

Country Roads

& City Streets

WV Local Technical Assistance Program

Spring 2013

Benjamin M. Statler College of Engineering & Mineral Resources

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WV LTAP EQUIPMENT LOAN PROGRAM

Kim Carr and Andrew Morgan, WV LTAP

Have you ever thought it would be nice to know how many vehicles are being driven on your city streets or how many people use your town's sidewalks or designated pedestrian trails? In addition to just being nice information to have, collecting and analyzing data can help your agency prioritize safety, maintenance, and development needs. Data helps roadway managers make informed decisions when prioritizing projects and deciding on the type and level of work that should be done. For instance, collecting vehicular data may include gathering and analyzing traffic volumes, vehicle types and weights, traffic speeds, and turning movements. Data of this sort could help with everything from deciding whether or not to re-time a traffic signal or add a turn lane to justification for installing, or not installing, traffic calming devices, such as speed humps. Collecting pedestrian data and knowing where people walk can assist in determining where sidewalks should be added or improved. Having a better understanding of what is currently occurring is beneficial for future planning and helps provide a better service to motorists and pedestrians in your area.



Photo by WV LTAP

Stephanie Spangler and Andrew Morgan, WV LTAP staff, attach a radar recorder to a tree with an unobstructed view of the street where traffic data will be collected.

HOW CAN WV LTAP HELP?

WV LTAP has a series of tools that can assist you in getting the information you need.

RADAR RECORDERS

The WV LTAP currently has two **radar recorders** which are excellent at collecting traffic data on two-lane roads. These traffic counters collect data on the number of cars being driven on your roadways, along with their size and speed. Unlike traditional traffic counters, these devices are attached to utility poles or trees and use radar so there is no need to put sensors or long tubes in the road. By keeping the equipment out of the road, the recorder is able to collect more accurate information, as drivers often change their driving patterns when they see traffic counting tubes or sensors on the roadway. More importantly though, it keeps workers out of the road during setup, making the process quicker and much safer.

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West Virginia University



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Country Roads & City Streets is typically published quarterly. The purpose of this newsletter is to provide information that is beneficial to decision makers, elected officials, and roadway construction, maintenance, and management personnel.

The material and opinions included in this newsletter are those of the West Virginia LTAP and do not necessarily reflect the views of the Federal Highway Administration or the West Virginia Department of Transportation. Every effort has been made to ensure the integrity and accuracy of both original and borrowed material; however, the West Virginia LTAP does not assume responsibility for any information that is found to be incorrect.



The West Virginia LTAP is part of the National Local Technical Assistance Program, which is funded by the Federal Highway Administration. West Virginia LTAP also receives funding from the West Virginia Department of Transportation.

MISSION:

The mission of the WV LTAP is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.

To help achieve this mission, training, demonstrations, personalized technical assistance, and resource materials are provided.

TURNING MOVEMENT COUNTERS

Unlike radar counters, **turning movement counters** are manual devices which require someone to operate the device during the entire count period. These counters are good when you have a problematic intersection, and you want to better understand how vehicles and pedestrians travel through the intersection. You can use the counters to determine how many vehicles turn at an intersection, or how long vehicles wait, on average, at a stop sign. The WV LTAP currently has two of these devices available for loan.

INFRARED TRAIL COUNTERS

Infrared trail counters can be used to collect information on pedestrian and bicycle traffic on trails, paths, and sidewalks. These counters use an infrared beam that is able to detect warm, moving objects. Through this technology, the infrared counter is able to detect and count the number of pedestrians and cyclists that pass a specific location. The WV LTAP has three trail counters available for loan.

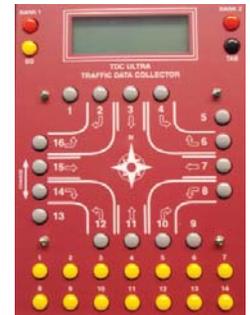
WV LTAP MUST BE SELLING THEIR SERVICES NOW, RIGHT? WHAT'S THE CATCH?

The loan program is a free service offered by the WV LTAP program, primarily to agencies in West Virginia that own or maintain our state's roads, streets, and trails. As part of the program, a WV LTAP staff member brings the equipment to your site and instructs the agency's employees on correct usage. The agency takes responsibility for ensuring that the equipment is returned in the same condition in which it was provided.

