

TECHNOLOGY

eXchange

For more information, visit our Web site
www.ltrc.lsu.edu/ltap/index.html

Railroad Crossing Safety

LA Operation Lifesaver offers safety tips



On Thursday March 24, 2005, a day-long Emergency Railroad Safety Summit conference was convened in Baton

Rouge in response to the deaths of ten Louisiana motorists at railroad crossings during the first three months of 2005. At the meeting, many safety options were discussed. Because Louisiana does not have the money to upgrade all crossings to include active warning devices such as flashing lights and gates, other options must be pursued. Conference attendees spent several sessions brainstorming about

potential safety solutions, but the organization mentioned most often as a key to reducing crashes was Louisiana Operation Lifesaver.

Operation Lifesaver, a national non-profit organization dedicated to eliminating fatalities and injuries at highway-rail grade crossings and railroad rights-of-way, provides presentations at no charge to the general public, including driver's education students, professional drivers, and school children. For more information on scheduling a presentation or becoming involved in the Louisiana Operation Lifesaver program, please visit the national Web site at www.oli.org or the state Web site at www.laoperationlifesaver.org.

cont. on page 6

Pipe Installation Workshops Held Statewide

LTRC research leads to proposed change in DOTD specifications

LTAP recently co-sponsored three pipe installation and inspection workshops with the Concrete and Aggregate Association of Louisiana (CAAL) and our Louisiana Transportation Research Center (LTRC) colleagues. Over 250 local and state agency personnel, public works employees, and other transportation professionals participated in regional workshops in Lafayette, Alexandria, and Bossier City. The Baker workshop will be rescheduled due to instructor illness.

The morning session of each workshop included presentations by LTRC researchers, Zhongjie "Doc" Zhang, Ph.D., P.E., and John Eggers, P.E., along with noted industry expert William Nesbeitt, P.E., of Hydro Services Incorporated.

Zhang presented the results of LTRC's trench back-fill research, which focused on the settlement which often occurs around pipes and culverts causing dips in the surrounding pavement surfaces. He reported

cont. on page 6

In this issue: 1 LPESA Spring Meeting - 2 1 Drive Safely Work Week - 3
Elderly Drivers - 4 1 Back to Basics - 5 1 LMA Meetings - 7
1 Calendar of Events - 8

A LOCAL TECHNICAL ASSISTANCE
PROGRAM OF THE LOUISIANA
TRANSPORTATION RESEARCH CENTER IN
COOPERATION WITH LADOTD, FHWA, AND
LSU.

LPESA Spring Meeting

Great Job!...Good Turnout!...Food and Refreshments—Great! These positive comments reflect the opinion of attendees of the recent Louisiana Parish Engineers and Supervisors Association (LPESA) spring conference. The conference was held in Lafayette in May of this year. Over 100 participants from city, parish, state, and federal agencies as well as representatives of private firms gathered at the Comeaux Recreational Center at Beaulieu Park to hear presentations on a wide variety of technical and administrative topics and to network with their professional peers.

Technical presentations included topics such as DOTD specifications for pipe installation, preventive maintenance treatments for flexible pavements, vegetation maintenance, the off-system

bridge program, new products for bridge replacement and rehabilitation, and sign reflectivity and inventory. Safety-related topics included railroad safety issues and heavy equipment operator safety. General topics of interest to the participants included the use of DOTD purchasing contracts by local agencies to save money, the Parochial Employee Retirement program, and Social Security for the public employee.

The conference provided opportunities for old acquaintances to catch up on the latest happenings in other parishes and for new participants to meet some of the “old-timers” in Louisiana’s public works departments. Door prizes were given throughout the conferences (and yes, you had to be present to win). A wonderful fish fry was sponsored the first night

by LA Testing & Inspection, Inc. LPESA appreciates the continued support of LA Testing and Inspection, Inc., and all of the Associate Members who contributed to this conference and help support LPESA throughout the year.

The next LPESA conference is scheduled for September 8-9, 2005, in Calcasieu Parish. Mark your calendar and plan to attend. Great presentations and some new conference activities are planned. The LPESA conference is one of the best ways to keep up with current technology, best practices around the state, and your professional peers. Don’t miss your next opportunity to participate.



