



moving FORWARD

SPRING 2016

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

On average each day in Pennsylvania in 2014:

- 332 reportable traffic crashes occurred (about 14 crashes every hour).
- 3 persons were killed in reportable traffic crashes (one death every 7 hours).
- 219 persons were injured in reportable crashes (about 9 injuries every hour).

Based on Pennsylvania's 2013 population (12,787,209 people):

- 1 out of every 46 people was involved in a reportable traffic crash.
- 1 out of every 10,701 people was killed in a reportable traffic crash.
- 1 out of every 160 people was injured in a reportable traffic crash.

Information Tool Provides Crash Data, Can Be Used to Make Roadways Safer

Traffic deaths hit record low for second year in a row

The Pennsylvania Crash Information Tool gives the public access to various types of crash data. Municipalities may find the tool useful when searching for information about crashes and how to make roadways safer.

The custom search tool pulls data from law enforcement crash reports, from both State Police and municipal police departments, involving passengers, drivers, and different vehicle types. It can display data showing the number of crashes, people involved, or vehicles involved. It can be filtered by timeframe, by county or municipality, and by various crash characteristics. Crash, fatality, and major injury statistics are also available.

In compliance with standard personal privacy policy and legal requirements, the tool does not provide access to specific police crash reports. The Crash Information Tool can be accessed at www.dotcrashinfo.pa.gov.

Traffic Death Statistics — Traffic deaths in Pennsylvania in 2014 reached an all-time low for the second year in a row, continuing a favorable trend as safety advocates work toward the nationwide goal of zero fatalities. Although even one fatality is too many, the 2014 number totaled 1,195, the lowest since recordkeeping

began in 1928. The fatality rate of 1.21 deaths per hundred million vehicle miles of travel was the second lowest ever recorded in Pennsylvania.

PennDOT data shows that while the number of highway deaths dropped in many types of crashes, significant decreases in 2014 from the previous year occurred in unbuckled (from 425 to 383), drinking-driver-related (from 342 to 294), and hit-tree (from 254 to 221) crashes.

Fatalities increased in some types of crashes, including those involving hit-utility poles (113, up from 103 in 2013) and drowsy or sleeping drivers (23, up from 10 in 2013). Fatalities in crashes involving drivers ages 65 and older also increased, from 277 in 2013 to 300 in 2014.

Fatality rates have fallen dramatically over the past 60 years as vehicles, roadways, and other factors have improved. Historically, Pennsylvania's rate has been lower than the U.S. average for most years since 1937. Fatality rates for 2015 are expected to be released this spring.

To make our roadways safer, PennDOT has invested \$50 million for safety improvements, including low-cost safety countermeasures such as centerline and edge-line rumble strips, over the last five years and about \$20 million annually in state and federal funds for safety education and enforcement efforts statewide. 🚧

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Pavement Preservation

Learning how to apply the right treatment to the right road at the right time

by Sam Gregory, LTAP Municipal Transportation Specialist

Applying the right treatment to the right road at the right time. Sounds easy, but is it? If your municipality has adopted a long-range asset management plan and communicated it, then it may be. The question usually is, does it satisfy your residents?

Public works operations in today's society often have to deal with balancing asset management with public relations. Similar to the NIMBY (not in my backyard) effect, municipalities are faced with NOMR (not on my road).

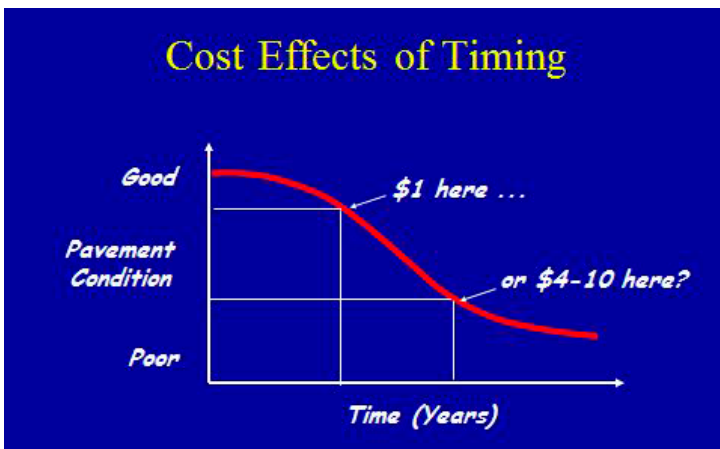
Does anyone ever say, "Hey, why don't you oil and chip my road?" Probably not. Usually it's more like "I want my road paved." At this point, you may feel like breaking into the verse from the Rolling Stones' song "You can't always get what you want," but, of course, you know better. Selecting an appropriate treatment for a roadway may be obvious to you but not to the taxpayers, users, or elected officials.

