

FHWA R&T Now ~ September 2010 ~

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

GENERAL/ADMINISTRATIVE

Turner Fairbank Highway Research Center Hosts the Forum of European National Highway Research Laboratories and European Conference of Transport Research Institutes

On September 20 and 21, Turner Fairbank Highway Research Center (TFHRC) hosted a delegation from the Forum of European National Highway Research Laboratories (FEHRL) and European Conference of Transport Research Institutes as part of their United States Scan. The focus of the Scan was Infrastructure Management and how U.S. research facilities are defined, developed, funded, and managed within a strategic program. The visit included a tour of some TFHRC laboratories and discussions with the Federal Railroad Administration, Federal Transit Administration, and Research and Innovative Technology Administration. The Federal Highway Administration (FHWA) recently became a member of FEHRL and as such the Agency is exploring opportunities to collaborate on research areas of interest.

For more information, contact Joe Conway, 202-493-3186, joe.conway@dot.gov.

Planning for SHRP 2 Implementation

The second Strategic Highway Research Program (SHRP 2) continues to make progress in accomplishing its programs goals. The Transportation Research Board (TRB) has hosted several Webinars to share information about early research results, and is beginning to convene implementation workshops, where technical experts will collaborate on drafting preliminary implementation plans for early products and clusters of products. TRB will continue to manage all SHRP 2 research and pre-implementation activities, as authorized under Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. SHRP 2 is being extended to 2015 since Congress has not enacted new highway authorization legislation. This will allow for a more coordinated approach for implementation.

FHWA is working with TRB, the American Association of State Highway and Transportation Officials (AASHTO), and the National Highway Traffic Safety Administration (NHTSA) through the multi-organizational SHRP 2 Implementation Planning Steering Group. The Steering Group recently established two specialty teams that will help ensure solid communications and marketing mechanisms are established for SHRP 2 implementation and help address all Information Technology-related SHRP 2 products by identifying current and future maintenance needs.

Within FHWA, SHRP 2 Implementation Team Director Margie Sheriff has been building awareness of SHRP 2 and its anticipated products outcomes, and planning for integrating SHRP 2 implementation into FHWA processes. FHWA and NHTSA have also been collaborating on key issues that will guide the SHRP 2 safety research and implementation.

For more information, contact Margie Sheriff, 202-366-1747, margie.sheriff@dot.gov.

Highways for LIFE Solicits Proposals

The Highways for LIFE Technology Partnerships Program is soliciting proposals to conduct selected product safety performance evaluations on infrastructure-based safety products that have limited or no U.S.

installations so that public agencies can make informed purchasing decisions. Specifically, the program limits the scope to commercially available infrastructure-based safety products that address one of the following focus areas:

- Roadway departure events (with an emphasis on those occurring on two-lane rural road horizontal curves)
- Pedestrian-related detection, warning, and enhanced conspicuity
- Rural, unsignalized intersections

If there are technologies that your State is interested in evaluating, consider partnering with a manufacturer and submitting an application to the program. The solicitation closes on October 7, 2010. Competition under this solicitation is open to all nonprofit and for-profit organizations. International companies are encouraged to apply. For a copy of the solicitation go to:

<http://www.fhwa.dot.gov/hfl/tech.cfm> , or contact julie.zirlin@dot.gov.

Report: State Planning and Research Guide For Peer Exchanges

This document provides guidance for the State Planning and Research peer reviews. It contains information about the philosophy and principle of the peer exchanges; the use of peer exchanges to strategically improve research programs; and guidance and resources on conducting peer exchanges. This report will be of interest to State research directors, FHWA division offices, and others at FHWA responsible for working on State peer exchange panels.

