

2016
TRANSPORTATION
CONFERENCE & EXPO
March 8-10, 2016



Technical Program

Last Updated January 22, 2016

Monday, March 7, 2016

Ethics

81A. Indiana Statutes and Rules

TIME	ROOM	PDH
2:00-2:50 PM	Union FACW/Union FACE	1

The course explains the role of statutes created by the Indiana Legislature concerning the professions and the role of the Registration Board for Professional Engineers in making and administering rules contained in Administrative Code 864 IAC for engineering. This version of the course includes: information on Indiana Statutes and Rules that apply to the Practice of Engineering, the process for becoming a professional engineer, the newly adopted Computer-Based Tests for the FE exam, the Continuing Engineering Education Rules adopted in 2010 and updated in 2014. It also compares the Indiana Rules with those of neighboring states. This course fulfills the rule requiring one hour on Indiana Statutes and Rules.

SPEAKER(S)

Vincent Drnevich, Purdue University

82A. Indiana Statutes and Rules

TIME	ROOM	PDH
3:00-3:50 PM	LOEB	1

The course explains the role of statutes created by the Indiana Legislature concerning the professions and the role of the Registration Board for Professional Engineers in making and administering rules contained in Administrative Code 864 IAC for engineering. This version of the course includes: information on Indiana Statutes and Rules that apply to the Practice of Engineering, the process for becoming a professional engineer, the newly adopted Computer-Based Tests for the FE exam, the Continuing Engineering Education Rules adopted in 2010 and updated in 2014. It also compares the Indiana Rules with those of neighboring states. This course fulfills the rule requiring one hour on Indiana Statutes and Rules.

SPEAKER(S)

Vincent Drnevich, Purdue University

Tuesday, March 8, 2016

Bridges

1. Load Rating of Buried Flexible Structures Without Plans

TIME	ROOM	PDH
11:00-11:50 AM	STEW 218CD	1

The presentation consists in a discussion on how to load rate buried flexible structures without plans. Because material properties and dimensions of the structure are not readily available, the load rating process might become difficult. Therefore, equipment and methods to gather enough data to load rate this type of structures are presented. Additionally, a procedure to load rate buried flexible structures is proposed. Ultimately, the procedure is exemplified using a bridge-size culvert on US24.

SPEAKER(S)

Rafael Armendariz, Purdue University

2. Hamilton County: GRS-IBS Construction – Lessons Learned

TIME	ROOM	PDH
1:00-2:50 PM	STEW 218CD	2

Hamilton County recognized the potential benefits of utilizing Geosynthetic Reinforced Soil (GRS) abutment walls. In 2014, USI Consultants; Beam, Longest, and Neff; Earth Exploration; and CTL Engineering were tasked to design four Hamilton Co. bridges utilizing this technology. The first of the four has been constructed. Find out the lessons learned from the designed and constructed GRS-IBS bridge(s) and why the County plans to build even more.

SPEAKER(S)

Faraz Khan, Hamility County
Tyler Wolf, USI Consultants, Inc.
Scott Roosa, Earth Exlporation, Inc.
Paul Aikins, Beam, Longest and Neff
Scott Dick, USI Consultants, Inc.
Patrick Conner, Purdue University

3. Bridge Maintenance Academy Collaboration

TIME	ROOM	PDH
1:00-1:50 PM	STEW 279	1

An overview of Minnesota DOT's Bridge Maintenance Academy, NHI Course Development on Bridge Maintenance, and the collaborative efforts of Indiana DOT, Minnesota DOT, Michigan DOT, IN LTAP, JTRP, & Purdue.

SPEAKER(S)

Sarah Sondag, Minnesota DOT
Jason DeRuyver, Michigan DOT

Tuesday, March 8, 2016

Bridges

4. Automated Deformation Monitoring Systems (ADMS) and I-65 Wildcat Bridge

TIME	ROOM	PDH
2:00-2:50 PM	STEW 279	1

Operating a real-time ADMS solution allows you to create valuable datasets and analyze the forces at work on your project that are causing movement, then take appropriate action in a timely manner. You can use cellular transmission on site to ensure that both live monitoring data as well as threshold alerts and warnings are received and processed remotely. A discussion of the use of an ADMS on the I-65 Wildcat Creek bridge will be presented.

SPEAKER(S)

Clem Kuns, TBIRD Design Services Corp.
Alan Jones, Topcon Positioning Systems

5. Wildcat Bridge - I-65 Artesian Well/Geotechnical/Structural

TIME	ROOM	PDH
3:00-4:50 PM	STEW 279	2

Session description coming soon.

SPEAKER(S)

TBD

Tuesday, March 8, 2016

Design/Construction

6. The Right Approach to Right of Way Engineering

TIME	ROOM	PDH
11:00-11:50 AM	STEW 206	1

There are many steps involved with preparing the proper documents for Right of Way Engineering. This presentation will discuss the steps and procedures required to be in compliance with INDOT statutes, including LRS electronic submittals.

SPEAKER(S)

Grant Niemeyer, Parsons Cunningham & Sharle Engineers, Inc.
Rodney Kelly, Parsons Cunningham & Sharle Engineers, Inc.
Sue Wood, Parsons Cunningham & Sharle Engineers, Inc.

7. Green Roads - Case Studies for a Complete Street and Rain Gardens

TIME	ROOM	PDH
1:00-1:50 PM	STEW 206	1

Rain Gardens for Roads: Installation & Maintenance Tips - Rain gardens and bio-swales provide an effective means of addressing water quality and quantity issues along roadways, IF properly designed and installed. IF NOT, they can create flooding, unsafe driving conditions, and ugly eyesores. This session will examine how to successfully incorporate rain gardens into roadways, including design and long-term maintenance considerations. Lessons learned from construction and upkeep of rain gardens in municipal installations will also be provided.

SPEAKER(S)

Nick Batta, Lochmueller Group
Andy Crouch, City of Jeffersonville
Bryan Wallace, Lochmueller Group

Butler University Sunset Avenue Street Reconstruction: A Green Infrastructure Case Study - Sunset Avenue is the primary transportation corridor for vehicular traffic that connects the Butler University campus with the surrounding residential neighborhood. Under a public-private partnership with the city, Sunset Avenue was redesigned based on a complete streets approach to accommodate pedestrians, bicycles, and vehicle traffic. In addition to multimodal transportation like bike lanes and new sidewalks elements, the streetscape design also includes linear rain gardens to manage stormwater within the right of way.

SPEAKER(S)

John Hazlett, Williams Creek Consulting
Rich Michal, Butler University

Tuesday, March 8, 2016

Design/Construction

8. Professional Surveyors Role in Design and Construction

TIME	ROOM	PDH
2:00-2:50 PM	STEW 206	1

Review Indiana Administrative Code 865 and other pertinent rules as it pertains to the role of the Professional Surveyor in Design and Construction tasks.

SPEAKER(S)

Dave Myers, Indiana Society of Professional Land Surveyors, Inc.

9. Using Drones for Aerial Mapping & Surveying

TIME	ROOM	PDH
3:00-3:50 PM	STEW 206	1

The use of small Unmanned Aircraft Systems (sUAS), commonly referred to as Drones, for commercial applications opens a world of possibilities previously considered cost-prohibitive. Commercial uses for Drones include aerial mapping and surveying, construction and utility infrastructure monitoring, real estate inspection, and asset management. This session will focus on how drones are being used with regard to planning, design, and construction projects.

SPEAKER(S)

TBD

10. J-Turn: An Intersection Safety Improvement

TIME	ROOM	PDH
4:00-4:50 PM	STEW 206	1

The INDOT Department of Transportation has begun utilizing an innovative intersection improvement to alleviate safety issues on rural divided highways. Restriction of the median crossing from side roads on a divided highway reduces the conflict points or opportunities for vehicular incidents. This presentation will discuss the application, safety improvements and design considerations for this type of intersection.

SPEAKER(S)

Joshua Cook, HNTB Corporation
Brian Malone, INDOT

Tuesday, March 8, 2016

Design/Construction

11. Post Construction Best Management Practices (BMP) for Reducing Stormwater Pollution

TIME	ROOM	PDH
1:00-1:50 PM	STEW 278	1

INDOT and other transportation agencies nationwide are seeking to better manage stormwater runoff and pollution through best management practice (BMP) implementation. BMPs include devices and passive assets permanently installed in the right-of-way to reduce stormwater pollution. As a designated Municipal Separate Stormwater Sewer System (MS4), INDOT is enhancing its stormwater management approach statewide. This presentation will describe national and Indiana trends as well as the challenges for selecting, operating, and maintaining post construction BMPs.

SPEAKER(S)

Michele Meyer, INDOT
Andrew Whelton, Purdue University

12. Storm Damages Reviewed by INDOT Hydraulics

TIME	ROOM	PDH
2:00-2:50 PM	STEW 278	1

Photos and discussion of factors that created storm damage that INDOT Office of Hydraulics was called upon to make recommendations, or provide expert input for.

SPEAKER(S)

Dale Sedler, INDOT
Mark Bailey, INDOT

13. How to Present Construction Specifications and Special Provisions

TIME	ROOM	PDH
3:00-3:50 PM	STEW 278	1

The purpose of this presentation is to help project managers and designers prepare the necessary information required for their contracts with regard to the Standard Specifications and any necessary special provisions. If the desired information is not readily found in the standard specifications or in the list of recurring special provisions, it may be necessary to incorporate a Unique Special Provision. It is important to know the proper way to write and present a USP.

SPEAKER(S)

Scott Trammell, INDOT
Melissa Peasley, INDOT

Tuesday, March 8, 2016

Design/Construction

14. Implementation of Roundabouts: City of Greenwood's Experience

TIME
4:00-4:50 PM

ROOM
STEW 278

PDH
1

The City of Greenwood opened its first roundabout in August of 2015 and has six more roundabouts in the pipeline to address congestion and safety issues throughout the City. The presentation will highlight why roundabouts were preferred at the various locations; how the project proposals were received by the public; and what has been the feedback on completed projects. The presentation will also highlight the challenges and solutions of a unique roundabout project in a congested area which includes a state highway.

SPEAKER(S)

Mark Richards, City of Greenwood
Trent Newport, CrossRoad Engineers
Jay Vorisek, Crossroad Engineers

Tuesday, March 8, 2016

Finance/Administration

15. Indiana Transportation Funding Update

TIME	ROOM	PDH
1:00-1:50 PM	STEW 313	1

The presentation will provide an update on the current and future state of Indiana's transportation funding.

SPEAKER(S)

Dan Brassard, INDOT

16. Local Elected Officials Sessions

TIME	ROOM	PDH
2:00-2:50 PM	STEW 313	0

Session description coming soon.

SPEAKER(S)

TBD

17. Preparation of the Annual Report

TIME	ROOM	PDH
3:00-3:50 PM	STEW 313	1

Session description coming soon.

SPEAKER(S)

TBD

18. Road Funding for Counties

TIME	ROOM	PDH
4:00-4:50 PM	STEW 313	1

Session description coming soon.

SPEAKER(S)

TBD

Tuesday, March 8, 2016

Human Capital

19. Women in Leadership Panel

TIME	ROOM	PDH
2:00-2:50 PM	STEW 204	1

The Women in Leadership Panel will have a select group of speakers for an energizing Talent Development Moderated Session.

