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Upcoming Events

December 2
FHWA Crash Modification Factors Course
TTEC-100

December 8-12
NHI Course No. I52054— Introduction to
Urban Travel Demand Forecasting
TTEC-160

To view more events, please visit
<http://www.ltrc.lsu.edu>.

DOTD Hosts 2014 SASHTO Conference

The Louisiana Department of Transportation and Development recently welcomed over 1,270 southeast transportation officials and professionals to the Sheraton in New Orleans, La during the Annual Southeastern Association of State Highway and Transportation Officials (SASHTO) Conference. The conference provided an opportunity for officials from all over the region to learn new methods and strategies in the transportation field as well as network with fellow professionals.

The annual meeting, presided over this year by Louisiana DOTD Secretary Sherri LeBas, was themed “Transportation Innovation: Building the Future.” This year’s opening session featured Mike Hancock, Secretary of the Kentucky Transportation Cabinet and President of AASHTO; David Vitter, US Senator Louisiana, who serves on the Committee on Environment & Public Works; and Greg Nadeau, Acting Administrator of FHWA. Following the speakers, the general session began with the traditional roll call from all states in attendance as well as a special interrupted visit from “Napoleon Bonaparte,” who gave the group an overview of Louisiana’s history and culture. The general

session’s keynote speaker was Dr. Mae Jemison, the first woman of color in the world to go into space, serving six years as a NASA astronaut. She is currently leading 100 Year Starship (100YSS) an initiative seed funded by DOD’s Defense Advanced Research Project Agency (DARPA) to assure the capability for human interstellar space travel to another star is possible within the next 100 years.

In addition to attending an opening and general session, attendees were given many options of technical sessions presented throughout the three-day conference. The sessions focused on an array of topics relevant to the transportation communities of the southeastern





states such as: updates on the Strategic Highway Safety Plan (SHRP) 2, bridge rehabilitation projects, lessons learned from state emergencies, weather and climate change, data system implementations, FHWA’s Every Day Counts (EDC) initiatives, major bridge projects, advancements in tolling operations, MAP-21, autonomous vehicles, and many more.



Delegates were also invited to attend a trade show, which provided an opportunity for over 70 vendors to exhibit new and innovative merchandise and services.

LTRC would like to thank its SASHTO staff for their commitment of time and talent from planning and conducting the conference over that last two years. Committees were made up of DOTD and LTRC employees throughout the department. The conference would also not have been possible without its many generous sponsors.

The 2015 SASHTO conference will be held in Nashville, TN August 1-4, 2015.

Albert Returns to New Orleans

Albert Paul Sashto began as a symbolic “passing of the baton” at the 2000 SASHTO close-out breakfast in New Orleans, but this year as he returned home, he became quite the beloved star. With outfit changes and a new traveling suitcase, he bounced around from event to event, taking pictures with everyone he saw, including major sponsors, top security, and the Louisiana and Tennessee Secretaries.



SASHTO Technical Session Highlights

With 25 concurrent technical sessions offered, conference attendees were offered a range of topics covering many different facets in today's transportation field, such as incorporating media or paperless options, examples of implementation success stories, strategies to tackle today's challenges, among others.

Among these sessions, a few topics seemed to garner the most attention from attendees. On Monday, "Finding the Right Solutions for Unique Bridge Rehabilitation Projects" attracted a number of people wanting to learn more about projects where innovative solutions were employed to solve unique and complex problems related to maintaining and rehabilitating large bridges.

Presenters Artur D'Andrea (Assistant Bridge Design Administrator, LADOTD) and Zolan Prucz (Modjeski and Masters) gave information on the I-20 Mississippi River Bridge Truss Rehabilitation-Repairs and Monitoring. They shared bridge characteristics and movements, a bridge monitoring program complete with instrumentation information, as well as bridge modification details. A presentation on the US 84 Mississippi River Bridge Pin and Link Replacement was given by Justin Walker (Deputy Director of Structures/Assistant State Bridge Engineer, MDOT) and James Gregg (Bridge Department Manager, HNTB Corporation). They explained the pin rehabilitation projects that occurred in 1996 and 2014, sharing their plans, results, and lessons learned from both. And Michael Smart (International Bridge Technologies, Inc.) led the group through the Mississippi River Bridge (Luling) Cable Stay Replacement, where he addressed hurricane evacuation, original construction, bridge characteristics, anchorage and stay system condition, replacing the stay system (all 72 cables and other stay components), as well as design and construction challenges.