<http://www.fhwa.dot.gov/publications/research/spr/10048/index.cfm>

For more information, contact John Moulden, 202-493-3470, john.moulden@dot.gov

ADVANCED RESEARCH

FHWA Exploratory Advanced Research Solicitation Deadline Approaching

FHWA's Exploratory Advanced Research (EAR) Program working with the Offices of Acquisition Management, Infrastructure Research and Development (R&D), Safety R&D, Operations R&D, Planning, and Policy and Governmental Affairs, is soliciting proposals through a broad agency announcement in three topic areas. Proposals are due September 30, 2010. The topic areas include Agent-Based Modeling and Simulation for Transportation, Breakthrough Approaches for Network-Level Travel Data, and National Transportation Demand Model: Foundational Research for New Approaches. The EAR Program plans to award nearly \$5 million to selected proposals responding to the solicitation with awards anticipated in 2011. A link to the solicitation is posted at <http://www.fhwa.dot.gov/advancedresearch/>.

For more information, contact Terry Halkyard, 202-493-3467, terry.halkyard@dot.gov; or David Kuehn, 202-493-3414, david.kuehn@dot.gov.

Fact Sheet: Driving Simulation Forward: Making Driving Simulators More Useful for Behavioral Research

It is often difficult for highway and traffic engineers to consider complex driver behavior in their designs, but failing to do so can cost lives and, if roadways must be rebuilt, millions of dollars. The aim of "Making Driving Simulators More Useful for Behavioral Research," an EAR Program project, is to make driving simulators a more reliable tool for highway engineers. The 32-month study, launched by FHWA in 2009, is being conducted by the University of Iowa.

For more information on this EAR Program project, contact Chris Monk, 202-493-3365, chris.monk@dot.gov or visit <http://www.fhwa.dot.gov/advancedresearch/pubs/10060/index.cfm>.

Fact Sheet: Investigating Congestion and Solutions: Experiments on Congestion Conditions and Pricing Initiatives

When and why drivers choose a priced or tolled facility over an untolled but congested parallel route is the subject of 3-year project funded by the FHWA EAR Program, in partnership with the University of Central Florida and Georgia State University. “Experiments on Driving under Uncertain Congestion Conditions and the Effects on Traffic Networks from Congestion Pricing Initiatives” will examine how drivers’ risk preferences influence their choice of route and travel departure time.

For more information on this EAR Program project, contact Karen White, 202-366-9474, karen.white@dot.gov or visit <http://www.fhwa.dot.gov/advancedresearch/pubs/10061/index.cfm>.

Fact Sheet: New Ways to Predict Bridge Performance: Advances in Structural Health Monitoring

Fiscally responsible, safe, life-cycle management of the Nation’s bridges depends on reliably predicting their health over time. The goal of the EAR Program project “Development and Demonstration of Systems-Based Monitoring Approaches for Improved Infrastructure Management Under Uncertainty,” is a next-generation, integrated framework to advance the reliability of bridge assessment. FHWA awarded this project to researchers from the University of Central Florida and Lehigh University.

For more information on this EAR Program project, contact Hamid Ghasemi, 202-493-3042, hamid.ghasemi@dot.gov or visit <http://www.fhwa.dot.gov/advancedresearch/pubs/10062/index.cfm>.

INFRASTRUCTURE

More Than 50 International Pavement Specialists Attend LTPP Pavement Analysis Forum

The Long-Term Pavement Performance (LTPP) Pavement Analysis Forum was held August 31 to September 2 in Irvine, CA, for the purposes of gathering information and suggestions of 50+ international pavement specialists for ways to revise and enhance the Strategic Plan for LTPP Data Analysis. Attendees of the forum, which was jointly planned by LTPP and TRB, developed new problem statements and project descriptions that will be considered by the TRB LTPP Committee at its next meeting in November.

For more information, visit the LTPP Analysis Web site at <http://www.fhwa.dot.gov/pavement/ltpp/analysis.cfm> or contact Larry Wiser, 202-493-3079, larry.wiser@dot.gov.

To learn more about the LTPP program and products, visit: <http://www.fhwa.dot.gov/pavement/ltpp/index.cfm> or contact the LTPP Customer Support Service Center, (202) 493-3035, ltpinfo@dot.gov.

