Rick Marquis, Volpe

TIME
4:00–4:50 PM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

8. Ohio River Bridges East End Crossing Cable-Stayed Bridge Construction

Representatives of the Ohio River Bridges East End Crossing cable-stayed bridge owner's and design-builder's teams present on the challenges and successes of this signature P3 project in Louisville, Kentucky. The presentation focuses on construction engineering and execution of the bridge's main river tower elements, as well as superstructure deck erection methodologies and construction cycles.

SPEAKERS

Doug VanSlambrook, Walsh Construction
Shawn Woodruff, Parsons
Ben Soule, International Bridge Technologies

MODERATOR

Rick Marquis, Volpe

TIME
11:00–11:50 AM

ROOM
STEW 206

PDH: 1

9. Construction Specifications and Special Provisions

This presentation helps project managers and designers prepare the necessary information required for their contracts with regard to the Standard Specifications and any necessary special provisions. Attendees are provided examples of the right way to incorporate a Unique Special Provision, as well as what to avoid and questions to ask. It is important to know the proper way to write and present a Unique Special Provision.

SPEAKERS

Scott Trammell, INDOT
Melissa Russell, INDOT

MODERATOR

Dimas Prasetya, FHWA

10. 3D Design Models to Construction (Data-Centric Approach)

One aspect of e-Construction is reducing paper use, and many DOTs have successfully reduced their use of paper documents. INDOT wants to take this further by adding a data-centric approach, which focuses on the transfer of data from 3D design models to construction and then to asset management. In this presentation we discuss this initiative.

SPEAKERS

Michael Jenkins, INDOT
Andrew Pangallo, INDOT
Derek Fuller, INDOT

MODERATOR

Eryn Fletcher, FHWA

TIME
1:00–1:50 PM

ROOM
STEW 206

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 206

PDH: 1

11. MASH Implementation for Guardrail

This presentation explains the difference between NCHRP-350 vs MASH and discusses what changes are ahead for guardrail and other barrier types as of December 31, 2017. The focus is primarily guardrail, guardrail transition, and guardrail end treatments.

SPEAKER

Katherine Smutzer, INDOT

MODERATOR

Eryn Fletcher, FHWA

TIME
3:00–3:50 PM

ROOM
STEW 206

PDH: 1

12. Compliant Curb Ramp Solutions

All curb ramps throughout all projects must be designed and constructed to comply with Public Rights-of-Way Accessibility Guidelines (PROWAG) to the maximum extent feasible. Existing facilities such as buildings, staircases, and utilities can make designing and constructing a compliant facility difficult. This presentation shows examples of how specific site constraints can be worked around to accommodate fully compliant curb ramps.

SPEAKER

Katherine Smutzer, INDOT

MODERATOR

Eryn Fletcher, FHWA

TIME
4:00–4:50 PM

ROOM
STEW 206

PDH: 1

13. RSP 205-R-636, Storm Water Quality Control Plans, Level Determinations...Storm Water Quality Managers...What Does All This Mean?

This session presents INDOT's new Storm Water Management Standard Specifications and changes in policy as they relate to new federal regulations.

SPEAKERS

Michele Meyer, INDOT
Richard Phillabaum, INDOT
Greg Couch, INDOT

MODERATOR

Eryn Fletcher, FHWA

14. The Evolution of Infiltration: Three Indianapolis Case Studies in Green Infrastructure

Hybrid ditches are a useful storm water best management practice (BMP) that engineers and government officials should have in their storm water toolbox as options. This presentation of three case studies focuses on the hybrid ditch: how it works, the evolution of the design, and lessons learned.

SPEAKER

Chris Kaufman, Beam, Longest, and Neff

MODERATOR

Mohammad Hajeer, FHWA

TIME
11:00–11:50 AM

ROOM
STEW 214AB

PDH: 1

TIME
1:00–1:50 PM

ROOM
STEW 214AB

PDH: 1

15. It's Never Too Late to Improve a Project

Contrary to industry perception, opportunities to make projects better are not exclusive to the scoping and design phases. It is often thought that the construction stage is about building according to the plans. In this session we will look at changes made during construction that greatly benefited the project, owner, and contractor. These changes range from minor plan adjustments to major redesigns that resulted in constructing a brand new bridge instead of a rehabilitation.

SPEAKERS

Aaron Ketzner, Lochmueller Group, Inc.
Keith Chadwick, Lochmueller Group, Inc.

MODERATOR

Gary Mrocza, AECOM

TIME
2:00–2:50 PM

ROOM
STEW 214AB

PDH: 1

16. Changing the Face of a City

In this session we will discuss the changing of two existing corridors of one-way street pairs to bidirectional traffic flow and implementing a complete streets policy in South Bend, Indiana. The City also constructed three roundabouts and is building bicycle facilities in the in the downtown area.

SPEAKER

Roger Nawrot, City of South Bend

MODERATOR

Gary Mrocza, AECOM

TIME
3:00–3:50 PM

ROOM
STEW 214AB

PDH: 1

17. Environmental Commitments Management on Large Projects

Managing environmental requirements and commitments is an ever growing and vital element of all projects, and it can be extremely challenging on large projects. In this presentation we discuss the process of gathering commitments, coordinating with multiple environmental agencies and stakeholders, and staying in compliance with all requirements on the Louisville-Southern Indiana Ohio River Bridges Project.

SPEAKERS

Emily Brown, Beam, Longest, and Neff
Jonathan Siminski, Walsh Construction

MODERATOR

Gary Mrocza, AECOM

18. Two Years Later: The State Street Redevelopment Project

Formally launched at Purdue Road School 2015, the innovative State Street Redevelopment Project has entered the construction phase. Follow the progress of this transformational town-gown collaboration by participating in an interactive session that will summarize progress to date, explore emerging opportunities, and envision the impact of the completed project on Purdue University and the local community. Unique aspects of the project, including its public-private partnership (P3) procurement and bicycle and pedestrian amenities will be featured.

SPEAKERS

Don Petersen, Purdue University
Michael Gulich, Purdue University

MODERATOR

Gary Mrocza, AECOM

TIME
4:00–4:50 PM

ROOM
STEW 214AB

PDH: 1

TIME
1:00–1:50 PM

ROOM
STEW 218CD

PDH: 1

19. Asset Management for Elected Officials

Panel discussion with geographically distributed elected officials.

SPEAKERS

Tom Murtaugh, Tippecanoe County
Patrick Conner, Purdue University
Travis Underhill, INDOT
Kevin Russel, Harrison County

MODERATOR

Stephanie Yager, Indiana Association
of County Commissioners

TIME
2:00–2:50 PM

ROOM
STEW 218CD

PDH: 1

20. Financial Planning for Long-Term Road Improvements

In an era of limited special road funding opportunities, it is challenging for project owners to find the necessary resources to plan for and build larger road projects. In this session we will present methods of finding those dollars from various sources to get a road project off the ground and provide an update on road funding efforts in the 2017 legislative session.

SPEAKERS

Dennis Faulkenberg, APPIAN, Inc.
Lauri Maudlin, APPIAN, Inc.

MODERATOR

Stephanie Yager, Indiana Association
of County Commissioners

TIME
3:00–3:50 PM

ROOM
STEW 218CD

PDH: 1

21. Indiana Bond Bank: A Local Government Funding Option

In this session we present the Indiana Bond Bank (IBB), which provides local government financing options for essential equipment, infrastructure projects, and fuel budgeting. IBB assists local government with debt issuance and exempts the need to bid financing. It also provides competitive rates for equipment financing and insurance for fuel budgets, and it now offers a funding option for smaller/short-term projects.

SPEAKERS

Ron Mangus, Indiana Bond Bank
John Righeimer, Maverick Energy

MODERATOR

Stephanie Yager, Indiana Association
of County Commissioners



TIME
11:00–11:50 AM

ROOM
STEW 279

PDH: 1

22. Streetscapes: Taking Main Street Mainstream

Lafayette's Main Street has recently been revitalized to its former glory. Unique from other streetscape improvements, Lafayette's focused on a tight urban core. This session encompasses all that was involved in completing the project. We discuss the overall design and the community and business outreach and involvement, as well as the triumphs and challenges along the way.

SPEAKERS

Kara Bishop, City of Lafayette
Dennis Carson, City of Lafayette
Brian Pohlar, HWC Engineering

MODERATOR

Antonio Johnson, FHWA

TIME
1:00–1:50 PM

ROOM
STEW 279

PDH: 1

23. Delphi Stellar Communities: Before and After

In 2012, Delphi was designated as a Stellar Community. This session compares Delphi's original vision with the finished work. The discussion includes an overview of the challenges of implementing streetscape and trail projects within the context of this program.

SPEAKER

Cory Whitesell, HWC Engineering

MODERATOR

Anne Trobaugh, Accelerate
Indiana Municipalities

TIME
2:00–2:50 PM

ROOM
STEW 279

PDH: 1

24. Federal-Aid Funding Requirements for Local Public Agencies

IFHWA continues to increase the review of project billing activity regarding how projects are managed, especially on federally funded LPA projects. In this session we will review the federal requirements LPAs must follow, both before and after federal funds are obligated, to prevent loss of federal funding.

SPEAKERS

Adam Makuley, FHWA
Karen Hicks, INDOT

MODERATOR

Anne Trobaugh, Accelerate
Indiana Municipalities

25. Cost-Effective County Road Reclamation in Northeast Indiana

Cost-effective county road reclamation is important given our current budget limitations. The ability to perform necessary maintenance within budget is critical. Several northeast Indiana counties have been successfully utilizing steel slag as a component in full- and partial-depth reclamation projects. The presentation includes an overview of the technique; proper characterization of the materials; and Noble County's decision-making process, construction phases, and cost comparisons.

SPEAKERS

Zack Smith, Noble County
John Yzenas, Edw. C. Levy Co.
Kelly Cook, Edw. C. Levy Co.

MODERATOR

Anne Trobaugh, Accelerate
Indiana Municipalities

TIME
3:00–3:50 PM

ROOM
STEW 279

PDH: 1

TIME
4:00–4:50 PM

ROOM
STEW 279

PDH: 1

26. Outsourcing Maintenance Operations: What Works and What Doesn't

In 2014 the Elkhart County Highway Department underwent a major reorganization that included a reduction in work force and outsourcing certain maintenance functions. Join us to learn what Elkhart County has experienced from the challenges and benefits of outsourcing.

SPEAKERS

Jeff Taylor, Elkhart County Highway Department
Mike Yoder, Elkhart County

MODERATOR

Anne Trobaugh, Accelerate
Indiana Municipalities

TIME
11:00–11:50 AM

ROOM
STEW 202

PDH: 1

27. Pipeline Safety

As a result of federal regulation, Vectren is charged with implementing preventative and mitigative strategies to keep public and pipeline facilities safe. The program developed has an official policy and guidelines, exhibits, and forms that could be helpful to excavators, developers, and government agencies. Vectren is discovering this to be an excellent outreach tool for raising awareness and reducing damages as well as costs.

SPEAKER

Perry Cloyd, Vectren

MODERATOR

Craig Parks, Boone County

28. Optimizing ROW Vegetation Management for Wildlife, Farmers, and Taxpayers

Invasive plants cause ecological and economic damage to Indiana's agricultural and natural areas. Best management practices for right-of-ways (ROWs) can not only minimize the damage to both sectors but also provide real benefits on both fronts. Through the establishment of corridors of habitat for Indiana's colorful families of native insects, especially bees and butterflies, pollinators can continue to play their increasingly important role in the landscape. Join us for a discussion.

SPEAKER

Steve Cotter, Southern Indiana
Cooperative Invasives Management

MODERATOR

Nick Batta, Crawford, Murphy & Tilly, Inc.

TIME
1:00–1:50 PM

ROOM
STEW 202

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 202

PDH: 1

29. Performance and Cost/Benefit Analysis of Plasma, CMH, and LEDs for Roadway Lighting

For the last 3 years Purdue University's Lyles School of Civil Engineering, INDOT, FHWA, and four industry specialists have been testing and evaluating alternatives to the current high pressure sodium lighting. This presentation covers the comparative light levels of HPS, plasma, CMH, and LEDs and provides detailed performance and cost analyses.

SPEAKERS

Shuo Li, INDOT
David Duba, Jr., Energy Resources, Inc.
Lalit Garg, INDOT

MODERATOR

Nick Batta, Crawford, Murphy & Tilly, Inc.

TIME
3:00–3:50 PM

ROOM
STEW 202

PDH: 1

30. Using Mobile Technology to Collect Pavement Asset Data

In 2016, the Putnam County and City of Greencastle pavement asset management plans were developed using data collected via an iPad application. This presentation covers the data collection and processing steps used. The methodology allowed for very detailed information to be collected efficiently and accurately, and data processing was conducted via a GIS analysis.

SPEAKERS

Dean Munn, Convergence Planning, LLC
Jessica Hartman, Civil Engineering Consultants, Inc.
Mike Ricketts, Putnam County

MODERATOR

Nick Batta, Crawford, Murphy & Tilly, Inc.

TIME
4:00–4:50 PM

ROOM
STEW 202

PDH: 1

31. CMP Metal Culvert Invert Repair With Geosynthetic Cementitious Composite Mats

Field paving is a standard practice of the Ohio DOT to repair deteriorated culvert inverts with 3-inch reinforced concrete paved slabs. Geosynthetic Cementitious Composite Mats (GCCM) is a new flexible, cement-impregnated material that hardens when hydrated to form a thin, durable waterproof and corrosion-resistant protective concrete layer. In this presentation we summarize a recent demonstration project where a GCCM was successfully installed as a substitute for concrete paving to repair the invert of a large CMP arch culvert.

