

FHWA R&T Now ~September 2009~

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

GENERAL/ADMINISTRATIVE

-Jorge Pagán-Ortiz, FHWA's New Director, Office of Infrastructure Research and Development-

Jorge Pagán-Ortiz has been selected as the new Director, Office of Infrastructure Research and Development, Office of Research, Development, and Technology. Jorge currently serves as the Senior Hydraulics Engineer and Team Leader of the Hydraulics and Geotechnical Team, Office of Bridge Technology, where since 2003 he has managed a multi-disciplinary staff in developing hydraulic and geotechnical policy, implementing national performance objectives and measures, and coordinating the dissemination of information on new and emerging technologies resulting from research and development activities. He has also served in other leadership positions within the U.S. Department of Transportation. In 2005, Jorge served as Acting Director, Office of Engineering, Federal Transit Administration. In this position, he directed a staff in providing program management oversight on all active Federal-transit funded projects. Jorge began his career with FHWA in 1983 as a Highway Engineer Trainee. He earned a Masters of Science in Water Resources Engineering from George Washington University, and a Bachelors of Science in Civil Engineering from the University of Puerto Rico.

-John Moulden Joins the R&T Program Development and Partnership Team-

FHWA's Office of Corporate Research, Technology, and Innovation Management is pleased to announce that John Moulden will be joining the staff as the National Partnership Program Manager on the R&T Program Development and Partnership Team. John will provide leadership in developing and implementing a national highway research agenda with broad-based customer support. He has had a distinguished career as a highway safety leader. Most recently, he served as President of Transportation Safety Associates, a Silver Spring, Maryland, highway safety consulting firm. John is a past president of the National Commission Against Drunk Driving, and he served as the Principal Staff Assistant on the Presidential Commission on Drunk Driving. John is a returning Federal employee, having spent the first 20 years of his career with the National Highway Traffic Safety Administration and the National Transportation Safety Board. John has a B.A. in Experimental Psychology from Johns Hopkins University and an M.S. in Experimental Psychology from Penn State.

-The Value of Research, Telling the R&T Story-

The Federal Highway Administration (FHWA) plays a leadership role in shaping and executing a National Research and Technology (R&T) program. The agency also acts as a convener; collaborations with State, industry, and academic partners provide the foundation for conducting research and developing innovations that are essential, indispensable, and connected to the needs of transportation system users.

<http://www.tfhr.gov/about/09050/index.htm>

-Research Project Summary of Selected Items FY 2007-2008-

This project summary, which corresponds to major Research, Development, and Technology (RD&T) offices and initiatives at the Turner-Fairbank Highway Research Center, provides representative examples of the Office of RD&T's activities in fiscal years 2007 and 2008 geared toward conducting research, deploying products and technologies, and providing communications and resource management support.

<http://www.tfhr.gov/about/perfplan0708/index.htm>

ADVANCED RESEARCH

-Exploratory Advanced Research Program Awards Support Energy Conservation and Sustainability-

As part of the Exploratory Advanced Research (EAR) Program, FHWA awarded a contract to the University of Michigan Transportation Research Institute for a project “Assessing the Potential of Automated Transit Services and Effective Pedestrian/Bicycle Facilities on Urban Travel Patterns.” The purpose of the research is to assess the magnitude of change needed in transportation and land use in order to make significant shifts in mobility, livability and sustainability.

For more information about the project, contact: robert.ferlis@dot.gov 202-493-3268

For more information about the EAR Program, contact:

david.kuehn@dot.gov 202-493-3414

-FHWA Awards Cooperative Agreement to Purdue University-

FHWA awarded a cooperative agreement to Purdue University on “Greatly Increased Use of Fly Ash in Hydraulic Cement Concrete (HCC) for Pavement Layers and Transportation Structures” as part of the EAR Program. Fly ash is a byproduct of coal-fired power plants and less than half is currently beneficially used – most is land filled. Improved characterization and understanding of the physical and chemical properties of fly ash and different blends of cementitious materials in concrete could allow for much greater use of fly ash. The use of fly ash will ultimately improve concrete if allowed to hydrate properly. The project involves a broad team including the National Ready Mixed Concrete Association, Indiana DOT, the National Institute of Standards and Technology, and Purdue University and Auburn University researchers.

For more information about the project, please contact: richard.meininger@dot.gov 202493-3191

For more information about the EAR Program, contact:

david.kuehn@dot.gov 202-493-3414

-Exploratory Advanced Research (EAR) Program Signs Agreement with DOE for Novel Method to Prevent Fuel Tax Evasion-

FHWA signed an interagency agreement with the Department of Energy Oak Ridge National Laboratory for a project on “Supply Chain-Based Solution to Prevent Fuel Tax Evasion.” The research is a unique concept for targeting fuel tax evasion that could result in two important breakthroughs. The first is in-line sensors to authenticate nanoscale markers in the fuel. The second is integration of exterior sensors to detect the volume of fuel in a tank truck and determine the open or closed position of the valve and GPS communication. The research addresses preventing three types of fuel tax evasion: (1) non-taxable or low-taxable petrochemical products from being “blended” with taxable fuel products; (2) taxable fuel products from cross-jurisdictional evasion (i.e. paying State tax in a low tax State but selling in a high tax State); (3) selling “exported” fuel domestically.

