

FHWA R&T Now ~ July 2011~

A news update of research, technology, and development from the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA)

GENERAL/ADMINISTRATIVE

FHWA and FEHRL Sign Memorandum of Cooperation

On July 13, 2011, the Federal Highway Administration (FHWA) and the Forum of European National Highway Research Laboratories (FEHRL) signed a Memorandum of Cooperation to establish a business protocol aimed at optimizing collaboration. The document, which was signed by FHWA Administrator Victor Mendez and FEHRL President Joris Al, is expected to advance cooperation by capitalizing on points of synergy and knowledge sharing; enhancing mutual innovation efforts; supporting targeted technologies; allowing for greater markets; establishing a framework for specific collaboration; and leveraging investments of common interest. In October 2009, FHWA became an Associate of FEHRL, a registered international association with a permanent Secretariat based in Brussels, Belgium. FEHRL provides a coordinated structure for over 30 European national research and technical centers to collaborate with associated institutes around the world.

For more information, contact Debra Elston, 202-493-3181, debra.elston@dot.gov.

FHWA to Advance Second Strategic Highway Research Program Implementation

The Second Strategic Highway Research Program (SHRP 2) has been underway since 2007, and approximately 20 percent of over 90 research projects are finished or nearing completion. With the extension of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law 109-59) through September 31, 2011, total SHRP 2 funding stands at \$283 million. The Transportation Research Board (TRB) will continue to manage the research program until 2015, governed by its extended Cooperative Agreement with FHWA.

In December 2010, Section 510 of Title 23 was amended to allow the Secretary of Transportation to use SHRP 2 funds for implementation of research products related to SHRP 2. This new flexibility has mobilized FHWA's involvement by bringing staff members up to speed on the program's progress and involving them in SHRP 2 development, demonstration, evaluation, and technology transfer activities. FHWA liaisons and technical staff are fully engaged with TRB staff in SHRP 2 implementation workshops, and also with the SHRP 2 Technical Coordinating Committees (TCCs) as they evaluate the projects and recommend initiatives for implementation or further research during 2011.

FHWA has been working cooperatively with TRB, the American Association of State Highway and Transportation Officials (AASHTO), and the National Highway Traffic Safety Administration (NHTSA) on a collaborative approach to SHRP 2 implementation. Each of the partner organizations is assessing the relevance and readiness of the emerging products to their existing programs and proposing next steps toward implementation of the products.

For more information, contact Ken Jacoby, 202-493-3186, ken.jacoby@dot.gov.

ADVANCED RESEARCH

FHWA Issues Exploratory Advanced Research Program Broad Agency Announcement

The Federal Highway Administration (FHWA) has issued a Broad Agency Announcement (BAA), soliciting proposals that address Exploratory Advanced Research (EAR) topics. In 2009 and 2010, FHWA engaged stakeholders from within and outside the traditional highway research community to identify topics of research that promise transformation and possible breakthroughs in highway technology, processes, and policies. As a result, FHWA is moving forward with three of the topic areas that had a strong scientific and technical basis through the issuance of this BAA. The three topic areas are: Modeling Cement Hydration Kinetics, Video Decoding and Feature Extraction Automation for Highway Research, and New Technology Solutions for Wayfinding and Navigation Guidance for People with Vision Impairment and Other Disabilities. For more information about these topics, visit <http://www.fhwa.dot.gov/advancedresearch/rfp.cfm>. The BAA (Solicitation Number DTFH61-11-R-00027) will remain open until 4 p.m. Eastern Standard Time, September 15, 2011.

For more information contact David Kuehn, 202-493-3414, david.kuehn@dot.gov.