Tuesday drew even more crowds with "In the Driver's Seat: Planning for Autonomous Vehicles on US Roads,"



"Are We really Going to Fall off the Federal Fiscal Cliff?" and "Success Stories in Context Sensitivity."

The topic of autonomous vehicles attracted the most interest throughout the conference. With a focus on Florida's experience, the hot topic of the technology and policy in the implementation of Autonomous Vehicle Technology was presented. Edward Hutchinson (Florida Automated Vehicle Initiative Manager, FDOT) gave the group an overview of autonomous vehicles and connected vehicles, and he shared Florida's automated vehicles initiative activities. He explained specific technology features, various levels of automation, safety critical functions, and pilot projects underway.

During the fiscal cliff discussion, panelists explored the Federal Reauthorization of MAP-21 and the consequences of a failure of Congress to increase funding before the end of the Federal fiscal year. Panel discussion members included Jim Tymon (Director of Management and Program Finance, AASHTO), Elissa Konove (Chief Financial Officer, FHWA), and John Schroer (Commissioner, TDOT).

And finally, during the context sensitivity session, an overview of Louisiana's #2 ranked Complete Streets Policy was presented along with success stories from other states in the areas of context sensitivity and environmental compliance. Ellen Soll (Transportation Planning Consultant, Soll Planning LLC) explained the Complete Streets Policy by explaining Louisiana's specific policy, how they are able to measure success, and the implementation and procedures involved. Other success stories included "Aesthetics in a Design Build Environment" presented by Richard Sutherland (Senior Principal, Stantec) and "New Priorities for Old Bridges: Leading the Way in Louisiana" by Ray Mumphrey (Assistant Bridge Design Administrator, DOTD) and

Amy Squitieri (Group Leader/Vice President, Mead and Hunt, Inc.). Both presentations gave in-depths views on successful projects and examples as well as tips and strategies used.

To view or download these presentations and more, please visit <http://www.ltrc.lsu.edu/sashto2014/presentations.html>.

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A Message from the Director: **Solicitation of Research Problem Statements**

The Louisiana Transportation Research Center is beginning its biennial solicitation of research problem statements. These problems will form the basis for the research program for the next two years. This effort is essential to the successful development and management of the department's research program. It is your chance as our transportation partners/customers to make a difference and optimize benefits to our industry. We welcome both applied and theoretical problem statements and also problems that require technical assistance.

Research problem statements should be submitted through the LTRC web site at the following link: <http://projectmanagement.ltrc.lsu.edu/ProblemStatement/SubmitProblemStatement.aspx> by January 23, 2015. Problem statements are also being solicited from the universities, transportation industry and local government.

Research Problem Identification Committees (RPICs) comprised of department, university and industry

personnel will be appointed according to technical or management areas depending on the content of problem statements submitted. They will be tasked to review and to prioritize the ideas submitted. Each problem statement will be prioritized according to need and implementation potential. The top rated problem statements from each RPIC will be again rated and prioritized by the Research Advisory Committee (RAC) comprised of the RPIC chairs and other section and district personnel from the department. The RAC will provide a prioritized selection of problems proposed for study.

Please contact Research Associate Director Mark Morvant at (225) 767-9124 for any questions about the process or for assistance in completing the problem statement forms.



Harold "Skip" Paul, P.E., Director

NHI Underwater Bridge Inspection Class

On October 7-10, 2014, bridge-inspection divers, non-diver bridge inspectors, and FHWA, state, and local agency structural engineers gathered at TTEC for an underwater bridge inspection class. As part of a requirement from the National Bridge Inspection Standards (NBIS), FHWA-approved bridge inspection training for all divers conducting underwater inspections is needed.