In an ideal world, public works officials would like to pave all the roads for their users, but monetarily this is impractical. This is where asset management plans use a "mix of fixes" ranging from routine maintenance to reconstruction that benefits the entire roadway system for which they are responsible.

Pavement preservation is an important component of this plan. The AASHTO Standing Committee on Highways defines "preventive maintenance" this way:

The planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system.

Preventive maintenance truly is "doing the right treatment to the right road at the right time." In technical jargon, this means applying "treatments to your roadway assets that will keep them from deteriorating below their current level for a period of time." Of course, at some point the life expectancy of the pavement will be exceeded, and a higher treatment level will need to be performed.



A dollar spent on preventive maintenance while the pavement is structurally sound will save you spending 4 or more dollars later.

By treating pavements before there is major damage, public works agencies can prolong the pavement life in a cost-effective manner.

Pay Me Now or Pay Me Later

Preventive maintenance activities that extend the life of pavements in "good" or even "fair" condition have been proven to be more economical than waiting for the pavements to deteriorate to a point where structural deficiencies require a more expensive rehabilitation or reconstruction operation.

It's the old "pay me now or pay me later" philosophy you use when you periodically change the oil in your car to extend the engine life. People understand the concept when it applies to their automobile, but it is difficult to convey the benefit of pavement preventive maintenance when it applies to a road or street. After all, a dollar spent on preventive maintenance while the pavement is structurally sound will save you spending 4 or more dollars later.

To incorporate the pavement preservation philosophy of "the right treatment to the right road at the right time," it is imperative to have a rational process for selecting the treatment and timing the application. The project selection process needs to use all available data on a roadway.

A pavement evaluation should be performed to determine if the roadway is eligible for preventive maintenance or requires a higher level of treatment. The analysis should include:

- Review the structural soundness of the project area to determine if it is eligible for a preservation treatment.
- Determine the prominent pavement distress in the project area so that you select the proper treatment.
- Evaluate what other forms of distress are present that may impact the treatment.

The pavement evaluation must be objective and repeatable and provide sufficient enough detail to aid in the decision-making process. Consistency across the entire roadway network is essential.

Getting the Most Bang for the Buck

Public works personnel are responsible for making cost-effective decisions about maintaining their pavements in a serviceable condition over a period of time that is acceptable to the users, taxpayers, and elected officials. Selecting projects on a rational and objective basis will help your municipality get the most "bang for the buck."

While it is difficult to explain why you are doing preventive maintenance on a pavement in good condition instead of performing rehabilitation on a pavement in poor condition, such decisions may be necessary to improve your overall roadway system in the long run.

The philosophy of prioritizing projects based on roads in the worst condition has proven not to work.

To optimize funding, we must use strategies that maintain roads in good condition for as long as possible. In the long run, this will reduce the number of roads in poor condition. By treating pavements before there is major damage, public works agencies can prolong the pavement life in a cost-effective manner.

Practicing pavement preservation by performing the right treatment to the right road at the right time will help you achieve this efficiency. Industry advances in the various types of preventive maintenance treatments in recent years provide many more choices for implementing this philosophy. No longer is oil and chip the only alternative. Now, we have the options of micro-surfacing, ultra-thin friction courses, thin bonded overlay, and seal coats with fiber, to name just a few.

With a systematic and rational approach, pavement preventive maintenance will help to prolong the life of your pavement and reduce expenditures for your roadway network.

