UK
UNIVERSITY OF KENTUCKY
Kentucky Transportation Center

THE LINK
GOVERNMENTS UNIVERSITIES INDUSTRIES
A Technology Transfer Newsletter for Local Transportation Agencies

Routing Box

_____ ____
_____ ____
_____ ____
_____ ____
_____ ____
_____ ____

www.kyt2.com
1-800-432-0719
Vol. 32, No. 2
Spring 2016

Training Benefits and How to Get the Most for Your Training Dollars

Mike King, Technology Transfer Instructor
Amy I. Terry, Marketing, Outreach and Publications Manager

The practicality and viability of training is often a significant issue in times like today when agencies must be transparent, cut budgets, and reduce the size of government.

Three important things to keep in mind that training does for organizations, especially during such challenging times, are:

1. SERVICE … our reason for being.
2. RETENTION … of our greatest resource.
3. DEVELOPMENT … our key to the future.

SERVICE

The public demands it, expects it, and is watching for it in our every move. Training not only offers qualification for public employees, it also significantly enhances their professionalism in dealing with and serving the public. Trained employees will be better equipped to handle customer inquiries.

RETENTION

A more satisfied employee is likely to stay longer. Staff gain knowledge, skills, and competencies throughout their careers. The cost of hiring new people to do the jobs our veteran staff do is significantly more expensive than keeping the good ones we already have. Staff are more likely to stay when their organizations invest in their future.

DEVELOPMENT

Future leaders, both formal and informal leaders, are developed by continuing to learn both the hard-skills (Snow and Ice Removal, Roadside Vegetation, Work Zone Control) and the soft-skills (Managing People, Customer Service, Communication). Networking with colleagues from different cities, counties, and districts leads to sharing of best practices and developing of innovative approaches to everyday challenges. Staff looking for the next challenge will be more likely to stay if you offer ways for them to learn and grow while at your company.

Training Benefits, continued on p. 11

Kentucky Lifesavers Conference and the Awards for Excellence

Amy I. Terry, Marketing, Outreach and Publications Manager

The Kentucky Lifesavers Conference was held March 22-24 at the Galt House Hotel in Louisville. There was an impressive turnout, with more than 380 participants and 23 exhibitors. The Lifesavers Conference is an opportunity for local, state, and private sector participants to network with highway safety peers and discuss news, share stories and develop new insights for the future.

Representatives from community traffic safety programs, injury prevention programs, prosecutors and judges, state and local law enforcement, federal and state highway safety agencies, state and local emergency medical services and public health organizations were all in attendance, as well as child passenger safety professionals.

Bill Bell, Director for the Kentucky Office of Highway Safety, presided over the Opening General Session. Kentucky Transportation Cabinet Secretary Greg Thomas provided opening remarks.

Break-out sessions were offered each day and included the following topics: Low-Cost Safety Improvements, ABC's of Cycling, Cutting Edge Safety Improvements, U Drive U Text U Pay, EMS Data Collection, Traffic Incident Management and Highway Safety Manual. The wide range of safety topics covered engineering, education, enforcement and emergency response.

The Kentucky Transportation Cabinet's Office of Highway Safety presented the Award for Excellence in each of the 4 E's during the luncheon on Wednesday, March 23. The awards were created to recognize individuals who have made a significant, outstanding, lifetime contribution to: Enforcement, Education, Engineering and Emergency Response.

Bill Bell, Kentucky Office of Highway Safety and Eric Green, Award for Excellence Recipient

Eric Green, Research Engineer for the Kentucky Transportation Center, received the Award for Excellence in Engineering. Mr. Green received his Bachelor's Degree and Master's Degree, both in Civil Engineering, from the University of Kentucky. He is currently a PhD candidate at the University of Kentucky.

Mr. Green has worked for the Kentucky Transportation Center since 1998. He is a licensed professional engineer in Kentucky and a GISP. Mr. Green's research expertise includes crash data analysis, GIS, GPS, asset management, sign retroreflectivity, MUTCD requirements, and software development.

In addition to his research work, Mr. Green is also an instructor for the Technology Transfer Program. He teaches Sign Retroreflectivity Training, Crash Data Analysis, and at the Kentucky Transportation Academy. He lives in Lexington with his wife and two children.

Lifesavers, continued on p. 5

Looking for Summer Help? Hire an Intern!

Your agency is on a tight budget. You have a lot to get done this summer, with limited resources. Have you thought about hiring an engineering student for an intern?

