
CEPDS
CIVIL ENGINEERING PROFESSIONAL DEVELOPMENT SEMINAR
NOVEMBER 19, 2026
@ PURDUE UNIVERSITY

8:30	**BREAKFAST & OPENING KEYNOTE - The Evolution and Future of Highway Safety: Driving Universal Engineering Transformation Presented by Rick Drumm, PE**				
	TRANSPORTATION	**BRIDGE**	**WATER RESOURCES**	**ENVIRONMENTAL**	**MULTI-DISCIPLINE I**
	STEW 302	**STEW 306**	**STEW 202**	**STEW 310**	**STEW 214AB**
	See page 12	**See page 14**	**See page 16**	**See page 18**	**See page 20**
9:30	#101 Reduced Conflict Intersections in Indiana, An Update	#106 Part 3 of the INDOT Bridge Inspection Manual – Load Rating	#111 LOMR Review Updates	#116 ProPEL US 41 - Identifying the Needs and Visions for All Users	#121 SR 37 Lessons Learned – How Design Impacts Corridor Construction
10:30	#102 AASHTOWare Safety and Crash Data Access	#107 Utilization of Redundancy: Three Girder Straddle Bents	#112 Following the Flow: Investigating Seepage at Reservoir 29	#117 Protecting Watersheds through Erosion Control Methods	#122 Communications in Emergency Situations
11:30	**LUNCH & KEYNOTE PRESENTATION – ASCE's Report Card for America's Infrastructure Presented by Rossana D'Antonio, ASCE President-Elect**				
1:00	#103 Beyond the Silver Bullet: Safer Roundabouts in Carmel	#108 Innovations in Steel I-Girder Strengthening	#113 Optimizing Operations and Capital Improvements by Integrating Technology	#118 NEPA and Permitting Project Timeline Challenges (Safer Drive 65 and US 40 for All)	#123 Your Right-Hand Assistant: A Field Guide to AI's Failure Modes in 2026
2:00	#104 Think Big. Build Fast. Scaling Quick-Build Safety Improvements Across an Entire City	#109 BAPP-Man	#114 Hobart Main Lift Station and Forcemain Guaranteed Savings Contract (GSC)	#119 Beyond the Public Hearing: Engaging Communities Across Urban, Suburban, and Rural Contexts in Complex Infrastructure Delivery	#124 In-tern it to Win-tern it!
3:00	#105 What's New with Traffic Control Devices and Roadway Lighting	#110 SR 249 Superstructure Replacement: Teaming to overcome challenges	#115 Advancing Wastewater Treatment to Meet Modern Development in Cumberland, IN	#120 A New Standard for Project Communications	#125 Update and Lessons Learned on INDOT's ongoing Progressive Projects (CM/GC and Progressive Design Build)

8:30	**BREAKFAST & OPENING KEYNOTE - The Evolution and Future of Highway Safety: Driving Universal Engineering Transformation Presented by Rick Drumm, PE**				
	MULTI-DISCIPLINE II	**MGMT/LEADERSHIP**	**VERTICAL STRUCTURES**	**GEOTECHNICAL**	**STUDENT**
	STEW 279	**STEW 214CD**	**STEW 278**	**STEW 206**	**PMU EAST & WEST FACULTY LOUNGE**
	See page 22	**See page 24**	**See page 26**	**See page 28**	
9:30	#126 Construction Specifications and Special Provisions	#131 Professional Engineer License - Historical Background, Current Status, and Ongoing Changes	#136 Best Practices on Communicating Joist Loading Requirements	#150 Managing Landslide Risk in Indiana: Planning, Prioritization, and Emerging Data	#155 Engineer Your Edge: Resume & Interview Tips from Industry Professionals
10:30	#127 Geospatial Data at the State of Indiana: Enhancements and Update	#132 Onboarding & Evaluating New Employees	#137 Meeting Existing Structures Where They Are At	#151 Performance Assessment of Innovative Geotextiles to Improve Drainage within the Foundational Layers of Pavement	
11:30	**LUNCH & KEYNOTE PRESENTATION – ASCE's Report Card for America's Infrastructure Presented by Rossana D'Antonio, ASCE President-Elect**				
1:00	#128 Agentic Quantity Takeoff and Error Detection for Transportation Construction Projects	#133 The Human Side of Engineering: A Guide to Emotionally Intelligent Leadership	#138 Contamination to Construction	#152 INDOT Geotechnical Instrumentation	#156 ASCE Guess Who? w/ ASCE President-Elect Rossana D'Antonio
2:00	#129 Beyond the Road: Public-Private Partnerships That Build Better Communities Across an Entire City	#134 The Greatest Project You'll Ever Engineer, Building a Career of Purpose, Leadership, and Lasting Impact	#139 Structural and Veneer Masonry Lintel Design and Detailing	#153 Understanding Geotechnical Challenges in Northern Indiana	
3:00	#130 SR 32 Digital Delivery for Construction	#135 Verified, Documented, Defensible: Responsible AI Use in Civil Engineering	#140 Mine Subsidence Cause, Effect and Mitigation	#154 Drilled Shaft Integrity Testing: Identification, Evaluation, and Remediation of Zones of Concern	#157 ASCE Prize is Right!

TABLE OF CONTENTS

4 General Info
5 CEU/PDH Instructions
6 Building Maps
8 Opening Keynote
10 Lunch Keynote
12 Transportation
14 Bridge
16 Water Resources
18 Environmental
20 Multi-Discipline I
22 Multi-Discipline II
24 Management/Leadership
26 Vertical Structures
28 Geotechnical
30 Students

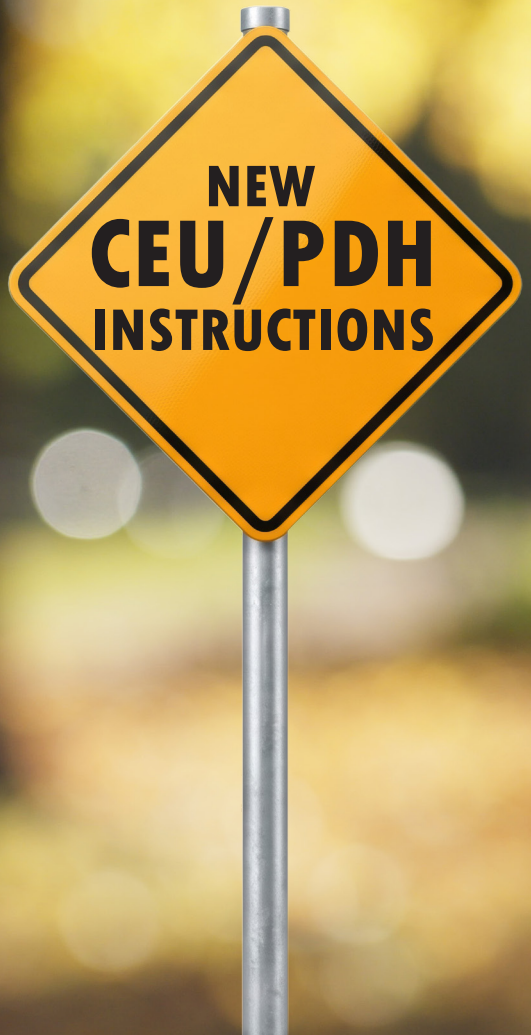
GENERAL INFO

IMPORTANT ROOM LOCATIONS

- **PMU Ballrooms (1st Floor)** — Breakfast, Opening Keynote, & Lunch
- **STEW 218** — Hospitality Room
- **Stewart Center** — Educational Tracks (2nd and 3rd floor)
- **PMU East/West Faculty Lounge** — Student Track & Breakfast/Lunch Overflow Seating

