



moving FORWARD

SUMMER 2022

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

Spotted Lanternfly – 2022 Quarantine Permit Area Expanded. Is Your County Included?

More municipalities will now require permits under the Spotted Lanternfly (SLF) quarantine area. The SLF is a newer invasive insect to Pennsylvania and the United States that is native to China, India, Japan, and Vietnam, and was first identified in eastern Berks County, Pennsylvania in September 2014. It is known

to kill grapes and may impact fruit trees. Some of its host trees include tree of heaven (ailanthus), red maple, Japanese maple, apple, crabapple, and peach.

The Pennsylvania Department of Agriculture (PDA) established a quarantine in late 2014 in an effort to contain the pest within a known area. In March 2015, PDA was awarded emergency Farm Bill funding to attempt to eradicate

the insect. Funding was also awarded for research and outreach. In April 2015, 22 property owners were trained to use brown sticky tree bands to trap the immature insects, which resulted in the death of nearly 200,000 of these insects. Evidence revealed that adult females seem to need to feed on ailanthus before they lay eggs. A strategy was developed to remove ailanthus from infested properties and treat a few remaining trees with a systemic pesticide. Female insects died after feeding on these trees.

Public reports led to the discovery of additional infestations, and by the end of 2015, additional infestations were discovered for a total of 435 properties. There are currently 45 counties within the quarantine zone, with 8 counties just added in 2021 and 11 more in 2022. Check the map above or on PDA's website to see which municipalities are in a quarantine county.

The SLF quarantine prohibits movement of any SLF living stage and regulates movement of materials that may harbor the insect. Some examples of regulated articles include:



Spotted Lanternfly

- Landscaping or construction waste.
- All plants and plant parts including logs, stumps, any tree parts, nursery stock.
- Outdoor household equipment such as tractors, mowers, grills, furniture, tile, stone, etc.
- Outdoor industrial and construction equipment and materials.

Businesses located or working within the quarantine, which move products, vehicles, or other conveyances within or from the quarantine are required to have an SLF Permit or hire companies that have one. To obtain a permit, a manager or designee must pass a free SLF training course (<https://extension.psu.edu/spotted-lanternfly-permit-training>). The trained employee must then train fellow employees in the quarantine zone on the material.

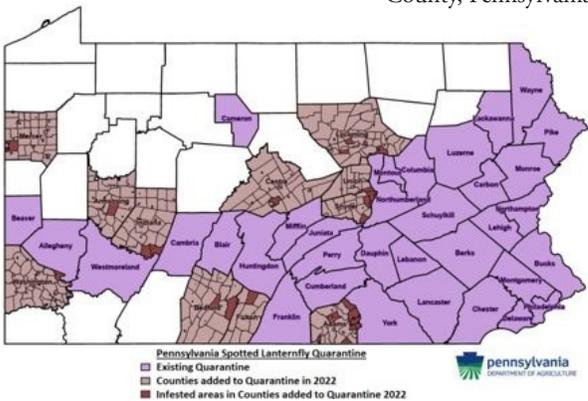
Additional information is available at PDA's website:

SLF Quarantine:

https://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/quarantine/Pages/default.aspx

Business & Industry Compliance:

https://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/program-information/Pages/Businesses.aspx



Spotted Lanternfly Map

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Sidewalks in Residential Areas

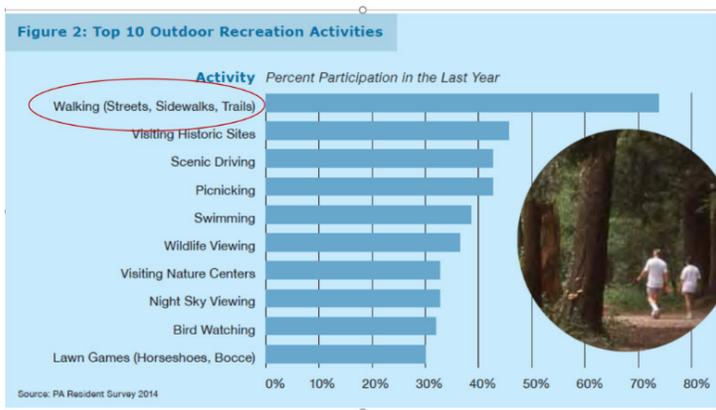
Sidewalks Can Contribute to Community Development, Mobility, and Quality of Life

By Patrick Wright, Pennoni

Why Sidewalks?

