



moving FORWARD

FALL 2017

A quarterly review of news and information about Pennsylvania local roads.

Learn More about ADA Transition Plans at December 12 Webinar

Register today for this FREE LTAP webinar. Don't delay! Attendance is limited.

Is your community required to have an Americans with Disabilities Act (ADA) transition plan? What should be in that plan, and how can you develop it? What happens if you don't have a transition plan in place?

LTAP is hosting a webinar Tuesday, December 12, that will clarify your obligations related to the ADA, which prohibits discrimination because of disability. If your municipality has 50 or more employees (full- or part-time), you must develop and implement a transition plan that ensures access to programs, activities, and facilities. In addition, accessibility standards must be applied to new and altered public facilities.

A transition plan is encouraged but not required if your municipality has fewer employees. Nonetheless, smaller municipalities must develop program access plans and execute them in good faith. This webinar will review development of an ADA transition plan (or self-evaluation for small communities), including the required components, and will explore resources that can help develop a plan.

The webinar is free but limited to the first 99 to register. A recorded webinar will be available on the LTAP website. To register, go to www.ltap.state.pa.us and look for the link under "News." 🗣️

What is in a transition plan?

Transition plans, with appropriate appendices, consist of the following elements:

- **Introduction**
- **Self-evaluation** – Identification of physical barriers in the public right of way. Required of all public entities regardless of size.
- **Policies and practices** – Detailed description of how the facilities will be made accessible. Must identify standard to be used (e.g., 2010 Standards, PROWAG). Required of all public entities regardless of size.
- **Improvement priorities and timeline** – Required of all public entities regardless of size.
- **ADA Coordinator for Public Rights of Way** – Must have ability to facilitate implementation of the plan.
- **Implementation schedule**, including budget(s)
- **Public outreach** – Summary of efforts and input received. Required of all public entities regardless of size.
- **Grievance procedures**
- **Monitoring schedule** – Documenting progress and updating plan with new facilities, as appropriate. Required of all public entities regardless of size.

More information about ADA requirements can be found at www.fhwa.dot.gov/civilrights under "Programs." A model transition plan is available at <https://lrrb.org/ada-transition-plan-for-public-rights-of-way/>. LTAP will hold additional training for developing transition plans and meeting obligations under the ADA. Visit the LTAP website for details.

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Avoiding the Excessive Use of Signs

by Wendy Kelley, PE, Pennoni, Inc.

In this day and age, we are always looking for more information, but can too much information while behind the wheel make us unsafe or not be in our best interest?

The average motorist must make about 120 decisions per minute while driving. Too many signs along a highway can lead to driver distraction and take a motorist's attention away from the road and traffic conditions. If used to excess, regulatory and warning signs tend to lose their effectiveness.

To avoid the excessive use of signs, convey proper information to motorists, and ensure signs are safe and effective, follow the standards set forth in applicable PennDOT publications and the Manual on Uniform Traffic Control Devices (MUTCD).

Excessive Signs Lead to Clutter and Disrespect

Sign clutter is a confused or disordered state or collection of signs. The excessive use of signs can diminish their effectiveness as well as lead to clutter and unnecessary distractions along a highway. It can create "inattentive blindness" or "perceptual blindness," a phenomenon believed to be a side effect of excessive stimuli in the visual field (*too many things to keep track of at the same time*) and can cause a person to miss important items in their vicinity.

The idea of reducing the number of traffic signs may seem counterintuitive when there seems to be a sign for everything and improving safety usually revolves around installing a sign as well as additional, oversized varieties of signs. Literature published by many federal agencies and programs, including the Federal Highway Administration (FHWA) and the National Cooperative Highway Research Program (NCHRP), provides engineering research support for the use of traffic warning and regulatory signs to reduce traffic accidents and their severity.

However, Section 2A.04 of the MUTCD also states, "Regulatory and warning signs should be used conservatively because these signs, if used to excess, tend to lose their effectiveness." In addition, Section 2C.02 of the MUTCD states that, "The use of warning signs should be kept to a



Just because an existing sign is erected in the field doesn't mean it is correct.



