

Kurt D. Smith, P.E.

VICE PRESIDENT | PROGRAM DIRECTOR

Education

M.S., Civil Engineering, University of Illinois, 1985

B.S., Civil Engineering, University of Illinois, 1983

Professional Registration

Professional Engineer, Illinois, 1989

(also licensed in Michigan, New York, and North Carolina)

INTRODUCTION

Mr. Smith is a Vice President and Director of the State and National Agencies Program Area at Applied Pavement Technology, Inc. (APTech). He oversees the pavement research and training segment of the firm, while also actively managing several projects and serving as an advisor and technical analyst on others. Mr. Smith has more than 35 years of engineering experience with specific expertise in:

- Pavement Research
- Pavement Evaluation
- Pavement Design and Construction
- Pavement Rehabilitation
- Concrete Materials
- Pavement Technology Transfer

REPRESENTATIVE EXPERIENCE

Pavement Research

- Program Manager for the FHWA Indefinite Delivery/Indefinite Quantity (IDIQ) contract, *Sustainable Pavements Program II*.
 - Project Manager for Task Order 1, *Sustainable Pavement Program Roadmap*.
 - Project Manager for Task Order 2, *Establishment, Organization, and Coordination of the Sustainable Pavements Technical Working Group (SPTWG)*.
 - Project Manager for Task Order 3, *Technology Transfer Toolbox*.
 - Project Manager for Task Order 4, *Sustainable Pavements Case Studies*.
 - Project Manager for Task Order 5, *Environmental Impact Benchmarking Tool*.
 - Project Manager for Task Order 6, *Sustainability Education and Outreach*.
 - Project Manager for Task Order 7, *Pavement Resilience Guidebook*.
- Program Manager for the FHWA IDIQ Contract, *Implementation of Best Practices for Concrete Pavements*.
 - Project Manager for Task Order 2, *Development of the Concrete Pavement Notebook*.
 - Principal-In-Charge for Task Order 5, *American Association of State Highway Workers and Transportation Officials (AASHTO) MEPDG Peer Exchange Meetings*.
 - Project Manager for Task Order 6, *Implementation Support for SHRP 2 Project R-21, New Composite Pavement Systems*.



- Principal-In-Charge of for Task Order 8, *Clearing-House of MEPDG-Related Research and Implementation Efforts*.
- Principal-In-Charge of Task Order 9, *AASHTO Pavement ME National Users Group Meetings*.
- Project Manager for Task Order 14, *PCC Pavement Preservation Strategies*.
- Project Manager for the Airport Cooperative Research Program (ACRP) A11-03/S09-08: *Practices to Mitigate Alkali-Silica Reaction (ASR) Affected Pavement at Airports*.
- Program Manager for the FHWA IDIQ Contract, *Sustainable Pavements Program*.
 - Co-Principal Investigator for Task Orders 1, 3, 5, and 8, *Organization, Coordination, and Facilitation of the SPTWG*.
 - Co-Principal Investigator for Task Order 2, *Development of a Reference Document for Sustainable Pavement Systems*.
 - Co-Principal Investigator for Task Order 4, *Technology Transfer of Information on Sustainable Pavements*.
 - Co-Principal Investigator for Task Order 6, *Development of a Pavement Life-Cycle Assessment (LCA) Framework*.
 - Co-Principal Investigator for Task Order 7, *Continuation of Technology Transfer of the FHWA Sustainable Pavements Program*.
- Co-Principal Investigator for the NCHRP Project 1-46, *Handbook for Pavement Design, Construction, and Management*.
- Co-Principal Investigator for the Michigan DOT study, *Sustainable Recycled Materials for Concrete Pavement*.
- Co-Principal Investigator for the Michigan DOT study, *Using Recycled Concrete in MDOT's Transportation Infrastructure*.
- Senior Engineer for the SHRP2 R-26 Study, *Preservation Approaches for High Traffic Volume Roadways*.
- Principal Investigator for the FHWA study, *Using Falling Weight Deflectometer Data with Mechanistic-Empirical Design and Analysis*.
- Co-Principal Investigator for the Ohio DOT study, *Relationship Between Skid Resistance Numbers Measures with Ribbed and Smooth Tire and Wet-Accident Locations*.
- Co-Principal Investigator for the Ohio DOT study, *Evaluation of Alternative Dowel Bar Materials*.