This seems like a trivial question, but unfortunately many residential communities do not have sidewalks, and many communities struggle with the need to require sidewalks for new development. Walking is the most common and basic form of transportation that we have. Thus, it should be designed and built into all aspects of our transportation system.

In addition to providing a space for basic mobility needs, walking is the most popular recreational activity for Pennsylvanians. Surveys conducted for PennDOT's Active Transportation Plan show this:



Furthermore, sidewalks provide a separate space, away from vehicles, improving safety benefits as opposed to walking in a road with traffic. Per the Federal Highway Administration (FHWA), sidewalks are a proven safety countermeasure and can reduce the probability of crashes 65 to 89% — that is a significant safety benefit.

Beyond basic transportation and safety, sidewalks provide many other benefits directly or indirectly, including for:

- Health.
- Air quality/environment.
- Transportation equity.
- Social interactions within a community.



For more information on these benefits, refer to PennDOT's Active Transportation Plan, Publication 787.

Many communities already have sidewalk requirements built into their Subdivision and Land Development Ordinances. However, there can be pressure to not include sidewalks for a variety of reasons. The decision on whether to waive sidewalks for a residential area should be taken seriously and carefully consider the safety, health, social, and other benefits of sidewalks.

This waiver of sidewalk requirements is common in more rural areas. However, if there are developments occurring in these areas, they are most likely transitioning from a rural nature to a suburban community.

Interestingly, these transitioning areas benefit the most from sidewalks from a safety perspective.

Sidewalk Design Considerations

While you can develop your own standards and requirements for sidewalks, PennDOT (See Figure 1 and the references at the end) has already developed Americans with Disabilities Act (ADA) compliant standards that you can adopt (see the resource list at the end). This article provides a summary of some of the key design considerations for sidewalks, including the width, buffer area, location, and materials. These key parts of a sidewalk, including the curb, buffer area, pedestrian-accessible route, and frontage zone are shown in Figure 2. For more information, check the resources listed at the end of this article.

Sidewalk Width

Sidewalk width can vary based on the number of pedestrians, the street classification, available right-of-way, and other factors. The standard width for a sidewalk in a residential area is 5 feet. The 5-foot width provides compliance with ADA requirements, plus accommodates two people walking side by side comfortably. While a 4-foot width is permitted, this requires passing areas every 200 feet for ADA, and limits the functionality of the sidewalk. For areas with more pedestrian traffic, sidewalks may need to be wider — although this is unlikely in residential areas. These widths represent an unobstructed width — so no signs, poles or other obstructions can be in the sidewalk within these widths.

Sidewalk Buffer Area

Another design feature to consider is the buffer area between the curb and sidewalk. The buffer area provides separation of the pedestrian from traffic, which increases safety and comfort of the walk. While there is no definitive design guidance on the appropriate width of the buffer area in PennDOT standards, the width will largely be a function of the available right-of-way, and the design of the street/sidewalk. Typically, the widths are a minimum of 2 feet, with 4 feet being a design goal, and even larger widths in some locations. The FHWA Small Town and Rural Areas Multi-Modal Guide recommends a minimum of 4 feet and 6 feet is preferred.

The width will affect the types of trees and other vegetation that can be accommodated in the buffer area. Narrower buffer areas may be hardscaped, as 2-foot or narrower widths may accommodate limited vegetation and even hinder the growth of grass. In addition to adding to the safety/comfort of the sidewalk, the buffer area is functional. The buffer can be used for utilities, signposts, other poles, garbage cans/other objects without blocking the sidewalk, and in the winter can store snow. The buffer area also makes creating ADA-compliant curbs and ramps easier. In locations where there is no space for a buffer area, consider increasing the sidewalk width to 6 feet.

Sidewalk Locations

Sidewalks should be constructed on both sides of a residential street and continuous along the street. They should be continuous across

Sidewalks continued from page 2

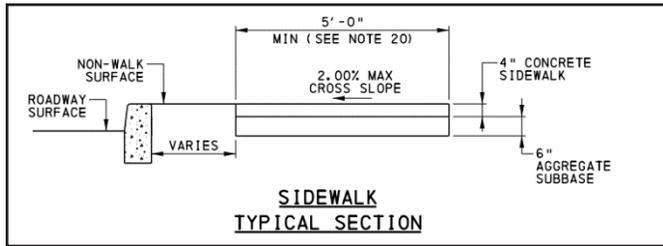


Figure 1: Sidewalk design detail from the PennDOT Roadway Construction Standards, RC-67M manual.