SPEAKER(S)

Brandye Hendrickson, INDOT
Barbara Alder, Purdue University
Teresa Conroy-Roth, AXIA Consulting

20. 2025 Workforce Planning

TIME	ROOM	PDH
3:00-3:50 PM	STEW 204	0

The 2025 Workforce Planning session focuses on improving workforce development efforts. Our shortage of qualified workers will affect Public- and private-sector stakeholders in infrastructure, education, economic development, and other areas. External partners will assist with this presentation to showcase opportunities in this area.

SPEAKER(S)

Steve Wanders, Purdue University
Mark Jacob, Citizens Energy Group

21. EVOLVE Mentor Program

TIME	ROOM	PDH
4:00-4:50 PM	STEW 204	1

The EVOLVE Mentor Program will highlight leadership in mentoring program efforts at INDOT. This program started within the Engineering population, yet now growing. Group mentoring and Mentor training will also be a focus.

SPEAKER(S)

Sheryl Proctor, INDOT
Timothy Wells, INDOT
Ed Cox, INDOT

Tuesday, March 8, 2016

Innovative Project Delivery

22. Ohio River Bridges Project - Contract Oversight and Administration

TIME	ROOM	PDH
2:00-2:50 PM	STEW 202	1

Contract oversight and administration of the ongoing Ohio River Bridges Project will be discussed. The P3 contract has provided INDOT the unique opportunity to utilize new systems for the management and administration of a large and complex project including design coordination, material tracking and quality verifications.

SPEAKER(S)

Paul Boone, INDOT
Ron Heustis, INDOT

23. I-69, Section 6, Project Update

TIME	ROOM	PDH
3:00-3:50 PM	STEW 202	1

Section 6 is the final section of I-69 from Evansville to Indianapolis, which will link Martinsville to I-465 in Indianapolis. Project officials will provide a summary of the activities associated with the project's Tier 2 Environmental Impact Statement since the project resumed in October 2014. The discussion will include a summary of defining the project scope, public involvement, environmental analysis, and preliminary design

SPEAKER(S)

Tim Miller, HNTB Corporation
Jim Earl, INDOT

24. One Year Later: The State Street Redevelopment Project

TIME	ROOM	PDH
4:00-4:50 PM	STEW 202	1

Formally launched at Purdue Road School 2015, the innovative State Street Redevelopment Project is advancing towards the construction phase. A collaborative effort between the City of West Lafayette and Purdue University, the project will transform State Street into a place that reflects the vibrant spirit of the community. This interactive presentation will provide a summary of progress to date as well as a preview of the next steps in the project delivery process.

SPEAKER(S)

Don Petersen, Purdue University

Tuesday, March 8, 2016

Maintenance & Operations

25. Tipton County Case Study of Ready Mix FDR

TIME	ROOM	PDH
2:00-2:50 PM	STEW 214CD	1

After heavy freeze thaw of the 2014-2015 winter along with the movement of agriculture products during the thaw. Tipton county experienced severe damage to their rural chip sealed roads. We determined that these roads would be great choices for FDR.

SPEAKER(S)

Jerry Larson, IRMCA

26. Bridge Deck Preservation

TIME	ROOM	PDH
3:00-3:50 PM	STEW 214CD	1

Economical methods to preserve and extend the service life of Bridges; your community's most expensive highway infrastructure component. Cost effective bridge joint replacement utilizing easy to install and maintain Asphaltic Plug Bridge Joints. Waterproofing box beam and box culvert structures in order to protect the decks elements. Deck distress repairs using state-of-the-art patching materials and cost effective joint and crack sealants.

SPEAKER(S)

Jim Lippert, Crafcro, Inc.
Robert Frosch, Purdue University

27. Innovative Strategies to Preserve/Protect Rural Roads

TIME	ROOM	PDH
4:00-4:50 PM	STEW 214CD	1

Building on results from a 4-state Pooled Fund study on the impacts of heavy agricultural equipment on low volume roads, local road managers, road users and stakeholders in Wisconsin have developed and implemented a series of simple steps designed to preserve and protect rural asphalt and concrete pavements. This presentation will summarize the research and present a variety of tools towns and counties can readily use.

SPEAKER(S)

Kevin Erb, University of Wisconsin-Extension
Craig Hardy, Iowa County

Tuesday, March 8, 2016

Multi-Modal Transportation

28. Needs Driven Design Solutions in Railroad Projects

TIME	ROOM	PDH
11:00-11:50 AM	Union FACE	1

This presentation highlights state, federal, and railroad stakeholder coordination in public-private partnerships.

The Indiana Gateway Project is a \$71.4M construction project underway in northwestern Indiana. This project will help Norfolk Southern and Amtrak address the single most delay-prone intercity rail passenger corridor in the country.

The White River Freight Railroad Bridge Replacement by Indiana Railroad is a \$14M project which replaced the 116-year old bridge with a 1,271-foot long bridge in Greene County, IN.

SPEAKER(S)

Michael Riley, INDOT
Derek Tichy, Norfolk Southern Railway
Justin Cronin, The Indiana Rail Road Company
Matt Spiel, HNTB Corporation

29. Expansion of Panama Canal - Impact in the US

TIME	ROOM	PDH
1:00-1:50 PM	Union FACE	1

The expansion of the Panama Canal will affect economically different industries and regions of the US. In this presentation, statistics about the current operation of the Panama Canal and predictions regarding the economic impact in the US of its expansion, including anticipated business opportunities for Indiana entrepreneurs, are presented. Other topics covered in this presentation are construction challenges and operation requirements of the canal's third set of locks, which is necessary to expand its capacity.

SPEAKER(S)

Marco Lara Garcia, University of Southern Indiana

30. Railway/Highway At-Grade Crossing Surface Management

TIME	ROOM	PDH
2:00-2:50 PM	Union FACE	1

This multi-modal transportation activity involves selecting the most cost-effective rehabilitation technique that will provide safe, smooth, high-performance, long-life, serviceable crossings for the motoring public. The presentation offers step-by-step guidance for a project from its planning stages through to its implementation and post-construction management. It further instructs users on executing the three main project phases: 1) Pre-Project Planning, 2) Selecting Appropriate Rehabilitation Techniques based on the Pre-Project studies and guidance, and 3) Post-Project Administration.

SPEAKER(S)

Jerry Rose, University of Kentucky

Tuesday, March 8, 2016

Multi-Modal Transportation

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

TIME	ROOM	PDH
3:00-3:50 PM	Union FACE	1

The presentation will provide a general overview of the project scope and status. Discussion will review the various BRT elements and local considerations for the project including its status as the first in the nation all-electric BRT system, route/operating configurations, transit oriented development, traffic impacts, schedule and funding.

SPEAKER(S)

Michelle Gottschalk, CDM Smith, Inc.
Steve Goodreau, CDM Smith, Inc.
Justin Stuehrenberg, IndyGo

32. New Tools for Understanding Urban Multi-Modal Transportation Networks

TIME	ROOM	PDH
4:00-4:50 PM	Union FACE	1

Understanding the complexities of urban, multimodal transportation systems requires technologically-advanced approaches. Fortunately, today's analytical tools are increasingly up to the task. This presentation will focus on techniques used on St. Louis' rapidly expanding Central Corridor and their role in facilitating data-driven decision-making. This includes a demonstration of a multi-resolution model combining elements of traditional travel demand models with traffic simulation and the dynamic assignment of traffic, as well as the application of multi-modal simulations.

SPEAKER(S)

Chris Beard, Lochmueller Group
Lauren Delaney, Lochmueller Group

Tuesday, March 8, 2016

Pavements

33. The US 40 INDOT Cold In-place Recycling Project

TIME	ROOM	PDH
2:00-2:50 PM	STEW 302	1

Cold in-place recycling (CIR) is a rehabilitation technique in which the existing HMA pavement is milled, blended with asphalt stabilizers and placed back onto the pavement in one continuous process. This treatment type was employed on an INDOT project on a portion of US 40 in Vigo County. The objective of this presentation is to summarize the CIR project from design, bidding and construction to ultimate completion. Lessons learned and design considerations for future CIR projects will also be discussed.

SPEAKER(S)

Jason Wielinski, Heritage Research Group
Michael Prather, INDOT

34. Subgrade Types and Its Construction in High Moisture Foundation Soils (Case Study)

TIME	ROOM	PDH
3:00-3:50 PM	STEW 302	1

Describe the INDOT Pavement Subgrade Types and Geotechnical recommendations to help during construction

SPEAKER(S)

Nayyar Siddiki, INDOT

Tuesday, March 8, 2016

Pavements

35. Non-Destructive Testing-Agency Side and Private Sector Perspective

TIME	ROOM	PDH
4:00-4:50 PM	STEW 302	1

Enhancing and Automating Non-Destructive Evaluations of Civil Infrastructure - The state of America's deteriorating infrastructure presses us to find solutions to assess infrastructure with limited funds and resources for repairs. By research and development of non-destructive testing technologies, GS Infrastructure integrates multiple sensor driven technologies to collect and interpret more data than was previously available while eliminating the need for lane closures, removing personnel from unsafe traffic zones, and employing automated data collection to improve efficiency and provide effective data for infrastructure repairs.

SPEAKER(S)

Jennifer Julien, GS Infrastructure, Inc.

INDOT R&D Specialized Testing Presentation Series: GPR, FWD, and Friction - Special pavement tests, such as GPR, FWD, and Friction, have been utilized to provide data not only for pavement and bridge deck preservation, rehabilitation, and resurfacing, but also for roadway forensic investigation. This presentation will first briefly introduce the fundamentals of GPR, FWD and Friction and field testing. Subsequently, this presentation will explore the interpretations of GPR, FWD, and Friction test results. Finally, the focus of this presentation will be the successful applications of GPR, FWD, and Friction tests in pavement and bridge engineering

SPEAKER(S)

Shuo Li, INDOT
Dwayne Harris, INDOT
Richard Ji, INDOT

36. Case Study on Concrete Overlays – SR 161 and SR 55

TIME	ROOM	PDH
1:00-1:50 PM	STEW 306	1

Concrete (PCCP) overlays can play an important role in total system preservation, ultimately helping agencies stretch their budgets by extending the service life of the overlay to 25 years or more. Learn how design, build, and inspect concrete overlay construction at this case study presentation on SR 161 in Dubois Co. and SR 55 in Lake Co.

SPEAKER(S)

Mike Byers, American Concrete Pavement Association - Indiana Chapter

Tuesday, March 8, 2016

Pavements

37. What's New with HMA

TIME	ROOM	PDH
2:00-2:50 PM	STEW 306	1

INDOT is in the process of reworking our current HMA specification with a goal of being complete by Dec 31st, 2015. This would be an overview of the changes to the 400 section.

SPEAKER(S)

John Leckie, INDOT
Matthew Beeson, INDOT

38. Secondary Road Reclamation Utilizing Sustainable Steel Slag Products

TIME	ROOM	PDH
3:00-3:50 PM	STEW 306	1

As the local agency budgets have grown tighter, while at the same time rural pavements have become older, the need to develop economic maintenance/rehabilitation techniques has become critical. Several areas in Northeastern Indiana have developed reclamation techniques, utilizing sustainable materials, which are both economic and are proving to perform very well compared to other methods. This presentation will review those techniques.