Interns can assist your agency with collecting and analyzing field data, updating sign inventory, conducting sign retroreflectivity analysis, and inspecting road conditions.

The College of Engineering Career Development Office is a team of dedicated professionals who can connect employers with students for co-ops, internships, part-time and full-time positions. Some of the services available to employers include:

- Personalized assistance in posting job opportunities on UK's online job posting system for students.
- Reserve interview room for your on-campus interviews.
- Schedule interviews with the students you select.
- Connect you with faculty and student organizations for targeted recruitment.
- Work with you to develop a personalized strategy for your company's recruitment goals.
- Provide you with salary statistics for engineering majors.

Hiring a UK Engineering student intern provides you with the opportunity to "test drive" an engineer before making a full-time employment commitment. The pay is lower for an intern compared to a full time employee and typically you pay no direct benefits. Finally, you could be training a future employee at a "student rate." Students often receive offers for full time employment after graduation which means they come into your company ready to work with little to no additional training needed.

When you share your intern needs with the Engineering Career Development Office, they will target the desired majors and students to advertise the position.

To learn more about the Engineering Career Development Office and their services, visit them at http://www.engr.uky.edu/careers/.

For additional information, or if you would like to post an intern opening, contact Ilka Balk at 859-257-4178 or ilka.balk@uky.edu. ■

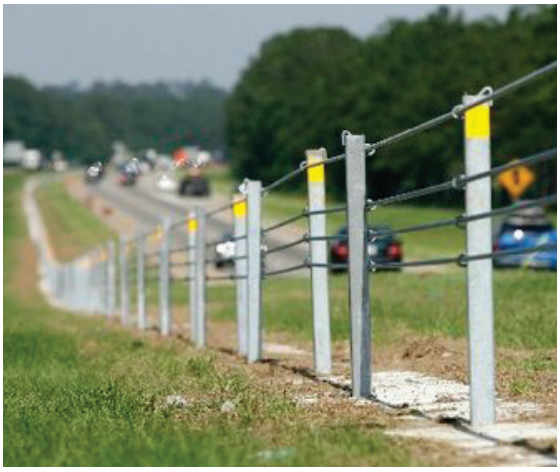
Highway Safety Countermeasures

Brian Howell, Research Engineer, Kentucky Transportation Center

Roadway departure crashes represent nearly 54 percent of all U.S. traffic fatalities. These crashes occur whenever a vehicle crosses a road's centerline or edgeline and ultimately, leaves the traveled way. Kentucky experiences a disproportionate number of roadway departures. In fact, nearly 68 percent of Kentucky's traffic fatalities from 2010 to 2014 involved roadway departure crashes. Recognizing this, the Kentucky Transportation Cabinet (KYTC) has taken great efforts in recent years to institute safety countermeasures and mitigate the occurrence and impact of roadway departure crashes. Four increasingly popular measures include cable median barriers, high friction surface treatment (HFST), rumble stripes, and safety edge treatments.

Cable median barriers are longitudinal safety barriers composed of high-tensioned, steel cables connected by a series of posts driven into the ground. In recent years, many of these systems have been installed along high-traffic corridors, typically interstates. Cable median barriers help prevent errant vehicles from crossing over into opposing lanes of traffic. Crossover crashes represent some of the most severe types of crashes, frequently resulting in fatalities or severe injuries. Cable median barriers have proven effective in reducing crossover crashes as evidenced by a 90 percent fatality reduction in some instances.

High friction surface treatment (HFST) is a thin overlay consisting of small aggregates held together by a binding agent. HFST provides increased surface friction for a vehicle's tires and helps prevent skidding. Vehicle skidding often occurs in locations requiring a drastic reduction in speed, such as intersections and horizontal curves. These same sites account for nearly half of all traffic fatalities in the U.S., according



to the Federal Highway Administration (FHWA). Recent case studies, including several by KYTC, support the use of HFST as an effective treatment at these locations. Subsequently, KYTC has installed HFST at several locations, including along horizontal curves, interstate ramps, and approaches to stop-condition intersections.

Rumble stripes consist of a series of indentations along the roadway surface overlain with a pavement marking to mark the lane boundary. They react with vehicle tires to produce a distinct sound for the driver and alert the errant driver to move back into the travel lane. Many drivers are familiar with their predecessor, the rumble strip, which includes indentations along the pavement but lack the pavement marking (i.e., paint striping). Numerous research studies have demonstrated rumble stripes and rumble strips can significantly reduce lane departure crashes.