SPEAKERS

David Kaeffaber, Milliken Infrastructure Solutions
Jeff Meyer, Ohio DOT

MODERATOR

Nick Batta, Crawford, Murphy & Tilly, Inc.

32. Weather and Traffic Innovations for Municipal RWIS/ITS Programs

The main issue for many agencies has been finding an economical way to deploy vital tools such as Road Weather Information Systems/Intelligent Transportation Systems (RWIS/ITS) technologies into a single, flexible platform while adhering to budget constraints. This presentation highlights new, innovative municipal RWIS/ITS solutions that can allow small agencies access to RWIS/ITS tools even when funding challenges persist.

SPEAKERS

Kurt Kinion, The Hoosier Co., Inc.
Josh Coulter, The Hoosier Co., Inc.

MODERATOR

Nick Parr, Boone County

TIME
11:00–11:50 AM

ROOM
STEW 214CD

PDH: 1

TIME
1:00–1:50 PM

ROOM
STEW 214CD

PDH: 1

33. Winter Operations

Winter storms demand extensive efforts from DOTs to maintain safety and mobility. A combination of weather forecasting and after-action review tools can be used to better manage the winter season. This presentation covers both the weather forecasting and roadway maintenance disciplines, as well as the intersection between the two.

SPEAKERS

Margaret McNamara, Purdue University
Michael Baldwin, Purdue University

MODERATOR

Robert Dirks, FHWA

TIME
2:00–2:50 PM

ROOM
STEW 214CD

PDH: 1

34. Recycle Your Roadway Full-Depth Reclamation With Cement

Full-depth reclamation (FDR) with cement is a construction process in which worn out flexible pavement is pulverized and left in place, mixed with cement and the underlying subgrade, compacted, graded, and paved over. FDR results in great savings because the old roadway is recycled, not removed, and the finished cement-treated base can be incorporated as part of the new pavement design. In this presentation we discuss design, construction, testing, and public and private case studies.

SPEAKERS

Scott Hall, Sagamore Ready Mix, LLC
David Holtz, INDOT

MODERATOR

Robert Dirks, FHWA

TIME
3:00–3:50 PM

ROOM
STEW 214CD

PDH: 1

35. Green Infrastructure Retrofit and Maintenance Strategies in Indianapolis

Rain gardens were installed in Indianapolis's Near Eastside neighborhood in 2011 as part of streetscape improvements funded by the XLVI Super Bowl Legacy Project. Several challenges followed rain garden construction: large-wheeled vehicles fell into the rain gardens when making turns, and the lack of continuous maintenance allowed invasive plants to take over. In this session we present a case study on the successful retrofits of the project areas and discuss different models for successful long-term maintenance.

SPEAKERS

John Hazlett, Williams Creek Consulting
Rachel Wilson, City of Indianapolis

MODERATOR

Robert Dirks, FHWA

36. Green Infrastructure Operation and Maintenance Successes and Experiences

This presentation focuses on operation and maintenance as an overall strategy to effectively influence the selection of the type of green infrastructure practice for specific situations. Case studies are highlighted.

SPEAKER

Kari Mackenbach, MS Consultants, Inc.

MODERATOR

Robert Dirks, FHWA

TIME
4:00–4:50 PM

ROOM
STEW 214CD

PDH: 1

TIME
1:00–1:50 PM

ROOM
PMU 240

PDH: 1

37. Transportation Assets: The Case for Rail Logistics in St. Joseph County

Since our country's founding, economic development and transportation assets have been interlinked. Even so, transportation's role as an economic development asset is commonly overlooked. With class one railroads, a toll road, and an airport, St. Joseph County is working on a plan to connect transportation resources to grow its economy. This case study relays the impetus, analysis, and ongoing effort to capitalize on the County's existing multi-modal network of resources.

SPEAKERS

William Schalliol, St. Joseph County
Eric Neagu, The Antero Group, LLC

MODERATOR

Katie England, INDOT

TIME
2:00–2:50 PM

ROOM
PMU 240

PDH: 1

38. Regional Transportation Needs

In this session we discuss the development of regional strategic plans that lead to identifying new capacity projects for all four transportation modes over the next 30 years.

SPEAKERS

John Phair, North Central Regional
Logistics Council
Mark DeFabis, Conexus Indiana

MODERATOR

Katie England, INDOT

TIME
3:00–3:50 PM

ROOM
PMU 240

PDH: 1

39. Planning for a Healthier Indiana Through Transportation Facilities

Including Health and Community Priorities in the Transportation Planning Process—Transportation helps shape an area's economic vibrancy, as well as the health and quality of life of residents and visitors. But to have that positive impact, transportation planning must be about more than vehicular movement, delay, and volume counts. Using the City of Indianapolis's recently adopted pedestrian plan as a model, we will discuss how transportation planning continues to evolve to develop an effective system that works for all users.

SPEAKER

Allan Henderson, Health by Design

Active Living Workshops: From Planning to Projects—Health by Design and the Indiana State Department of Health have conducted Active Living Workshops in 24 communities across Indiana. These workshops raise awareness of how strategic planning, policies, and programs can support active living. Communities who participate develop an action plan based on priorities identified during the workshop. This presentation gives an overview of workshops presented to date and features a case study of three communities that have made significant progress on their action plan.

SPEAKER

Kate Riordan, Health by Design

MODERATOR

Katie England, INDOT

TIME
4:00–4:50 PM

ROOM
PMU 240

PDH: 1

40. Indianapolis to Chicago by Passenger Rail—The Hoosier State

Evaluating Opportunities to Enhance the Hoosier State Train's Ridership—The focus of this presentation is to showcase preliminary findings of the on-board Hoosier State Train survey conducted in fall 2016, including the socio-demographic characteristics of riders, origin-destination pairs, and riders' perception of passenger rail. We will present a comparison of findings of the 2016 and 2015 surveys, the results of which help identify factors contributing to changes in ridership since the start of the public-private partnership.

SPEAKERS

Lisa Lorena Losada Rojas, Purdue University
Christos Gkartzonikas, Purdue University
Nadia Gkritza, Purdue University
Dimitra Pyrialakou, West Virginia University

Indiana's Hoosier Train at Two—INDOT's 2-year contract for the Hoosier State expires on June 30, 2017. As passenger rail travel becomes more integrated into modern life, learn how Indiana's model has impacted the national landscape of state-supported passenger rail service. In Indiana, what has changed in 2 years? What lessons have been learned?

SPEAKER

Venetta Keefe, INDOT

MODERATOR

Katie England, INDOT

TIME
2:00–2:50 PM

ROOM
STEW 302

PDH: 1

41. Bio-Based Pavement Preservation

In this session we discuss bio-based rejuvenators and their place in your pavement preservation program, including the benefits of agricultural oils and their restorative effects on asphalt pavements. Included is a PowerPoint presentation on BioRestor, followed by a Q&A session.

SPEAKER

Mike Freisthler, Asphalt Systems, Inc.

MODERATOR

Larry Lee, City of Lebanon

42. Cold Constructed Asphalt Pavements (CCAP) With Gelled Asphalt

CCAP mixtures have been used by numerous agencies across Indiana and the Midwest. CCAP mixtures consist of hard, angular, open-graded aggregates that provide strength to pavement structures. The gelled multi-grade asphalt provides a thick, durable asphalt film that slows the progression of aging and thereby promotes increased pavement life. This presentation details the engineering and design behind CCAP mixtures, provides ideal pavement candidates for CCAP mixtures, and showcases projects across the region.

SPEAKER

Jason Wielinski, Heritage Research Group

MODERATOR

Larry Lee, City of Lebanon

TIME
3:00–3:50 PM

ROOM
STEW 302

PDH: 1

TIME
4:00–4:50 PM

ROOM
STEW 302

PDH: 1

43. Building a Better Terminal Joint

INDOT's standard terminal joint is a 24-inch ribbon of HMA pavement resting on a sleeper slab between a bridge's RCBA and the PCC mainline pavement. It has forever presented challenges of durability and smoothness. The new terminal joint design presented in this session is an adaptation of the current Iowa state standard and is smoother, more durable, and much easier to repair when required.

SPEAKERS

Jane Twaddle, INDOT
Nicole Klass, American Structurepoint, Inc.
Thomas Carrow, American Structurepoint, Inc.

MODERATOR

Larry Lee, City of Lebanon

44. Rosphalt Asphalt Mixture

The Ohio River Bridges Project used a Rosphalt asphalt deck in lieu of a concrete deck on the I-65 main bridge. S&ME did the testing for this mixture. This presentation was given at the S&ME technical conference.

SPEAKERS

David Hamilton, S&ME, Inc.
Scott Quire, Bluegrass Testing

MODERATOR

Laura Britton, FHWA

TIME
11:00–11:50 AM

ROOM
STEW 306

PDH: 1

TIME
1:00–1:50 PM

ROOM
STEW 306

PDH: 1

45. Using Innovative Materials to Improve Pavement Performance and Life

Designing Pavements With Interlayers—In this session we provide training on the latest information, technology, and application of pavement interlayers, including pavement mats and grids, VRAM void reducing asphalt membrane, and FiberMat stress absorbing membrane. Products from all major manufacturers—Ten Cate Mirafi, Tensor, Asphalt Materials, and Colas—will be discussed.

SPEAKERS

John Sikich, Road Fabrics, Inc.
Paul Schaus, Road Fabrics, Inc.

Cost-Effective Flexible Pavement Design Using Geogrid—Geogrid is used to develop a mechanically stabilized layer (MSL) in conjunction with the aggregate base below a flexible pavement, enhancing aggregate stiffness. The MSL improves pavement performance and reduces thickness requirements of conventional materials, lowering initial construction and life-cycle costs. This concept has been adopted by local agencies throughout Indiana. In this session we will discuss the quantification of geogrid benefits in terms of M-E and AASHTO 93 methodologies, field performance verification, and cost-benefit analysis.

SPEAKER

Joe Heintz, Tensor International Corp.

MODERATOR

Tom Duncan, FHWA

TIME
2:00–2:50 PM

ROOM
STEW 306

PDH: 1

46. Explore Road Recycling That's Better Five Ways

This session presents hot-in-place recycling (HIR), which is an environmentally friendly process that can save agencies time, reduce truck traffic, and deliver savings of up to 30% versus the conventional resurfacing approach.

SPEAKER

Patrick Faster, Gallagher Asphalt Corp.

MODERATOR

Tom Duncan, FHWA

TIME
3:00–3:50 PM

ROOM
STEW 306

PDH: 1

47. Fiberglass Fibers in Chip Seal and Hot Mix Overlays

For many years on-site cut glass fibers have been used to bridge cracks, add stress relief, and waterproof pavements in conjunction with a chip seal for pavement preservation. In this session we discuss a current chip seal project in LaPorte County.

SPEAKERS

Nelson Wesenberg, Colas, Inc.
Paul Schaus, Road Fabrics, Inc.

MODERATOR

Tom Duncan, FHWA

TIME
4:00–4:50 PM

ROOM
STEW 306

PDH: 1

48. Concrete Overlays: A Pavement Preservation Option

Technical advancements in macro, high-strength synthetic fibers used in thinner concrete overlays offer an additional proven option to be considered for pavement preservation options. Collected performance data have demonstrated that the fiber-reinforced PCCP overlays offer a longer term (20–30 years) preservation option. This session covers data/performance history, design and construction details, and case histories.

SPEAKER

Mike Byers, ACPA–Indiana Chapter

MODERATOR

Tom Duncan, FHWA



TIME
1:00–1:50 PM

ROOM
PMU 250

PDH: 1

49. I-69 Ohio River Crossing: Project Update

This session gives an overview of the EIS process for this bi-state major river crossing project. What has happened since the historic MOA signed by Governors Pence and Bevin? This presentation highlights lessons learned from the Sherman Minton Bridge in New Albany, as well as working with municipalities, FHWA, and other federal and state resource agencies from Kentucky and Indiana.

SPEAKER
Janelle Lemon, INDOT

MODERATOR
Samuel Sarvis, INDOT

TIME
2:00–2:50 PM

ROOM
PMU 250

PDH: 1

50. Fiscal Constraint and the Central Indiana Regional Bikeways Plan

The number of proposed bikeways projects in central Indiana far outweighs available federal funding. Join us to learn how the Metropolitan Planning Organization has inventoried, scored, and prioritized hundreds of proposed bikeways projects to better manage limited funding and gain the largest regional return on bikeways investments.

SPEAKER
Jen Higginbotham, Indianapolis MPO

MODERATOR
Samuel Sarvis, INDOT

TIME
3:00–3:50 PM

ROOM
PMU 250

PDH: 1

51. Fresh Look: Perspectives From Newer Project Managers

This presentation shares, from the client and consultant viewpoints, a myriad of experiences and lessons learned in the first few years of project management by a few budding PMs. It will be a great fit for those who are new or potential PMs and should be reminiscent for the veterans in the room.

SPEAKERS
Kyanna Moon, INDOT
Karl Krukenberg, American Structurepoint, Inc.

MODERATOR
Samuel Sarvis, INDOT

52. Engaging Stakeholder Engagement in Long-Range Planning

The Indianapolis Metropolitan Planning Organization is setting the bar for effective public and stakeholder engagement with its current update of the Long Range Transportation Plan. MPO staff are soliciting feedback at each step of the planning process—from development of goals, objectives, and performance measures to scenario planning. In this session we share strategies and lessons learned for effective engagement throughout the planning process.

SPEAKERS
Ryan Wilhite, Indianapolis MPO
Jennifer Pyrz, HNTB Corp.

