ARLE Grants Can Help to Improve Road Safety

Municipalities seeking money to improve safety on roads may want to apply for a grant under the state Automated Red Light Enforcement (ARLE) program. The program funds worthwhile, relatively low-cost transportation enhancement projects that improve the safety and mobility of the traveling public.

The amount of available funding varies year by year, based on the revenue generated by automated red-light enforcement violations placed into a restricted Motor License Fund, but the program has provided between $3 and 8.8 million each year. PennDOT will post the yearly revenues available for grants in 2017 in the Pennsylvania Bulletin sometime this spring, and the next application period will occur from June 1 through 30.

When applying for a grant, municipalities should keep in mind that priority is given to projects that demonstrate a positive impact on traffic safety and mobility. Applicants should show how the project will improve safety, enhance mobility, reduce congestion, and curtail greenhouse gases. In addition, multimunicipal applications are encouraged and will be given priority. No matching funds are required for eligibility in the ARLE program.

Applicants will be notified by letter sometime in the late summer or early fall whether or not their project was selected to receive a grant.

One City’s Success Story, with Help from LTAP

The City of Harrisburg in Dauphin County was awarded an ARLE grant in 2016 to address safety concerns at five intersections, three of which are adjacent to public schools. The monies, once executed, will be used to make recommendations highlighted in a traffic and engineering safety study that LTAP prepared under PennDOT’s Local Safe Roads Communities Program.

The work consists of improvements to signalized intersections, including the addition of 12-inch LED signal heads, countdown displays, back plates, signage, and pavement markings as recommended in the report. The total project budget is $72,569, of which $52,569 will be reimbursable through the ARLE grant and used primarily for purchasing equipment and line painting. The remaining $20,000 is an in-kind donation by the city for installing and maintaining the signal heads, signage, and related equipment.

In the grant application, the city engineer wrote that the projects should result in a measurable increase in vehicular and pedestrian safety at these intersections. “The Local Safe Roads Communities Program is innovative,” he wrote. “The selected intersections were identified through two sources: crash data and public input through traffic study petitions.”

He also noted that the process is cost-effective since LTAP provided the traffic studies and evaluations of the intersections and the city’s maintenance crew will perform most of the work. The city expects to have the improvements completed by August this year.

More Information Available

For more information about the Automated Red Light Enforcement (ARLE) grant program, go to www.dot.state.pa.us and click on “Local Government” under the “Doing Business” tab at the top of the page. Next, click on “Traffic Signal Portal” from the list of local government resources and then click “ARLE Program.”

For more information about LTAP tech assists under the Local Safe Roads Communities Program, contact LTAP at 1-800-FOR-LTAP (367-5827) or ltap@pa.gov.

Revenue from automated red light enforcement violations are placed in a restricted account to fund grants for municipal projects that improve traffic safety.
Processions, assemblages, and parades may only take place once or twice a year in a municipality, but such events may temporarily shut down a portion of a local or state-owned road and require detour routes. To ensure safe passage for those traveling in the vicinity, municipalities should be aware of the regulations governing temporary traffic control.

**Requirements for Closing Local Roads**

According to Chapter 212 of Title 67, municipalities may close or partially close a portion of their local roads for special events as long as the following criteria are satisfied:

1. An alternate route (*not more than five miles longer or five times greater in length than the normal travel distance*) is established to detour traffic;
2. The local authorities provide adequate detour signing or police controls along the alternate route;
3. The roadway closure or partial closure will not adversely affect adjacent properties; and
4. A review of previous similar closures shows no substantial problems or citizen complaints.

However, municipalities do not have to establish or sign an alternate route if one of the following conditions exists:

- The roadway to be closed is not a numbered route and is primarily used by local drivers who are familiar with alternate routes;
- The roadway is only partially or periodically closed, and police control can safely maintain traffic on the remainder of the roadway; or
- The roadway closing is for less than 20 minutes, and excessive traffic backup will not occur during the closing.

**Traffic Control for a Detour**

If a municipality has determined that a detour should in fact be established and signed for an event planned within its borders, proper signing to provide a safe and efficient detour must be in place. Municipalities should follow specific guidelines from PennDOT.

PennDOT Publication 213, *Temporary Traffic Control Guidelines*, establishes the guidance for signs and traffic control devices for work zones and other events, such as a detour for a parade. PATA 116, *Road Closure with a Detour*, is the appropriate plan to use for events of short duration, such as parades, on local roads.

