




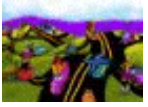







Office of Asset Management

Research & Development Activities

January 2007

Research Area	Current Initiatives	Agenda for the Future
Tunnel Management 	Update and distribute software resulting from pilot applications of the Tunnel Management System (TMS) and implement additional pilot applications. Assist agencies in adopting Tunnel Management guidelines and customizing the TMS for their own use.	Compile feedback from pilot agency usage and revise guidelines and database system.
Bridge Management 	Deliver NHI training courses on Pontis 4.4. Promote Pontis e-learning. Develop Pontis Infomaker training course. Evaluate National Bridge Investment Analysis System (NBIAS), provide training to FHWA and limited number of State users, develop manual. Perform interviews of states use of BMS (BMS Case Studies); Analyze results, publish reports, distribute reports.	Provide support to the states in revising the AASHTO CoRe element guide. Promote national collection of element level bridge data. Develop appropriate documentation and training material for State version of NBIAS (i.e. NBIAS-ST). Develop a National Bridge Management Conference Participate in bridge management program exchanges.
Bridge Preservation 	Assist states with developing a bridge preservation roadmap, a white paper on bridge preservation and a toolbox. Promote bridge preservation within Transportation System Preservation (TSP). Develop & deliver a national bridge preservation workshop. Develop a NHI Bridge Rehabilitation Course.	Support formation of regional bridge preservation working groups. Develop bridge rehabilitation training course reference manual. Develop Transportation System Preservation Workshop that would identify bridge preservation and maintenance R&D needs.
Culvert Management 	Create and distribute case study on the use of Culvert Management Systems by various State and local agencies nationwide.	Update and enhance the existing FHWA Culvert Management System software.
Ancillary Structures 	Develop software for Ancillary Structures Inspection Management System (ASIMS) for use by State and local agencies in managing structures such as overhead signs and high mast lights.	Distribute software and develop training module.
Hardware Management 	Evaluate existing hardware management systems and identify links to maintenance management, safety management and other management systems in State and local agencies. Encourage States to apply asset management strategies as they develop their Strategic Safety Plans.	Identify new technologies to capture and evaluate the condition of safety hardware. Encourage States to include hardware management in their Strategic Highway Safety Plans.
Highway Data Collection 	Demonstrate and deploy the Rolling Wheel Deflectometer technology for measuring in-situ structural capacity of pavements at the network level. Propagate the Asset Management Data Collection Guide. Publish research on Asset Management Data Collection in Support of Decision Processes Report.	Develop analysis procedures and tools to predict the remaining structural life of pavements at the network and national levels.
Pavement Performance Monitoring 	Deliver a training course on using Pavement Management Systems (PMS) for performance monitoring and evaluation. Develop and publish case study on state PMS practices as applied to decision making.	Document the use of PMS databases in State DOT's to monitor the performance of pavements including Superpave, and evaluate projects that have performance warranty clauses. Show how this real life performance can be used to predict the remaining service life of the pavement network.
Highway Needs Analysis 	Update and enhance the Highway Economic Requirements System - State Version (HERS-ST) software and documentation. Assist States and other agencies in using HERS-ST through workshops, users meetings and conferences.	Refine the HERS-ST model based on recommendations from users. Deliver the HERS-ST workshops and briefings.

Research Area	Current Initiatives	Agenda for the Future
Life-Cycle Cost Analysis 	Provide technical assistance on best practices in Life-Cycle Cost Analysis (LCCA). Update Technical Bulletin on LCCA in Pavement Design. Conduct on-site technical support and training in LCCA principles and use of the FHWA RealCost LCCA Software.	Develop technical guidance for bridge LCCA. Develop LCCA case studies. Develop guidance for other highway assets.
Engineering Economic Analysis 	Deliver Engineering Economic Analysis (EEA) training workshops for managers and analysts. Maintain Economic Analysis website. Implement and support a web-based benefit-cost analysis model for State use.	Prepare EEA best practice reports, and conduct workshops and surveys. Upgrade web-base model. Conduct research on EEA data including user cost and maintenance data.
Data Integration 	Provide assistance to agencies on Data Integration (DI). Develop and deliver a Data Integration training course. Conduct research on "Uses of Integrated Data for Asset Management"	Evaluate tools and technologies for DI including software, hardware, and communications. Document DI initiatives through case studies. Update DI materials (primer, glossary & fact sheet).
Highway Quality Management 	Provide leadership and support to the National Partnership for Highway Quality (NPHQ). Champion activities of the Performance-Related Specification and Quality Assurance work groups. Support highway agencies' inspector and technician training and qualification programs through the Transportation Curriculum Coordination Council (TCCC). Develop a broad database of training resources nationwide to assist technical trainers to share efforts and avoid duplication of effort.	Participate in NPHQ programs. Conduct Quality Assurance and Performance-Related Specification related research. Develop Performance-Related Specification fact sheets and training course.
Construction/Maintenance Mngt. 	Provide program oversight and support to the Construction Quality Improvement Team (CQIT). Promote the use of Construction Management Systems (CMS), the next generation Maintenance Management Systems (MMS) and other innovative construction and maintenance procedures. Support and implementation of Accelerated Construction Technology Transfer initiatives.	Develop and deliver construction management certification/training programs. Conduct research and develop national policies on Construction Quality Management. Propagate the AASHTO CMS and deliver MMS training courses.
Workzone Safety and Mobility 	Publish informative/educational materials on improved workzone safety and mobility. Promote/evaluate innovative techniques such as accelerated construction, highly mobile barrier systems, workzone intrusion alarms, dust and noise control, and night lighting.	Conduct additional research studies to evaluate other innovative practices for improving safety and mobility during construction and maintenance.
System Preservation 	Provide support on Pavement Preservation (PP) programs, and develop outreach materials, training, and workshops. Develop policies/guidelines, and evaluate international practices for Transportation System Preservation (TSP). Develop a Preservation Research Roadmap to identify and implement research development needs in bridge and pavement preservation.	Conduct research/demonstrations and develop training materials on innovative PP methods. Develop and deliver NHI courses on contract maintenance and bridge maintenance. Develop a training and qualification program to help States ensure that contractors working in pavement preservation activities can perform quality work.
Asset Management Implementation 	Conduct case studies on Asset Management implementation by transportation agencies and develop synthesis of national practices. Update Asset Management Primer.	Conduct peer exchanges for Data Integration and Economic Analysis.
Asset Management Outreach/Support 	Support the Asset Management (AM) "Communities of Practice" website: http://assetmanagement.transportation.org Present NHI course on AM (FHWA-NHI-131106; one-day course for transportation management officials), and provide information/training to internal and external staff including 'train the trainer' materials.	Develop academic programs for AM. Provide technical assistance to States. Produce outreach materials and conduct conferences and workshops on AM.

For more information, contact:

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