MODERATOR
Samuel Sarvis, INDOT

TIME
4:00–4:50 PM

ROOM
PMU 250

PDH: 1

TIME
2:00–2:50 PM

ROOM
FOWLER

PDH: 1

53. Ensuring Project Success by Managing Diverse Stakeholders

For every public project, there is a diverse group of stakeholders who need and want information. During this session we outline important stakeholders, how and when to involve them in the planning process, and how targeted messaging might be the key to your project's success. We also discuss how to identify and manage stakeholders who oppose your project.

SPEAKERS

Erin Pipkin, Borshoff
Sean Porter, Parsons
Rickie Clark, INDOT

MODERATOR

Rickie Clark, INDOT

TIME
3:00–3:50 PM

ROOM
FOWLER

PDH: 1

54. Community Outreach and Engagement

In this session we discuss how to identify and engage low income and minority populations. From newsletters to social media, discover what works and does not work for your community. Case studies of various projects will showcase efforts to engage communities during project planning.

SPEAKERS

Chris Meador, HNTB Corp.
Adin McCann, HNTB Corp.

MODERATOR

Rickie Clark, INDOT

TIME
4:00–4:50 PM

ROOM
FOWLER

PDH: 1

55. Plan Commission Basics for Engineers

Whether you are a plan commission member (city engineer, county surveyor, extension agent) or you have to work with one, this session is designed for you. Learn how “public health, safety, and welfare” plays into not only what you do, but also the decisions the plan commission and other local government bodies make. This session is based on the popular Nitty Gritty for Plan Commission and Board of Zoning Appeals Training Series. We will allow time for Q&A.

SPEAKER

K.K. Gerhart-Fritz, FAICP

MODERATOR

Rickie Clark, INDOT



TIME
2:00–4:50 PM

ROOM
KRANNERT
AUDITORIUM

PDH: 3

56A. Road Scholar Core Course #1: Transportation Asset Management

This 3-hour course provides a detailed overview of asset management within the Planning and Operations department of a local public agency. The focus is on pavement management and how to identify the condition of existing road networks. We will present effective methods for establishing priorities and developing policies and communication techniques that inform stakeholders and the public of the current condition of the road network.

SPEAKERS

Rich Domonkos, Purdue University
Patrick Conner, Purdue University

MODERATOR

Rich Domonkos, Purdue University



TIME
11:00–11:50 AM

ROOM
STEW 310

PDH: 1

57. Macroscopic Review of Crash Data: More Crashes Doesn't Always Equate to Unsafe Conditions

Crash data can often be misleading in relation to public safety, which can impact future growth. The review of crash data on a macroscopic level suggests crashes are strongly correlated to factors other than just roadway safety. Recent research indicates that population, driver behavior, and driving patterns have a significant effect on annual crash totals. The effects of growth, the economy, population, and driving behavior on annual crash data are presented.

SPEAKER

John Beery, City of Noblesville

MODERATOR

Dan Avery, Allen County

58. Recent Developments in Traffic Signal Preemption/Collision Avoidance

In this session we present recent technology developments that allow collision avoidance systems to be integrated into emergency vehicle preemption. We also provide a historic overview of all preemption technology platforms (acoustic, optical, radio based, and GPS), as well as the benefits, drawbacks, and limitations of each platform type.

SPEAKER

Dave Gross, Collision Control
Communications, Inc.

MODERATOR

Tom Ford, INDOT

TIME
1:00–1:50 PM

ROOM
STEW 310

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 310

PDH: 1

59. LiDAR for Traffic and Safety Studies

This session presents a LiDAR-based traffic scanner (TScan) to track vehicles, pedestrians, and bicycles in an intersection area. Inexpensive LiDAR sensors with limited resolution were applied in the research unit, and two engineering applications were developed for intersections: one for counting moving objects and one for counting traffic conflicts. The presented study indicates that the TScan can measure traffic volumes and speeds, classify objects, and count traffic conflicts automatically. A prototype is in progress.

SPEAKER

Andrew Tarko, Purdue University

MODERATOR

Tom Ford, INDOT

TIME
3:00–3:50 PM

ROOM
STEW 310

PDH: 1

60. Communicating the Safety Benefits of Alternative Intersections

The number of projects employing an alternative intersection design is increasing on both state and local roads, and it is important for agencies to know how to inform the public about the benefits they can expect from these infrastructure investments. In this session we discuss the crash reduction effects of these designs and present videos that can help explain your agency's design choices.

SPEAKERS

Michael Holowaty, INDOT
Rick Drumm, FHWA

MODERATOR

Tom Ford, INDOT

TIME
4:00–4:50 PM

ROOM
STEW 310

PDH: 1

61. FHWA Performance Management Rules for Traffic Safety

In 2016 the FHWA issued new rules that govern performance management for a number of transportation areas. In this session we explore the new rules that apply to the area of traffic safety, in particular the requirements that both state DOTs and metropolitan planning organizations must set performance goals and begin reporting their annual progress toward meeting those targets.

SPEAKER

Roger Manning, INDOT

MODERATOR

Tom Ford, INDOT



TIME
11:00–11:50 AM

ROOM
STEW 218AB

PDH: 1

62. LED Streetlight Program in Northern Indiana

Northern Indiana Public Service Co. (NIPSCO) is collaborating with a group of municipalities to initiate a program to replace all fixtures in its service territory with LED fixtures. In this presentation we discuss this program and its timing, results, and tariff impacts.

SPEAKERS

David Boruff, INDOT
Robert Kramer, Purdue University
Ted Sommer, London Witte Group, LLC

MODERATOR

Janice Osadczyk, FHWA

TIME
2:00–2:50 PM

ROOM
STEW 218AB

PDH: 1

63. Innovation and Consensus Building With Traffic Simulation

This presentation showcases the use of traffic simulation to solve a complex mix of safety and operational problems within the Giant City Road corridor in Carbondale, Illinois. This case study demonstrates how state-of-the-art operational analysis tools can be leveraged to not only develop innovative solutions to complex problems, but interact with agencies and local stakeholders to facilitate consensus.

SPEAKERS

Doug Shatto, Lochmueller Group, Inc.
Dustin Riechmann, Lochmueller Group, Inc.

MODERATOR

John McGregor, INDOT

TIME
3:00–3:50 PM

ROOM
STEW 218AB

PDH: 1

64. Portable Traffic Signals: Design and Specification Requirements

Until recently portable traffic signals, which are mounted on towable trailer supports, were not allowed in Indiana. However, portable signals have many advantages over fixed temporary signals, so the Indiana Manual on Uniform Traffic Control Devices was revised to allow them, and specifications for their use are now in place. This presentation provides an overview of portable signals, including INDOT's current design and specification requirements for these devices.

SPEAKERS

Mike Winters, JTI Traffic
Joe Bruno, INDOT

MODERATOR

John McGregor, INDOT

65. Solving Congestion and Safety Issues With Roundabouts

The Plainfield Road corridor is a major commuter route in Blue Ash, Ohio. This corridor is plagued by extreme peak hour congestion and intersection crash rates that are the largest in the city. The City intends to construct a series of roundabouts to address both congestion and safety issues. This presentation summarizes the evaluation process used to identify roundabouts as the preferred alternative to address both issues.

SPEAKERS

Ryan Huebschman, American Structurepoint, Inc.
Gordon Perry, City of Blue Ash
Zak Bradley, City of Blue Ash

MODERATOR

John McGregor, INDOT

TIME
4:00–4:50 PM

ROOM
STEW 218AB

PDH: 1

TIME
11:00–11:50 AM

ROOM
STEW 278

PDH: 1

66. Visualizing the Potential Performance of Coordinated Signal Systems

This session presents the uses of traffic signal controller data to view the existing and predicted optimal performance of signalized corridors—proposed as a management tool for evaluating system performance. The presentation provides details of how the data is used to develop the visualization, as well as how attendees can implement signal performance measures back home.

SPEAKER

Chris Day, Purdue University

MODERATOR

Doug Valmore, BF&S Civil Engineers

TIME
1:00–1:50 PM

ROOM
STEW 278

PDH: 1

67. LiDAR-Based Mobile Mapping System for Lane Width Estimation in Work Zones

The presentation covers the implementation of a LiDAR Mobile Mapping System for the estimation of lane width in work zones. The discussion starts with a general introduction of Mobile Mapping Systems, followed by the adopted technical approach for lane width estimation and reporting.

SPEAKER

Ayman Habib, Purdue University

MODERATOR

Hardik Shah, American Structurepoint, Inc.

TIME
2:00–2:50 PM

ROOM
STEW 278

PDH: 1

68. Work Zone Traffic Management: Dynamic Dashboards and Alerts

Most agencies have extensive processes in place for designing interstate work zone maintenance of traffic plans. Operational feedback is critical for ensuring that the design assumptions reasonably reflect operational conditions. Six work zones were chosen as case studies for the development of traffic monitoring tools that utilize real-time, connected vehicle data. In this presentation we will discuss the development, implementation, verification, and impact of these tools.

SPEAKERS

Howell Li, Purdue University
James Sturdevant, INDOT
Michelle Mekker, Purdue University

MODERATOR

Hardik Shah, American Structurepoint, Inc.

69. Corridor Studies: One Size Does Not Fit All

There are various goals, purposes, and processes for corridor studies, but the key to success for any study is in the scoping process, where goals and objectives are clearly identified and a well-defined process and clear expectations are established. In this session, important differences between types of corridor studies are highlighted using specific project examples.

SPEAKER

Kendra Schenk, Burgess & Niple, Inc.

MODERATOR

Hardik Shah, American Structurepoint, Inc.

TIME
3:00–3:50 PM

ROOM
STEW 278

PDH: 1

TIME
4:00–4:50 PM

ROOM
STEW 278

PDH: 1

70. Methods for De-Identifying Work Zone Signage

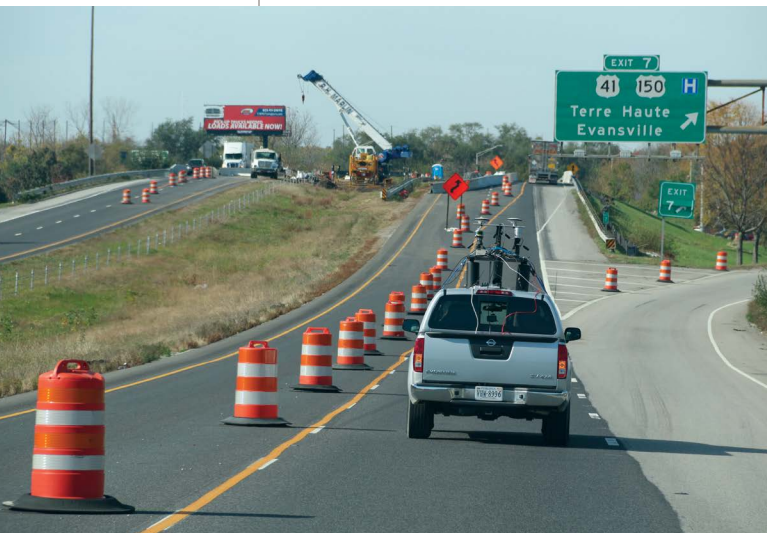
In this session we compare methods used to alter the message displayed by construction signs either prior to or within a work zone. Various hinge techniques, sign covers, and secondary, qualifying signs are presently being used.

SPEAKER

Charles Fanslow, Safety Technologies, Inc.

MODERATOR

Hardik Shah, American Structurepoint, Inc.



TIME
8:30–9:20 AM

ROOM
STEW 204

PDH: 1

71. Waiting Line Analysis of an Airport's Customs Facility

This session presents a waiting line analysis, based on queuing theory, of the customs area of Chicago's O'Hare International Airport. The purpose of this analysis was to evaluate, in terms of waiting time, the level of service provided by U.S. Customs and border protection officers. Recommendations to maximize the flow of travelers and minimize waiting time in the Customs area in question, and details of a computer-based simulation developed to conduct the waiting line analysis, will be discussed.

SPEAKER

Marco Lara Gracia, University of Southern Indiana

MODERATOR

Martin Blake, INDOT



TIME

9:30–10:20 AM

ROOM

STEW 204

PDH: 1

72. Structural Modifications to Airport Runway Pavements

Runway 9-27 Rehabilitation With Full-Depth Reclamation (FDR)—In this session we discuss the rehabilitation of Runway 9-27, which over its lifetime had been piecemealed and overlaid multiple times, resulting in a non-homogeneous structure with pavement failures much sooner than the most recent 20-year design life expectancy. Testing showed that many of the distresses were full-depth, and total reconstruction was necessary. Because of its cost-effectiveness, we chose FDR. The project was extremely successful and is now being considered at other airports around the state.

SPEAKERS

John Baer, Woolpert, Inc.
Michael Buening, INDOT
Kyle Kuebler, Porter County Regional Airport

Runway Extension With a Vegetated Mechanically Stabilized Earth Wall (VMSEW)

—In this session we discuss the extension of the existing Runway 2-20 at the Paoli Municipal Airport, which sits on top of an approximately 70-foot embankment. Alternatives were analyzed to identify the most cost-effective solution, which was determined to be the construction of a vegetated mechanically stabilized earth wall (VMSEW). To date we have completed one phase of construction (approximately 30 feet of wall).

SPEAKERS

John Baer, Woolpert, Inc.
Maria Muia, Woolpert, Inc.

MODERATOR

Martin Blake, INDOT

TIME

10:30–11:20 AM

ROOM

STEW 204

PDH: 1

73. General Aviation Land Use Planning

In this session we discuss the value of land use planning sessions in determining airside and landside short-, mid-, and long-term needs of the airport. Land use plans have been used to secure funding and increase commercial landside and military airside growth. Currently a plan is being used to develop the first general aviation aerotropolis concept. Join us to learn how a land use plan can increase the marketability and revenue generation of your airport.