The final feature, or Safety Edge, reduces the abrupt grade drop-off typically associated with roadway departures. This treatment reduces the departure slope angle located at the pavement's outer edge and allows errant drivers leaving the pavement the chance to safely return to the roadway. Safety Edge construction requires a 30-degree pavement angle relative to the adjacent, non-paved ground surface.

Highway Safety, continued on p. 15

Lifesavers, continued from page 2

Recipients in the other three categories were:

- Enforcement: Officer Ron Fey, Louisville Metro Police Department
- Education: Dreama Wright, Cumberland Valley Area Development District
- Emergency Response: Lee Roberts, Roberts Heavy-Duty Towing

The keynote speaker for the luncheon was Brigadier General Joe E. Ramirez. During his 31 years of military service, he has commanded soldiers around the world from the platoon and battery level up to battalion, brigade and division level. Brigadier General Ramirez shared his personal experiences as Commandant of the Texas A&M Corps of Cadets and Former Deputy Chief of Staff for United States Central Command during Operation Iraqi Freedom and Enduring Freedom.

The conference is made possible through partnerships between the Kentucky Transportation Cabinet, Kentucky Office of Highway Safety, Federal Highway Administration and the National Highway Traffic Safety Administration. We would like to thank our sponsors Appriss, Intoxalock, Kentuckians for Better Transportation, Kosair Children's Hospital, Northrop Grumman, SiteSafe and Smart Start for helping to make the 2016 Lifesaver's Conference a success. ■

Together we can move *Toward Zero Deaths*.

http://lifesavers.ky.gov

Brigadier General Joe E. Ramirez

Chainsaw Safety Training

Chainsaw Safety Training was held in Hopkins County from April 18-21. Participants from six agencies attended the training which included a Demonstration Safety Course, Hands-On Safety Course, and Storm Clean-up Course.

The Demonstration Safety Course began in the classroom with training going over parts of the chainsaw. In the afternoon, they traveled to a field site location where instructor, Tim Ard, completed a start-to-finish demonstration of what each participant would be doing during the Hands-On Safety Course.

The Hands-On Safety Course began with a Q & A session covering topics from the previous day. Next, the participants were challenged to bore a 4" hole into a stump without exiting either side, from front to back. If they succeeded then they would win a chainsaw. Although the task appeared fairly simple when watching the instructor, it turned out to be a challenge for all of the guys and no one won the saw. The reminder of the day was spent felling trees using the wedge or bore techniques.

The final day of training was the Storm Clean-up section of the class. The participants were divided into groups and asked to make a plan to clean up the trees that had been cut down the previous two days. Each group presented their plan to the entire class and together they decided if modifications were needed. Once a final plan was decided, the clean-up proceeded.

Tim Gordon, Road Foreman for Hopkins County sent several participants to the class. "I think they all felt Tim Ard was very knowledgeable," said Tim. "They learned techniques and skills that will help them all be safer on the job."

For additional information on Chainsaw Safety Training, contact Becky Boston at becky.boston@uky.edu or 859-257-4509. ■

Smarter Work Zones
Fact Sheet

Effective traffic management during construction is necessary to minimize travel delays, ensure motorist and worker safety, maintain access to local businesses and residences, and complete road work on time. While several options are available to establish efficient work zones, the Every Day Counts (EDC-3) Smarter Work Zones effort focuses on two strategies: road project coordination and technology applications.

ROAD PROJECT COORDINATION

Road project coordination involves coordination within a single project and/or among multiple projects within a corridor, network, or region, and possibly across agency jurisdictions, to minimize work zone impacts and produce time and cost savings. Cities and regions around the country are efficiently synchronizing projects at various levels, combining multiple projects in a corridor or network, correlating right-of-way acquisition and utility work, and coordinating work between different transportation agencies.

This internal and external agency road project coordination results in reduced numbers of street cuts, earlier identification of project impacts, greater ability to reduce and manage traffic disruptions from road work, cost savings, better quality road surfaces, and more satisfied customers.

TECHNOLOGY APPLICATIONS

Technology applications such as queue management and speed management involve deployment of Intelligent Transportation Systems (ITS) for dynamic management of work zone traffic impacts to improve motorist and worker safety and mitigate work zone-related congestion.