The course provided an overview of diving operations that will be useful to agency personnel responsible for managing underwater bridge inspections. Course topics included: methods of underwater inspection, underwater material deterioration mechanisms and inspection techniques, scour inspection techniques, and underwater element-level rating.

The class aimed at preparing participants to conduct the following:

- Explain the need and benefits of inspecting the underwater portions of bridge structures.
- Describe typical underwater defects and deterioration, and identify conditions contributing to rates of deterioration.
- Identify the types of inspection equipment available, and the advantages and limitations of each.
- Identify procedures for planning and performing thorough and safe underwater bridge inspections.
- Assign component and element level condition ratings for underwater components in accordance with NBIS and agency requirements.

For more information on this class or similar classes offered at LTRC, please contact Training and Development Program Manager Allison Landry at allison.landry@la.gov or (225) 767-9134.

Tool for Tracking and Analyzing Safety Improvements Implemented by DOTD

According to the Federal Highway Administration (FHWA), Highway Safety Improvement Program (HSIP), intersection safety is a national, state, and local priority. With an intersection crash rate that was higher than the national average, Louisiana has been recognized as a “focus” state for intersections by the FHWA. Subsequently, Louisiana’s Strategic Highway Safety Plan’s (SHSP) implementation strategy calls for the “aggressive deployment of low-cost safety treatments in a systematic manner based on both historic data and roadway characteristics.” As a result, LTRC project 12-4SS contracted LSU’s Highway Safety Research Group (HSRG) to develop a new web-based system with data tracking and analysis capabilities that will be used to assess the effectiveness of deployed safety improvements at intersections and in the vicinity of curves, where a high number of serious injury and fatal crashes occur.

The recently completed system developed by LSU’s HSRG is called the Louisiana Safety Evaluation Tool, or LaSET. The tool is currently being utilized by DOTD’s

LaSET Louisiana Safety Evaluation Tool

Today is November 03, 2014







Highway Safety section on three recently awarded district-wide projects in Districts 02, 61, and 62. According to April Renard, DOTD highway safety engineer, “Three district-wide projects included a risk-based assessment of roadways and considered proven effective low-cost safety countermeasures for mitigating the identified risk. In accordance with Louisiana’s SHSP and the Destination Zero Deaths initiative, roadway departures and intersections were identified for treatment and countermeasures included, but are not limited to thermoplastic centerline and edge lines, doubled-up oversized advanced curve warning signage

Site Improvements

Project: H.000001 / Site: 3rd AT Crowley

Update a Sign at Site

Signs:

Sign	Sign name	Sign code	Sign height(inch)	Sign width(inch)	Existing sign quantity	Reason for Improvement	Sign quantity after improvement	Sign added date	Sign added by	Edit	Remove
	ADVISORY SPEED (ENGLISH)	W13-1	30	30	3	New Install/Marking	6	5/20/2014 1:08:32 PM	AprilRenard	Edit	Remove
	STOP	R1-1	18	18	1	New Install/Marking	2	4/24/2014 11:32:52 AM	AD	Edit	Remove
	YIELD	R1-2	18	18	1	Size Increase (Signs)		5/2/2014 8:28:48 AM	AD	Edit	Remove
	YIELD	R1-2	48	48		Size Increase (Signs)	2	5/2/2014 8:29:10 AM	AD	Edit	Remove

1 to 4 of 4 rows

Update Pavement Markings at Site

Pavement:

Pavement Markings	Reason for Improvement	Construction type	Pavement added date	Pavement added by	Remove
High Friction Surface Treatment	Size Increase (Signs)	NEW	5/20/2014 1:14:15 PM	AprilRenard	Remove
Legends & Symbols -- Arrows	Condition	REPLACE	5/20/2014 1:09:00 PM	AprilRenard	Remove
Legends & Symbols -- School Crossing	New Install/Marking	NEW	4/24/2014 11:33:01 AM	AD	Remove
Striping -- Paint	New Install/Marking	NEW	5/20/2014 1:13:20 PM	AprilRenard	Remove

with speed advisory plaques, oversized chevrons, closely-spaced retro-reflective raised pavement markers on edge lines, and advanced intersection warning signs with street name plaques.”