All of our counting equipment is rugged, weatherproof, and easy to use. For more information on the WV LTAP equipment loan program, please contact Kim Carr at 304-293-9924 Kim.Carr@mail.wvu.edu or Andrew Morgan at 304-293-9939 Andrew.Morgan@mail.wvu.edu.



Stephanie Spangler is using a turning movement counter, like the one shown here, to collect vehicle turn data at this intersection.



Photos by WV LTAP



Photo by WV LTAP

This is one of the infrared trail counters and metal storage boxes available for loan from the WV LTAP.

THE PROOF IS IN THE PROOFREADING

Kim Carr and Ashley Collins, WV LTAP

Proofreading is an essential part of writing. The perfect business correspondence, whether it is a letter, memo, email, text message, etc., is more than just getting your thoughts written down. Proofreading greatly enhances the quality of your writing, helping you project a positive tone, increasing your credibility, and conveying your message clearly and concisely.

GENERAL PROOFREADING TIPS:

- **Concentrate.** Get rid of distractions as best as you can and proofread in a quiet place.
- **Don't rely solely on spell checkers and grammar checkers.** While they are good support tools, they are not a substitute for proofreading. If you have common words you always misspell, make sure to pay extra attention to these.
- **Step away from your document.** Even if you only take a short break, this brief time away from the document will help you have a fresher perspective when reading it again.
- **Give yourself enough time.** Many errors are made by not allowing ample time for the writing and proofreading processes.
- **Print the document.** Sometimes it is easier to see mistakes in print rather than on a screen. Also, it may be easier to see the document's layout, text and images sizes, how the document will look printed out, and other items when you have a paper print-out.
- **Read the document aloud.** This will help you to read each word individually and allow you to hear if what you have written makes more, or less, sense when spoken.
- **Ask a trusted friend or colleague to proofread your work.** Two pairs (or more) of eyes are always better than one.
- **Make sure that what you have written achieves your purpose.** Have you said what you wanted to say, in a manner appropriate for the intended audience?
- **Review your document in different stages. *These stages include:***
 - 1. Layout**—In this stage, you are looking at the visual design of the document. Items to look for include: margins, headers, footers, line spacing, font type and sizes, page numbers, etc. Is everything lined up? Do the headers and footers correctly identify the associated material? (This is especially important when a document has different chapters.)
 - 2. Spelling, Grammar, Punctuation**—Read each word individually. Check for commonly misused words and watch for homonyms, which are words that sound alike but mean something different. For example, did you use the word their when you meant to use there? Affect when you should have used effect? These words have completely different meanings, so be careful! Watch out for contractions and apostrophes. For example, do not mix up words, such as it's and its, your and you're, there and they're. Make sure you have used correct capitalization and punctuation. Are your nouns and verbs in agreement? When checking for agreement you want to pay attention to tense (past, present, future) and that your subjects and verbs are in agreement based on whether they are singular or plural. Also, double-check any numbers in your document, including postal codes, phone numbers, monetary amounts, etc. Adding an extra zero, forgetting a zero, or transposing numbers can make a huge difference in what you intended to state.
 - 3. Flow**—Does your document begin each paragraph with a strong or relevant opening sentence? Have you used a variety of sentence lengths? When you read it aloud, does it read easily? Did you use transition words and bulleted lists, if necessary? Do the paragraphs have smooth transitions?



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LARGE TIRE TRAILER TRANSPORT

An Innovative Idea from North Dakota

(Article adapted from the 2010 LTAP/TTAP Build a Better Mousetrap National Entry Booklet)

Across the country, the roadway agencies that LTAP and TTAP Centers serve are filled with innovative and resourceful workers, many who find new and better ways to accomplish everyday tasks. This has led many Centers to develop contests called, "Build a Better Mousetrap" or "Show Us." The purpose of these competitions is to collect and disseminate real world examples of best practices, tips from the field, and assist in the transfer of technology. Each year at the National LTAP Association (NLTAPA) meeting, LTAP and TTAP Centers are given the opportunity to submit examples from their state competitions into the NLTAPA competition.

The following innovative solution, **Large Tire Trailer Transport**, is from Towner County, North Dakota and was awarded 1st place in the 2010 Build a Better Mousetrap National Competition. The WV LTAP staff thought many of you would find this solution useful. If you would like to know more about this piece of equipment, please contact Kim at the WV LTAP and she will put you in touch with the road foreman from Towner County.

PROBLEM STATEMENT:

With motor graders and front end loaders located throughout the county, the Towner County North Dakota roadway agency was hauling heavy tires in from the work sites for repair. Manually handling these tires was very difficult and could be unsafe for the individual if not handled properly.