READ SPEAKER BIOS

The ASCE Board Meeting will occur in the STEW 206 from 4 - 5 PM.



Modify your registration and receive an event specific PDH/CEU statement from Purdue University (like at Road School).

By modifying your registration, you certify that you attended all sessions selected for the full session duration.

HOW TO GET YOUR 2026 CEPDS PDH/CEU CERTIFICATE

Self-reporting will not open until November 20th, 2026 at 8:00 AM eastern time and will remain available until December 17th, 2026 at 5:00 PM eastern time.

Modify your registration (so you can get your PDH/CEU statement) online by scanning this QR Code and following the steps below.

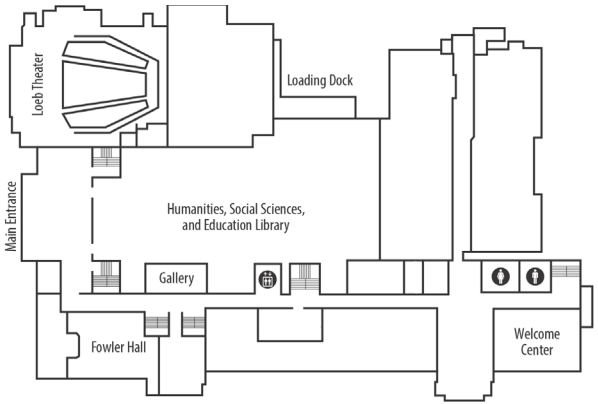
1. Enter your confirmation number. Your confirmation number is listed on your registration confirmation email (sent to you from confreg@purdue.edu).
2. After logging in, click on the "Modify" button.
3. You will advance to the “Terms & Conditions” page.
4. Click the “Next” button at the bottom of the page and proceed to the “Registrant Information” page.
5. Click the “Next” button at the bottom of the page and proceed to the “Sessions” page. The list of sessions, ordered by presentation number and title will appear on the next page.
6. Select the session(s) you attended and then click on the “Next” button at the bottom of the page.
7. Follow the prompts to continue and complete the PDH/ CEU recording process. Be sure to click Submit on the final screen.

Sessions attended must be reported between November 20th and December 17th of 2026 to be eligible to receive the event CEU/PDH Certificate.

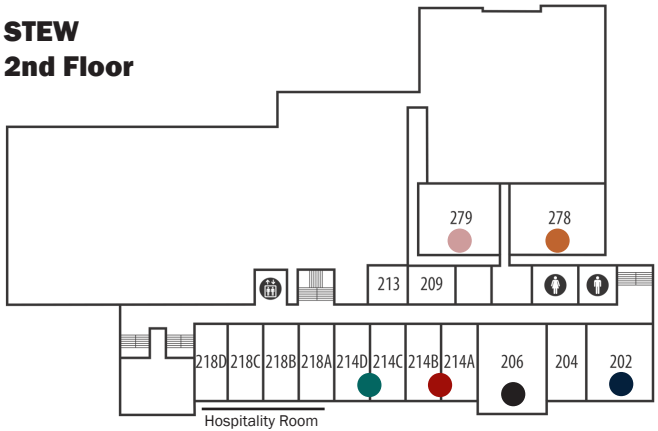
An event-specific PDH/CEU statement will be sent to your registration email address on December 18, 2026.

BUILDING MAPS

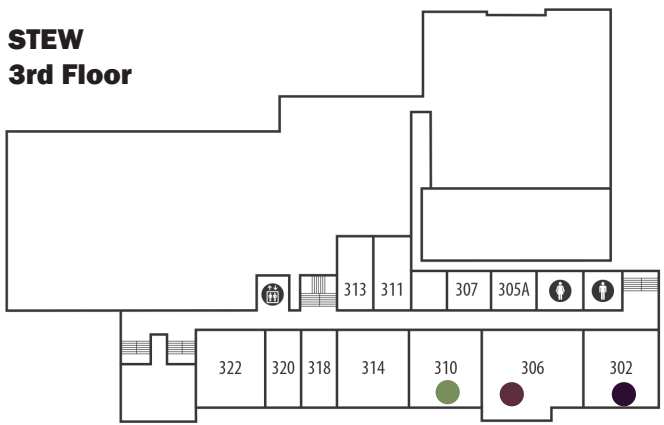
STEWART CENTER (STEW) 1st Floor



STEW 2nd Floor



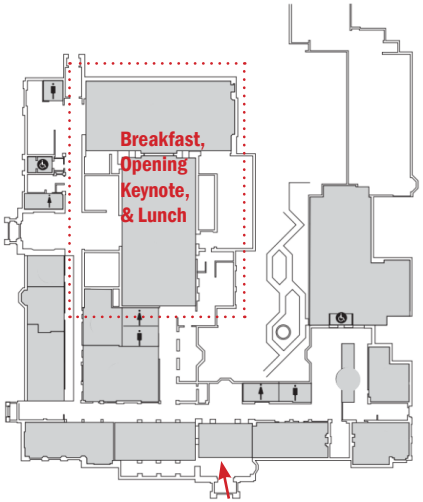
STEW 3rd Floor



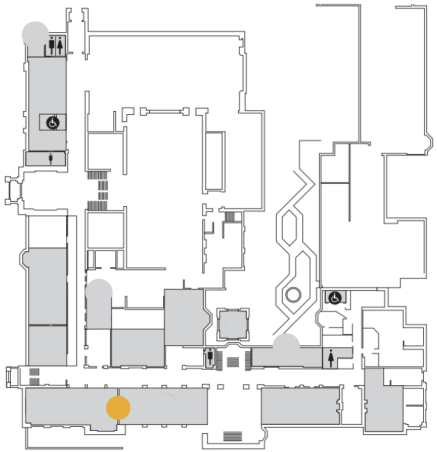
FIND YOUR TRACK!