FHWA Office of Highway Policy Information Attends EAR Project in Ohio

In April 2011, the FHWA Office of Highway Policy Information attended a field test of an EAR Program project in East Liberty, Ohio. Conducted by the Center for Transportation Analysis (CTA) in the Oak Ridge National Laboratory, the research is entitled “Supply-Chain Based Solution to Prevent Fuel Tax Evasion,” and involves the incorporation of several technologies into an integrated system that will allow for the full-time monitoring of bulk fuel delivery vehicles carrying motor fuel. CTA has partnered with a large truck-stop operator that has donated the use of a vehicle for the field test. The research project could result in the production of a marketable integrated system that carriers would use to decrease the opportunity for tax evasion and product theft.

For more information contact Michael Dougherty, 202-366-9234, michael.dougherty@dot.gov.

INFRASTRUCTURE

Memorandum: Reclaimed Asphalt Pavement in Asphalt Mixtures: State of The Practice

The FHWA Office of Infrastructure Research and Development (R&D) in partnership with the Office of Pavement Technology would like to announce the availability of *Reclaimed Asphalt Pavement in Asphalt Mixtures: State of The Practice* (Pub. No. FHWA-HRT-11-021), dated April 2011.

This report supports FHWA’s recycled materials policy, which is aimed at advancing the use of recycled materials in highway applications. The purpose of this report is to inform practitioners about the state of the practice of reclaimed asphalt pavement (RAP) use in the United States, and provide best practices for increasing the use of RAP in asphalt pavement mixtures while maintaining high-quality pavement infrastructures.

The report may be downloaded from FHWA’s Web site at <http://www.fhwa.dot.gov/publications/research/infrastructure/pavements/11021/index.cfm>.

Please inform your appropriate State DOT representative of the availability of this report. For more information, contact Audrey Copeland in the Office of Infrastructure R&D at audrey.copeland@dot.gov, or John Bukowski in the Office of Pavement Technology at john.bukowski@dot.gov.

Report: *Performance Evaluation of One-Coat Systems for New Steel Bridges*

The current state of art for corrosion protection of steel bridges involves a three-coat system typically consisting of a zinc-rich primer, an intermediate coat, and a top coat. Replacing a three-coat system with fewer coats without sacrificing corrosion resistance can lead to savings in production cost and improved productivity in the steel shops. The purpose of this study, covered in the report, *Performance Evaluation of One-Coat Systems for New Steel Bridges* (Pub. No. FHWA-HRT-11-046), was to evaluate the performance ranking of various one-coat test systems.

The report is available online via

<http://www.fhwa.dot.gov/publications/research/infrastructure/bridge/11046/index.cfm>.

TechBrief: *Performance Evaluation of One-Coat Systems for New Steel Bridges*

This document (Pub. No. FHWA-HRT-11-047) is a technical summary of the report, *Performance Evaluation of One-Coat Systems for New Steel Bridges*.

The TechBrief is available online via

<http://www.fhwa.dot.gov/publications/research/infrastructure/bridge/11047/index.cfm>.

For more information, contact Paul Virmani, 202-493-3052, paul.virmani@dot.gov.

OPERATIONS

Work Begins to Establish the Transportation Operations Laboratory

The new Transportation Operations Laboratory (TOL) at FHWA's Turner-Fairbank Highway Research Center (TFHRC), which will open in September 2011, will include working space, specialized work stations that can access data resources and models, control equipment needed to conduct experiments, and visualization equipment to allow research progress to be shared with visitors. The TOL will consist of three testbeds that will support the Office of Operations R&D's research mission, namely the Data Resources Testbed, the Concepts and Analysis Testbed, and the Cooperative Vehicle-Highway Testbed. The TOL will also incorporate workspace in the Vehicle Preparation area of the Turner Building where in-vehicle systems can be maintained and data transferred. Unique sensors, communication, and traffic control systems on the roadways within TFHRC will be linked to the main TOL facility and additional overflow workspace and storage space elsewhere at TFHRC. These facilities will enable the Operations R&D staff and research partners to conduct innovative testing of technologies such as vehicle-vehicle and vehicle-infrastructure communication systems and to develop prototype applications that could take advantage of these technologies. The TOL will also provide resources that will encourage on-site research by partners such as universities to further leverage the investment in FHWA facilities.