SPEAKER(S)

John Yzenas, Edw C. Levy Co.
Kelly Cook, Edw C. Levy Co.

39. Designing and Building Roundabouts

TIME	ROOM	PDH
4:00-4:50 PM	STEW 306	1

Concrete pavement is well suited for the loading and stresses that occur in roundabout configurations. Learn how to optimize the performance of your roundabouts with proper design of concrete pavement for these innovative intersection solutions. Attendees will learn about pavement design, joint layout, guidance on concrete mix design to ensure joint durability, and construction methods utilized on successful concrete roundabout projects."

SPEAKER(S)

Christopher Tull, CRT Concrete Consulting
Wayne Bunnell, Purdue University
Drake Krohn, Purdue University

Tuesday, March 8, 2016

Project Management/Planning

40. Effective Subsurface Utility Locating

TIME	ROOM	PDH
1:00-1:50 PM	Union FACW	1

Subsurface utility exploration is the only tool used to accurately locate underground utilities associated with a design project. Learn about the available technologies to quickly and accurately provide Quality Level A & B Information.

SPEAKER(S)

Natalie Parks, American Structurepoint, Inc.
Tracy Pursell, Blood Hound, Inc.

41. Update on In Lieu Fee Mitigation Program Development

TIME	ROOM	PDH
2:00-2:50 PM	Union FACW	1

Update progress on development of DNR's IN-SWMP program, which will allow in lieu fee mitigation payments for CWA 401/404 impacts.

SPEAKER(S)

Laura Hilden, INDOT

42. Utility and Railroad Coordination for Design Build Projects

TIME	ROOM	PDH
3:00-3:50 PM	Union FACW	1

when projects are to be delivered using the Design Build option, the utility coordination can be confusing. Kenny Franklin will discuss the IN code 105 IAC 13 as it relates to Design Build and the deliverables and expectations for all parties in the process of coordinating with Utilities or Railroads

SPEAKER(S)

Kenny Franklin, INDOT

Tuesday, March 8, 2016

Project Management/Planning

43. US 231 Relocation Project Capstone

TIME
4:00-4:50 PM

ROOM
Union FACW

PDH
1

The US 231 Relocation Study Capstone provides an opportunity to take a 'soft' look back on the evolution of the planning, environmental assessment, design and ultimate construction of this important project in West Lafayette. What is a Capstone? In academic terms, a capstone project is an opportunity to analyze an experience, problem or opportunity whose lessons learned can be used in a real world setting. INDOT used the US 231 Relocation project as an opportunity to explore the value of using different approaches to the project development process including more robust coordination with the MPO, Purdue University, employing the first Community Impact Assessment (CIA), developing context sensitive solutions and full engagement of a Community Advisory Committee. The relocation of US 231 was successfully constructed and opened to traffic in 2013. This Capstone will evaluate how the project was developed after the completion of the Environmental Assessment and CIA work, what transpired during the design and land acquisition processes and ultimately how the commitments made during the study process came to be once the project was completed. The value of this Capstone lies in its ability to demonstrate how the project development process evolves over time, what went well and what could be done differently to continue to enhance project delivery.

SPEAKER(S)

Sallie Fahey, Area Plan Commission of Tippecanoe County
Wendy Vachet, Michael Baker International

Tuesday, March 8, 2016

Public Relations/Communications

44. Community Involvement within Your Organization

TIME	ROOM	PDH
1:00-1:50 PM	FOWLER	1

Active community involvement programs within your organization allow the engineering community to serve one another while promoting a positive work environment and strengthening the communities that are being served. Various community involvement programs will be presented that provide positive mentoring skills and/or public service to various organizations. Ongoing community involvement programs in two large organizations will be presented. Time will be allowed for questions and further dialogue on individual program successes.

SPEAKER(S)

Mark Jacob, Citizens Energy Group
Chris Gale, HNTB Corporation

45. Designing and Implementing a Social Media Plan

TIME	ROOM	PDH
2:00-2:50 PM	FOWLER	1

This presentation will discuss how to create and implement a social media plan and improve your social media presence and will outline steps for designing a plan, evaluating its success, and establishing sustainable practices.

SPEAKER(S)

Brittany Williamson, INDOT
Ashley Watson, Purdue University

46. Driving Economic Development through Community Outreach

TIME	ROOM	PDH
3:00-3:50 PM	FOWLER	1

Downtown Branson hosts over 7 Million visitors every year and continues to be a substantial source of revenue for the City. Branson has made a 5 year commitment to revitalizing a 6 block area of the historic downtown. The presentation will focus on how the unique approach to the community outreach and consensus building was utilized to create community drivers for economic development and infrastructure redevelopment in a historic district.

SPEAKER(S)

Steve Prange, Crawford, Murphy & Tilly, Inc.

Tuesday, March 8, 2016

Public Relations/Communications

47. Ohio River Bridges Project - Communications and Public Outreach

TIME
4:00-4:50 PM

ROOM
FOWLER

PDH
1

The Ohio River Bridges Project has provided a special opportunity for communications and public outreach. The project, being administered by Indiana and Kentucky and bordering numerous municipalities, has presented challenging internal and external communications issues. Through defined protocols and innovative tracking, communications and public involvement has been a success story for our customers. This presentation will discuss the effort to date and lessons learned for the future.

SPEAKER(S)

Angela Nichols, INDOT
Paul Boone, INDOT

Tuesday, March 8, 2016

Public Safety

48. Indiana Traffic Incident Management Effort (IN-TIME) Executive Session

TIME	ROOM	PDH
2:00-2:50 PM	STEW 214AB	1

During this presentation members of IN-TIME will highlight the need for coordinated response among all first responders at incident scenes. Through the use of statistics, videos and real life events we will paint the picture of the need for quickly clearing roadways to restore normal traffic flow and reduce/eliminate secondary crashes, which often result in deaths and serious injuries/

SPEAKER(S)

Mike Lepper, Indiana State Police
Steve Harney, INDOT

49. Major Detours from a Public Safety Perspective

TIME	ROOM	PDH
3:00-3:50 PM	STEW 214AB	1

This session will discuss the logistics associated with implementing an emergency 67 mile detour on I-65. Topics will cover signing, signal installation, ITS Monitoring Technology, and coordination with local public safety officials.

SPEAKER(S)

Ed Cox, INDOT
Jim Sturdevant, INDOT

50. Railroad Grade Crossing Status Notification System

TIME	ROOM	PDH
4:00-4:50 PM	STEW 214AB	1

Emergency Vehicles and the general public can get unnecessarily delayed when railroad grade crossings are occupied by trains and the crossing is not visible from upstream diversion points. This system detects trains and can predict the downstream crossing closure times for emergency vehicles. It can also activate signs at alternate route diversion points for motorists.

SPEAKER(S)

Dan Shamo, AECOM
Michael Farmer, City of Anderson

Tuesday, March 8, 2016

Road Scholar

51A. Road Scholar Core Course #10: Drainage for Street and Highway Managers

TIME	ROOM	PDH
2:00-4:50 PM	KRANNERT	3

This 3 hour workshop is planned for county highway engineers, supervisors, county commissioners, city engineers, street commissioners and those who are interested in earning the designation of Master Road Builder in the Indiana LTAP Road Scholar Program.

This course will cover the following:

- Drainage Basics
- Legal Aspects/Drainage
- Permeable Surfaces
- Culvert Drainage

SPEAKER(S)

Thomas Burke, Jr., Christopher B. Burke Engineering, Ltd.

William Enslen, Enslen, Enslen & Matthews

Monica Giermek, Christopher B. Burke Engineering, Ltd.

Tuesday, March 8, 2016

Safety

52. INDOT Safety Special Provision High Friction Surface Treatment

TIME	ROOM	PDH
11:00-11:50 AM	STEW 310	1

INDOT is in the processes of developing a special provision to govern the mechanical application of High Friction Surface Treatments (HFST) using primarily Calcined Bauxite aggregate and epoxy binder for short road segments. This new process is being developed as a systemic traffic safety improvement program for locations with high risk for roadway departure crashes.

SPEAKER(S)

TBD

53. Road Safety Audits

TIME	ROOM	PDH
1:00-1:50 PM	STEW 310	1

Road Safety Audits can be an integral tool to support an application for HSIP funds. This presentation will show how an RSA is used to document the need for a project requesting an HSIP eligibility determination. Attendees will learn how to conduct an RSA, who is needed on the RSA review team, how safety concerns are identified and documented and how an RSA is used as part of the application for eligibility determination of HSIP funds. A sample RSA will be used in this presentation.

SPEAKER(S)

Opal Kuhl, Tippecanoe County Highway Department
Doug Poad, APCTC
Greg Haltom, Tippecanoe School Corporation

Tuesday, March 8, 2016

Safety

54. Good Safety Program: Straight Ahead

TIME	ROOM	PDH
2:00-2:50 PM	STEW 310	1

AASHTO and FHWA conducted a joint scan tour in the fall of 2015 to document what makes a good safety program. Topics to be presented that were discussed on this seven-state tour include: data collection/analysis, funding, systemic safety improvements, types of projects and initiatives, project development and delivery, cooperation with safety partners, and measuring safety. A wealth of information on safety programs was pulled together in one effort and coalesced in one document.

SPEAKER(S)

Rick Drumm, FHWA

55. The Lesser Known Side of Highway Safety

TIME	ROOM	PDH
3:00-3:50 PM	STEW 310	1

Many highway professionals have heard the main concepts of highway safety. But there are many odd statistics, different concepts, and unique countermeasures that are not well publicized. These will get us to think that they are brilliant – or silly. As a host of ideas are presented, you will be challenged to consider how to improve highway safety on your roads, and maybe share some of your own ideas.

SPEAKER(S)

Rick Drumm, FHWA

56. Safety Performance of Indiana Road Barriers

TIME	ROOM	PDH
4:00-4:50 PM	STEW 310	1

The most comprehensive and in-depth evaluation of road barriers to date will be presented. It included median cable barriers, guardrails and concrete walls, and roadside guardrails. The study made a considerable effort to control data quality and to apply adequate quantitative analysis and statistical models. Design and traffic related factors of barrier-relevant crash frequency and severity were identified. A procedure of predicting the safety benefits of barriers useful in design and safety management is provided.

SPEAKER(S)

Andrew Tarko, Purdue University

Tuesday, March 8, 2016

Traffic Operations

57. Railroad Preemption Signals at a Roundabout Interchange

TIME	ROOM	PDH
1:00-1:50 PM	STEW 218AB	1

The use of roundabouts near at-grade railroad crossings has traditionally been shied away from due to the inability to ensure that the tracks can be cleared in advance of a railroad event. The Ohio River Bridges project incorporated a roundabout interchange near an at-grade railroad crossing on SR 62, and this concern was mitigated using traffic signals. Signal configuration and controller logic, along with video of operational signals, will be shared in this presentation.

