RC Flagman Gets Test Run in Washington County

by Lisa Harris

Flagging is dangerous work, but a well-functioning work zone depends on it. Most highway agencies hire summer help as flaggers, but some are trying another way—using automatic flagging machines.

Washington County (Ks.) Public Works rented two RC Flagmans last year to use on asphalt maintenance projects. RC stands for remote controlled. They used two units for each work zone, one at each end, just like flaggers. An operator used a radio signal to open and close the gates.

Washington County rented the units from Construction Rental in Salina. They paid $4500 for three months’ use.

Even though county staff found the units worked well, they will not be renting them again this year.

“They worked fine,” said Don Long, asphalt foreman, “but we’d just as soon hire summer help as flaggers. They can do other things besides flagging—so when it rains, they are not just sitting around.”

Glenn Larson, a geometric systems engineer with KDOT, was Public Works Administrator for Washington County through last summer. Larson agrees with Long’s assessment, but what if you don’t have the people? That was the situation Larson faced last year, and the impetus for renting the equipment.

“We needed to do something out there, and we couldn’t find anyone to do the job. I was going to have to take production people out to fill out that crew,” Larson said.

Larson was considering buying automatic flaggers and did some research on what’s out there. He found three types of units—the RC flagman that uses a radio signal, another unit that has set timing, and a third that senses vehicles when they drive up to the work zone stop sign.

Larson prefers the third kind, if the budget allows.

“When a driver stops at the stop sign, they need to be protected until they can safely get across,” Larson said.

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Remote controlled flagman,
continued from page 1

and the unit at the other end agrees that the roadway is clear, the driver can proceed right away. That’s a real advantage,” Larson said.

Units with set timing are only appropriate for certain types of projects, like bridge repair, Larson said.

“People see the red light from far away and respect it more than they do a flagger.”

Cost was a factor for Washington County, so they opted for the RC Flagman which provides adequate service for a relatively low price. A human operator controlled the gates with a radio signal. Larson expected to have the operator sit on a hill and watch both ends of the work zone, but the operator was actually able to do some work on the site as long as she was not distracted from operating the gates when needed.

“Our flag operator ran a rubber tire roller now and then,” said Larson, “and that arrangement worked OK most of the time. I don’t recommend it as a general rule, though; it’s only feasible in areas with low traffic counts.”

What about cost? Larson said they paid about $1500 per month to rent the two RC Flagman units. Purchasing the units would cost about ten times that much—$15,000.

Larson thinks it’s worth it. “We were paying flaggers $6.43 per hour. The machines cost less, if you use them over time,” he said.

While he was pleased with the RC Flagman, Larson wishes they would change one thing: the size of the yellow “go” signal. “The yellow lens is smaller than the red; I’d prefer them the same size,” he said.

The RC Flagman was developed in 1993 in Canada. Over 800 units have been sold there. The units are commonly used by counties for one-day projects up to 1,000 feet long, like ditching, shoulder-patching, and guard rail repair.

Peter Vieveen, president of RC Flagman, said no accidents have been reported in the product’s nine year history. “People see the red light from far away and respect it more than they do a flagger,” noted one customer. Vieveen would like to have more business in the U.S. He’s willing to work for it, too. In the case of Washington County, he drove 22 hours from Ontario to give Larson a test run on the equipment before he committed to renting it.

Vieveen says his product is ideal for one-day projects because it is relatively light in weight compared to the other types of flagging machines. A set of flagging units weighs 750 lbs. and comes on its own trailer.

The Ohio DOT requested permission from the Federal Highway Administration (FHWA) to test the RC Flagman for two years; it received solid reviews. Vieveen says the device may be added to FHWA’s Manual of Uniform Traffic Control Devices (MUTCD) in the future. It is already in the Canadian MUTCD.

RC Flagman is distributed through Construction Rental, Inc., in Salina. Their sales rep is Randal Hardy, (800) 359-8208.

For more information, visit www.rcflagman.com. Or call Peter Vieveen at (877) 352-4626.

You can also borrow a video or CD from us that includes footage of the unit in use—see page 15.

Mulinoazzi Named New Kansas LTAP Director

The Kansas LTAP at the University of Kansas has a new director. Dr. Joe Lee has stepped down after 19 years as director of the KUTC and LTAP. Dr. Lee’s direction will be missed.

The new LTAP director is Tom Mulinoazzi. Tom has been on the Civil Engineering faculty at the University of Kansas since 1979. Tom and Joe were co-leaders of LTAP before Tom became associate dean of Engineering in 1987. Tom returned as a full-time faculty member of Civil Engineering last July.

Many of our readers have met Tom in his travels doing traffic safety training for KU. Tom has been teaching workshops, seminars and classes since the Kansas LTAP began in January 1982, when KU was selected as one of the original 10 technology transfer centers in the country (there are now 56 in the United States).

Tom has made presentations in over 75 Kansas communities, on topics including the MUTCD, risk management, liability and traffic signing, maintaining unpaved roads, geometric design and work zone signing.

Tom earned a BSCE from the University of Notre Dame and graduate degrees from Purdue University. He is a professional engineer in Kansas and Indiana and a licensed land surveyor in Kansas.