Pavement Training Courses and Manuals

- Project Manager for the FHWA project, *Concrete Pavement Preservation Manual Update*, as a subcontractor to Snyder and Associates, Inc.
- Project Manager for the NHI IDIQ *Development and Delivery Support for Highway Construction and Maintenance, Pavement Technology, and Transportation Asset Management Training*.
- Contributing Author and Instructor for the *Integrating Materials and Construction Practices for Durable Concrete Pavements: A State-of-the-Practice Manual*.

Airport Pavement Evaluation and Design

- Lead Engineer for the Hawaii Fueling Facilities Corporation Pavement Design Review, as a subcontractor to Bowers & Kubota Consulting, Inc.
- Senior Engineer for the Porter County Regional Airport (Indiana) Apron Investigation.



- Senior Engineer for the John F. Kennedy International Airport (New York) Runway 13R-31L Spall Evaluation.

Roadway Pavement Evaluation and Design

- Principal Investigator for the Port of Miami (Florida) Tunnel Pavement Evaluation.
- Senior Engineer for the 2015 to 2021 Illinois DOT Statewide Pavement Testing, Engineering Evaluations, and Performance Monitoring.
- Principal-In-Charge for the City of Urbana (Illinois) Pavement Forensics Investigation.
- Principal-In-Charge for the City of Fort Wayne (Indiana) East State Boulevard Pavement Evaluation, as a subcontractor to DLZ Indiana, Inc.
- Principal-In-Charge for the Port of Mobile (Alabama) Intermodal Facility Pavement Analysis, as a subcontractor to EMH&T.
- Lead Engineer for the Evaluation of Concrete Pavement Design at Lincoln Land Community College (Illinois).
- Lead Engineer for the North Carolina DOT I-440/I-40 Pavement Design Review.
- Senior Engineer for the Honolulu Wilhelmina Rise Pavement Friction Investigation, as a subcontractor to Parsons Brinkerhoff, Inc.
- Senior Engineer for the City of Champaign (Illinois) Staley Road Pavement Improvement Plan, as a subcontractor to Crawford, Murphy & Tilly, Inc.

SELECTED RECENT PUBLICATIONS

Smith, K., J. Signore, D. Tompkins, and P. Ram. 2019. *Implementation of Composite Pavement Systems*. FHWA-HIF-19-014. Federal Highway Administration, Washington, DC.

Ram, P., K. Smith, M. Parvini, and S. Chaudhari. 2019. *Caltrans Two-Lift Concrete Pavement Construction Project: I-210 EB*. Final Report. Federal Highway Administration, Washington, DC.

Snyder, M., K. Smith, and A. Naranjo. 2019. *Texas DOT Two-Lift Concrete Pavement Construction Project: Frontage Road Along SB U.S. 59*. Final Report. Federal Highway Administration, Washington, DC.

Van Dam, T., K. Smith, M. Snyder, P. Ram, and N. Dufalla. 2019. *Strategies for Concrete Pavement Preservation*. FHWA-HIF-18-025. Federal Highway Administration, Washington, DC.

Ram, P. V. and K. D. Smith. 2018. *SHRP2 Project R21 Peer Exchange: New Composite Pavement Systems*. FHWA-HIF-18-024. Federal Highway Administration, Washington, DC.

Ram, P. V. and K. D. Smith. 2017. *SHRP2 Project R21 Showcase: New Composite Pavement Systems*. FHWA-HIF-17-040. Federal Highway Administration, Washington, DC.