- Transportation
- Bridge
- Water Resources
- Environmental
- Multi-Discipline I
- Multi-Discipline II
- Management/Leadership
- Vertical Structures
- Geotechnical
- Student

PURDUE MEMORIAL UNION (PMU) 1st Floor



PURDUE MEMORIAL UNION (PMU) 2nd Floor



BREAKFAST SPONSOR

VOLKERT

LUNCH SPONSOR

JQOL
QUALITY OF LIFE™

OPENING KEYNOTE

The Evolution and Future of Highway Safety: Driving Universal Engineering Transformation
Rick O. Drumm, PE

Executive Summary

Elevating the Perspective of Innovation in Engineering

As infrastructure demands shift, modern traffic safety engineering requires a profound move from reactive fixes to human-centric, proactive design. Gone is the relatively easy-going, tourist-focused realm of Route 66. The historic significance of its connection cannot be questioned; however traffic safety has evolved immensely, transitioning from localized damage control ("Where are the most crashes?") to systemic, predictive modeling using the Highway Safety Manual and the Safe System Approach. This keynote addresses how traffic safety professionals are leading this attitude shift by designing for real-world human behavior and the critical limits of human tolerance.

The Value: Professional Development for Hoosier Engineers

Tailored specifically for the Civil Engineering Professional Development Seminar at Purdue University, this session bridges the gap between specialized traffic safety and general engineering practice. By analyzing the structural evolution of highway safety, along with future direction, attendees will discover universal principles of growth, systemic data analysis, and proactive risk management. Participants will gain a transferable perspective to apply these transformative concepts to their own diverse engineering disciplines across Indiana, modernizing their approach to problem-solving and improving the future of Indiana engineering.

Core Audience Takeaways

- Predictive and Proactive vs. Reactive Action: Shifting from historical problem-solving to systemic, data-driven foresight in project development.
- The Safe System Approach: How to design resilient infrastructure that proactively accounts for human error and physical tolerance limits.
- The Mindset for Transformation: Improve the flexibility of attendees as they learn lessons from this arc for the future of all engineering, including:
    - Acknowledge (against our nature) that engineering is an evolving profession.
    - It may take several iterations to continue to improve.
    - We can learn from others. Humility is a virtue.

Rick O. Drumm, PE



Rick Drumm has been a Traffic Safety Engineer for 25 years. He recently retired from a 32-year career in public service and has since entered the consulting world, sharing his passion and insights on Traffic Safety to conference attendees as a session instructor and a keynote speaker.

Rick has a Master's Degree in Civil Engineering from Virginia Tech, a BS in Civil Engineering from LSU, and a BA in Geology from Franklin and Marshall College. He is a licensed Professional Engineer in Indiana.

Rick continues to pursue various interests such as acting, along with spreading the message of the vital importance of Traffic Safety in our society. He resides in Noblesville, Indiana, with Susan, his incredibly patient wife of 38 years.

About the Leonard E. Wood Lecture Series

The Leonard E. Wood Lecture Series has been given since 2010 in honor of Professor Leonard E. Wood, an alum (PhD, 1956) and Purdue faculty member from 1956 to 1993. During his distinguished career at Purdue University, Dr. Wood served as more than an instructor. He was a mentor, a counselor, a teacher, and a friend who was truly dedicated to and for the students. His influence continues to be felt through the impact he had on his students and colleagues and through his legendary work with the Co-op Program.

LUNCH KEYNOTE

ROSSANA G. D'ANTONIO, PE, GE, ENV SP, F.ASCE | ASCE President-Elect



Rossana D'Antonio is an Executive Director with NV5, a global engineering consulting firm. Prior to that she served as Deputy Director for Los Angeles County Public Works providing executive leadership for municipal services and emergency management.

D'Antonio has extensive knowledge of how complex systems work and expertise on how deficient infrastructure can result in disasters. She has advocated for infrastructure investments including the Federal Aviation Authority Reauthorization as part of the American Society of Civil Engineers contingency. She received her Bachelor of Science Degree in Civil Engineering from Fresno State and an MBA from Pepperdine University. Rossana holds dual registrations in the State of California in Civil and Geotechnical Engineering. She is also credentialed as an Envision Sustainability Professional with the Institute for Sustainable Infrastructure, providing a globally recognized approach to the design of sustainable infrastructure.

In 2020, D'Antonio was appointed by Governor Gavin Newsom to the California Board for Professional Engineers, Land Surveyors, and Geologists where she currently works to ensure protection of the public and the environment with competent and ethical professional services. In 2024, she was appointed to the President's National Infrastructure Advisory Council's Disaster Response and Recovery Committee. D'Antonio is a Fellow with ASCE and is the ASCE 2028 President.

D'Antonio is the author of "26 Seconds: Grief and Blame in the Aftermath of Losing My Brother in a Plane Crash" which was published in May 2025. For more information, check out her website https://rossanadantonio.com/

ASCE's Report Card for America's Infrastructure

In highlighting the Report Card for America's Infrastructure, the presentation offers key information detailing both overall grade and grades for each of the categories, leading issues experienced across the infrastructure network, and recommendations to improve the built environment. Introductory remarks provide context on how the report card was established, its purpose, and development. The presentation also offers specific aspects relating to individual categories such as roads, energy, and drinking water justifying their respective standing in the report. Discussion closes with key recommendations to "raise the grades" across investment, resilience, and innovation.

THANK YOU TO OUR 2026 SPONSORS

JQOL
QUALITY OF LIFE™

Flexamat
PERMANENT EROSION CONTROL

Tensar®
A Division of CMC

VOLKERT

CRANE
ENVIRONMENTAL SERVICES, LLC

Visit
LAFAYETTE
WEST LAFAYETTE

TRANSPORTATION

9:30 | #101 | Reduced Conflict Intersections in Indiana, An Update



Taylor Ruble & Alan Holderread
A presentation on lessons learned, updated standards, and before and after statistics after several years of RCI construction in Indiana.

10:30 | #102 | AASHTOWare Safety and Crash Data Access

Taylor Ruble & Molly Sipes
An overview of the new AASHTOWare Safety software and how to use it (launches in Indiana October 2026).

1:00 | #103 | Beyond the Silver Bullet: Safer Roundabouts in Carmel



Jarrod Huff, Neil VanTrees, & Willie Hall
Learn how Carmel moved from community concerns about roundabout speeds to implementing raised pedestrian crosswalks along the Towne Road, Gray Road, and Hazel Dell Parkway corridors. This presentation explores the decision-making and design process, construction phasing and maintenance of traffic strategies used to manage cut-through traffic, and lessons learned from implementation. Final speed study results and public feedback will highlight the effectiveness of the approach and inform future roundabout improvements.