Tom is pleased about his new role in LTAP and working more closely with local highway agencies. “I am really excited about having the opportunity to increase my service to the people of Kansas,” he said. “Although I wasn’t born here, I feel like a Kansan because of all of the interactions I’ve had over the years with the great, ‘real’ people of this state.”
“There’s no such thing as a healthy tan” and other facts about sun exposure

... by Ira J. Allen .................

“S

ummer’s here, it’s the most beautiful time of the year, and I’m glad that it’s here.” While most of us would agree with James Taylor at the start of the summer, we soon find ourselves wishing for Arctic blasts—after that first blistering sunburn starts peeling.

Every summer we see articles about summer safety and think...blah blah blah. We tend to ignore or gloss over them, looking for something “interesting.” Sadly, one result of this lackadaisical attitude is that over 600,000 people are affected by skin cancer every year. We often assume we know the basics of safety in the sun, and we probably do. But are you sure you have all the information? Read on to find out.

“

A killer tan” takes on new meaning

Everyone wants to be healthy, and many of us would like to have the deep tan associated (supposedly) with being attractive. Are the two compatible? Well...no, says Jackie Couture, Safety and Occupational Health Specialist for the Northern Plains Agricultural Research Laboratory.

“It doesn’t matter whether you get radiation from the sun or a man-made source—it still does damage. There is no such thing as a healthy tan. Protect yourself from the sun and myths,” she said.

It is no accident that skin cancer is the most common cancer in the United States. Dr. Alan Green says, “The risk of malignant melanoma has more than tripled since 1980—from one in 250 to one in 71. A person dies every hour from melanoma in the U.S.”

Dr. James Allen, medical director for Unocal Asia, says, “In addition to skin cancer, the sun’s effects on the skin can lead to premature ageing, and “actinic keratosis,” which is essentially sun-damaged skin and can be a precursor to cancer. This condition is itchy and can look like cancer, sending one to an expensive dermatologist for tests and reassurance. Often a biopsy of the skin is required to tell the difference between sun-induced ageing and early cancer.”

Does this mean you should quit your job and spend the rest of your life indoors, burrowed in like a mole? Of course not. A certain amount of exposure to the sun can be healthy for the skin, but there is a very real danger of overdoing it.

It’s best to avoid direct sunlight between the hours of noon and 4:00 p.m., when sunlight carries peak ultraviolet (UV) radiation loads. Of course, most of us, especially those who work outside, simply can’t afford to tell the boss we’ll be taking most of the afternoon off to avoid the sun. So let’s look at ways to minimize the risks of exposure.

Sunscreen: Man’s other best friend

Everybody knows to wear sunscreen, right? Well, maybe, but many don’t bother. They don’t realize the damage done to their skin by hour after hour of UV radiation, day after day, year after year. When you think about it, it really adds up.

Some folks compromise by using a low SPF (sun protection factor) sunscreen that still allows them to tan. Remember, there’s not such thing as a healthy tan...

Jackie Couture says about sunscreen, “Apply liberally and frequently (don’t forget the tops of the ears and the temples).” Further, she recommends at least SPF 15 sunscreen. Many other experts recommend stronger protection, such as SPF 30.

The higher the SPF, the more protection you get against the sun’s rays. For example, SPF 15 means that when you wear that sunscreen, your skin will “see” about the same amount of sun in 15 hours as in just one hour without protection.

Couture warns against labels that say “water resistant” or “waterproof.” “Don’t let this fool you,” she says. “All sunscreens must be reapplied during continued exposure—even the ‘water-proof’ ones.”

This means that if you’re working out in the field, you should keep the sunscreen handy. And for those manly men out there, if you’re worried about

Remember to put your bug spray on over your sunscreen. Doing it the other way around, bug spray first, greatly reduces its effectiveness.

continued on page 4 ➤
No such thing as a healthy tan, 
continued from page 3

the guys making fun of your putting lotion on the tops of your ears, you might try thinking about how it might feel to have malignant skin cancer instead.

Apply sunscreen 30 minutes or so before exposure to the sun, and don’t forget to use lip balm that protects against the sun.

Sun-blind? It happens
Cataracts are another possible effect of regular exposure to sunlight. These are dense thickenings of the cornea that impair vision and require surgery to remove.

Another sun-related eye ailment is macular degeneration. Unlike cells in the rest of the body, some cells in the eye are not naturally replaced, and damage accumulates over a lifetime. Damage in the retina, behind the lens, is known as macular degeneration, and affects about one third of adults in the U.S. This steady decline of central vision is not correctable by eyeglasses.

Sunglasses: Not just a fashion statement
Sunglasses are an important tool in combating both macular degeneration and cataracts.

A common mistake in buying sunglasses is to assume that cost equals quality. While this may be the case for durability and attractiveness, it is not necessarily true for UV protection. Effective sunglasses should block 99 to 100 percent of ultraviolet radiation, type A (UVA). Expensive brand names and polarized lenses are no guarantee.

Unfortunately, inappropriate sunglasses can make the situation worse. Dark glasses cause the pupils to dilate, and if they don’t protect against it, they allow dangerous UVA to damage the lens and the retina. So don’t assume your polarized fishing glasses will protect your eyes. Make sure they block out harmful UVA radiation.

Other Safety Measures
So those are the biggies, right?—sunscreen and sunglasses? Well, yes and no. Those two are vital defenses in the War-on-Sun-Damage, but there is more we can do.

