U.S. Department of Transportation
Federal Highway Administration

2008

Priority, Market-Ready Technologies and Innovations

2008 List

The Federal Highway Administration's (FHWA) Research & Technology Leadership Team endorses **four new** priority, market-ready technologies and innovations (T&Is). This list continues to fulfill our Agency commitment established in the FHWA *Corporate Master Plan for Research and Deployment of Technology & Innovation to identify market-ready T&Is.*

CONSTRUCTION & PROJECT MANAGMENT

Accelerated Construction Technology Transfer (ACTT)*—This undertaking promotes creative techniques to reduce construction time and enhance quality and safety. Contact: james.sorenson@fhwa.dot.gov, (202) 366-1333; jerry.blanding@fhwa.dot.gov, (410) 962-2253

NEW! **Construction Analysis for Pavement Rehabilitation Strategies (CA4PRS)***—This software identifies optimal rehabilitation strategies to balance the construction schedule with inconvenience to drivers and transportation agency costs. Contact: james.sorenson@fhwa.dot.gov, (202) 366-1333

FINANCE

Asset Management Guide—This guide illustrates asset management principles and identifies techniques and methods for adopting the decisionmaking framework in transportation agencies. Contact: stephen.gaj@fhwa.dot.gov, (202) 366-1336; thay.bishop@fhwa.dot.gov, (404) 562-3695

GEOTECHNICAL & HYDRAULICS

Continuous Flight Augered (CFA) Piles—This technology is characterized by the drilling of a hollow-stem auger into the ground, pumping grout or concrete into the hole, and installing reinforcement in the pile. This eliminates the need for a temporary casing. Contact: silas.nichols@fhwa.dot.gov, (404) 562-3930

Expanded Polystyrene (EPS) Geofoam—This lightweight material can be used as fill behind walls and other support structures. Contact: silas.nichols@fhwa.dot.gov, (404) 562-3930

OPERATIONS

511 Traveler Information—This easy-to-remember, three-digit telephone number is available to State and local transportation agencies nationwide so that they can provide information readily about highway and transit conditions to travelers by telephone. Contact: robert.rupert@fhwa.dot.gov, (202) 366-2194; mac.lister@fhwa.dot.gov, (708) 283-3532

NEW! **Adaptive Control Software Lite (ACS-Lite)**—This cost effective technology improves efficiency and prolongs the effectiveness of traffic signal timing by updating critical timing parameters in response to current traffic conditions. Contact: eddie.curtis@fhwa.dot.gov, (404) 562-3920

DYNASMART-P—This traffic analysis tool integrates travel demand models into the planning process. The tool also evaluates intelligent transportation system (ITS) technologies and provides traffic operations data for air quality analysis. Contact: henry.lieu@fhwa.dot.gov, (202) 493-3273; john.tolle@fhwa.dot.gov, (708) 283-3541

Intelligent Transportation System Deployment Analysis System (IDAS)—This tool can predict the costs and benefits of ITS investments and provide data and information to enable agencies to analyze ITS operational improvements. Contact: harlan.miller@fhwa.dot.gov, (202) 366-0847; john.halkias@fhwa.dot.gov, (202) 366-2183; james.sturdevant@fhwa.dot.gov, (708) 283-3552

PAVEMENTS & MATERIALS

Air Void Analyzer (AVA)*—This technology provides real-time evaluation for measuring air content, specific surface, and the spacing factor of fresh portland cement concrete. Contact: gary.crawford@fhwa.dot.gov, (202) 366-1286; angel.correa@fhwa.dot.gov, (404) 562-3907

Pavement Smoothness Methodologies—The new pavement smoothness specification encompasses smoothness test methods, smoothness equipment specifications, and equipment certification programs. Contact: mark.swanlund@fhwa.dot.gov, (202) 366-1323; robert.orthmeyer@fhwa.dot.gov, (708) 283-3533

PLANNING

Highway Economic Requirements System, State Version (HERS-ST)—This software model evaluates the implications of alternative programs and policies on the condition, performance, and user cost level associated with highway systems. Contact: robert.mooney@fhwa.dot.gov, (202) 366-4657