By being able to now evaluate these roadway safety improvements with LaSET, it is expected that the system and tracked data will allow DOTD to make better decisions in the future based on crash frequencies at the treated locations. The project was funded by DOTD, LSU, and the National Center for Intermodal Transportation for Economic Competitiveness (NCITEC).

To learn more about the project or LaSET, contact Project Manager Kirk Zeringue at kirk.zeringue@la.gov or 225-767-9169.

Staff Updates and Accomplishments

LTRC Research Associate **Danny Xiao, Ph.D.**, is the new host of Pavinars, a free webinar series covering topics of interest to the pavement community. Anyone with an interest in pavements is welcome to participate. Generally, there is a 50-minute presentation interspersed with discussion, with time for questions at the end of the presentation. After the Pavinar is completed, a Professional Development Hour (PDH) certificate will be emailed to attendees for one PDH. To find out more information on Pavinars, please visit www.pavinars.com.

Senior Geotechnical Research Engineer **Gavin Gautreau, P.E.**, was recently appointed as the Committee Communication Coordinator for the TRB Committee on Foundations of Bridges and Other Structures (AFS30).

Local Road Safety Program Manager **Rudynah Capone** attended a local road safety peer exchange in Michigan to learn more about Michigan’s successful Towards Zero Death programs involving local agencies.

LTAP Director **Marie B. Walsh, Ph.D.**, served as a Technical Oversight Work Group member for an FHWA-sponsored program to evaluate the effectiveness and efficacy of a series of local road safety resources. She traveled to Flagstaff County, AZ (home of the Grand Canyon) and to Klickitat County, WA to meet with federal, state, and local officials to develop and document best practices to share nationwide. She also participated in the project kickoff meeting for the NCHRP project 17-69, “Transforming Traffic Safety Culture to Reduce Deaths and Serious Injuries.”

LTAP Program Manager **Steve Strength** participated in the on-site NHI Instructor Development class sponsored by LTAP. He also participated as a panel member for the NCHRP Project 17-65, dealing with Improved Analysis of Two Lane Highway Capacity and Operational Performance.

Patrick Frazier was recently promoted from Eng. Tech 5 in the Asphalt Lab to Eng. Tech DCL in the Soils Lab.

NEW HIRES | LTRC would like to welcome the following new staff to the Department:

TTEC: Garrett Wheat, Teaching Associate 4.

Asphalt: David Mata, Engineer Intern I, and **Kristi Goetting**, Engineer Tech 5

Concrete: Zachary Collier, Engineer Intern I

Geotech: Ural Cosse, Engineer Tech 4

GERL: Adele Lee, Computer Analyst 2

PRF: Brian Crerry, Research Specialist 2

Recently Published

Project Capsule 14-IST

Evaluating Louisiana New Deck Continuity Detail for Precast Prestressed Concrete Girder Bridges
Ayman M. Okeil, Ph.D., P.E.

Final Report and Technical Summary 515

Asphalt Surface Treatment Practice in Southeastern United States
Hesham Ali, Ph.D., P.E., and Mojtaba Mohammadafzali

Final Report and Technical Summary 522

Development of Performance Measurement for Freight Transportation
Kirk Zeringue, P.E.

Final Report 523

Use of Containers to Carry Bulk and Break Bulk Commodities and Its Impact on Gulf Region Ports and International Trade
James R. Amdal and Marc Howlett

Final Report and Technical Summary 531

The Rideability of a Deflected Bridge Approach Slab (LTRC Project 02-2GT Continuation: Phase II)
Mark Martinez, P.E.

Final Report and Technical Summary 534

Regional Implementation of Warm Mix Asphalt
Clark Graves, Ph.D., P.E., P.G.



FIND OUT MORE

To view a complete list of LTRC publications, visit the website at www.ltrc.lsu.edu.



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