Besides the eye and skin problems, there are several heat disorders to watch out for. These range in severity from sunburn to heat stroke. Most (if not all) of us have experienced sunburn. Fortunately, fewer have had heat cramps, heat exhaustion, or the potentially fatal heat/sun stroke. All four of these heat disorders are described above, along with their recommended treatments.

Dress for success. Lightweight clothing and brimmed hats both protect against sun-related injuries. Clothing should be light-colored; dark clothing soaks in the sun and transmits its heat to our bodies. Although clothing will protect against the radiation of sun's
throughout the day. Glasses of water, and several of them lose fluids. We’re talking about large— it’s a diuretic, causing you to drink a lot of water. We’re not talking about a small glass to chase your coffee in the morning. (And by the way, that coffee isn’t helping you— it’s a diuretic, causing you to lose fluids.) We’re talking about large glasses of water, and several of them throughout the day.

Drink up. The final measure you can take to protect yourself from the heat is to drink a lot— of water. We’re not talking about a small glass to chase your coffee in the morning. (And by the way, that coffee isn’t helping any— it’s a diuretic, causing you to lose fluids.) We’re talking about large glasses of water, and several of them throughout the day.

One way to make sure you’re getting enough water is to carry around a water bottle. For those with access to a drinking fountain or sink, filling your water bottle can be very helpful in keeping you hydrated. That way, you can take a small drink whenever you feel thirsty, far healthier and more efficient than going to the drinking fountain now and then.

Making sure you’re drinking a lot (and that doesn’t mean beer) can not only help you beat the heat, but avoid getting a heat/sun-related illness as well. And remember, caffeinated and alcoholic drinks don’t count.

Don’t feel pressured into buying fancy sports drinks to replace lost electrolytes. Most people with a moderately healthy diet won’t need all that. The primary function of these drinks is to make you thirstier so you’ll keep drinking water (or buying more sports drinks). While they do taste good, don’t be fooled; a glass of water fulfills the same function, and is significantly cheaper.

Bug out. Second, remember to put your bug spray on over your sunscreen. Doing it the other way around, bug spray under sunscreen, greatly reduces the bug spray’s effectiveness. An easy way to remember this is that you “want to keep the bugs out,” as Dr. Allen put it.

None of us is actively seeking cataracts or skin cancer, and those few who don’t mind a sunburn “because it’ll fade to tan” may be rethinking their position in light of the attention the media has given the correlation between sunburns and skin cancer. At this point, many of us are asking, “What can I do?” Fortunately, there is a lot we can do to protect ourselves from UV radiation.

So whether you’re working in the office or on the street this summer, it’s time to prepare for the blazing sun and the legendary Kansas humidity. Drinking right, eating right, and dressing right are the keys to preparation for the sun and heat.

Sources

www.srh.noaa.gov/fiwd/heatindex/heat3.html;


“Sun and our Eyes” by Dr. Greene, www.drgreene.com/21_169.html;


Bad Press about Roundabouts Refuted

Roundabouts in the United States

A response to the article in the Wall Street Journal  (18th January 2002)

The article in the Wall Street Journal painted a black picture about roundabout safety and their suitability for the United States. The Clearwater Roundabout was cited. This response fills in the gaps in the article and redresses the balance.

The design of the Clearwater Roundabout was uncommonly complex. It converted five intersections into one intersection that had to accommodate Spring Break traffic volumes of 50,000 vehicles and 6,000 pedestrians per day.

The aims of the Landscape Architects and the Fountain Designers also contributed to the design complexity. The design sought to find the best balance between these unavoidably conflicting aims.

The roundabout has had a large number of vehicle crashes at the exit onto the Causeway and at the exit into Coronado Drive. However, there have been no pedestrian accidents at the roundabout. This clearly reveals that the best balance was not initially achieved.

In July 2001, my recommended revisions to signing, striping, and lane arrows were introduced at the Causeway exit. The crashes subsequently dropped from an average of 25 to zero crashes per month. There have been no crashes at this location since that time.

This clearly demonstrates that the fault was with design detail and not the drivers.

To resolve the crash problem at the Coronado Drive exit, the curbs need to be realigned. This work will be completed by the end of February 2002 when a dramatic reduction in crashes is expected—similar to the reduction at the Causeway Exit.

Over the past 12 years about 300 hundred modern roundabouts have been constructed in the United States. Almost all have been unqualified successes. A study commissioned by the Insurance Institute for Highway Safety determined that roundabouts in the United States have reduced all crash types by 40 percent and injury crashes by 80 percent, at sites where they replaced other types of intersection. We do not know of any other type of highway improvement that has such a high success rate.

Considering that U.S. Engineers are relatively new and inexperienced at roundabout design, it is to their credit that their failure rate is only a few percent. This is exemplified by U.S. public opinion, that is typically about 80 to 90 percent against building a roundabout, but after construction this soon changes to about 80 to 90 percent in favor.

The lesson to be learned is not that roundabouts are bad for the US, but that design faults can lead to failure while good design produces roundabouts that are safer than any other type of at-grade intersection in the United States.


