Local Road Safety Program Kicks Off

Applications for Safety Improvement Funds Due October 1, 2006

Program Kick-off
LTAP initiated Louisiana’s new Local Road Safety Program with a series of informational briefings and training classes. Informational briefings were held across the state in April and May, 2006. Representatives of local public works agencies, police juries, municipalities, law enforcement authorities, and the engineering profession gathered in Alexandria, Ruston, Bossier City, Hammond, Lafayette, and Baton Rouge to learn about the new program that includes services offered by LTAP and the availability of funding for safety improvement projects.

To provide additional information, two training classes, Road Safety Fundamentals and Low Cost Safety Improvements, were presented in May and June at multiple locations across the State. In addition to learning the basics of road safety, class partic-

LPESA Spring Conference
Best Management Practices

Submitted by Woody Wilson, Director, Public Works, Caddo Parish

A Best Management Practices (BMP) session was introduced at this year’s Annual Spring Conference of Louisiana Parish Engineers and Supervisors Association. The BMP idea resulted from discussions among conference attendees at the 2005 conference. Attendees agreed that sharing work experiences could benefit the entire group. The BMP initiative will highlight benchmark practices from across the state in an effort to save time and resources.

This year’s BMP session was facilitated by Woody Wilson, Director of Public Works for Caddo Parish. James Hankins, District Manager of the Springridge Highway Department in Caddo Parish, briefed con-

Hey Flagger: Heads Up!

An 18” x 24” laminated poster illustrating the “Do’s and Don’ts” for flaggers will be provided to each agency that hosts an on-site workshop. The poster comes to Louisiana from the Kansas LTAP.

Based on information contained in the Guidelines for Temporary Traffic Control, Federal Highway Administration, 2004, this poster will serve as a tool for crew leaders to refresh and remind flaggers of their critical role in safe temporary traffic control. If you would like to schedule one of these workshops, call David McFarland at (225) 767-9118.

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Participants had the opportunity to apply the information to their own road safety challenges and to work with the actual application to begin developing potential projects for implementation.

**Technical Assistance and Opportunities**
LTAP encourages all local road agencies to take advantage of the services available as part of the new local road safety program. A call to LTAP can access the following assistance:

**Organization and Coordination** - LTAP can assist you in forming community-based coalitions to address local road safety issues.

**Training and Education** - Free training on road safety basics, road safety improvements and road safety assessments is available upon request.

**Technical Assistance** - Traffic engineers with extensive road safety experience are available to meet with you on-site to review existing road safety issues and identify opportunities for improvement. Assistance with data review and application preparation are also available.

**Road Safety Assessments (RSAs)** - The RSA is a useful tool to identify road safety issues and possible solutions and to provide justification when applying for project funding. Technical assistance to start a regular program or conduct initial assessments is available. Results can be used to justify requests for funding made under the new program.

**Project Funding**
In addition to the services provided by LTAP to begin local road safety programs, funding for low cost safety improvements is available through the Local Road Safety Program. Application for low cost safety improvement projects for local roads will be accepted from local road owners until October 1, 2006. Successful project applicants will be notified by January 15, 2007. The maximum state funding per project is $500,000, although local agencies may contribute additional funds on larger projects. A local match of between 5% (can be in-kind) for non-construction projects and 10% (cash) match for construction projects will generally be required.

A total of $3 million to $5 million dollars will be available to implement local road safety improvement projects for this year and on an annual basis according to federal funding levels. Applications will be submitted to LTAP, which will coordinate the review and selection process in cooperation with the LA Department of Transportation. The application is available on LTAP’s website at www.ltrc.lsu.edu/ltap/index.html.

Eligible projects will generally fall into the three primary categories shown below. If you have questions about your proposed project, please contact LTAP for information on eligibility.

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Low cost road safety improvements, which are addressed in the ongoing training classes, are being encouraged. Development of adequate crash data collection and management systems can be included as part of the requested project funding. LTAP encourages agencies in need of technical assistance to contact Marie Walsh at (225) 767-9184 as soon as possible to schedule an on-site visit.

