pennsylvania
DEPARTMENT OF TRANSPORTATION
LOCAL TECHNICAL ASSISTANCE PROGRAM

moving FORWARD

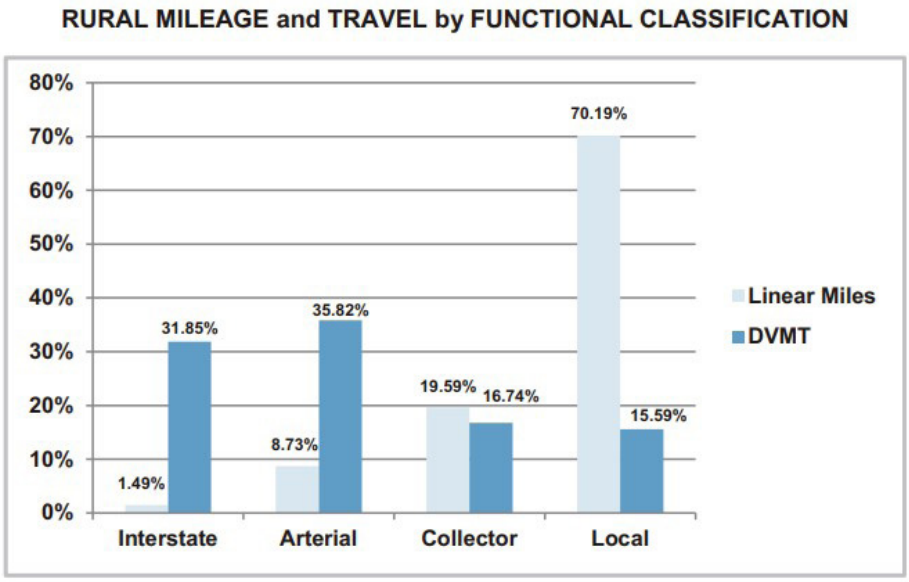
SPRING 2020

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

The Latest with Asphalt Paving

Warm mix technologies are now the go-to choice of PennDOT

by Marvin V. Ta, EIT, and Alan Leonori, PE, Pennoni



This chart from PennDOT Publication 600, *Pennsylvania Highway Statistics*, compares linear rural miles to daily vehicle miles traveled (DVMT) by type of road for 2018.

Spring is road maintenance season for municipalities and PennDOT. With more than 78,000 miles of local roads to maintain statewide, Pennsylvania's municipal road crews are reminded to stay up to date on state and federal policies and regulations affecting roads.

Over the years, asphalt paving has come a long way from the introduction of SuperPave technologies in the 1990s to the implementation of warm mix technologies in the 2000s. Equipment and construction techniques have changed, too. To understand what's new when it comes to asphalt roads, it helps to know the history of asphalt paving in Pennsylvania and how it has shaped the paving industry we know today.

From hot mix to warm mix, the industry is constantly changing to keep up with emerging technologies that make it safer for workers and reduce the impact on the environment. Municipalities must stay on top of and understand which technology or process can be applied to which roads. While a certain process may work for one road, it may not be the right choice for another.

Keeping up with the emerging technologies and state and national policy changes will lead to successful paving projects, according to Lee Zimmerman, the roadmaster in Earl Township, Lancaster County.

"The right paving process with the right candidate roadway equals a good paving project," he says.

The Evolution of Warm Mix Asphalt

Warm mix asphalt (WMA) is a generic term for various technologies that allow asphalt paving materials to be produced and placed at lower temperatures. The technology, which originated in Europe, was first used in the United States in the early 2000s. PennDOT began to use it on a trial basis, but eventually WMA became the preferred replacement for all hot mix asphalt (HMA) designs.

By 2015, WMA made up a third of asphalt mixtures produced. Today, PennDOT uses warm mix technologies for all its asphalt pavements.

When it comes to construction and quality between warm mix and hot mix asphalts, there really isn't much of a difference. Although both are

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Asphalt Paving *continued from page 1*

Hot mix asphalts produce more visible air emissions.

The lower fumes associated with warm mix asphalt result in a safer work environment.