Events on state highways use PATA 215, *Detour of a Numbered Traffic Route*, which mandates the use of state route shields (M1-5) and direction indicators (M3-1, 2, 3, or 4) with the detour signs. However, according to note 5 of PATA 215, PATA 216 may be used for events of short duration, such as parades, which do not require M1-5 and M3 series signs.

**Sign Placement**

Sign placement must conform to the requirements of PennDOT Pub 213. (Refer to PATA 010 for details on sign placement. General sign placement notes are also listed in Pub 213 General Notes — Section D.)

Barricades may be required on side streets to keep traffic from entering the section of closed road during an event. These are discussed in Pub 213.
Which picture below shows the correct way to barricade a closed roadway?

If you guessed photo 3, which shows a Road Closed sign on top of type III barricades, you are correct. MUTCD Section 6E.68 states: “Type III barricades should be used to close or partially close a road.”

In addition, the appropriate PATA figures from Pub 213 require type III barricades be used in specific locations to close a roadway. The Road Closed sign on a temporary post shown in photo 2 should be located closer to the actual roadway closure, and type III barricades should be located at the intersection.

An excerpt from a proposed detour plan (see graphic below) is an example of easily quantifying and choosing the placement of necessary signage for a particular detour. The sign placement guidelines listed in the example are based upon area type and speed limit from the sign spacing chart in PATA 116. The exact placement of the sign will have to be adjusted to reflect field conditions using the criteria for placement in Pub 213.

### Sign Design

The design of signs used for a short-term detour must conform to the requirements of both PennDOT Publications 213 and 236. Pub 213 identifies the sign designation, while Pub 236 provides the details for the size and sign fabrication. Pub 213 requires that sign sheeting be of an approved type listed in PennDOT Publication 35 (Bulletin 15) and meet retroreflectivity requirements.

Which detour sign is properly maintained and meets retroreflectivity requirements? If you picked the front sign in the photo at left, you are correct.

### Existing Signs

Municipalities should also look for any existing signs that may present conflicting information on a detour and cover any confusing signs when the detour is implemented. For example, let’s say Route 147 is being closed down and all traffic at an intersection must turn right on to Route 209 rather than proceed straight on to Route 147. (See image below.) In this scenario, the route shield directional sign for Route 147 should be covered to avoid confusing the motorists.

Traffic control, such as STOP signs, at intersections should also be reviewed to ensure appropriate control exists during the detour.

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**Resources**

- Pub. 212: [www.dot.state.pa.us/public/PubsForms/Publications/PUB%20212.pdf](http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20212.pdf)
- Pub. 213: [www.dot.state.pa.us/public/PubsForms/Publications/PUB%20213.pdf](http://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20213.pdf)
- TE-300 Special Events: [www.dot.state.pa.us/public/PubsForms/Forms/TE-300.pdf](http://www.dot.state.pa.us/public/PubsForms/Forms/TE-300.pdf)
Bidding Limit Increases to $19,700 This Year

The minimum purchase amount requiring municipalities to seek public bids increased beginning January 1 from $19,400 to $19,700. In addition, the minimum purchase amount for telephone quotes rose from $10,500 to $10,700.

Each year, the Department of Labor and Industry must adjust the base amounts triggering the requirement for public, telephone, or separate bids, or both, for certain contracts based on the Consumer Price Index (CPI) for the 12-month period ending September 30. The change in the CPI for this most recent period was 1.5 percent. The new rates were officially advertised in the December 10, 2016, edition of the Pennsylvania Bulletin.

IRS Mileage Rate Decreases in 2017

The Internal Revenue Service standard business mileage rate for 2017 is 53.5 cents per mile, down from 54 cents per mile last year.

New GIS Map to Help Municipalities with MS4 Requirements

A new geospatial information system (GIS) mapping website developed by the state Department of Environmental Protection (DEP) will help local governments pursuing permits for municipal separate storm sewer systems (MS4s) to more easily access information for their permit applications.

Municipalities in an urbanized area (as determined by the latest Decennial Census by the U.S. Census Bureau) must obtain National Pollutant Discharge Elimination System (NPDES) permit coverage or a waiver for stormwater discharges from their MS4. Small MS4s are required to develop and implement DEP-specified pollutant reduction plans for most discharges to streams, rivers, lakes, and ponds that DEP has identified as impaired.