Signs provide critical regulatory and warning information as well as important guidance and direction for motorists.

minimum as the unnecessary use of warning signs tends to breed disrespect for all signs."

An example of a loss of effectiveness or disrespect could happen when Cross Road signs are installed when sight distance is good and the signs are, in fact, not warranted. Sound engineering judgment and practice play an important role in improving safety by providing enough information without overstimulation and distraction.

Avoiding Excessive Use and Clutter

Excessive sign use and clutter should be addressed when installing new signs and conducting routine maintenance. To initiate a specific project to reduce sign clutter, a municipality can review crash history along specific roadway segments where it appears that drivers might be distracted, potentially by sign clutter, and complete sign inventory field views. However, because a municipality may not have the time or resources to devote to such a project, an alternative would be to confront this issue while on the front line when either installing or maintaining a sign.

Another good time to assess potential sign clutter is while checking the retroreflectivity of a group of signs. Refrain from simply replacing a sign because “it’s been there for years.” Just because an existing sign is erected in the field doesn’t mean it is correct.

Here are a few simple “good practice” measures to follow and questions to ask to avoid excessive use and clutter when maintaining or installing signs:

- Understand the intended message of existing signs. Often, the Slippery When Wet sign is misunderstood to indicate a curvy road.
- Assess the need or purpose of an existing sign. Ask the questions:
 - » Is this sign warranted?
 - » Was a study done to warrant this sign, and are the proper ordinances in place?
 - » Are the conditions that once warranted the sign still present? (i.e., do ducks still cross in the vicinity of a Duck Crossing sign, or does a school bus still stop in the vicinity of the School Bus Stop Ahead sign?)
- To ensure it is safe to remove an existing sign, complete a study to document that none of the engineering and traffic warrants included in PennDOT Pub 212 justify the existing traffic restriction or warning. This will help alleviate any legal repercussions associated with removing a sign.
- If it is necessary to erect temporary signs at a hazard, such as a pavement heave or settlement (dip), the signs must be removed as soon as the repairs are completed as indicated in PennDOT Pub 23 – Maintenance Manual (Chapter 11).
- When installing new signs, ensure proper studies are completed in accordance with PennDOT Publications 212, 236, and 46 and that MUTCD guidelines are followed.
 - » To legally post and enforce regulatory signs, an engineering and traffic study must be completed, and an ordinance must be adopted as indicated in Sections 6109 and 6102 of the Vehicle Code.
 - » In accordance with Section 2C.02 of the MUTCD, the use of warning signs must be based on an engineering study or judgment. For example, Table 2C-5 of the MUTCD lists curve delineation signs that are required, recommended, or optional depending on curve speed studies.
 - » In accordance with PennDOT Pub 236, the Cross Road sign should be restricted to intersections with a fairly large volume of traffic entering or crossing the through route and where there is poor sight distance.
- Make sure the existing or proposed sign is approved and included in PennDOT Pub 236.
- Ensure the existing or proposed sign is installed at proper heights and offsets with correct spacing between signs and at locations that give motorists adequate perception-response time (PRT) in accordance with Section 2C.05 and Table 2C-4 of the MUTCD.

If used to excess, regulatory and warning signs tend to lose their effectiveness.

TRUE or FALSE?

The following sign indicates a curvy road ahead:



FALSE

The intended message of this sign is that the roadway is slippery when wet. If the slippery condition is corrected, the sign should be removed.

When Many Signs are Necessary

In accordance with Section 2.11 of PennDOT Pub 46, sign grouping and back-to-back installations are encouraged wherever possible to improve the roadside environment. Signs that are mounted back-to-back are typically of the same size and shape. However, a sign that is mounted back-to-back with a STOP or Yield sign should stay within the edges of that sign.

Section 2A.16 of the MUTCD provides guidance on when signs can be grouped together on one post. It’s important that the regulatory signs that are grouped together do not conflict with each other.