Queue management systems, especially when coupled with traffic information strategies, can alert drivers to a line of vehicles ahead caused by a work zone so they can slow down safely. A queue is a line or sequence of vehicles awaiting their turn.

Speed management solutions, especially variable speed limit (VSL) systems, dynamically manage work zone traffic based on real-time conditions such as congestion and weather. Combining VSL with automated enforcement can increase driver compliance and displayed speed limits.

Smarter Work Zones, continued on p. 11

Roads Scholar & Road Master Highlights

Instructor Todd Morrison

Todd Morrison has been teaching for the Technology Transfer Program (T2) at the Kentucky Transportation Center for eight years. Currently, he teaches Environmental Awareness, Basic Plan Reading, Horizontal Alignment, and Work Zone Traffic Control training for T2.

Todd was born in Glasgow, Kentucky. He graduated from Barren County High School and was active in Beta Club, Academic Team and Young Business Leaders.

Todd graduated from the University of Kentucky in 1994 where he studied Civil Engineering with an emphasis on Construction Management. He attended Kentucky State University where he became a Kentucky Certified Public Manager in 2004. Todd is a licensed professional engineer in Kentucky.

Todd began working for the Kentucky Transportation Cabinet in 1994. While at the cabinet, Todd held numerous positions including Construction Engineer, Operations Branch Manager, and Area Engineer. When he left the cabinet in 2011, he was a Section Supervisor.

In his spare time, Todd is active in his church as a Sunday School teacher. He also enjoys spending time with his wife of 21 years, Danyel. They have two daughters, Hannah and Emma, who keep them very busy. ■

Technology Transfer Staff

Megan Perrin

Megan Perrin is the Conference Coordinator for the Traffic Incident Management Responder Training, Asphalt Training & Testing, and Work Zone Traffic Control Employee Qualification Program. She has been with the Technology Transfer Program (T2) since March 2014. Her favorite thing about her job is traveling around the state and meeting new people.

Megan was born in Corinth, Kentucky, and attended Grant County High School. She was very active in her school and played basketball, volleyball and softball. Megan was also on the Student Council.

Megan studied Public Relations at Eastern Kentucky University and completed her Bachelor of Arts degree in 2013. While at EKU, she was in the Alpha Gamma Delta International Fraternity, Golden Key International Honour Society, and Alpha Lambda Delta Honor Society.

When she has spare time, Megan enjoys crafting, watching HGTV and hanging out with friends. She just purchased her first home and is excited to begin decorating. ■

KCJEA/KMCA Joint Summer Convention

June 28-30, 2016
Galt House Hotel & Suites
Louisville, KY

The Kentucky County Judge/Executive Association and the Kentucky Magistrates and Commissioners Association would like to invite you to participate in the 30th Annual Joint Summer Convention which will be held June 28-30 at the Galt House Hotel & Suites in Louisville.

Conference events will include KCJEA and KMCA board and membership meetings, Economic Development Panel discussion, Kentucky Department of Agriculture update and several roundtable workshops.

Certified training credit will be available for attendees.

For additional information including a tentative agenda or to register for the conference, visit www.kmca.net/summerconferences.html.

The Technology Transfer Program will have a booth in the exhibit area. Please stop by and see us to learn more about our program and for the chance to win a fabulous prize.

www.kcjea.org www.kmca.net

Resources Available from the Occupational Safety & Health Administration

The Occupational Safety and Health Administration (OSHA) has a variety of ***free*** resources available for your use including eTools, Fact Sheets and QuickCards.

eTools are stand-alone, interactive, Web-based training tools on occupational safety and health topics. They are highly illustrated and utilize graphical menus. Some use expert system modules which enable the user to answer questions, and receive reliable advice on how OSHA regulations apply to their worksite.

Fact Sheets are typically 8.5 x 11 double sided sheets which provide basic background information on safety and health hazards. They are available on the OSHA publications page in PDF format for you to download, print and distribute to employees.

QuickCards are small cards that provide safety and health information for employers/employees. Also available on the OSHA publications page, you can download them in PDF format or order laminated copies from OSHA.

To learn more about these resources, visit www.osha.gov.

Build a Better Mousetrap Competition

It's not too late to get your entry in for the 2016 Build a Better Mousetrap Competition. The Build a Better Mousetrap Competition highlights innovative solutions to everyday problems and issues that local transportation workers encounter. They can range from the development of tools, equipment modification, and/or processes that increase safety, reduce cost, improve efficiency and the quality of transportation.

