Safety Peer Exchange Seeks to Identify, Expand Safety Resources for Local Agencies across the Southeast

by Matt Cate, P.E.

The Federal Highway Administration Office of Safety hosted a regional Local Road Safety Peer Exchange in Atlanta on March 6 and 7. The peer exchange brought together representatives from state departments of transportation, local and regional transportation agencies, and Local Technical Assistance Program (LTAP) centers to discuss topics including: enhancing collaboration and cooperation with federal, state, and local partners; local involvement in the Highway Safety Improvement Program (HSIP) and Strategic Highway Safety Plan (SHSP); moving safety projects on local roads forward; and improving local road safety data collection and analysis.

The meeting included representatives from Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, and Tennessee. Tennessee had five participants, including:

- John Sexton, Staff Transportation Engineer, Knox County Engineering and Public Works
- Jessica Rich, Safety Engineer, FHWA Tennessee Division Office
- Brian Hurst, Transportation Manager 2, TDOT Project Safety Office
- Airton Kohls, Engineer, TTAP
- Matt Cate, Technical Assistance Coordinator, TTAP

Throughout the peer exchange, a number of common issues emerged among the participating states. Included in these issues were limited availability and/or access to local crash data, difficulty in identifying high crash locations or “hotspots” on the local roadway network, and maintaining safety as a key focus for local agency officials who must balance numerous (and often conflicting) priorities set by elected officials and the community as a whole. The lack of local road crash data is especially important as most federal safety improvement programs now require documentation to show that funded projects target locations that have higher-than-average crash rates relative to similar sites within the state.

Each state delegation presented the group with an update on its

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What a great day! The sun is finally out after a few cold, rainy days and it looks like Spring may finally be arriving—weatherwise—in east Tennessee.

In driving around this part of the state in the past few weeks, I’ve noticed what seems to be a very high level of pavement damage—mostly potholes and patch deterioration—on our roadways. I would attribute this to rather cold, wet winter, though it doesn’t seem like this one was particularly severe. However, I can’t remember road surfaces being in this condition since the late 1970s. Maybe my mind is playing tricks on me, but the numerous comments on this situation on our morning radio talk show make me think otherwise. What do you think? If I’m correct, it seems as though our surfacing budgets might be strapped this year.

Since my last column, we’ve fallen off the much dreaded “fiscal cliff.” At this point, it’s unclear to me just what the long term impact to surface transportation will be, despite a raft of dire predictions about impacts to other programs. The Highway Trust Fund itself is exempt from sequestration. Legislation outlining sequestration specifically exempts the following programs to the extent that program budgets have obligation limitations in appropriations bills:

- Federal-Aid Highways
- Highway Traffic Safety Grants
- Operations and Research NHTSA and National Driver Register
- Motor Carrier Safety Operations and Programs
- Motor Carrier Safety Grants
- Formula and Bus Grants

So, under this provision, Tennessee will see a $724,000 reduction during 2013 in National Highway Performance Program funds. This program addresses roads that are part of the National Highway System—in Tennessee, overwhelmingly components of the state maintained network. Federal disaster aid for highways and that portion of the General Fund that is transferred to the Highway Trust Fund is also subject to sequestration, though the effects on our state are not clear to me at present.

On the whole, it appears to me that sequestration should have little impact on local roads and streets. We’ll still have the same issues with funding that existed before the fiscal cliff. Unlike the nation as a whole, many of you operate within
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budget limits, and that means stretching resources to make the best use of them. In these economic times, working smart is mandatory at the local level. That’s where we at TTAP hope to help out.

Well, that’s about it for this issue. As always, if we can help, please don’t hesitate to call or email. TTAP looks forward to assisting you. Be safe!

Toward Zero Deaths: Can We Get There?
by Matt Cate, P.E.

One of the lasting impressions from my experience at the Local Road Safety Peer Exchange in Atlanta came from a video shown early in the meeting. The video begins with people on the street being asked how many traffic fatalities occur in the U.S. every year. Despite the fact that this is a serious topic, the answers are humorous because people are clearly guessing. Responses ranged from a low of 400 to a high of 1,000,000. In fact, the National Highway Traffic Safety Administration (NHTSA) indicates that there were 32,637 traffic fatalities across the United States in 2011. The National Safety Council (NSC) estimates that fatalities rose to approximately 36,200 in 2012, marking the nation’s first annual increase since 2005. In Tennessee, the state’s 2011 fatality total of 938 represented the state’s lowest annual toll since 1962. However, Tennessee followed the national trend in 2012 as fatalities rose to 1,023.

People were next asked to identify the leading cause of traffic fatalities. Again, answers were all over the place. Many interviewees focused on distracted driving, while others identified drunk or impaired driving as the leading cause of fatal crashes. They were then asked what would be a reasonable goal for their state. Answers were again all over the place, with some as low as 2 or as high as 1,000. Several said that fatalities should be reduced by 50% from current levels. However, no one said “zero.”

The last question, and the one that has grabbed my attention since the meeting, was “What is a good goal for your family?” Not surprisingly, every person interviewed said that there should be zero traffic accidents.