SAFETY

National Crash Analysis Center Technical Summaries Now Available

The Advanced Crash Analysis Program, of the FHWA Office of Safety R&D, announces the availability of new reports, working papers, and technical summaries covering research into a number of topics including:

guardrail systems, cable barriers, and concrete barriers; crashworthiness criteria and testing; crash simulation and vehicle modeling; motorcycle safety; and highway design. The FHWA funded this research under a contract with the National Crash Analysis Center (NCAC), at George Washington University. Among the documents most recently posted are:

- “Development of an Energy-Absorbing End-Terminal for the Steel Backed Timber Guardrail” – Phase I (NCAC 2009-W-006); Phase IIA (NCAC 2010-R-002), and Phase IIB (NCAC 2010-R-003).
- “Using Vehicle Dynamics Simulation as a Tool for Analyzing Cable Barriers Effectiveness” (NCAC 2010-W-006)
- “FOIL Cable Median Barrier Retrofit Testing” (NCAC 2008-T-001)
- “Evaluation of Roadside Hardware Performance under Updated Crashworthiness Criteria” (NCAC 2008-W-002)
- “Modeling, Testing, & Validation of the 2007 Chevy Silverado Finite Element Model” (NCAC 2009-W-005)
- “California Motorcycle Crashes: Roadway & Rider Contributing Factors” (NCAC 2010-T-001)

These documents, and many more, can be downloaded from the NCAC Web site at:

<http://www.ncac.gwu.edu/research/reports.html>.

For more information, contact Steve Kan cdkan@ncac.gwu.edu, or Ken Opiela at kenneth.opiela@dot.gov.

Report: Safety Effectiveness of the HAWK Pedestrian Crossing Treatment

This study was part of a larger FHWA study to quantify the effectiveness of engineering countermeasures in improving safety and operations for pedestrians and bicyclists. The project focused on existing and new engineering countermeasures for pedestrians and bicyclists that have not yet been comprehensively evaluated in terms of effectiveness. This effort involved data collection and analysis to determine whether these countermeasures reduced fatalities and injuries or increased appropriate driving behaviors. In this study, the safety effectiveness of the High intensity Activated crossWalk (HAWK) pedestrian beacon was evaluated using a before-after empirical Bayes (EB) approach.

<http://www.fhwa.dot.gov/publications/research/safety/10042/index.cfm>

For more information, contact Ann Do, 202-493-3319, ann.do@dot.gov.

TechBrief: Safety Effectiveness of the HAWK Pedestrian Crossing Treatment

This document is a technical summary of the FHWA report, [Safety Effectiveness of the HAWK Pedestrian Crossing Treatment, FHWA-HRT-10-042](#).

<http://www.fhwa.dot.gov/publications/research/safety/10045/index.cfm>

For more information, contact Ann Do, 202-493-3319, ann.do@dot.gov.

TechBrief: Crash Impact of Smooth Lane Narrowing with Rumble Strips at Two-Lane Rural Stop-Controlled Intersections

As part of an effort to reduce crashes at unsignalized rural intersections, this study evaluates a safety treatment for two-way stop-controlled intersections.

<http://www.fhwa.dot.gov/publications/research/safety/10047/index.cfm>

Surrogate Safety Assessment Model Software Download is Now Online

After reading the terms of the license agreement, complete the form below. The terms of the license agreement are as follows:

<http://www.fhwa.dot.gov/software/research/safety/ssam/>

OPERATIONS

TFHRC Transmitter Installed, Intellidrive Research Continues

TFHRC now has a 5.9GHz transmitter installed in the Transportation Operations Laboratory's Cooperative Vehicle-Highway Testbed. In addition, the IntelliDrive car has received and displayed messages transmitted from TFHRC's intelligent intersection. The car's On Board Equipment has successfully communicated its position back to the Intelligent Intersection. Moreover, TFHRC's intelligent intersection communicated back to the Service Delivery Node in Michigan so that it could see researchers as they moved around TFHRC. Researchers also could see TFHRC's vehicle in real-time on a laptop.