Additionally, signs can be installed on other poles or structures such as utility poles to reduce clutter, according to the MUTCD, Section 2A.19, as long as their placement meets all of the criteria and is permitted by the owner of the pole.

Guidance is also provided in Section 2A.16 of the MUTCD for establishing an order of priority for sign installation. Typically, signs with critical regulatory and warning information should take precedence over guidance information, where conflicts occur. However, if there are no conflicts, route and guidance signs can be used more frequently to keep motorists informed of their location and potential lane changes.

Understanding signs and knowing when to use them wisely and effectively will provide motorists with the pertinent information they need to stay safe while driving — no more, no less. 🚗

Low-Cost Safety Improvements for Rural Intersections

by Phillip Bobitz, P.E., FHWA

Pennsylvania has more than 78,000 miles of municipal-owned roads carrying around 46 million miles of traffic each day. The slowing, stopping, crossing, and turning of traffic at intersections increase the risk of crashes at rural intersections. According to the Pennsylvania Crash Information Tool (PCIT), 375 people lost their lives in local road intersection crashes between 2015 and 2016.

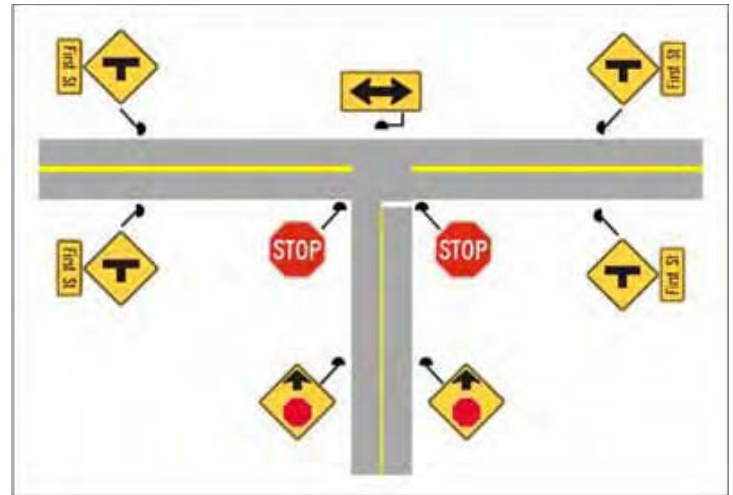
Intersection safety is one of the most pressing issues in ensuring the safety of motorists. Intersections can vary widely in terms of size, shape, number of entering legs, and number of turn lanes. Risks increase because motorists are moving through or across traffic as well as turning onto roads.

Rural roads encompass a wide range of surface types, including paved, gravel, and dirt. Many rural intersections lack suitable design standards, delineation, and signing that may be provided on higher volume roadways. Further, many were not officially designed but instead “evolved” over time to their current geometric configuration.

Deciding which countermeasures to install to improve safety can be challenging. However, low-cost improvements can be made to address sight distance, intersection recognition, visibility and conspicuity of traffic control devices, and roadway geometry issues.

The table below shows treatments for stop-controlled intersections, the safety issue addressed, the associated crash modification factor (CMF), and typical cost of implementation.

Decreasing intersection crashes on rural roads can be challenging because of limited resources, but a number of low-cost proven countermeasures can be installed relatively quickly to improve safety at intersections known to have high numbers of crashes. Doing so will help to reduce the number of intersection crashes and fatalities statewide. 🚦



This basic signing and pavement marking package for intersections has the potential to reduce crashes by 30 percent.