At the MS4 requirements GIS website, www.depgis.state.pa.us/MS4/index.html, municipalities may click on a map to see stream impairments and pollutant reduction requirements for specific areas. This website should serve as a useful supplement to DEP’s MS4 Requirements Table, which lists each MS4 municipality by county and identifies whether it must comply with Chesapeake Bay and/or sediment and nutrient reduction goals for impaired streams. (The table is available on the Municipal Stormwater page of the DEP website, www.dep.pa.gov, by scrolling down to the third-to-last paragraph of the text and clicking on the link.)

PennDOT Approves Ultra-Thin Wearing Course

The state Department of Transportation has approved the use of ultra-thin bonded wearing course (formerly known as ultra-thin friction course), which consists of a polymer modified emulsified asphalt membrane (UTWCEM) immediately overlaid with an ultra-thin bonded wearing course of hot-mix asphalt concrete (UTWC) in one pass of a single paving machine.

A self-priming paver applies the UTWCEM directly in front of the paving screed. Three gradations of UTWC are available: Type A, B, or C with a nominal maximum aggregate size of 6.3 mm for type A, 9.5 mm for B, and 12.5 mm for C. The UTWC is placed in one lift to a final thickness of 1 to 1.5 times the diameter of the coarsest or maximum sized aggregate.

UTWC will seal the pavement, reducing oxidation and weathering of the surface. The reduction in oxidation will allow the pavement to remain resilient to fatigue and low-temperature cracking. Surface distresses such as raveling and moderate rutting may also be corrected. The final thickness of paver placed surface treatment is ½ inch for type A and ¾ inch for types B and C.

Paver placed surface treatment has no traffic restrictions, and the expected service life of UTWC is 8 to 10 years.
STIC Spotlight

Partnering with Local Governments to Promote Innovation

Tasked with maintaining 78,000 miles of roadway and 6,400 structures, local governments play a critical role in managing Pennsylvania’s transportation system. State Transportation Innovation Council (STIC) members understand the importance of putting tools into the hands of practitioners.

In 2016, the STIC launched a program to strengthen relationships with local government stakeholders and increase the acceptance and implementation of STIC innovations on a local level. To accomplish this, the STIC created a customized survey to determine the top priorities for local government stakeholders. The surveys were distributed to members of the Pennsylvania State Association of Township Supervisors (PSATS), the Pennsylvania State Association of Boroughs (PSAB), the Pennsylvania Municipal League (PML), and the PA County Planning Directors Association. The STIC also worked with PennDOT’s Municipal Advisory Committee to gather additional input and confirm the survey findings.

These efforts provided a wealth of information and insight into local government needs and supported the development of a pilot Innovation Day Workshop for local government officials and staff. Nearly 100 individuals representing boroughs, townships, state and federal governments, and other local government entities attended the workshop, which was held November 2 at California University of Pennsylvania in Washington County. The event featured sessions on such topics as funding and partnerships, winter maintenance, and innovative stormwater management techniques, as well as case studies on local roundabouts and smart signals.

FHWA Pennsylvania Division Administrator Renee Sigel and PennDOT Deputy Secretary for Planning Jim Ritzman gave keynote presentations on the importance of using innovations at the local level. The workshop also included presentations from local municipal representatives on adaptive signal control technology and roundabouts.

Moving forward, the STIC plans to build upon this foundation and host other local government safety seminars. These events provide an opportunity for local government representatives to learn about innovations that can help enhance safety on roadways, prevent crashes, and save lives in communities across Pennsylvania. The STIC will continue to strengthen the important relationships with local governments and work to promote innovations throughout Pennsylvania.

What is STIC?

Led jointly by the Pennsylvania Department of Transportation (PennDOT) and the Federal Highway Administration (FHWA), the State Transportation Innovation Council (STIC) supports innovation deployment to deliver a safe and efficient transportation system. The STIC is comprised of 26 member organizations, including local government representatives from the Pennsylvania State Association of Township Supervisors (PSATS) and the Pennsylvania State Association of Boroughs (PSAB).
Every Day Counts Initiative

Roundabouts, a Proven Safety Countermeasure

by Bren I. George-Nwabugwu, Federal Highway Administration

A roundabout offers a safer alternative to a traditional signalized intersection. The Federal Highway Administration Office of Safety has identified roundabouts as a “proven safety countermeasure” because of their ability to substantially reduce the types of crashes that result in injury or loss of life.