Figure 2: This photo shows different sidewalk zones, including a buffer area.



Figure 3: A five-foot-wide sidewalk can comfortably accommodate two people side by side.



Figure 4: The photo shows an example of a street with a left-side sidewalk without a buffer area and a right-side sidewalk with a buffer area.

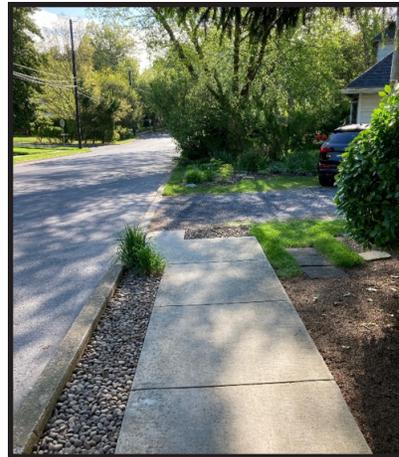


Figure 5: Sidewalks should be on both sides of the street and continuous. A gap in the sidewalk network leads pedestrians into conflicts with traffic.

driveways, with no adverse grades/cross slopes due to the driveway (refer to PennDOT RC standards for example designs). Sometimes new development asks for a delay in the construction of sidewalks. Remember, sidewalks are a viable part of the transportation system. If the street is there, the sidewalks should be too. Further, the sidewalk systems should be linked and continuous. How often do you drive down a road that just stops?

Sidewalks should also generally follow longitudinally along the street. While meandering sidewalks may look pleasant, and can be appropriate in parks, a linear sidewalk is best for the residential street to provide the shortest walking distance, lower costs, and easier maintenance.

Roadway Classification and Land Use	Sidewalk/Walkway	Future Phasing Requirements
Rural Highways (< 400 ADT)	Shoulders preferred, with minimum of 0.9 m (3 ft).	Secure/preserve right-of-way (ROW) for future sidewalks.
Rural Highways (400 to 2,000 ADT)	1.5-m (5-ft) shoulders preferred, minimum of 1.2 m (4 ft) required.	Secure/preserve ROW for future sidewalks.
Rural/Suburban Highway (ADT > 2,000 and less than 1 dwelling unit (d.u.) / .4 hectares (ha) [1 d.u. / acre])	Sidewalks or side paths preferred. Minimum of 1.8-m (6-ft) shoulders required.	Secure/preserve ROW for future sidewalks.
Suburban Highway (1 to 4 d.u. / .4 ha [1 to 4 d.u. / acre])	Sidewalks on both sides required.	
Major Arterial (residential)	Sidewalks on both sides required.	
Urban Collector and Minor Arterial (residential)	Sidewalks on both sides required.	
Urban Local Street (residential – less than 1 d.u. / .4 ha [1 d.u. / acre])	Sidewalks on both sides preferred. Minimum of 1.5-m (5-ft) shoulders required.	Secure/preserve ROW for future sidewalks.
Urban Local Street (residential – 1 to 4 d.u. / .4 ha [1 to 4 d.u. / acre])	Both sides preferred.	Second side required if density becomes greater than 4 d.u. / 4 ha (4 d.u. / acre) or if schools, bus stops, etc. are added.
Local Street (residential – more than 4 d.u. / .4 ha [4 d.u. / acre])	Sidewalks on both sides required.	
All Commercial Urban Streets	Sidewalks on both sides required.	
All Streets in Industrial Areas	Sidewalks on both sides preferred. Minimum of 1.5-m (5-ft) shoulders required.	

1 acre=0.4 hectares (ha)

Figure 6: These are recommended guidelines for sidewalk installation from the FHWA pedbikesafe.org website (Source: pedbikesafe.org).

Sidewalks *continued from page 3*

Sidewalk Surface Materials

PennDOT standards specify concrete as the preferred surface for sidewalks. Concrete provides a long-life surface, lasting over 40 years or more. Concrete also requires the least maintenance, especially early in its life cycle.

Asphalt may be acceptable in some situations but is typically more appropriate for trails and paths to accommodate both pedestrians and bicyclists.

While some brick or other pavers may look nicer than concrete, the maintenance of these sidewalks is much greater. Especially in Pennsylvania, where the winters and thaw cycles can cause pavers to settle differently and create an uneven walking surface that may not meet ADA compliance. Even stamped concrete surfaces can have too much texture in the surface and will make it difficult for pedestrians with disabilities. Per ADA, surfaces must be smooth (PROWAG Section 302.7.1). 🚫



Figure 7: Bricks look nice, but are difficult to maintain to ADA compliance.