SPEAKER(S)

Jeromy Grenard, American Structurepoint, Inc.
Hardik Shah, American Structurepoint, Inc.
James Howard, INDOT

58. Maintenance Performance Measures for Traffic Signal Systems

TIME	ROOM	PDH
2:00-2:50 PM	STEW 218AB	1

Development and examples of using data collected by traffic signal controllers to monitor, detect, and alert system operators of potentially failing detection devices.

SPEAKER(S)

Jay Grossman, Elkhart County Highway

59. Scaling High-Resolution Data to Statewide System Management

TIME	ROOM	PDH
3:00-3:50 PM	STEW 218AB	1

The research examines 70 signals across seven corridors over a six-month period. Approximately three billion high-resolution signal events including 217 million phase occurrences are analyzed, with 126 million of those phases occurring during the 0600–1900 time period. This paper proposes a scalable method to identify phase occurrences with insufficient green. Applying a previously-developed split failure performance measures, summaries to identify where to prioritize resources for signal re-timing activities and geometric improvements are explored.

SPEAKER(S)

Howell Li, Purdue University

Tuesday, March 8, 2016

Traffic Operations

60. Optimizing Diverging Diamond Traffic Signals

TIME
4:00-4:50 PM

ROOM
STEW 218AB

PDH
1

This paper presents a methodology for optimizing offsets on a corridor including a single-controller DDI. The methodology is demonstrated by its application to a 5-intersection arterial route including a DDI, and the outcomes are assessed by measurement of travel times by Bluetooth vehicle re-identification.

SPEAKER(S)

Chris Day, Purdue University

Wednesday, March 9, 2016

Aviation

61. Purdue Aviation and Transportation Technology Activities

TIME	ROOM	PDH
8:00-8:50 AM	STEW 204	1

An Innovative Education and Training Model for the Airline Industry: iPOP (Industry-Purdue Opportunity Pipeline) - iPOP (the Industry-Purdue Opportunity Pipeline) is an innovative education and training model that provides affordability and accessibility, STEM leadership, world-changing research, and transformative education. The iPOP model strives to create the employee of the future based on industry needs and demands. It also assists in enhancing the knowledge and skills of existing industry professionals making them better at their jobs and creating internal advancement career opportunities.

SPEAKER(S)

John Wensveen, Purdue University

Estimating Operations and Airport-Specific Landing Take-off Cycles at GA Airports - Estimating greenhouse gas and particulate emissions around airports is important when seeking to understand the impact on a community of existing or increasing aviation operations. Environmental consultants prepare models, and these models need estimates of the number of operations and landing/take-off (LTO) cycle characteristics. This information is difficult for GA airport managers to obtain. This presentation shows how to estimate LTO characteristics and the number of operations more easily by using sampling methods.

SPEAKER(S)

Mary Johnson, Purdue University
Chenyu Huang, Purdue University

62. Unmanned Aviation Systems (UAS) - Drones, FAA Requirements

TIME	ROOM	PDH
9:00-9:50 AM	STEW 204	1

UAS - Drones have become a serious concern and topic for potential conflicts with airplane traffic. The presentation will provide information concerning drone activity in relation to aircraft and FAA requirements regarding drones.

SPEAKER(S)

Richard Baker, Indiana State University
Drew Genneken, Indianapolis Airport Authority

Wednesday, March 9, 2016

Aviation

63. Inspection

TIME	ROOM	PDH
10:00-10:50 AM	STEW 204	1

Airport Self Inspection on a Mobile Device - Self-inspection of airport facilities is required to maintain safe flight operations and operating environment. Resource International, Inc. provides a mobile, web-based asset management tool for safety reports and will illustrate how this innovative, technological tool track hazards, issues maintenance work orders, provide inspection reports, and performs other daily airport tasks. This presentation will discuss how this technology can simplify information gathering and sorting and will explore additional airport operational uses.

SPEAKER(S)

Todd Majidzadeh, Resource International, Inc.
Bernard Schubach, Resource International, Inc.

Inspection services utilizing Unmanned Aircraft Systems (drones) - Brief overview of Unmanned Aircraft Systems, pertinent regulations, how to operate commercially, discuss limitations, touch on engineering applications, explore various platforms and show-and-tell how UAS's are being used to help specifically with deliverables in a safer, faster and more economical manner.

SPEAKER(S)

Michael Mang, BF&S Civil Engineers
Andrew Maksymovitch, BF&S Civil Engineers

64. Gary Airport: Runway Safety Area Correction Challenges

TIME	ROOM	PDH
1:00-1:50 PM	STEW 204	1

Facing a congressional mandate, the Gary airport was tasked with correcting non-standard runway safety areas at both ends of its 7,000 ft runway. Simultaneously, the Airport leveraged this opportunity to add runway length to enhance its capacity and marketability for the future. The obstacles and impediments included, but were not limited to, the Grand Calumet River, the Indiana Toll Road, the Canadian National Railroad, globally rare Dune and Swale Wetlands, Dual Overhead 345kV Power Lines, the CITGO Fuel Storage Facility, Environmentally Impacted Soils and Groundwater and a Former RCRA Cleanup Site. The FAA has described this as the most complicated and challenging project in FAA history. This presentation will discuss the lows as well as the highs, how the effort involved a teaming effort of many State and Federal Agencies and what creative solutions were utilized to ultimately meet the final deadline.

SPEAKER(S)

Kenneth Ross, NGC Corp.
Dan Vicari, Gary/Chicago International Airport

Wednesday, March 9, 2016

Aviation

65. Airport Sustainability

TIME	ROOM	PDH
2:00-2:50 PM	STEW 204	1

Aviation Airports- Transition to Unleaded Avgas - Explain Tankage, Signage, Fuel Handling and Safety Guidelines

SPEAKER(S)

Chris D'Acosta, Swift Fuels

Solar Farm at Indianapolis International Airport - The Indianapolis International Airport is home to the world's largest airport based solar farm complex. Its three solar farms occupy more than 180 acres of land. The project represents a successful public-private partnership, returning undeveloped aviation buffer land to commercial use. This presentation will review the project's various components focusing on the aviation aspects, hurdles that were overcome, and lessons learned.

SPEAKER(S)

Jarod Klaas, Indianapolis Airport Authority
Drew Genneken, Indianapolis Airport Authority

66. Airport Planning - Expansion and Overlay Districts

TIME	ROOM	PDH
3:00-3:50 PM	STEW 204	1

Aiport Overlay Districts - Fort Wayne International Airport (FWA) has developed an Airport Overlay District to help protect the area near the airport. The presentation will inform about the creation and implementation of the district at FWA.

SPEAKER(S)

Scott Hinderman, Fort-Wayne Allen County Airport Authority
Joe Marana, Fort-Wayne Allen County Airport Authority

Evansville Runway 4/22 Safety Area Improvements - Evansville Regional Airport relocated and extended Runway 4/22 to improve the runway safety areas. Land acquisition, Railroad relocation, Road relocations, Navaid relocations were all required in concert with airport facility changes to complete the project.

SPEAKER(S)

Douglas Joest, Evansville Regional Airport
Todd Schultheis, CHA Consulting

Wednesday, March 9, 2016

Bridges

67. Girder Erection on Complex, Long-Span Plate Girder Bridges

TIME	ROOM	PDH
8:00-8:50 AM	STEW 218CD	1

This presentation highlights four case studies associated with girder erection on complex, long-span plate girder bridges. Each bridge is located in different geographic locations (Chicago, St. Louis, and two in Tennessee) and were erected by different Contractors using different methods. Each construction technique was selected to address the constraints of the project and meet the required project delivery timeline. All four bridges are over 1,500' long with main spans ranging from 250' to 490'.

SPEAKER(S)

Andrew Keaschall, Alfred Benesch & Company

68. The Design and Behavior of Spliced Girder Bridges

TIME	ROOM	PDH
9:00-9:50 AM	STEW 218CD	1

Spliced girder bridge technology has continued to attract attention due to its versatility over traditional prestressed concrete highway bridge construction. This emerging technology effectively extends span lengths that can be achieved in the field by joining multiple precast concrete girders together using post-tensioning. A large-scale experimental program aimed at gaining a better understanding of spliced girder behavior has been conducted. The presentation will detail the primary findings from the research and relate them to design.

SPEAKER(S)

Chris Williams, Purdue University

69. Strut-and-Tie Modeling Provisions: What, When, and How

TIME	ROOM	PDH
10:00-10:50 AM	STEW 218CD	1

The presentation will discuss the basic principles for the design of reinforced concrete (RC) bridge components using strut-and-tie modeling (STM). Updated STM design provisions developed based on an extensive research project that included large-scale tests on deep beam specimens will soon be incorporated into the AASHTO LRFD specifications. The updated provisions will be introduced during the presentation. Attendees are expected to gain confidence in the implementation of STM for the design of RC bridge components.

SPEAKER(S)

Chris Williams, Purdue University

Wednesday, March 9, 2016

Bridges

70. US 60 over Tennessee River New Truss Bridge

TIME	ROOM	PDH
1:00-1:50 PM	STEW 218CD	1

The superstructure features an aesthetically pleasing truss without verticals, sway and portal bracing utilized in conventional truss design. The challenge of providing this clean and open design was met by paying particular attention to truss proportions, erection requirements, connection details and seismic requirements (New Madrid Fault Zone).

Due to the many challenges, the contractor and the KYTC worked closely together to successfully complete this unique structure despite design changes, flooding, and an accelerated schedule.

SPEAKER(S)

Craig Klusman, AECOM
Michael McGregor, KYTC

71. Improvement Methods Using Column Tupe Techniques

TIME	ROOM	PDH
2:00-2:50 PM	STEW 218CD	1

Ground improvement methods using column-type techniques are used on an increasing scale for the construction of road and railway embankments in Indiana. In this presentation the main emphasis is put on methods for the improvement of soft soils using column-type techniques. The following methods will be discussed: stone columns, aggregate columns, sand compaction piles, grout injected stone columns with load transfer mats constructed with geosynthetic reinforcements, geotextile encased sand columns, lime and lime cement columns and friction piles in soft soils. The current state-of-the-art on these techniques, some research results and the experiences gained from two important projects are presented.

SPEAKER(S)

Malek Smadi, GEOTILL, Inc.

72. County Bridge Inspection Updates and LPA Certification

TIME	ROOM	PDH
8:00-9:50 AM	STEW 279	2

This presentation will discuss recent changes to the County Bridge Inspection Program from the perspective of both the FHWA and INDOT. As this course is a yearly requirement, all county ERCs are encouraged to attend.

SPEAKER(S)

Jessica Miller, INDOT
Keith Hoernschemeyer, FHWA
Merril Dougherty, INDOT
Andrew Wortkoetter, INDOT

Wednesday, March 9, 2016

Bridges

73. Innovative Culvert Invert Preserves Stream Ecology

TIME	ROOM	PDH
10:00-10:50 AM	STEW 279	1

Consideration of stream ecology and stream biology is an emerging trend in the effective design of culverts. Current methods of burying the inverts of culvert have been shown to provide limited or no benefits. To address limitations in existing technologies and current design practices Colorado State University has developed a culvert invert technology that retains streambed material and provides stream ecology benefits. This presentation will review the development and testing process from Colorado State University.

