NCHRP UPDATE

September 2014
9-49: *Performance of WMA Technologies: Stage I- Moisture Susceptibility*

- Do WMA technologies adversely affect the moisture susceptibility of asphalt pavements?
- Guidelines for identifying and limiting moisture susceptibility.
- Project final report will be published in early 2014.

*TTI (Completed)*
9-49A: Performance of WMA Technologies: Stage II-Long-Term Field Performance

- Identify the material and engineering properties of WMA pavements that are significant determinants of their long-term (> 4 years) field performance.
- New projects: IA, LA, MT, TN, TX (2011-12).
- Existing projects: CO, IL, LA, MD, MO, MN, NE, NV, OH, PA, SC, TN, TX, VA, WA (2005-10)
- May 2013 24-month analysis report reviewed by panel.

Washington State University (July 2016)
9-52: \textit{Short-Term Laboratory Conditioning of Asphalt Mixtures}

- Develop procedures and associated criteria for short-term laboratory conditioning of asphalt mixtures that simulate (1) plant mixing and processing to the point of loading in the transport truck and (2) the initial period of field performance.

\textit{Texas Transportation Institute (November 2014)}
9-53: Properties of Foamed Asphalt for Warm Mix Asphalt Applications

- Determine key properties of foamed asphalt binders that significantly influence the performance of asphalt mixtures.
- Develop laboratory protocols for foaming of asphalt binders and laboratory mixing procedures.

Texas Transportation Institute (December 2014)
Develop and validate a laboratory procedure to simulate long-term aging of asphalt mixtures for performance testing and prediction.

North Carolina State University (May 2016)
Develop a design and evaluation procedure for acceptable performance of asphalt mixtures incorporating WMA technologies and RAS, with and without RAP, for project-specific service conditions.

*National Center for Asphalt Technology (Sept 2016)*
MATERIALS AND MIX DESIGN
9-48: Field versus Laboratory Volumetrics and Mechanical Properties

- Determine sources of variability for volumetric and mechanical properties of dense-graded asphalt mixtures between (1) laboratory mixed and compacted, (2) plant mixed and laboratory compacted, and (3) plant mixed and field compacted.
- Meta-analysis of extensive data sets from literature inconclusive. Controlled laboratory experiment underway.

Louisiana Transportation Research Center (December 2013)
FY 2015 PROJECTS
9-58 The Effects of Recycling Agents on Asphalt Mixtures with High RAS and RAP Binder Ratios ($1,500,000)-Awarded

9-59 Binder Fatigue, Fracture, and Healing and its Contribution to Hot-Mix Asphalt Fatigue Performance ($750,000)-RFP issued

1-55 Porous Friction Course Design and Maintenance ($300,000)

NCHRP Synthesis 20-05/Topic 46-03 Performance-Based Specifications (PBS) for Asphalt Mixtures ($40,000)

NCHRP Synthesis 20-05/Topic 46-05 Use of Recycled Asphalt Pavement and Shingles ($40,000)
Thanks!