Pennsylvania has approved these three WMA technologies. While mechanical foaming is the most used, chemical additives have also become popular recently.

virtually identical SuperPave mixes, an additive in WMA keeps the viscosity of the asphalt binder in the mix lower. This allows the mix to be manipulated and compacted at a lower temperature than HMA.

In general, a binder oxidizes over time, causing the asphalt to become stiffer and crack and lose performance life. Because HMA is produced with higher temperatures, it becomes pre-aged at the plant even before it is placed on the road and thus loses performance life quicker. In contrast, the cooler temperatures used to produce WMA help to extend the pavement's performance life.

"The key to long-term performance is to have pavement that is densely compacted (low permeability) and doesn't crack," LTAP instructor and technical expert Gary Hoffman says.

The lower production and delivery temperatures of warm mix asphalt provide other benefits, too, including reduced energy usage at the plant, a reduction of fumes during construction, and more time to compact the mix.

Lower temperatures translate into lower costs and less greenhouse gas emissions, which makes WMA safer for both the environment and road workers who breathe the air while paving. In addition, WMA also can be hauled longer distances, withstand longer paving seasons, and provide more productive compaction. Because its binder has a slower aging rate, warm mix asphalt can be stored longer than hot mix.

The many benefits of WMA have convinced the Federal Highway Administration (FHWA) to make this technology a prime initiative of its Every Day Counts efforts, whose goals are to identify and rapidly deploy proven, yet underused innovations to shorten the project delivery process, enhance roadway safety, reduce traffic congestion, and integrate automation. In 2011-2012, the FHWA established a goal of using WMA in 20% of mixes. Today, more than 60% of mixes nationwide are made with WMA technology.

Water and Air

In Pennsylvania, approved WMA technologies are foaming technology (mechanical and additive), chemical additives, and organic additives.

The key to long-term performance is to have pavement that is densely compacted (low permeability) and doesn't crack.

Mechanical foaming is the most common, accounting for more than 80% of the WMA industry in the state. With this technology, small amounts of water are injected into the mix and vaporized, causing the asphalt to temporarily expand and reducing the viscosity in the process.

One of the reasons that long-term, mechanical foaming technology is popular is its affordability. After purchasing the equipment to control the amount of water added to the mix, the only other negligible expense is a small amount of water.

Recently, chemical additives have also gained in popularity since some of them act as an anti-strip agent, which PennDOT now requires in all mixes.

No matter which technology is used, compaction of the material is critical for long-lasting pavements. Proper compaction increases densities by reducing the air voids in the pavement. While a small amount of air voids (3-8%) are necessary to maintain some flexibility in the pavement, too many air voids allows water intrusion in the mat. Once water gets in, failures happen fast, especially when the water freezes and thaws. Every 1% increase in air voids causes up to a 10% reduction in pavement life.

"The key to a long-lasting roadway is to keep water out of the pavement structure by ensuring proper drainage beneath the asphalt layers and creating impermeable asphalt layers through good compaction and increased densities," LTAP instructor and technical expert Alan Leonori says.

Just Asphalt

Now that all mixes in PennDOT projects use WMA technologies, PennDOT decided it no longer needs to distinguish between WMA and HMA in its latest edition (April 2020) of Publication 408, *Highway Construction Specifications.*

One of the major recent changes to this publication is removing Sections 309 (HMA Base Course) and 311 (WMA Base Course) and replacing them with Section 313 (Base Course). Sections 409 (HMA Surface Course) and 411 (WMA Surface Course) have also been replaced by Section 413 (Asphalt Surface Course). Instead of specific references to HMA or WMA, the latest language simply refers to "asphalt mixes." In addition, PennDOT no longer uses the term "bituminous."

These alterations to Publication 408 only affect new projects after April 10, 2020, and they will not necessarily change how municipalities approach paving since asphalt construction itself has not changed. Municipalities will more than likely find that the costs of mixes will vary, based on the technologies used and the availability of materials. Although all mixes will now use WMA technology, PennDOT still allows for asphalt production using the same maximum temperatures as HMA.

It's important for municipalities to remember that to qualify for liquid fuels money, they must follow PennDOT specifications. Moving forward, they will eventually have to comply with the new specifications in Publication 408.