DISCUSSION OF SOLUTION:



Towner County Roadway Department employees built a small trailer, as shown in the photo to the left, to transport the large tires to and from the work site, as necessary. The trailer has a two (2") inch axle with sixteen (16") inch wheels. The trailer carriage is five (5) feet long, two (2) feet wide and thirty nine (39) inches high, using one

and one-half (1.5") inch square steel tubing. The trailer bed is pinned at the front to the trailer hitch for easy tilting in the back. The tailgate is hinged and can then be dropped to the ground level, making it very easy to roll the tire into the cage. The top of the tailgate has a chain attached to partially raise the tailgate when the tire is placed thereon. When the trailer is tilted down in front, the tire rolls ahead and the tailgate can be closed. There is a winch located on the trailer hitch to assist in pulling the trailer carriage into place and reinserting the pin; the procedure is reversed for unloading the tire.

With this trailer design, the tires can be transported back to the shop for repair, and the vehicle that is towing the trailer can generally travel within the posted speed limit to the repair shop.

COSTS TO BUILD

New material for the large tire trailer cost approximately \$600.00. All labor was done in-house by agency employees during downtime.

SAFETY:

Handling large equipment tires is very difficult. Prior to having the large tire trailer, loading the tires into a truck (pickup) took two individuals, and with the heavy



lifting required, injuries were always a possibility. With this trailer, since very little lifting is required, there is less possibility for injury.

WV LTAP Note: The trailer would have also increased the efficiency of the department. One individual could now handle the removal, loading, unloading, and replacement of a tire, which would then free up the second employee to do other tasks.

Also, the WV LTAP staff would love to know if your agency's employees have developed or

refined a best practice, have an innovative idea, or have crafted a new device. Just give us a call, shoot us an email, stop by the office, or invite us to your site.

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EMAIL AND TEXT SPECIFIC PROOFREADING TIPS:

Have you ever sent an email or text message to the wrong person? Sent the wrong attachment in an email? In addition to the proofreading tips already discussed on page three, listed below are some specific tips for proofreading emails and text messages.

- **Don't fill in the "to" until you finish writing and editing the email or text message.** This will help prevent you from accidentally sending a message before it is finished.
- **Always re-read** your emails and text messages before sending.
- **Double-check** that you are sending the email or text message to the correct person, group, or list.
- When sending attachments, **verify that you are sending the correct attachment.**
- When sending a text message, **watch out for auto correct!**
- **Make sure you haven't written in ALL CAPS or all lowercase.**

Make sure to take the time to proofread all of your written correspondence. Think of proofreading as your "filter" for your written word; just as you often filter your thoughts before speaking, proofreading helps you filter your writing. Having a good set of proofreading skills will help make your message more credible and professional, as readers won't be distracted by punctuation, grammar, or other writing mistakes.

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ROAD SLEUTH INFORMATION SHEET

There are many myths about transportation related issues. Road Sleuth has been designed to help dispel these myths and reveal the truth. Road Sleuth came from conversations WV LTAP staff had with public works directors, street supervisors, and others. From these conversations, one common theme emerged: public works personnel getting the same questions and requests time and again from their elected officials and residents and not having educational information readily available.

The Road Sleuth series can be downloaded from the WV LTAP website (wvltap.wvu.edu) as a PDF or Microsoft Publisher file. The Publisher files are formatted so agencies can add their individual contact information if desired. The WV LTAP does ask that the main text not be changed or altered without permission. Agencies are encouraged to post these information sheets on their webpage, distribute printed copies to city council members, send out in mailings, etc. The WV LTAP staff welcomes your suggestions for new topics and will continue adding new sheets as they become available.

MYTH: ROUNDABOUTS AND TRAFFIC CIRCLES ARE THE SAME THING



This photo shows a single lane roundabout in a rural location in the state of Washington. Prior to installing the roundabout, this intersection had a serious crash history. This roundabout is in the heart of an area where a popular tulip festival is held every year; as you can see in this photo, the roundabout has many tulips incorporated. (Special thanks to Skagit County, WA and the Washington LTAP for providing this photo.)

Motorists attempting to enter the roundabout must yield to circulating traffic and look for gaps to enter.

Many citizens have negative opinions of roundabouts and are opposed to constructing them in their community. These negative opinions may, in part, be due to the common misconception that traffic circles and roundabouts are the same. Additionally, inexperience with driving through roundabouts, safety concerns, and a lack of information often lead to resistance and negative opinions.

