pennsylvania
DEPARTMENT OF TRANSPORTATION
LOCAL TECHNICAL ASSISTANCE PROGRAM

moving FORWARD

SUMMER 2021

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

PennDOT Changes Funding Method for New Turnback Roads

by Jeremy M. Freeland, Planning Division Manager, PennDOT

PennDOT has changed how rehabilitation costs for new turnback roads will be processed. The department will now use a reimbursement-style contract to cover rehabilitation costs, which are undertaken before a state road is turned back to a municipality. This new method replaces the prior lump-sum payment. Please note that this change does not affect turnback road maintenance payments.

PennDOT's Turnback Program provides for the rehabilitation, maintenance, and transfer of roads identified as "functionally local" to municipalities. Such roads are generally fragmented, have low traffic volume, and essentially serve only local purposes.

The Highway Transfer (Turnback) Program provides for the rehabilitation, maintenance, and transfer of roads identified as "functionally local" to municipalities. Such roads are generally fragmented, have low traffic volume, and essentially serve only local purposes. Through a voluntary agreement between a municipality and PennDOT, the turnback enables the municipality to improve its local transportation system and further develop its community.

Under the Turnback Program, state funds are used to rehabilitate roads to a satisfactory condition before transfer; together, the municipality and PennDOT decide the necessary improvements and estimated cost. Municipalities also receive an annual maintenance payment of $4,000 per mile paid in perpetuity two years following the year of transfer. Since the program was first established in 1983, more than 4,800 miles of road have been successfully transferred from state to local ownership.

The Turnback Program is funded from the Highway Transfer restricted account within the Motor License Fund. Under Act 32 of 1983, three mills of the oil company franchise tax were originally earmarked for use in the turnback program. In 2013, Act 89 split the allotment of three mills — roughly $54 million — between this account and the Highway Bridge Improvement restricted account, thereby reducing the deposit amount to only 1.5 mills and capping the Turnback Program's annual budget at $27 million.

Turnback funds are first used to pay the annual maintenance payments of $4,000 per mile owed to municipalities, and any remaining dollars are then distributed toward the rehabilitation of more turnback roads. As additional mileage gets added to the turnback program, the overall maintenance payments increase and the available amount of rehabilitation funds decreases. In 2021, for example, the statewide maintenance payment delivered on March 1 totaled more than $19.2 million. It's also worth noting that as projects become more costly over the years, the total miles capable of being turned back each year has dropped.

Concerned about this limited funding, PennDOT recently made changes to how the municipality receives its rehabilitation funds, shifting from a cash-settlement delivery system to a reimbursement-style contract, where the municipality must now submit invoices to receive payment for work performed. PennDOT is hoping that by preserving funds that regularly went unexpended for a project, this money can go toward other turnbacks.

To learn more about the Turnback Program, go to www.penndot.gov/Doing-Business/LocalGovernment/TurnbackProgram/Pages/default.aspx. Any municipality interested in obtaining ownership of a state-owned local road should contact its District Municipal Services representative for more information.

ALSO IN THIS ISSUE

Crossing Guards Must Be Trained and Follow the Rules to Keep Children Safe

by Wendy Kelley, PE, Pennoni

Grab a STOP paddle and reflective vest, step into the roadway, and stop traffic to allow children to cross the street safely. Seems easy enough. After all, most of us cross a road every day, but while it is one thing to cross the road yourself, it is a completely different task when you are responsible for getting a group of children across. Add in other challenges, such as several lanes of traffic, morning rush hour, heavy traffic, and children (and parents) who may or may not be paying attention, and suddenly, it is not as easy as it looks.

Crossing guards are given a tremendous responsibility in a community to help children safely cross a street at key locations. They can serve as role models by teaching children good pedestrian safety skills.

Why do we need crossing guards?