On January 18, 2002, the Wall Street Journal published an article about roundabouts, focusing mostly on one project in Clearwater, Florida. Designed to “replace a dangerous tangle of streets and intersections often choked with beach-bound traffic,” the Journal reported that the Clearwater roundabout has scared the wits out of drivers trying to navigate it.

And with good reason. As of January there had been more than 500 accidents at the roundabout—eight times more than the original configuration of streets, although the crashes have been less severe. The Journal interviewed and quoted an engineer who drives nine miles out of his way to avoid the roundabout.

Some changes have been made to the Clearwater roundabout, like adding pavement markings at some of the approaches and turning off the center fountain which was dousing passing vehicles with water. Accidents have diminished by over 50 percent as a result, the Journal said. However, the article put a bad face on roundabouts in general. This article received some press around the country, and has been a source of ammunition for those opposed to roundabouts.  

(contin.)
Robert B. “Barry” Crown, a well-known consultant from the United Kingdom on roundabout design, wrote a response to the Journal article, prepared at the request of Gene Russell for Kansas State University’s (KSU) roundabout web site. We’ve reprinted the letter on page 6, with permission from KSU. Crown agrees with a point made in the Journal article: Roundabouts only work well when designed properly.

Gene Russell noted that the Clearwater roundabout is not a typical “modern” roundabout. It has a very complex design with very high traffic and pedestrian volumes, creating extra driver confusion.

For more information on roundabouts, visit KSU’s excellent web site at www.ksu.edu/roundabouts.

Where to Get Help With Roundabout Design

Other than taking a course, what resources are available for effective roundabout geometric design?

According to Gene Russell at KSU there is no one definitive guide. The United Kingdom and Australia have design manuals, as well as several state DOTs in the U.S.—Florida, Maryland, New York, Utah and Oregon to name a few. Kansas does not have a roundabout design guide at this time.

The closest thing to a national guide is the Federal Highway Administration’s Roundabouts: An Informational Guide. The book format and CD-ROM version may be obtained from the FHWA Report Center free of charge. Fax requests to (301) 577-1421. However, the National Cooperative Highway Research Program has just let a project to refine national design guidelines on roundabouts. So look for more guidance—around the corner.

Do You Have These Popular Safety Resources?

Here are a lot of safety-related resources out there: books, magazines, pamphlets, videos, CD-ROMs, and more. In fact, there’s almost too much to sort through on your own.

We’ve asked representatives of two providers of safety resources (other than our own KUTC Lending Library) to share with us their top-sellers. We spoke with Dave McKee, at the American Traffic Safety Services Association (ATSSA), and David Dancy, at the American Public Works Association (APWA).

McKee said the millennium edition of the Manual of Uniform Traffic Control Devices (MUTCD) was ATSSA’s “number one seller in our industry”—the “Bible of the traffic control industry.”

Another that’s expected out by mid-2002 is the Standard Highway Signs Manual, the first update since 1979. It will contain “every sign approved by the FHWA.”

A third resource he suggested was the brand-new Roadside Design Guide published by AASHTO, which has “everything to do with guard rails, and all kinds of stuff like that.” These three resources are generating about 90 percent of the interest in ATSSA resources.

Dancy mentioned three video sets that are particularly popular at APWA at the moment. APWA has a “limited number of safety resources,” per Dancy, all produced by Vista. Of these, the Loader Backhoe Series, Wheel Loader Series, and Transport Trailer Safety video are selling the best.

The Loader Backhoe Series is a set of three videos, covering pre-start inspection, safe operating techniques, and maintenance and transport.

What is ATSSA’s #1 safety seller?
The MUTCD.

The Wheel Loader Series is a two-video set, which brings together real world lessons learned in many different environments and emphasizes the importance of the daily walk-around inspection.

Transport Trailer Safety addresses correct loading, tie-down, transport and unloading of 18 different types of equipment, and accounts for a variety of environmental factors.

So that’s what’s hot. Feel free to contact APWA at (816) 472-6100 or ATSSA at (540) 368-1701 or (800) 272-8772 for more information on the publications they offer.
When Training Road Crews About Work Zone Safety, Keep the Gory Details

... by Lisa Harris

Terry McNinch is passionate about work zone safety. And he thinks you should be, too, if you provide safety training for road crews.

McNinch recently presented a Click Listen and Learn* session on "Using Gut-Level Emotion to Make Safety Training Stick: An Alternative Approach that YOU Can Use." His presentation was based on work zone safety training he conducts as director of the Michigan LTAP.

"Showing the same old video in a safety meeting and having everyone sign the sign-up sheet to get a break on insurance just doesn't cut it," he said.

McNinch uses a combination of true stories and photographs of dangerous work zone practices or accident scenes to make his point: It’s DANGEROUS out there. And he makes it personal—it’s dangerous for YOU, the guy next to you, YOUR wife, YOUR kids, YOUR parents.

He told a story about a gravel truck driver who rolled through a stop sign and ran into a car carrying two women, young college students. One was killed at the scene. Her mother happened upon the scene shortly thereafter. McNinch said the truck operator was the first to reach the scene, he watched the woman die, and he was there to see the mother’s reaction. That experience marked the truck driver for the rest of his life.

Another involved a road crew riding in the back of a pick-up truck that had to swerve sharply to avoid being hit by a semi. One crew member was thrown from the truck box and got caught under the semi as it was braking. A photograph showed the scene of the accident, with skids marks and a plastic tarp by the side of the road. He said “that’s not his body under there, it’s pieces of his body that the rescue crew scraped up from the road.”