LTAP revises its Principles of Paving Course

LTAP is currently updating the Principles of Paving Course to help municipalities achieve quality paving projects. This course aims to:

- Identify which paving processes are appropriate for which types of roads, including material and construction specifications for asphalt.
- List the operations necessary to properly prepare an existing pavement for a new asphalt surface.
- Describe the paving process, including loading/unloading trucks and the functions of the components of an asphalt paver.
- Discuss the success factors for a paving project, including compaction process, achieving proper densities, and identifying segregated pavements and the potential cause.

The updated course will demonstrate what to look for in good pavement to avoid problems during construction. The importance of compaction for long-lasting pavements will be stressed.

Look for a webinar providing an overview of the course this spring with classes to be scheduled around the state.

Good Paving Resources

- *Effect of Compaction on Asphalt Concrete Performance*, Robert N. Linden, Joe P. Mahoney, and Newton C. Jackson, 1989
- *Effect of Warm Mix Asphalt (WMA) Low Mixing and Compaction Temperatures on Recycled Asphalt Pavement (RAP) Binder Replacement*, PennDOT, 2018: http://www.dot7.state.pa.us/BPR_PDF_FILES/Documents/Research/Complete%20Projects/Construction/Task%206_Deliverable_%206.1_Final_Report.pdf
- *Warm Mix Asphalt*, FHWA, 2016: www.fhwa.dot.gov/innovation/everydaycounts/edc-1/wma.cfm
- FHWA Every Day Counts (EDC): www.fhwa.dot.gov/innovation/everydaycounts/
- PennDOT Publications 408 and 600

PennDOT Connects
Planning with our communities

PennDOT Connects Process Guides 'Trees for the Trail' Project to Success

In the early 1920s, the War Mothers Club planted 400 sycamore trees along the Susquehanna Trail in York County, from the Maryland line to Jacobus, Pa., to honor WWI veterans. By 2017, only about 200 of these trees along the dedicated "Road of Remembrance" were still standing.

In hopes of replacing the missing trees, a committee was formed. Recognizing that restoring the memorial would be a significant task, especially since the Road of Remembrance spans nine municipalities across 25 miles, committee chair and retired school superintendent Shelly Monk Riedel sought help from one of her former students, Brian D. Hare, PennDOT's director of the Center for Program Development and Management.

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Communication advice provided by PennDOT Connects helped the "Trees for the Trail" committee in York County restore a century-old WWI memorial, which was rededicated in a ceremony last November.

STIC Spotlight On the Leading Edge of Innovation

PennDOT STIC Receives National Recognition

The Pennsylvania State Transportation Innovation Council (STIC) recently received the 2019 STIC Excellence Award from the Federal Highway Administration (FHWA) and the American Association of State Highway Transportation Officials' Innovation Initiative.

The STIC works to develop and deploy innovations that improve roadway safety, reduce traffic congestion, accelerate construction, improve project delivery and enhance sustainability. Since its inception in 2012, Pennsylvania's STIC has championed more than 80 innovations, which have been brought to the council's attention mainly through the hard work of technical advisory groups (TAGs). These committees are comprised of a cross-section of transportation stakeholders who assist in evaluating, developing, promoting, and deploying innovations.

The 2019 STIC Excellence Award was based on the Pennsylvania STIC's development and deployment of its STIC *Moving Forward* strategic plan, which provided the framework to reorganize, reenergize, and right-size the STIC. The plan has led to increased participation opportunities for PennDOT employees and its transportation partners to develop and deploy well-researched, proven, and documented innovations across Pennsylvania.

Among the plan's recommendations were combining and reducing the STIC's 10 TAGs to four; developing a structured, yet flexible, process that supports a wider range of innovations; and enhancing various STIC communication platforms, including an updated website.