The Technology Transfer Program, which is the Local Technical Assistance Program (LTAP) in Kentucky, will collect the entries and an independent panel of judges will review the projects and pick a state winner. The state winner will be automatically submitted into the national competition where they will compete for fantastic prizes and, of course, bragging rights!

Bowling Green Public Works Discharge Control Door

The city of Bowling Green was the 2014 Build a Better Mousetrap National first place winner with their Discharge Control Door. Bowling Green Public Works developed a flap to replace the plastic chute that comes standard on a mower. The door provides a safer means of mowing rights-of-way. In addition, it is a cost efficient device that reduces the company's liability.

Mt. Sterling Public Works was the 2015 Build a Better Mousetrap National second place winner with their Under Body and Frame Pressure Washer. They wanted to design something that would wash off salt from underneath truck frames and dump beds after snow events to help slow down the rusting process and help preserve the brake parts from early failure.

Mt. Sterling Public Works Under Body and Frame Washer

Judging criteria is based on a five point scale used at both the state and national levels:

- Cost
- Savings/Benefits to the Community
- Ingenuity
- Ease of Transference to Others
- Effectiveness

The deadline to submit your entry is May 30, 2016.

Additional information and an entry form can be found at http://www.kyt2.com/training/program/build-a-better-mousetrap-competition.

AT THE LIBRARY
Laura Whayne, Librarian
800-432-0719 or 859-257-2155
E-mail: laura.whayne@uky.edu

Check Out Your World

The focus this time is on maintenance, work zones, and personal safety. Included are selected print and electronic resources that relate to these topics. Please contact the Library staff to borrow any of the library resources. Need help locating transportation information or publications? Call Laura or Victoria at 800-432-0719.

Materials to Consider:

Library Resources

- AV-VD090 Best Practices: Crack Filling/Sealing, Ohio Dept. of Transportation, 2011.
- AV-V098 Best Practices: Spray Injection Patching, Ohio Dept. of Transportation, 2013.
- AV-VD033 Defensive Flagging: A Survivor's Guide, DOT FHWA, Texas DOT, 2006.
- AV-V739 Eye Protection, Long Island Productions, 1992.
- AV-VD095 Flagging Fundamentals: 6 Steps to Safety, ARTBA, 2012.
- AV-V840 Personal Protective Equipment, Long Island Productions, 2000.
- AV-VD079 Vermont Work Zone Set Up Video, Vermont Agency of Transportation, 2008.
- AV-V900 Your Precious Eyes: the gory Story, Long Island Productions, 2000.

Internet Sites:

OSHA Eye and Face Protection: https://www.osha.gov/SLTC/eyefaceprotection/hazards.html

Electronic Library of Construction Occupational Safety & Health: http://www.elcosh.org/en/index.php

Mobile Operations or Short Duration Resources: http://www.workzonesafety.org/work_zone_topics/mobile-operations,short-duration/

A Pocket Guide to Asphalt Pavement Preservation, DOT FHWA. https://www.mdt.mt.gov/publications/docs/brochures/research/toolbox/FHWA/PPGuide.pdf

Smarter Work Zones: https://www.workzonesafety.org/SWZ/main

Smarter Work Zones: https://www.fhwa.dot.gov/innovation/everydaycounts/edc-3/swz.cfm

Video Lending Library Online Database

Did you know that the Link is also available in electronic format?
To change your print subscription to electronic, contact Victoria Brock at victoria.brock@uky.edu or 800-432-0719.

Smarter Work Zones, continued from page 6

BENEFITS

- Minimize Traffic Delays Project coordination among different agencies allows them to be proactive in reducing construction time and the resulting traffic congestion. Technology applications can reduce travel delays by dynamically managing traffic according to real-time conditions.
- Enhance Safety of Motorists and Workers Combining queue and speed management technologies can raise driver awareness as they approach work zones, provide delay and routing information, and increase their compliance with displayed speed limits.
- Maintain Business and Residential Access Communication and coordination between agencies helps lessen the extended impacts of work zones and minimize effects on local access.

Additional information about Smarter Work Zones and Every Day Counts (EDC), can be found by visiting www.fhwa.dot.gov/everydaycounts. ■

Source: FHWA Every Day Counts Smarter Work Zones Fact Sheet (FHWA-14-CAI-043)

Training Benefits, continued from cover

The Technology Transfer Program (T2) offers a variety of training throughout the year across Kentucky. For those agencies who have multiple employees to train and a limited budget, on-demand training may be a good option.