With so many programs aimed at improving the health and physical activity of children, walking and bicycling to school are becoming more popular. These activities, however, can place children in a vulnerable position, especially when their paths to school involve crossing a road. Young children need help crossing the street, particularly in locations that are difficult to cross.

High-traffic volumes, fast speeds of travel, and distracted drivers add to the challenges. In addition, children have not developed many of the perceptive and judgment skills needed to safely cross the street by themselves. For example, they do not have the same range of peripheral vision as adults and are unaware of or have difficulty judging distance and closure speeds. They also tend to be spontaneous and overestimate their abilities to safely cross a street.

The good news is that while children do not naturally act in a safe manner all the time, they can be taught how to be safe. Part of a crossing guard's responsibility is to instruct children on how to safely cross a street and to be a positive role model by exhibiting proper behavior.

Who can become a crossing guard?

Crossing guards have an important responsibility, and high standards must be set for the adults who are tasked with this important job. The MUTCD provides a list of minimum requirements that a crossing guard should possess, including:

- Average intelligence.
- Good physical condition, including sight, hearing, and ability to move and maneuver quickly to avoid danger from errant vehicles.
- Ability to control a STOP paddle effectively so that approaching road users are provided a clear, fully direct view of the paddle's STOP message during the entire crossing movement.
- Ability to communicate specific instructions clearly, firmly, and courteously.
- Ability to recognize potentially dangerous traffic situations and warn and manage students in sufficient time to avoid injury.
- Mental alertness.
- Neat appearance.
- Good character.
- Dependability.
- An overall sense of responsibility for the safety of students.

What are the requirements?

Many crossing guards are community, parent, or teacher volunteers who may have little or no experience when it comes to knowing what to wear or how to properly cross children. Since they are entrusted with children's lives, it is imperative that they be properly trained to protect student walkers and cyclists and ensure that motorists, bicyclists, and pedestrians follow the rules of the road.

Proper training should reinforce many of the techniques that most adults take for granted when crossing a street. The lessons should use real-life examples and information that will prepare crossing guards to help children cross a street safely.

Training is typically provided by the local police department. In addition, PennDOT offers two resources: 1) Adult Crossing Guard Procedures and Techniques course, which focuses on how to be an effective, efficient, and safe crossing guard, and 2) Crossing Guard Train-the-Trainer course, which provides training techniques for teaching others how to be safe, effective crossing guards. (Note: While there is no training planned at this time, the PowerPoint presentations for the courses are available.) Find out more at www.penndot.gov/TravelInPA/Safety/SchoolResourcesAndPrograms/SafeRoutesToSchool (click on "Crossing Guards" within the text on that page).

To properly and safely cross children, a few devices are also required:

- A STOP paddle 

- A high-visibility, retroreflective garment that satisfies the ANSI 107-2004 Class 2 standard 
- Fluorescent rainwear or vest over personal rainwear 

High-visibility garments will increase the conspicuity of the crossing guard and remind motorists of the presence of pedestrians. The STOP paddle will inform drivers of their responsibilities.

Proper equipment is necessary to increase the visibility of crossing guards.

What can crossing guards do?

Effective crossing guards need to master the following techniques:

- Selecting a safe gap in traffic.
- Properly stopping traffic.

Continued on page 3

Crossing Guards *continued from page 2*

- Identifying and safely reacting to common hazards and driver errors.
- Maximizing their visibility when crossing children.
- Minimizing the interruption of traffic and extending gaps by grouping children before crossing.
- Properly responding to an incident.
- Interacting with children while waiting to cross.

Under the Second Class Township Code and Borough Code, crossing guards may control and direct traffic at or near schools. They also must be in uniform and authorized only in the management of traffic and pedestrians. The Manual on Uniform Traffic Control Devices (MUTCD) sheds further light on what crossing guards can and can't do. According to Chapter 7D.05, "Adult crossing guards shall not direct traffic in the usual law enforcement regulatory sense. In the control of traffic, they shall pick opportune times to create a sufficient gap in the traffic flow. At these times, they shall stand in the roadway to indicate that pedestrians are about to use or are using the crosswalk and that all vehicular traffic must stop."