Roundabouts improve efficiency of traffic flow, which reduces the need to brake and accelerate, thus lessening harmful emissions and improving fuel economy for the driver. Roundabouts have also been shown to virtually eliminate fatal accidents and reduce injury accidents that occur at traditional intersections. Numerous studies have shown significant safety improvements at intersections that have been converted from traditional signalized intersection to roundabouts. The most comprehensive and recent study showed an overall reduction of 35 percent in total crashes, with 76 percent fewer injury crashes and 89 percent fewer severe, incapacitating injuries and fatalities.

Roundabouts should be considered as an alternative for intersections on federally funded highway projects that involve new construction or reconstruction. The FHWA also recommends that they be considered when rehabilitating existing intersections identified as needing major safety or operational improvements. Roundabouts have also proven to be effective at freeway interchange ramp terminals and at rural high-speed intersections.

For more information on roundabouts, see http://safety.fhwa.dot.gov/intersection/innovative/roundabouts/.

Check out this PennDOT video on roundabouts

PennDOT has produced an instructional video on roundabouts. The four-and-a-half minute video introduces the concept of roundabouts and provides information on how vehicles, bicyclists, and pedestrians should navigate a roundabout. The video is available online at www.youtube.com/watch?v=nNXRlWgAVOg. The idea of a video started about a year ago when PennDOT's then deputy secretary asked the State Transportation Innovation Council (STIC) to help promote educational materials on navigating through a roundabout.

Collected fines are submitted to PennDOT, which uses the fine money to fund Automated Red Light Enforcement grants for projects that demonstrate a positive impact on traffic safety and mobility.

Q. May our municipality put up red-light cameras and enforce fines for motorists who are caught running the red light?
A. Perhaps. PennDOT has an Automated Red Light Enforcement program, but the legislature has only authorized specific municipalities to participate. In addition to Philadelphia and Pittsburgh, municipalities in 2A counties or third class counties with populations between 490,000 and 510,000 may be eligible. The municipality must have a population exceeding 20,000 with a police agency accredited by the Pennsylvania Chiefs of Police Association. Authorized municipalities must request approval from PennDOT to install cameras at specific intersections. Multiple cameras capture images of the license plate and position of a vehicle that has run a red light. Police review these photographs to validate that the vehicle did indeed run the red light. Upon validation, a ticket is mailed to the registered owner of the vehicle. In Pennsylvania, the typical ticket fine is $100, unless a lesser amount is set by a local ordinance.

Q. Who can apply for the Automated Red Light Enforcement grants, and what types of projects are considered for the funding?
A. Municipalities, counties, metropolitan planning organizations (MPOs) and rural planning organizations (RPOs), county planning organizations, and commonwealth agencies are eligible for the Automated Red Light Enforcement grants. The intent of the program is to fund worthwhile, relatively low-cost transportation enhancement projects that improve the safety and mobility of the traveling public. The types of eligible projects vary widely from improvements to traffic signals, to roadway improvements at signalized intersections, to school zones, guiderail, and roadside safety. (See page 1 for more information about these grants.)
Upcoming 2017 Classes

Americans with Disabilities Act
April 18 – Montgomery County

Asphalt Roads Common Maintenance Problems
April 12 – Mercer County
April 26 – Blair County
May 3 – Lehigh County
June 28 – Montgomery County
June 29 – Carbon County

Bridge Maintenance & Inspection
April 6 – Philadelphia
April 10 – Adams County
April 6 – Wayne County

Conducting Sign
Retroreflectivity Inspections
April 5 – Pike County
April 12 – Clinton County
April 20 – Carbon County
April 26 – Columbia County
May 24 – Bedford County
June 29 – Lehigh County

Drainage: The Key to Roads That Last
May 3 – Blair County
June 9 – Lycoming County

Equipment & Worker Safety
April 7 – Luzerne County
April 12 – Lehigh County
April 13 – Wyoming County
April 18 – Crawford County
May 23 – Philadelphia

