



## Message from the Director - Earl "Rusty" Lee, Ph.D.

Summer is nearly here and that means interns are in the field. This summer, the T<sup>2</sup> / LTAP Center will be fielding its largest group of interns, supporting local transportation agencies.

This has been a very successful program to help municipalities with a variety of projects, including sign inventories, curb ramps and ADA compliance, pavement distress condition, stormwater facilities, etc. Recently, the center received a grant from FHWA for two more of our Trimble data col-

lection devices to support ADA efforts around the state.

I would like to congratulate the City of Newark Public Work's Department and the University of Delaware Grounds Services for their submissions to the "Build a Better Mousetrap" competition. This was the first year that Delaware will have an entry in the national competition. We had three great entries this year and we hope to see that number expand in the future.

There are several new courses on the horizon, includ-

ing a complete revision to the Low Cost Safety Improvements course. We will also repeat the Ethics Course for professional engineer re-certifications sometime this fall. Watch the T<sup>2</sup> website for these and other course announcements.

If there is anything the Center can ever do for your town or agency, please contact Matt, Sandi, or me and we will see what we can do.

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## Liability Issues with Pedestrian Facilities

The Transportation Research Board is hot off the presses with a new Legislative Research Digest entitled "Liability Aspects of Pedestrian Facilities."

It is worth a read.

In a comprehensive but (relatively) concise approach, it examines relevant historic and recent case law associated with pedestrian facilities. Understandably focused on aspects of the Americans with Disabilities Act (ADA), it nonetheless deals with more general slip, trip, and fall issues and other general allegations of neglect.

Through relevant case law,

the digest steps away from the theoretical and examines what really happens when public agencies and private sector businesses fail to meet ADA or other standards of due care, the kind of enforcement that resulted, and what happened in some cases of over-reach by unscrupulous plaintiff-attorneys.

The digest ends with some summary risk management strategies. First up, identify safety issues. This is consistent with the ADA requirement to conduct a Self Evaluation and, in many cases, a Transition Plan. It is also consistent with case law, wherein the courts have taken the understandable view that if an organization hasn't even taken stock of its assets, how

can it assert compliance and due diligence?

The next strategy is to request help and input from the public. Except when we are homebound for illness or other reasons almost all of us are pedestrians during at least a portion of our day and that means there is an army of inspectors traveling our pedestrian facilities every day. Most of these people have reasonable expectations, particularly when they are included in our planning and development of priorities. Beyond just addressing complaints and grievances as they come in, including the

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### ITE Traffic Bowl



On April 13, 2015, the University of Delaware student chapter of the Institute of Transportation Engineers travelled to Arlington, VA to participate in the 2015 ITE

Traffic Bowl. UD was competing for the sixth consecutive year.

The UD team squared off against Penn State and Morgan State Universities. The Traffic Bowl is a Jeopardy-style competition with categories including The Highway Safety Manual, the Highway Capacity Manual and The Manual on Uniform Traffic Control Devices.

The UD team was comprised of Anna Duryea, Rachel Chiquoine, and Megan Rosica. The team finished second to Penn State. A number of UD alumni were in the crowd, cheering on the Blue Hen team.

After the competition, the team had a chance to network with ITE members. A great time was had by all.

### UD Students Compete

An annual visit of the Department of Civil and Environmental Engineering's External Advisory Council provided a great opportunity to showcase some of the competitions that engineering students have participated in recently. So students gathered in the DuPont Hall Structures Lab for a casual

forum.

Members of the EAC, faculty, and staff discussed the competitions with members from the ASCE Steel Bridge, Canoe, and Geo-Wall teams, the ITE Traffic Bowl, and the American Concrete Institute Concrete Beam teams.

These competitions are extra-curricular, so students took on these challenges in addition to their already packed academic schedules.

Nonetheless, students consistently report back that the preparation for these competitions and the networking and other interactions when they arrive at the competitions expand their skillsets in areas such as leadership, time management, quality control,

relationship building, funding, and so on.