McNinch uses graphic stories like this to get crews to pay attention. He says “Safety is a topic no one will argue with, [and yet] when we provide safety training, no one listens.”

Rookies need a strong dose of awareness out there and veterans “need to use what they already know,” he said.

The challenge is to make an impact in training without a wake-up call of having someone killed.

McNinch backed up his ideas on training by discussing research on effective communication. He said arousing fear is the best way to make safety information memorable, and that’s why he doesn’t shy away from gory details.

"[Road workers] could get killed out there, or their actions could kill someone else," he said. “They need to see what really happens.” he said.

“However, I wouldn’t show pictures like that to the PTA...you have to use some judgement.”

He suggests telling it like it is; replacing vague words no one uses, like “maimed,” with something specific, like “a flagger got smacked by a side-mirror on a passing truck.”

*Click, Listen and Learn is a training program on local road issues sponsored by the American Public Works Association and the Local Technical Assistance Program (LTAP). See our Summer 2001 issue for more information, or give us a call at (785) 864-2590. Upcoming sessions on a variety of topics are listed on page 14.

Is she talking on a CB with the flagger at the other end of the work zone? No, she’s talking to her baby, inside the car. McNinch uses images like this to show dangerous work zone practices.

What if you are not a skilled presenter or story-teller? McNinch suggests finding someone in your agency who is, or cooperating with other agencies to create a joint safety program.

He suggested getting stories about work zone accidents from the state attorney’s office, state troopers, the state DOT’s attorney, county attorneys, and your peers. And be sure to follow the stories with suggestions for safe practices crews can follow to prevent accidents.

McNinch’s Click, Listen and Learn presentation is available on CD for $59 ($49 for APWA members). To purchase a copy, call Christine Robinson at the APWA, (816) 472-6100, ext. 3560.

It’s guaranteed to make you sit up and pay attention.
2002 KUTC Lending Library Update

Instead of printing a 2002 lending catalog, we are providing these updates as an insert to your current catalog. Clip this page and place it inside your 2001 KUTC Lending Library Catalog for easy reference.

If you don't have the catalog, download it from www.kutc.ku.edu. (Or even easier, use our searchable video and publication lending libraries.) If you don't have a computer, order a hard copy on page 15.

... New Videos .............

BICYCLISTS & PEDESTRIANS


WALK! (48 min), FHWA, OTA, HTA, 1990. This video compiles three programs and short clips discussing the amount of accidents involving pedestrians and how they occur. Introduces engineering options to make a better walking environment and stresses pedestrian safety (Spanish clips included).

Walk Our Children to School Day (13:20 min), Thomas May Associates, Inc, 1999. This video is a compilation of several news segments highlighting Walk Our Children To School Day (October 6) in Alabama; parents were interviewed on the hazards they encountered on their walk to school.

TRAFFIC SAFETY: signals, signs, markings & railings

Demonstration of Milled Rumble Strips on Asphalt Shoulders in the State of Kansas (6:30 min), Kansas DOT, 1999. Demonstrates the use of a computer-controlled milling machine and discusses the benefits of milled rumble strips for drivers who drift onto the shoulder of a road.

Night Lights—How Retroreflectivity Makes Roads Safer (13 min), ATSSA, 2001. An introduction to retroreflectivity—what it is, how it works and how retroreflective products are made. Also reviews challenges of nighttime visibility. Appropriate for commissioners, schools, or general public.

MISCELLANEOUS

“Get the Dirt” (8:44 min), Dig Safely Program (22 sponsors), 2000. Reviews 4 steps for safe digging: 1) call before you dig, 2) wait the required amount of time, 3) respect the marks, 4) dig with care. Good refresher on using one-call programs.

Mowing (30 min), Illinois DOT. Part 1 describes why, when and where to mow, and how to mow safely, including on slopes and around corners.

Road Blading Forest Service Style (18 min), USDA-Forest Service. Demonstrates the Forest Service's five-pass process and their “light on the land” approach to grading low volume roads. Includes interviews with operators.

... New Publications .......

BICYCLISTS/PEDESTRIANS

A Walkable Community (fold-out brochure and map), USDOT/FHWA, 2000. A well-designed and very informative presentation of effective pedestrian facilities. Includes statistics on pedestrian accidents.

PAVEMENTS & ROADS: maintenance, repair & recycling

2002 KUTC Lending Library Update, continued


SAFETY, WORK ZONES, TRAFFIC CONTROL, GUARDRAILS, SIGNS & POSTS

Maintenance of Signs and Sign Supports for Local Roads and Streets, FHWA, 2002. Describes why sign maintenance is important and provides guidance (using illustrations and photographs) for doing the job right.

This Vehicle Stops at Highway-Rail Crossings—bumper sticker, Look Listen & Live Operation Lifesaver. This bumper sticker decal is yellow and red and reads, “This Vehicle Stops at Highway-Rail Crossings.”

Work Zone Safety: Guidelines for Construction, Maintenance, and Utility Operations (44 pgs), ITRE, 1997. Covers basic requirements of Part VI of the MUTCD, especially regarding short term work zones in rural areas and small cities. (There is a $3.50 charge for this publication.)