Stop-Controlled Intersection Low-Cost Safety Improvements

Countermeasure	Safety Issue Addressed	Crash Modification Factor	Typical Implementation Cost Range per Intersection
Basic set of sign and marking improvements (<i>as shown in graphic</i>)	Recognition of stop-controlled intersection during day or night conditions	0.70	\$5,000 to \$8,000
Either: a) flashing solar-powered LED beacons on advance intersection warning signs and STOP signs, or b) flashing overhead intersection beacons	Recognition of stop-controlled intersection during day or night conditions	0.90	\$5,000 to \$15,000
Replace standard stop sign with flashing LED stop sign	Recognition of stop-controlled intersection during day or night conditions	0.60	\$1,000 to \$2,000
Transverse rumble strips across the stop approach lanes	Recognition of intersection and running STOP signs is a problem	0.72	\$3,000 to \$10,000
“Stop Ahead” pavement marking legend	Recognition of intersection and running STOP signs is a problem	0.85	\$3,000 to \$10,000
Retroreflective strips on sign posts may increase attention to the sign, particularly at night	Recognition of stop -controlled intersection, especially at night	Unknown	Less than \$1,000
High friction surface treatment	High speed intersections or approaches	0.50	\$20,000 to \$50,000
Install wider longitudinal pavement markings (6-8")	Recognition of stop-controlled intersection during day or night conditions and speeding	0.78	Less than \$1,000
Install dotted-line pavement markings through an intersection	Assist drivers to stop at the optimum point	Unknown	Less than \$1,000
Clear the intersection sight triangles (remove overgrown foliage or other objects)	Inadequate sight distance at intersection due to obstructions in the sight triangle	0.50	\$1,000 to \$10,000
Install splitter islands on minor leg approach	Recognition of stop-controlled intersection during day or night conditions	0.30	\$5,000 to \$15,000

Transportation News Briefs

LATEST INFORMATION FROM PENNDOT & OTHERS

Rural Road in Armstrong County Repaved with Recycled Material

A nearly five-mile stretch of rural road in Armstrong County was paved this summer with the use of Recycled Asphalt Paving (RAP) through PennDOT's Road Maintenance and Preservation (Road MaP) initiative. RAP is an environmentally conscious method that repurposes materials from projects on other roads by mixing ground millings with oil. It allows PennDOT to reinforce shoulders or pave less-traveled roads that otherwise wouldn't be repaved.

PennDOT estimates a \$225,000 cost with about 3 inches of RAP compared to roughly \$371,000 for 2 inches of new asphalt. Those savings can be redirected to other maintenance improvements or contracts. 🚧

Municipalities Receive Grants to Improve Traffic Signals, Safety

More than 100 municipalities recently received funding through two PennDOT programs to improve traffic signals and increase safety at intersections.

Through the Green Light-Go program, 94 municipalities received \$33 million to help upgrade signals and improve safety and mobility. This grant money can be used on existing traffic signals to install LED technology, perform regional operations such as retiming, develop special event plans, monitor traffic signals, and upgrade signals to the latest technologies.

Under the Automated Red Light Enforcement (ARLE) funding, 21 municipalities will share \$6 million for 27 safety projects at signalized intersections. Under state law, fines from red light violations at 30 intersections in Philadelphia supply the grant funding. 🚧

Franklin County Township Awarded National Grant to Rehab Bridge



Quincy Township in Franklin County replaced a deteriorating steel bridge thanks to winning the 2017 Dire States competition, Case Construction Equipment's national program to help improve local infrastructure. The township received \$25,000 worth of free equipment rental from a local Case dealer in this successful example of public-private cooperation.

Each of the last five years, the bridge's weight limits had to be lowered

due to its deteriorating condition, and the township had been trying for nearly a decade to come up with an affordable replacement plan. The award, plus a \$67,000 grant from the Franklin County Soil and Conservation District, finally made the upgrade possible.

The township public works crew did most of the work, including preparing the site, replacing drainage pipes, demolishing and removing the old bridge, adding new signage, and installing guide rails.

Case Construction Equipment awards the grant to local projects that use heavy equipment to improve a critical piece of infrastructure. To watch a video about the project, go to www.direstates.com. 🚧

Penn State Students Win Traffic Control Device Challenge

A team of engineering students from Penn State won first place in a traffic control device challenge for their electronic beacon to guide autonomous vehicles through work zones. The five-member student team was awarded \$1,500.

Sponsored by the American Traffic Safety Services Association (ATSSA), in partnership with the National Academy of Sciences' Transportation Research Board (TRB), the challenge asked students at high school, college, and graduate levels to develop an improved roadway system design or create innovative roadway traffic control devices to help improve road safety.