2:00 | #104 | Think Big. Build Fast. Scaling Quick-Build Safety Improvements Across an Entire City

John Garzee
Cities often know where pedestrian crashes are occurring but struggle to deliver safety improvements quickly enough to make a meaningful impact. Traditional capital projects can take years to design, fund, and construct, leaving many high-risk locations unchanged.

This presentation shares the development of a citywide quick-build strategy currently being explored by the City of Bloomington, Indiana through its Safe Streets and Roads for All (SS4A) Action Plan. Rather than focusing on a single project or product, the presentation explores how agencies can use crash data, High Injury Networks, and existing parking regulations to identify dozens of opportunities for low-cost pedestrian safety improvements such as daylighting, curb extensions, pedestrian refuge islands, and lane reallocation using modular materials and pavement markings.

Cities often know where pedestrian crashes are occurring but struggle to deliver safety improvements quickly enough to make a meaningful impact. This presentation explores how agencies can use crash data, High Injury Networks, existing parking regulations, and low-cost quick-build treatments such as bump-outs and traffic islands to improve pedestrian safety at scale. Drawing on lessons learned, the presentation will discuss practical strategies for identifying candidate locations, developing repeatable design details, evaluating materials, coordinating implementation, and building a scalable approach that enables agencies to make meaningful safety improvements across dozens of locations rather than one project at a time.

STEW 302

3:00 | #105 | What's New with Traffic Control Devices and Roadway Lighting

David Boruff, Lalit Garg, & Joe Bruno

This session would focus on current experimentation, trials, and recent or upcoming changes in specifications and design procedure regarding signs, signals, pavement markings, and highway lighting.

READ SPEAKER BIOS



BRIDGE

9:30 | #106 | Part 3 of the INDOT Bridge Inspection Manual – Load Rating

Jennifer Hart

This session will explore Part 3 of the INDOT Bridge Inspection Manual, highlighting key changes and the context behind them. Bridge inspection consultants, local public agency (LPA) bridge owners, and designers working on INDOT projects will gain a better understanding of INDOT's load rating procedures, the reasoning behind the updates, and their implications for bridge inspection and load rating practices.

10:30 | #107 | Utilization of Redundancy: Three Girder Straddle Bents



Charles Boltz & JoshCarter

This presentation will cover the implementation of three girder straddle bents on the I-65 Central Corridor Project in Louisville Kentucky. During the scoping phase of the project, it was determined that the existing I-65 over E. Kentucky St. and Brook St. bridge needed to be replaced due to structural steel cracks and severe loss of bearing. The replacement structure would also require straddle bents due to low vertical clearances. Steel was selected for the speed of construction during the closure of I-65, with three girder steel straddle bents being incorporated. Use of the new three girder straddle bent type utilizes the new changes in the AASHTO code which allows redundancy to be accounted for. By accounting for this redundancy these new steel straddle bents can reclassify Fracture Critical Elements eliminating the need for detailed hands-on inspections over the life of the structure.

1:00 | #108 | Innovations in Steel I-Girder Strengthening

Omar El Masri

Steel I girders in existing bridges often require strengthening due to section loss from corrosion or increased demand. Full replacement is disruptive and costly, especially when deterioration occurs in the top (compression) flange. This presentation discusses an innovative alternative that welds inclined plates between the compression flange and the compression zone of the web to create a locally closed section within the I girder. The approach can be executed on site without removing the concrete deck and can also be applied during fabrication of new girders. The presentation will provide a design guide covering transformed section properties of the strengthened cross section; flexural and shear capacity; stability and local buckling checks; fatigue (detail category) considerations; and constructability limits. Practical recommendations on the placement and detailing of the inclined plates will be presented, along with an example demonstrating the efficiency and effectiveness of the technique. Finally, the presentation will showcase bridge case studies that have implemented the technique and their observed performance.

2:00 | #109 | BAPP-Man

Kyle Zak & Brad Kahn

This presentation will be a case study of the widening of I-65 over Pleasant Run in Indianapolis. Due to the unique site conditions and risks related to the existing bridge, INDOT, Parsons, and Terracon introduced a unique foundation scheme for two of the piers… but not right away. This presentation will walk the audience through the decision-making process of using large open-ended pipe piles for support of the bridge and also provide feedback from lessons learned during construction.

STEW 306

3:00 | #110 | SR 249
Superstructure Replacement: Teaming to overcome challenges

Derek Barnes, Sean Porter, John Moran, & Ryan Bruni

The SR 249 crossing of US 12 provides a vital link for the Port of Indiana to Indiana's infrastructure. This presentation provides insight from the designer, inspection lead, and contractor on how project challenges were addressed by effective teaming. The most unique challenge the audience will learn about is how after letting two-spans were added to the existing bridge and how the entire project team worked together to deliver it.

READ SPEAKER BIOS



WATER RESOURCES

Flexamat
PERMANENT EROSION CONTROL

9:30 | #111 | LOMR Review Updates
Paul Brayton
In 2022, IDNR began processing MT-2 LOMC Applications for FEMA. Its goal was to be a state voice for the applicants to FEMA's review process. In 2025, the funding from FEMA was exhausted and IDNR had to step away from the review process. A year later, funding will have been re-established and IDNR is once again reviewing MT-2 LOMC Applications but what has changed? Please join the conversation for MT-2 LOMC updates, the current IDNR Team, and best practices; to learn how the most complete applications get approval the quickest.

10:30 | #112 | Following the Flow: Investigating Seepage at Reservoir 29



Kellen Heavin
This presentation examines seepage issues observed at Reservoir 29, an aging embankment dam in southwest Indiana with a complex construction history rooted in coal mining operations. The dam's original construction using mine spoil and subsequent modifications contributed to long-term performance challenges, including seepage, instability, and material variability. A multidisciplinary approach combining geotechnical, geophysical, and geochemical evaluations was used to characterize the embankment and identify potential seepage pathways. The presentation also explores the performance and limitations of legacy seepage control measures, particularly geotextile drains that have been in service for decades. Conclusions focus on the embankment's current stability, the likely causes of seepage, and practical considerations for rehabilitation.

1:00 | #113 | Optimizing Operations and Capital Improvements by Integrating Technology
Phil Gralik & Tim Kingsland
The City of Hobart is integrating different technologies (GNSS, GIS, CCTV, OpenGov, etc.) to optimize operations and future capital improvements by inventorying and assessing all of the stormwater infrastructure. The final product of the five-year effort will be a data driven operation plan and capital improvement plan based on an accurate GIS of assets.

