

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

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 ____

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| 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.

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| 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.

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| 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.

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| 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.

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| 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 ____ |