SPEAKERS

Nick Isenberg, Woolpert, Inc.
Brian Payne, Columbus Municipal Airport
Maria Muia, Woolpert, Inc.

MODERATOR

Martin Blake, INDOT



TIME

1:00–1:50 PM

ROOM

STEW 204

PDH: 1

74. Improving Airport Safety and Operations Through Cost-Effective Planning and Data Management

Emerging Safety Management System (SMS) Technology Trends

As airport compliance and reporting have become increasingly complex, new technologies have been developed to meet this demand cost-effectively. Effective asset management and GIS strategies, data collection best practices and methods, FAA funding eligibility, and applications currently in use or under study are presented in this session.

SPEAKERS

Christopher Snyder, Woolpert, Inc.
Dave Fleet, Faith Group, LLC

ADS-B Applications for General Aviation Airports

ADS-B (Automatic Dependent Surveillance–Broadcast) Out will soon be required for aircraft operating in most assigned airspace categories. ADS-B data are more accessible for analysis than data from flight data monitoring devices and can potentially be used to improve airport operations. General aviation airports need low-cost, effective solutions. In this session we explore data from ADS-B technologies that support operations counting, landing/takeoff cycle characterization, and landing fee assessment, and that potentially identify areas of operational concern.

SPEAKERS

Chenyu Huang, Purdue University
Mary Johnson, Purdue University

MODERATOR

Michael Buening, INDOT

TIME

2:00–2:50 PM

ROOM

STEW 204

PDH: 1

75. Using Unmanned Aerial Systems (Drones) to Improve Airport Operations and Make Real-Time Assessments

Beneficial Applications of Unmanned Aerial Systems on Airports—Unmanned aerial systems (UAS), when coordinated with airport operations, provide an economical tool for airport obstruction assessment and management and asset inventory and hazardous wildlife monitoring. Join us to learn how UAS (aka drones) are used, pre- and post-Federal Aviation Regulations Part 107, to obtain accurate data at airports while reducing interference with airport operations compared to traditional data gathering methods.

SPEAKERS

Brandon Tanner, Hanson
Professional Services, Inc.
Susan Zellers, Hanson Professional Services, Inc.

UAS in the Mix at Non-Towered Airports

Unmanned aerial system (UAS) registration has ballooned since the FAA expanded registration requirements. For public airport owners, operators, and managers, there is increasing concern for how to safely include UAS operations because public airports are required to reasonably accommodate all types of aeronautical activities. In this presentation a heat map of FAA-registered UAS is shown in relationship to airport locations across Indiana and operational characteristics and needs to be considered when combining UAS operations at non-towered airports are abridged for airport managers.

SPEAKERS

Mary Johnson, Purdue University
Yue Gu, Purdue University

MODERATOR

Michael Buening, INDOT

TIME
3:00–3:50 PM

ROOM
STEW 204

PDH: 1

76. Airport Storm Water and Wildlife Management

Airport Storm Water Management—This presentation addresses the need for a balanced approach toward managing storm water quality and quantity while remaining sensitive to the issue of creating hazardous wildlife and water-fowl attractants. Examples will include long and linear retention ponds, underground storm water systems, and other related methods.

SPEAKERS

Kenneth Ross, NGC Corp.
Michael Buening, INDOT

Critters on My Runway: Aviation Wildlife Management—The management of potential wildlife hazards on airfields is a challenge faced by airports across Indiana. This presentation provides an overview of these hazards, available resources, and a discussion of management practices, including specific case studies of innovative approaches.

SPEAKER

Simon Davies, CHA Consulting

MODERATOR

Michael Buening, INDOT

TIME
4:00–4:50 PM

ROOM
STEW 204

PDH: 1

77. Airport Runway Pavement Design and Resolving Contractor Pavement Disputes

FWA Runway 14-32 Reconstruction: A Pavement Design Case Study—CHA Consulting developed multiple pavement section options for the reconstruction of Runway 14-32 at Fort Wayne International Airport (FWA). The FAA was involved in the evaluation of pavement section options and ultimately approved a Modification of FAA Standards for the stabilized subbase portion of the pavement section. Join us for a discussion.

SPEAKERS

Nathan Lienhart, CHA Consulting
Todd Schultheis, CHA Consulting

P-501 PCC Construction QA v. QC: Resolving Disputes Between Owner's QA Testing and Contractor's QC Testing Results—The P-501 PCC Pavement Specification requires contractors to perform QC testing and owners to provide QA testing. During a recent pavement replacement project the results of QA and QC testing varied significantly, and a lengthy process was required to resolve this dispute. A more cooperative approach was taken in the Runway 14-32 reconstruction project, resulting in no disputes during construction. Join us to hear about lessons learned.

SPEAKERS

Nathan Lienhart, CHA Consulting
Todd Schultheis, CHA Consulting

MODERATOR

Michael Buening, INDOT

TIME
8:30–10:20 AM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 2

78. ABC Techniques for Rapid Bridge Replacement

Accelerated bridge construction (ABC) techniques have the potential to minimize traffic disruptions during bridge renewals, promote traffic and worker safety, and improve the overall quality and durability of bridges. The Transportation Research Board (TRB) toolkit was created to guide agencies through ABC implementation. This presentation discusses utilization of the toolkit, presents standardized approaches to designing and constructing complete bridge systems for rapid renewals, and reviews actual ABC implementations.

SPEAKER
Bala Sivakumar, HNTB Corp.

MODERATOR
Jeremy Hunter, INDOT

TIME
10:30–11:20 AM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

79. Declassifying Fracture Critical Members Using System Redundancy

As a consequence of past bridge failures and the aging of existing infrastructure, the FHWA has identified new criteria within a recently released memo to classify fracture critical bridges using the concept of system redundancy. Ciorba has investigated 20 bridges in Illinois with fracture critical members (FCMs). This presentation details the analysis criteria required by the FHWA memo, the various categories of FCMs in the 20 bridges, our finite element analysis, and ultimately our results.

SPEAKER
Brett Sauter, Ciorba Group, Inc.

MODERATOR
Jeremy Hunter, INDOT

TIME
1:00–1:50 PM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

80. Michigan DOT M-100 Superstructure Slide

The M-100 bridge over the CN/GTW railroad in Potterville, Michigan was replaced. Temporary steel abutments and a temporary road were constructed adjacent to the existing structure, and the new superstructure was constructed on the temporary abutments. In this session we will discuss how the new superstructure was slid from the temporary abutments onto the permanent abutments utilizing high-capacity steel rollers and horizontal jacks.

SPEAKER
Doug Parmerlee, AECOM

MODERATOR
Jason Heile, Daviess County

81. Moving Bridge Painting Into the 21st Century

This presentation focuses on bridge preservation and the increasing painting needs. We will discuss funding issues and new technologies and approaches, as well as the concerns for skilled labor and the DOT's knowledge and experience due to changes in government workforces.

SPEAKERS
Bobby Meade, Greenman-Pedersen, Inc.
Tony Serdenes, Greenman-Pedersen, Inc.

MODERATOR
Jason Heile, Daviess County

TIME
2:00–2:50 PM

ROOM
ST. THOMAS
NEWMAN HALL

PDH: 1

TIME
8:30–9:20 AM

ROOM
STEW 206

PDH: 1

82. Recent Drainage Updates to the Indiana Design Manual

INDOT has recently made a number of revisions to the drainage portion of the Indiana Design Manual regarding the design of bridges over water, culverts, and storm drainage systems. This presentation provides a summary of these revisions and how they should be applied in drainage design for INDOT projects.

SPEAKERS

Mark Bailey, INDOT
David Finley, INDOT

MODERATOR

Greg Pankow, INDOT

TIME
9:30–10:20 AM

ROOM
STEW 206

PDH: 1

83. Establishing and Maintaining Mitigation Wetlands for Construction Projects

Wetland mitigation is often required with road construction projects, and it can pose a significant expense to proposed projects for years after completion. Establishing and maintaining successful mitigation wetlands is essential to the overall success, and bottom line, of your project. Proper mitigation site selection, design, and maintenance can significantly reduce the effort and funds needed for a successful mitigation wetland. We offer professional insights and lessons learned.

SPEAKERS

Jacob Bannister, Davey Resource Group
Summer O'Brien, CHA Consulting

MODERATOR

Greg Pankow, INDOT

TIME
10:30–11:20 AM

ROOM
STEW 206

PDH: 1

84. IR-35914, US 31/SR 28 Interchange Delivery

This presentation summarizes project delivery of the US 31/SR 28 interchange, including lessons learned during the development and construction phases of this \$10.5 million project in Tipton County delivered and completed in 36 months.

SPEAKERS

KimberLee Peters, INDOT
Gary Mroczka, AECOM

MODERATOR

Greg Pankow, INDOT

85. Benefits of UAS in Roadway Design: A Case Study

The City of Danville, Illinois, selected Hanson Professional Services to provide engineering services for sanitary and roadway improvements on the northwest side of Danville. Our unmanned aerial system (UAS) was used to collect topographic data and high resolution aerial imagery and video, which were used during public information sessions. Join us to learn how our UAS created added value and time savings for the City of Danville.

SPEAKERS

Matt Heyen, Hanson Professional Services, Inc.
Rich McPhail, Hanson Professional Services, Inc.
Brandon Tanner, Hanson Professional Services, Inc.

MODERATOR

Michael Rowe, United Consulting

TIME
1:00–1:50 PM

ROOM
STEW 206

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 206

PDH: 1

86. Restore Sagamore

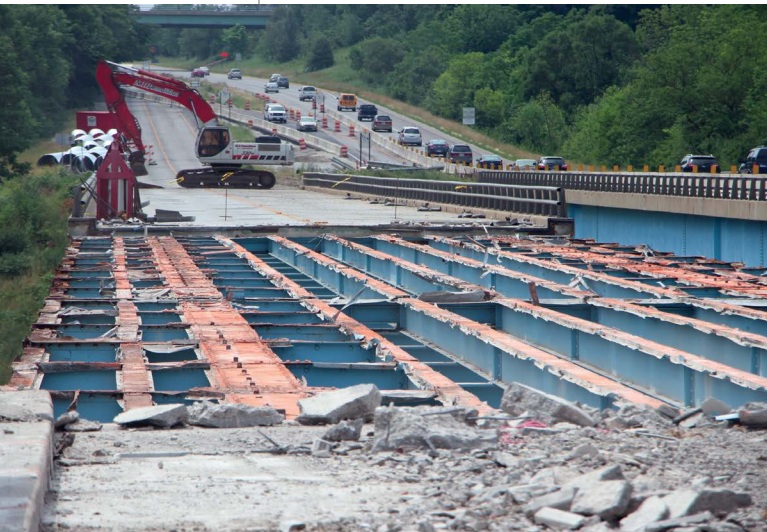
Currently underway, Lafayette's Restore Sagamore is a \$29 million, multi-phase project aimed at repurposing a primary Lafayette thoroughfare that was recently relinquished to the City by INDOT. An important goal of the project has been to transform the former US 52 from a utilitarian, impervious traffic-moving highway to a welcoming and attractive corridor that better meets the needs of the Lafayette community, including its businesses and residents. Join us to learn more about this project.

SPEAKERS

Chris Wheatley, Butler, Fairman & Seufert, Inc.
Carly Sheets, Butler, Fairman & Seufert, Inc.
Jennifer Leshney, City of Lafayette

MODERATOR

Michael Rowe, United Consulting



TIME
3:00–3:50 PM

ROOM
STEW 206

PDH: 1

87. Drainage Structures: Concrete Pipe and Box Culvert Design and Installation

Reinforced Concrete Pipe Installation Methods and Structural Design—In this session we review the four standard installation methods for reinforced concrete pipe. Pipe structural design will also be covered, as well as the importance of trench width, bedding, and compaction in determining fill height.

SPEAKERS

Steve Hiner, Rinker Materials
Al Hogan, American Concrete Pipe Association

Reinforced Concrete Box Culvert Installation and Applications—In this session we discuss the important elements for box culvert installation—site prep, bedding, joint treatment, and backfill—as well as box culvert application in culverts, detention systems, and storm drainage. Images presented will show installations and applications, including how to handle end treatments by using precast wingwalls.

SPEAKERS

Steve Smart, County Materials
John Susong, Rinker Materials

MODERATOR

Michael Rowe, United Consulting

TIME
4:00–4:50 PM

ROOM
STEW 206

PDH: 1

88. Introduction to Portable Traffic Signals

Recent changes in the Indiana Manual on Uniform Traffic Control Devices (INMUTCD) have allowed the use of portable traffic signals. This presentation is designed to provide the most up-to-date information on their use. We will discuss typical applications along with unique projects such as pedestrian crosswalks, wireless knockdown systems, and much more. Most important, we will go over the changes in the INMUTCD to show how and where these devices should be used.

SPEAKER
Kirk Thrasher, Horizon Signal Technologies

MODERATOR
Michael Rowe, United Consulting

TIME
8:30–9:20 AM

ROOM
STEW 214AB

PDH: 1

89. Ohio River Bridges East End Crossing: Sustainability Performance and Certification

The East End Crossing of the Ohio River Bridges Project is pursuing sustainability certification using Envision. When certified, it will be one of the largest P3 infrastructure projects in North America to be third-party certified by a horizontal infrastructure sustainability rating system. In this presentation owner's representatives will discuss how the owner's early commitment ensured that sustainability practices were followed, the inherent compatibility of P3 projects with Envision, how collaboration among team members enhanced performance, and lessons learned.