2:00 | #114 | Hobart Main Lift Station and Forcemain Guaranteed Savings Contract (GSC)
Mark Chmeliwskyj, Kameryn Wright, Jacob Ballah, & Phil Gralik
The project upgraded the Hobart Main Lift Station from 14 to 28 MGD, added a 30-inch redundant forcemain, and replaced pumps, valves, and HVAC. Running parallel to the existing line, the improvements increased capacity, provided system redundancy, and maintained continuous operation of this critical facility during construction.

3:00 | #115 | Advancing Wastewater Treatment to Meet Modern Development in Cumberland, Indiana
Kameryn Wright & Mark Chmeliwskyj
Project included the expansion of Cumberland's WPCF from an average daily flow of 1.5 MGD to 3.0 MGD and changed the treatment type from a Sequencing Batch Reactor (SBR) system to an Aerobic Granular Sludge System (AGS). Plant improvements also included a new headworks facility, new non-contact UV disinfection system, new low-profile cascade aeration

system, and new influent pumps and controls. Project also included the regionalization of the North Gem WWTP with the Cumberland WPCF. The North Gem WWTP had surpassed its useful life and was decommissioned with a new regional lift station taking its place. To facilitate this regionalization the existing downstream Buck Creek Lift Station was improved with new pumps, valve vault, and a backup generator. Additional improvements included the complete reconstruction of the German Church Lift Station, extension of 2,800 feet of 15-inch sanitary sewer, and installation of 850 feet of 3” Low-Pressure Force Main.



READ SPEAKER BIOS

TRACK SPONSOR

Flexamat

PERMANENT EROSION CONTROL

9:30 | #116 | ProPEL US 41 - Identifying the Needs and Visions for All Users

Dan Miller & Cam Schuh

This presentation will provide an update on the ProPEL US 41 study in Terre Haute, which is identifying needs and improvements for all users (drivers, walkers, bikers, and transit users.

10:30 | #117 | Protecting Watersheds through Erosion Control Methods



Michael Everhart

Sediment loss through erosion is one of the leading causes of water pollution. Water quality affects us all and it is all our responsibility to protect it. Soil erosion from water is a natural process that can be dealt with if you are using the correct erosion control methods. Erosion Control methods are used to prevent soil erosion and protect the environment. These methods include vegetated cover, mulching, terracing, tracking, riparian buffers, sediment basins and erosion matting. The effectiveness of these methods depends on the specific conditions of the area and the type of erosion that is occurring. Watershed management is a comprehensive approach to managing water resources and protecting the environment. It involves the coordination of activities that affect the quality and quantity of water in a watershed, including land use and planning, water supply management, and pollution control. Erosion control methods are an important part of watershed management, as they help to protect water quality by reducing the amount of sediment and other pollutants that enter streams and rivers. This presentation will cover several different methods of temporary and permanent erosion control. All options will center around creating sustainable vegetation and the importance of creating optimal soil conditions. The benefits of building a proper soil structure include water retention in the soil as well as carbon capture. We will be covering how to select the correct solution for different situations. Also, we will look at the differences between sediment control and erosion control and the most common pollutants that are targeted. There will be several project sites and case studies to review. People who attend this presentation will leave with a better understanding of the different erosion control solutions available to them. Attending this presentation people will have a greater understanding of the importance of soil testing before recommending soil amendments. People will also have a better understanding of the practical application of the solutions discussed in this presentation.

1:00 | #118 | NEPA and Permitting Project Timeline Challenges (Safer Drive 65 and US 40 for All)

Mike Oliphant, Brian Haefliger, Jessi Massing, & Kari Carmany George

Safer Drive 65 - An overview of the NEPA and Permitting Processes as it applies to the Safer Drive 65 project, with emphasis on lessons learned and the schedule implication. The US 40 for All project in Plainfield was originally programmed to be completed under one NEPA document and constructed under three separate contracts. The project has strict funding constraints with the first construction letting scheduled for 2029. However, current large NEPA document review times can take several months, and it became clear completion of the NEPA document for the entire corridor would be incredibly challenging within the given funding constraints. The project team will discuss how it was determined the project could be split into two projects of independent utility resulting in a path to deliver the first construction contract in 2029.

2:00 | #119 | Beyond the Public Hearing: Engaging Communities Across Urban, Suburban, and Rural Contexts in Complex Infrastructure Delivery

Aaron Smith, Brad Rateike, & Tim Ochs

Complex civil engineering projects rarely fail on the engineering. They stall, get litigated, or lose momentum when the public, elected officials, and private partners aren't brought along. This panel examines how public engagement strategy must adapt to the community it's operating in, and how the fundamentals stay constant, on projects spanning dense urban corridors, growing suburban edges, and rural communities. The strength of this panel is that each presenter has done this work firsthand. Between them, they have carried complex projects through community meetings and local government, through the statehouse and state agencies, and through the legal agreements, procurement, and P3 structures that turn engagement commitments into enforceable terms. The result is a single conversation that covers the full arc of a project, from the neighborhood meeting to the negotiating table, with the credentials to back each perspective. Attendees will leave with a practical framework for scaling engagement to context. What changes between an urban neighborhood worried about access and displacement, a suburb focused on growth and traffic, and a rural community concerned about land, farms, and small business — and what should never change regardless of setting? The session connects the softer discipline of public engagement to the hard realities of legal agreements, agency coordination, and political sponsorship, giving engineers and project leaders a clearer picture of the full delivery environment their designs live in.

3:00 | #120 | A New Standard for Project Communications

READ SPEAKER BIOS

Kathy Wolf & Matt Werner

Effective communication is critical to the success of high-profile infrastructure projects, especially those that transform communities. This workshop will explore the strategies and tools American Structurepoint has implemented to engage stakeholders, inform the public, interact with impacted businesses, and build community support. We will share how our team has developed comprehensive communication plans that include project branding, logo development, key messaging, and event coordination. The session will cover how we have used digital platforms, including websites, social media, e-newsletters, business outreach, virtual open houses, and video simulations to inform and engage. In addition, the workshop will discuss how customized marketing materials, press releases, and public events such as groundbreakings and ribbon cuttings have strengthened community connections. Attendees will take away lessons learned and best practices for tailoring communication approaches to various audiences.

TRACK SPONSOR

CRANE ENVIRONMENTAL SERVICES, LLC

MULTI-DISCIPLINE I

9:30 | #121 | SR 37 Lessons Learned – How Design Impacts Corridor Construction

Eric Farny, Hatem Mekky, & Jennifer Beck

This presentation will look at how design and process decisions impacted the successful completion of the SR 37 Corridor project in Fishers, IN.