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

For more information about the EAR Program, contact:

david.kuehn@dot.gov 202-493-3414

-The Exploratory Advanced Research Program Fact Sheet: Integrated Urban Systems Modeling—Designing a Seamless, Comprehensive Approach to Transportation Planning-

Metropolitan planning agencies face increasingly complex issues in modeling interactions between the built environment and multimodal transportation systems. Although great strides have been made in simulating land use, travel demand, and traffic flow, gaining the ability to model urban systems across these phenomena would be a revolutionary advance. This challenge is the focus of "Modeling the Urban Continuum in an Integrated Framework: Location Choice, Activity Travel Behavior, and Dynamic Traffic Patterns," an EAR Program project launched by the FHWA in 2008.

<http://www.fhwa.dot.gov/advancedresearch/pubs/interurbsys.cfm>

-The Exploratory Advanced Research Program Fact Sheet: Real-Time Measurement of Soil Stiffness During Static Compaction-

Is continuous sensing of soil properties during static pad foot roller compaction achievable? A new pad-based, roller-integrated system for real-time measurement of the elastic modulus of fine- and mixed-grain soils is the goal of "Development of Soil Stiffness Measuring Device for Pad Foot Roller Compactor," a project of the FHWA's EAR Program. Initiated in 2008, the study is being conducted by the Colorado School of Mines with the participation of roller manufacturers and the Colorado and Minnesota Departments of Transportation.

<http://www.fhwa.dot.gov/advancedresearch/pubs/soilcompact.cfm>

ENVIRONMENT

-Federal Register Notice on Proposed FY2010 STEP-

The Federal Register Notice on the proposed FY2010 Surface Transportation Environment and Planning Cooperative Research Program (STEP) is available at:

Text version: <http://edocket.access.gpo.gov/2009/E9-21378.htm>

PDF version: <http://edocket.access.gpo.gov/2009/pdf/E9-21378.pdf>

STEP is an FHWA-administered source of funding for research related to planning, environment and realty. The FHWA anticipates that the STEP or a similar program to provide resources for national research on issues related to planning, environment, and realty will be included in future surface transportation legislation. Stakeholder input is required to identify the research topics that should receive priority consideration. Therefore, we are seeking input from all of our partners on the FY 2010 STEP.

FHWA will use STEP to fund research, field demonstrations, technology transfer, conferences, and workshops, as well as portions of various pooled fund research efforts. We anticipate that grants and cooperative agreements will continue to require a 50% match and that research contracts will not require a match. The Office of Planning, Environment and Realty (HEP) has developed STEP research emphasis areas and has identified contacts for each <http://www.fhwa.dot.gov/hep/step/contacts.htm>. The STEP contacts can answer questions that you may have regarding research planned or underway within a particular emphasis area.

Please review the proposed FY2010 STEP Implementation Strategy and submit suggested research topics via the STEP Website at: <http://www.fhwa.dot.gov/hep/step/index.htm>. Feedback is requested by December 3, 2009.

For further information regarding STEP, contact:

felicia.young@dot.gov

deborahr.johnson@dot.gov

phil.roke@dot.gov

INFRASTRUCTURE

-LTPP Beyond FY 2009: What Needs to Be Done?-

This report summarizes the current status of the Long-Term Pavement Performance (LTPP) program and its major activities—data collection, data storage, data analysis, and product development. It describes the work that will be needed beyond 2009 to realize the full potential of the world's most comprehensive pavement performance database and the benefits that will be accrued by capitalizing on the investment that has been made.

<http://www.fhwa.dot.gov/pavement/ltpp/pubs/09052/index.cfm>

The LTPP program is an ongoing and active program. To obtain more information, LTPP data users should visit the LTPP Web site at <http://www.fhwa.dot.gov/pavement/ltpp/>. LTPP data requests, technical questions, and data user feedback can be submitted to LTPP customer service via e-mail at ltpinfo@dot.gov.

SAFETY

-Techbrief: Safety Evaluation of Improved Curve Delineation-

The Federal Highway Administration (FHWA) organized 26 States to participate in the FHWA Low Cost Safety Improvements Pooled Fund Study as part of its strategic highway safety plan support effort. The purpose of the pooled fund study is to estimate the safety effectiveness for several of the unproven low-cost safety strategies identified in the *National Cooperative Highway Research Program (NCHRP) Report 500 Series*. One of the strategies chosen to be evaluated for this study is improved curve delineation. This strategy is intended to reduce the frequency of curve-related crashes by providing more conspicuous signing and lane markings. The safety effectiveness of this strategy has not been thoroughly documented, and this study is an attempt to provide a crash-based evaluation through scientifically rigorous procedures.

<http://www.tfhr.gov/safety/pubs/09046/index.htm>

RECENT PERIODICALS

-FOCUS Newsletter -- August 2009-

This issue includes: Scanning the Country for Best Practices in Accelerated Construction; Moving Forward with Long Term Bridge Performance; Value Engineering: Strategies for Success; Highways for LIFE Seeks Stakeholder Input; Conference to Feature Sustainable Technologies for Concrete Pavements; and, Highway Technology Calendar.