While the municipal codes seem to indicate that crossing guards can direct traffic in and out of school driveways, for example, the MUTCD clearly states that they should only be stopping traffic to create a sufficient gap for children to cross the streets and should not be directing traffic like law enforcement officials. Therefore, a municipality must be careful and clear about what roles and responsibilities the crossing guards should have. While some municipalities allow crossing guards to direct traffic, others do not. It may be best left to the solicitor to decide. LTAP recommends NOT allowing crossing guards to direct traffic since they are not law enforcement and do not have the training, or at times the physical abilities, to properly direct traffic.

Where should crossing guards be used?

There are no absolute criteria for identifying which street crossings require an adult school crossing guard. According to the MUTCD, "Adult crossing guards may be used to provide gaps in traffic at school crossings where an engineering study has shown that adequate gaps need to be created and where authorized by law."

Typically, a school board identifies locations and makes a request for crossing guards by establishing criteria and gathering information to help them determine the need. Information to consider includes the following:

- the age of the students who are crossing,
- the width of the street and number of lanes of traffic,
- the sight distance at the crossing,
- the available safe gaps in traffic during the peak times of student crossings,
- the type of and presence of traffic control devices along the route, including traffic signals, signs, and pavement markings,
- the speed of vehicles at the crossing,
- volumes of traffic and pedestrians,
- the attendance boundary and walk zone for each school,
- the distance of the crossing from a school and the type of adjacent land use, and
- crash history in the vicinity of the crossing.

Section 1915 of the Second Class Township Code and Section 1127 of the Borough Code authorize the board of supervisors or borough council to appoint school crossing guards. The governing bodies also determine the compensation of school crossing guards to be paid by the municipality or jointly by the municipality and the school district. By ordinance, the governing bodies may allow school board directors to assume hiring, oversight, and payment of school crossing guards, but the school board must pass a resolution and training provisions must be provided for.

Without crossing guards, children are left to fend for themselves at intersections.

Upcoming LTAP Training

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

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 list online and take advantage of this free training from the comfort of your home or office.

pennsylvania
DEPARTMENT OF TRANSPORTATION
AGILITY PROGRAM

Agility Celebrates 25 Years

PennDOT's Shared Service Program Stands the Test of Time

It was a just a fledgling idea a quarter century ago. Today, the Agility program is a successful sharing of services between PennDOT and municipalities.

by Rich Kirkpatrick, PennDOT Bureau of Innovations

A visionary leader supported by savvy executives intent on overcoming bureaucratic obstacles paved the way for PennDOT's innovative Agility program, which is celebrating its 25th anniversary this year.

In 1995, then-Secretary of Transportation Brad Mallory came across a book by author Roger Nagle, "Agile Competitors and Virtual Organizations," outlining a concept to spur businesses to think outside of the box.

"On a superficial level, I was struck by the term initially," Mallory says. "That was a good thing to be as I thought about it. It occurred to me the notion was akin to a competitive organization declaring a Christmas truce from the normal trench warfare. Join forces and cooperate to release the life of the joint enterprise to a higher level and produce higher productivity."

"If there ever was an enterprise that needed that, it was government," he adds.

After meeting with Nagle and associates from Lehigh University, Mallory bought each of his deputy secretaries a copy of Nagle's book for Christmas that year and asked them to come back to him with ideas on how to bring the Agility approach to PennDOT.

"Rob Wonderling (then PennDOT deputy secretary for administration) came back with a program layout to reach out to local governments and trade services with them," Mallory says. "Instead of stopping the plows at the borough line, we should continue with a straight pass and they do a similar loop and hit some of our network."

By enabling PennDOT and its partners to equally exchange services, like snow plowing or mowing, without exchanging money, synergies could be found to better transportation in Pennsylvania. The concept would address the challenging impact of the jurisdictional boundaries created by Pennsylvania's many local governments with road responsibilities.