10:30 | #122 | Communications in Emergency Situations

Kayla Arnold

When emergencies happen, public works and engineering professionals are often among the first to respond and the first to understand the technical details of what went wrong. But clear communication is just as critical as the operational response. This presentation will focus on how to communicate effectively before, during and after emergency situations, including severe weather events, flooding, road closures, infrastructure failures, utility disruptions and other incidents that impact the public. Using recent flooding events in Indiana as a key example, Kayla Arnold, Director of Communications for the City of Westfield, will examine what communities are doing well, where communication challenges often arise and what local governments can do to better prepare for high-impact events. The session will also cover practical best practices for reaching residents and stakeholders, coordinating internal information, working with traditional media, using social media and monitoring public forums. Attendees will learn how to share timely, accurate and understandable information; communicate changing conditions and uncertainty without speculation; translate technical information for the public; prepare message templates and response plans; and build trust with the community before, during and after an emergency. While flooding will serve as a significant case study, the strategies discussed can be applied to a wide range of emergency and infrastructure-related situations.

1:00 | #123 | Your Right-Hand Assistant: A Field Guide to AI's Failure Modes in 2026

Dave Thurston

AI has become your right-hand assistant. It's fast, always at the desk, and increasingly trusted with real responsibility, the way a good right hand once meant someone who took shorthand, kept the files, and never missed a beat. That's exactly the problem: trust has outpaced verification. This session is a management talk, not a tech talk. We'll cover the mechanics briefly, touching on how AI holds memory in text and markdown files and how it processes ongoing work, the modern equivalent of the notepad and the filing cabinet. Then we'll move into the real material: a field guide to where this assistant actually breaks down. Confidently misquoting the memo (hallucination). Losing the thread mid-meeting (context loss). Filing things that were never actually said (fabricated memory). For each one, a real-world tell for spotting it before it costs you, and a habit that catches it. We'll close on the uncomfortable throughline. A right hand who never says "I didn't catch that" isn't a good right hand, it's a liability wearing a badge of competence. Every bit of trust we hand AI, from intern to right-hand assistant to something closer to full employee, raises the cost of the mistakes we don't catch. This talk is ultimately about building that catch.

STEW 214AB

2:00 | #124 | In-tern it to Win-tern it!

Jim Lesh, Noelle Moon, Addison Wood, Mallory Kline, & Anna Conklin

Describing recent summer intern experiences of undergraduate students in public (INDOT) and private sector (engineering consultants Parsons and WSP) via game show. This presentation talks takes a sneak peek at various activities and opportunities the students had while going through their summer internship.

3:00 | #125 | Update and Lessons Learned on INDOT's ongoing ProgressiveProjects (CM/GC and Progressive Design Build)

Brian Shattuck, Kevin Jasinski,Dave Ayala, & Jason Rhoades

Alternative Delivery Program Update and progress details on all ongoing Progressive Projects including (Level Up 31, SR 32, I-80/94 FlexRoad, SR 2 and any other projects underway).

READ SPEAKER BIOS



MULTI-DISCIPLINE II

9:30 | #126 | Construction Specifications and Special Provisions
Scott Trammell
Attendees will be exposed to examples of both the right and wrong way to present a Unique Special Provision, along with helpful tips on how to navigate the new Sharepoint review process, things to avoid and questions to ask, in order to adhere to legal, moral and ethical construction standards. This presentation will also assist the Subject Matter Experts regarding their review of the USPs.

10:30 | #127 | Geospatial Data at the State of Indiana: Enhancements and Updates
Daniel Council & Shaun Scholer
The Indiana Geographic Information Office continues to enhance statewide geospatial data through core imagery, elevation, and framework data programs that support government operations and public access. Current initiatives focus on modernizing data delivery and expanding cloud-based resources, including optimizing all imagery and elevation products in our AWS Open Data bucket and our ongoing ATLAS grant work aimed at expanding geographic research and education. New advancements include: Imagery and elevation program updates, Integrating STAC (SpatialTemporal Asset Catalog) into our imagery and lidar products, and Recently added 6-inch leaf-on imagery from 2025.

1:00 | #128 | Agentic Quantity Takeoff and Error Detection for Transportation Construction Projects
John Habermann & Amir Hossein Oliaee
Errors and omissions (E&O) in Plans, Specifications, and Estimates (PS&E) remain one of the most expensive and preventable problems in transportation project delivery. At the Texas Department of Transportation (TxDOT), as an example, roughly one-fourth of all change orders and one-third of change-order costs between 2001 and 2015 were traced back to E&O in consultant-prepared contract documents, and over a 5-year period, 552 million dollars in change order costs were associated with the design E&O reason code. Additionally, cost estimates are largely developed through a time-consuming manual quantity takeoff process, resulting in inconsistencies and variation in estimate quality because key assumptions and expert knowledge are not always explicitly documented in manuals and specifications. This study introduces an agentic AI framework designed to reduce E&O and streamline estimation while keeping engineers in control of decision-making. Unlike traditional generative AI systems that primarily respond to prompts, agentic AI can execute multi-step reasoning processes, access reference materials, and perform structured calculations to complete complex engineering tasks. By combining project plans, specifications, historical PS&E documents, and agency guidance, the framework performs pay-item-level quantity takeoffs and evaluates estimate completeness through a transparent, step-by-step workflow. Portions of this framework are already being used by TxDOT, including tools for quantity verification and the identification of missing work items. Results demonstrate that the framework can reasonably approximate engineer-developed quantities, achieving an average R^2 of 0.72, while

correctly identifying the scope of major project work items with a micro-averaged F1 score of 76.4%. These tools help engineers identify potential E&O in estimates, improve quality assurance, and provide an independent check against AI hallucinations as AI-assisted workflows become more common in transportation project development.

2:00 | #129 | Beyond the Road: PublicPrivate Partnerships That Build Better Communities Across an Entire City
John Nail, Jenn Beck, & Kayla Arnold
Major transportation projects can transform a community—but only when agencies, local governments and businesses work together. This session explores the partnership between the Indiana Department of Transportation (INDOT) and the City of Westfield during the State Road 32 reconstruction through downtown Westfield. Attendees will learn how the project balanced transportation improvements with the city's vision for a walkable, pedestrian-focused downtown while supporting local businesses during construction. The presentation will also highlight Westfield's "Brave the Barricades" campaign, a collaborative effort to encourage residents to continue shopping and dining downtown throughout a six-month intersection closure. Participants will leave with practical strategies for building partnerships, engaging stakeholders and maintaining community support during complex transportation projects.

3:00 | #130 | SR 32 Digital Delivery for Construction
Bobby Steele
The first Progressive Design Build project in Lebanon's Leap District is utilizing digital delivery in various ways to advance the use of technology to benefit design, construction and asset management of INDOT's projects. This session will dive into how the contractor is utilizing the information provided by their design partner and how information is passed between the two parties to expedite various processes.