LTAP has courses, such as Roadway Surface Management and Asphalt Roads Common Maintenance Problems, which will aid you in implementing an asset management strategy. In addition, other LTAP courses provide information on the individual treatments mentioned above. For more information, visit the LTAP website, www.ltap.state.pa.us.

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STIC Spotlight

2015 Accomplishments and Successes

The State Transportation Innovation Council (STIC) completed its Annual Report for 2015 in which it highlights the accomplishments and successes for the year and visions of the future. Under the leadership of co-chairs Secretary of Transportation Leslie Richards and Federal Highway Administration (FHWA) Division Administrator Renee Sigel, the STIC approved eight new initiatives, trained more than 1,000 transportation professionals, partnered with five districts to host Innovation Day workshops, and promoted innovations through hands-on demonstrations and presentations at industry conferences and events.

Much of the success of STIC over the past year is due to its strong partnerships with local governments, research universities, and industry. In fact, the theme for the 2015 report is Innovation through Collaboration because communication and collaboration are so critical to the council's operations.

In 2016, STIC plans to continue this work by investing in outreach and education for local governments to improve the maintenance and preservation of Pennsylvania's more than 78,120 miles of locally owned roads and 6,400 bridges.

You can access the 2015 report on the STIC website at www.penndot.gov/about-us/StateTransportationInnovationCouncil by clicking on "2015 STIC Accomplishments Report" under Projects and Resources at the bottom of the page.



State Transportation Innovation Council (STIC)
 (717) 772-4664 RA-pdPennDOTSTIC@pa.gov
www.penndot.gov/about-us/PennDOT2020

LTAP SUCCESS STORY

Before & After

Several years ago, LTAP worked with Penn Township, Lancaster County, on a Local Safe Roads Communities project. An improvement plan was developed to address safety and other concerns at several locations in the township.

Temperance Hill Road and Lexington Road Intersection



BEFORE



AFTER

At this intersection, the township was concerned about the sight distance for oncoming traffic from the left on Lexington Road (photo at left). Trees were removed to improve sight distance (photo at right).

Sun Hill Road and Junction Road Intersection



BEFORE



AFTER

After a new development was constructed, the intersection of Sun Hill Road and Junction Road was altered. The new intersection configuration made the existing curve signing out of date and confusing (photo at left). The sign was updated, and the single-yellow center line was replaced with the correct double-yellow center line (photo at right).

Sun Hill Road Bridge Sign Update



BEFORE



AFTER

The weight limit signs for this bridge no longer met current requirements (photo at left). The "Covered Bridge Ahead" sign was not an official sign, the distance plaque number was not rounded, and the clearance sign was the wrong shape and color. The township replaced the signs with the proper signs/plaques, and since both the height and weight restriction signs must be placed within 25 feet of the intersecting roadway, according to Section 4902 of Title 75, they were mounted side by side (photo at right). Note that both the weight restriction and clearance information were updated according to the findings of the bridge inspection report.

Oak Street and Fruitville Pike Intersection



BEFORE



AFTER

Crashes at the intersection of Oak Street and Fruitville Pike occurred when motorists approaching the intersection ran the STOP sign and proceeded without clearance. Because the Oak Street approach curved into the intersection and had a large turning radius, the STOP sign was difficult to perceive (photo at left). To improve the intersection, a tree was removed and a business sign was relocated to remove obstructions with the sight distance (photo at right).

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

Transportation News Briefs

LATEST INFORMATION FROM PENNDOT

ARLE Applications Due in June

Municipalities may once again apply for Automated Red Light Enforcement (ARLE) transportation enhancement grants to improve safety and reduce congestion on local roads. The 2016 funding announcement is expected to be released mid-May in the *Pennsylvania Bulletin*. Applications will be accepted **June 1-30**. Access the online application at www.dot.state.pa.us/Portal%20Information/Traffic%20Signal%20Portal/FUNDARLE.html.

Roller-Compacted Concrete Projects

Effective March 18, 2016, any municipality wishing to bid a roller-compacted concrete project using liquid fuels funds may obtain a standard special provision specification from the PennDOT lab.