Save the Date

Louisiana Transportation Engineering Conference
“Navigating the Wave of Change”
February 12-15, 2006
River Center, Baton Rouge

This biennial conference represents a premier tech transfer opportunity for the Louisiana Transportation Research Center, which is charged with the accountability for planning, coordinating, and managing the conference. Attendees represent the public, private, and academic sectors from throughout Louisiana and the nation.

As the conference draws closer, program information and online registration will be available on the LTRC Web site (www.ltrc.lsu.edu).

Drive Safely Work Week: October 3-7, 2005

To launch the 9th annual Drive Safely Work Week (DSWW) campaign season, the Network of Employers for Traffic Safety (NETS) and its member partners are sponsoring a national ribbon awareness campaign. The teal and black "Drive Safely" ribbons will serve as a silent remembrance to those who have lost their lives in motor vehicle crashes and remind all motorists to "Drive Safely" to prevent further tragic roadway crashes.

The most dangerous part of the day for employees is the time spent in their vehicles. Traffic-related crashes are the leading cause of death on the job, with one-quarter of all workplace fatalities resulting from a crash. Work-related traffic crashes involve not only professional drivers, but are also the leading cause of death for workers in clerical and professional specialty jobs, and the second leading cause of occupational death for executives, sales workers, and technicians. They involve employees who drive company-owned vehicles as well as employees who use their personal vehicles for work-related purposes.

Some of these crashes occur while employees are engaged in business-related travel during the workday or while they are commuting to and from work.

Network of Employers for Traffic Safety

8150 Leesburg Pike, Suite 410
Vienna, VA 22182

Office: (703) 891-6005
Fax: (703) 891-6010

[www.trafficsafety.org/dsww/
DSWW2005/ribbon.asp](http://www.trafficsafety.org/dsww/DSWW2005/ribbon.asp)

Other crashes occur off the job. But regardless of when and where a crash occurs, each of these situations impacts employers, making it increasingly important for them to take an active role in reducing death and injury from these preventable events. NETS asks the nation's employers to join us in spreading this life-saving message by distributing ribbons at your place of business, within your organization, and by telling your friends and family about the campaign.

Thousands of employers nationwide will join together on October 3-7, 2005, and encourage their employees to be ready, be set, and be focused on the roadways in honor of the 9th annual DSWW campaign. DSWW 2005 addresses driver focus and the importance of devoting one's full attention to the driving task at hand.

Reprinted with permission from NETS.

Work Zone Information Resources Available On-line

The Alabama LTAP Center hosts a comprehensive work zone information resource Web site. You will find all kinds of information from other LTAP Centers and the Federal Highway Administration, among other organizations, to help you serve the public by providing the safest possible work zones. Local agencies can use the material to help communicate the importance of work zone safety with the traveling public, and to get ideas on effectively managing work zones to maximize safety for all involved.

[http://alabamat2.org/
WZInfoResources.html](http://alabamat2.org/WZInfoResources.html)

Elderly Drivers: Baby Boomers Mature

During the next 30 years, the United States will face increasing challenges concerning the burgeoning number of senior drivers. According to the U.S. Department of Transportation, 35 million Americans ages 65 and older account for approximately 13 percent of the population. By 2030, this figure will double to 70 million, which is projected to be 20 percent of the population at that time. This trend is a major concern because drivers ages 65 and older experience a higher crash death rate per mile driven than all other age categories, excluding teenagers. In addition, many studies show that these drivers, particularly those ages 80 and over, also pose higher risks to other persons on the road and pedestrians (www.irmi.com/Expert/Articles/2004/Olson10.aspx).

Studies suggest elderly drivers have slower reaction times and poorer merging behavior than their younger counterparts (Dewar, Kline and Swanson, 1994). Although no strong research evidence actually proves that increased accident rates result from decreased visual acuity, the eye lens does become yellow and less transparent with age and pupils become smaller and less able to dilate in dim light.