SPEAKERS
Emily Brown, Beam, Longest, and Neff
Catherine Sheane, Parsons
Shawn Woodruff, Parsons

MODERATOR
Joiner Lagpacan, FHWA

TIME
9:30–10:20 AM

ROOM
STEW 214AB

PDH: 1

90. SR 37 Fishers Corridor Improvement Project Update

SR 37 Fishers Corridor Improvement is an estimated \$98 million project to improve congestion along SR 37 from 126th Street to 146th Street in Fishers, Indiana. The project involves many stakeholders, including the Cities of Fishers and Noblesville, Hamilton County, INDOT, local businesses, and nearby residents. Join us for an update on this project, which involves innovative funding mechanisms and is progressing at an accelerated schedule.

SPEAKERS
Randall Brooks, RQAW Corp.
Troy Woodruff, RQAW Corp.
Jeff Hill, City of Fishers

MODERATOR
Joiner Lagpacan, FHWA

91. "The Other Left": 96th Street @ Allisonville Road

This presentation documents the planning, design, construction, and operational effectiveness of the first full median u-turn intersection in the state of Indiana. The presentation contains a before-and-after study of the intersection, comparing operational measures of effectiveness prior to and 2 years subsequent to intersection construction. Safety, travel time, and LOS are highlighted.

SPEAKERS
Jeff Hill, City of Fishers
Dave Henkel, CHA Consulting
Joe Rengel, A&F Engineering

MODERATOR
Joiner Lagpacan, FHWA

TIME
10:30–11:20 AM

ROOM
STEW 214AB

PDH: 1

TIME
1:00–1:50 PM

ROOM
STEW 214AB

PDH: 1

92. I-69, Section 6 From Martinsville to Indianapolis

Section 6 of I-69 will upgrade existing SR 37 from SR 39 in Martinsville to I-465 in Indianapolis. The project's Draft Environmental Impact Statement is scheduled to be approved in the first quarter of 2017. In this session members of the I-69 study team present a project update as well as a summary of the alternatives under consideration.

SPEAKERS
Tim Miller, HNTB Corp.
Sarah Rubin, INDOT

MODERATOR
Mark Miller, INDOT

TIME
2:00–2:50 PM

ROOM
STEW 214AB

PDH: 1

93. Slide Correction Case Study: SR 105 in Huntington County

During the record rainfalls of June 2015, a steeply wooded rural section of SR 105 in Huntington County experienced a side slope failure causing portions of the southbound lane to break off and drop more than a foot overnight. In this session we walk through the solution as well as the steps taken to expedite and complete design, permitting, right-of-way acquisition, and construction within a time frame of 13 months.

SPEAKERS
John Langmaid, INDOT
Jennifer Goins, HNTB Corp.

MODERATOR
Mark Miller, INDOT

TIME
3:00–3:50 PM

ROOM
STEW 214AB

PDH: 1

94. Project Bundling: Design and Construction

Owners face funding and project development challenges and are turning to project bundling to find cost savings and efficiency. In this presentation we discuss current trends in project bundling—from programming to project development to design to construction.

SPEAKER
Seth Schickel, HNTB Corp.

MODERATOR
Mark Miller, INDOT

95. Fluvial Erosion Impacts on Infrastructures Along Indiana Streams

Rivers provide for storm water drainage, municipal water usage, and recreation, and they add to the natural aesthetics of a community. As we encroach on river corridors, flooding and damage due to streambank erosion endangers our built environment. In this session we use the recently completed White Lick Creek System Assessment in Hendricks County as a case study to discuss the importance of understanding system-wide stream evolution and movement processes in evaluating and addressing impacts on infrastructures along Indiana streams.

SPEAKERS
Siavash Beik, Christopher B. Burke Engineering, LLC
Robert Barr, IUPUI
Brian Meunier, Christopher B. Burke Engineering, LLC

MODERATOR
Mark Miller, INDOT

TIME
4:00–4:50 PM

ROOM
STEW 214AB

PDH: 1

TIME
8:30–9:20 AM

ROOM
STEW 218CD

PDH: 1

TIME
9:30–10:20 AM

ROOM
STEW 218CD

PDH: 1

96. Economic Development 101

This presentation will educate transportation professionals on how economic development site selectors and industry officials select locations for new industrial development.

SPEAKER
Pam Fisher, INDOT

MODERATOR
Dan Zuerner, Garmong Construction

97. ADA and Title VI for the Elected Official

This session provides practical steps to assist elected officials in removing barriers to accessibility and evaluating their programs for potential discrimination. Once plans and policies are in place, it can be challenging to get these programs moving, and even more challenging to sustain them over the long term. INDOT, FHWA, and the Indiana Title VI and ADA Coordinators' Association will connect attendees to available resources for administering these programs and maintaining compliance with the Title VI and ADA requirements.

SPEAKERS
Erin Hall, INDOT
Ken Woodruff, FHWA
Cathy Gross, City of Monticello

MODERATOR
Dan Zuerner, Garmong Construction

TIME
10:30–11:20 AM

ROOM
STEW 218CD

PDH: 1

98. Funding Road and Bridges Through the Motor Fuels Tax and a Mileage User Fee

The Motor Fuel Tax: A Critical System at Risk—Today we have the ultimate public policy contradiction: transportation funding is heavily dependent on the taxation of a commodity our government is actively trying to discourage the use of. In this presentation we take an Indiana-focused and hard look at the coming decline in fuel sales and transportation revenue and discuss potential solutions surrounding a shift from a “per gallon” to a “per mile” basis of taxation.

SPEAKERS
Ed Regan, CDM Smith, Inc.
Michelle Gottschalk, CDM Smith, Inc.

Road Mileage User Fee Design and Public Support—In this session we discuss use data from a survey to determine the extent to which mileage collection technology and mileage rate structure influence public opinion regarding the adoption of mileage user fees. We have found that public opposition can be attenuated by the choice of collection technology, but there is no evidence that choice of rate structure matters for support.

SPEAKER
Denvil Duncan, Indiana University

MODERATOR
Dan Zuerner, Garmong Construction

TIME
3:00–3:50 PM

ROOM
LOEB

PDH: 1

99B. Indiana Statutes and Rules

This course explains the statutes regulating Indiana professions and the role of the Registration Board for Professional Engineers in administering the statutes and rules for engineers. It also provides an overview of recent changes to the NCEES Model Law and Model Rules and fulfills the rule requiring 1 hour on Indiana Statutes and Rules.

SPEAKER
Vincent Drnevich, Purdue University

MODERATOR
Jay Wasson, Purdue University

TIME
4:00–4:50 PM

ROOM
LOEB

PDH: 1

100B. Ethics and the Indiana Law for Professional Engineers

This course explains why ethics is important, gives an overview of professional codes of ethics, describes professional conduct requirements in the Indiana Statutes and Rules, provides guidelines and examples for making value-laden decisions, and shows the value of professional and technical societies in maintaining ethical health fitness. It fulfills the rule requiring 1 hour on ethics applicable to the practice of professional engineering in Indiana.

SPEAKER
Vincent Drnevich, Purdue University

MODERATOR
Jay Wasson, Purdue University

TIME
8:30–9:20 AM

ROOM
STEW 278

PDH: 1

101. Preparing for Boomer Retirements

Is it true that an estimated average of 10,000 baby boomers retire every day? In this session we discuss the current state of boomer retirements, obstacles associated, and practical strategies leaders can apply to be better prepared.

SPEAKERS
Eric Kleinert, State of Indiana
Britni Saunders, INDOT

MODERATOR
Adam Beasley, State of Indiana

102. Changemakers: Relationships and Influence

Want to get something done? The loudest voice in the room doesn't work anymore. What does work: building meaningful business relationships, listening, finding mutual benefit, and solving relevant issues. Join us to learn more about what is working from industry leaders who have led a major initiative in the last year, overcome obstacles, and influenced naysayers and were able to drive results.

SPEAKERS
Clark Packer, INDOT
Katie England, INDOT
Beth Hillen, Civil & Environmental Consultants, Inc.

MODERATOR
Brian Rivette, INDOT

TIME
9:30–10:20 AM

ROOM
STEW 278

PDH: 1

TIME
10:30–11:20 AM

ROOM
STEW 278

PDH: 1

103. Women in Leadership Panel

This panel forum highlights female industry leaders in robust discussion about personal and professional development and key career learnings.

SPEAKERS

Barbara Alder, Purdue University
Christi Garcia, E-gineering, LLC
Tiffany White, Rolls-Royce

MODERATOR

Jane Richardson, Cummins, Inc.

TIME
1:00–1:50 PM

ROOM
STEW 278

PDH: 1

104. Leveraging a Multi-Generational Workforce

Leverage all of your organization's talent! In this session we explore best practices for acknowledging and ignoring generational stereotypes to create a productive and cohesive workforce.

SPEAKERS

Brian Rivette, INDOT
Melody Coleman, INDOT

MODERATOR

Jerred Stephenson, INDOT

TIME
2:00–2:50 PM

ROOM
STEW 278

PDH: 1

105. Transportation Performance Metrics and the Employee Contribution

"Transportation performance metrics" is a phrase with which we are all (too) familiar. In this session we explore methodologies to better align these industry metrics from the organizational level to the frontline employee to create traction in our industry.

SPEAKERS

Martin Blake, INDOT
Clark Packer, INDOT
Britni Saunders, INDOT

MODERATOR

Jerred Stephenson, INDOT



TIME
8:30–9:20 AM

ROOM
STEW 279

PDH: 1

106. Critical Path Thinking on Local Projects

What should you put in your RFP? What are and how do you manage critical path elements of your local project? What are the key things you need to know about ROW? When will FHWA participate in a utility-related claim? When do we start managing for permits? Project owners need to see how much extra they spend when critical path items are not managed appropriately. Join us for a discussion.

SPEAKERS

Todd Clift, INDOT
Mary Jo Hamman, Michael Baker International, Inc.
Don Ballard, INDOT
Kenny Franklin, Blood Hound, Inc.

MODERATOR

Craig Leudeman, Seymour City

TIME
9:30–10:20 AM

ROOM
STEW 279

PDH: 1

107. Pavement Management for Rural and Urban Communities

In this session we review two options for implementing a pavement management plan for local public agencies. The first option uses Excel and GIS to provide a simple management system for small or rural communities. The second option uses Roadsoft to provide a more robust pavement management system that offers additional benefit. Examples from the City of La Porte and Carroll County will be presented.

SPEAKERS

Nick Minich, City of La Porte
Paul Coutts, Carroll County
Susan Al-Abbas, Lochmueller Group, Inc.
Ryan Clark, Lochmueller Group, Inc.

MODERATOR

Craig Leudeman, Seymour City

TIME
10:30–11:20 AM

ROOM
STEW 279

PDH: 1

108. Asset Management for LPAs

In this session we will report on the Asset Management Program developed and administered by LTAP, including updates for the 2017 asset management plan requirements, the user's guide manual planned for release in spring 2017, 2017 training opportunities, lessons learned from the 2016 program, and the 2016 annual report.

SPEAKERS

Bob McCullouch, Purdue University

MODERATOR

Craig Leudeman, Seymour City

109. The Nitty Gritty: INDOT and Title VI

This presentation provides Title VI requirements for Indiana local public agencies. Ken Woodruff opens the session with the history of Title VI and why we care. Erin Hall discusses the specifics of EJ and LEP within Title VI and what they look for. Cathy Gross provides information on networks and resources for LPAs.

SPEAKERS

Ken Woodruff, FHWA
Erin Hall, INDOT
Cathy Gross, City of Monticello

MODERATOR

Jay DuMontelle, FHWA

TIME
1:00–2:50 PM

ROOM
STEW 279

PDH: 2

TIME
8:30–9:20 AM

ROOM
STEW 202

PDH: 1

110. Using Collector for ArcGIS for Field Surveys

In this session we discuss the use of mobile devices such as tablets and cell phones to complete field surveys using the Collector app. This app is a product of ArcGIS and allows for collection of points, lines, areas, and other related data in the field without internet or home network connection. It also makes completing data forms easy.

SPEAKER
Chris Meador, HNTB Corp.

MODERATOR
John Ayers, Hendricks County

TIME
9:30–10:20 AM

ROOM
STEW 202

PDH: 1

111. Autonomous and Inexpensive Condition Assessment of Road Surfaces and Bridges

Current inspection standards require an inspector to manually assess the structure's condition. This approach is labor-intensive, yet highly qualitative. This presentation introduces the development, evaluation, and field application of a set of novel, relatively inexpensive, vision-based systems based on commercially available off-the-shelf devices for enabling (1) a cost-effective road surface monitoring system, (2) a tool for remote inspection of bridges, (3) an autonomous crack mapping system, and (4) a bridge bearing monitoring system.

SPEAKER
Mohammad Jahanshahi, Purdue University

MODERATOR
John Ayers, Hendricks County

TIME
10:30–11:20 AM

ROOM
STEW 202

PDH: 1

112. Leveraging Snow Plow Dashboard Cams and Connected Vehicle Speed Data to Improve Winter Operations Performance Measures

Recent developments in mobile phone applications for polling traffic and roadway condition data from the public have led to new data sources that complement traditional Intelligent Transportation System (ITS) sensors, weather stations, and automatic vehicle location (AVL) on fleet vehicles. The techniques discussed in this session will provide a framework for agencies to dynamically monitor changing road conditions and respond to changing weather conditions.

SPEAKER
Howell Li, Purdue University

MODERATOR
John Ayers, Hendricks County

113. Winter Operations at the Local Level

Establishing an Anti-Icing Program in the City of Mishawaka, Indiana—In this session we go through the City of Mishawaka's process of establishing an effective anti-icing program over the course of 14 years.

SPEAKER
Tim Ryan, City of Mishawaka

Setting Up Winter Operation SOPs—In this session we discuss the need for standard operating procedures and training in winter operations and the process that St. Joseph County Highway has gone through to set them up.

SPEAKERS
Charles Porter, St. Joseph County
Rod Waltman, CPI-Road Solutions, Inc.