Roller-compacted concrete can be used for applications of roadway base courses. It is a high-density plant-mixed product delivered in dump trucks to a paver and finished with a conventional roller. If desired, a blacktop-wearing course is placed on top of it for a smoother ride.

If you have any questions, please contact your district's Municipal Services representative or Tom Welker at twelker@pa.gov.

Traffic Control Devices

Townships are reminded not to enact ordinances that degrade the meaning of or compliance with the STOP sign and double-yellow center-line pavement marking. According to the MUTCD, the STOP sign must require all vehicles to come to a stop (certain classes

of vehicles cannot be exempted), and the double-yellow center-line pavement marking prohibits passing another vehicle traveling in the same direction unless it is to pass a slow-moving vehicle.

Gravel Roads Guide

A digital version of the *Gravel Roads Construction and Maintenance Guide* is available at the website of the Federal Highway Administration (FHWA) Office of Infrastructure, www.fhwa.dot.gov/construction/library.cfm, under "Construction Publications."

Forta-Fi Approval

PennDOT has approved Forta-Fi for hot-mix asphalt (HMA) as a qualified product listed under Section 409, Superpave Mixture Design, Standard and RPS Construction of Plant-Mixed HMA Courses, in Bulletin 15. Approval is not retroactive to projects in 2015 unless special permission was granted.

This product, available from Forta Corporation, is used in accordance with HMA Fiber-Modified Course. It is a high-tensile strength fiber that helps asphalt pavement perform better and last longer than traditional asphalt placements by increasing the strength and durability of the mat, helping it resist premature cracking and rutting, and allowing for thinner placement designs. The manufacturer must distribute a Certificate of Compliance with all approved products it ships to PennDOT projects.



CELEBRATE

National Work Zone Awareness Week 2016, April 11-15

Don't Be THAT Driver: Work on Safety. Get Home Safely. Every Day.

National Public Works Week 2016, May 15-21

A public education campaign by the American Public Works Association (APWA)

Public Works Always There.

Q&A

Q: Our municipality had installed Trinity Highway Product ET-2000 Plus end treatments for guiderails on a replaced bridge a few years ago. We have heard that several states have initiated lawsuits because Trinity changed the design but did not retest the end treatments to make sure they won't fail. What action should we take in light of these lawsuits?

A: PennDOT suspended approval of Trinity Highway Products' ET-Plus end treatments in 2014, but it does not have a policy or process currently in place for removing or replacing any end treatments that have already been installed. Until PennDOT issues an updated policy, the end treatments should remain in place. Trinity has set up a website, <http://etplusfacts.com>, to provide up-to-date news about the ET-Plus product in question.

Q: We are planning to repave a neighborhood street that has a paved multi-use path crossing at a mid-block location. Do we need to consider the Americans with Disabilities Act (ADA) when performing our work?

A: Yes, any time you perform activities that will alter a pedestrian path, the ADA can be triggered. In this instance, the multi-use path is considered a pedestrian circulation route (ADA R204) and is covered under the ADA. Since the roadway is being repaved and repaving will alter the pedestrian path across the road, ADA-compliant ramps will be required at the crossing.

Q: May we create our own sign, with unique words and colors, and post it along a public road with other traffic signs?

A: No. Pennsylvania has a uniform system of traffic control devices that is followed nationally (the Manual on Uniform Traffic Control Devices) as well as within Pennsylvania (PennDOT Publication 236, *Handbook of Approved Signs*). Only signs listed in these documents may be used and installed by any authority in Pennsylvania. Both these documents apply to any road open to the public, including state roads, borough streets, city alleys, and township roads. Sections 6121, 6125, and 6127 of the Pennsylvania Vehicle Code, Title 75, have several laws that enforce the use of standard official signs.

Non-standard signs can be confusing or cause distractions to motorists and should be removed as soon as practical. If you have a question about the validity of a sign, you can contact PennDOT's Local Technical Assistance Program (LTAP) at 1-800-FOR-LTAP or your PennDOT Municipal Services representative.