<http://www.tfhr.gov/focus/aug09/index.htm>

lgpope@woodward.com

-FOCUS Newsletter -- July 2009-

This issue includes: Traffic Analysis Toolbox Offers New Guides to Work Zone Modeling and Simulation; A Quick Check of Your Highway Network; First International Conference on Transportation Construction Management: New Solutions in Successful Project Delivery; FHWA Launches Online ASR Reference

Center; FHWA's ACTT Toolkit: Bringing the Power of Accelerated Construction Straight to You; Highway Technology Calendar; and, Gusset Plate Guidance for Truss Bridges Available from FHWA.

<http://www.tfsrc.gov/focus/july09/index.htm>

lgpope@woodward.com

-Public Roads – September/October 2009-

This issue includes: 1. Detecting Pedestrians. 2. NDE Showcase for Bridge Inspectors. 3. Advances in Wildlife Crossing Technologies. 4. Road Safety Audits for Pedestrian Facilities.

<http://www.tfsrc.gov/pubrds/09septoct/index.htm>

martha.soneira@dot.gov

-LTPP Newsletter- Summer 2009-

This issue includes: Securing the Legacy of LTPP: The New IMS Server at FHWA's TFHRC; and, FWD Calibration Center Long-Term Support Being Transitioned AMRL.

<http://www.fhwa.dot.gov/pavement/ltp/news.cfm>

Innovator—Accelerating Innovation for the American Driving Experience-August/September 2009-

This issue includes: Q&A With Pete Ruane: Telling the Innovation Story; Highways for LIFE Seeks Stakeholder Feedback; NHI Course on Mainstreaming Innovation Now Available; Public-Private Partnership Works to Advance Highway Quality; Iowa Project to Test Super-Strength Concrete in Bridge Deck Panels; FHWA Offers Connections Manual for Prefab Bridges; and Calendar.

<http://www.fhwa.dot.gov/hfl/innovator/issue14.cfm>

-Transportation and Climate Change Newsletter –August 2009-

This issue includes: Integration of Climate Change Considerations in Statewide and Regional Transportation Planning Report Released; USACE Releases Sea Level Rise Guidance; CA Draft Adaptation Strategy Released for Public Comment; Michigan Governor Calls for Reductions in Greenhouse Gas Emissions; NYSDOT Report Explores Roadway Energy Efficiency and Carbon Capture; TRB and AASHTO Webinar: U.S. Transportation System Scenarios to 2050 in a World Addressing Climate Change; Value Pricing Pilot Program Seeking Applications; and, ITS America and IBTTA Hosting Conference on Sustainability, Social Responsibility, and Energy Conservation.

<http://www.fhwa.dot.gov/hep/climatechange/newsletter/ccnews0809.htm>

-Transportation and Climate Change Newsletter –July 2009-

This issue includes: Secretary LaHood Testifies Before Senate; Moving Cooler Report Released; AASHTO Releases "Real Transportation Solutions" Website and Report; 28th Edition of the Transportation Energy Data Book Released; UK Low Carbon Transition Plan Released; RFF Report Released on Adapting Public Infrastructure to Climate Change; and, CA Sea Level Rise Final Report Released.

<http://www.fhwa.dot.gov/hep/climatechange/newsletter/ccnews0709.htm>

-Centered on Service- July 2009-

This issue includes: CA Develops Pedestrian Safety Action Plan Template; Pavement & Materials TST and HQ Evaluate NC's I-795/US 117 Bypass; Going International with RSA; Intersection Safety Reviews Offer Powerful & Productive Measures for Reducing Crashes; PDS UPDATE: ACS Lite Training for Signal Timing Comes to TX; DE Showcases Precast Concrete Pavement Systems at Night; New Online Course on ADA and Pedestrian Facilities; What is Transportation Conformity?; ABC Seminars Offered Nationwide; National Concrete PRR Conference Held in St. Louis; "Acceptance" of Self Consolidating Concrete; Safety & Bridge Blast Behavior Workshop Launched; KAT Joins FHWA RC; The Learning Highway; and, EMPLOYEE HIGHLIGHT: ARC Salutes 2009 Legends Award Winner.

<http://www.fhwa.dot.gov/resourcecenter/success/cosvol5iss3.cfm>

-The Conduit of Research- Summer 2009-

This Transportation Research Board Conduct of Research Committee Newsletter includes: Writing Effective Research Problem Statements; Next Generation Agenda Setting: The Exploratory Advanced Research Model; Communicating the Value of Research Guidebook Now Available; Transportation Synthesis Reports: A Gold Mine of Information; UTCs Tapped to Fill Deputy Administrator Role; TRB & Other Related News; CoR Webinar on Writing Research Statements; Special Thanks to Research Resource Contributors; Upcoming Events; and, From the Chair.

<http://www.mrutc.org/COR/resources/newsletter/SUmmer2009.pdf>

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