Congratulations to our competing students!

*Photos courtesy of Mingxin Li*



## A Better Mousetrap

### We have a winner!

University of Delaware Grounds Services has been chosen as the best Delaware submittal for the 2015 Build a Better Mousetrap Competition for their “3-Point Hitch Brine Sprayer.”

The national Build a Better Mousetrap Competition is all about celebrating innovation by local agencies and sharing ideas, technologies, evolutions, approaches, and modifications that make the jobs of local agencies easier, more effective, and safer at low cost. It is the epitome of “doing more/better with less” and the nationally published booklet proves each year that local personnel are always looking at old problems with new perspectives and applying creativity and innovation to advance the cost-effectiveness, productivity, and safety of their organization.

### First Place

UD Grounds Services maintains 25 miles or so of pedestrian pathway on the Newark campus and they needed to reduce the amount of chlorides being applied to the hardscapes. With nearly 23,000 students and another 4,300 faculty and staff, the campus is a busy, busy place and the campus pedestrians tend to find it irrelevant that a snow or ice storm has occurred—they have some walking to do.

But whereas vehicular traffic moves in well defined lanes and tire loadings move the salt around, keeping the brine active, pedestrian ways may have little or no activity at first and the wider pathways on the Newark campus means the pedestrian could be anywhere. Thus, the stakes are higher for treating pedestrian surfaces



*Rusty Lee and Sandi Wolfe congratulate Roger Bowman (center), for the winning entry in Delaware's 2015 Build a Better Mousetrap competition.*

because you have to get it in the right place from the start of the operation.

So Grounds Services developed a low cost solution to apply salt brine to large plazas, patios, and sidewalks that are utilized by students, faculty, staff, and visitors. Leveraging their existing tractors with power take offs (PTOs), they fashioned together an existing 3-point hitch 150-gallon water tank with a PTO-driven pump, adding a spray bar, nozzles, and controller (powered by a 12 volt connection on the tractor). The prototype was intentionally designed so that the assembly could be easily transferred between tractors without any major modifications.

With a 150-gallon plastic liquids tank and PTO pump already among their assets, they added the spray bar, nozzles, and controller for approximately \$2,200.

This innovation is just the latest in the evolving snow and



ice control program at UD. Roger Bowman, Manager of Grounds Services, observed that the anti-icing setup will, “allow us to apply brine at a controlled rate to a wide range

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## A Better Mousetrap (Cont'd)



(Continued from page 3)  
of pedestrian areas 3-4 days in advance of a storm and reduce our salt usage.” Roger also noted that the setup could be used for other uses year round, such as fertilizer applications, with simple adjustments, such



*The national Build a Better Mousetrap competition yields dozens of innovative ideas and evolutions each year...and inspires yet more adaptation at public works yards across the country.*

*Annual booklets showing all the entries can be viewed at <http://www.ltap.org/resources/mousetrap.php>*

as swapping out the nozzles.

As the winner of the 2015 Delaware competition, UD Grounds Services received two Delaware MUTCD-compliant Stop/Slow paddles for temporary traffic control. Rusty Lee, Sandi Wolfe, and Matt Carter presented the prize to Roger on May 8th at their operations facility.

Their submittal has now been elevated to the Mid-Atlantic Region competition (Delaware, Maryland, Virginia, West Virginia, Pennsylvania) and has been forwarded as our contender to the LTAP Clearinghouse (they manage the national competition) and we will learn the winners at our National Local Technical Assistance Program Association annual meeting and conference in Savannah, Georgia in late July.



### Second Place

The City of Newark addressed another winter maintenance challenge with their “Two Hands Are Better Than Four” submittal. Jason Winterling, on behalf of Dave Vispi, explained, “the installation of a new plow blade required two men to hold the blade in place and bolt the blade to the plow. While this did not take a significant amount of time, any opportunity to make a two man job a one man job with a little thought and little to no cost is certainly worth it.”