Q: Our municipality has several new developments that we have adopted. These developments have stop signs and speed limit signs already posted in the neighborhoods, but the municipality has no records of any engineering and traffic studies conducted for the signs. Must our municipality still do the studies since the signs are already established?

A: Yes. Section 6109 of the Pennsylvania Vehicle Code, Title 75, requires that all regulatory signs have engineering and traffic studies completed. Since these existing signs do not have any documented studies, they are not compliant with the Vehicle Code requirements. Your municipality would either have to document the studies or require the developer to provide documentation of the studies.

For speed limits, the documentation can be completed quickly, using the statutory speed limit category of 25 miles per hour for residential streets (Title 75, Section 3362). For stop signs, a study will need to be performed using Form TE 108. The municipality could also designate certain streets as through highways (Publication 212, Section 212.106) and complete Form TE-107 for the studies. Keep in mind that any other regulatory signs, such as parking signs and turn restrictions, would also require engineering and traffic studies. After the studies are completed, the municipality must then pass an ordinance accepting the regulatory signs, per Section 6102 of Title 75.

If the developer installed the signs, your municipality should review the installation and placement of the signs to ensure they are compliant with the federal Manual on Uniform Traffic Control Devices (MUTCD) and PennDOT standards. Improper placement, installation, and/or spacing could jeopardize the safety of your residents as well as proper enforcement of the signs.

Q: We have a resident with a disability placard who has requested an accessible parking space in front of his residence. Once we mark and sign the space, who can use it?

A: Any person who accompanies a proper person with a disability placard can use the space, per Pennsylvania Vehicle Code, Title 75, Section 3354 (d). If the municipality prefers to assign the space to a specific person, you could consider assigning the space to the disability placard number of the person who requested the space. Such an arrangement would have to be reflected in the related ordinance.

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Signs, such as these, that do not comply with national or state uniform standards can be confusing or cause distractions to motorists. They should be removed as soon as practical.

Upcoming 2016 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 ADA

May 24, Berks County

Asphalt Roads

April 14, Crawford County
April 21, Dauphin County
May 4, Lycoming County
May 14, Columbia County

Bridge Maintenance *Updated Course* Available fall 2016

Drainage

April 1, Clarion County
April 12, Lycoming County
May 11, Northumberland County
May 27, Lehigh County

Conducting Sign Retroreflectivity Inspections *New Course* Available fall 2016

Engineering & Traffic Studies

April 1, Adams County

Equipment & Worker Safety

April 15, Montgomery County

Full-Depth Reclamation

April 4, Somerset County
May 16, Mercer County

Intersections

April 7, Lehigh County

Liquid Bituminous Seal Coat

April 8, Indiana County

Pavement Markings

May 5, Huntingdon County
June 7, Lehigh County

Pavement Preventive Maintenance

April 12, York County
June 17, Mercer

Posting & Bonding

April 7, Erie County

Principles of Paving

April 13, Crawford County
April 29, Chester County
May 12, Lehigh County

Risk Management Strategies

April 14, Blair County

Road Surface Management

May 6, Somerset County
May 17, Montgomery County

Roadside Vegetation Control *Updated Course* Available fall 2016

Safe Driver

April 5, Lebanon County
April 6, Berks County

Sign Basics *New Course* Available fall 2016

Signs & Safety Features for Bridges and Culverts

May 3, York County

Stormwater Facility Operation & Maintenance *Updated Course*

May 17, Lycoming County

Traffic Calming

May 4, Lehigh County
June 1, Chester County

Traffic Safety Development Plan

April 26, Blair County

Unpaved & Gravel Roads

June 8, Lycoming County

Warm Mix Asphalt

April 12, Erie County
June 22, Berks County

Work Zone (Temporary) Traffic Control

June 8, Wayne County
June 9, Montgomery County

Congratulations to the following Roads Scholar recipients!

