

# Transportation System Preservation (TSP) Research Roadmap

The Transportation System Preservation (TSP) Research, Development, and Implementation Roadmap has now become a reality. The Roadmap is the result of a collaborative effort between FHWA and its agency and industry partners in pavement and bridge preservation.

Historically, funding for research in the preservation area has been difficult to secure. It has been clear that a systematic approach is needed to identify knowledge gaps and recommend research projects to address those gaps. The Roadmap does precisely that: It establishes short-term and long-term priorities to help agencies use system preservation to extend the service life of their infrastructure. Agencies will thus be able to most effectively manage their resources and meet transportation research and development needs and customer expectations.

The research needs statements contained within the Research Roadmap represents the integrated effort and ongoing commitment of FHWA, AASHTO, and TRB to discover and address the challenges facing our industry and our nation. We encourage you to examine the Research Roadmap and to participate in the execution of these research projects. We appreciate the valuable input of public agency, academic, and industry pavement and bridge preservation practitioners, without which this effort would not have been possible.

## **Implementation of the Research Roadmap**

Transportation agencies are concluding that it is no longer possible to just “build their way” out of ever increasing needs for transportation facilities. An aging infrastructure of roadway pavements and bridges combined with inadequate resources and rapidly growing traffic volumes indicates a demand for different approaches. Preservation practices can extend the service life of the existing infrastructure and can be of help in providing better, safer, and more reliable service to users at less overall or life cycle cost. One major impediment to widespread implementation of preservation programs is

the programming and selection of the various preservation actions and when and where to apply them to get the most benefit for the least cost – or in other words, how to apply the *right* preservation action at the *right* time to the *right* pavement or the *right* bridge.

The FHWA has partnered with the American Association of State Highway Transportation Officials (AASHTO) and other stakeholders in the preservation industry to sponsor a study to determine what the most critical knowledge gaps and needs are in pavement and bridge preservation and what research is necessary to address those gaps. This Transportation System Preservation (TSP) Research, Development, and Implementation Roadmap is the output of that partnership effort.

## **Collaboration Results**

Working together with preservation practitioners from State, Provincial, and local transportation agencies, industry, academia, and FHWA, the effort has resulted in developing a broad array of pavement and bridge preservation research and implementation needs statements.

Peer-reviewed white papers were developed to articulate preservation issues within the following categories. These were used throughout the consideration and organization of the needs statements:

### **Pavement Preservation**

- Asset Management
- Design
- Construction
- Materials
- Contracting Methods
- Performance

### **Bridge Preservation**

- Asset Management
- Decks and Joints
- Superstructures
- Substructures
- Project Selection
- Performance

The consolidated number of need statements and estimated costs are reflected below:

Area	# of Needs Statements	Total Estimated Cost
Pavement Preservation	40	\$28.3 M
Bridge Preservation	25	\$12.8 M

All of the statements were evaluated and ranked to present a sense of timing and priority for their funding and pursuit. The total estimated cost of all these projects is substantial, but so is the ultimate value of providing agencies with the knowledge and tools they will provide. Although this does not represent a commitment FHWA funds for the research projects, the Roadmap serves as a valuable guide for FHWA, States, and industry and their combined research community. It presents relationships between technical and program needs and offers recommendations to help decision makers within FHWA, AASHTO, and TRB to allocate resources to conduct the research addressing these short-term and long-term needs.

## **Want more Information?**

Check out the TSP Research Roadmap and other items of related interest at [www.tsp2.org/roadmap](http://www.tsp2.org/roadmap). Please visit the site to download the document as well as express interest in specific projects.

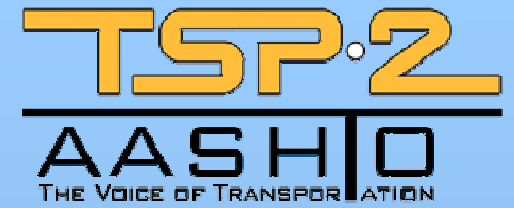


**TSP RESEARCH ROADMAP**  
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Transportation System Preservation

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