The top three winning teams, out of nearly 20 finalists, presented their concepts to the roadway safety industry – and more than 3,000 guests – during ATSSA's annual convention in Phoenix, Az., in February.

A panel of TRB experts judged the entries based on the ability of the idea to address a specific roadway problem, how easily it would be understood by all road users, its applicability on a nationwide basis, and its feasibility for implementation. 🚧

PennDOT Approves Dust Suppressant for Dirt and Gravel Roads

Resinator, a petroleum-based dust suppressant, is approved by PennDOT and may be purchased with Liquid Fuels and Dirt, Gravel, and Low-Volume Roads program funds. The product has been added to Publication 447, Approved Products for Lower Volume Local Roads. The approved application rate is 1:4 emulsion to water or more dilute.

Resinator penetrates hard-packed roads to stabilize the driving surface, improve driving conditions, and reduce dust, potholes, washboarding, silt runoff, and aggregate loss. It is touted as an environmentally sound solution for dust control and soil retention. 🚧

New Salt Alternative Products Approved

PennDOT has given approval to several products that can be used for deicing and prewetting during winter storms. The following five salt alternative products were recently added to Bulletin 15:

- Geomelt 55
- BEET HEET Concentrate
- Aquasalina+
- Biomelt AG
- AMP

If using Liquid Fuels Funds, be sure to purchase only approved products. Direct questions about these products to your district's Municipal Services representative or Tom Welker at (717) 783-3721 or twelker@pa.gov. 🚧

Q&A

Q. What safety provisions must municipalities with CDL employees comply with?

A. To ensure that they are promoting a safe workforce, municipalities are encouraged to obtain a copy of their CDL employees' drivers' license report from PennDOT at least annually. Through this report, a municipality can review its employees' driving safety history over the previous 12 months and verify that the employees possess a valid driver's license. To obtain the report, the municipality can use PennDOT form DL-503 or go online to PennDOT's business services login.

In addition, the federal Omnibus Transportation Employee Testing Act of 1991 requires CDL employees to be randomly tested for alcohol and drug use. Municipalities with CDL employees are responsible for implementing on their own, or contracting with a reputable third-party administrator, this required testing program. Besides having their CDL employees continuously covered in a complying random drug and alcohol testing program, municipalities must also provide all covered employees with educational information about alcohol and drug misuse, a copy of the employer's random drug and alcohol testing policy, including how testing will occur, and information on how employees with drug use or alcohol misuse problems can obtain assistance.

Supervisors of CDL employees are required to have specific training on misuse symptoms and indicators of prohibited on-duty drug or alcohol use.

Q. What records must our municipality keep on commercial motor vehicles?

A. Municipal employers must maintain daily and historical records for every commercial motor vehicle they operate on public roads. Such records include daily vehicle inspection reports signed by the vehicle driver and inspection, repair, and maintenance records for the vehicle.

Under the Pa. regulations at 67 Pa. Code 231.8(1), a commercial motor vehicle is defined as any motor vehicle or combination used on a highway in intrastate commerce to transport passengers or property when the vehicle meets one of the following conditions:

- Has a gross vehicle weight rating or gross combination weight rating, or gross vehicle weight or gross combination weight, of 17,001 pounds or more, whichever is greater.
- Is designed or used to transport more than eight passengers (including the driver) for compensation.
- Is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation.
- Is a school bus.
- Is transporting hazardous materials, which must be placarded in accordance with department regulations.

It should be noted that municipal employees are exempt from daily vehicle driving time limits when using a commercial motor vehicle to perform the following functions: roadway maintenance, snow plowing operations, and traffic-control support operations. If not engaged in these activities, a driver of a municipal commercial motor vehicle must maintain the required driving time limits, which include driving no more than 11 hours before requiring 10 consecutive off-duty hours. An employee who has already been on-duty for more than 14 hours would need 10 consecutive hours off-duty, regardless of how many of the 11 daily driving hours the employee may still have available. 🚧

LTAP Announces Two New Courses

STOP Signs and Intersection Traffic Control

This course focuses on STOP signs and other controls that improve safety at unsignalized intersections. Beginning with reasons for effectively implementing STOP sign placement, course content will examine the components of STOP sign placement and offer suggestions for accommodating uncommon challenges.