More information on the Local Road Safety Program is available at LTAP’s website www.ltrc.lsu.edu/ltap/index.html.
To Track or Not to Track: HMA Tack Coats

by Sam Cooper, P.E. (Senior Asphalt Research Engineer, LTRC) and Chris Abadie, P.E. (Materials Research Administrator, LTRC)

Often overlooked in design and construction of asphalt pavements is the tack coat. Louisiana Section 504 lists the tack coat requirements, yet there is no separate payment or cost associated with the tack coat. The price of the tack coat is “included.” So, what is a tack coat, and why is it important?

An asphalt tack coat is a light application of asphalt, usually made of asphalt diluted with water. It is used to ensure bonding between the surface being paved and the overlying course. Simply applying any asphalitic material between layers will reduce dust. Dust and debris will definitely cause debonding and contribute to pavement failure. In addition, tack coat helps strengthen the hot mix asphalt (HMA) pavement by improving the bond between layers. The bonding of HMA lifts is critical to transferring the surface loads to the entire pavement structure. Also, no bond or an insufficient bond may cause premature load-related cracks and slippage in the top lift. Excessive tack decreases pavement bearing capacity and may also cause slippage.

The most common tack coat used in Louisiana is SS-1 emulsified asphalt. Through research and practice, LTRC and DOTD have demonstrated the need for polymer-modified asphalt tack coats. However, in construction, the material tends to stick to the construction equipment wheels, causing tracking in the wheelpath.

Louisiana is currently evaluating the Blacklidge Trackless Tack Coat in conjunction with an on-going research project which looks at the effects of tack coat type and asphalt mix density in the longitudinal joint. LTRC’s two trial projects using “trackless” tack coat have been successful. The tack coat is a polymer-modified emulsion that uses conventional tack coat distributors. This product has been used in test sections on two projects—LA 315 south of Theriot in Terrebonne Parish and LA 3235 between Galliano and Golden Meadow in Lafourche Parish. Preliminary observations from both projects were that the tack coat was indeed trackless, and the set time was approximately 10 minutes when the emulsion was applied at 0.08 gallons per square yard.

Above is a photograph of the Trackless Tack Coat placed on LA 3235. The conventional tack coat (SS-1) experienced tracking in the wheelpath when the tractor/trailer backed up to perform the laydown operations. No tracking was observed in the Trackless Tack test section. The set time depended on the application rate and ambient temperatures.

There are other systems of interests such as the European “COLAS” system, which requires some special equipment or modifications to current equipment. The national interest in tack coats suggests it is time to look at changing the status quo for tack coats.

LTRC’s Dr. Louay Mohammad has a National Study, NCHRP Project 9-40, on tack coat material selection and performance. Regardless of the outcome of research, any system that facilitates the use of “a better glue” is a system that Louisiana road builders want to implement as soon as possible.

For more information, contact Chris Abadie (225-767-9109, ChrisAbadie@dotd.louisiana.gov) or Sam Cooper (225-767-9165, SamCooper@dotd.louisiana.gov).
By Rip Tompkins

For those working in the “Green Industry,” the first order of business is to set up and maintain a safe work environment. Every public works and transportation professional knows the importance of a safe work environment. Whether it’s maintaining shrubs and trees, or landscape construction and installation, the professional arborist uses a variety of power tools and equipment. String trimmers, blowers, and chain saws are only a few, and each carries its own set of risks. To keep a safe work site, landscape professionals must minimize risk as much as possible.

The first line of defense in minimizing risk on the job site is Personal Protective Equipment (PPE). Training in the safe and proper use of tools and equipment is the most effective way to reduce accidents and injuries. However, even the safest workers encounter unforeseen events that can result in lost work time. Worse yet, workplace accidents can result in permanent disability such as the loss of an eye or impaired hearing. PPE is the cheapest form of insurance we have against such incidents.