MODERATOR
Bob McCullouch, Purdue University

TIME
1:00–1:50 PM

ROOM
STEW 202

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 202

PDH: 1

114. Biodiesel Consumer Education and Industry Update

Biodiesel is endorsed by all major diesel engine manufacturers and continues to change the landscape as an alternative to conventional diesel fuel. Its usage and demand are on the rise because of EPA regulations and the fact that it is better for the environment and reduces our demand for hydrocarbon fossil fuels. Join us to learn more about this clean-burning fuel.

SPEAKERS

Steve Howell, Marc4 Consulting
Mick Calvin, CountryMark

MODERATOR

Bob McCullouch, Purdue University

TIME
3:00–3:50 PM

ROOM
STEW 202

PDH: 1

115. Why Now is the Time to Use Organic-Based Performance Enhancers to Treat Winter Roads

In this session we discuss the use of organic-based performance enhancers (OBPEs) as winter road treatment additives and the economics of liquids versus salts. We will conclude with a Q&A session.

SPEAKERS

Jay Walerstein, CPI-Road Solutions, Inc.
Rod Waltman, CPI-Road Solutions, Inc.
Diane Watkins, CPI-Road Solutions, Inc.

MODERATOR

Bob McCullouch, Purdue University

TIME
4:00–4:50 PM

ROOM
STEW 202

PDH: 1

116. Cloud Technology and On-Demand Solutions for Citizen Needs

This presentation provides an overview of cloud technology and how it can be deployed to help county surveyors, county engineers, and other transportation officials operate their departments efficiently and responsively using document management and workflow technologies. We will also discuss how to efficiently process citizen requests, whether they be complaints, requests, or ideas for improvement.

SPEAKER

Chekuri Raju, SBS Portals

MODERATOR

Bob McCullouch, Purdue University

117. Advancements in Automatic Vehicle Location (AVL) Technology

In this session we discuss the City of Fishers Department of Public Works's cutting-edge AVL system, which utilizes the ESRI GIS platform and allows the City to deploy its fleet based on live data, including location, speed, history of routes driven, and idle time, saving the City thousands of dollars. Data are displayed in each truck, and a web-based map allows management to reallocate resources during a winter storm.

SPEAKER

Sean O'Grady, City of Fishers

MODERATOR

Eric Pethtel, City of Fishers

TIME
8:30–9:20 AM

ROOM
STEW 214CD

PDH: 1

TIME
9:30–10:20 AM

ROOM
STEW 214CD

PDH: 1

118. Pavement Preservation Begins With a Target Goal

In this session we discuss how an asphalt rejuvenator will keep your good roads good. The Town of Avon has had positive results since implementing a 15-year proactive pavement preservation plan—results that show that the best bang per dollar lies with treatments that are applied at the top of the pavement deterioration curve.

SPEAKERS

Rex Hedges, RejuvTec, Inc.
Ryan Cannon, Town of Avon
Jim Brownridge, Tricor Refining, LLC

MODERATOR

Eric Pethtel, City of Fishers

TIME
10:30–11:20 AM

ROOM
STEW 214CD

PDH: 1

119. Seeding for Monarchs, Pollinators, and Living Snow Fence

The establishment of the correct mix of native plant species on roadsides can benefit water quality, provide a habitat for pollinators including the monarch butterfly, and at the same time offer protection from snow drifting. Reduced mowing and beatification is another benefit. This presentation covers the where, what, and how to make this happen. What have we learned in the past 20 years that can make wildflower establishment less expensive and more successful?

SPEAKER

Mark O'Brien, Cardno

MODERATOR

Eric Pethtel, City of Fishers

TIME
1:00–1:50 PM

ROOM
STEW 214CD

PDH: 1

120. Effects of Cracks in Reinforced Concrete Pipe

This presentation reviews for the owner, inspector, and engineer how to quickly evaluate cracks in reinforced concrete pipe to determine whether they are significant or a nonissue, and what the next steps should be. We will also discuss autogenous healing of cracks.

SPEAKER

Al Hogan, American Concrete Pipe Association

MODERATOR

Bill Smith, INDOT

121. How to Rehabilitate Bridge and Terminal Joints Economically and for Long-Term Performance

Protecting your bridge structures and their supporting elements is critical. Thermal movements and loading eventually cause joint failure. To prevent water and debris from entering these joints, they need to be sealed with an airtight, waterproof, flexible material. In this session we look at how to properly rehabilitate deteriorated bridge and terminal joints using an asphaltic plug joint system.

SPEAKER

Jim Lippert, Crafcro, Inc.

MODERATOR

Bill Smith, INDOT

TIME
2:00–2:50 PM

ROOM
STEW 214CD

PDH: 1

TIME
3:00–3:50 PM

ROOM
STEW 214CD

PDH: 1

122. Transportation Vulnerability Assessment for Owen County, Indiana

In this session we discuss the Transportation Vulnerability Assessment the Indiana Department of Natural Resources and the Polis Center completed for Owen County, Indiana. The results were presented to state and community officials in a public meeting held on December 7, 2015. A focus analysis of the vulnerable assets will be performed, including developing engineering hydraulic models for the site, flood depth grids, fluvial erosion mapping, and cost estimates for suggested mitigation.

SPEAKERS

David Knipe, Indiana Department
of Natural Resources
Lacey Bannon, IUPUI
Matthew Riggs, IUPUI

MODERATOR

Bill Smith, INDOT

TIME
9:30–10:20 AM

ROOM
PMU 240

PDH: 1

123. Building a Better Pedestrian and Biking Infrastructure

Building the Boilermakers' Biking Infrastructure—The Integrated Bicycle and Pedestrian Infrastructure Plan, conceived in 2014, is guiding the development of a bicycle network to accommodate a safer environment for all modes of campus travel. As new dedicated paths are completed, opportunities for integrating academic and student life are emerging. Planning the bike share program, launched in 2015, requires understanding shifts in student travel throughout campus, safe and efficient riding, locating bike share stations, and connecting to adjacent communities. Join us for a discussion.

SPEAKER

Michael Gulich, Purdue University

FHWA's Strategic Agenda for Pedestrian and Bicycle Transportation—The FHWA has a long history of supporting pedestrian and bicycle transportation through funding, policy guidance, program management, and resource development. The Strategic Agenda for Pedestrian and Bicycle Transportation builds on this support and sets the stage for our activities in the coming years. Join us for a discussion.

SPEAKER

Joyce Newland, FHWA

MODERATOR

David Holt, Conexus Indiana

TIME
10:30–11:20 AM

ROOM
PMU 240

PDH: 1

124. Weigh-in-Motion Activities in Indiana

I-65 Seymour Weigh Station: Indiana's First Mainline Weigh-in-Motion—In 2014 INDOT selected CDM Smith to design the replacement of an abandoned truck weigh station on I-65 in Seymour. Due to site physical constraints, pre-screening of trucks with weigh-in-motion (WIM) must take place on the mainline as opposed to a screening lane—the first such design in Indiana. Construction will be completed spring 2017, and the design team will participate in final testing of the entire WIM and weight enforcement system. Join us to hear more about this project.

SPEAKERS

Jim Powell, CDM Smith, Inc.
Brian Shattuck, INDOT

Virtual Weigh Stations: Indiana's Technology-Driven Solution to Overweight Vehicle and Credential Enforcement

—Since June 2016, the State of Indiana has been studying the use of weigh-in-motion sensors and high-speed cameras to assess the weight compliance of all trucks in real time and at highway speeds, 24 hours per day. The program is deployed at the Chesterton weigh station on I-94 in the LaPorte District and data collection is ongoing. Join us for a discussion.

SPEAKERS

Katie England, INDOT
Timothy Wells, INDOT

MODERATOR

David Holt, Conexus Indiana

TIME
8:30–9:20 AM

ROOM
STEW 302

PDH: 1

125. Identifying Cracking Potential in the Lab and Field

The I-FIT test method, developed at the University of Illinois at Urbana–Champaign, is being explored by several state and local agencies as a tool in the struggle against premature asphalt pavement cracking. Extensive work has been conducted by various research institutions on the test method's feasibility, repeatability, and validity in the laboratory setting. In this session we present several case studies that connect laboratory mixture production to field mixture production.

SPEAKERS

Ahmad El Khatib, Chicago Testing Laboratory, Inc.
Paul Yerkes, Chicago Testing Laboratory, Inc.

MODERATOR

Curt Higginbotham, Hendricks County

126. Air-Cooled Blast-Furnace Aggregate Application

In this session we will discuss the uses of air-cooled blast-furnace aggregates.

SPEAKER

Rich Droske, Beemsterboer Slag Corp.

MODERATOR

Curt Higginbotham, Hendricks County

TIME
9:30–10:20 AM

ROOM
STEW 302

PDH: 1

TIME
10:30–11:20 AM

ROOM
STEW 302

PDH: 1

127. FDR and Local Roads

This session provides an in-depth look at FDR (full-depth reclamation) and its applications on rural and local roads. We will cover new developments, construction techniques, case studies, and use of local forces.

SPEAKER
Jerry Larson, IRMCA

MODERATOR
Curt Higginbotham, Hendricks County

TIME
8:30–9:20 AM

ROOM
STEW 306

PDH: 1

128. How to Design and Build Smoother Pavements

Smoothness is one of the key functional performances of pavements, used universally for construction acceptance and prioritizing rehabilitation and maintenance. Materials, equipment, and construction operations all play a role in pavement smoothness. Based on decades of experience and engaging case studies, this presentation covers pavement design considerations and construction best practices—recommendations that maximize pavement performance and reduce costs. In addition, it will touch on pavement smoothness specifications, including INDOT's planned transition to IRI.

SPEAKER
George Chang, The Transtec Group, Inc.

MODERATOR
Bill Knopf, Asphalt Pavement Association of Indiana

TIME
9:30–11:20 AM

ROOM
STEW 306

PDH: 2

129. Automation in Highway Construction: Success, Challenges, and Guidance

With the advancement of intelligent construction technologies, numerous tools are now available for roadway survey, design, construction, real-time quality monitoring, and construction management. Areas of innovation include high-precision surveying, 3D design and modeling, smart material production, automated machine guidance, intelligent compaction, Civil Integrated Management, and Building Information Modeling. Among the greatest benefits are improved quality and efficiency. This presentation highlights key automation technologies, offers guidance for implementation, and showcases successes and challenges.

SPEAKER
George Chang, The Transtec Group, Inc.

MODERATOR
Bill Knopf, Asphalt Pavement Association of Indiana

130. Introduction to Cold Central Plant Recycling (CCPR)

CCPR is a cost-effective pavement rehabilitation technique in which 100% RAP is blended with asphalt emulsion without heat in a central plant to produce an engineered recycled mixture. This presentation details how the CCPR process works and demonstrates how CCPR has been used in multiple applications.

SPEAKER
Jason Wielinski, Heritage Research Group

MODERATOR
Steve Moriarty, Kosciusko County

TIME
1:00–1:50 PM

ROOM
STEW 306

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 306

PDH: 1

131. Concrete Pavement Repair and Restoration

Extend the service life of your concrete pavement by applying the right fix at the right time. Join us to learn how to identify and execute alternative repair techniques, whether the work is performed by agency crews or by qualified contractors.

SPEAKER
Patrick Long, ACPA–Indiana Chapter

MODERATOR
Steve Moriarty, Kosciusko County

TIME
3:00–3:50 PM

ROOM
STEW 306

PDH: 1

132. INDOT GPR Case Studies

This presentation will cover case studies that demonstrate INDOT's use of ground penetrating radar (GPR).

SPEAKER
Dwayne Harris, INDOT

MODERATOR
Steve Moriarty, Kosciusko County

TIME
8:30–9:20 AM

ROOM
PMU 250

PDH: 1

133. Handle Stress Before It Handles You!

Stress affects each of us in different ways and can come at us from multiple directions. From an accelerated deadline at work to an urgent phone call from home, it doesn't take long for our plates to become full. In this session we identify different types of stress and stress responses and how to use more of our innate resiliency to overcome stressful internal and external factors.

SPEAKERS
Eric Farny, American Structurepoint, Inc.
Steve Hanes, Dale Carnegie
Amy Porter, Dale Carnegie

MODERATOR
Heather Kennedy, INDOT

TIME
9:30–10:20 AM

ROOM
PMU 250

PDH: 1

134. IndyGo Red Line Electric Bus Rapid Transit (eBRT) Project Update

The presentation provides a general overview of the project scope and status as Phase 1 of the project nears construction. We will review the various BRT elements, explore design challenges for the project, and provide details on its status as the first in the nation all-electric BRT system, including route/operating configurations, transit-oriented development, traffic impacts, schedule, and funding.

SPEAKERS
Steve Goodreau, CDM Smith, Inc.
Michelle Gottschalk, CDM Smith, Inc.

MODERATOR
Heather Kennedy, INDOT

TIME
10:30–11:20 AM

ROOM
PMU 250

PDH: 1

135. INDOT Design Memo 16-04

This session covers the effective use of all the tools necessary to understand the intent and application of the design memo requirement for designers, utility coordinators, and project managers. We will share candid experiences from consultant and project-owner perspectives. Understanding who owns the real risk of utility location data, going beyond 811, design flexibility options, subsurface utility engineering (SUE), constructability, and developing partnerships with each utility are essential elements in meeting this requirement.

SPEAKERS

Natalie Parks, American Structurepoint, Inc.
Matthew Witt, INDOT
Kenny Franklin, Blood Hound, Inc.
Mike Hoy, INDOT

MODERATOR

Heather Kennedy, INDOT

TIME
1:00–1:50 PM

ROOM
PMU 250

PDH: 1

136. Performance-Based Planning

As FHWA continues to promote the importance of utilizing performance-based metrics in evaluating practical design solutions, opportunities exist to extend this philosophy into the planning stages of the project development process. This presentation provides a compelling topic of discussion among DOT designers and project managers on incorporating performance-based metrics into planning-level decision making.