Since the launch of the strategic plan, nine innovations have been submitted for consideration and approved for further development. Among several STIC innovations under development, the following will especially be of interest to municipalities:

- **Cement Slurry for Full-Depth Reclamation** — This innovation applies cement slurry, a mix of cement and water, during full-depth reclamation projects to provide stability to the road base. Using cement slurry requires less equipment, expedites the reclamation process, and provides environmental benefits by reducing the amount of dust during application. To increase awareness of this innovation and its benefits, STIC has developed a short video introducing the technique. To learn more and watch the video, go to the STIC website, www.penndot.gov/about-us/StateTransportationInnovationCouncil, and click on the "Cement Slurry" link under "Featured Innovations."
- **Stormwater Management Training and Field Guidebook** — This publication provides maintenance employees with the tools they can use to install and maintain stormwater control measures to ensure compliance with federal and state environmental permitting requirements. This innovation received 2019 STIC Incentive Funding from FHWA to help with the development of the training.

To learn more about these and other innovations, check out the 2019 STIC Year-End Report on the STIC website, www.penndot.gov/about-us/StateTransportationInnovationCouncil.

STIC
Moving Innovation Forward

State Transportation Innovation Council (STIC)
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www.penndot.gov/about-us/PennDOT2020

‘Call Before You Dig’ Amendments Change Obligations of Excavators, Facility Owners

by Jason Dailey, Director of Public Works, Cranberry Township, Butler County

A motorist speeds daily on his way to work. One day, he gets pulled over, and while the officer is writing him a ticket, the motorist asks, “Why am I getting a ticket today? I was speeding all month but didn’t get a citation.”

The officer replies, “I guess you got lucky, but today your luck ran out.”

The same could be said about the Pennsylvania One Call Law, which requires utilities to mark their lines and excavators to call before they dig. Any municipality not actively participating in the One Call system may have been lucky so far, but why take the risk?

Recently, the law was amended to change the enforcement agency, among other modifications. Municipalities should understand the latest changes to the One Call Law and their role in keeping underground utilities and workers safe.

Changes to the Law

Under the One Call Law, which was passed in 1974, excavators must call before they dig to prevent damage to underground utilities. Although calling before digging is an important first step in damage prevention, it does not work unless underground utilities also participate. In 1986, owners or operators of underground utilities were required to become members of the One Call System.

The law went through a series of amendments between 1991 and 2008. Although the One Call System was helping prevent damage and enhance worker and citizen safety, enforcement of the law was becoming more critical over time.

In 2017, the legislature passed Act 50 to make some important changes to the law to strengthen enforcement and increase safety. These changes, which took effect in 2018, include the following:

- **New Enforcement Authority** — The biggest change in the One Call Law was the transfer of enforcement authority from the state Department of Labor and Industry to the Pennsylvania Public Utility Commission. Because the commission has enforcement authority for regulated public utilities in Pennsylvania, this change made sense for underground utilities.
- **Obligations for Responding** — Facility owners must respond to all notifications through the One Call System by the response due date, and excavators must renotify facility owners when locate request issues arise. The timing of the renotify request determines the response required of a facility owner.

On a correctly submitted *nonemergency* locate request from an excavator, who, upon initial arrival at the work site determines that “clear evidence of facilities” exists that are not marked or may be mismarked and initiates a renotify through the One Call System, the facility owner is required to make “direct contact” with the excavator within two hours.

If the facility owner fails to provide sufficient information to the excavator within three hours after the renotify call to the One Call System, the act allows the excavator to begin work as scheduled but not earlier than the first lawful dig date, provided the excavator exercises due care and uses prudent techniques while working.

If an excavator disagrees with a response a facility owner made through the One Call System but it is *not* their initial arrival at the work site, the One Call System will capture the locate issue in the text of the renotify and the facility owner must respond as soon as practicable.

Sometimes, municipalities that own facilities struggle to understand that the time to respond must encompass both working hours and off hours. Staff responsible for One Call responses should clearly lay out the work-flow process for when a ticket comes in: Is it an emergency or routine request? How will we respond (by phone or email)? Who is responsible for responding (the public works director or an off-hours administrative assignee)?

- **Obligations to Map Facilities** — Every facility owner must participate in the One Call System’s Member Mapping Solutions. Mapped members receive fewer notifications, and municipal level mapping members receive ALL notifications.

The One Call System can accept shape files of facility centerlines for upload into the mapping system. These files can be generated from a GIS system, or a member can draw their facilities via the Member Mapping web application. The facility owner has control of the buffer size of the centerline information.

