Introduction

FHWA is conducting an update to the Pavement Preservation Research Roadmap.  The work is being carried out by a team consisting of Steve Tritsch from Iowa State University, Judith Corley-Lay, John O’Doherty and John Hooks from the National Center for Pavement Preservation, and Larry Scofield, with American Concrete Pavement Association.

The Roadmap was divided into six umbrella topics:  Asset management, PMS and Pavement Preservation; Treatment Design: Selection and Timing; Materials; Treatment Application: Construction and Contracting; Performance; and Benefits.  Research ideas and needs were solicited in a series of web-based telephone meetings that took place during the fall of 2018.

Those ideas have been distilled and abbreviated research needs statements have been written.  You are now being asked to participate in prioritizing the research needs statements.  The research needs statements under each umbrella topic will be considered separately.  Please read the attached research needs statements and assign a priority to each, with 1 being highest priority.  Please do not assign the same priority to multiple statements.  Since the surveys will overlap in order to meet the project schedule, please only consider one topic area at a time.

Thank you in advance for your insights into research needs in pavement preservation.

Best wishes,

Judy Corley-Lay, technical lead

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The first group of research need statements is from the umbrella topic: Asset Management, Pavement Management Systems and Pavement Preservation. There are 8 RNS in this umbrella topic. For each RNS, assign a priority, with 1 being highest and 8 being lowest.

1. Statistical Training for PMS engineers and PP engineers: Priority \_\_\_\_
2. Cycle times for Cyclic Pavement Preservation Activities: Priority \_\_\_\_
3. Managing Changing Technologies: Priority \_\_\_\_
4. Approaches to increase Remaining Service Life or Network Condition Priority \_\_\_\_
5. Advanced Models with Multiple Treatments Priority \_\_\_\_
6. Structural Adequacy using Pavement ME-Design Priority \_\_\_\_
7. Network Level Determination of Structural Adequacy Priority \_\_\_\_
8. Case Studies Using PMS to set Pavement Preservation Program Priority \_\_\_\_

The second group of research need statements is in the area of treatment design, selection and timing. There are 5 RNS in this umbrella topic. For each RNS, assign a priority, with 1 being highest and 5 being lowest.

1. Bonded Concrete Overlay over Asphalt Pavement Priority \_\_\_\_
2. Web based or Mobile App for Chip Seal Design Priority \_\_\_\_
3. Design of New Roadways to Maximize preservation Priority \_\_\_\_
4. Preservation in urban environments Priority \_\_\_\_
5. CIP, CCP and HIP- Impacts of Surface Layers/Thicknesses Priority \_\_\_\_

The third group of research need statements is in the Materials area. There are 6 RNS in this umbrella topic area. For each RNS, assign a priority, with 1 being highest and 6 being lowest.

1. Use of recycled concrete in surface treatments & thin overlays Priority \_\_\_\_
2. Documentation of materials in PMS Priority \_\_\_\_
3. Using Images to quantify macro-texture and model friction Priority \_\_\_\_
4. Micro surfacing with fibers Priority \_\_\_\_
5. Performance related specs for handling RAP, additives, etc. Priority \_\_\_\_
6. Specifications and testing for durable concrete Priority \_\_\_\_

The fourth group of research need statements is in the Treatment Application: Construction and Contracting area. There are 7 RNS in this topic area. For each RNS, assign a priority, with 1 being highest and 7 being lowest.

1. Rumble/Mumble strip approaches for thin surface layers Priority \_\_\_\_
2. IDIQ Contracting guidance Priority \_\_\_\_
3. Adequate Training of Inspectors Priority \_\_\_\_
4. Innovations in safe work zones for preservation activities Priority \_\_\_\_
5. Distress triggers for Pavement Preservation warranty projects Priority \_\_\_\_
6. Performance measures and testing for warranty projects Priority \_\_\_\_
7. Bid Price versus Quantity; Also consider # of bidders Priority \_\_\_\_

The fifth group of research need statements is in the Performance umbrella topic area. There are 6 RNS in this topic area. For each RNS, assign a priority, with 1 being highest and 6 being lowest.

1. Performance of treatments as affected by construction, inspect., etc. Priority \_\_\_\_
2. Impact of pavement condition on performance of pres. treatments Priority \_\_\_\_
3. Data to differentiate performance Priority \_\_\_\_
4. Performance goals and characteristics for pres. treatments Priority \_\_\_\_
5. Treatment life considering only true preservation data Priority \_\_\_\_
6. Common elements of state data quality management plans Priority \_\_\_\_

The final group of research need statements is in the Benefits umbrella topic area. There are 5 RNS in this topic area. For each RNS, assign a priority, with 1 being highest and 6 being lowest.

1. Societal benefits of pavement preservation Priority \_\_\_\_
2. Common definitions of cost elements for preservation treatments Priority \_\_\_\_
3. Guidance for a good mix of preservation, rehab, and reconstruction Priority \_\_\_\_
4. Treatments leading to noise reductions Priority \_\_\_\_
5. Communicating with Stakeholders Priority \_\_\_\_