



Technical Sessions Schedule 2024



View full Road School technical program at <https://purdue.pub/rs2024-program>

TUESDAY, MARCH 12

Visit With the Exhibitors

North & South Ballrooms, Purdue Memorial Union 8:00 AM–5:00 PM

Opening Session

Loeb Theater, Stewart Center 9:30 AM–10:30 AM

Student Poster Session

Purdue Memorial Union 11:00 AM–1:00 PM

	Bridges	Design/Construction			Elected Officials	Finance/ Administration	Human Capital/ Leadership	Local Agency		Maintenance & Operations	Multimodal Transportation	Pavements	Project Management/Planning		Public Works	Safety	Traffic Operations	Urban Planning	
	CL50 224	Fowler Hall	Loeb Theater	STEW 302	STEW 320	RAWL 1086	STEW 206	STEW 214 AB	STEW 314	UC 114	STEW 218 CD	STEW 306	STEW 202	STEW 279	STEW 218 AB	WTHR 104	STEW 310	STEW 278	
11:00–11:50 AM	1. US 33 Over Blue River: ABC’s With Steel			15. 3rd Street Bridge Replacement and Enhancements Over Lake George			28. Engineers Without Borders: U.S. Mission, Needs, and Opportunities	33. Tips for Successful LPA Engineers and Supervisors			44. Monon South Trail Project Updates			57. Emerging Challenges to Project Delivery: Discussion and Solutions	62. Women of Public Works			76. Transportation Equity Assessment in Indiana: Recent Findings	
12:00–12:50 PM				6. Hurrying to Drain: The Secret to Accelerated Projects			16. Lessons Learned From the I-65 Concrete Pavement Restoration				24. NextLevel Grants and Project Funds Management			34. A Holistic Approach to Managing Local Agency Assets	39. Applied Ergonomics			63. City of Warsaw GIS and Asset Management	77. Safe Routes to Health Centers Project
1:00–1:50 PM	2. Cost Quantification of Construction Defects on Concrete Decks	7. Proper Use and Care of the Lightweight Deflectometer	11. Using Sustainable BMPs to Achieve SWPPP Success	17. I-69: Closing in on the Finish Line	21. White River Innovation District BOT for Infrastructure IndyDPW	25. Exploring Fuel Tax Alternatives	29. It Starts With You: Effective Team Building Strategies			40. Collected Mobile LiDAR Data Along Indiana’s Transportation Corridors	45. Reimagining Cherry Lane: A Road to Collaboration	49. I-65 ATL Boone County: Pavement Instrumentation Lessons Learned	53. Demystifying Utility Coordination: Understanding the Basics	58. Managing Stormwater in Flat Floodplains	64. The Role of the Owner’s Representative in Public Works Projects	68. Vulnerable Road Users: Session 1	72. Demystifying Traffic Engineering for the Rest of Us	78. Achieve Long-Term Management Success of Green Infrastructure	
2:00–2:50 PM	3. The Fort Wayne Veterans Memorial Bridge	8. Design-Build Best Value: Navigating Geotechnical Risk	12. Managing Risk: Balancing Design Criteria With Site Constraints	18. MSE Walls Retrofit Design and Construction	22. Equitable Stormwater Rates: Sustaining Essential Infrastructure	26. Local Income Tax: An Evolving Resource	30. Looking Back and Plowing Ahead			35. County Bridge Preservation: Locally Funded vs. Federally Funded	38. Local Agency Round Tables: Street Commissioners	41. Evaluation of Lane Marking Reflectivity Using LiDAR Intensity	46. Rail Test Track at Purdue	50. Designing the Thickness of Low-Volume Roads and Streets	54. Utility Construction Headaches	59. Improving Highway Safety and Efficiency Using Weaving Data Analytics and CV2X Technology	65. The Future of Smart Sewer Inspections	69. Using AI Video Analytics to Evaluate Roundabout Operations and Safety	73. Streamlining Trips: An Overview of Transit Signal Priority System Implementation at IndyGo
3:00–3:50 PM	4. UHPC Pre-Cast Bridge Elements	9. Rethinking Intersections at Grade: IDM Chapter 46 Update	13. Adventures in Preparing Additional Information Documents	19. Complete Streets on a Local Arterial Roadway	23. Public Speaking Level 2: The Skill of Storytelling and Persuasion	27. Gas Tax Reimbursement and Budgeting Sub-Funds	31. The Transition From Individual Contributor to Engineering Manager	36. Introduction to Right-of-Way Acquisition			42. Solid State LiDAR for Stockpile Volume Estimation in Storage Facilities	47. Kentucky Statewide Interstate and Parkway Plan	51. Back-Calculating the Dynamic Modulus Master Curve From the Time History Data of FWD Deflections	55. Protecting Your Waterways: How to Prevent Pollution and Budget Effectively for Your Construction Site	60. Consultant Contracts Process Improvement	66. The Importance of Standard Drawings and Specifications	70. ATMA Pilot Implementation and Evaluation in Indiana	74. Connecting TSMO to the TMC and to the Motorist	80. Planning for the Next Generation of I-65 and I-70
4:00–4:50 PM	5. Gantry Erection of I-294-Mile-Long Bridge	10. A Move Towards Context-Based Design	14. Pedestrian Maintenance of Traffic Updates	20. New Roundabout Guidelines			32. Engaging Engineering Students in Community-Based Project Learning	37A. What is in the New Edition of the MUTCD?			43. AI and Road Asset Management	48. Purple Line Bus Rapid Transit Project Overview	52. Temperature Correction Factors for FWD Deflections of Asphalt Pavements	56. Stop Doing Schedules Wrong	61. Progressive Contracting: Shifting Paradigms (KYTC’s Year in Review)	67. The Low-Cost Resurface Plan Creation	71. Horizontal Curve Alignment and Setting Advisory Speeds	75. Revolutionizing Work Zone Implementation Using Big Data	81. Addressing Risk and Uncertainty in Traffic Impact Studies