SPEAKER(S)

Joseph Fisher, CONTECH Engineering Solutions
Scott Aston, CONTECH Engineering Solutions

74. Case Study: SR7 Emergency Bridge Repairs During Design

TIME	ROOM	PDH
1:00-1:50 PM	STEW 279	1

Case study of two SR 7 bridge projects, both of which suffered failures during the design phase that required emergency temporary repairs. Each project included good examples of innovative cost savings found by implementing practical design methods. Examples: (re-using beams from emergency repair, widening structure to eliminate run-around bridge, changing beam types, re-use of existing footings, shoulder width reduction etc.). Emergency repairs required schedule adjustments and flexible design to incorporate repairs to minimize re-work.

SPEAKER(S)

Randall Brooks, Burgess & Niple, Inc.
Bill Read, INDOT
Jeff Drake, Burgess & Niple, Inc.

75. The Longest Integral Abutment Bridge (IAB) in Illinois

TIME	ROOM	PDH
2:00-2:50 PM	STEW 279	1

The Illinois Tollway I-90 bridge over the Kishwaukee River is a jointless four-span weathering steel plate girder structure. The 630' long bridge is the longest IAB in Illinois and among the longest in the States. The bridge required special structural analysis to model soil-structure interaction, pile and superstructure behavior and was instrumented to validate the prediction of the 3D structural model to develop design and detailing criteria. Construction photos and lessons learned will be presented.

SPEAKER(S)

Salvatore DiBernardo, Ciorba Group, Inc.
Brett Sauter, Ciorba Group, Inc.

Wednesday, March 9, 2016

Design/Construction

76. NEW Curb Ramp and Access Standards for ADA

TIME	ROOM	PDH
8:00-8:50 AM	STEW 214AB	1

The Indiana Department of Transportation (INDOT) is in the process of adopting The Public Right of Way Accessibility Guidelines (PROWAG) for pedestrian access route design within public right of way. Updates to the Indiana Design Manual and Standard Drawings will be presented and discussed. These updates include revisions anticipated in 2016 to the curb ramp standard drawings and pedestrian signal placement standards. Presentation will include information from the INDOT standards section and INDOT ADA committee.

SPEAKER(S)

Katherine Smutzer, INDOT

77. ADA and Title VI: Remaining Eligible for Funding

TIME	ROOM	PDH
9:00-10:50 AM	STEW 214AB	2

Learn how to effectively implement Nondiscrimination & Accessibility Requirements in your community to become and remain compliant and eligible for federal funds. Hear about changes to the law and requirements effective in 2015 and beyond. Learn what resources are available to get and keep your community on track, and understand how several Indiana communities are making strides in ADA & Title VI compliance.

SPEAKER(S)

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

78. FHWA Compliance: Results and Responses for 2015/2016

TIME	ROOM	PDH
1:00-1:50 PM	STEW 214AB	1

The presentation will discuss and describe the results from FHWA's 2015 Compliance Assessment Program and then explain how these results are being used to direct the FHWA's activities in 2016.

SPEAKER(S)

Jay DuMontelle, FHWA
Eryn Fletcher, FHWA

Wednesday, March 9, 2016

Design/Construction

79. Effective Roadway Management of Septic Systems & Wells

TIME	ROOM	PDH
2:00-2:50 PM	STEW 214AB	1

Roadway construction in rural & urban fringe regions impacts properties that utilize septic systems & wells. Due to their fundamental difference from centralized utilities, they can fall through the cracks & create critical path problems & unforeseen costs. Decentralized water & wastewater experts will present engineering fundamentals, construction techniques & costs, regulations & regulatory process, and tips to effectively manage the replacement & protection of septic systems & wells.

SPEAKER(S)

Matt Gavelek, Weaver Consultants Group
Denise Wright, IN State Department of Health

80. The Indiana Geospatial Coordinate System, (INGCS)

TIME	ROOM	PDH
3:00-4:50 PM	STEW 214AB	2

The objective of the seminar is to introduce the audience to the Indiana Geospatial Coordinate System (InGCS), compare and contrast it to UTM 16, Indiana State Plane East and West Zones, discuss the advantages of low distortion projections and provide recommended guidelines for use of the InGCS.

SPEAKER(S)

Matthew Badger, Lochmueller Group
Matt Healy, VS Engineering

Wednesday, March 9, 2016

Ethics

81B. Indiana Statutes and Rules

TIME	ROOM	PDH
2:00-2:50 PM	Union FACW/Union FACE	1

The course explains the role of statutes created by the Indiana Legislature concerning the professions and the role of the Registration Board for Professional Engineers in making and administering rules contained in Administrative Code 864 IAC for engineering. This version of the course includes: information on Indiana Statutes and Rules that apply to the Practice of Engineering, the process for becoming a professional engineer, the newly adopted Computer-Based Tests for the FE exam, the Continuing Engineering Education Rules adopted in 2010 and updated in 2014. It also compares the Indiana Rules with those of neighboring states. This course fulfills the rule requiring one hour on Indiana Statutes and Rules.

SPEAKER(S)

Vincent Drnevich, Purdue University

82B. Indiana Statutes and Rules

TIME	ROOM	PDH
3:00-3:50 PM	LOEB	1

The course explains the role of statutes created by the Indiana Legislature concerning the professions and the role of the Registration Board for Professional Engineers in making and administering rules contained in Administrative Code 864 IAC for engineering. This version of the course includes: information on Indiana Statutes and Rules that apply to the Practice of Engineering, the process for becoming a professional engineer, the newly adopted Computer-Based Tests for the FE exam, the Continuing Engineering Education Rules adopted in 2010 and updated in 2014. It also compares the Indiana Rules with those of neighboring states. This course fulfills the rule requiring one hour on Indiana Statutes and Rules.

SPEAKER(S)

Vincent Drnevich, Purdue University

Wednesday, March 9, 2016

Finance/Administration

83. Federal-Aid Funding Requirements for Local Public Agencies

TIME	ROOM	PDH
8:00-8:50 AM	STEW 313	1

There is a renewed emphasis by FHWA on controlling how projects are managed - especially on federally funded LPA projects. This session would review the federal requirements LPAs must follow, both before and after federal funds are obligated, to prevent loss of federal funding.

SPEAKER(S)

Karen Hicks, INDOT
Tony Perkinson, FHWA

84. The Time Is Now for LED Street Lighting

TIME	ROOM	PDH
9:00-9:50 AM	STEW 313	1

Nipsco, Duke Energy and IPL are all looking at LED lighting. The state of those efforts and why it is so difficult for the current regulatory model to accommodate this technology.

SPEAKER(S)

Ted Sommer, London Witte Group

Wednesday, March 9, 2016

Finance/Administration

85. Tolling - Is It a Viable Option in Indiana?

TIME	ROOM	PDH
10:00-10:50 AM	STEW 313	1

Built to Last: Funding Our Nation's Highways - The presentation discusses the major funding shortfall that exists to fix our crumbling infrastructure and how tolling in particular can be a viable solution to close the gap. The presentation focuses on the revenue generated by tolling the interstate system and barriers that exist to implementing a tolling scenario. The cost to the average consumer will also be addressed and how this can be a win-win for all users.

SPEAKER(S)

Steve Davidson, American Structurepoint, Inc.

Rebuilding Our Interstate Highways: Is Tolling the Answer? - Much of the interstate system is now more than 50 years old, and needs to be reconstructed and/or expanded. The federal government conceived of it, and largely funded it, but it owns virtually none of it. Hence, as we look forward to the "next 50 years", for the most part the states will be left holding the bag to finance its replacement. Every five years the states collective now spend more than the entire original investment in the system. New sources of revenue will be needed. In the age of all-electronic tolling, adding tolls to our existing interstates may provide an important new sustainable funding source to ensure this critical system will be preserved for future generations. the presentation looks at opportunities, challenges and issues associated with the use of widespread tolling.

SPEAKER(S)

Edward Regan, CDM Smith, Inc.

86. P3s - Dos, Don'ts and How Tos

TIME	ROOM	PDH
1:00-1:50 PM	STEW 313	1

PennDOT Rapid Bridge Replacement Public Private Partnership Procurement - The presentation will provide a deep dive into the procurement process including challenges encountered during the procurement and how they were addressed. John will also cover the project scope and schedule and key terms and conditions of the P3 agreement and other procurement results.

SPEAKER(S)

John Munoz, CDM Smith, Inc.

Trends in Public Private Partnerships - This presentation will examine the current trends in public private partnerships for infrastructure. Are P3s already yesterday's news? Who's for them and who's against them? What are owners really trying to do with this strategic finance and delivery tool? What impact will the bankruptcy of the concessionaire for the Indiana Toll Road have on P3s?

SPEAKER(S)

Kendra York, American Structurepoint, Inc.

Wednesday, March 9, 2016

Human Capital

87. Competency-Based World

TIME	ROOM	PDH
8:00-8:50 AM	STEW 278	1

The Competency-Based World session will focus on the need for designated competency frameworks for job classifications. Involving many steps of the employee life cycle, this is a showcase of INDOT Leadership Competencies and other competency frameworks developed by time of presentation. Job Descriptions, Interview Questions, Performance and Development are key.

SPEAKER(S)

Trevor Mills, INDOT
Scott Adams, INDOT
Mark Shields, INDOT

88. Inter-Agency Exchange Peer Exchange Case Study

TIME	ROOM	PDH
9:00-9:50 AM	STEW 278	1

The Inter-Agency Exchange Peer Exchange Case Study will highlight a variety of resources gained by peer exchange through leadership and innovation.

SPEAKER(S)

Drew Storey, INDOT
Tommy Nantung, INDOT
Ed Cox, INDOT

89. Driving Results Through People

TIME	ROOM	PDH
10:00-10:50 AM	STEW 278	1

Driving Results Through People will highlight employee engagement and the link between talent strategy and business strategy.

SPEAKER(S)

Britni Saunders, INDOT
Sheryl Proctor, INDOT
Melody Coleman, INDOT

Wednesday, March 9, 2016

Maintenance & Operations

90. Using ArcGIS Online to Manage Snow Operations

TIME	ROOM	PDH
8:00-8:50 AM	STEW 202	1

The City of Greenwood used ArcGIS Online to manage our snow operations during winter 2014. This presentation will show the design of the snow map as well as the process to update the map during an individual snow event.

SPEAKER(S)

Tom Maggard, City of Greenwood

91. Asset Management for Locals

TIME	ROOM	PDH
9:00-9:50 AM	STEW 202	1

Asset Management for LPAs - Overview of asset management (software) systems for LPAs that can track assets, maintenance activities, costs, etc.

SPEAKER(S)

Jay Grossman, Elkhart County Highway
Justin Zimmer, Elkhart County Highway

Transportation Asset Management - Transportation asset management is a key tool the City of South Bend is implementing in order to distribute funding and resources in the most efficient manner. It involves the use of a GIS database, which categorizes the current condition of all transportation related infrastructure within the city. The City's approach to asset management and the creation of the database begins with taking inventory of the City's transportation assets, which is primarily accomplished through inspections and simultaneous entry of the findings into the database. This inventory process is completed for every mile of roadway and sidewalk, every signalized intersection, and all sign locations within the city. The database allows for identification of areas, whether that is roads, sidewalks, signals, etc., that are in greatest need of repair and more importantly help identify what steps can be taken to lengthen the lifespan of existing infrastructure. The overall goal of transportation asset management is to create and use the GIS database to ensure funding and resources are utilized in such that the City of South Bend is making the largest difference possible for all transportation assets.