TRANSPORTATION PLANNING

Access Management: Sensible Solutions for Tomorrow’s Traffic (tri-fold brochure) An at-a-glance guide to limiting access to heavily-traveled roads, how the process works, and when to consider its use. Published by USDOT/FHWA, 1998.

A Citizen’s Guide to Transportation Decisionmaking (32 pgs), FHWA, 2001. Provides an overview of the key participants and important products of the transportation decision-making process and how citizens can participate in the process.

Corridor Management: Balancing Land Use and Transportation (tri-fold brochure) A very simple presentation of corridor management—a planning tool whereby governments work together to improve safety and efficiency of major traffic corridors. Includes contacts within each of the KDOT districts. Published by KDOT.

Where Will My Driveway Go? (tri-fold brochure) A brief guide to both access management and corridor management, with information about how to apply for a permit from KDOT to build a driveway on highway right of way. Published by KDOT.

UNPAVED ROADS

Problems Associated With Gravel Roads (156 pgs), USDOT/FHWA, 1998. An LTAP product, this book looks at the overall environment of gravel roads; the materials used to surface them; the common surface defects—their causes, prevention, and correction; and the equipment/techniques used to repair and maintain gravel roads.

Gravel Roads Maintenance and Design Manual (102 pgs), South Dakota LTAP, 2000. Provides clear and helpful information for doing a better job of maintaining gravel roads. Contains many useful photos and illustrations. Also available on CD.

NEW CDs

BICYCLISTS/PEDESTRIANS

Pedestrian/Bicycle Safety Resource Set, USDOT/FHWA, 2000. This CD describes problems and possible solutions for pedestrian and bicyclist safety. It should be a valuable tool for designers of roads and bike/pedestrian facilities.


TRANSPORTATION PLANNING

Intelligent Transportation Systems Awareness, Version 2.0, USDOT/FHWA, 1999. This CD-ROM aims to develop awareness about intelligent transportation systems—a collection of technologies used in transportation to increase efficiency in traffic flow and communication.

SAFETY, WORK ZONES, TRAFFIC CONTROL, GUARDRAILS, SIGNS & POSTS

Work Zone Operations: Improving Mobility and Safety on Both Sides of the Barrel, USDOT/FHWA, 2000. This CD provides a best practices guidebook for effective work zones, both in terms of traffic flow and worker and driver safety.
KDOT doesn’t want you seeing double. That’s why it acts as a second line of defense when it comes to work zones.

KDOT—the Kansas Department of Transportation—dispatches a five-person Traffic Control Review Team to check those out.

Sometimes things get pretty blurry out there.

“We’ve seen situations where temporary pavement markings have been placed, but the old markings were not removed,” says team leader Mike Herzog.

Nightfall can also double the confusion.

Herzog and his team travel to a different KDOT district each month during the construction season for a two to three day visit. They visit all six of the state’s districts each year. The team lets the districts know in January when they’ll be visited.

Herzog says, “We examine signing, striping, lighting and anything else to do with work zones. We make sure each site gives the traveling public an accurate message about what to expect ahead.”

KDOT has standard specifications for work zone set-up. The team uses the Manual of Uniform Traffic Control Devices as a back-up. (KDOT will use the 1988 manual until the millennium edition is adopted by the state.)

A KDOT district rep from the local area accompanies the team on each inspection. They discuss safety issues and start a dialogue that continues even after the team heads back to Topeka. The team provides notes to the field rep so that concerns can be addressed quickly by the area office, Herzog says.

KDOT review teams have existed for about 20 years, identifying various work zone concerns along the way.

“We’ve found the wrong signs being used, and sometimes a misapplication of a device,” Herzog says.

Recently, for example, they saw a temporary traffic signal being used without a back plate. That can make a signal difficult to see when the sun is behind it.

In addition to the district inspections, the team makes occasional nighttime inspections of interstate work zones.

“You’d be amazed at what you see at night,” said Herzog.

Because of their observations, the team encourages field personnel to inspect all work zones at night.

“The main thing we try to preach to our field personnel and contractors is truth-in-signing,” said Herzog. “We tell them: ‘Make sure you are communicating the truth to the traveling public about what to expect ahead.’”

—Mike Herzog

“The main thing we try to preach to our field personnel and contractors is truth-in-signing. ...We tell them: ‘Make sure you are communicating the truth to the traveling public about what to expect ahead.’”

2002 KDOT Traffic Control Review Team

✓ Bob Alva, Federal Highway Administration, Topeka office
✓ Joel Breakstone, Bureau of Local Projects
✓ Charlie Brunson, Bureau of Design
✓ Mike Herzog, Bureau of Construction and Maintenance
✓ Jeff Henry, Bureau of Traffic Engineering

For more information about the Traffic Control Review Team, call Mike Herzog, Field Construction Engineer, Bureau of Construction and Maintenance, at (785) 296-3576.
New Users Guide Targets Pedestrian Safety

In 2000, more than 4,739 pedestrians were killed and 78,000 were injured in U.S. motor vehicle crashes. These figures point toward a need to increase pedestrian and bicycle safety and mobility. Whether it’s making improvements in crosswalks, sidewalks, walkways and pedestrian technologies, or expanding public education and safety programs, Federal Highway Administration’s (FHWA) Pedestrian and Bicycle Safety Research Program strives to pave the way for a more walkable future.