Some proposed changes in highway signs and driver testing may help older drivers deal with these vision changes. Larger signs may help, but strategic sign placement may be more important. “Stop” and “Yield” signs generally occupy conspicuous positions; however, information signs frequently compete with advertising signs and other distracting background. Placing highway warning and information signs in uncluttered areas would assist all drivers, especially older drivers experiencing difficulty in picking out low-contrast images in a cluttered array. Since elderly drivers react more slowly to warning signs, increasing the distance between warnings and hazards might be helpful.

Because visual acuity and driving performance change gradually, older drivers may not be aware of

changes. Current measures of visual acuity used in drivers’ test centers employ high-contrast letters that do not highlight changes in vision due to age and early cataracts. Using low-contrast letter charts and functional field measures for driver testing might increase awareness of vision problems that appear to affect driving performance.

For more information on elderly drivers, visit the following sites.

“Elderly Drivers and the Comprehension of Traffic Signs”

Road Management and Engineering Journal

www.usroads.com/journals/rej/9705/re970503.htm

“New Signs Help Elderly Better Navigate Roads”

The Macomb Daily online edition

www.macombdaily.com/stories/090204/loc_signage001.shtml

“Vision and Driving Performance in Older Drivers”

Road Management and Engineering Journal

www.usroads.com/journals/rej/9708/re970804.htm

“Aging and Mobility: Current Issues”

Prevention Institute

www.preventioninstitute.org/print/traffic_aging.html

“Designing Roadways to Safely Accommodate the Increasingly Mobile Older Driver—

A Plan to Allow Older Americans to Maintain their Independence”

The Road Information Program (TRIP)

www.atssa.com/public/downloads/TRIP2003OlderDrivers.PDF

Back to Basics: Spotting the Problem First

The following is reprinted with permission from *Transportation Tracks*, NC LTAP newsletter, Spring 2005.

Around Greensboro, North Carolina, a covert reconnaissance team has been canvassing the city on a special field operation. The objective? An assault on deteriorating infrastructure. When are they executing these missions? En route to the local grocery store, soccer practice, the movies or even their jobs. This team is on a mission: Back to Basics!

Back to Basics (B2B) is a voluntary problem identification program created by the Greensboro Department of Transportation (GDOT) with a straightforward, but important goal...to spot and correct needed transportation maintenance tasks before citizens do. The GDOT team participates by keeping an eye out for problems as they travel back and forth to work and in the course of leisure travel. Seven days a week and 365 days a year, they look for damaged signs, burned out street lamps or a number of other existing problems while on and off the clock. Once a problem is identified, the employee reports their findings to the City Contact Center, which in turn tags the item for response by the appropriate GDOT division or City department. Even if the identified issue does not fall under city jurisdiction, the information will be referred to the appropriate county or state agency. The B2B program was created by the GDOT leadership team in 2000 after the Greensboro Mayor and City Council identified community appearance and city asset maintenance as two of their top priorities. The goal was to systematically use available resources to identify and correct problems by enlisting the help of GDOT's 220-strong workforce.

Employee participation in any program that involves such personal off-duty effort has its challenges, and B2B offers valued incentives for their effort. Employees who report B2B offenses accu-

For more information about the Back to Basics program, contact

Mike Mabe

Phone: (336) 373-4987

mike.mabe@greensboro-nc.gov

multate points according to a predetermined scale. For items reported by participants during normal work hours and within their area of responsibility, they earn one point. For problems identified

that are not within their area of responsibility (i.e., a public transit employee spotting a burned out traffic signal), they will receive two points. To qualify for the maximum three-point award, the employee must identify a problem after work hours or on weekends. Periodically, GDOT creates monthly focus items that will also earn the maximum three points for recognizing seasonal or problematic areas, such as potholes in January or sight obstructions in June. Employees can redeem their Back to Basics points for premium items such as t-shirts, caps, gym bags, and more. Each item is emblazoned with GDOT and/or B2B logos. Further recognition is provided for the top point recipient and three random participants each quarter who are treated to lunch with the GDOT leadership team. The top three also receive special certificates in celebration of their achievement.