"People don't care who owns the road, they want seamless service and that (Agility) really played to that," Mallory says.

Concept Takes Root

In 1995, there was no established internet, the information and technology revolution was picking up steam, and economic globalization was increasing. It was a time ripe for new ideas, such as Agility.

"The notion of collaboration through innovation really captured my imagination," Wonderling says.

He spent hours with Rich Harris, head of PennDOT's Center for Performance Excellence (precursor to the current Bureau of Innovations), mapping out the Agility concept. They focused on the highway maintenance organization as the best place to incorporate Agility's principles. A key to success was to ensure that Agility had a very public face and efforts to streamline maintenance efforts were highly visible.

"We always heard from Brad that the yellow maintenance truck was the most visible symbol of PennDOT," Wonderling says.

A driving concept was to keep the program simple; building relationships with municipal government on maintenance made the most sense. "People just want a smooth ride," he says.

After several more meetings during which the specifics were outlined, the Agility program was launched in May 1996. Sherri Chippo, Ph.D., who was Wonderling's special assistant at the time, was named the Agility program manager. She explains that the principles of the new program were written to help businesses become more agile.

"We were looking at best practices in business that we could bring to government," says Chippo, who is now assistant professor and managing director for the Administration and Leadership Studies Research and Training Center at Indiana University of Pennsylvania. "The Ridge Administration was very receptive to it. We had begun looking at government as a business, adapting practices to help improve performance and service delivery. Our leadership was ripe for taking this on."

The biggest challenge that had to be overcome was dealing with an undercurrent in the organization that believed this was just another new program that would eventually go away. Many critics also thought the local partners would not be able to offer anything of equal value, and PennDOT would therefore be contributing more than it was receiving.

Finding Success

Critical to Agility's success was PennDOT's insistence that the value of the services be calculated carefully to ensure equitable sharing for all parties.

"The real goal is to make life better for people," Mallory says. "The public relations benefits of this were enormous. It was anti-bureaucratic in the extreme, and people loved it. Rules and regulations be damned. It was about how to do something that makes sense, common sense, but do it in a fashion that is still legal."

First drafts of the legal agreement were 30 pages long, but the Agility team was able to whittle it down to a few paragraphs.

"We came up with a new Agility agreement that really was different," Chippo says. "It was much simpler, more of a 'written handshake,' and helped to break down the initial bureaucratic resistance that we can't do this. We made it a much less intimidating process for our partners."

Continued on page 5

PennDOT Connects Planning with our communities **Success Story**

Trail Segment Enhanced and City Maintenance Effort Reduced in Johnstown

At the initial PennDOT Connects meeting for the Point Stadium Bridge rehabilitation project, which included paving and slide repair to nearby Roosevelt Boulevard (PA 56), the City of Johnstown informed District 9's Project Manager Jess Urbas that the James Wolfe Sculpture Trail was impacted by the slide. City staff noted that the trail was part of an emerging trail system across Johnstown and suggested a coordination meeting with the local trail group to discuss project goals and review preliminary design decisions.

At this subsequent meeting, the trail group proposed a wider trail in the vicinity of the slide and a trail extension to an intersection 100 feet to the north. Ultimately, the district committed to replacing the 4-foot-wide footpath with a 10-foot-wide multi-use trail and swapping the trail's split-rail fence with a decorative concrete barrier to prevent future slides from affecting the road below. Unfortunately, the district could not extend the improved trail as suggested since the intersection had not yet been scheduled for improvement.

Also, during PennDOT Connects discussions about paving Roosevelt Avenue, the city noted that its public works crew was concerned about safety while maintaining the narrow grass strip between the road and a concrete floodway. District staff evaluated alternatives and committed to replacing the grass with stone. Construction of most project elements, including the trail, barrier, and trail signage, was completed in 2020.