A part of a larger study, FHWA recently published the Pedestrian Facilities Users Guide—Providing Safety and Mobility. This guide helps engineers, planners, and safety professionals make cities more pedestrian-friendly and safe. The guide offers plenty of useful information about safe walking environments, and highlights the main causes of pedestrian crashes and strategies for countering them.

Pedestrian Facilities Users Guide—Providing Safety and Mobility is also a tool for identifying pedestrian safety needs within roadway rights-of-way. It defines 13 pedestrian crash-type groupings and the types of possible safety counter measures for each group in different crash situations. Along with this information, the guide includes the purpose, considerations, and estimated costs for each countermeasure.

The Pedestrian Users Guide supplies a number of case studies that highlight success stories in Asheville, NC, Cambridge, MA, Boulder, CO, Fort Pierce, FL, and Portland, OR, including traffic calming, reducing speed through neighborhoods, revitalizing downtown areas, and improving safety for children near schools.

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This photo shows pedestrians standing on a depressed median, four-lane separator. It might be safer under certain conditions for the pedestrians to wait for the light to change on the corner of the road.

A printed version is not yet available; however, the Pedestrian Facilities Users Guide is current available on-line by visiting the following site: http://safety.fhwa.dot.gov/fourth-level/design_p.htm#crosswalk.

For more information, call Ann Do at FHWA at (202) 493-3319.

Reprinted from Research & Technology Transporter, USODT/FHWA, March 2002.
A Walkable Community is More than Just Sidewalks

Well maintained sidewalks are an important component of a pedestrian friendly community—but not the only one to consider. A new brochure by the Federal Highway Administration on pedestrian safety walks the reader through a variety of other considerations.

The brochure, *A Walkable Community Is More Than Just Sidewalks*, is chock-full of statistics on traffic accidents involving pedestrians. It also describes characteristics of pedestrians at different ages (see sidebar) and measures that can be taken to slow traffic and decrease accidents.

A strength of this brochure is its fold-up format and use of illustrations to bring the message home.

<table>
<thead>
<tr>
<th>Common Pedestrian Characteristics</th>
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<tr>
<td><strong>Age</strong></td>
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<td>5-12</td>
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<td>13-18</td>
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<td>19-40</td>
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<td>40-65</td>
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<td>65+</td>
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Bicycle Friendly Rumble Strips

Two new bicycle-friendly rumble strip patterns have been recommended to AASHTO's Steering Group for Technology Deployment. The patterns are recommended specifically for non-freeway facilities. Developed by Pennsylvania State University, the new configurations provide enough vibration to alert inattentive or drowsy motorists but can be safely traversed by bicyclists.

For more information, see AASHTO’s High Value Research web site: [www4.nationalacademies.org/trb/scar/states.nsf](http://www4.nationalacademies.org/trb/scar/states.nsf). Or contact Michael Bonini, Research Division, Pennsylvania DOT, (717) 772-4664, mbodini@dot.state.pa.us.

Retroreflective Sheeting Identification Guide
This one-page (front and back) laminated sheet shows photographs of all 27 retroreflective sign sheeting types known as of November 2001. The sheeting patterns are shown at actual size. The “type” designations used in the guide are ASTM D 4936-01 classifications as stated by the manufacturers. Most of the sheeting types shown are above Engineer grade. This guide is useful for taking sign inventories, especially for road departments that have several types of sheeting among their road and work zone signs.
—by Lisa Harris

Safer Journey: Interactive Pedestrian Safety Awareness
This CD-ROM builds awareness of pedestrian safety by taking viewers through an interactive journey where they encounter pedestrian safety scenarios. A quiz and library of related resources are also included. Requires computer with sound.
—by Jennifer Noblitt

Work Zone Operations: Improving Mobility and Safety on Both Sides of the Barrel
USDOT/FHWA in partnership with AASHTO, 2000.
Anyone involved with road construction may be interested in this CD’s content—mobility and safety at roadway construction sites. The information is fairly well presented (there’s even a search option) as long as you know what you’re looking for. If you use this CD-ROM with a specific purpose or data set in mind, you will probably find it useful. If you are planning to open it up and browse through, you may find yourself frustrated. The information is there, and the visual presentation is okay, but the information is not very clearly organized, which is unfortunate, as someone clearly put a lot of work into this. This is intended to be an ongoing project, with updates provided by highway agencies and available on-line.
—by Ira Allen

Roadway Safety Guide
Roadway Safety Foundation and USDOT/FHWA.
This 78-page guide helps elected officials learn to recognize potentially hazardous roadway conditions and identify trouble spots in their own communities. It also advises them to work with local, state, and regional highway engineers and other relevant agencies to address roadway safety problems. Download or order the guide from www.roadwaysafety.org or call (202) 857-1231.
—by Lisa Harris