For more information, contact Bob Ferlis, 202-493-3268, robert.ferlis@dot.gov.

RECENT PERIODICALS

***FOCUS* Newsletter June 2011**

The June issue includes: Building Better Pavements That Save Lives: The Safety Edge; Data Integration in Asset Management: Primer Highlights Steps to Success; 2011 Excellence in Utility Relocation and Accommodation Awards; Highway Technology Calendar; Making the Switch to 3D Design Modeling: An Online Introduction; and Training Offers Guide to Superpave 101.

The issue is available online via <http://www.fhwa.dot.gov/publications/focus/11jun/11jun00.cfm>.

For more information, contact Lisa Pope, lgpope@woodwardcom.com.

***FOCUS* Newsletter May 2011**

The May issue includes: FHWA Equipment Loan Program Showcases Advances in Achieving Smoother Pavements; Building a Smoother Pavement: FHWA Training Highlights Construction Quality Control; FHWA Launches *Facebook* and *YouTube* Web sites; National Bridge Management, Inspection, and Preservation Conference: Beyond the Short Term; Highway Technology Calendar; and Webinar Introduces GIS Tools for Linking Transportation and Natural Resource Planning.

The issue is available online via <http://www.fhwa.dot.gov/publications/focus/11may/11may00.cfm>

For more information, contact Lisa Pope, lgpope@woodwardcom.com.

***Public Roads*—July/August 2011**

This issue includes: Growing Gracefully; New Cost Estimating Tool; Preserving Yesterday While Designing for Tomorrow; Emerging Bridge Applications; and Louisiana's Recovery.

It is available online via <http://www.fhwa.dot.gov/publications/publicroads/11julaug/index.cfm>

For more information, contact Paula Magoulas, paula.magoulas@dot.gov.

***Innovator: Accelerating Innovation for the American Driving Experience*—May/June 2011**

This issue includes: Industry Leaders Explore New Way of Doing Business; Utah Uses SPMTs in Historic Bridge Move; Innovation Cuts Construction Time by a Year on Minnesota Project; Innovations to Ease Impact of Denver Bridge Construction; Aggregate Image Measurement System Makes Leap From Prototype to Product; Precast Panels Demonstrate Innovative Pavement Process; and Calendar.

The issue is available online via <http://www.fhwa.dot.gov/hfl/innovator/issue24.cfm>

For more information, contact Kathleen Bergeron, kathleen.bergeron@dot.gov.

Transportation and Climate Change Newsletter—May/June 2011

This issue includes: USDOT Issues Policy Statement on Climate Change Adaptation; FHWA Releases Workshop Summary Report on Integrating Climate Change with Transportation Planning; FHWA Report Highlights MPO and DOT Best Practices in Climate Change Education; Updated/Pilot Test Version of FHWA Sustainable Highways Self-Evaluation Tool Released; FHWA Creates Web site for Gulf Coast Study; USDOT Releases Sustainability Scorecard; EPA Report Examines Effectiveness of Travel Efficiency Strategies; EPA Issues Guide to Transportation Emissions Reduction Measures; National Research Council Releases Final Report of America's Climate Choices Project; NAFTA Environment Commission Publishes Report on Sustainable Freight Transportation; European Road Research Center Publishes Final Report on Climate Change Adaptation; NAS Report Looks at Implications of Various GHG Concentration Levels; FTA is Seeking Climate Change Adaptation Pilot Locations; and AASHTO/FHWA to Hold Webinar: Who's Saying What about Climate Change and Energy These Days?

The issue is available online via <http://www.fhwa.dot.gov/hep/climatechange/newsletter/ccnews0611.htm>

Links:

Turner-Fairbank Highway Research Center: <http://www.fhwa.dot.gov/research/>

Resource Center: <http://www.fhwa.dot.gov/resourcecenter/>

National Highway Institute: <http://www.nhi.fhwa.dot.gov/home.aspx>

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Suggestions may be submitted to: FHWA_Now@fhwa.dot.gov