The former footpath along Roosevelt Boulevard in Johnstown was replaced with a 10-foot-wide multi-use trail. Decorative concrete barriers now protect the trail and road from falling rocks, and a detectable warning surface alerts guide dogs and vision-impaired pedestrians to the adjacent roadway.

Visit the PennDOT Connects page on PennDOT's website to see how PennDOT Connects can work for you.

Agility *continued from page 4*

This form followed by a work plan has led to more than 3,200 agreements in 25 years.

One of the most effective tools for winning support was giving people credit for their role, regardless of how big or small and reluctant they were to begin with. This "sharing of credit" gave everyone — department managers, employees, local governments, and local elected officials — "ownership" in the project, and they began to believe in it. More people started to work hard for it, coming up with more ideas on how to adapt and make it better.

"There were so many pieces that made it work … getting out there and celebrating new Agility agreements … turning over the 'keys' for the maintenance organization to our employees ... bringing union leaders to the table and helping them realize a sense of ownership," Chippo says.

A quarter century after its formation, the ongoing success of Agility "is testimony to the employees at PennDOT, who always had a strong sense they were stewards of tax dollars," Wonderling says. "They have a deep-rooted sense they are doing important work to save lives and improve the health and welfare of our communities."

For Mallory, the success of the Agility program serves as proof of a lesson that he learned earlier in his career: Ramping up good maintenance practices is infectious. When PennDOT takes better care of its property, local governments and nearby property owners will follow suit. Agility helps to further that effort.

"It was too good to believe, but it was true," he says, "and what a benefit it is to society at large and in Pennsylvania."

Learn more about Agility at www.penndot.gov/Doing-Business/LocalGovernment/AgilityProgram.

Harborcreek Township in Erie County (below) completes work as part of the state's first-ever executed Agility agreement. A common Agility exchange over the past 25 years has been PennDOT painting lines on local roads (right).

STIC Spotlight Enhanced Pavement Treatments Help to Extend the Life of Roads

In its search for longer-lasting concrete and asphalt surfaces, PennDOT is working to advance up to four new pavement technologies — highly modified asphalt, crack attenuating asphalt mixture, enhanced–friction overlay, and bonded concrete on asphalt — as part of the Federal Highway Administration's (FHWA) Every Day Counts Round 6 (EDC-6) Targeted Overlay Pavement Solutions (TOPS) innovation.

PennDOT aims to pilot and review the use of these techniques to eventually add them to pavement innovations that the agency has already adopted, including high-performance thin overlay, stone matrix asphalt, asphalt rubber gap-graded, ultra-thin bonded wearing course, and unbonded concrete on concrete.

"For concrete surfaces, we are focused on bonded concrete on asphalt," says Lydia Peddicord, chief of the Pavement Design and Analysis Unit in PennDOT's Bureau of Project Delivery and one of the project champions for the TOPS innovation. She is part of an implementation team that includes Neal Fannin, pavement materials engineer in PennDOT's Construction and Materials Division, and Kevin Smith, assistant construction engineer in District 3 based in Lycoming County.

Peddicord notes that several districts are interested in participating in pilot applications, and her goal is to update PennDOT's specifications to encourage widespread use of the technologies.

According to FHWA, half of all dollars invested nationally in infrastructure go for pavements with half of that needed for overlays to extend pavement life. The innovations are aimed at combining different materials to generate longer service life or lower cost so that revenue-challenged DOTs can better maintain their extensive road networks. PennDOT is responsible for nearly 40,000 miles of roads, the nation's fifth largest network.

Highly modified asphalt appears to be a good candidate for use on interstates. "New Jersey DOT has pretty good specifications on that, and we could pull off of that," Fannin says. "They use it extensively on their interstates." He added that more investigation is needed on the enhanced friction overlay technique.

"The general objective is to have needed tools in the maintenance toolbox," he says. "Every one of these can be viewed as a tool that we can use in the proper context and situation. If we have more and better tools, we can address pavement problems more effectively."