Michael Craig, Road Foreman for Clinton County Road Department, wanted to provide extra snow and ice removal training for his crew before winter weather hit late last year. He worked with Becky Boston, T2 Training Coordinator, to schedule an on-demand Snow & Ice Removal class in his area. He joined with Wayne County Road Department and split the cost of the class to get the maximum benefit.

"We were able to keep the training close to us so we didn't pay for travel and the employees were only out one day for training," said Mr. Craig. "It worked out perfect, and we would definitely do it again."

HOW IT WORKS

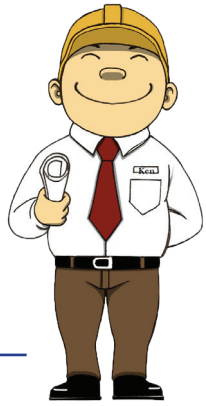
On-demand trainings are presented to provide low-cost training to agencies. The Technology Transfer Program supplies the training materials and the instructor. The agency provides the participants, meeting room, AV equipment and on-site staff assistance. Normal class size is no less than 15 or more than 40 participants.

On-demand training is available for most of the T2 courses including Roads Scholar and Road Master classes, Basic Work Zone and Flagger training, and Work Zone Technician and Supervisor training.

For additional information on on-demand training or to set-up a training date, contact us at 800-432-0719.

It can be said, when times are good, you ***should*** train and develop your employees. When times are tough, you ***MUST*** do it. ■

ASK AN ENGINEER!



Is there an engineering issue that is troubling you? Are you confused on how to address a specific road problem? Then the "Ask an Engineer" section is here to help! Submit your safety, engineering or other road questions to us and we will consult an engineer within the Kentucky Transportation Center to find an answer for you. Questions can be emailed to amy.terry@uky.edu or mailed to Ask an Engineer, Kentucky Transportation Center, 176 Raymond Building, Lexington, KY 40506.

Question: I want to put "Buckle Up" safety message stickers on the back of STOP and YIELD signs in my city. Is this permissible under the MUTCD?

Answer: No. Section 2B.10 of the MUTCD states that "No items other than inventory stickers, sign installation dates, and bar codes shall be affixed to the fronts of STOP or YIELD signs, and the placement of these items shall be in the border of the sign. No items other than official traffic control signs, inventory stickers, sign installation dates, anti-vandalism stickers, and bar codes shall be mounted on the backs of STOP or YIELD signs. No items other than retroreflective strips (see Section 2A.21) or official traffic control signs shall be mounted on the fronts or backs of STOP or YIELD signs supports." The reason is that "Buckle Up" and other such messages detract from the motorist's recognition of the STOP sign as a stop sign.

Public Works Always There

Since 1960, APWA has sponsored National Public Works Week. Across North America, our more than 29,000 members in the U.S. and Canada use this week to energize and educate the public on the importance of public works to their daily lives: planning, building, managing and operating at the heart of their local communities to improve everyday quality of life.

To learn more about how you can be involved with your local National Public Works Week, visit www.apwa.net/discover/National-Public-Works-Week.

TRAINING CALENDAR
May - July 2016

* Indicates Roads Scholar course # Indicates Road Master course **Indicates Central Standard Time Zone

May

17	Construction of Concrete	Fairfield Inn & Suites, Lexington North*
18	Roadside/Vegetation Management	Fairfield Inn & Suites, Lexington North#
18	Computer Familiarization	Bluegrass Community & Technical College, Lex.#
19	Asphalt Paving Best Practices	The Corbin Center*
24	Managing People II	Morehead Conference Center*
25	Developing Leadership Skills	Morehead Conference Center#
25	WZTC Technician Requalification	Mountain Arts Center, Prestonsburg
25	WZTC Supervisor Requalification	Mountain Arts Center, Prestonsburg
25	Snow & Ice Removal	Rough River Dam SRP, Falls of Rough**#
26	Traffic Management Through Signals, Signs & Markings	Rough River Dam SRP, Falls of Rough***
26	Basic Work Zone Traffic Control & Flagger	Mountain Arts Center, Prestonsburg*