READ SPEAKER BIOS



MANAGEMENT/LEADERSHIP

9:30 | #131 Professional Engineer License - Historical Background, Current Status, and Ongoing Changes



David Devine & Tim Jensen

The Professional Engineer license has about a century of history and particularly aligns with civil engineering work. Differences in licensure qualifications exist in the many jurisdictions throughout the United States and changes in these qualifications have been ongoing. Proposals for future changes similarly are being made by multiple constituencies. This presentation provides an overview of Professional Engineer license qualifications beginning with a Historical Background, an analysis of current licensure status, and an outlook of future proposed changes. Emphasis will be on these issues in Indiana and the civil engineering profession.

10:30 | #132 | Onboarding & Evaluating New Employees

Robert Hart

Each day organizations large and small struggle to successfully onboard and evaluate new employees. Fortunately, there are effective methods - regardless of industry or occupation - that supervisors can apply in order to ensure effective orientations, clear performance expectations, and improved retention rates among newly-hired employees. This engaging 50-minute presentation, brimming with eye-popping statistics and startling real-life examples, invites engineering professionals to discover the do's and don'ts of welcoming aboard and evaluating new employees...including tips for navigating difficult conversations.

1:00 | #133 | The Human Side of Engineering: A Guide to Emotionally Intelligent Leadership

Jessica Miller Lighty & Karen Wood

Engineering runs on systems, schedules, and technical know-how — but people make the work happen. This session, "The Human Side of Engineering: A Guide to Emotionally Intelligent Leadership," explores why emotional intelligence is a core skill for leaders in transportation and DOT environments. We'll look at simple ways to connect with your team, understand different work styles, and communicate in a way that builds trust and keeps projects moving. The session also covers how to manage your own energy and set healthy boundaries in a job that often requires constant interaction. Attendees will leave with practical tools they can use right away to lead more confidently, work better with a mix of personalities, and build stronger, safer teams in a fast-paced industry.

2:00 | #134 | The Greatest Project You'll Ever Engineer, Building a Career of Purpose, Leadership, and Lasting Impact



Cassie Reiter & Kashif Khan

Every engineer learns how to design bridges, highways, airports, and water systems—but few are taught how to intentionally design a remarkable career. Drawing on lessons from engineering, leadership, and decades of professional experience, this presentation explores the principles that create lasting success beyond technical excellence. Attendees will discover how character, continuous learning, resilience, mentorship, and purposeful leadership become the true structural framework of an extraordinary career. The presentation also offers an honest perspective on the role of discipline, delayed gratification, and the

personal sacrifices that sometimes accompany meaningful achievement—while recognizing that careers evolve through different seasons and that long-term success should never come at the expense of personal well-being. Rather than offering generic career advice, this session provides a practical blueprint for building a career defined not only by projects completed, but by trust earned, people developed, and a legacy that endures.

3:00 | #135 | Verified, Documented, Defensible: Responsible AI Use in Civil Engineering

Neal Carboneau

AI is becoming another tool on the civil engineer's bench. The question isn't whether engineers can use it. It's how to use it while keeping the verification, documentation, and professional judgment that practice already requires. This focused session gives engineers a simple, repeatable way to do that: where AI helps and where more caution should be exercised; how to check its output before relying on it; and, how to document the work so it stays defensible. The professional bodies, the state licensing boards, and the professional liability market have all now tied unverified AI use to the engineer's responsibility and seal. Participants leave with a short method and a set of questions they can apply to their own projects the next day. The message holds steady throughout: AI Assists, Engineers Decide.

READ SPEAKER BIOS



VERTICAL STRUCTURES

9:30 | #136 | Best Practices on Communicating Joist Loading Requirements

Gerald McKenzie

See the attached article from the Vulcraft website for the main idea to be developed. I would also add a discussion of the new IBC2024/ASCE7-22 snow loading requirements to the discussion in an effort to bring clarity on how to specify the new LRFD Basis of Design in an effort to make sure that we don't generate the same confusion that still persists in the specification of wind loads since wind was converted to an LRFD Basis of design with the introduction of ASCE7-10 over 15 years ago. https://vulcraft.com/insight/BestPracticeCommunicatingLoadRequirements

10:30 | #137 | Meeting Existing Structures Where They Are At



Jerica Barlow & Maria Schadow

As the built environment ages and project demands evolve, structural engineers are increasingly challenged to adapt, rehabilitate, and expand existing structures rather than start with a clean slate. This presentation explores practical strategies for evaluating and designing within the constraints of existing buildings. Attendees will learn how to balance code compliance, owner expectations, and construction realities while preserving the value embedded in existing structures. Through real-world project examples, the session will examine condition assessments, load path investigations, material verification, selective strengthening techniques, and approaches for understanding existing structural behavior. The presentation will highlight the use of original drawings, historical building records, previous renovation documents, field observations, and archival resources to develop a more complete understanding of existing conditions and inform design decisions. Designed for structural engineers involved in renovation, adaptive reuse, expansion, and rehabilitation projects, this session will provide practical insights for making informed decisions when existing structures do not fit neatly within today's codes, standards, or design assumptions. Participants will leave with a deeper appreciation for the value of historical information and a practical framework for delivering safe, resilient, and constructible solutions by meeting existing structures where they are.

1:00 | #138 | Contamination to Construction

Salim Ilmudeen

Geotechnical engineering challenges and solutions for brown field redevelopment and case studies.

2:00 | #139 | Structural and Veneer Masonry Lintel Design and Detailing

Scott Walkowicz

Join us as we explore design strategies and analytical methods for masonry lintel design in both structural and veneer applications. We'll review how proper detailing and material selection influence lintel performance and contribute to a resilient building envelope. You'll also learn about the structural and construction benefits of masonry lintels compared to alternative lintel systems, including their impact on moisture control, stability, cost, and schedule. Case studies of completed projects will highlight how well-detailed masonry lintels can improve overall building behavior and long-term durability.

3:00 | #140 | Mine Subsidence Cause, Effect and Mitigation

Reza Osouli

The presentation will go over subsidence risks from the underground coal mining. Underground mining methods and stability analyses will be discussed. The subsidence risk, shapes, damage potential will be introduced and some photos from case histories will be shown to highlight the type of damages caused by subsidence. At the end some surface and underground mitigation approaches will be covered.