- **Obligations for Reporting Violations** — An alleged violation of the One Call Law means any instance when a person, by action or inaction, fails to fulfill an obligation under the law. Examples include line damage, failure to call before excavation, or failure to respond to One Call notifications.

All One Call stakeholders are obligated to report violations of the One Call Law according to the following timeframes:

An excavator who damages a line has 10 business days to report the damage to the PUC by completing an alleged violation report at www.paonecall.org/enforcement.

The facility owner who owns or operates the damaged line has 30 business days to report the incident.

The project owner who hired the excavator to do the work is also obligated to report the damage to the PUC within 10 business days.

Excavators, facility owners, project owners, and designers who believe a violation of the One Call Law has occurred are obligated to report it at www.paonecall.org/enforcement. Click on “Report an Alleged Violation,” log in to the site, create a user ID and password, complete the form, and click “Submit.”

Understanding the Violations Process

The adage “a best defense is a good offense” certainly applies to the new One Call changes. Municipalities should have already been marking their lines and responding to the ticket system. If not,

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PennDOT Connects *continued from page 4*

"He advised reaching out to municipalities early on in the process and provided material about the PennDOT Connects process, with its emphasis on the importance of communication," Reidel says.

Armed with this advice, the committee got to work, first contacting the municipalities to get them on board. Along the way, hundreds of volunteers, three Rotary Clubs, and numerous sponsors and businesses in the area also offered to help. With a series of plantings, the trees took root, and when the memorial was restored to its former glory, a "Trees for the Trail" dedication ceremony was held November 10, 2019.

"I was fortunate to have a wonderful group of folks join the committee," Riedel says. "I have met so many phenomenal people. It just worked out so well with everyone stepping up to help."

In a letter to Hare thanking him for his assistance with planning the project, Reidel was especially appreciative of the PennDOT Connects document that Hare had shared. The guide provided useful communication advice for accomplishing regional projects.

"Your assistance helped us just complete a restoration of 203 trees that have joined the century trees to stand in tribute to ALL veterans who have fought and died for our country," she wrote.

PennDOT Connects is an initiative by the state Department of Transportation to enhance planning by engaging communities and partners early in the transportation planning process. Learn more at www.penndot.gov/ProjectAndPrograms/Planning/Pages/PennDOT-Connects.aspx.

'Call Before You Dig' Amendments *continued from page 5*

recent enforcement by the PUC should serve as a wake-up call for municipalities to follow the latest rules.

Here are some tips for submitting an alleged violation report to the PUC:

- **Create an agency email**, such as AVRsubmission@MyTownship.org, to use as your contact email. Be sure to assign multiple employees to this agency email so more than one person receives the necessary PUC notifications about the investigation or possible hearing.
- **Review a draft of the alleged violation report** before submitting it to check for clarity, reference specific violations of the law, and include pictures showing the painted marks and any damage that occurred.
- **Educate staff and elected officials on the process** from when an alleged violation report is filed through to the hearing. First, the report is reviewed by a PUC investigator, who evaluates the submission and determines if a violation indeed occurred. Fines may be imposed on municipalities for any number of violations, including failure to mark a ticket, incorrectly marking a ticket, and failure to submit an alleged violation report after a line is struck.

The investigator will then bring a justified case before the PUC's Damage Prevention Committee, which is made up of various industry professionals, including a muncipal representative. The committee holds monthly hearings, which are televised online. To better understand the process and the violations, municipal officials should consider blocking off some time with their public works staff to watch a hearing. The dates can be found on the Pa. One Call website.

Working with Complex Projects

The enforcement changes to the law have resulted in excavators creating more complex projects. This can be a benefit to municipalities because facility owners must attend complex project preconstruction meetings and work with excavators on a schedule to mark the underground lines reasonably in advance of the start of excavation or demolition work for each phase of the work.

The Pennsylvania One Call System board of directors has set a maximim geographic area for a single locate request at 1,000 feet or intersection to intersection, whichever is greater, along the same street and within the same political subdivision. Anything larger requires a complex project ticket.

Let's examine a real-world example: A communications company

PHOTO COURTESY OF CRANBERRY TWP.