Ear Protection

Despite all the noise created by power tools and equipment in the landscaping industry, hearing protection is probably the most widely underused form of PPE. Think of workers using backpack blowers, with the engine close to their heads! Hearing protection is not designed to totally block out all noise, but to bring it down to or below an acceptable level of 80 decibels. There are a variety of foam earplugs or earmuffs to choose from. Hearing loss is usually a slow and undetectable process, so it may be many years before a hearing aid is actually needed. Protect your hearing now so you will at least have the choice whether to listen to your grandchildren or leave the room later in life.

Eye Protection

Eye protection is another important type of PPE. Safety glasses come in many different shapes and shades, but the bottom line is that eyesight is important. There are even anti-fog and anti-scratch gels and creams to keep your glasses clear and improve their wear life. The number of string trimmer operators I see without safety glasses is astounding. Eye protection is also a must when using tools such as brush cutters, chain saws, and brush chippers.

Chainsaw

Speaking of chainsaws, the chainsaw is a great tool, certainly faster than a two-man crosscut saw, but it is potentially very dangerous. Each year, roughly 30,000 chainsaw-related injuries are reported in the U.S., and about 40% of these occur in the leg area. More widespread use of chainsaw-resistant chaps or pants would greatly reduce this number. While chaps or chainsaw pants may not be 100% chainsaw-cut-proof, they will stop many cuts from occurring and reduce the severity of others.

Head Protection

Another form of PPE that is critical in certain situations is a hardhat or helmet. When overhead hazards are present, such as during tree work or when working around large equipment like excavators or cranes, some form of head protection is a must. I once heard it said that the only person who doesn’t need a hard hat in those situations is the person with nothing on their shoulders worth protecting. So, even though they may be warm and uncomfortable in hot weather, we all do have something worth protecting on our shoulders!
Foot Protection

Proper footwear, usually a good sturdy boot with ankle support and a good tread is also important. When the work area is slippery or uneven, good traction will help keep you off your back. Some boots even come with a hardened toe cap, which reduces the chance of crushed toes.

Hand Protection

Lastly, gloves are a good idea when working with any number of power tools. They lessen vibration that can lead to fatigue. Gloves are also a must when working on certain sharp tools or when working on trees with thorns. How many times have you gotten a nagging little cut on your finger that might have been prevented if you had been wearing gloves?

While reducing potential risk in the job place is largely a result of good planning and proper training, the use of the appropriate PPE is a key factor in reducing accidents. Each year, thousands of accidents resulting in countless hours of lost work time occur because workers aren’t wearing the proper PPE. Too often workers think they don’t need PPE because they haven’t been hurt in the past. Don’t wait to become a statistic.

The best reason to wear PPE isn’t because I tell you to or even because your boss tells you to. The best reason is that there is likely someone at home who cares about you and is counting on you to come home unharmed at the end of the day. PPE is your first line of defense.

Please work safely!

Rip Tompkins is with ArborMaster® Training, Inc. He was the instructor of the highly acclaimed and popular “Chain Saw Safety, Precision Felling, and Hazardous Cutting Situations After Storms” classes presented by LTAP across the state in spring 2006.
Conversion of Signals to LED Technology

The Energy Policy Act of 2005 contains provisions to promote energy conservation by converting traffic and pedestrian signal equipment from incandescent bulb technology to light-emitting diode (LED) technology. These provisions require that traffic and pedestrian signal modules manufactured or imported after January 1, 2006, meet or exceed specific energy efficient requirements, which currently can only be met by equipment using LED technology. The legislation does not impact suppliers’ or public agencies’ existing stock of product on hand; neither does it cover replacement parts for signals that use traditional incandescent technology. Furthermore, public agencies that own and operate traffic signals are not required to retrofit their incandescent signal equipment.

The Federal Highway Administration (FHWA) has worked with the Department of Energy, AASHTO, the National Electrical Manufacturers Association, the Institute of Transportation Engineers (ITE), and the American Public Works Association to ensure that they all share an understanding of the Energy Policy Act requirements and their potential impact on public agencies that own and operate traffic signals. Because there is no requirement to replace existing traffic signals using incandescent technology with LED technology, and since the availability of incandescent replacement parts will not immediately be adversely affected, FHWA has indicated the immediate impacts will not be severe.