The innovations under review are only part of PennDOT's ongoing effort to deliver better services, he continues. "There are quite a few things we are looking at to improve our specifications," he says. "It's a continual thing we do. We look nationally to see what is going on out there, and when something makes sense, we try to use it."

In general, FHWA, PennDOT, and other DOTs across the country are seeking ways to extend the expected pavement life of concrete to 50 years compared to the current 30 years and extend asphalt pavement wearing courses to beyond the existing 10- to 12-year timeframe before maintenance is needed, Fannin says.

PennDOT has both asphalt and concrete quality improvement committees that work with industry partners. "We are always looking for cost-effective solutions to pavement issues," Peddicord says.

For more information on the TOPS innovation, visit the EDC-6 page on FHWA's website, highways.dot.gov.

STIC
Moving Innovation Forward

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www.penndot.gov/about-us/PennDOT2020

Q&A

Q: I understand that PennDOT recently updated Publication 213, Temporary Traffic Control Guidelines. Are there any changes that affect municipalities?

A: The March 2021 version of Publication 213 contains a variety of updates and enhancements to information about temporary work zones. Many of the updates clarified previous information in the publication and were not changes per se to PennDOT policy. For example, the requirement for using a shadow vehicle while mowing did not change. Rather, information about this traffic control measure, including a new drawing and notes (PATA 307), were added to the publication.

Other updates to Publication 213, however, did affect municipalities, including the following:

- Under definitions, the duration of a short-term operation was extended from less than 24 hours to less than 72. Since most local maintenance activities are short-term operations, this provides municipalities with more time to conduct such activities while still following the short-term PATA drawings.
- Sign legibility minimum distance requirements based on the speed of the road were added to Note A-2.
- Also under Note A-2, flagger positioning was changed from 40 feet minimum distance from the first channelizing device to a range of 25 to 100 feet.
- With the addition of PATA 116B, short-term closures of low-volume roads with less than 1,500 vehicles per day may now use a red-arrow detour.
- New guidance is provided for intersection traffic control options, such as painting crosswalks, stop bars, turn arrows, and other markings, at tee- (PATA 109 series) and four-way intersections (PATA 110 series).
- Newly added figures (PATA GA 06 series) show the placement of signs for various temporary situations around and near intersections.
- New figures (PATA GA 13 and GA14 A/B) address hills, curves, and other obstructions that could impact sight lines to flaggers and traffic control devices.
- New figures (PATA GA 15 series) address temporary pavement markings for seal coat operations.

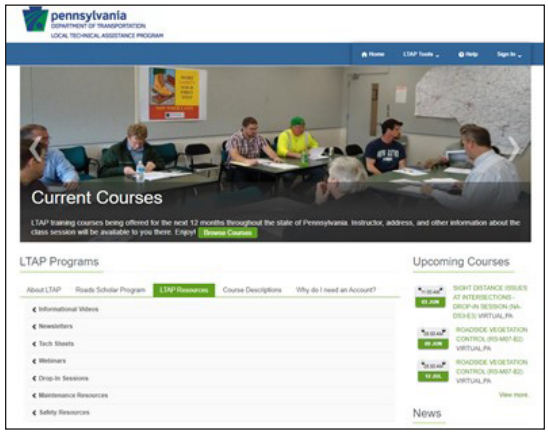
Publication 213 is available online at www.dot.state.pa.us/public/PubsForms/Publications/PUB%20213.pdf. To learn more about the updated Pub 213, listen to a recorded LTAP virtual drop-in session and an archived LTAP webinar on the topic at connect.psats.org/ltapresourcepage. LTAP is also incorporating the updated publication into its Work Zone Traffic Control course. Check the LTAP website, gis.penndot.gov/ltap, for future training sessions.