READ SPEAKER BIOS



9:30 | #150 | Managing Landslide Risk in Indiana: Planning, Prioritization, and Emerging Data



Joey Franzino & Victoria Leffel

This presentation will focus on how INDOT plans ahead for landslides, prioritizes projects based on risk and importance, and continually adjusts letting dates as slide conditions and priorities change. We will discuss the Department's emergency on-call contract as well as the annual "Routine Slides" program and explain the differences between Routine, Urgent, and Emergency Slides, including how projects move between these categories. We will also examine how the excessive rainfall during the spring and early summer of 2026 resulted in an unusually high number of urgent and emergency landslides, creating significant challenges for scheduling, design, and construction resources. We will discuss what INDOT has learned from this season and how proactive planning and delivery of routine slide repairs can improve the Department's ability to respond quickly and effectively when urgent slides occur. Finally, we will highlight ongoing landslide inventory work being completed by the Indiana Geological and Water Survey in partnership with the USGS. This effort is expanding and updating Indiana's landslide inventory while evaluating the relationships between landslide occurrence, bedrock geology, and landslide susceptibility across south-central Indiana. The resulting data and mapping products will provide a stronger scientific foundation for identifying high-risk corridors, prioritizing future mitigation projects, and supporting a more proactive, data-driven approach to landslide management throughout the state.

10:30 | #151 | Performance Assessment of Innovative Geotextiles to Improve Drainage within the Foundational Layers of Pavements

Salman Amin, Hyunsoo Lee, Syed Faizan Husain, Hyojung Ko, Erol Tutumluer, & Nayyar Siddiki

Excess moisture in pavement foundation layers can reduce the stiffness and durability of unbound materials, leading to moisture-related distress and shorter pavement service life. Conventional moisture-mitigation methods include open-graded drainage layers connected to edge drains, which primarily remove free water under saturated or near-saturated conditions when a sufficient hydraulic gradient exists toward the drainage outlet, as well as traditional geotextiles used for separation, filtration, or capillary control. However, these approaches may be less effective in removing moisture under unsaturated conditions or when the driving gradient for drainage is limited. Wicking geotextiles provide an alternative approach by transporting moisture through capillary action under unsaturated and low-gradient conditions. This presentation evaluates and compares the moisture-management performance of two different wicking geotextiles using instrumented, large-scale laboratory pavement test sections consisting of compacted subgrade, a geotextile layer, and aggregate base. Moisture sensors were installed at different depths to monitor moisture movement within each section. Groundwater-induced capillary rise and rainfall events were simulated to assess the response of the test sections under different wetting conditions. Moisture sensor responses were compared among the sections to evaluate differences in moisture movement, drainage behavior, and overall moisture-management performance. Key findings from this comparative analysis will be presented.

STEW 206

1:00 | #152 | INDOT Geotechnical Instrumentation
Nayyar Siddiki & Samuel Clawson
The Geotechnical investigation limitation requires the Engineer to make assumptions to design the project and develop construction procedures without full knowledge of what might be encountered in soil borings. The suitable subsurface instrumentation can reduce these uncertainties and can aid in the selection of appropriate field equipment and construction procedures. Subsurface instrumentation is typically utilized during the design phase or the construction phase. During the design phase, field instrumentation can be utilized for the following purposes: Established soil and rock profile along with ground water elevation, Bearing capacity of the proposed structure, Load response of soils and rock, Risk prediction, Natural calamities such as seismic, flooding, and soil types. During construction instruments are installed to monitor the following: Design validation and stage construction monitoring, Construction quality control and following designer's recommendations, Research results validation, and to ensure correction efficiency

2:00 | #153 | Understanding Geotechnical Challenges in Northern Indiana
Akhtar Zaman & Eric Morphis
We face difficult subsurface conditions and geotechnical challenges for various project sites in Northern Indiana. This presentation provides a detailed review of available historical and soil maps and compare them with available subsurface soil profile to understand the changing landscape of the region and possible reasons for the observed challenging subsurface conditions.

3:00 | #154 | Drilled Shaft Integrity Testing: Identification, Evaluation, and Remediation of Zones of Concern
Rory Flynn & Travis Coleman
The authors will highlight integrity testing of drilled foundations, focusing on INDOT bridge foundations tested using Thermal Integrity Profiling. Examples of both acceptable and anomalous examples will be presented. For anomalous shafts, the process will be expanded on, including remediation and supplemental shafts.



TRACK SPONSOR

Tensar®

A Division of CMC

STUDENTS

9:30 |#155 | Engineer Your Edge: Resume & Interview Tips from Industry Professionals



Josshe Palm & Karen Wood

Having technical background skills helps you excel at work and school; our presentation is your guide to help effectively communicate those skills to prospective employers. In this interactive session, presenters will share approaches to creating a fantastic resume, best practices for preparing for an interview, and navigating the job application process. Attendees will learn how to translate academic projects and technical experience into tangible accomplishments and highlight your teamwork and problem-solving skills. The session will also explore the importance of internships, professional organizations, networking, mentorships, and other forms of industry involvement that could strengthen and expand your career journey. Attendees will learn how to advocate for roles internally and externally and gain insight on what employers look for when reviewing applications, and common mistakes to avoid during interviews. Whether you are applying for an internship, co-op, or full-time position. This session will provide you with the tools to go into your interview with confidence, stand out amongst other applicants, and engineer your own edge.

1:00 | #156 | ASCE Guess Who? w/ ASCE President-Elect Rossana D'Antonio



ASCE Young Members Group

Come join the ASCE Metropolitan Indianapolis Branch (MIB) Younger Member Group (YMG) with a special guest appearance from the ASCE President Elect, Rossana D'Antonio! Let's have interactive conversations between younger engineers, ASCE leadership, and you. Work on your intrapersonal skills with experts in the industry and with other students in a low-stress, relaxed environment.

3:00 | #157 | ASCE Prize is Right!



ASCE Young Members Group

Ever wanted to be on the game show "Price is Right"? Now you can! Join the ASCE MIB YMG for fun-filled, competition-based learning activity that'll sharpen your engineering skills. Put your estimator hard hat on and win some prides! Win ASCE swag and bragging rights with your friends. You'll be the next contestant on the Prize is Right!



Look for the rocket icon!

Sessions with the rocket have been recommended for students!

PMU E/W FACULTY LOUNGES

FOLLOW US

TO STAY UP TO DATE

ASCE INDIANA SECTION
Metropolitan Branch
YOUNGER MEMBER GROUP

ASCE Younger Members *focuses on matters of the professional development of civil engineers 35 years of age and younger and facilitate their engagement with and participation in the Society. Use this QR Code to learn more!*



Join the American Society of Civil Engineers (ASCE)!

Membership moves you forward faster!

- **CAREER BOOSTERS.** Current industry standards, salary report and technical tools, job fairs and international job board, PE exam preparation
- **CONNECTION MAKERS.** Networking with peers and mentor, committee volunteer and policy roles, publishing, awards, and honors, free institute membership, join a Younger Member Group
- **DISCOUNTS AND SAVINGS.** 10 free PDHs annually, free and discounted event access and benefits, complimentary subscription to Civil Engineering magazine, continuing

Visit www.asce.org to become a member today.