SPEAKER(S)

Patrick Kerr, City of South Bend
Blair Bennett, City of South Bend

Wednesday, March 9, 2016

Maintenance & Operations

92. Technologies for In-Place Rehabilitation of Pipes and Culverts

TIME	ROOM	PDH
10:00-10:50 AM	STEW 202	1

Replacing Failed Culverts by Jacking Concrete Pipe - One category the 2013 ASCE Report Card overlooked was stormwater drainage, and many of the metal culverts installed in the mid-20th Century deserve a failing grade. Many states and municipalities have explored relining these corroding culverts, but there's only one option that provides greater hydraulic capacity, a new structure, and doesn't interrupt surface traffic is jacking RCP. Explore the concepts and a case study on jacking concrete pipe to replace failing culverts.

SPEAKER(S)

Trygve Hoff, American Concrete Pipe Association

SR 446 Culvert Rehabilitation with Geopolymer Mortar Lining - Asset owners throughout the United States are in search of cost effective and environmentally friendly solutions to severe infrastructure degradation problems such as aging culverts and sewers. Centrifugally cast Geopolymer Cement Mortars offer cost effective pipe rehabilitation alternatives to traditional relining technologies. This presentation focuses on a demonstration project this past October with the Indiana DOT Seymour District in which a 7' CMP culvert was structurally relined with a high strength geopolymer cement mortar.

SPEAKER(S)

David Keaffaber, Milliken Infrastructure Solutions
Jane Twaddle, INDOT

93. Varied Use of Compaction Grouting For Roadway Rehabilitation

TIME	ROOM	PDH
1:00-1:50 PM	STEW 202	1

Compaction grouting was developed many years ago as a means of densifying soft and weak soils under existing structures as well as a means to re-level the structure itself once settlement has occurred. The technique can treat not only the symptom of the problem (settlement), but the cause (the underlying soft soil) thereby extending the life of the structure. The technique and associated installation procedures will be discussed, and applications for roadway rehabilitation will be summarized.

SPEAKER(S)

Tom Szyrakiewicz, GeoStabilization International

Wednesday, March 9, 2016

Maintenance & Operations

94. Road & Bridge Basics for Local Officials

TIME	ROOM	PDH
2:00-2:50 PM	STEW 202	0

Road and bridge basics from a non engineer viewpoint. Will include terms and concepts, plans and details, images, and videos on how these are constructed and maintained.

SPEAKER(S)

Mike Bohacek, LaPorte County

95. Epoxy Injection to Repair Delaminated Concrete Deck Overlays

TIME	ROOM	PDH
8:00-8:50 AM	STEW 214CD	1

This session will review the process for bridge deck rehabilitation rebonding for a delaminated PCC overlay by epoxy injection. Experiences in Iowa and Michigan have indicated that this process can delay repair of overlays by 5 to ten years.

SPEAKER(S)

Drew Storey, INDOT

96. Bridge Maintenance for Locals

TIME	ROOM	PDH
9:00-9:50 AM	STEW 214CD	1

Session description coming soon.

SPEAKER(S)

TBD

97. Planning to Preserve Your Roads

TIME	ROOM	PDH
10:00-10:50 AM	STEW 214CD	1

A step by step process on how to create a pavement management plan and then implement it for smaller government agencies such as small cities, towns, and counties. We will show how to use GIS and standard bidding documents as well as create exhibits for describing the tasks to staff or bidding contractors.

SPEAKER(S)

Shawn Strange, First Group Engineering, Inc.

Wednesday, March 9, 2016

Maintenance & Operations

98. INDOT Asset Management in 2016

TIME	ROOM	PDH
1:00-1:50 PM	STEW 214CD	1

One of INDOT's performance goals for 201516 is to "Take Care of What We Have", with that goal in mind INDOT has been working with staff to implement a plan that maintains steady improvement in pavement and bridge quality and to ensure a commitment to safety.

SPEAKER(S)

Louis Feagans, Jr., INDOT
John Weaver, INDOT

99. Phases of Road Maintenance

TIME	ROOM	PDH
2:00-2:50 PM	STEW 214CD	1

Road maintenance recommendations for all PASER ratings. Explanation of different products and their recommended sequence of use determined by PASER rating.

SPEAKER(S)

Nick Golden, SealMaster
Jacob Bernath, SealMaster

100. Cutting Edge Solutions and the Evolution of Snowplow Blades

TIME	ROOM	PDH
3:00-3:50 PM	STEW 214CD	1

Each garage across the United States hosts its own unique struggle with snow removal. Variables like road composite, plow speed, and road conditions transform from lane to lane across the map. Learn the differences between each type of cutting edge, and how choosing the appropriate style is critical in achieving maximum results. The correct plow blade can save your road surface and minimize spring maintenance, reduce salt and brine usage, prolong wear life saving time and money, and most importantly provide the safest driving conditions.

SPEAKER(S)

Jason Bartuseck, Winter Equipment Company, Inc.

Wednesday, March 9, 2016

Maintenance & Operations

101. Fog Seal, Scrub Seal, Rejuvenator - Benefits and Differences

TIME	ROOM	PDH
4:00-4:50 PM	STEW 214CD	1

Asphalt Fog Seal, Scrub Seal and Rejuvenation are the main methods of surface treatment application. Review the description and understanding of the products used and currently promoted for asphalt sealing and how they differ in application for the user. Where the agency would consider use of each. Reinforce the need for Top of the Curve Asphalt Preservation to Extend Pavement Life at a low cost.

SPEAKER(S)

Jim Brownridge, Tricor Refining, LLC

Wednesday, March 9, 2016

Multi-Modal Transportation

102. Hoosier Hike and Bike Centennial Map Project

TIME	ROOM	PDH
8:00-8:50 AM	Union FACE	1

In creating the HH&BC Map Project, the Indiana Trails Community ("ITC") proposes to encourage Indiana to become a "Trail State" by asking many groups, including local governments and state agencies to endorse creating a statewide transportation system of hike- and bikeways and "trail towns" to build a tourist and health system based on bicycling and hiking both to bolster the Hoosier economy and to improve the fitness of Hoosiers throughout.

SPEAKER(S)

Richard Vonnegut, Indiana Trails Community

103. Update on the "Hoosier State Train" Service

TIME	ROOM	PDH
9:00-9:50 AM	Union FACE	1

Evidence on the Hoosier State Train's Future - This presentation describes the outcome of a focus group on the Hoosier State train and competing transportation modes in Indiana. The group met in West Lafayette and in Indianapolis in the Fall 2015 and consisted of elected officials, planning and operations agencies, economic development groups, and transportation groups and agencies. In addition, the results of a statewide public survey of residents' and riders' opinions pertaining to the Hoosier State train will be presented.

SPEAKER(S)

V. Dimitra Pyrialakou, Purdue University
Nadia Gkritza, Purdue University

Passenger Rail: A viable Indiana transportation option - INDOT and their partner communities, including Tippecanoe County, Lafayette and West Lafayette, issued an RFP to preserve and improve the Amtrak passenger rail service March 2014.

Through a public-private partnership with Iowa Pacific Holdings and Amtrak, "the mighty Hoosier State" is transforming passenger rail service. Learn how Indiana improved arrival times into Chicago, enhanced the on-board traveling experience, forged a strong relationship with the primary host railroad and helped craft new federal guidelines.

SPEAKER(S)

Venetta Keefe, INDOT

Wednesday, March 9, 2016

Multi-Modal Transportation

104. Human-Powered Travel - Planning and Best Practices

TIME	ROOM	PDH
10:00-10:50 AM	Union FACE	1

Active Transportation Plan: One Step at a Time - During the Michiana on the Move: 2040 Transportation Plan, participants identified a need to have a comprehensive plan addressing active transportation. Active transportation refers to human-powered methods of travel, such as walking and bicycling. In this session, learn about the planning process employed by the Michiana Area Council of Governments (MACOG) to actively engage stakeholders and the public. Further, learn how MACOG used data to inform decisions and priorities for future investments.

SPEAKER(S)

Zachary Dripps, Michiana Area Council of Governments (MACOG)
Caitlin Stevens, Michiana Area Council of Governments (MACOG)

Pedestrian's and Roundabout - This presentation will address the current best practices for accommodating pedestrians, bikes, and ADA requirements at roundabouts. It will also dispel some myths and review some the pending recommendations from the Accessibility related to roundabouts which are summarized in PROWAG and under consideration by Federal Highway.

SPEAKER(S)

Michael McBride, American Structurepoint, Inc.

105. Reimagining Streets and Implementing Complete Streets

TIME	ROOM	PDH
1:00-1:50 PM	Union FACE	1

Beyond Functional Classifications: Reimagining Streets to Enrich Communities - Streets are currently characterized by functional classification standards that define levels of mobility and access to adjacent land uses. With the growth of multi-modal Complete Streets, however, the time has come to update these standards. Join us in reimagining streets in a broader context that looks at ways they can create healthier, more sustainable communities. We will look at how a new set of street typologies can guide policy-makers, stakeholders, planners, and designers alike.

SPEAKER(S)

Chris Beard, Lochmueller Group

Complete Streets Implementation: Moving from Policy to Practice - With a growing number of Complete Streets policies in place across Indiana, and a statewide policy through INDOT, there is an increasing focus on effective implementation. How are day-to-day planning, design and engineering practices changing? What projects have resulted from policies? How are such projects performing and how is that being measured? This session will explore these questions and include examples of implementation progress and best practices from around the state and nation.

SPEAKER(S)

Jennifer Pyrz, Parsons Brinckerhoff

Wednesday, March 9, 2016

Multi-Modal Transportation

106. INDOT Freight Modeling

TIME	ROOM	PDH
2:00-2:50 PM	Union FACE	1

This presentation will cover freight modeling, what is currently available and how it is used and what is coming in the future. A new model called TREDIS will be highlighted which allows for economic impacts to be estimated.

SPEAKER(S)

Roy Nunnally, INDOT

Korey Chu, INDOT

Pavements

107. Simplified Pavement Design Tools for LPA Projects

TIME	ROOM	PDH
8:00-8:50 AM	STEW 302	1

While MEPDG is an effective pavement design tool for INDOT, low volume LPA projects may not require that level of complexity. Many agencies have long been comfortable with the 1993 AASHTO Guide for the Design of Pavement Structures and the associated software known as DARWinTM. However, the DARWinTM software is no longer available and local agencies and consultants are faced with a lack of well supported pavement design tools in the marketplace. PaveXpress is a free online tool to help you create simplified pavement designs using key engineering inputs, based on the AASHTO 1993 and 1998 supplement pavement design process. It is user friendly, and works on your phone or tablet. How does this tool work?

Typically, the pavement designer will have policy defined layer coefficients for each material, how thick each material layer will be, and a policy defined drainage coefficient for unbound materials. For example, the common layer coefficient for asphalt materials is 0.44. Each layer of asphalt is set thickness such as a 1.5" surface, a 2" binder, and a variable base asphalt layer. The sub-base is usually a set thickness such as 6" cement stabilized stone or 8" dense graded aggregate. Given all the known inputs, the designer solves for the asphalt base thickness that satisfies the required structural number. It is as simple as that.