Utilizing an old jack and scrap materials, a plow blade temporary support was constructed. A piece of plate steel was welded to the top of the jack. Scrap rebar and plate steel were then welded to the flat plate to create a support that would allow the blade to be correctly positioned on the plow by one mechanic.

The plow blade support was constructed in approximately one hour with in-house personnel and welding equip-



ment and only spare or scrap material was used. Jason estimated that the total cost was less than \$100, including labor.

He explained that, “sometimes finding the extra set of hands is what takes the longest. This is especially the case when long plowing shifts leave public works crews short staffed in the garage. When a plow blade needs to be replaced in the middle of a shift, and all of the available support is on the streets, one man can [now] get the job done.”

### Third Place

UD Ground Services grabbed the third spot as well with their “Front Mounted Leaf Collector.” Roger Bowman explained that their, “large leaf

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## Liability Issues with Pedestrian Facilities (cont'd)

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public, particularly the disabled, in our assessments and planning can save us a lot of time, avoid some bad assumptions, and put those members of the public on the solutions team instead of the alternative.

Next up, review the claims. If a grievance, complaint, or legal claim arises, address it directly and without delay. Let the complainant know (in the case of a legal action, through your attorney) your intended actions in response to the claim and the



timeframe for your investigation and response. Investigate the complaint objectively, entertaining the possibility that, yes, your organization may have failed to take timely and/or effective action (what's the point in pretending otherwise?). At the same time, document with notes and photographs the conditions at that time so as to have a record if the complaint becomes protracted. If you can address the complaint, even partially, take immediate action to do so—good will goes a long way with complainants and the opposite is equally true.

The next strategy is to

provide tools to address problems. Training of employees to respond correctly to community inquiries, complaints, or grievances is a great start, but equally important is to ensure that designers are able to complete technically correct and design-sensitive solutions, while inspectors and maintenance personnel are equally trained to ensure that the end result is correct and stays that way over time. Finally, our inspectors and maintenance personnel must be the eyes of the organization, spotting issues and degrading conditions before

they become problematic for the pedestrian.

Finally, the digest encourages organizations to ensure that our internal guidance and directives are consistent, not just with federal guidelines and standards of care, but also with what we actually do in practice. Said another way, perhaps one of the worst habits we can

engage in is to have internal policies that pretend to accomplish the standard of care, but in practice follow practices that will not achieve those stated goals.

There's nothing new about liability issues with pedestrian facilities. Public agencies (and private organizations) are sometimes

viewed as having deep pockets and there is no shortage of opportunistic plaintiffs and attorneys. But there are also plenty of legitimate cases where pedestrians exercising due care have encountered barriers or suffered injury because of poor maintenance. Regardless, nearly all pedestrian facilities have some shortcomings and they can be legal liabilities for us. As such, the new Legal Research Digest is a worthwhile resource for those interested in understanding those liabilities better.



*“Liability Aspects of Pedestrian Facilities,”  
Legal Research Digest 65,  
Transportation Research Board, May 2015, <http://www.trb.org/Publications/Blurbs/172532.aspx>.*

### A Better Mousetrap (Cont'd)

*The annual Build a Better Mousetrap booklets are a great use of time on rainy days. Invite staff to gather around a computer and view the dozens of ideas to see which of those can be adapted by your team...or just outright stolen!*

<http://www.ltap.org/resources/mousetrap.php>

(Continued from page 4) collection system and vehicle were too large for many of the small, tight areas on campus and a current staff member had previously utilized a small leaf vacuum [mounted on a] snow plow lift. By mounting [the power unit] to the front of the truck, we improved visibility, safety, and productivity.”

They utilized a Fisher snow plow frame and lift system, together with electrical connections to create the quick connect setup. They then connected the vacuum to the plywood truck body insert by running the pipe over the cab



chased a leaf vacuum trailer instead and the approximately \$2,000 saved by not purchasing the trailer more than offset the cost associated with adapting the snow plow frame and lift; hence, the net cost was approximately nothing.

of the truck.

