

Jim Mack | Associate Principal



EDUCATION

- University of Illinois at Urbana-Champaign
 - Bachelor of Science, Civil Engineering, 1988
 - Master of Science, Civil Engineering, 1990
- University of Chicago
 - Master of Business Administration, 2001

PRACTICE AREAS

- Pavements
- Construction Materials
- Sustainability
- Repair and Rehabilitation
- Research and Product Development

REGISTRATIONS

- Professional Engineer in IL and TX

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- American Concrete Pavement Association (ACPA)
- American Society of Civil Engineers
- National Ready Mixed Concrete Association
- Portland Cement Association (now American Cement Assn.)
- Transportation Research Board

CONTACT

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EXPERIENCE

Jim Mack joined WJE in 2025 with more than thirty-five years of pavement engineering experience. He has expertise in pavement and rehabilitation design, construction, forensic evaluation, pavement management, materials specification and evaluation, and life cycle cost analysis and life cycle assessment (environmental impact).

Before joining WJE, Mr. Mack worked in the cement and concrete industry, collaborating with state agencies, municipalities, and industry professionals to develop cement and concrete-based solutions for various pavement applications. He has held leadership roles in numerous industry associations and national and state organizations across the U.S., including serving as chair of the ACPA Board of Directors in 2019. Mr. Mack has published more than thirty-five technical papers, articles, and reports and is a frequent presenter on topics, such as concrete pavement design, materials, and sustainability.

REPRESENTATIVE PROJECTS

Pavements

- Port of Newark, NJ, and Port Nuevo, Puerto Rico: Structural condition assessment of pavements and recommendations of feasible alternatives for rehabilitation *
- Innovative Pavement Research Foundation: Research project on improved overlay design parameters for concrete airfield pavements *
- Pavement Design: Pavement optimization, life cycle costs, and life cycle assessment for multiple projects; development of WinPAS, PavementDesigner.org, and other design programs *
- Florida DOT, Texas DOT, and CALTRANS Rigid Pavement Committees: Collaboration with agencies to refine and improve concrete pavement designs and specifications, resulting in numerous projects, including the FDOT Concrete Test Road *
- Education and Training: Development of multiple technical bulletins, computer programs, and other materials on concrete pavements and delivery of training sessions across the U.S. and globally

- MIT Concrete Sustainability Hub: Technical co-chair overseeing the university's pavement research

Construction Materials

- Concrete Mix Design: Concrete paving mix design development for numerous projects and contractors *
- Low-Carbon Concrete: In-house EPD implementation and low-carbon concrete program development activities *

Sustainability

- FHWA Sustainable Pavements Program: Promotion of sustainable pavement practice and author of guide documents *
- PCA Sustainability Roadmap: Collaboration within cement industry to develop CO₂ reduction framework *
- Development of industry publications on lifecycle cost analysis, asset management, and lifecycle assessment *

Repair and Rehabilitation

- Development of industry technical publications for the repair of concrete streets, highways, and airport pavements *
- Diamond Grinding: Longevity of diamond-ground concrete pavements research
- Concrete Overlays: Multiple concrete overlay of asphalt (whitetopping) and concrete overlay of concrete projects

TECHNICAL COMMITTEES

- ACI 323A - Low-Carbon Concrete Code
- ACI 325 - Concrete Pavements
- ACI 327 - Roller-Compacted Concrete Pavements
- ACI 330 - Concrete Parking Lots and Site Paving
- ACPA Research - Technology and Innovation (RT&I) Committee

AWARDS

- ACPA 2022 Presidential Award
- PCA John P. Gleason Jr. Leadership Award
- Eldon J. Yoder Outstanding Paper Award for the 11th International Conference on Concrete Pavements

* Indicates with previous firm