For more information, contact Joe Peters, 202-493-3269, joe.peters@dot.gov.

RECENT PERIODICALS

***FOCUS* Newsletter—August 2010**

This issue includes: New Health Track Analysis Tool Offers a Checkup for Your Pavement; TIG Announces Solicitation for 2011 Focus Technologies; Welcome to WIM: FHWA Releases New Data Analyst's Manual; Visit FHWA's Online Work Zone Training Compendium; Showcasing Enhanced Bridge Inspections Through Nondestructive Evaluation; Highway Technology Calendar; FHWA Issues New Guidance on Pavement Friction Management; and, FHWA Solicits Comments on Creation of National Tunnel Inspection Standards.

<http://www.fhwa.dot.gov/publications/focus/10aug/index.cfm>

lgpope@woodwardcom.com

***FOCUS* Newsletter—July 2010**

This issue includes: Transportation Asset Management: Beyond the Short Term; FHWA Launches Online Training on Asphalt Paving Field Inspection; Webinar to Explore Key Performance Indicators for Transportation Projects; Precast Concrete Pavement Systems: Acceleration Through Innovation; Ultra High Performance Concrete: Taking Concrete to New Levels; and, Highway Technology Calendar.

<http://www.fhwa.dot.gov/publications/focus/10jul/index.cfm>

lgpope@woodwardcom.com

Public Roads—July/August 2010

This issue includes: Transportation Lessons from Central Europe; Are We Winning or Losing the War on Weeds?; Complete Streets; IntelliDrive; From Hot to Warm; and, Scour, Flooding, and Inundation.

<http://www.fhwa.dot.gov/publications/publicroads/10julaug/index.cfm>

paula.magoulas@dot.gov

Innovator—Accelerating Innovation for the American Driving Experience—June/July 2010

This issue includes: Q&A With Greg Nadeau: Making Every Day Count; Trenchless Technology Trial Works for Montana DOT; Choosing Right Delivery Method Key to Project Success; Highways for LIFE Seeks States to Try Innovations; Seminar Challenges Engineers to Innovate; and, Calendar.

<http://www.fhwa.dot.gov/hfl/innovator/issue19.cfm>

kathleen.bergeron@dot.gov

Transportation and Climate Change Newsletter—July/August 2010

This issue includes: AASHTO Hosts 2010 National Climate Change Symposium; TRB Environment and Energy Research Conference Presentations Posted; 2010 Transportation Energy Data Book Released; Welcome Mike Culp; FHWA Seeks Input on FY2011 Research; FHWA's STEP to Host Air Quality and Climate Change Webinar September 28; ASCE Green Streets & Highways Conference Announced; and, Online Sustainable Transportation Certificate Program Offered Through University of Washington.

<http://www.fhwa.dot.gov/hep/climatechange/newsletter/ccnews0710.htm>

LTTP Newsletter, Summer 2010

This issue includes information on: LTTP Welcomes Stakeholder Input; 36th LTTP Pavement Distress Accreditation Workshop; and, In Brief: LTTP Completes Transition of the Falling Weight Deflectometer Calibration Center Support to AASHTO Materials Reference Laboratory.

<http://www.fhwa.dot.gov/publications/ltppnews/10074.cfm>

LTBP Newsletter, Summer 2010

This issue includes information on: Pilot Study Field Investigation Underway; From the Desk of Jorge Pagan-Ortiz, Director, Office of Infrastructure, R&D; Stakeholder Input: Meet Sandra Larson, Iowa DOT; Developmental Phase; Defining Bridge Performance; Focus Group Meetings; Data Infrastructure and Bridge Portal; Decision Support Tool; LTBP Geotechnical Workshop; and, Mark Your Calendar!

<http://www.fhwa.dot.gov/publications/ltbpnews/10058.cfm>

Links:

Turner-Fairbank Highway Research Center: www.tfhrc.gov

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

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

Please forward this newsletter to others you think might find it interesting and/or useful.

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