Roger estimates that the cost was less than \$10,000, including the Fradan leaf vacuum, which accounted for about \$4,900. By our estimate, they would have pur-

#### Next Steps

As noted previously, our first place winner, Ground Services' 3-Point Hitch Brine Sprayer, will now compete in both the Mid-Atlantic Region



competition and the National Build a Better Mousetrap competition. The second and third place entries from the City of Newark and Ground Services will also be included in the 2015 booklet for the national competition.

The Delaware T<sup>2</sup>/LTAP Center congratulates UD Grounds Services and the City of Newark for their great submittals and thank them for sharing their ideas!

## Which Type of Traffic Control is Needed at This Intersection, if Any?

By Mehrdad Givechi, P.E., P.T.O.E.

[Reprinted with permission from the Fall 2014 issue of the Kansas LTAP Newsletter, a publication of the Kansas Local Technical Assistance Program (LTAP) at the Kansas University Transportation Center.]

When it comes to controlling traffic at intersections, one size does not fit all. Whether to place a stop or yield sign or traffic signal, add a roundabout, or just leave the intersection without any traffic control, depends on a few important factors, including approach speed, sight distance, and traffic volumes. This article will outline the considerations for installing different types of traffic control on local roads for optimal traffic safety.

### Function of traffic control at intersections

Traffic control devices alter the “rules of the road” for driver behavior to improve safety. Where there are no traffic control devices, the right-of-way rules of the road apply. These rules are established by the state and local laws in accordance with the state Motor Vehicle Code. The rules say:

1. The driver of a vehicle approaching an intersection must yield the right-of-way to any vehicle or pedestrian already in the intersection; and

2. The vehicle on the left must yield to the vehicle on the right if they arrive at approximately the same time.

Traffic control devices, such as YIELD or STOP signs or traffic signals, can be used to

The Delaware Motor Code has very similar language to the language here.

§ 4131 Vehicle approaching or entering intersection.

(a) The driver of a vehicle approaching an intersection shall yield the right-of-way to a vehicle which has entered the intersection from a different highway.

(b) When 2 vehicles enter an intersection from different highways at approximately the same time, the driver of the vehicle on the left shall yield the right-of-way to the vehicle on the right.

Title 21 Chapter 41 Rules of the Road (<http://delcode.delaware.gov/title21/>)

assign the right-of-way at intersections on one or more approaches. Roundabouts or mini traffic circles provide another way to assign right of way [see sidebar on page 10 regarding roundabouts and traffic circles].

### Guidelines on selection of intersection control type

The *Manual on Uniform Traffic Control Devices (MUTCD)*, which is the national standard for traffic control, outlines the specific types of information needed to make the decision about installing a traffic control device. The MUTCD states that engineering judgment should be used to establish intersection control type with the following factors as guidance:

- Vehicular, bicycle, and pedestrian traffic volumes on all approaches;
- Number and angle of approaches;
- Approach speed;
- Available sight distance on each approach; and
- Reported crash experience.

A guide for local agencies in knowing how to tell.



R1-1



R1-2

**Do you need to be an engineer to determine where traffic control devices will be placed?** According to the MUTCD, Section 1A-09, the decision to use a particular traffic control device at a particular location should be made on the basis of an engineering study or the application of an engineering judgment, both of which shall be performed by an engineer or by an individual working under the supervision of an engineer (See [Delaware] MUTCD, Part 1A-13, items 64 and 65 [[www.mutcd.deldot.gov](http://www.mutcd.deldot.gov)]).

**What is an engineering study?** According to the MUTCD, an engineering study is the comprehensive analysis and evaluation of available pertinent information, and the application of appropriate principles, provisions, and practices as contained in the MUTCD and other sources, for the purpose of deciding the applicability, design, operation, or installation of a traffic control device. The MUTCD requires that an engineering study be documented.

**No traffic control.** Where there is no history of crashes, sight distance is good, and total entering traffic volumes are very low (less than 400 vehicles per day), uncontrolled intersections may be a good choice.