SPEAKER(S)

Dudley Bonte, Asphalt Pavement Association of Indiana, Inc.
Eric Ferrebee, American Concrete Pavement Association

108. Concrete Pavement Restoration and Preservation

TIME	ROOM	PDH
9:00-9:50 AM	STEW 302	1

Extend the service life of your concrete pavements (and budgets) by choosing the right fix at the right time. The National Concrete Pavement Technology Center, in conjunction with FHWA and industry experts has compiled a number of best practices in the 2014 Guide to Concrete Pavement Preservation. Learn how to identify alternative repair, restoration and preservation techniques and how to execute them, whether the work is performed by agency maintenance crews or by qualified contractors.

SPEAKER(S)

Larry Scofield, American Concrete Pavement Association

Wednesday, March 9, 2016

Pavements

109. Performance-Based Specifications: The Modified SCB Cracking Test

TIME	ROOM	PDH
10:00-10:50 AM	STEW 302	1

Presentation will focus on innovative Illinois SCB Test Method developed to tackle premature cracking in asphalt pavements. Presentation content will include industry introduction to performance test, explanation of its origin and methodology, and explanation of how it can help the asphalt community design and construct pavements that are better suited to resist premature cracking. Primary presenter will be test developer Ahmad El Khatib, an integral figure in the development and implementation of this test method.

SPEAKER(S)

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

110. Full Depth Reclamation (FDR) with Cement

TIME	ROOM	PDH
8:00-8:50 AM	STEW 306	1

Full Depth Reclamation with Cement is a process that recycles an existing failed road into new cement treated base. The process fixes pavement problems at the subgrade layer. In addition to providing a stable base the process is also cost effective. INDOT has completed a few FDR with Cement projects. This process has been performed successfully on parking lots, county roads, state roads and interstates.

SPEAKER(S)

Scott Hall, Sagamore Ready Mix LLC
David Holtz, INDOT

111. Setting Asphalt Content for Hot Mix: How much?

TIME	ROOM	PDH
9:00-9:50 AM	STEW 306	1

So, how does the mix design specify how much asphalt binder is needed in hot mix asphalt? This presentation looks at historic methods for setting asphalt content and the way it works today. Learn what things affect asphalt content and understand what defines the right asphalt content for the mix.

SPEAKER(S)

Gerry Huber, Heritage Research Group

Wednesday, March 9, 2016

Pavements

112. Recycled Hot Mix Asphalt: What's going on in there?

TIME	ROOM	PDH
10:00-10:50 AM	STEW 306	1

Adding recycled asphalt has been going on for more than 30 years but still there are questions about how it works, whether the new and old asphalt blend and whether recycled mix performs the same or not. Recent research explains how it mixes and the impact it has on hot mix properties.

SPEAKER(S)

Gerry Huber, Heritage Research Group

113. J-Band: Solution to Longitudinal Joint Problems

TIME	ROOM	PDH
1:00-1:50 PM	STEW 306	1

J-Band is a Void Reducing Asphalt Membrane (VRAM) that differs from other processes on the market aimed at the prevention of joint failure. J-Band migrates into the void structure of the unconfined edge, reducing density and therefore preventing premature failure. It is placed prior to an overlay using a distributor truck with an inline spray bar. VRAM features crack resistance, the reduction of water and air permeability and a superior bond to the existing pavement.

SPEAKER(S)

Marvin Exline, Asphalt Materials
John Ayres, Hendricks County

114. Airfield Pavements

TIME	ROOM	PDH
2:00-2:50 PM	STEW 306	1

Full Depth Reclamation of Aviation Pavement - Full Depth Reclamation (FDR) has been utilized multiple times in recent years for airport and roadway pavement rehabilitation. The presentation will review FDR and its use as a pavement treatment for aviation pavements.

SPEAKER(S)

Michael Buening, INDOT

Resurfacing the Runway to the Nation's Capital - Presentation on the resurfacing of Runway 1-19 at Ronald Reagan Washington National Airport in 2011. The Metropolitan Washington Airports Authority (MWAA) decided to develop a project to re-surface the entire runway, associated connecting taxiways but constrained the project to only allowing construction operations between the overnight hours. This presentation will be the construction practices used for the overlay and connecting taxiways rehabilitation for Runway 1-19. Originally presented at ASCE T&DI Pavement conference in 2013.

SPEAKER(S)

Jason Frank, Crawford, Murphy & Tilly, Inc.

Pavements

115. 2020 ATL Pavement Design Case Study

TIME	ROOM	PDH
3:00-3:50 PM	STEW 306	1

4 projects on I-65 were selected, designed and being constructed as 2020 ATL (Added Travel Lanes) projects. During pavement design stages, various alternatives (6) with MEPDG (Mechanistic Pavement Design Guide) analysis, cost (cost per lane miles) and LCCA (Life Cycle Cost Analysis) were carried out. Finally all projects were selected as total reconstruction with alternate bid (HMA v/s Concrete) in anticipation with lower bidding cost. There was saving of 14% on these projects out of 200 M total cost due to extensive pavement design analysis & Alternate bidding process. The case study will describe various alternate pavement design analysis with cost analysis.

SPEAKER(S)

Kumar Dave, INDOT
Pankaj Patel, INDOT

116. Accelerated Pavement Testing Using a Fast Falling Weight Deflectometer

TIME	ROOM	PDH
4:00-4:50 PM	STEW 306	1

The recently developed Fast Falling Weight Deflectometer (FastFWD) is similar to traditional FWDs in that it imparts a dynamic load pulse to a pavement surface which simulates that of a moving vehicle. Due to its rapid testing speed, however, the FastFWD may be used as a small scale Accelerated Pavement Testing (APT) device for rapidly assessing predicted in-situ performance of new pavement structures. This presentation will illustrate novel ways in which the FastFWD may be used to gain a better understanding of pavement structures.

SPEAKER(S)

Kurt Keifer, Dynatest Consulting, Inc.
Rick Hammond, Dynatest Consulting, Inc.

Wednesday, March 9, 2016

Project Management/Planning

117. An Application of the SHRP2 C11 Tools in Indiana

TIME
8:00-8:50 AM

ROOM
STEW 206

PDH
1

Transportation project evaluations are usually focused on travel time, vehicle operating costs, and safety benefits when assessing the economic value of transportation investment. The incorporation of additional direct benefits has been limited by the lack of proper tools. In this respect, this presentation describes the recently developed SHRP2 C11 tools and shows the reliability and market access benefits associated with two highway projects in Indiana. A sensitivity analysis of the results will also be presented.

SPEAKER(S)

Davis Chacon-Hurtado, Purdue University

118. Pragmatic Urbanism: South Bend's West Side Main Streets

TIME
9:00-9:50 AM

ROOM
STEW 206

PDH
1

The session will review how in a limited resource environment master planning, road diets, matching facade grants, business assistance programs, a form-based code, and other local initiatives can be coordinated to bring about quick, visible revitalization in a low-income, slow/no growth environment. The session will provide an overview of South Bend's West Side Main Streets Revitalization Plan for Lincolnway West, Western Avenue, and adjoining neighborhoods and discuss a set of immediately implementable projects.

SPEAKER(S)

Jitin Kain, City of South Bend
Roger Nawrot, City of South Bend

119. Planning for the Environmental Process: The LPAs Guide

TIME
10:00-10:50 AM

ROOM
STEW 206

PDH
1

The environmental process for transportation projects is always evolving causing an overwhelming sensation to those expected to manage them. This non-technical session intends to provide Local Public Agencies a fundamental understanding of the key environmental challenges that LPAs should be factoring into planning for their projects and how to account for them. The conclusion includes an environmental roundtable intended to provide individuals the opportunity to discuss specific project challenges with the presenters and other officials.

SPEAKER(S)

Chad Costa, American Structurepoint, Inc.
Briana Hope, American Structurepoint, Inc.

Wednesday, March 9, 2016

Project Management/Planning

120. GIS - Basic to Advanced Uses

TIME
1:00-1:50 PM

ROOM
STEW 206

PDH
1

GIS in the Field: The Path to Increasing Efficiency - Everyone uses GIS to display data and create maps, but it can also standardize data collection and ease data-sharing. This presentation explores how to use GIS to collect field data; make field data accessible to the entire project team in real time; eliminate paper records; standardize data collection; and enhance flexibility by using multiple types of data, including pictures, points, lines, and polygons.

SPEAKER(S)

Kari Carmany-George, INDOT
Randy Weaver, Lochmueller Group

INDOT's Innovation with GIS - INDOT was the first of many state DOTs to implement a new GIS based Advanced Linear Referencing Solution (ALRS). Key strengths of this solution are the ability to synchronize changes in a foreign business system with those from the ALRS and the capability of distributing asset management workloads across the Department and with local government.

SPEAKER(S)

Kevin Munro, INDOT
Werkye Rader, INDOT

121. Green Infrastructure - From Indianapolis to China

TIME
2:00-2:50 PM

ROOM
STEW 206

PDH
1

Green Infrastructure as a Stormwater Management Tool - As municipalities and other agencies implement water quality and water quantity standards, this presentation will focus on both design aspects and long term impacts to green infrastructure found by the Indianapolis Department of Public Works. The presentation will discuss designers experience with meeting water quality and quantity standards and provide lessons learned from the owner's perspective.

SPEAKER(S)

Robert Page, HNTB Corporation
Rachel Wilson, Indianapolis Department of Public Works

Green Infrastructure Successes in the US Benefit China - China has a new initiative called Sponge Cities. The Chinese government has pledged to provide billions of dollars in financial assistance, in an effort to help numerous cities morph into "urban sponges." Besides the selected pilots, other cities in China have also carried out their own experiment. ms consultants has been asked to provide guidance to several cities on how the implementation of green infrastructure can reduced localized flooding and promote infiltration through their watersheds. There is a direct benefit for those cities considering green infrastructure solutions to learn from cities from the US who have already implemented large scale projects and have lessons learned to share.

SPEAKER(S)

Kari Mackenbach, ms consultants, inc.

Wednesday, March 9, 2016

Project Management/Planning

122. Using Indiana LiDAR Data and Future Uses of Orthoimagery

TIME
3:00-3:50 PM

ROOM
STEW 206

PDH
1

IndianaMap – Leveraging Indiana’s Statewide LiDAR Data - IndianaMap provides access to Indiana's 2011 - 2013 statewide Light Detection and Ranging (LiDAR) data. These data can be extracted and downloaded in a number of formats and resolutions to support specific project needs. This workshop will show how to view, download, and perform geoprocessing of Indiana's elevation data to support projects and daily work.

SPEAKER(S)

Philip Worrall, Indiana Geographic Information Council, Inc.
Chris Morse, USDA NRCS

Indiana's Statewide Orthoimagery Program - Indiana is set to begin its third statewide orthoimagery project. In this presentation Jim Sparks, Indiana Geographic Information Officer, and Jim Stout, Senior GIS Consultant at 39 Degrees North, will discuss the program's history, orthoimagery uses and benefits, the current RFP, and what to expect with the next 3-year update project.