Ram, P. and K. Smith. 2017. *Measuring and Expressing Pavement Smoothness*. FHWA-HIF-16-032. Federal Highway Administration, Washington, DC.

Smith, K. D., J.E. Bruinsma, M.J. Wade, K. Chatti, J.M. Vandenbossche, H.T. Yu, and L. Pierce. 2017. *Using Falling Weight Deflectometer Data with Mechanistic-Empirical Design and Analysis—Volume I: Final Report*. FHWA-HRT-16-009. Federal Highway Administration, McLean, VA.

Bruinsma, J. E., J. M. Vandenbossche, K. Chatti, and K. D. Smith. 2017. *Using Falling Weight Deflectometer Data with Mechanistic-Empirical Design and Analysis—Volume 2: Case Study Reports*. FHWA-HRT-16-010. Federal Highway Administration, Washington, DC.



Pierce, L. M., J. E. Bruinsma, K. D. Smith, M. J. Wade, K. Chatti, and J. M. Vandebossche. 2017. *Using Falling Weight Deflectometer Data with Mechanistic-Empirical Design and Analysis—Volume 3: Guidelines for Deflection Testing, Analysis, and Interpretation*. FHWA-HRT-16-011. Federal Highway Administration, Washington, DC.

Smith, K. D., M. B. Snyder, L. M. Pierce, and J. L. Waller. 2015. *Tennessee DOT Two-Lift Concrete Pavement Construction Project: I-65 NB Shoulder*. Federal Highway Administration, Washington, DC.

Van Dam, T. J., J. T. Harvey, S. T. Muench, K. D. Smith, M. B. Snyder, I. L. Al-Qadi, H. Ozer, J. Meijer, P. V. Ram, J. R. Roesler, and A. Kendall. 2015. *Towards Sustainable Pavement Systems: A Reference Document*. FHWA-HIF-15-002. Federal Highway Administration, Washington, DC.

Smith, K. D., D. Harrington, L. M. Pierce, K. L. Smith, and P. V. Ram. 2014. *Concrete Pavement Preservation*. Concrete Pavement Technology Center, Ames, Iowa.

Ram, P. V., T. J. Van Dam, L. L. Sutter, G. Anzalone, and K.D. Smith. 2014. “Field Study of Air Content Stability in the Slipform Paving Process.” *Proceedings, Transportation Research Board (TRB) 93rd Annual Meeting*. Transportation Research Board, Washington, DC.

SELECTED RECENT PRESENTATIONS

Composite Pavements, 21st Annual Pennsylvania Concrete Conference. Harrisburg, PA. February 21, 2019.

FHWA Concrete Pavement Preservation Study, Transportation Research Board 98th Annual Meeting, Washington, DC, January 16, 2019.

Concrete Pavement Patching, Southeastern States Pavement Association Conference. Charleston, WV. October 23, 2018.

Practices to Mitigate Alkali Silica Reaction Affected Pavement, Transportation Research Board 97th Annual Meeting, Washington, D.C., January 7, 2018.

Two-lift Concrete Paving, Australian Society for Concrete Pavements (ASCP) 4th Concrete Pavements Conference, Kingscliff, NSW, Australia, July 17, 2017.

US Experience with Concrete Pavement Rehabilitation, ASCP 4th Concrete Pavements Conference, Kingscliff, New South Wales, Australia, July 18, 2017.

Composite Pavements, 2017 Annual Virginia Concrete Conference, Richmond, VA, March 2-3, 2017.

PROFESSIONAL AFFILIATIONS

- Member, American Society of Civil Engineers (ASCE).
- Member, Transportation Research Board (TRB).
 - Member, TRB Committee AFD50, *Design and Rehabilitation of Concrete Pavements*
 - Member, TRB Subcommittee AFD30(2), *Sustainable Pavements*
- Member, American Concrete Institute (ACI).
 - Chair, Committee ACI 325, *Concrete Pavements*.
- Member, International Society for Concrete Pavements (ISCP).