Municipalities that own facilities must be members of PA One Call and mark their utilities upon notice that digging is to occur.

puts a routine ticket into the system. However, the distance called out in the ticket is 2,500 feet and crosses three intersections. The company also notes that both sides of the road should be marked since it isn't sure where the underground boring will actually take place. In reality, this ticket should have been entered as a complex project, which would have required a meeting to discuss the project.

The municipality would be wise to respond with a Code 092, which stands for "requests meeting." Such a meeting would bring all the facilities together to discuss how the exact details of the project would play out and whether the project should be broken up into more manageable sections for marking purposes.

The municipality should also consider submitting an alleged violation report (AVR) against the utility for failing to submit the ticket as a complex project.

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Municipalities with questions about their obligations under the One Call Law should contact the One Call liaison in their area at www.paonecall.org/liaisons. Other resources on the One Call website include Act 50 of 2017, Act 50 frequently asked questions, a summary of changes to the One Call Law, and a user's guide.

Transportation News Briefs

LATEST INFORMATION FROM PENNDOT & OTHERS

Municipalities Must Use Federal CDL Clearinghouse

Municipalities with employees who operate vehicles requiring a commercial driver's license (CDL) must now register for and use the CDL Drug and Alcohol Clearinghouse of the Federal Motor Carrier Safety Administration (FMCSA). This secure online database, which just became operational in January, provides real-time information about drug and alcohol violations by drivers with a CDL or a commercial learner's permit.

The clearinghouse will make it easier for employers to find out if an employee may be prohibited from driving because of a drug and/or alcohol violation committed while working for another employer, even in another state. It will also ensure that such drivers receive the required evaluation and treatment before they can return to duty.

All CDL employees are required to register, using their CDL license number, with the clearinghouse. Municipalities must use the clearinghouse to:

- See if any CDL driver they intend to hire has a prior drug or alcohol violation,
- Annually check to see if any of their municipal CDL drivers has a violation, and
- Report drug and alcohol program violations for current CDL employees.

Because there is a $1.25 fee each time the database is accessed, municipalities are urged to prepurchase enough queries (at least equal to the number of CDL employees currently employed plus some for any potential new hires) when registering for the clearinghouse. Employees must sign a consent to allow employers to query them.

Violations, including positive drug or alcohol test results and test refusals, can be reported through the consortium that provides the random testing of employees. When registering for the clearinghouse, municipalities should indicate that they want their consortium to report violations and return-to-duty information and conduct queries on their behalf.

To access the clearinghouse and find out more about it, go to clearinghouse.fmcsa.dot.gov. Registration instructions plus resources for both employers and employees, including a consent form for clearinghouse queries, can be found at cdl.psats.org (scroll down and click the "Drug and Alcohol Clearinghouse" button).

All CDL employees are required to register, using their CDL license number, with the federal clearinghouse.

Bituminous Seal Coat Aggregate Approved for LFF Monies

Municipalities will be happy to hear that they may now use liquid fuels fund (LFF) monies to purchase and apply bituminous seal coat with a finer stone as the second cover aggregate.

PennDOT recently released its final specifications for the approved treatment, which involves an application of bituminous material immediately followed by an application of normally used AASHTO #8 and then a second application of emulsion and finer aggregate (what is now called #9M, quarter-inch-size chip).

Bituminous seal coat is considered the number-one treatment in use to maintain and preserve roads, extend their useable life, and maintain a good road system.

Municipalities that want to use this product or process must remember to specify Publication 447 and the Specification MS-0340-0005 (Bituminous Seal Coat) in their bid documents. Contractors must follow those specifications when applying it.

For more information, contact Tom Welker at PennDOT at twelker@PA.gov or 717-783-3721.