Improved Decisionmaking Using Geographic Information Systems—This software program enables manipulation, analysis, and display of geographically referenced data. Contact: mark.sarmiento@fhwa.dot.gov, (202) 366-4828; ben.williams@fhwa.dot.gov, (404) 562-3671

Transportation, Economics, and Land Use System (TELUS)—This information-management and decision-support system helps State Transportation Departments and metropolitan planning organizations prepare their annual transportation improvement programs and statewide transportation improvement programs. Contact: rob.ritter@fhwa.dot.gov, (202) 366-8870; lisa.randall@fhwa.dot.gov, (720) 963-3209

STRUCTURES

NEW! **Bridge and Tunnel Security**—This assessment tool provides resources to help owners make their critical bridges and tunnels more secure. Contact: steve.ernst@fhwa.dot.gov, (202) 366-4619; shay.burrows@fhwa.dot.gov, (410) 962-6791

Fiber-Reinforced Polymer (FRP)*—This material repairs cracks in overhead sign supports by wrapping the support with fiber-reinforced material. Contact: benjamin.tang@fhwa.dot.gov, (202) 366-4592; lou.triandafilou@fhwa.dot.gov, (410) 962-3648

Load and Resistance Factor Design (LRFD) and Rating of Structures—The American Association of State Highway and Transportation Officials' (AASHTO) Load and Resistance Factor Design (LRFD) and Rating bridge specification provides for more uniform levels of safety which should lead to superior serviceability and long-term maintainability. Contact: firas.ibrahim@fhwa.dot.gov, (202) 366-4598; thomas.saad@fhwa.dot.gov, (708) 283-3521

Prefabricated Bridge Elements and Systems (PFBES)*—These systems minimize traffic impacts of bridge construction, improve work zone safety, and make construction less disruptive by minimizing the necessary lane closures, detours, and narrow lane uses. Contact: vasant.mistry@fhwa.dot.gov, (202) 366-4599; raj.ailaney@fhwa.dot.gov, (410) 962-2542

SAFETY & DESIGN

Cable Median Barriers*—These barriers are effective mechanisms for preventing fatal and disabling crashes and are more forgiving than traditional concrete and metal beam barriers. Contact: frank.julian@fhwa.dot.gov, (404) 562-3689

PEDSAFE—This online, interactive system enables users to "diagnose" a pedestrian-related issue based on site characteristics and to formulate potential solutions that improve conditions for pedestrians within the public right-of-way. Contact: rudolph.umbs@fhwa.dot.gov, (708) 283-3548

Road Safety Audits (RSA)*—RSAs improve transportation safety by using an independent audit team to conduct a formal safety performance examination of an existing or future road or intersection. Contact: craig.allred@fhwa.dot.gov, (720) 963-3236

Roundabouts—This design treatment is a circular intersection that requires entering vehicles to yield to existing traffic in the circulatory roadway. Contact: mark.doctor@fhwa.dot.gov, (404) 562-3732

Rumble Strips—Shoulder rumble strips are continuously grooved indentations in roadway shoulders that provide audible warnings and physical vibrations to alert drivers when their vehicles are leaving the roadway. Contact: frank.julian@fhwa.dot.gov, (404) 562-3689

NEW! **USLIMITS***—This Web-based expert advisor system designed to assist practitioners in determining appropriate speed limits in speed zones. Contact: davey.warren@fhwa.dot.gov, (202) 366-4668; rudolph.umbs@fhwa.dot.gov, (708) 283-3548

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* Denotes an AASHTO Technology Implementation Group approved technology.

Removed From 2006 List:

- Dispute Resolution Guidance for Environmental Streamlining
- Maintenance Decision Support System (MDSS)
- QuickZone
- Red Light Cameras

Additional Resources

FHWA Corporate Research and Technology (R&T) Web site, www.fhwa.dot.gov/crt

FHWA Resource Center Web site, www.fhwa.dot.gov/resourcecenter/misc/technology.cfm

AASHTO Technology Implementation Group Web site, http://tig.transportation.org

To request additional copies of this publication, contact:

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