In addition to STOP signs, the course will present content on other safety features, such as pavement markings and rumble strips, often used at intersections along with signs. The course will also offer content on common intersection problems, such as unwarranted STOP signs and multi-way STOP intersections. Through a hands-on workshop, participants will be provided an example problem and given an opportunity to work through a study to determine the best tools for intersection safety.

Curves on Local Roads: Issues and Safety Tools

This course will provide information about curve safety and the application of horizontal alignment signs for curved segments of local roads. Based upon national and state standards, the course will cover curve warning sign details and applications, sign placement and installation criteria, and curve study components and safety.

The course will focus on studies for determining the application of curve warning signs and other safety features for curves and will examine other features related to curve safety, including pavement quality, superelevation, shoulder edge drop-offs, clear zones, and fixed-object hazards. Students will be able to explore the application of curve warning signs through several real examples, including a field visit to nearby curved roadway segments.

See listing on page 7 for upcoming dates and locations. Classes can also be scheduled at your facility with a minimum of 10 people. To request a workshop, contact LTAP at www.ltap.state.pa.us, LTAP@state.pa.us, or 1-800-FOR-LTAP (367-5827).

Did you know... you can use your CPR training for a class credit toward Roads Scholar designation?

Details: Successful completion of an approved CPR training course accepted by your employer or the Pennsylvania Department of Health earns you one workshop credit toward Roads Scholar certification. A copy of a completion certificate must be forwarded to the LTAP office in Harrisburg within the three-year training window.

Visit www.ltap.state.pa.us for more information.

Upcoming 2017 Classes

To Register:

PHONE: 1-800-FOR-LTAP (367-5827)

WEBSITE: www.ltap.state.pa.us

This represents some of our scheduled courses. Look for updates on the website.

Americans with Disabilities Act

November 30 – Cambria Co.

Asphalt Roads Common Maintenance Problems

October 11 – Westmoreland Co.

November 16 – Bucks Co.

December 6 – Northampton Co.

Conducting Sign Retroreflectivity Inspections

October 26 – Potter Co.

November 15 – Northampton Co.

Curves on Local Roads: Issues and Safety Tools

October 5 – Pike Co.

October 20 – Union Co.

Engineering and Traffic Studies

December 6 – Monroe Co.

Equipment and Workers Safety

November 3 – Indiana Co.

Geosynthetics

October 10 – Clarion Co.

October 13 – Clearfield Co.

October 19 – Crawford Co.

Intersections

October 19 – Chester Co.

Pavement Markings: Application and Maintenance

November 2 – Chester Co.

November 8 – Allegheny Co.

December 5 – Northampton Co.

Posting and Bonding of Local Roads

October 13 – Crawford Co.

Project Estimating Using Mathematical Principles

October 12 – Warren Co.

Risk Management Strategies

November 9 – Westmoreland Co.

November 30 – Clearfield Co.

December 14 – Bucks Co.

Road Surface Management

October 9 – Clarion Co.

October 19 – Adams Co.

Roadside Safety Features

October 10 – Tioga Co.

October 27 – Bradford Co.

November 9 – Warren Co.

November 17 – Wyoming Co.

Roadside Vegetation Control

October 5 – Erie Co.

December 12 – Lehigh Co.

Salt and Snow Management

October 3 – Berks Co.

October 4 – Bucks Co.

October 6 – Blair Co.

October 6 – Northumberland Co.

October 16 – Lycoming Co.

October 26 – Mercer Co.

October 31 – Montgomery Co.

November 3 – Allegheny Co.

November 3 – Luzerne Co.

November 9 – Allegheny Co.

November 9 – Schuylkill Co.

Stop Signs and Intersections Traffic Control

October 11 – Bradford Co.