In fact, according to FHWA-SA-05-11 “Road Safety Fundamentals,” uncontrolled intersections may even be safer than stop-controlled intersections at low volumes because a driver may be more likely to run a STOP sign if he or she knows there is little chance of a vehicle coming the other way. The publication states that drivers typically are more cautious when crossing an

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## Which Type of Traffic Control is Needed at This Intersection, if Any? (cont'd)

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intersection when they believe other drivers do not have to stop.

### Yield and stop control.

*Yield control.* Uncontrolled intersections may not work well when daily volumes exceed 400 vehicles. Use a YIELD sign if there is no crash history and sight distance is adequate. Often, a YIELD sign causes less delay than a STOP sign, because it requires drivers to



### Sight Distance Considerations

Sight distance is a factor when considering installing a traffic control device. Poor sight distance can lead to rear-end crashes on the approaches to intersections and to angle crashes within the intersections because drivers may be unable to see and react to traffic control devices or approaching vehicles. As a driver approaches an intersection, two different types of sight distances come into play:

- **Stopping sight distance** to the intersection—Drivers on the main road need to see far enough ahead so they can stop safely if a vehicle on the side road makes an unsafe move caused by lack of traffic control on minor road or lack of their visibility.
- **Intersection sight distance**—This is typically defined as the distance a motorist can see approaching vehicles before their line of sight is blocked by an obstruction near the intersection. The driver of a vehicle approaching a yield condition or departing from a stopped position at an intersection should have an unobstructed view of the intersection and enough time to anticipate and avoid potential collisions. Examples of obstructions include farm crops, hedges, trees, fences, berms, bridge railing, culvert headwall, utility poles, traffic control devices such as signs and signal equipment, buildings, parked vehicles, street furniture, etc. The horizontal and vertical alignment (i.e., curves and dips or rises) of the roadways approaching the intersection can also reduce the sight distance.

The area needed for provision of the unobstructed view is called the clear sight triangle. There are two types of sight triangles:

- **Approach sight triangle**, which covers a larger area and is applied to uncontrolled or yield-controlled intersections; and
- **Departure sight triangle**, which is smaller than its counterpart and is applied to stop-controlled (two-way or all-way) or signalized intersections.

For more information on sight distance, refer to AASHTO's "Green Book": A Policy on Geometric Design of Highways and Streets, 2011 Edition, Sections 3.2 and 9.5.

adjust speed to yield to another vehicle and not necessarily to come to a complete stop.

*Stop control.* Stop control may be necessary because of sight distance restrictions, high traffic volumes, or unusual conditions such as high crash locations. Local agencies use two-way stop control on minor roads that intersect roads with heavier traffic volumes, higher operating speed, or those that appear to be major roads. All-way stop control works best when traffic volumes are roughly the same on each approach to the intersection.

The MUTCD states that YIELD and STOP signs should be used at an intersection if one or more of the following conditions exist:

- An intersection of a minor roadway with a main roadway where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;
- A roadway entering a designated major roadway (e.g. state route, arterial, thoroughfare, parkway); and/or
- An unsignalized intersection in a signalized area.

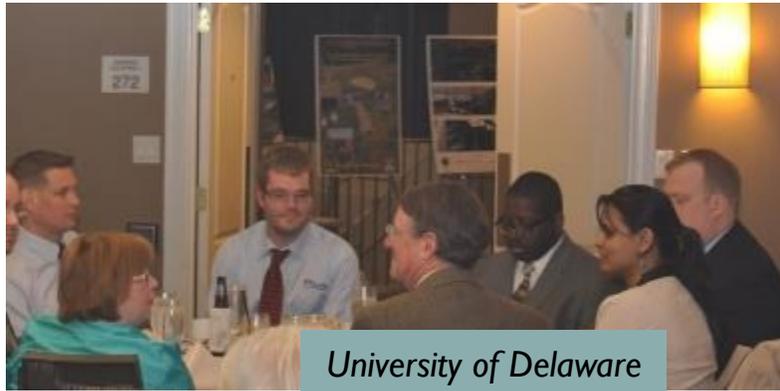
The MUTCD also says the use of YIELD or STOP signs should also be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