SPEAKER

Adam Burns, Crawford, Murphy & Tilly, Inc.

MODERATOR

Roy Nunnally, INDOT

TIME
2:00–2:50 PM

ROOM
PMU 250

PDH: 1

137. The Future of the MUTCD

The current edition of the national Manual on Uniform Traffic Control Devices (MUTCD) became effective on January 10, 2010. Because of constant changing and improving technology, FHWA can now issue Interim Rulings that allow implementation of new and important traffic control devices on conditional approval until the next Manual is produced. This presentation includes a brief overview of the integral workings of this process and provides an update on proposed changes to the next MUTCD.

SPEAKER

Steven Jewell, DLZ Corp.

MODERATOR

Roy Nunnally, INDOT



TIME
8:30–9:20 AM

ROOM
FOWLER

PDH: 1

138. An Engineer in Washington: Involvement in the Policy Game

Drawing on experiences from my year on Capitol Hill as ASCE's Science and Engineering Congressional Fellow, I explain and encourage the involvement of civil engineers in the public policy arena.

SPEAKER

Theresa Harrison, City of South Bend

MODERATOR

Ashley Watson, Purdue University

TIME
9:30–10:20 AM

ROOM
FOWLER

PDH: 1

139. Communications on the Ohio River Bridges: Best Practices

Managing the internal and external communications on the Ohio River Bridges Project provided our team with a unique opportunity for public outreach and involvement. Learn what worked, and how the communications were tracked and reported throughout the 3.5 years of construction.

SPEAKERS

Paul Boone, INDOT
Angela Nichols, INDOT

MODERATOR

Ashley Watson, Purdue University

TIME
10:30–11:20 AM

ROOM
FOWLER

PDH: 1

140. Your Communications Toolbox: Effective Email Communications

Email—it's one of the most widely used forms of communication for many businesses and organizations. While email is a quick, convenient way to stay in touch with customers and suppliers around the world, it is also known for causing confusion and misunderstandings. This presentation offers tips on how you can write emails that convey a professional image and get the results you want.

SPEAKER

Sue Scott, Tippecanoe School Corp.

MODERATOR

Ashley Watson, Purdue University



TIME

8:30–9:20 AM

ROOM

ST. THOMAS
CLASSROOM 3

PDH: 1

141. Rest in Peace, Comrades

Dennis DeMoss speaks about the day, May 9, 2014, his son, Coty, was killed in double-fatal-ity crash that took the lives of two Rieth-Riley employees. This informative and engaging presentation introduces Road Construction Awareness Corp. (RCAC), a nonprofit organization advocating for road worker safety. RCAC initiated the largest, most innovative statewide work zone safety campaign in the history of Indiana. We will discuss current and future work zone safety campaigns and honor our comrades killed in work zone crashes.

SPEAKERS

Dennis DeMoss, Road Construction Awareness Corp.
Tim Harvey, Road Construction Awareness Corp.

MODERATOR

Karen Stippich, FHWA

TIME

9:30–10:20 AM

ROOM

ST. THOMAS
CLASSROOM 3

PDH: 1

142. IN-TIME Executive Session

In this session we provide an introduction to Indiana's traffic incident management program and discuss the dangers of secondary crashes to responders and the motoring public. During this synopsis of our regular 4-hour class, we talk about preventative measures and the need for quick clearance of blocked lanes.

SPEAKERS

Steve Harney, INDOT
Mike Lepper, Indiana State Police

MODERATOR

Karen Stippich, FHWA

TIME

10:30–11:20 AM

ROOM

ST. THOMAS
CLASSROOM 3

PDH: 1

143. Evaluation of Potential Benefits From Rural Bicycle Climbing Lanes

Research shows that drivers are far more likely to cross a solid or double yellow centerline, regardless of oncoming traffic, when a paved shoulder is not present on uphill segments. However, a paved shoulder appears to reduce the likelihood of centerline crossing by nearly 80%, and from encroaching into oncoming traffic by over 50%. Join us to discuss how these safety benefits can be achieved with minimal additional cost to a rural road project.

SPEAKER

Jeremy Chapman, Rose-Hulman
Institute of Technology

MODERATOR

Karen Stippich, FHWA

144. Pedestrian Safety Planning: The City of Indianapolis Experience

Under an FHWA Focus States and Cities Initiative, the City of Indianapolis has partnered with INDOT and FHWA to develop a pedestrian safety plan. This session provides a status update on plan development.

SPEAKERS

Meredith Klekotka, City of Indianapolis
Mark Zwoyer, City of Indianapolis

MODERATOR

Steve Remias, Wayne State University

TIME

1:00–1:50 PM

ROOM

ST. THOMAS
CLASSROOM 3

PDH: 1

TIME
8:30–11:20 AM

ROOM
KRANNERT
AUDITORIUM

PDH: 3

**56B. Road Scholar Core Course #1:
Transportation Asset Management**

This 3-hour course provides a detailed overview of asset management within the Planning and Operations department of a local public agency. The focus is on pavement management and how to identify the condition of existing road networks. We will present effective methods for establishing priorities and developing policies and communication techniques that inform stakeholders and the public of the current condition of the road network.

SPEAKERS

Rich Domonkos, Purdue University
Patrick Conner, Purdue University

MODERATOR

Rich Domonkos, Purdue University

TIME
3:00–4:50 PM

ROOM
FOWLER

PDH: 2

**145. Jane Doe v. Your Agency:
A Lesson in Tort Liability**

In this session we present a mock court case involving a tort liability claim against a local agency related to a safety deficiency in the roadway, highlighting steps local agencies can take to protect themselves against such claims. An attorney familiar with this subject area will be present for questions.

MODERATOR

Grant Clapacs, Bingham Greenebaum Doll LLP

**146. Collision Diagram
Builder for Documenting Crash
Patterns at Intersections**

In this session we present a computer application to support preparation of collision diagrams. These diagrams are an important element of safety audits but are not used frequently due to the considerable amount of time required to build them. The developed application reduces this time from one or two days to an hour or less. The application also provides additional tools for analyzing and visualization of crash patterns. A CDB User Manual is available.

SPEAKERS

Jose Thomaz, Purdue University
Andrew Tarko, Purdue University

MODERATOR

Alan Holderread, INDOT

TIME
8:30–9:20 AM

ROOM
STEW 310

PDH: 1

TIME
9:30–10:20 AM

ROOM
STEW 310

PDH: 1

147. Utilizing the Interactive Highway Safety Design Model to Improve Indiana Local Roads and Major Freeway Interchanges

Calibrating the IHSDM for Indiana Roads—The Interactive Highway Safety Design Model (IHSDM) is a tool developed by the FHWA that utilizes the Highway Safety Manual (HSM) methodology to evaluate road design alternatives from the safety perspective. This presentation shows how the IHSDM may be calibrated for Indiana roads. A case study will demonstrate the tool's usefulness to agencies in evaluating the safety effects of road scoping and design decisions.

SPEAKER

Thomas Hall, Purdue University

IHSDM Crash Prediction Model for Large Freeway/Interchange Projects—With the incorporation of the freeway and ramp crash prediction models into the Interactive Highway Safety Design Model (IHSDM), faithful application of the Highway Safety Manual for large freeway and interchange projects has been simplified to allow for rapid evaluation of multiple design alternatives. In this session we will discuss the application of IHSDM to evaluate design alternatives for large freeway and interchange projects.

SPEAKERS

Peter Flynn, HNTB Corp.
Micah Reynolds, Purdue University

MODERATOR

Alan Holderread, INDOT

TIME
10:30–11:20 AM

ROOM
STEW 310

PDH: 1

148. Integrating Crash Roadway and GIS Data

A recent FHWA-sponsored data integration project investigated the collection and use of roadway data in Indiana by local agencies and INDOT. This session presents findings and recommendations from this project. Areas of discussion include the accuracy of rural Indiana crash data.

SPEAKER

Laura Slusher, Purdue University

MODERATOR

Alan Holderread, INDOT

149. Temporary Portable Rumble Strip Arrays Reduce Crashes: Two Studies

Temporary portable rumble strip (TPRS) is designed to reduce accidents and save lives in work zones. This session presents the methodology, results, and conclusions from two recent studies of the effectiveness of TPRS: A Texas study examines the performance of an end-of-queue warning system that includes TPRS arrays. A Pennsylvania study measures the effectiveness of TPRS arrays in driver behavior and speed reduction. Both studies support the premise that TPRS reduces accidents and saves lives.

SPEAKER

Kenny Kolberg, PSS Innovations, Inc.

MODERATOR

John Thomas, Tippecanoe County

TIME
1:00–1:50 PM

ROOM
STEW 310

PDH: 1

TIME
2:00–2:50 PM

ROOM
STEW 310

PDH: 1

150. Connected Vehicle Infrastructure Deployment Considerations

The rollout and adoption of autonomous and connected vehicles will be disruptive, changing the way transportation systems are planned, designed, and operated. However, transportation agencies must capitalize on innovations to achieve their primary missions of ensuring safe, efficient movement of people and goods. The question is: How? The answer will be discussed in this presentation.

SPEAKER

Jim Barbaresso, HNTB Corp.

MODERATOR

John Thomas, Tippecanoe County

TIME
8:30–9:20 AM

ROOM
STEW 218AB

PDH: 1

151. Using Crowdsourced Probe Data to Assess and Manage Work Zone Mobility

Crowdsourced probe vehicle data has provided new and novel approaches to manage interstate mobility in the past few years. Using this dataset, it is possible to develop work zone–specific performance measurement to manage both agency and public expectations. A case study will be presented using probe data from large interstate projects in the metropolitan Detroit region.

SPEAKER

Steve Remias, Wayne State University

MODERATOR

Ericka Miller, Parsons Brinckerhoff

152. Deployment and Evaluation of Sinusoidal Rumble Strips

Centerline and edge line rumble strips are effective tools for reducing crashes, but the resulting noise of rumble strip incursions can be disruptive to nearby residents. Sinusoidal rumble strips are emerging as quieter rumble strip construction technology. In this session we will discuss the design, construction, and evaluation of sinusoidal rumble strips on SR 1 in Fort Wayne.

SPEAKERS

Jijo Mathew, Purdue University
Dana Plattner, INDOT
Andrew Balmos, Purdue University

MODERATOR

Ericka Miller, Parsons Brinckerhoff

TIME
9:30–10:20 AM

ROOM
STEW 218AB

PDH: 1

TIME
10:30–11:20 AM

ROOM
STEW 218AB

PDH: 1

153. Bus Stop Facility Design Considerations to Improve Efficiency and Safety for All Users

As use of and demand for public transportation grows, it is more important than ever to consider how safety and efficiency of operations can be improved by transit-conscious design. In this session we will discuss the needs of transit riders (who are also pedestrians and bicyclists), the challenges faced by public transportation operators, and examples that demonstrate sound practices for design improvement.

SPEAKER

John Metzinger, CityBus

MODERATOR

Ericka Miller, Parsons Brinckerhoff

TIME
1:00–1:50 PM

ROOM
STEW 218AB

PDH: 1

154. Emerging Tools for After-Action Review of Major Traffic Incidents

Major traffic incidents present significant challenges to public safety and traffic management agencies. In this session we will present several case studies that fuse probe data, ITS cameras, and public safety dispatch audio. The panel will discuss the use of these case studies for training and education.

SPEAKERS

Michelle Mekker, Purdue University
Margaret McNamara, Purdue University
Ed Cox, INDOT
Steve Harney, INDOT

MODERATOR

Joyce Newland, FHWA



EXHIBITORS

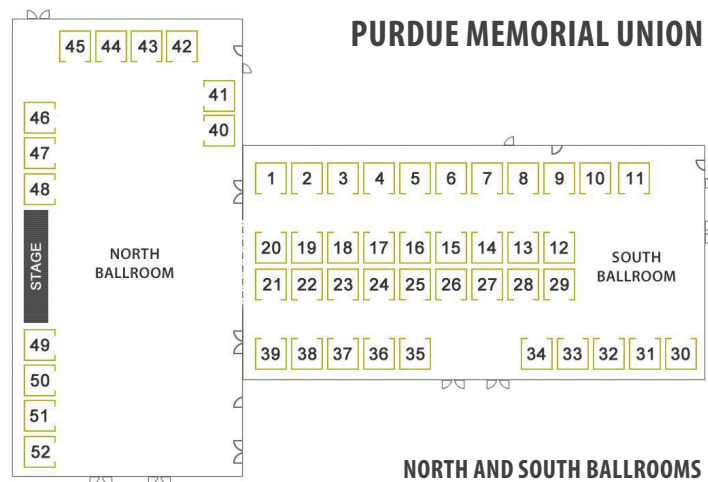
EXHIBITORS LISTED BY NAME

- 42 3M Co.
- 50 ACEC Indiana
- 14 Acrow Corp. of America
- 10 Advanced Drainage Systems
- 25 AECOM
- 36 American Structurepoint, Inc.
- 39 Asphalt Pavement Association of Indiana
- 15 ASC Group, Inc.
- 22 Avery Dennison
- 43 AZTEC Engineering Group, Inc.
- 26 Beam, Longest and Neff
- 6 Bioseal
- 35 Burgess & Niple, Inc.
- 38 Christopher B. Burke Engineering, LLC
- 18 Ciorba Group, Inc.
- 5 Collins Engineers
- 7 CountryMark
- 17 Crafc0, Inc.
- 19 D2 Land & Water Resource, Inc.
- 13 Davey Resource Group
- 3 EMCS, Inc.
- 34 Equipment Marketing Co.
- 27 Fleis & VandenBrink
- 23 GAI Consultants, Inc.
- 32 GeoStabilization International
- 45 Globe Asphalt Paving Co., Inc.
- 41 Greenman-Pedersen, Inc.
- 2 GRW Engineers, Inc.
- 29 Hoosier Co.
- 11 Hydro-Technologies, Inc.
- 16 IKOCPA
- 1 Irving Materials, Inc.
- 9 KSE Testing Equipment
- 48 MGI Traffic Control Products
- 37 Milliken Infrastructure Solutions
- 11 Modified Concrete Suppliers, LLC
- 44 Motz Enterprises, Inc./Flexamat

EXHIBITORS

EXHIBITORS LISTED BY NAME

- 12 MS Consultants, Inc.
- 21 Osburn Associates, Inc.
- 49 Palmer Power & Truck Equipment
- 40 Parsons
- 30 Primera Engineers, Ltd.
- 8 Reinforced Earth Co.
- 33 Resource International, Inc.
- 31 Roadway Bioseal, LLC
- 20 S&ME, Inc.
- 47 Sagamore Ready Mix, LLC
- 4 Sanders Precast Systems
- 52 Sherwin Industries, Inc.
- 28 Shrewsbury & Associates, LLC
- 46 Somerset CPAs and Advisors
- 51 Tippmann Industrial/Propane Hammer E.F.I.
- 24 United Consulting



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SUPPLIERS, LLC

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engineers, architects, planners

Osburn Associates, Inc.