Pennsylvania's Active Transportation Plan Vision Statement

“Biking and walking are integral elements of Pennsylvania’s transportation system that contribute to community health, economic mobility, and quality of life.”

Resources

- PennDOT Publication 787, Active Transportation Plan: <https://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20787.pdf>
- PA Department of Health, WalkWorks Program: <https://www.health.pa.gov/topics/programs/WalkWorks/Pages/WalkWorks.aspx>
- PennDOT Roadway Construction Standards for Curb Ramps and Sidewalks, RC-67M: https://www.dot.state.pa.us/public/PubsForms/Publications/Pub%2072M/72M_2010_8/72M_2010_8.pdf
- PennDOT Materials and Constructions Specifications for Curb Ramps and Sidewalks, Publication 408 Sections 350, 413, 630, 676, and 695.
- PennDOT Design Manual Part 2, Chapter 6, Pedestrian Facilities and the American with Disabilities Act, <https://www.dot.state.pa.us/public/pubsforms/Publications/PUB%2013M/December%202021%20Change%20No.%207.pdf>
- National Association of City Transportation Officials: <https://nacto.org/>
- Smart Growth America. <https://smartgrowthamerica.org/>
- Complete Street Coalition: <https://smartgrowthamerica.org/tag/national-complete-streets-coalition/>
- FHWA Small Town and Rural Multimodal Networks: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/fhwahep17024_lg.pdf
- FHWA Proven Safety countermeasures, Walkways: <https://safety.fhwa.dot.gov/provencountermeasures/walkways.cfm>
- Pedsafe.org: http://www.pedbikesafe.org/pedsafe/resources_guidelines_sidwalkwalkways.cfm

Transportation News Briefs

LATEST INFORMATION FROM PENNDOT & OTHERS

Yield to Pedestrian Channelizing Devices (YTPCD)

As part of PennDOT’s efforts to reduce pedestrian crashes on the commonwealth’s highways, it purchased for municipalities Yield to Pedestrian Channelizing Devices (YTPCD) that meet all federal and state criteria for traffic signs and crashworthiness.

In-street YTPCDs are intended to be used at locations with high pedestrian volumes during peak periods of travel or during unique situations or events. These devices are a low-cost countermeasure that can be utilized until a more permanent solution can be planned, designed, and constructed. Ideally, based on the portable design of these devices they are most effective when removed if pedestrian activity is minimal. This limits driver complacency and has a greater impact on drivers yielding to pedestrians.

PennDOT YTPCDs inventory had been depleted two years ago and at that time these devices were no longer available free for local authorities. However, attached is a list of approved Bulletin 15 vendors, should local authorities choose to obtain these devices independently.

As a reminder, local enforcement is the responsibility of the local jurisdiction. When YTPCDs are in place, [PUB 236](#) must be followed when using Pedestrian Channelizing Devices (R1-6):

- Shall be placed on the centerline of a low-speed roadway in a marked unsignalized crosswalk.
- Shall not be positioned on a roadway with a speed limit greater than 35 mph or with a clear roadway width of less than 20 feet.
- Shall not be used in locations where it will adversely affect the turning radius of motor vehicles.
- Are to be placed on roadway centerlines within 50 feet of crosswalks to remind all users that they are to obey state law and yield to pedestrians in those crosswalks.

If you have additional questions or are in need of support or education on this topic, local jurisdictions may reach out to [PennDOT Connects](#), [PennDOT LTAP](#), or the [PennDOT Bicycle and Pedestrian Coordinators](#). 🚫



A Yield to Pedestrian Channelizing Device being used on Bridge Street in Lemoyne Borough.

2022 Build A Better Mousetrap

FIRST PLACE

Sidewinder

South Manheim Township,
Schuylkill County, PA

Contact:

Corby Lewis, Roadmaster
southmanheimroads@gmail.com



South Manheim Township came up with a way to preserve materials, save time and create a more consistent fill along berms with the sidewinder. The township used existing materials and a donated ATV plow to create a product that saves money, time and materials.