Calendar

<table>
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<tr>
<th>Event</th>
<th>Date</th>
<th>Location</th>
<th>Contact Information</th>
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<tr>
<td>NHI Course: Urban Drainage Design in Topeka</td>
<td>June 25-27</td>
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<td>Infrastructure Asset Management—Best Practice</td>
<td>June 26-27</td>
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<td>Call TransEducation Program, B16/350-2248</td>
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<tr>
<td>Kansas City, MO</td>
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<td>Call TransEducation Program, B16/350-2248</td>
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<td>July 9-10 Pavement Design, Maintenance, and Management—Practical Solutions in Kansas City, MO</td>
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<td>Call TransEducation Program, B16/350-2248</td>
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<td><strong>July 17 Implementing GASB-34 (Click, Listen and Learn)</strong></td>
<td>August 7-11</td>
<td>APWA Kansas City Metro Chapter Snow Plow Rodeo 2002 in Gardner, KS</td>
<td>Call (913) 862-0650</td>
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<td>Roundtable Discussion, APWA Kansas Chapter 7/18 in Great Bend</td>
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<td>8/29 in Wichita</td>
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<td>10/24 in Lawrence</td>
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<td>11/21 in Fort Scott</td>
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<td>Call Brenda Herman at 785/628-7350</td>
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<td>September 4-5 Kansas Expo: 2002 Winter Training in Salina</td>
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<td>Call Mike McGee at 785/568-3801</td>
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<td>*September/October LTAP Motorgrader Operator Training 5 locations in KS</td>
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<td>October 7-11 APWA Kansas City Metro Chapter Snow Plow Rodeo 2002 in Gardner, KS</td>
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<td>Call Wes Ludwig at 913/682-6560</td>
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<td>*October 8-10 Culvert Design (NHI Course), in Topeka</td>
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<td>October 15-16 MINK2 (FHWA County Engineer’s Meeting) in St. Joseph, MO</td>
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<td>Call Gary Rosewicz at 785/562-5349</td>
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<td><strong>October 29 Use of Chemicals and Abrasives for Winter Road Maintenance (Click, Listen and Learn)</strong></td>
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<td>*October LTAP Snow and Ice Control Training 5 locations in KS</td>
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<td>November 18 Fall Meeting of the Kansas County Highway Association (in association with KAC meeting) in Wichita</td>
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<td>Call Norman Bowers at 913/782-2640</td>
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For information on calendar items indicated with a * or to suggest a topic for a future LTAP workshop, contact:
Rose Lichtenberg
LTAP Training Coordinator
Kansas University Transportation Center
1530 W. 15th Street, Room 111
Lawrence, KS 66045-7609
785/864-2594
or visit our Web site at www.kutc.ku.edu

**To register for the APWA/LTAP "Click Listen and Learn" workshops, call Ashley Gann at (816) 472-6100 ext. 3511. Cost is $125 per site.**
Free Resources

Equipment

Available free—for loan to local highway agencies. Call us at (785) 864-5658 to arrange time period needed for loan. There could be a waiting list for these items.

- Jamar Technologies, Inc. (DB-400) Turning Movement Counter Board
  A basic model for recording turning movements at intersections. The board is lightweight and comes with its own case.

- Jamar Technologies, Inc. (TDC-8) Turning Movement Counter Board
  Can be used to do turning movement counts, classification counts, gap studies, stop-delay studies, speed studies, and travel time studies. The board is lightweight and comes with its own case.

Video or CD

One per lending request. Two week lending period.

  Specify format: □ videotape or □ CD


- Work Zone Operations; Improving Mobility and Safety on Both Sides of the Barrel
  by USDOT/FHWA in partnership with AASHTO, 2000.

Publications

You are free to keep these unless otherwise noted.

- Maintenance of Signs and Sign Supports for Local Roads and Streets
  A handy guide for road crews in understanding why maintaining signs is important. Outlines steps needed to keep the sign and sign support in good repair. (See more information on page 5.) Published by FHWA and LTAP, 2001.

- Retroreflective Sheeting Guide
  Shows photographs of all 27 retroreflective sign sheeting types as of November 2001. The sheeting patterns are shown at actual size. (See more information on page 14.) Published by USDOT/FHWA, 2001.

- A Walkable Community
  A fold-out brochure/map with a wealth of information on pedestrian facilities and safety issues. (See more information on page 13.) Published by USDOT/FHWA, 2001.

Order Form

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*For all international requests, the requester must pay postage. We will notify you of the postage cost and will send materials after receiving payment.
Let us at the KUTC help you find the answers to your transportation-related questions.

KUTC, 1530 W. 15th St., Rm. 211, Lawrence, KS, 66045
Call 785/864-5658 (fax 785/864-3199)
www.kutc.ku.edu

The Kansas Local Technical Assistance Program (LTAP) is an educational, research and service program of the Kansas University Transportation Center (KUTC), located in the University of Kansas School of Engineering. Its purpose is to provide information to local and county highway agencies and transportation personnel by translating into understandable terms the latest technologies in the areas of roads, highways and bridges.

The KUTC Newsletter is one of the KUTC’s educational activities. Published quarterly, the newsletter is free to counties, cities, towns, tribal governments, road districts and others with transportation responsibilities. Editorial decisions are made by the KUTC. Engineering practices and procedures set forth in this newsletter shall be implemented by or under the supervision of a licensed professional engineer in accordance with Kansas state statutes dealing with the technical professions.

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Director ....................... Tom Mulinazzi
Editor ........................... Lisa Harris
Contributing Writer ................. Ira Allen

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KUTC Newsletter
K. U. Transportation Center
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