WEDNESDAY, MARCH 13

Visit With the Exhibitors

North & South Ballrooms, Purdue Memorial Union 8:00 AM–5:00 PM

132B. Indiana Statutes and Rules for Professional Engineering Licensure

Loeb Theater, Stewart Center 8:00 AM–8:50 AM

133B. Professionalism and Ethics in the Practice of Engineering

Loeb Theater, Stewart Center 9:00 AM–9:50 AM

	Aviation	Bridges	Design/Construction			Elected Officials	Electric & Connected Vehicles	Human Capital/ Leadership	Local Agency		Maintenance & Operations	Pavements		Project Management/Planning		Public Relations/ Communications	Safety	Traffic Operations
	STEW 218 CD	CL50 224	Fowler Hall	Loeb Theater	STEW 302	STEW 320	MTHW 210	STEW 206	See locations below	STEW 214 AB	UC 114	STEW 218 AB	STEW 306	STEW 202	STEW 279	STEW 278	WTHR 104	STEW 310
8:00–8:50 AM	82. Challenges and Successes: The Runway 1-19 Project and Drone Usage in Construction	90. Bringing the NEXT Beam to Indiana	98. Holistic Quality Management of Precast Concrete Construction Infrastructure		112. INDOT Digital Delivery Post Construction Data Intake	121. Breaking Down Communication Barriers		134. Burnout: How to Spot It and Take Action	142. TTC: Emergency Response STEW 214 CD	149. Design and Maintenance Considerations for Buggies	156. Renewable Energy Sources in INDOT ROW or Properties	165. Resilient Modulus Enhancements in Geogrid Stabilized Pavement Bases	173. Nano-TiO2-Based Surface Treatments on Pavements: Effect on Proactive Properties	180. Tips and Tricks for Successful Project Management	187. Above and Beyond: LiDAR Mapping Technology	194. Importance of Public Outreach for Reimagine Pleasant Street	201. Tools to Implement the Safe System Approach	209. Work Zone Safety Fundamentals and Best Practices
9:00–9:50 AM	83. Indianapolis Airport: RON Parking and Risk Management for Airfield Pavement	91. Modified Semi-Integral End Bent Details: Design and Construction	99. I-69 Finish Line: Techniques for Great Utility Coordination		113. How Survey Technology Helped Transform the I-69 Project	122. Local Agency Round Tables: County Commissioners	126. Quantifying Roadway Complexity for AV Freight Deployments	135. Improving Operational Success Through Communication and Leadership	143. Practical Math for Roadway Workers STEW 214 CD	150. Local Safety Funding and Needs	157. VAC Truck Operations and Best Practices		174. Indiana Asphalt Binder Specification Changes	181. Alternative Procurement for Assessment Management: ID/IQ and MSE Walls	188. Survey and R/W: Bookends of a Successful Project	195. PRD and Me	202. Indiana Observational Weather Needs to Mitigate Road Hazard Risk	210. Automated Work Zone Enforcement Update
10:00–10:50 AM	84. Air Hazards: Air Ambulance Accidents and Managing Tree Growth Near Airports	92. Advanced Site Characterization for Improved Project Delivery	100. Success of Build-Operate-Transfer Projects in Plainfield		114. Maximize Drainage Design With Bentley OpenRoads Technology		127. Charging the Crossroads: Indiana's Electric Vehicle Infrastructure Program	136. Five Generations Walk Into an Office . . .	144. A Local Government's Approach to Context Design Policies STEW 214 CD	37B. What Is in the New Edition of the MUTCD?	158. What's Next for the Operation and Maintenance of Indiana Roadways?	167. Concrete Pavement 101, "Back to Basics": Long-Lasting Concrete Streets and Roads	175. Novel Self-Heating and Sustainable Pavement System		189. ProPEL US 30/ US 31 Study Update	196. Elevating Equity in Public Engagement	203. Confessions of a Former City Vision Zero Coordinator	211. Intelligent Transportation System Monitoring
11:00–11:50 AM	85. INDOT UAS: Obstruction Evaluations and WEB Tool Demonstration	93. 28+1 Bridge Preservation: From Silane to Epoxy Best Practices	101. North Split Project Update		115. A Contractor's Top 5 Keys to MOT Design and Implementation		128. Electric Vehicles and EV Charging Preferences	137. Developing a Culture and Building a Cohesive Team	145. Community Crossings Matching Grant Funding Loeb Theater	151. Prioritizing Small Structure Inspections: Safety and Budgets	159. Using Your Data to Make Decisions	168. Data Management System for FWD Analysis and Visualization			190. Understanding and Implementing INDOT's Noise Analysis Procedure	197. Driving Success: Effective Communication and Storytelling	204. Vulnerable Road Users: Session 2	