- The combined vehicular, bicycle, and pedestrian volumes entering the intersection from all approaches average more than 2,000 units per day;
- Restricted sight distance; and/or

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## Recent Student Activity

*ASHE@UD students on their third tour of work on the 896 bridge over I-95*



*University of Delaware students attend the American Society of Highway Engineers' Project of the Year Showcase dinner.*



## Which Type of Traffic Control is Needed at This Intersection, if Any? (cont'd)

*(Continued from page 8)*

—Five or more crashes within a 3-year period, or three or more crashes within a 2-year period, all caused by failure to yield the right-of-way under the normal right-of-way rules.

**Signal control.** When traffic volumes are too high for any type of stop control, consider installing a traffic signal (only if it is warranted in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) or a modern roundabout, which works well when traffic volumes are nearly even on each approach leg, when left-turn movements are heavy, when severity of crashes are of primary concern, or when speeding is an issue.

According to MUTCD, an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall

be performed to determine whether installation of a traffic signal is justified at a particular location. The study shall include analysis of factors related to the existing operation and safety at the study location, the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants.

- Eight-hour vehicular volume
- Four-hour vehicular volume
- Peak-hour vehicular volume
- Pedestrian volume
- School crossing
- Coordinated signal system
- Crash experience
- Roadway network
- Intersection near a grade crossing

The MUTCD states that satisfaction of one or more traffic signal warrants shall not in itself

*(Continued on page 10)*

*Drivers are typically more cautious at an intersection when they believe other drivers do not have to stop.*

## Which Type of Traffic Control is Needed at This Intersection, if Any? (cont'd)

(Continued from page 9)  
require the installation of a traffic signal. The need should be based on an engineering study.

### Conclusion

If you are considering adding traffic control to an uncontrolled intersection, be sure you are following the guidance in the MUTCD; the Manual is designed to create safer conditions, and



### Install a YIELD or STOP sign? Helpful hints from the MUTCD

- YIELD or STOP signs should not be used for speed control.
- YIELD or STOP signs should not be installed on a higher volume roadway unless justified by an engineering study.
- When two roadways with the relatively equal volumes and/or characteristics intersect, consider installing YIELD or STOP sign to control the direction that:
  - Conflicts the most with established pedestrian crossing activity or school walking routes;
  - Has obscured vision, dips, or bumps that already slow down the drivers; and
  - Has the best sight distance from a controlled position to observe conflicting traffic.
- YIELD or STOP signs shall not be used in conjunction with any traffic signal control except:
  - If the signal indication for an approach is a flashing red at all times; or
  - If minor roadway is located within or adjacent to the area controlled by a traffic signal, but does not require separate traffic signal; or
  - If a channelized turn lane is separated from the adjacent travel lanes by an island and the channelized turn lane is not controlled by a traffic signal.

[Source: Delaware MUTCD, Part 2B.04, [www.mutcd.deldot.gov](http://www.mutcd.deldot.gov).]

**Modern roundabouts** have also proven to be safe and efficient types of intersection traffic control devices. They work well when traffic volumes are nearly even on each approach. Single-lane roundabout is often a good alternative to all-way stop control. Multi-lane roundabout can replace traffic signals, but they are very complicated in design.

**Traffic circles**, on the other hand, are traffic calming devices (often used on local residential streets) with much smaller inscribed diameters and do not have the characteristics of modern roundabouts. [Historically referred to as "Rotaries," these outdated traffic circles are generally not used anymore in the U.S. However, an updated design, usually referred to as a mini-roundabout, is sometimes applied to low speed subdivision streets as a calming device.]