Has the program made a difference in the appearance and maintenance of Greensboro's transportation assets? Greensboro leaders believe so. Overall, about 95% of GDOT's employees have identified potential items for repair or maintenance. In January 2005, 468 B2B calls were received from team members. The top five items identified were potholes (37%), traffic signal bulbs (35%), dead animal pickup (6%), sign repair (5%), and graffiti (3%). As more of these calls come in, fewer are reported by the public. The Back to Basics items reported by staff also tend to be reported quicker, helping to reduce expenses by preventing small problems and tasks from growing into larger, more costly repairs. The Back to Basics program has been successful in encouraging employees to help maintain and extend the useful life of city infrastructure.

Safety Tips from Louisiana Operation Lifesaver (cont. from page 1)

- 1) Freight trains do not travel on a predictable schedule, and schedules for passenger trains change. Always expect a train at every highway-rail intersection.
- 2) Do not get trapped on a highway-rail crossing. Never drive onto a railroad crossing until you are sure you can clear the tracks on the other side without stopping.
- 3) If the gates are down, the road is closed. Stop and wait until the gates go up and the red lights stop flashing.
- 4) When you are at a multiple-track crossing and the last car of the closest train passes by, stay alert. Before crossing, look and listen carefully for another train on another track, coming from either direction.
- 5) If your vehicle stalls at the highway-rail crossing intersection, get everyone out and far away from the tracks immediately. Then call 911 to report the emergency situation.
- 6) Racing a train to a highway-rail intersection is a fool's game. If you lose, you may never have a second chance.

Betsey Tramonte is the Operation Lifesaver contact in Louisiana. You can reach her by phone at (225) 925-6995, by writing to P.O. Box 66336 Baton Rouge, LA 70896, or by emailing her at betsey@laoperationlifesaver.org.

Pipe Installation Workshops (continued from page 1)



that the findings indicated that stone aggregate (or recycled Portland cement concrete) should be required for backfill materials for all cross

drain pipes and side drain pipes under paved areas of travel lanes, shoulders and turnouts. The research resulted in proposed changes to Section 701 regarding DOTD's backfill specifications for culverts and storm drains.

Eggers provided information on the use of flowable fill as an alternative to compacted fill. He addressed DOTD requirements for the use of flowable fill including mix design, construction requirements, measurement, and payment.

Nesbeitt's presentation addressed types of pipe products; proper installation; testing requirements; and inspection and acceptance requirements.

Workshop attendees learned the differences between installation procedures for rigid and flexible pipe materials as well as the differences between failure modes in rigid and flexible pipes.

The presentations were followed by an afternoon demonstration of pipe installation using different types of pipe and backfill materials. Proper pipe installation techniques were demonstrated, and the potential for failure based on improper practices was shown.

LTAP, CAAL, and LTRC gratefully acknowledge the local public works agencies that assisted in these workshops by providing facilities and personnel to conduct the workshops and demonstrations. Special thanks go to the Alexandria City Public Works Department, the East Baton Rouge Public Works Department, the City of Baker, and DOTD District 04. For more information on the research projects or the workshops, please contact Zhongjie "Doc" Zhang at (225) 767-9162.

Getting the Word Out

LTAP makes summer road show with LMA

At the invitation of the Louisiana Municipal Association (LMA), Marie Walsh, LTAP Director, attended all 10 of the LMA District meetings around the state this summer. The meetings were a great opportunity for LTAP to meet with mayors and other municipal officials. Walsh made a short presentation at each meeting about the many services that LTAP provides local agencies. Several training classes have already been scheduled and LTAP has provided information and technical assistance to a number of communities as a result of the meetings.

Special thanks go to the following communities for their hospitality: Slaughter, Lockport, Crowley, Winnfield, Minden, Arcadia, Natchitoches, Hammond, Opelousas, and Pineville. The LTAP/LMA partnership is a natural one, and LTAP appreciates the opportunity to participate in the summer meetings and to increase services to Louisiana's municipalities.