What was the challenge? Like many small, rural communities, we face budget constraints. Therefore, we can not purchase or rent additional equipment for every job. Along many of our roadways, the berm is not very wide and our challenge was to be able to fill areas of the berms without losing expensive materials. We also needed to be mobile enough to cover a large area in a short amount of time. Dumping our material directly on the roadway and working it in slowly with our backhoe caused a waste of material, as some material was not going into the correct areas. The result was inconsistent and required continuous sweeping to keep roadways safe. We owned a berming machine with a moon paver which works well; however, you are limited to using one truck over and over which results in a lot of down time while the truck gets loaded, then returns to the site. We needed something more efficient that allowed us to use multiple trucks and provide consistent flow of materials to avoid waste and increase productivity.

How did you develop and implement your solution? The township needed something similar to a widener, which can be expensive. Working together, we developed something along the lines of a widener using implements we already owned, including a berming machine, which usually would mount on the back of a truck, and some scrap metal from the shop. Although we knew there would be some cost involved, we estimated we would save thousands in labor in just a short time. The machine would need to mount to our backhoe (JD 410j tmc) and it needed to be able to push the trucks like a paver. This would allow us to use multiple trucks (we often work with neighboring municipalities, sharing trucks and equipment) and eliminate unnecessary loss of material due to the truck coming out of the berming machine and making a mess on the roadway. We constructed a frame with quick-attach mounting for our backhoe and put a dock bumper to eliminate potential damage from pushing the trucks. Next, we created a frame for the berming machine, and skis to run on the roadway to ensure it stays on grade.

What labor, equipment, plans, or materials did it take to make the solution work? It took roughly 60 manhours to construct the sidewinder, using basic metal-working tools (welder, grinder, etc.). A good portion of the metal was scrap from our shop. Also, one of our employees donated an old ATV plow he intended to scrap. We reinforced it so it could handle the material load. We had to purchase metal and a dock bumper. The quick-attach plates were cut by a plasma cutter instead of buying

blanks from the dealer, which can cost \$1,500. Plasma-cutting material was roughly \$250 for the pair through a local metal sales group. As we were building it, we also discovered we could make other attachments to accomplish other tasks with the same unit. We designed an attachment for doing curbing with blacktop, and an attachment for making a uniform 2-inch-wide pass for berms. We also ran the hydraulics off of the backhoe so everything can be controlled right from the driver's seat.

What was the cost of implementation? The cost of materials was just under \$500. This included the cost of blanks for the quick-attach for the backhoe. We used a mig welder and simple angle grinders to fabricate the sidewinder, all of which we already owned.

What was the positive impact/results/outcome of your efforts? This invention has been very beneficial to the township. It saves time because we can keep it running continuously. We have a three-man crew, and this allows one person to operate the sidewinder while the other two employees are hauling materials. The sidewinder also saves our township on costs of materials. We don't lose as much material over the banks because we can control the flow and placement of the materials. Above all we can make our township roadways safer for our residents by having wider shoulders.

RUNNERUP

Hydraulic Powered Concrete Mixer

North Manheim Township, Schuylkill County, PA

Contact:

Ross Miller, Roadmaster
NMTRoadmaster@comcast.net



North Manheim Township's innovation solves several problems and eliminates the need for additional equipment and fuel back and forth to job sites. The mixer saves the township time and money, and gives township workers flexibility at the site.

What was the challenge? We do a lot of catch basin repairs, pouring of headwalls, and other concrete work. Our off-the-shelf options were to mix by hand with a wheelbarrow, which can be labor intensive and slow; use an electric mixer, which requires hauling a generator and fuel to jobsite; or use a gas-powered mixer, which requires another engine to maintain and hauling fuel to the jobsite. We weren't satisfied with these options.

How did you develop and implement your solution? All of our trucks are built with central hydraulics, so we decided to convert an electric mixer to hydraulic. We removed the electric motor, fabricated a mount to install a hydraulic spinner motor, added a safety shut-off valve, and had long hydraulic lines made to hook to the spreader or spinner hydraulic hook-ups at the back of the trucks. We purchased a suitably sized pulley from Tractor Supply and the correct-length belt from a local hardware

Continued on page 6

2022 Build A Better Mousetrap *continued from page 5*

store to complete it. Since those hook-ups already have adjustable flow for controlling salt usage, we were able to adjust the speed of rotation on the mixer. Now we don't have to haul any extra fuel or a generator to the job site. We don't have to worry about getting a small engine to start, and we don't have to break our backs mixing by hand.

What labor, equipment, plans, or materials did it take to make the solution work? A used electric mixer, hydraulic spinner motor, V belt pulley, V belt hydraulic lines and fittings, hydraulic safety valve, random sheet metal laying around to build the mount and about 8 hours of labor.