June

1	Roadside/Vegetation Management	Natural Bridge State Resort Park, Slade#
1	Asphalt Paving Best Practices	Kentucky Dam Village SRP, Gilbertsville***
2	Erosion & Sediment Control	Kentucky Dam Village SRP, Gilbertsville**#
7	Basic Work Zone Traffic Control & Flagger	Receptions Inc., South Erlanger*
7	Communications II	Rough River Dam SRP, Falls of Rough**#
8	Drainage: The Key to Roads That Last	Rough River Dam SRP, Falls of Rough***
8	Sign Retroreflectivity	Four Points by Sheraton, Lexington
8	Traffic Incident Management Responder Training	Receptions Inc., South Erlanger
9	Drainage: The Key to Roads That Last	Receptions Inc., South Erlanger*
14	Low-Cost Roadway Safety Improvements	Lake Barkley State Resort Park, Cadiz***
14	Asphalt Paving Best Practices	General Butler State Resort Park, Carrollton*
15	Customer Service	General Butler State Resort Park, Carrollton*
15	Small Bridge Repair & Maintenance	Lake Barkley State Resort Park, Cadiz***
16	Introduction to Railway Operations & Engineering	Kentucky Dam Village SRP, Gilbertsville**
21	Risk Management/Tort Liability	Baymont Inn & Suites, Elizabethtown*
22	Snow & Ice Removal	Baymont Inn & Suites, Elizabethtown#
28	Environmental Awareness	James E. Bruce Convention Center, Hopkinsville**#
29	Basic Plan Reading	James E. Bruce Convention Center, Hopkinsville**#

July

6	Communications II	Four Points by Sheraton, Lexington#
7	Communications II	Four Points by Sheraton, Lexington#
12	Managing People I	Rough River Dam SRP, Falls of Rough***
13	Managing People II	Rough River Dam SRP, Falls of Rough***
13	Computer Familiarization	Somerset Community College#
13	WZTC Technician Requalification	Fairfield Inn & Suites, Lexington North
13	WZTC Supervisor Requalification	Fairfield Inn & Suites, Lexington North
13	Basic Work Zone Traffic Control & Flagger	Fairfield Inn & Suites, Lexington North*
20	Risk Management/Tort Liability	Morehead Conference Center*
20	Communications I	James E. Bruce Convention Center, Hopkinsville***
21	Communications II	James E. Bruce Convention Center, Hopkinsville**#
26	Work Zone Traffic Control Technician Qualification	James E. Bruce Convention Center, Hopkinsville**
26	Managing People II	The Corbin Center*
27	Communications II	The Corbin Center#
27	Work Zone Traffic Control Supervisor Qualification	James E. Bruce Convention Center, Hopkinsville**

*To check the availability of a workshop, please visit our website, **www.kyt2.com**.*

To register for a class contact us at 800-432-0719.

Eye and Face Protection for Workers

Amy I. Terry, Marketing, Outreach and Publications Manager

The National Institute for Occupational Safety and Health (NIOSH) says that each day about 2,000 U.S. workers have a job-related eye injury that required medical treatment. The financial cost of these injuries is more than $300 million per year, but there is no dollar amount which can adequately reflect the personal toll these accidents take on the injured workers.

Personal protective equipment (PPE) for the eyes and face is designed to prevent or lessen the severity of injuries to workers. The employer must assess the workplace and determine if hazards that necessitate the use of eye and face protection are present or are likely to be present before assigning PPE to workers.

A hazard assessment should determine the risk of exposure to eye and face hazards, including those which may be encountered in an emergency. Employers should be aware of the possibility of multiple and simultaneous hazard exposures and be prepared to protect against the highest level of each hazard.

TRAINING

Each employee shall be trained to know at least the following:

- When PPE is necessary
- What PPE is necessary
- How to properly adjust and wear PPE
- Limitations of the PPE
- Proper care, maintenance, useful life and disposal of the PPE.

All training should be conducted by a knowledgeable designated person who presents the training in a manner that the employee can understand. Each affected employee shall demonstrate an understanding of the training and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

CRITERIA FOR PPE

The following minimum requirements must be met by all protective devices. Protectors shall:

- Provide adequate protection against the particular hazards for which they are designed.
- Be of safe design and construction for the work to be performed.
- Be reasonably comfortable when worn under the designated conditions.
- Fit snugly and not interfere with the movements of the wearer.
- Be durable.
- Be capable of being disinfected.
- Be easily cleanable.
- Be marked to identify only the manufacturer.