Pictured below at the LMA meeting in Opelousas on July 19 (l to r): Honorable **Lynn Lewis**, Mayor of Delhi, LMA 2nd Vice-President; Honorable **David T. Riggins**, Mayor of Vinton, LMA 1st Vice-President; **Marie B. Walsh**, LTAP Director; Honorable **James T. Petitjean**, Mayor of Rayne, LMA President; Honorable **Clarence Fields**, Mayor of Pineville.



New Publications in the LTAP Library

*Roadway Safety Tools for Local Agencies
(A Synthesis of Highway Practice)
NCHRP Synthesis 321 (2003)*

This publication aids local government agencies as they select tools and develop programs to implement road and street safety improvements. It recognizes the wide variation in the operations and responsibilities of local agencies and acknowledges the level of expertise in transportation safety also varies greatly. It examines the tools and procedures that are practical, relatively easy to apply, and can be implemented by agencies with limited financial support and personnel. It groups safety tools as either reactive or proactive, and basic and advanced analysis approaches are considered for each group.

*Safety Evaluation of Red-Light Cameras
FHWA-HRT-05-048 (April 2005)*

This is a final report on an evaluation of the effectiveness of red-light-camera (RLC) systems in reducing crashes. The intended audience is professionals who make decisions about safety programs for intersections.

*Storm Water Management and Drainage
(NACE Action Guide Volume III-IV)
NACE (2000)*

Our modern highway system is dependent upon adequate drainage for continuous, safe, all-weather uses. Even more importantly, the very existence of the roadway and related structures necessitates competent analysis and planning of drainage systems to prevent erosion, flooding, and disastrous washouts. Increasing demands for land development and improved transportation are resulting in accelerated runoff and alteration of natural drainage patterns. This guide will hopefully help local engineers and administrators to cope with the legal, technical, and environmental problems associated with this land development and utilization.

Mark Your Calendar

*Roads Scholar #13
Introduction to Louisiana
Off-System Bridge Inspection*



September 7	Slidell
September 13	Bossier City
September 14	Ruston
September 15	Alexandria
September 20	Sulphur
September 21	Lafayette

LPESA Fall Conference
Sulphur, Louisiana
September 8-9

LTRC Structures Conference
New Orleans, Louisiana
September 8-9

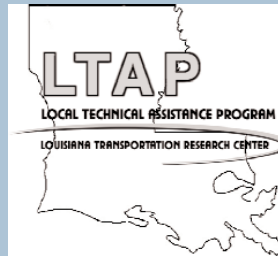
Road Safety Audit and Review
Locations to be arranged
October 18, 20, and 21

Stormwater BMP Academy
Baton Rouge, Louisiana
October 13-14

Introduction to Leveling and Grading
Coming fall/winter 2005

*Visit www.ltrc.lsu.edu/ltap/index.html for
our most up-to-date calendar of events.*

Need Technical Help? Contact LTAP!



(225) 767-9117
(800) 595-4722 (in state)
(225) 767-9156 (fax)
LALTAP@ltrc.lsu.edu

Dr. Marie B. Walsh, Director
David McFarland, Teaching Associate
Robert D. Breaux, Office Manager

LTAP Center
Louisiana Transportation Research Center
4101 Gourrier Ave.
Baton Rouge, Louisiana 70808

Publication Statement

Technology Exchange is published quarterly by the Louisiana Transportation Research Center. It is the newsletter of the Louisiana Local Technical Assistance Program. Any findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect those of LSU, LADOTD, or FHWA.

Newsletter Staff

Sher Creel, Executive
Editor

Emily Wolfe, Writer/Editor
Nick Champion, Photographer

The Louisiana Local Technical Assistance Program was established at the Louisiana Transportation Research Center on the LSU campus in 1986. The purpose of the center is to provide technical materials, information, and training to help local government agencies in Louisiana maintain and improve their roads and bridges in a cost-effective manner. To accomplish this purpose, we publish a quarterly newsletter; conduct seminars, workshops, and mini-workshops covering various aspects of transportation; provide a lending library service of audio/visual programs on a variety of transportation topics; provide technical assistance through phone and mail-in requests relating to transportation technology; and undertake special projects of interest to municipalities in Louisiana.