A Manufacturing Company



PARSONS

 **Primera**

EXHIBITORS

Propane Hammer E.F.I.



EXHIBITORS



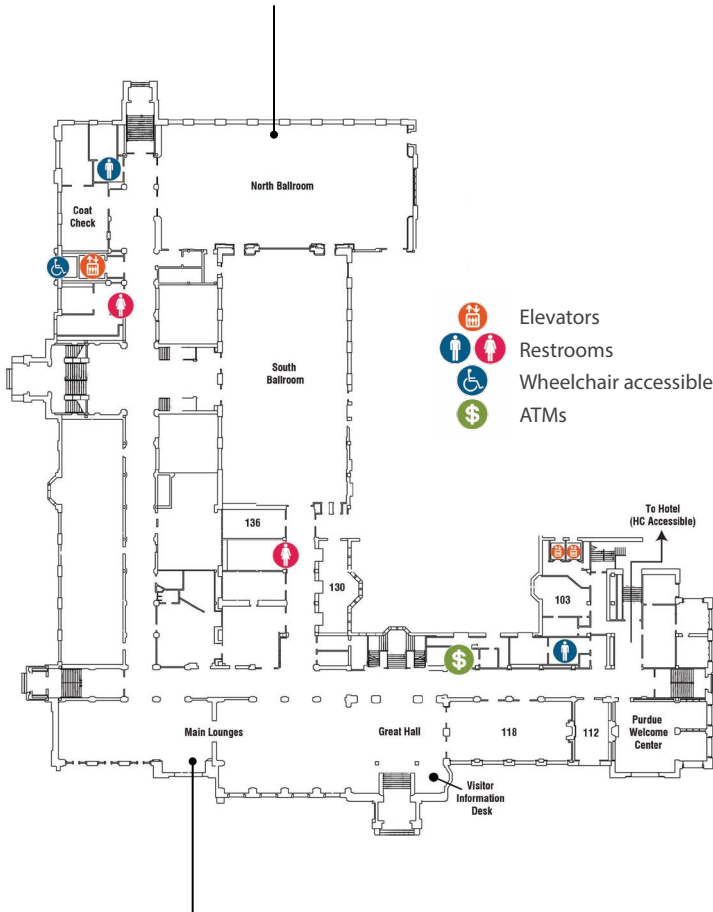
PURDUE MEMORIAL UNION, FIRST FLOOR

- Registration
- Exhibitors
- Coffee
- Tuesday luncheon
- Student posters
- Wednesday luncheon

NORTH AND SOUTH BALLROOMS

Tues: Morning Coffee and Exhibitor Luncheon

Wed: Road School Luncheon



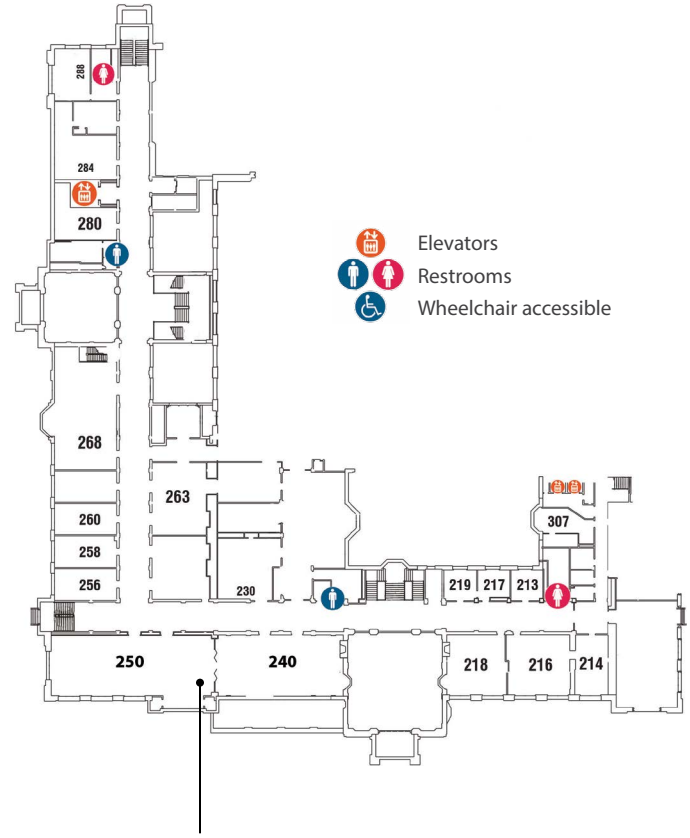
MAIN LOUNGES

Tues: Student Poster Area

Tues & Wed: Registration

PURDUE MEMORIAL UNION, SECOND FLOOR

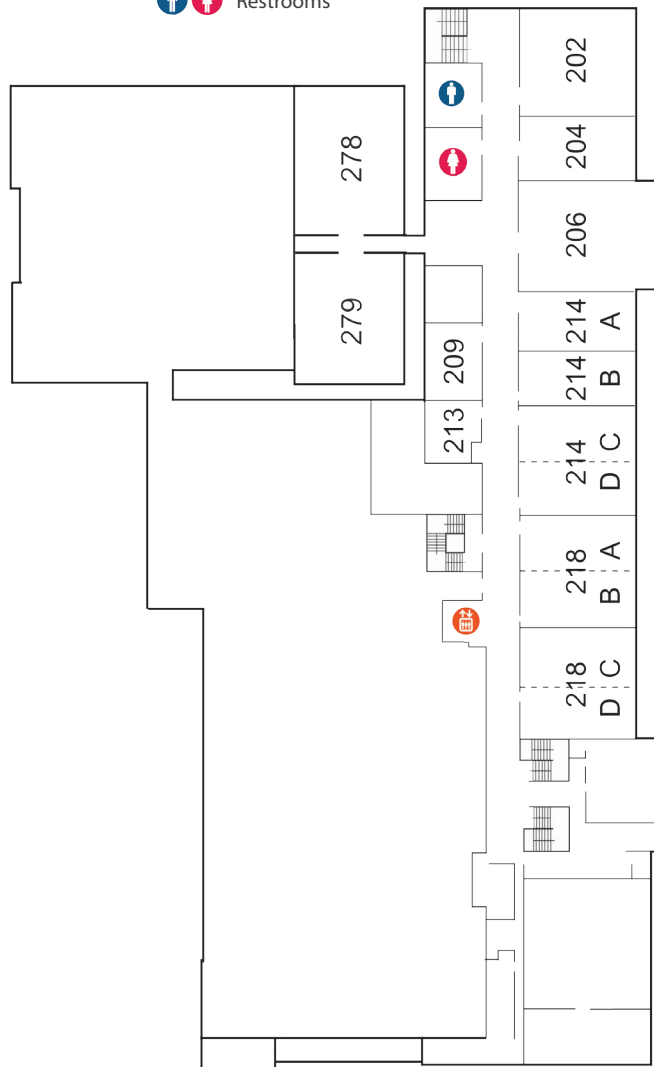
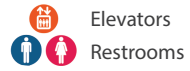
- Technical sessions



PMU 250 & 240

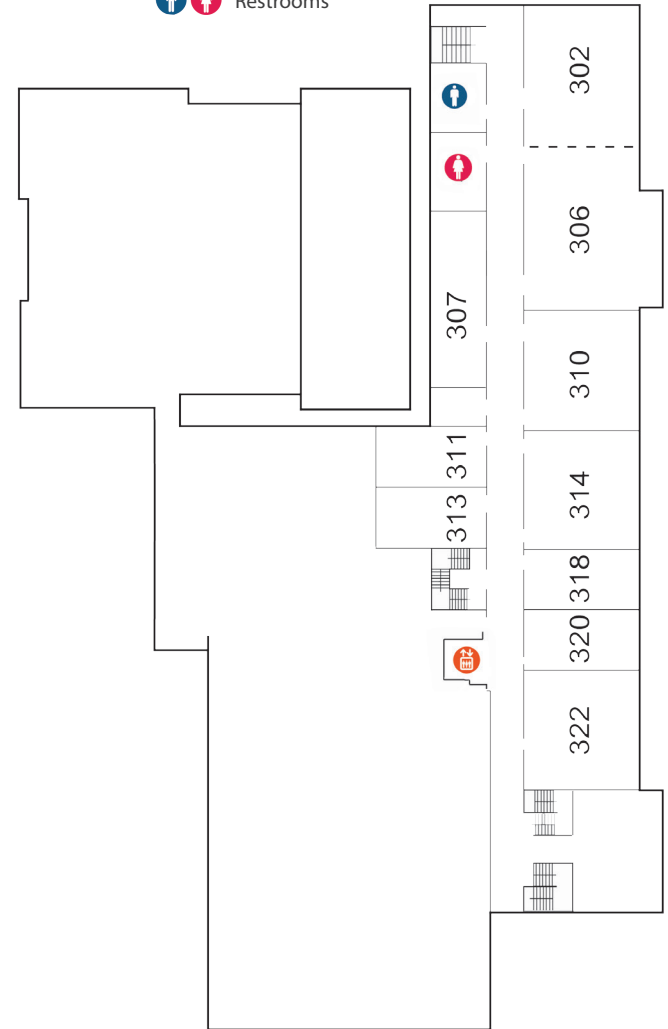
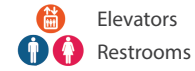
STEWART CENTER, SECOND FLOOR

- Technical sessions



STEWART CENTER, THIRD FLOOR

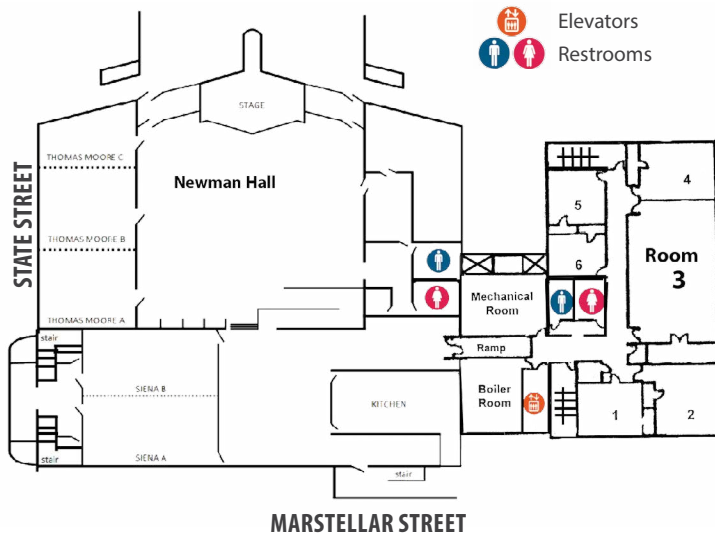
- Technical sessions



MAPS

ST. THOMAS/STREET VIEW

- Technical sessions



Purdue Road School 2017 Exhibitors

- 3M Co.
- ACEC Indiana
- Acrow Corp. of America
- Advanced Drainage Systems
- AECOM
- American Structurepoint
- Asphalt Pavement Association of Indiana
- ASC Group
- Avery Dennison
- AZTEC Engineering Group
- Beam, Longest and Neff
- Bioseal
- Burgess & Niple
- Christopher B. Burke Engineering
- Ciorba Group
- Collins Engineers
- CountryMark
- Crafcro
- D2 Land & Water Resource
- Davey Resource Group
- EMCS
- Equipment Marketing Co.
- Fleis & VandenBrink
- GAI Consultants
- GeoStabilization International
- Globe Asphalt Paving Co.
- Greenman-Pedersen
- GRW Engineers
- Hoosier Co.
- Hydro-Technologies
- IKOCPA
- Irving Materials
- KSE Testing Equipment
- MGI Traffic Control Products
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- Motz Enterprises/Flexamat
- MS Consultants
- Osburn Associates
- Palmer Power & Truck Equipment
- Parsons
- Primera Engineers
- Reinforced Earth Co.
- Resource International
- Roadway Bioseal
- S&ME
- Sagamore Ready Mix
- Sanders Precast Systems
- Sherwin Industries
- Shrewsbury & Associates
- Somerset CPAs and Advisors
- Tippmann Industrial/Propane Hammer E.F.I.
- United Consulting