Studies have found that roundabouts are often a safer alternative to signed and signalized intersections. Since automobiles are traveling at low speeds, crashes that do occur are generally less severe. All vehicles are traveling in the same direction, which eliminates the likelihood of head-on and t-bone collisions. In addition to the safety benefits of roundabouts, they often move traffic more efficiently. When designed properly, vehicles are much less likely to stop and delays are reduced.

Generally, citizens' perceptions of roundabouts improve after driving through them a few times. Drivers tend to recognize the shortened drive time and increased safety of the roundabout. Often, it just takes the driver's personal experience to overcome their negative opinions.

Many people mistakenly use the terms roundabout and traffic circle synonymously. While both direct traffic in a circular pattern, they are not the same.

Traffic circles were introduced to the United States from Europe in the early 1900s. They were intended to direct traffic via a large circular or oval island. Traffic circles were designed for vehicles to travel through them at relatively high speeds (30 to 50 mph), and many were designed for entering cars to have the right-of-way. As traffic volumes increased, traffic circles became unsafe because the congestion and high speeds attributed to many crashes. Thus, the need for a safer circular intersection became apparent; the first modern roundabout in the United States was constructed in the 1990s.

Roundabouts are intersections in which traffic travels in one direction around a circular island, much like a traffic circle, but they have many distinct characteristics. Motorists in roundabouts travel at lower speeds, from 15 to 25 mph, and the traffic inside the roundabout has the right-of-way.

SPRING 2013 STREET SMARTS CONTEST

Photo by WV LTAP



In what West Virginia city or town is this street located and what is the name of the street?

On, or after, May 13, 2013 the first correct answer posted on the WV LTAP Facebook page will be the winner of a fabulous prize! (*Well, as fabulous as a prize can be under \$25.*) The correct answer will only be accepted on our Facebook page. [facebook.com/WVLTAP](https://www.facebook.com/WVLTAP)

The winner will be announced on our Facebook page and in the next edition of this newsletter. So in addition to the fabulous LTAP prize, you'll also get bragging rights!

CHECK OUT THE WV LTAP FACEBOOK PAGE



The WV LTAP wants to remind you that we are on Facebook! We encourage you to visit our page and give us your feedback. You can find us by typing in [www.Facebook.com/WVLTAP](https://www.facebook.com/WVLTAP) or within the search feature in Facebook, by typing WV Local Technical Assistance Program (WVLTAP). The page is set up so everyone can post comments; you don't need to become a "friend" or be accepted to post items. Just make sure to "like" us so anytime we add announcements, they will show up in your newsfeed.

This is a great place to check for upcoming training events, available give-a-ways, current transportation related items, photos, and much more. We also hope that in addition to checking out our announcements, this will be an interactive tool for you, our clients, to pose questions, share solutions, successes, challenges, etc.

ROADWAY FUN FACTS

Microsoft.com Image



DID YOU KNOW....

- West Virginia's Memorial Tunnel was the first in the nation to be monitored by television. It opened November 8, 1954. <http://www.wvcommerce.org/travel/requestinformation/funfactsandtrivia/unusualfacts.aspx>
- After thirty seconds of waiting, most people will begin to cross against the light, and they are more likely to jaywalk when well-dressed people do it first. <http://tomvanderbilt.com/traffic/some-things-about-traffic-that-may-surprise-you/>
- A driver driving at 30 mph sees an average of 1320 pieces of information every minute. <http://tomvanderbilt.com/traffic/some-things-about-traffic-that-may-surprise-you/>

RECENT WV LTAP ROADS SCHOLAR I GRADUATES

The WV LTAP is pleased to announce these recent graduates from our RS I and II Programs; congratulations to each of them for this accomplishment.

ROADS SCHOLAR I GRADUATES

These graduates are WVDOH-D1 employees.



Front Row: Rick Wheeler, Lisa Black, Duane West
Back Row: Jeff Blount, Rick Young, Warren Parkins

ROADS SCHOLAR I GRADUATE

Congrats Jennifer!



Jennifer McNamara, WVDOH-District 6,
Engineering Technician

West Virginia Local Technical Assistance Program
West Virginia University
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The WV LTAP encourages you to share this newsletter with others or direct them to the electronic version on our website <http://wvltap.wvu.edu>.

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- Road Crew
- Managers
- City Engineers
- Others