Congratulations to the following Roads Scholar I recipients

(Certified between November 1 and December 31, 2019)

- Jay J. Pollinger, East Pikeland Twp., Chester Co.
- Tracey J. Crawford, Woodcock Twp., Crawford Co.
- Kody Lehman, East Pennsboro Twp., Cumberland Co.
- Daniel Tasco, East Cocalico Twp., Lancaster Co.
- Brian Hite, Hanover Twp., Lehigh Co.
- William McIntosh, Luzerne Boro, Luzerne Co.
- Daniel J. Yelito, Pittston City, Luzerne Co.
- Bill Medvic, Montgomery Twp., Montgomery Co.
- Frederick Miami, Philadelphia City, Philadelphia Co.
- Todd M. Smith, Conewago Twp., York Co.
- Scott J. Getgen, Newberry Twp., York Co.

Congratulations to the following Roads Scholar II recipients

(Certified between November 1 and December 31, 2019)

- Scott A. Small, Conewago Twp., Adams Co.
- Aaron J. Mohar, Horsham Twp., Montgomery Co.
- Eric J. Bortner, Penn Twp., York Co.

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 **gis.penndot.gov/ltap** and look for the release under "Roads Scholar Program."

Upcoming 2020 Classes

To Register:
PHONE: 1-800-FOR-LTAP (367-5827)
WEBSITE: gis.penndot.gov/ltap
This represents some of our scheduled courses. Look for updates on the website.

Active Transporation
April 9 – Huntington Co.
April 14 – Westmoreland Co.

Asphalt Roads Common Maintenance Problems
April 3 – Crawford Co.
April 9 – Lehigh Co.

Bridge and Culvert Inspections for Municipalities
April 16 – Crawford Co.
May 6 – Chester Co.
May 18 – Bedford Co.

Curves on Local Roads: Issues and Safety Tools
April 15 – Indiana Co.

Drainage: The Key to Roads That Last
May 7 – Chester Co.

Equipment & Worker Safety
May 7 – Center Co.
May 19 – Lycoming Co.
May 20 – Northumberland Co.

Introduction to Traffic Studies
April 2 - McKean Co.
May 12 – Lehigh Co.

Seal Coat
April 16 – Cameron Co.
April 16 – Berks Co.
April 23 – Crawford Co.

Pavement Markings: Applications and Maintenance
April 28 – Allegheny Co.

Pedestrian and Crosswalks
April 15 – Chester Co.
April 21 – Lycoming Co.
April 22 – Susquehanna Co.
May 19 – Lancaster Co.

Project Oversight
April 3 – Berks Co.
April 30 – Erie Co.

Roadside Vegetation Control
April 20 – York Co.

Safe Driver
April 9 – Erie Co.
April 16 – Centre Co.

Speed Limits and Speed Management
May 21 – Blair Co.

Stormwater Facility Operation and Maintenance
April 2 – Chester Co.
April 15 – Venango Co.
May 8 – Berks Co.

Traffic Calming
April 21 – Lehigh Co.

Work Zone (Temporary) Traffic Control
April 7 – Lehigh Co.
April 9 – Centre Co.
April 14 – Cambria Co.
May 12 – Montgomery Co.

** NOTE: Calendar subject to change.*

Upcoming Webinars

The following LTAP webinars will be repeated on two consecutive days. Registration is free and will open 30 days prior to the webinar; email notifications will be sent. Register at www.ltap.state.pa.us (under "Webinars").

Principles of Paving, April 23 or 24, Noon
This webinar will provide an overview of the LTAP Principles of Paving course, newly updated to reflect changes in paving techniques, PennDOT specifications, and lessons learned from local officials.

Roadside Safety Features, July 9 or 10, Noon
This webinar will discuss safety concepts and how to keep vehicles on the road through pavement markings, guide rails, signs, and road surface improvements.

ABC's of Asset Management, September 24 or 25, Noon

Emergency Preparedness from the Road Crew Perspective, December 11 or 12, Noon

Register TODAY for these Training Opportunities

Road Maintenance and Safety Symposium

May 3-5
Hershey Lodge
Hosted by LTAP and PSATS
Register at learn.psats.org (look under "Public Works")

Roadway Management Conference

RMC

October 26-28
Charlottesville, Va.
Hosted by the LTAP and T2 Centers of the Mid-Atlantic region – PA, MD, VA, WV, and DE
Register at roadwaymanagementc.wixsite.com/home

pennsylvania DEPARTMENT OF TRANSPORTATION
LOCAL TECHNICAL ASSISTANCE PROGRAM

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