To learn more about current opportunities for local road safety funding in Tennessee, contact:
Steve Allen, Director, TDOT Project Planning Division (steve.allen@tn.gov) or
Brian Hurst, Transportation Manager 2, TDOT Project Safety Office (Brian.Hurst@tn.gov, 615-253-2433).
Maintenance of Drainage Features for Safety

by Dr. Airton G. Kohls  (Source: FHWA - Office of Safety)

Have you ever experienced the situation of driving over standing water in a road? It is not a good feeling and it can result in serious consequences. FHWA provides a guide for local street and highway maintenance personnel, highlighting the importance of maintenance of drainage features for safety.

Recognizing drainage problems is the first step to efficiently address safety issues. Drainage problems like water ponding in wheel ruts, water standing in the roadway, water ponding in the edge of the roadway, deterioration of pavement edge and shoulder, etc. can directly cause or contribute to crashes. As an example, drainage features that fail to remove run-off because they are too small or are clogged and pond water on the roadway can cause hydroplaning or force drivers to leave their lane. It is important to identify these potentially hazardous situations as soon as possible. Some of these conditions may have been in existence for quite some time, while others may have recently developed as a result of a storm or change in weather conditions.

Drainage problem locations can be identified by citizen complaints, local police, crash data or field reviews. Potentially hazardous drainage features are best identified through field reviews. **Drainage features should be inspected periodically!** Here is a field inspection checklist – check for the following conditions:

- Rutting or shoving of pavement surface.
- Discontinuity of surface level between the pavement and shoulder (shoulder drop-off).
- Accumulation of earth or debris on shoulder.
- Existence of erosion channels on ditch side slopes.
- Silt or debris accumulation in ditch.
- Headwalls and drainage structures that are not flush with the ground (roadside obstacle)
- Damage to drainage structures, such as crushed culverts.
- Grates with wide openings parallel to the roadway that can trap bicyclists.
- Drains blocked by soil and debris.
In March 2012, FHWA published a document to assist local rural practitioners in making effective use of current practices and resources addressing non-motorized mobility and safety, thereby creating a more accommodating and viable transportation system for all road users. Non-motorized transportation is primarily comprised of biking, walking, equestrian, and horse-drawn vehicles. Approximately 60 percent of all road miles in the US are non-interstate, rural roads maintained and operated by local agencies. The document addresses:

- Identification of factors affecting non-motorized safety;
- Assessing factors affecting non-motorized safety;
- Selecting and implementing countermeasures;
- Follow-up and evaluation of countermeasures.

One of the challenges in the process is to appropriately select countermeasures. When selecting countermeasures, one needs to consider the extent of the problem. Is it a spot location, corridor, or network? It is equally important to address the safety of all roadway users, non-motorized and motorized. Proposed countermeasures must be appropriate for the roadway conditions and the environment, for example, a marked crossing may be appropriate on a two-lane rural road through a rural village, where vehicle speeds are relatively lower, but probably will not be appropriate on a two-lane section of road through an undeveloped area where vehicles speeds are relatively high and motorists’ expectancy of encountering a crossing is low unless other measures are included as well. There are also behavioral considerations, like speeding, that needs to be addressed using engineering, education, enforcement and emergency medical services. Finally, the ability to apply countermeasures in near, mid, and long range timeframes provides opportunities for the im-

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mediate implementation of some countermeasures to address certain safety issues before longer-range measures are implemented.

**Example** - High speeds in an active pedestrian/bicycle zone: addressing issues at spot locations and short corridors.

A straight rural road with no shoulder and a posted speed of 45 mph enters an area active with pedestrians and cyclists. This area has a posted speed of 35 mph. Adjacent to the roadway is a school, and across the street is a park. There is information indicating some motorists are traveling 55 mph through the 35 mph zone. There are few gaps in traffic during student drop-off and pick-up at the school. Some children from nearby residences walk along the road to and from school.

**Short-range** measures can be implemented rather quickly at this type of location and can have an immediate positive effect.

- Utilize a school crossing guard during the peak period of pedestrian and bicycle activity. States and often local jurisdictions may have a crossing guard course in which volunteers may learn how to create gaps for children to cross the road safely.

- Conduct targeted enforcement in the 35 mph zone to reduce motorist speeds during the peak period of non-motorized activity.

- Install Reduced Speed Limit Ahead signs and post the speed zone signs on both sides of the road. Install pedestrian warning signs in the built-up, residential zone.

- Educate students on safe walking, bicycling, and crossing practices.

- Provide safe riding and driver safety tips on various local Web sites and articles in various media outlets.

**Mid-range** measures should be implemented to help create a lasting effect on non-motorized safety, as it may be difficult to sustain the short-range enforcement of the speed zone.

- Install solar-powered school zone flashers that are activated during school start and dismissal periods to manage motorized vehicle speeds.

- Install roadway (or transverse) rumble strips to alert motorists of the reduced speed zone if previous measures are not effective.