What was the cost of implementation? Our costs included: a used mixer, \$100; pulley, \$20; belt, \$15; and hydraulic lines and fittings, \$90. The hydraulic spinner motor and hydraulic safety valve were already in stock and not planned to be in used in the near future. Labor was approximately \$200. The total cost for us was \$425.

What was the positive impact/results/outcome of your efforts? Not running a gas engine or generator saved us fuel costs and resulted in reduced emissions/pollution. Time was saved from not having to perform maintenance on the engine/generator or having difficulty getting them started. Not having to hand mix saved on labor. The main benefit for the crew is simply convenience. Just hook the lines to the truck and you're done.

RUNNERUP

Decorative Light Rebuild

Tarentum Borough, Allegheny County, PA

Contact:

Mark Anuszek, Borough Foreman
streets@tarentumboro.com

What was the challenge? Multiple decorative LED streetlights were fading or completely burning out at the same time. The lights are about 10 years old and out of warranty and the cost to retrofit one light was estimated at \$870, plus shipping. We have 45 of these lights in the borough, and in October 2021 we had to figure a way to repair or replace 38 of them. No money was allocated for this large purchase in the 2021 budget.

How did you develop and implement your solution? We took the top light assembly from one of the units, disassembled it and evaluated its design. The LED lights were built into a 22-inch aluminum-finned shaft. The top of the LED lights included a plastic shield designed to deflect the light downward. At the top and bottom of the shaft were three threaded holes for screws. Our group came up with an idea to somehow fit this light with a new 360 LED screw in the light by using a ceramic socket. We spoke with the local electrical vendor who had seen our lights before and recommended the correct lumens. Our group purchased the material and came back to the table for design. We had to figure a way to put it all together so that all the disassembled parts got reconnected. We started



Tarentum's invention enables the borough to save considerable money by refurbishing street lights in house. Crews disassembled an existing light to learn how better to repair the units.

with an inch-and-a-half piece of threaded PVC to hold the decorative top onto the assembly. We removed all LED lights and shields from the aluminum shaft. We then cut 3 inches off the top and bottom of the shaft. This allowed us to use the threaded spots to attach our ceramic socket. We wired the socket through the center of the 3-inch aluminum shaft and reattached to the bottom of assembly. We then removed the driver for the decorative light pole and wired a new assembly to the pole.

What labor, equipment, plans, or materials did it take to make the solution work? We used our lineman and bucket truck to take down the light assembly and wire it back up to the pole. We had two laborers disassemble and strip old LED lights apart. Two others cut the aluminum shafts using our bandsaw. They then assembled the new sockets onto the aluminum base and wired them to the base for our linemen to finish.

What was the cost of implementation? Material costs: Ceramic socket, \$8.85; Keystone 360 LED, \$67; miscellaneous wire/nuts, \$20. Total cost: \$95.85 per light. With 38 lights, the project came to \$3,642.30. New retrofitted lights would have cost over \$33,000.

What was the positive impact/results/outcome of your efforts? The savings came to \$29,417 for the borough. The results were fresh and brighter lighting throughout the borough. Our citizens and businesses immediately noticed the difference. Every one of the workers that participated in the project felt rewarded by the positive feedback of the community and borough officials. We still have eight more to complete, and in the future we will modifying our decorative lights in the park. 🚧

To learn more about the Build A Better Mousetrap program, go to the LTAP website, gis.penndot.gov/ltap and search under "News".

2022 ROADWAY MANAGEMENT CONFERENCE Attendee Registration Information

Register Today to Secure Your Spot!

\$150 per person until Sept. 1
\$200 per person after Sept. 1

Attendees from the Mid-Atlantic LTAP Region states will be given preference through July 31.

Cancellation Policy: Refunds will not be issued unless notice of cancellation is received by September 9, 2022. An administrative fee of \$25 will be retained.



<https://roadwaymanagementc.wixsite.com/home>

October 11-13, 2022

Oglebay Resort

Wheeling, West Virginia



Reducing Rural Road Runoff Crashes: A Joint Effort Across Pennsylvania

PennDOT, [Pennsylvania's Local Technical Assistance Program \(LTAP\)](#) and local officials across the state are teaming up in the ongoing effort to tackle the vexing problem of rural roadway departure crashes.

According to the Federal Highway Administration (FHWA), every year, nearly 12,000 people die in crashes when their cars leave the travel lane on a rural road. That's 30 people every day.