LTAP Revises Website with New Section for Resources

PennDOT recently updated the LTAP website, gis.penndot.gov/ltap, to include a new section called "LTAP Resources." Under this tab, you will find LTAP informational videos, newsletters, tech sheets, webinars, drop-in sessions, and maintenance and safety resources.

There are currently six informational videos on active transportation, curve signage, guiderail, speeding, sign requirements, and traffic calming. Each video provides an overview of the topic and resources and would be useful to show to transportation personnel on a rainy day or to elected officials or residents when dealing with the topics.

The maintenance and safety resources sections of the website incorporate resources under program topics, including courses associated with the topics, drop-ins, webinars, newsletter articles, tech sheets, and other PennDOT or FHWA resources. The goal is to provide a single go-to place to look for general topic information.



PennDOT's LTAP website has been improved to make it easier to find resources on certain maintenance and safety topics, including six short informational videos. The maintenance and safety resource sections are under construction and will be added later this summer and fall.

Congratulations to the following Roads Scholars!

The following scholars were certified between January 1 and April 28, 2021:

Roads Scholar I:

- James Kelly, Bellevue Borough, Allegheny County
- Jerome C. Sepesy, North Braddock Borough, Allegheny County
- Chris L. Cooper Jr., Pittsburgh City, Allegheny County
- Brian A. Krul, Pittsburgh City, Allegheny County
- Robert F. Marshall Jr., Pittsburgh City, Allegheny County
- Gabriele Mastroberardino, Pittsburgh City, Allegheny County
- Devon Hain, Maidencreek Township, Berks County
- Matthew J. Decker, New Hope Borough, Bucks County
- James T. Harvey, London Grove Township, Chester County
- Lonnie Miller, Silver Spring Township, Cumberland County
- Suzanne E. Sepic, Uniontown City, Fayette County
- Sherri Law, Huntingdon Borough, Huntington County
- Andrew M. Boxleitner, Millersville Borough, Lancaster County
- Kyle Miller, Millersville Borough, Lancaster County
- Neal Thome, Millersville Borough, Lancaster County
- Thomas J. Murray III, Mt. Joy Borough, Lancaster County
- David J. Hillard, Upper Leacock Township, Lancaster County
- Jarrid D. Shulla, Plymouth Borough, Luzerne County
- Andrew Irick, Hatfield Township, Montgomery County
- John Koffel, Hatfield Township, Montgomery County
- Joe Cardamone, Montgomery Township, Montgomery County
- Bryan Waryga, Montgomery Township, Montgomery County
- Charles Dearnley, Plymouth Township, Montgomery County
- Justin Johnson, Turbot Township, Northumberland County
- Rabiul Hasan, Philadelphia City, Philadelphia County
- George Nubo, Philadelphia City, Philadelphia County
- Dawn Koch, Washington Township, Schuylkill County
- Thomas J. Lamacz, Penn Township, Westmoreland County

Roads Scholar II:

- Ken Kudrav, Pittsburgh City, Allegheny County
- Tracey J. Dengler Crawford, Woodcock Township, Crawford County
- Todd R. Lachenmayer, Upper Merion Township, Montgomery County
- Joseph P. O'Donnell, Upper Merion Township, Montgomery County

Roads Scholar Administrative:

- James Kelly, Bellevue Borough, Allegheny County
- Autumn D. Barszczowski, Pittsburgh City, Allegheny County
- Chris L. Cooper Jr., Pittsburgh City, Allegheny County
- James E. McComb, Plumstead Township, Bucks County
- Robert A. Mastrippolito Jr., Newlin Township, Chester County
- Thomas Dunmire Jr., Erie City, Erie County
- Daniel P. Ouellet, Millcreek Township, Erie County
- Mike Tome, Colerain Township, Lancaster County
- Andrew M. Boxleitner, Millersville Borough, Lancaster County
- Kyle Miller, Millersville Borough, Lancaster County
- Neal Thome, Millersville Borough, Lancaster County
- David J. Hillard, Upper Leacock Township, Lancaster County
- Brian Hite, Lehigh Valley Planning Commission
- Jarrid D. Shulla, Plymouth Borough, Luzerne County
- Todd R. Lachenmayer, Upper Merion Township, Montgomery County
- Joseph H. Murton Jr., Port Carbon Borough, Schuylkill County
- Shawn D. Garrett, Penn Township, York County