SPEAKER(S)

Jim Sparks, Indiana Office of Technology
Jim Stout, 39 DEGREES NORTH

123. Park Over the Highway – Enhancing Landmarks Through Collaboration

TIME
8:00-8:50 AM

ROOM
Union FACW

PDH
1

The downtown landscape in St. Louis, Missouri is experiencing radical change through a \$380 Million investment in the Gateway Arch grounds. With fourteen agencies, stakeholders, and financial partners, including the National Park Service and FHWA; the task of collaborating, coordinating, and consolidating project objectives was monumental. In addition to regulatory management; traffic, safety, constructability, and aesthetic considerations had to be consented to by all project partners involved in the transformational transportation components.

SPEAKER(S)

Jay Rakers, Crawford, Murphy & Tilly, Inc.

Wednesday, March 9, 2016

Project Management/Planning

124. Section 106 Tribal and Electronic Consultation Procedures

TIME	ROOM	PDH
9:00-9:50 AM	Union FACW	1

INDOT's Cultural Resources Office will provide attendees with an overview of new procedures for consulting with Native American tribes, explain general electronic consultation procedures using INDOT's electronic consultation web portal, and provide general updates on Section 106 topics. This session is geared towards the consultant community (engineers, planners, etc) who are responsible for completing/overseeing completion of Section 106 as part of their project development.

SPEAKER(S)

Patrick Carpenter, INDOT
Shaun Miller, INDOT
Michelle Allen, FHWA

125. Incorporating Sustainability into Transportation Projects

TIME	ROOM	PDH
10:00-10:50 AM	Union FACW	1

INDOT & LPA's are challenged to do more with less to address the growing needs of yesterday's infrastructure, while at the same time respond to demands for today's needs and plan for the future. Sustainable designs enable planners and designers to look at the bigger picture, provide benefits for all stakeholders, coordinate plans and goals of agencies and their partners, encourages collaboration, improve the triple bottom line and quality of life. Various project examples included.

SPEAKER(S)

Cassie Reiter, Crawford, Murphy & Tilly, Inc.

126. INDOT's New Paradigm: Making the Effort Works!

TIME	ROOM	PDH
1:00-2:50 PM	Union FACW	2

This two part session will serve as a refresher for INDOT's New Paradigm for utility coordination; especially as it relates to the use of a conflict matrix, Gantt charts, writing special provisions, project timelines, and "exceptions" in the certification process. The session will feature success stories from various projects. The session will also include perspectives from Utility partners.

SPEAKER(S)

Kenny Franklin, INDOT
Natalie Parks, American Structurepoint, Inc.
Adam Burns, Crawford, Murphy & Tilly, Inc.

Wednesday, March 9, 2016

Project Management/Planning

127. LPA ERC Recertification Training

TIME	ROOM	PDH
3:00 4:50 PM	Union FACW	2

A 2-hour course designed to provide updates on the LPA Program and more advanced knowledge to an experienced, recertifying ERC. This course will satisfy ERC requirements for one year following completion. Pre-registration for this course is required. To register, please send an e-mail to LPAQuestions@indot.in.gov with the subject line "Road School ERC Recertification."

SPEAKER(S)

Kathy Eaton-McKalip, INDOT
Kenny Franklin, INDOT
Jim Reilman, INDOT

Wednesday, March 9, 2016

Public Relations/Communications

128. Your Communications Toolbox: Tips for Working with Media

TIME
9:00-9:50 AM

ROOM
FOWLER

PDH
1

You have information you want to share with the public, but how do you get a story in the newspaper or on TV? Tippecanoe School Corporation Communications Coordinator and former broadcast journalist Sue Scott will share tips on how to get the word out through the media.

The workshop will cover:

- Creating a news release that will standout
- Crafting your message
- Preparing for an interview

SPEAKER(S)

Sue Scott, Tippecanoe School Corporation

Wednesday, March 9, 2016

Road Scholar

51B. Road Scholar Core Course #10: Drainage for Street and Highway Managers

TIME	ROOM	PDH
8:00-10:50 AM	KRANNERT	3

This 3 hour workshop is planned for county highway engineers, supervisors, county commissioners, city engineers, street commissioners and those who are interested in earning the designation of Master Road Builder in the Indiana LTAP Road Scholar Program.

This course will cover the following:

- Drainage Basics
- Legal Aspects/Drainage
- Permeable Surfaces
- Culvert Drainage

SPEAKER(S)

Thomas Burke, Jr., Christopher B. Burke Engineering, Ltd.

William Enslen, Enslen, Enslen & Matthews

Monica Giermek, Christopher B. Burke Engineering, Ltd.

Safety

129. Traffic Signals - Preemption, HAWK, Accessible Pedestrian Signals, and Crossings

TIME	ROOM	PDH
8:00-8:50 AM	STEW 310	1

Includes an overview of traffic signal basics and associated equipment; traffic signal preemption pros, cons and equipment; HAWK Signal applications and best practices; Accessible Pedestrian Signals and pushbuttons; and pedestrian crossings and equipment (RRFB, etc.).

SPEAKER(S)

Steve Moore, VS Engineering

130. Design, Operations and Safety of High Speed Approach Rural Roundabouts

TIME	ROOM	PDH
9:00-9:50 AM	STEW 310	1

High speed approach rural roundabouts have been found to reduce overall crashes by 71% and injury crashes by 87%. They have become an effective tool for public agencies to improve safety and capacity at rural intersections. Critical design features for effective implementation will be discussed including alignment on approach, deflection, splitter islands, lighting, signing, curbing, diameter, design vehicle and landscaping. Before-and-after results involving safety, operations and public acceptance will be highlighted at specific U.S. roundabouts.

SPEAKER(S)

David Church, WSP | Parsons Brinckerhoff
James Tobaben, WSP | Parsons Brinckerhoff

131. Statewide Crash Database Implementations

TIME	ROOM	PDH
10:00-10:50 AM	STEW 310	1

An overview of how both local and state agencies currently use the ARIES statewide crash database. Tools used by these agencies to analyze problem crash locations will be demonstrated. A question and answer panel with the presenters will follow.

SPEAKER(S)

Tim Overman, INDOT

Wednesday, March 9, 2016

Safety

132. Indiana Strategic Highway Safety Plan, 2015 Revised

TIME	ROOM	PDH
1:00-1:50 PM	STEW 310	1

INDOT is in the process of completing a revision to the Indiana Strategic Highway Safety Plan. We expect to have approval of the new plan before the 2016 Road School. The presentation will describe the SHSP format and application for traffic safety programs.

SPEAKER(S)

Michael Holowaty, INDOT
Roger Manning, INDOT

133. Pedestrian and Bicycle Safety & Assessments

TIME	ROOM	PDH
2:00-2:50 PM	STEW 310	1

Pedestrian and bicyclist safety and mobility are priorities for USDOT. FHWA Offices are working to improve planning, design, operation, and data for bike/pedestrian facilities. FHWA goals are to reduce pedestrian and bicyclist fatalities, injuries, and improve pedestrian and bicyclist accessibility. FHWA will present on recent pedestrian and bicyclist assessments, USDOT's Secretary's 'Safer People, Safer Streets' initiative, efforts on the states and cities with the most pedestrian/bicyclist fatalities (also know as "focus states" and "focus cities"), and promote tools, resources and technology to assist state and local transportation agencies.

SPEAKER(S)

Joyce Newland, FHWA

134. Analysis of a University Bike-Sharing Program and Lessons Learned

TIME	ROOM	PDH
3:00-3:50 PM	STEW 310	1

Purdue University initiated a bike sharing program in August 2015 with 13 locations and 50 bikes. During the first 14 weeks of the program, there were 15,259 rentals for a total of 22,677 hours. The Purdue sustainable transportation staff partnered with Purdue traffic engineering students to monitor usage trends to identify future investment opportunities and changes to their bike sharing contract. This presentation will describe the series of analytics performance measures, management dashboards, and changes initiated as a result of this partnership.

SPEAKER(S)

Maggie McNamara, Purdue University
Jijo Mathew, Purdue University

Wednesday, March 9, 2016

Traffic Operations

135. Assessing Longitudinal Arterial Performance and Traffic Signal Retiming Outcomes

TIME	ROOM	PDH
8:00-8:50 AM	STEW 218AB	1

This study presents a use case for an active traffic management strategy on a signalized corridor over a 5-year period, during which traffic volumes increased by approximately 36%. Despite the considerable volume growth, arrivals on green were increased by more than 41%. This resulted in a total user benefit over the 5-year period of approximately \$3.6 million.

SPEAKER(S)

Chris Day, Purdue University

136. Impact Fees Based on ITE Trip Generation - Cautions

TIME	ROOM	PDH
9:00-9:50 AM	STEW 218AB	1

Many communities require traffic impact fees for new developments. Often these fees are calculated based entirely on general land use trip data derived from ITE's Trip Generation manual. Significant problems can arise when communities rely solely on ITE Trip Generation data to calculate impact fees. Problems stem from the misuse of data resulting in much higher impact fees being required. This presentation will provide real-world examples of these situations and how they were remedied.

SPEAKER(S)

Eric Tripi, Parsons

137. Traffic Ticker

TIME	ROOM	PDH
10:00-10:50 AM	STEW 218AB	1

The Traffic Ticker is a web-based tool developed for use by INDOT to monitor interstate conditions in real-time. Based in crowdsourced probe vehicle data, it is linked to a variety of other tools to provide powerful monitoring and after action review capability. The advantages of this tool are demonstrated in case studies spanning winter operations, interstate crashes, and the I-65 N detour route in August 2015.

SPEAKER(S)

Maggie McNamara, Purdue University

Wednesday, March 9, 2016

Traffic Operations

138. LED Lighting Tariffs and New Advances in Lighting Design

TIME	ROOM	PDH
1:00-1:50 PM	STEW 218AB	1

Cost Based Rate Tariffs that Accommodate LED Lighting - IPL and Nipsco are both considering LED tariffs. It is very likely that Duke Energy and perhaps even Vectren will by then. I am pushing to do so on behalf of the City of Indianapolis and a dozen municipalities in Nipsco service territory.

SPEAKER(S)

Ted Sommer, London Witte Group

New Advances in Lighting Design - Changes to the Indiana Design Manual lighting procedures as well as how to apply the design manual procedure on an LPA project will be discussed. The life cycle cost analysis and when it should be performed will also be discussed.

SPEAKER(S)

Amanda Johnson, American Structurepoint, Inc.
Dave Boruff, INDOT

139. Digitally Printed Signs and Changes to the INDOT Signing Policies

TIME	ROOM	PDH
2:00-2:50 PM	STEW 218AB	1

Digitally Print Traffic Signs the Right Way - Digitally printed traffic signs continue to gain interest due to a variety of cost efficiencies that can be attained by agencies. While a variety of options exist for printing, not all comply with Federal, State, or local specifications or meet long-term durability requirements. This session will explore options available, and provide agencies with the information to ask the proper questions leading to a good selection decision.

SPEAKER(S)

Scott Chapman, Avery Dennison

INDOT Signing: Recent Developments - This session will describe recent changes to INDOTs highway signing policies and procedures including new standards for ground mounted panel signs and our attraction signing programs.

SPEAKER(S)

Joseph Bruno, INDOTLalit Garg, INDOT