Roadway departure crashes are a major problem on all public rural roads. Nationally, 50 to 60% of them happen on state networks. That means more than 40% occur on locally-owned roads, according to FHWA.

As an FHWA [Every Day Counts Round 5 \(EDC-5\)](#) innovation Pennsylvania selected to pursue, the Reducing Rural Roadway Departures initiative involves LTAP contacting municipalities to offer training and assistance dealing with this critically important safety issue.

Michael Dudrich, transportation planning specialist in PennDOT's Bureau of Planning and Research, said that between 2011 and 2019, 363 local officials attended training classes on techniques to improve local road safety. The classes were updated in 2019, and since then, 72 more local officials have attended.

From the PennDOT perspective, Gavin Gray, acting PennDOT chief engineer and former chief of the Highway Safety Section, noted that all roadway departure crashes have increased since the start of the COVID-19 pandemic. On the state highway system, Gray said, the use of systemic treatments like rumble strips and [high friction surface treatments](#) as well as use of FHWA's [proven countermeasures](#) should yield more positive results in the future.

In addition, Gray said, "the new [Strategic Highway Safety Plan](#) has lane departure crashes as an emphasis area for the next five years because it's our leading contributing element to infrastructure-related crashes."

Patrick Wright, a traffic engineer with Pennoni, an engineering consulting firm that works with LTAP, provides training at LTAP classes as well as writing articles and hosting webinars aimed at helping municipal officials deal with roadway safety issues.

"We are constantly reviewing the training," he said. "We are making sure we are getting the latest and most accurate information (to the students)."

As examples of the success stories generated by LTAP, he pointed to work LTAP did with North Londonderry and North Lebanon townships, both in Lebanon County.



John Dubbs, assistant roadmaster in North Londonderry Township, relied on a study and data from LTAP to deal with a troublesome curve.

John Dubbs, assistant roadmaster for North Londonderry Township, turned to LTAP and Wright for help after studying data associated with a troublesome curve on Hoffer Road.

"At one supervisors' meeting, we were getting complaints from residents that they felt they continually had people leaving the roadway and tearing up their yards," he said. "LTAP is a huge resource. Every question you come up with, there is an expert (to help)."

With LTAP's assistance, the township considered rumble strips, but noise to nearby residents was an impediment.

LTAP helped with a pavement assessment as well, but ongoing maintenance concerns gave the township pause.

"We actually doubled up on curve warning signs, put on either side of the street and added post delineators," Dubbs noted.

He praised LTAP for the thoroughness of its advice.

"We always get a big packet when getting assistance from LTAP with recommendations and advice on how to do everything," he said. "On this one, we got the flip side if we didn't install the rumble strips and what the downside was, and we had the information that helped us make the decision. It's more than just 'we recommend this,' but here is the positive and negative of everything we discussed."

In North Lebanon Township, Roadmaster Ed Bremsinger turned to Wright and LTAP for help with a curve on Kimmerlings and Kochenderfer Road.

"We had seven incidents on that turn in a two-month time frame that was really concerning," Bremsinger said.

Wright did a curve analysis and developed recommendations.

"On both turns, we added signage with advisory speeds and additional chevrons," Bremsinger said. "We determined that in addition to signage, we needed to do something for skid resistance. We had a paving contractor come in with a milling machine and milled off half an inch and scarified it."

"Since we changed the signage and scarified the road, we have not had any incidents at that turn," Bremsinger added.

He is also very supportive of the LTAP training classes. They include background information on curve safety, how to study a curve following federal and state regulations, signing requirements, and examination of other curve safety features such as shoulder edge drop-offs, drainage issues, and removal of fixed objects. Hands-on training examples with photos, videos, and local Pennsylvania examples highlight the curve course. As new information became available, such as the FHWA guide "Low-Cost Treatments for Horizontal Curve Safety 2016," the course was updated.

A course on Roadside Safety Features provides information and resources



Roadmaster Ed Bremsinger used LTAP services to address a dangerous curve in North Lebanon Township.



The Sequential Dynamic Lighting Curve Warning System is a safety countermeasure that alerts motorists and guides them through sharp curves.

for municipalities to understand the importance of roadside safety and to be able to determine the most appropriate countermeasures. While not a design class, it focuses on practical applications of roadside safety concepts, such as roadside hazard identification and improvement, hazard removal and relocation, pavement markings, delineators, and chevrons, and higher cost barrier improvements. Information is also presented on guiderail warrants, types, and end treatments.