Roads Scholar Police:

- Michelle Major, Tredyffrin Township, Chester County
- Alan Freed, Abington Township, Montgomery County
- Christian Posey, Abington Township, Montgomery County
- Darren W. Morgan, Marlborough Township, Montgomery 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."

2021 Build a Better Mousetrap Winners

Lancaster County Township's Snow Fence Winder Takes First Place

Two townships and one borough have received honors in this year's Build a Better Mousetrap Contest, sponsored by PennDOT LTAP to recognize municipalities that develop improved ways of doing a transportation-related job. Penn Township in Lancaster County took the top award and Jefferson Township in Butler County was named a runner-up — both for devices involving snow fence — while Brentwood Borough in Allegheny County also received a runner-up nod for its excavator hammer holder.

Now in its 11th year, the annual competition honors innovative inventions, improvements, and projects built and designed by road crews or municipal employees to improve safety, reduce costs, or increase efficiency.

FIRST PLACE: Penn Township in Lancaster County built a winder to help roll up snow fence into tight bundles for storage.

For its winning entry, the Penn Township public works crew designed a winder that makes it easier to put up and take down snow fence.

"The township has an aging workforce, and to be on our knees rolling up the snow fence can be difficult," roadmaster Daryl Lefever says. "Rolling up snow fence in higher grass and corn stalks is also a problem."

The crew came up with a way to use the hydraulics on its small dump truck to create a winder that rolls up the fencing on a metal rod. A used stone pan from the back of a dump truck supplied the framework for the new tool. The crew removed the floor of the pan and welded on a platform to hold the hydraulic valve and controls. With the addition of some hoses, a couple universal joints, and scrap that the department had on hand, the snow fence winder was built for $520. The new equipment has increased the efficiency of rolling the snow fence into tighter rolls for storage.

Jefferson Township's runner-up innovation also helps with snow fencing installation. The crew modified a donated post pounder that attaches to a tractor's three-point hitch to install the snow fence posts and then fabricated other attachments to carry the fencing, posts, wooden slats, and other materials. The tool enables all the elements to be laid out as the posts are driven into the ground. All the equipment can be mounted on the township's tractor with the side deck mower removed.

RUNNER-UP: To help with snow fence installation, Jefferson Township in Butler County devised attachments for a tractor to hold a post driver (left) and materials carrier (right).

The crew spent less than $250 to purchase new hydraulic hoses, steel, and hardware. The rest of the materials were scrap or items on hand. The device helps the crew safely and efficiently install temporary snow fence in about one-third the time of previous years. Three workers can install approximately 2,500 feet of snow fence in roughly seven hours.

Brentwood's runner-up invention enables the borough to store its excavator hammer in an upright position to keep the hammer's seals from getting damaged. The hammer holder allows the excavator hammer to be stored indoors, out of the elements and out of the way until it is needed, which helps to reduce the need for repairs and downtime.

A member of the public works crew built the holder in six hours using a plasma cutter and welder with materials found in the shop, including an old trailer ramp, pipe covers, and spray paint. The device cost just $150 in labor and saved the borough more than $1,000 compared to if it would have purchased a new holder.

Penn Township's winning entry was submitted into the national competition, whose winners will be announced this summer. All entries at the national level will be posted on the LTAP/TTAP website and compiled into an electronic booklet.

RUNNER-UP: Brentwood Borough in Allegheny County built a holder to store its excavator hammer in an upright position so that its seals do not get damaged.

pennsylvania
DEPARTMENT OF TRANSPORTATION
LOCAL TECHNICAL ASSISTANCE PROGRAM

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