**Long-range** measures can be applied to help change the nature of the roadway in the area with high non-motorized activity, which should alert motorists that conditions have changed and to reduce speed.

- Construct a shared use path parallel to the roadway that serves children from neighboring residential areas who walk or ride to and from school. Areas where pedestrian activity and cycling activity are high would potentially generate multiple street crossings, and non-motorized users would benefit from separated space from motorized users and the promoting of walking against traffic/riding with traffic.

- Install gateway treatments to encourage slower motorized-vehicle speeds and increase driver expectancy of pedestrians and bicyclists in the area (speed feedback signs, speed reduction markings, roadway or transverse rumble strips, lane narrowing, regulatory pavement markings, curb extensions, etc)

For additional examples and for more information on the Non-Motorized user Safety – A Manual for Local Rural Road Owners, go to http://safety.fhwa.dot.gov/local_rural/training/fhwasa010413/nonmotorize.pdf.
fatalities in their family. Any loss of life among their family and friends would be unacceptable. I cannot imagine a scenario where any person in any state would give a response other than zero. However, by setting fatality goals above zero, are we unintentionally saying that it is acceptable for other families to experience loss of a friend or loved one? No one would put it in those words, but it is food for thought. All in all, I thought that the video was very effective and I would encourage you to take less than four minutes out of your day to watch it. The video, produced by the Illinois Department of Transportation, can be found on the YouTube website at http://www.youtube.com/watch?v=vgUIKUSwE8.

The video, and the broader concept of Toward Zero Deaths campaigns at the national and state levels, raises many questions. Is a year without traffic fatalities a realistic goal for any state, much less the nation as a whole? Probably not, as there are many variables beyond the immediate control of the highway safety community. However, a year without traffic fatalities would represent the ideal situation for every political division of our country. Why not strive for perfection as the ultimate goal?

In my mind, this discussion gets even more interesting when brought down to the local level. While it may not be “realistic” to expect zero deaths across Tennessee in a given year (or even a given month), why can’t it be done on a smaller scale? Two Tennessee counties (Lake and Van Buren) had no traffic fatalities in 2012. Twenty more counties had only one, two, or three traffic fatalities in 2012. In other words, Tennessee has at least 22 counties where it would be quite reasonable to set an annual goal of zero fatalities.

How would we achieve a goal of zero fatalities? Certainly it would take a coordinated effort among law enforcement, emergency response, and roadway agencies. It would take a conscious effort on the part of drivers and other roadway users to be aware of potential danger posed by the roadway and the other vehicles and an understanding of responses that are appropriate to avoid these hazards. However, it only takes one driver to make a poor decision that could result in injury or fatality. A goal of zero deaths cannot be attained without an effort by everyone on or behind our roadways. Ask yourself what you can do on a daily basis to help achieve this goal within your own community.

One example of a proactive safety response was provided last year by TDOT. After seeing traffic fatalities increase by 64 (249 at the end of March 2012 versus 185 at the end of March 2011, or a year-to-date increase of 34.6%) in the first three months of 2012, TDOT began to post the YTD fatality total on its SmartWay overhead dynamic message signs. As evidenced by the responses in the Illinois DOT video, most people didn’t have a clue how many lives are lost on Tennessee roadways in a given year. I heard many people discussing the fatality totals after the numbers became a standard message in the summer months. While sharing this information was not the only step taken to reduce fatalities, it surely helped to raise awareness of the problem in a greater percentage of the driving population.

On a related note, TTAP presented the Road Safety 365 workshop for the first time in 2012. This class, funded by the Federal Highway Administration for use by Local Technical Assistance Program (LTAP) and Tribal Technical Assistance Program (TTAP) centers across the nation, provides an excellent overview of the need for attention to improved safety on all roadways. Using simple but effective real-world examples, the class leads participants through a discussion of common roadway safety issues and presents a variety of potential low-cost safety improvements. One of the key concepts in the class is that of reading the road, or using clues in the roadway environment to determine where and potentially even why problems may occur. More importantly, the workshop builds a case for the importance of safety in all roadway activities, from planning to construction to routine maintenance. Finally, the course challenges all participants to renew their commitment to safety on a 24/7/365 basis.

As a co-instructor for the Road Safety 365 workshop, I feel that the classroom materials, videos and slides provide an excellent foundation for a meaningful discussion of safety on all roadways. In fact, the Road Safety 365 workshop has received excellent reviews from all participants. The biggest problem we face with this class is the fact that more people haven’t had a chance to participate. In an effort to better identify the course content and focus, we have renamed it “Road Safety 365: Everyday Safety for Local and Rural Roads.” The class will be offered in Knoxville on May 21 and in Jackson on August 20. Please visit the training page on the TTAP website (http://ctr.utk.edu/ttap/training/index.php) for more information.

On the Web:
TALK TO TTAP

We are always looking for your comments, ideas and suggestions to help make the TTAP Program more useful to you. Please fill out and fax the form below to TTAP at (865) 974-3889 or mail to TTAP; Suite 309 Conference Center Building, Knoxville, TN 37996-4133.

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