October 12 – Susquehanna Co.

October 25 – Wyoming Co.

Stormwater Facility Operation and Maintenance

October 6 – Lehigh Co.

October 12 – Westmoreland Co.

October 26 – Bucks Co.

October 27 – Allegheny Co.

Traffic Calming

October 26 – Susquehanna Co.

November 15 – Lackawanna Co.

Traffic Signs Basics

October 2 – Armstrong Co.

October 10 – McKean Co.

November 1 – Northampton Co.

November 21 – Cameron Co.

December 7 – Cambria Co.

Work Zone (Temporary) Traffic Control

December 13 – Northampton Co.

Congratulations to the following Roads Scholar recipients

(Certified between May 1 and July 31, 2017)

- Steve Cox, Ferguson Township, Centre Co.
- Steve Miller, West Whiteland Township, Chester Co.
- John Cannon, Otter Creek Township, Mercer Co.
- Aaron J. Mohar, Horsham Township, Montgomery Co.
- Mike Smith, New Hanover Township, Montgomery Co.
- Nicholas V. Raio, Manchester Township, York Co.

Are You a Roads Scholar Yet? *The Roads Scholar Program, offered by the PennDOT LTAP, provides an opportunity for municipal employees to be trained by LTAP's professional team in the latest road-related technologies and innovations related to maintenance and safety and receive recognition as a certified Roads Scholar. The program consists of two designations (Roads Scholar I and Roads Scholar II) and provides a professional certification to municipal employees and officials who attend a certain number of LTAP courses within a three-year period (10 courses for Roads Scholar I and 8 for Roads Scholar II). For more information on the Roads Scholar Program, go to www.ltap.state.pa.us and click on "Roads Scholar Program."*

Roads Scholars, Share the News! *LTAP has a press release you can modify and use to announce your accomplishment to your local media. To obtain a copy of the release, go to www.ltap.state.pa.us and look for the release under "Roads Scholar Program."*

LTAP SUCCESS STORY

Reducing Crashes at an Intersection

LTAP worked with Swatara Township, Lebanon County, to examine safety issues at the intersection of Lancaster Street and SR 22. The intersection had a history of crashes when motorists on Lancaster Street proceeded without clearance or ran the STOP sign and collided with vehicles traveling at high speeds on SR 22. The existing STOP sign location was compromised by the large intersection radius, which required the sign to be positioned to the right edge of view, where it was also partially obscured by a Keep Off Shoulder sign.

LTAP suggested several sign enhancements to improve the visibility of the STOP sign from Lancaster Street: relocating the STOP sign further back from the intersection to improve the sign's visibility to approaching motorists; adding a stop bar; adding a supplemental STOP sign on the left side of the approach as well as a Stop Ahead sign; and placing reflective strips in the channel posts of the stop signs.



BEFORE: At the approach on Lancaster Street toward SR 22, the STOP sign is located around the large radius, outside the cone of vision of an approaching motorist. The STOP sign is also partially hidden by the Keep Off Shoulder sign.



AFTER: The township relocated the stop sign 50 feet back from the travel way on SR 22, the maximum distance permitted in the MUTCD, so that the sign is in view of approaching motorists.



AFTER: The relocated STOP sign on the right, plus a stop bar and a supplemental STOP sign on the left, increases the visibility of the need to stop at the intersection.

Need help with a transportation-related problem?
Schedule a **FREE Tech Assist** with LTAP today!

Want Off the Mailing List?

If you do not want to receive a copy of this newsletter, please send an email to ltap@pa.gov. The newsletter is available electronically on the LTAP website under "Publications" on the right-hand side of the page.



LTAP Contact Information:

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Email: ltap@pa.gov Website: www.ltap.state.pa.us

Did you find the information in this newsletter useful? Do you know others who will, too?

Please share this newsletter with others, including:

- Road supervisors/roadmasters
- Public Works Department
- Road crew
- Elected officials
- Managers and secretaries
- Engineers

You can also direct them to the electronic version available at www.ltap.state.pa.us.