(certified between September 16, 2015, and February 1, 2016)

- Shanna Murphy, Cambria County
- Gideon Ammerman, Ferguson Township, Centre County
- Stephen Donely, Ferguson Township, Centre County
- Chad Kauffman, Ferguson Township, Centre County
- Glace Rider, Ferguson Township, Centre County
- Aaron Zellers, Ferguson Township, Centre County
- Nate Hughes, London Grove Township, Chester County
- Harry Cowan, West Pikeland Township, Chester County
- CJ Cassidy, West Whiteland Township, Chester County
- Paul Groff, West Whiteland Township, Chester County
- Mike Hinkle, Montour Township, Columbia County
- Brian Steigleman, South Middleton Township, Cumberland County
- Gerardo Recupido, Upper Merion Township, Montgomery County
- Dan Piorkowski, Moore Township, Northampton County
- Shawn Ault, Penn Township, York County
- Wayne Bankert, Penn Township, York County
- John Czapp, Penn Township, York County
- Justin Ruggles, Southern Alleghenies
- Michael Gromling, Wrightsville Borough, York County

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. The program provides professional certification to municipal employees and officials who attend 10 LTAP workshops within a three-year period. For more information on the Roads Scholar Program, go to www.ltap.state.pa.us and click on "Roads Scholar Program."



2016 Municipal Road Maintenance and Safety Symposium

April 17-19 Hershey Lodge

HELD IN CONJUNCTION WITH the Pennsylvania State Association of Township Supervisors' **94th Annual Educational Conference and Trade Show**, this three-day symposium features presentations by road maintenance professionals on new products and technologies and by municipal officials on real-world road issues.

The symposium includes the following workshops and activities each day:

SUNDAY, APRIL 17

2-4 p.m.

- Roadmasters Roundtable



MONDAY, APRIL 18

10:45 a.m.-Noon

- Making Your Roads Safer by Complying with the MUTCD
- State Transportation Innovation Council (STIC) Update

1:15-2:30 p.m.

- Long-term Road Maintenance Planning and Stormwater Inventory

2:45-4 p.m.

- Traffic Calming for Municipalities

4:15-5:30 p.m.

- Geosynthetic Reinforced Soil (GRS) Bridge Success

TUESDAY, APRIL 19

1:15-2:30 p.m.

- Keeping PennDOT Projects Running Smoothly
- Local Roads: Design, Construction, and Maintenance

2:45-4 p.m.

- FHWA Form 536: What Is It and How Do I Complete It?
- Paving Fabric: Sustaining Township Roads and Budgets

COST: Those registered for the PSATS conference may attend the symposium for no additional charge.

There is a \$65 registration fee for those who wish to attend the symposium without registering for the conference. The fee includes access to the specified workshops, the Cyber Corner, and the largest municipal trade show in Pennsylvania. Nearly 300 vendors will be on hand at the conference to display new products and equipment and answer questions.

REGISTRATION: Go to www.palocalgovtraining.org and select the link in the Course Calendar.

Meet the LTAP Advisory Committee

The PennDOT LTAP Advisory Committee is comprised of an appointed group of municipal government (elected and/or appointed) officials who serve a critical role as program advocates and assist PennDOT by attending training courses, reviewing course materials and content, and functioning in an advisory role on a variety of LTAP issues. The following officials currently serve as members of the Advisory Committee:

- **Paul O. Wentzler, Chair**; Muncy Township, Lycoming County, patricia.wentzler@windstream.net
- **Donald G. Sirianni Jr.**, Springfield Township, Montgomery County, dsirianni@springfieldmontco.org
- **Larry Bowers**, Gaskill Township, Jefferson County, ljdabowers@yahoo.com
- **Glenn A. Coakley**, Patton Township, Centre County, gcoakley@twp.patton.pa.us
- **Steve Herman**, MPO/RPO Representative, SEDACOG, Union County, sherman@seda-cog.org
- **Mark T. Hoke**, East Stroudsburg Borough, Monroe County, esbmaint@frontier.com
- **Jeffrey K. Kinsey**, Elizabethtown Borough, Lancaster County, publicworks@etownonline.com
- **Douglas A. Roth**, Penn Township, Butler County, droth@penntownship.org
- **Daniel Strausser**, Wellsboro Borough, Tioga County, wellsboromanager@frontier.com
- **David A. Williams**, Ross Township, Luzerne County, dawills@epix.net

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.



pennsylvania
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