FITTING OF PPE

Consideration should be given to comfort and fit. Poorly fitting eye and face protection will not offer the necessary protection. Fitting of goggles and safety spectacles should be done by someone skilled in the procedure. Prescription safety spectacles should be fitting by a qualified optical personnel. Eye protection from dust and chemical splash should form a protective seal when fitted properly.

MAINTENANCE AND CLEANING

PPE must be used and maintained in a sanitary and reliable condition. Dirty lenses can reduce the quality of vision. Deeply scratched lenses are apt to breaking.

The most effective method for disinfecting eye-protective equipment is to disassemble the goggles and thoroughly clean all parts with soap and warm water. It's also a good idea to immerse all parts for 10 minutes in a solution of germicidal deodorant fungicide.

Several resources are available on the NIOSH Eye Safety website including an eye safety checklist and an example tool box talk on eye protection. OSHA also has an Eye and Face Protection eTool which provides compliance assistance information to employers and employees.

Don't accept eye injuries as just a part of the job! ■

Sources:
Centers for Disease Control and Prevention: www.cdc.gov/niosh/topics/eye/
Occupational Safety & Health Administration: www.osha.gov

Highway Safety, continued from page 4

This gentle slope reduces incidents related to "tire scrubbing", whereby the driver tends to oversteer and crash.

Across the nation, many state and local governments are increasingly adopting these roadway departure countermeasures to reduce severe crashes and improve safety outcomes for roadway users. KYTC transportation officials have led this multi-pronged effort in Kentucky. Over the last decade, KYTC has installed nearly 265 miles of cable barrier, 112 HFST treatments, 2,500 miles of rumble stripes, and 580 miles of Safety Edges along Kentucky highways. These efforts should continue to pay future safety dividends for Kentucky drivers through reduced traffic fatalities and move Kentucky ever closer to the goal of "Toward Zero Deaths". ■

Sources:
Federal Highway Administration, www.fhwa.dot.gov
National Highway Traffic Safety Administration www.nhtsa.gov
Howell, B., Agent, K., & Green, E. (2015) *Creating a Highway Information System for Safety Roadway Features* (KTC-15-25/OHS K9-15-04-1F). Retrieved from the Kentucky Transportation Center website: www.ktc.uky.edu/files/2015/12/KTC_15_25_OHSK9_15_04_1F.pdf

Publication Statement *The Link*© is published quarterly by the Kentucky Transportation Center, College of Engineering, University of Kentucky, using funds from the Federal Highway Administration and the Kentucky Transportation Cabinet. The opinions, findings, or recommendations expressed in this newsletter are those of the Kentucky Transportation Center and do not necessarily reflect the views of the Federal Highway Administration nor the Kentucky Transportation Cabinet nor the University of Kentucky. Any product mentioned in *The Link* is for informational purposes only and should not be considered as a product endorsement. Comments may be addressed to: Kentucky Transportation Center, 176 Raymond Building, University of Kentucky, Lexington, KY 40506-0281. Phone: 859-257-7466 or 800-432-0719.
Staff include:
Joe Crabtree, Ph.D., P.E. Director, Kentucky Transportation Center
Martha Horseman, Program Manager, Technology Transfer Program
Amy I. Terry, Editor, Technology Transfer Program

LTAP Local & Tribal Technical Assistance Program
Kentucky LTAP Center

The Link is printed on recycled paper.

Kentucky Transportation Center
College of Engineering
176 Raymond Building
University of Kentucky
Lexington, Kentucky 40506-0281
www.kyt2.com

Non-Profit Org.
U.S. Postage Paid
Lexington, KY
Permit No. 51

THE LINK GOVERNMENTS UNIVERSITIES INDUSTRIES
THE LINK, Kentucky Transportation Center, Technology Transfer Program

Apply Now for the Michelle Adams Memorial Scholarship

The Michelle Adams Memorial Scholarship was established in 2011 by Mark and Laurie Adams in memory of their daughter. Michelle lost her life in a vehicle crash resulting from dangerous winter road conditions outside of Indianapolis, Indiana. We were blessed to work with Michelle as a University of Kentucky student and as a staff member.

To be eligible for the scholarship, one must be an incoming freshman enrolled full time at the University of Kentucky; be the son or daughter of either an attendee of the Technology Transfer's Snow & Ice Removal Course or any public works employee in the state of Kentucky; and demonstrate financial need.

Application Deadline: June 30, 2016

For additional information about the scholarship, visit www.kyt2.com.

In This Issue: