

The AASHTO Research Advisory Committee (RAC) has selected their Sweet 16 High Value Research projects for 2016 (full list below), and the IDOT/ICT project [Testing Protocols to Ensure Performance of High Asphalt Binder Replacement Mixes Using RAP & RAS](#) was selected as a winning project for Region 3! This project developed and established an Illinois modified version of the Semi-circular Bend (IL-SCB) test and the determination of a flexibility index (FI), known together as the Illinois Flexibility Index Test (I-FIT).

IDOT is beginning to implement I-FIT this year by constructing 11 pilot projects using the department's new I-FIT specification, which requires I-FIT testing and compliance for mix design verification and plant-produced mixtures. On a national level, there is a new AASHTO provisional standard (TP-124 Determining the Fracture Potential of Asphalt Mixtures Using Semicircular Bend Geometry (SCB) at Intermediate Temperature) for the I-FIT, which for now is being referred to as IL-SCB.

As a result of this vote, IDOT will be recognized at the AASHTO RAC national meeting in July as well as at the AASHTO Annual Meeting in November. This project will also be part of the Sweet 16 High Value Research poster session at the 2017 annual Transportation Research Board meeting next January.

Congratulations to everyone who has been involved in this project, which featured an especially strong collaboration between the department and the research team. A special thanks to the collaborators listed below for the hard work and dedication it took to produce and implement research results that are improving the state of the practice and having a national impact.

Technical Review Panel: Matt Mueller (Panel Chair), Abdul Dahhan, Steve Hefel, George Houston, Vickie Prill, Jim Trepanier, Mark Vock, and Tom Zehr, all from IDOT, and Brian Pfeifer (formerly with FHWA), Kevin Burke (Illinois Asphalt Pavement Association), Bill Pine (Heritage Research Group),

Research Team: Imad L. Al-Qadi, Hasan Ozer, John Lambros, B.K. Sharma, Ibrahim Abuawad, Heena Dhasmana, Berangere Doll, Ahmad El-Khatib, Ziad Ghauch, Erman Gungor, Ahmad Imad Kanaan, Tamim Khan, Aurangzeb Qazi, Jose Rivera-Perez, Ahmad Shams, Punit Singhvi, Song Su Son, and Shan Zhao.

We are especially pleased to share that IDOT projects have been selected as Sweet 16 High Value Research projects for 5 for past 6 years.

2016: [Testing Protocols to Ensure Performance of High Asphalt Binder Replacement Mixes Using RAP & RAS](#)

2015: [Development of a Traffic Incident Management Operational and Training Guide - Phase II](#)

2013: Best Practices for Implementation of Tack Coat: [PART I - Laboratory Study](#) and [PART 2 - Field Study](#)

2012: [An Expert Systems Approach to Highway Construction Scheduling](#)

2011: [Evaluation of 3-D Laser Scanning for Construction Application](#)

2010: [Speed Photo-Radar Enforcement Evaluation in Illinois Work Zones](#)

To see all past High Value and Sweet 16 projects, please visit the [High Value Research Projects](#) page on the AASHTO RAC website. If you would like additional information on any of the High Value Research projects, please contact IDOT's Technical Research Coordinator, Megan Swanson.

2016 Sweet Sixteen High Value Research Projects

REGION 1	Connecticut DOT	Repair of Steel Beam/Girder Ends with Ultra High Strength Concrete
	Maryland DOT	Sustainable Landscaping Practices for Enhancing Vegetation Establishment
	New Hampshire DOT	Instrumentation, Digital Image Correlation, and Modeling to Monitor Bridge Behavior and Condition Assessment
	Rhode Island DOT	Coupling GPR and IR Thermography to Detect Damage in Reinforced Concrete Bridge Decks
REGION 2	Florida DOT	FDOT Research Concerning the Detection, Mitigation and Prevention of Wrong Way Crashes
	Georgia DOT	Corrosion-Free Precast Prestressed Concrete Piles Made with Stainless Steel Reinforcement: Construction, Test, and Evaluation
	North Carolina DOT	In-Situ Determination of Emulsion Application Rate for Tack Coats and Surface Treatments
	Virginia DOT	Continuous Friction Measurement Equipment As a Tool for Improving Crash Rate Prediction: A Pilot Study
REGION 3	Illinois DOT	Testing Protocols to Ensure Performance of High Asphalt Binder Replacement Mixes Using RAP & RAS
	Iowa DOT	Development of Self-Cleaning Box Culvert Design: Phase II
	Michigan DOT	Evaluation of Michigan's Engineering Improvements for Older

		Drivers
	Minnesota DOT	Unmanned Aerial Vehicles Enable Safe and Cost-Effective Bridge Inspection
REGION 4	California DOT	Research & Development of Open-Source Advanced Traffic Management
	New Mexico DOT	Optimization of Elastic Polymer Modification Rates Based on Contemporary Relative Costs vs. Benefits
	Texas DOT	Assessment of the Effectiveness of Wrong Way Driving Countermeasures and Mitigation Methods
	Wyoming DOT	Pronghorn and Mule Deer Use of Underpasses and Overpasses Along US Highway 191, Wyoming