"We were well satisfied with the LTAP program, and we want to get guys lined up for more," Bremsinger said. "Our goal is always to keep guys going to things. There is a wealth of information in those classes; Patrick is a good instructor."

For information on available courses, visit [LTAP's website](#). 

Upcoming LTAP Training

Classes are being held in person and virtually. Check the website, gis.penndot.gov/ltap, for the latest listing. If you would like to receive email alerts about upcoming training, send a request to ltap@pa.gov. Here is a sampling of upcoming scheduled classes. **All classes are free!**

American with Disabilities Act (ADA)
September 27 – Virtual

Asphalt Roads CMP
October 5 – Lancaster County

Equipment and Worker Safety
September 6 – Virtual

Introduction to Traffic Studies
August 9 – Berks County

Pedestrian and Crosswalks
September 19 – Lancaster County
October 18 – Berks County

**Posting and Bonding of
Local Roads v.II**
September 13 – Lycoming County

Principles of Paving v.II
October 25 – Lycoming County

Project Oversight
September 13 – Virtual

Road Safety Audit
August 30 – Virtual

Seal Coat
August 9 – Lycoming County

Speed Limits & Speed Management
September 20 – Virtual

Unpaved & Gravel Roads CMP
February 1 – Schuylkill County

Winter Maintenance 101
December 14 – Berks County

Archived Training: Catch up online!

Recorded sessions and handouts from previously held drop-ins and webinars are available on the LTAP website, gis.penndot.gov/ltap. Sessions cover a variety of topics from asset management to truck restrictions. Check out the full list online and take advantage of this free training from the comfort of your home or office.

NEW! Course Handouts Are Now Online

Did you misplace a workbook or handout from a course? Do you wish you had the handouts in an electronic format? All the handouts from LTAP courses are now online and available for download. Go to gis.penndot.gov/ltap and under the Course Descriptions tab, click on the course and then scroll to the bottom of the course information to see a list of course handouts.

Congratulations to the following Roads Scholars!

The following scholars were certified between February 1 and April 30, 2022

Roads Scholar I:

- Michael Wozniak, Monroeville Borough, Allegheny County
- Robby E. Rarick III, Richmond Township, Berks County
- Mike Hughes, London Grove Township, Chester County
- Ryan Yerkes, London Grove Township, Chester County
- David B. Madden, PennDOT, Cumberland County
- Evan Zeiders, PennDOT, Dauphin County
- Pike Brynildsen, PennDOT, Dauphin County
- Michael J. Dudrich, PennDOT, Dauphin County
- Geroge H. Baker Jr., Upper Leacock Township, Lancaster County
- Wade T. Ball, Upper Leacock Township, Lancaster County
- Daniel J. Yelito, NEPA-MPO, Luzerne County
- Kyle J. Dermer, Hatboro Borough, Montgomery County
- Bruce Fehr, Washington Township, Schuylkill County
- Chris Light, Washington Township, Schuylkill County
- Shawn M. Reichart, Orwigsburg Borough, Schuylkill County

Roads Scholar II:

- Devon Hain, Berks County Planning Commission, Berks County
- Matthew J. Decker, New Hope Borough, Bucks County
- Kyle Miller, Millersville Borough, Lancaster County

Roads Scholar Administrative:

- Paul W. Twale, Elizabeth Township, Allegheny Township
- Andrew T. McAdams, Warminster Township, Bucks County
- Chris Metka, PennDOT, Dauphin County
- Michael J. Dudrich, PennDOT, Dauphin County
- Barbarajean R. Storm, PennDOT, Dauphin County
- John M. Hagan, Lower Milford Township, Lehigh County
- Stacey Smith, Lower Milford Township, Lehigh County
- Daniel J. Yelito, NEPA-MPO, Luzerne County
- Lynn Brown, Washington Township, Schuylkill County
- Slade A. Bugajinsky, Orwigsburg Borough, Schuylkill County

Roads Scholar Police:

- Nicholas K. Kauffman, Derry Twp. Police Dept., Dauphin County
- Andrew P. Sanborn, Upper Dublin Twp. Police Dept., Montgomery County
- Anthony J. Lombardo, East Handfield Twp. Police Dept., Lancaster County

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."

LTAP Contact Information:

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1-800-FOR-LTAP (367-5827) Fax: (717) 783-9152
Email: ltap@pa.gov Web: gis.penndot.gov/ltap

All LTAP services are free to municipalities.