12:00–12:50 PM			102. Principles of Writing Construction Specifications and Special Provisions	107. Unlocking Precision for Municipalities Through LiDAR and Mapping	116. Signs, Gateways, and Landscaping, Oh My!						160. Bridge Inspectors' Consistency Assessment Using Virtual Reality			183. Navigating Complex Section 106 Mitigation				
1:00–1:50 PM	86. Put the Brakes on Airfield Friction Concerns	94. Effective and Efficient Hydraulic Site Data Collection Sensors	103. INDOT Alternative Project Delivery With CM/GC and PDB	108. Two Diamonds Are Better Than One	117. Indiana Transportation Team: ITT Updates	123. Maximizing Your Project Outcomes With Statements of Qualifications	129. INDOT Dynamic Wireless Power Transfer Pilot Project	138. Curb Ramps: Ramp Up Your Career	146. Local Agency Round Tables: County Engineers and Supervisors STEW 314	152. Local Bridge Inspections	161. Compressed Natural Gas and How It Works	169. Inexpensive Pavement Management System Using Crowdsourced RGB-D Data	176. Concrete Pavement for Intersections and Roundabouts	184. Best Practices for Implementing Large Data Systems	191. Identifying Bat Species From Feces	198. Mastering Difficult Conversations: A Practical Guide	205. Speed Management	212. INDOT's Intersection Development Process
2:00–2:50 PM	87. Purdue University Airport Terminal: Innovation to Mitigate Risk	95. iTAMS Inspection Platform: Tips, Tricks, and Lessons Learned	104. I-69 ORX Section 3: Completing the Connection	109. Ahead of the Curve With Bentley Infrastructure Cloud	118. Developments in INDOT Maintenance of Traffic Practices and Standards	124. Turn Building Assessments Into Capital Plans	130. Ohio Rural Automated Driving System Project	139. Employment-Based Immigration for A/E Managers		153. Subsurface Utility Engineering for Municipalities	162. Post-Fire Assessment and Evaluation of INDOT Bridges	170. Performance Evaluation of Power Transfer Roadways	177. Preserving Roads: Ensuring Municipalities' Sustainable Infrastructure Future	185. Better Project Management Using Microsoft Teams	192. Navigating the Environmental Critical Path: Effective Coordination Strategies	199. Link 101: Navigating Challenging Terrain and Challenging Public Opinion	206. SAFERoad Solutions: Explaining Road Designs to the Public	213. Simulating Traffic Calming Effects on the Neighborhood
3:00–3:50 PM	88. Indianapolis International Airport Runway Reconstruction: Sustainability in Action	96. Including Inspection Details on the Milton-Madison Bridge	105. Surveying Today's AEC World From Design to Construction	110. Indy's First BOT: Utilizing IC 5-23	119. Exit 10 Renovations for the Indiana Toll Road Concession Company	125. Elected Official Emergency Planning, Response, and Recovery canceled	131. Practical Methods to Design and Construct Electric Roads Using Concrete or Asphalt	140. Bringing Out the Best in People	147. Local Agency Workforce Challenges and Opportunities STEW 214 CD	154. Broadband Money is Coming! What Do Local Governments Need to Know?	163. Scanning, Assessing, and Repairing Corroded Steel Bridge Girders	171. Use of GPR to Evaluate Pavement Subgrade Problems	178. Verifying Pavement Foundation Construction Using Roller Mapping Technology	186. Risky Business: Identify and Mitigate Risks in Project Development	193. Innovation Through Adaptability: Navigating Project Complexities	200. Clear Path 465: Know Before You Go	207. GIS Analysis Informs Lighting Location Selection	214. INDOT ITS Future Deployments
4:00–4:50 PM	89. The Future is Here: Airport Energy Resiliency and Electric Aviation	97. Assessment of Bridge Rehabilitation to Improve Asset Management	106. Utility Rope-a-Dope: The Muhammad Ali Approach to Conflict Analysis	111. Best Practices in Design for Preserving Limestone Curbs	120. Precast Box Culvert Design and Installation			141. My Role as a Transportation Practitioner on Equity	148. ADA/Title VI STEW 214 CD	155. Municipal Engineering in a Post-Pandemic Environment	164. Unmanned Aerial Systems	172. Sustainable Pavement Design Using Geosynthetics	179. Machine Learning for Resilient Subgrade Soil Predictions				208. Slow Down! South Bend's Progress on Traffic Calming	215. 2+1: The Good, the Bad, and the Ugly