According to surveys conducted by ITE and AASHTO, a substantial portion of new traffic signal installations are already being designed to use LED technology and the conversion of existing traffic and pedestrian signals is also progressing at a rapid pace across the United States because of the significant energy cost savings that can be realized. The primary challenges associated with conversion projects appear to be 1) the availability of funding for the capital costs associated with purchase of new equipment, and 2) resolution of some technical issues associated with interfacing LED technology with older traffic signal equipment.

For additional information on LED technology, you may wish to consult the following sources:

ITE
www.ite.org/

Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement. (Category: Institute of Transportation Engineers/Lighting/Standards of the Institute of Transportation Engineers.)

This publication is the latest supplement purchase specification, which provides the minimum performance requirements for light emitting diode (LED) vehicle traffic signal modules while in service.
LTAP Provides Work Zone Safety Training

The Louisiana National Guard Job Challenge Program is a skill training program designed as a follow-up to the Youth Challenge Program (YCP). The Job Challenge Program (JCP) enables a select group of students who have graduated from the YCP with exemplary ratings to participate in several areas of skill training. The program consists of heavy equipment, welding, culinary arts, carpentry, masonry, EMT, landscaping and turf management, office skills, arborist, and firefighting courses.

The JCP curriculum combines classroom work, community service, physical training, skills training, and individual and team activities into one unique experience. The JCP is offered at the Gillis Long Center in Carville, LA. Trained National Guard personnel run the Job Challenge Program using expert instructors in realistic training settings.

Students who graduate from the 12-week heavy equipment operator (HEO) training course will have completed over 300 hours of machine operation in addition to classroom work. These graduates make ideal entry level operators, in most cases bringing far more “in the seat time” experience than the typical new hire, and have already acquired basic heavy equipment operator skills. In addition, they have been taught to carry out the operator’s daily equipment checks and understand safety precautions.

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The Job Challenge HEO Training Program is based on the HEO Training curriculum from the National Center for Construction Education and Research. The aim of the Job Challenge HEO training program is to further the development of the students by providing skills training on selected items of heavy construction equipment. The training is designed to provide basic equipment
operating skills, while at the same time strengthening the student’s attitude toward work and creating an awareness of the construction industry. The program consists of the following core curriculum: math, safety, measuring instruments, drawings and diagrams, and other topics common to the construction and industry trades. The curriculum is broken down into modules, with each module consisting of a set of training activities in the field and classroom:

- Skid Steer Loader Caterpillar 232
- Dozer Caterpillar, D3G
- Backhoe Loader Caterpillar 416C and 416D
- Backhoe Loader John Deere – 510B
- Forklift All Terrain 8,000 lb

Students who complete the HEO Training course will have a basic knowledge and understanding of heavy equipment operation and maintenance and will have achieved various levels of operating skills on all the equipment listed above. They can perform entry-level operating tasks under normal site conditions. Students may receive the following certifications based on their level of achievement: Job Challenge Diploma, NCCER (Core and Level 2), All Terrain Forklift, and OSHA. Candidates for the program must be at least 17 years and 9 months old and have high school level reading, writing, and math skills.

LTAP has collaborated with the National Guard to provide basic work zone safety and flagger training to the students in the Job Challenge HEO Training Program. LTAP’s David McFarland presented the first sessions in May 2006 and will become a regularly scheduled instructor in the program.

For more information on the Job Challenge Program visit the web site at www.jobchallengeprogram.org or speak to a team member at (225) 319-4661. The Job Challenge Team is always looking for mentors and people who are willing to spend time speaking to the students and share their work experiences with the students.

For Technical Help?
Contact LTAP!

(225) 767-9117
(800) 595-4722 (in state)
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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 road and transportation issues; provide a lending library service of audio/visual programs; provide technical assistance through phone and mail-in requests relating to transportation technology; and undertake special projects of interest to municipalities in Louisiana. LTAP also coordinates the Louisiana Local Road Safety Program.