For more information on roundabouts refer to TRB publication, NCHRP Report 672, Roundabouts: An informational Guide, 2nd Edition, 2010, [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_672.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_672.pdf).

following it will help reduce liability for your agency in the event of a crash. More (and more expensive) traffic control is not always the best way to address a safety concern. Sometimes the best approach is a simple one, especially in low-volume situations.

For more information, consult the sources listed below.

- [Delaware] Manual on Traffic Control Devices (MUTCD) [[www.mutcd.deldot.gov](http://www.mutcd.deldot.gov)]
- A Policy on Geometric Design of Highways and Streets, 2011 Edition, American Association of State Highway and Transportation Officials (AASHTO).
- Road Safety Fundamentals. Federal Highway Administration. Office of Safety. FHWA-SA-05-011, September 2005.
- Intersection Safety: A Manual for Local Rural Road Owners, FHWA-SA-11-08. [http://safety.fhwa.dot.gov/local\\_rural/training/fhwa1108/](http://safety.fhwa.dot.gov/local_rural/training/fhwa1108/)
- NCHRP Report 672, Roundabouts: An informational Guide, 2nd Edition, 2010. [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_672.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_672.pdf)

## Upcoming Events

The T<sup>2</sup>/LTAP Center is currently planning the following upcoming events. Others will follow. We will announce exact dates, locations, and other information as we finalize details. Monitor our website for up to the minute details and registration.

- Training Workshop - Ethics in Engineering - Fall 2015
- Traffic Monitoring Programs: Guidance and Procedures (2-day course) - June 3 & 4, 2015
- Low Cost Safety Improvements (2-day course) - June 10 & 11, 2015

See our website for further details: <http://sites.udel.edu/dct/t2-center>.



*“Training”  
Get it?*

## T<sup>2</sup>/LTAP Center Request Form

Your feedback and interests help us increase the T<sup>2</sup>/LTAP Center’s effectiveness, so please complete and return this form or email us—all compliments, criticisms, and ideas are welcome!

\_\_\_\_\_ Please add my name to the T<sup>2</sup>/LTAP INFO-CHANGE subscription list—subscriptions are free

\_\_\_\_\_ I have an idea for a future T<sup>2</sup>/LTAP newsletter article  
Topic: \_\_\_\_\_

\_\_\_\_\_ I volunteer to author this article—please contact me

\_\_\_\_\_ Please consider these topics for future training sessions  
Topic: \_\_\_\_\_

Topic: \_\_\_\_\_

\_\_\_\_\_ I would like to learn more about the T<sup>2</sup>/LTAP Center and how its free services can assist my municipality or agency—please contact me  
Name: \_\_\_\_\_

Agency: \_\_\_\_\_

Address: \_\_\_\_\_

email: \_\_\_\_\_

Please return this form to:

Delaware T<sup>2</sup>/LTAP Center, Delaware Center for Transportation  
360 DuPont Hall, University of Delaware, Newark, DE 19716



*Care to  
contribute an  
article? Just let  
us know by  
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form or  
emailing us.*

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dct/t2-center](http://sites.udel.edu/dct/t2-center)



### Helping to Bridge your Transportation Gaps

The Local Technical Assistance Program (LTAP) is a nationwide effort financed jointly by the Federal Highway Administration and individual state departments of transportation. Its purpose is to conduct training and technology transfer in the form of workshops, seminars, and conferences. The Delaware T<sup>2</sup>/LTAP Center Info-change is published semi-annually. T<sup>2</sup>/LTAP Center articles also appear semi-annually in the TransSearch - the newsletter of the Delaware Center for Transportation. Any opinions, findings conclusions or recommendations presented in this newsletter are those of the authors and do not necessarily reflect views of the University of Delaware, Delaware Department of Transportation, or the Federal Highway Administration. Any product mentioned in the newsletter is for information purposes only and should not be considered a product endorsement.



The Delaware T<sup>2</sup>/LTAP Center is a member of the  
National Local Technical Assistance Program (LTAP)



**Delaware  
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### AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

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