Full-Depth Reclamation
April 21 – Erie County

Geosynthetics
May 4 – Chester County

Intersections
April 6 – Tioga County
May 2 – Wyoming County

Managing Utility Cuts
April 12 – Philadelphia
June 1 – Chester County

Pavement Preventive Maintenance
April 4 – York County
April 18 – Lehigh County
June 1 – Philadelphia

Principles of Paving
April 3 – Indiana County
May 31 – Chester County
June 6 – Lehigh County

Project Estimating Using Mathematical Principles
May 10 – Chester County

Risk Management Strategies
April 5 – Blair County
April 25 – Clarion County

Road Surface Management
April 27 – Bucks County
May 9 – Philadelphia
May 11 – Lehigh County

Roadside Safety Features
April 4 – Susquehanna County
April 8 – Chester County

Roadside Vegetation Control
April 6 – Clinton County
April 18 – Cumberland County
May 9 – Berks County
May 23 – Cambria County

Safe Driver
April 11 – Allegheny County
May 5 – Crawford County

Signs & Safety Features for Bridges/Culverts
May 3 – Susquehanna County

Stormwater Facility Operation and Maintenance
April 11 – Allegheny County
April 21 – Cambria County
May 17 – Montgomery County

Traffic Calming
June 15 – Blair County
June 23 – Delaware County

Traffic Signs Basics
April 19 – York County
May 18 – Clearfield County

Unpaved & Gravel Roads
Common Maintenance Practices
April 7 – Cambria County
April 20 – Venango County

Warm Mix Asphalt
April 11 – Mercer County

Work Zone (Temporary) Traffic Control
May 10 – Monroe County

To Register:
PHONE: 1-800-FOR-LTAP (367-5827)
WEBSITE: www.ltap.state.pa.us

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

Congratulations to the following Roads Scholar recipients
(certified between May 31, 2016, and September 30, 2016)

- Arentz, Brian R., Liberty Township, Adams County
- Barlow, Walter M., Liberty Township, Adams County
- Grassley, Troy L., West Reading Borough, Berks County
- Rodriguez, Dave, West Reading Borough, Berks County
- Raichle, Jordan M., Altoona, Blair County
- Ruggles, Justin P., Southern Alleghenies Planning and Development Comm., Blair County
- Grandinetti, Michael R., Geistown Borough, Cambria County
- Veneziano, David, Boggs Township, Centre County
- Claas, Derrick L., East Brandywine Township, Chester County
- Vanlew, Matthew T., East Brandywine Township, Chester County
- Stoker, Crystal, Columbia County
- Durs, Dustin, North Newton Township, Cumberland County
- Gutshall, Mike, North Newton Township, Cumberland County
- Jones, Steve G., Dauphin County
- Erbin, George, Waterford Township, Erie County
- Jenkins, Michael, Erie County
- Barry, Martin K., Dallas Township, Luzerne County
- Williams, David A., Ross Township, Luzerne Township
- Etta, Charles, Lewis Run Borough, McKean County
- Mckelvey, Eric, Montgomery Township, Montgomery County
- Flynn Jr., Dennis M., New Hanover Township, Montgomery County
- Lee Sr., Brian J., New Hanover Township, Montgomery County
- Rinehart, Rob, New Hanover Township, Montgomery County
- Daniel, Norman S., East Allen Township, Northampton County
- Marcellino, Domenic, Philadelphia, Philadelphia County
- Fetterman, Lawson D., East Buffalo Township, Union County
- Rudolph, David P., York County

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

Roads Scholars, Share the News! LTAP has a press release you can modify and use to announce your accomplishment to your local media. To obtain a copy of the release, go to www.ltap.state.pa.us and look for the release under “Roads Scholar Program.”
Pennsylvania LTAP, along with the other states in the Mid-Atlantic LTAP region, is seeking input about revising the Roadway Management Conference (RMC), a past training event intended for practitioners who construct and maintain state, county, and municipal roads and streets. The conference was designed to help road crews face the many challenges confronting them, including stormwater management, continuing budget constraints, and the retirement of experienced employees.

Take a short online survey to help determine if the RMC should be revived and to provide valuable input on programming and logistical decisions about the event. Visit www.cognitoforms.com/WVLTAP/RoadwayManagementConferenceSurvey to complete the survey. Please take a few minutes to provide your feedback. Your input is needed!

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

Please share this newsletter with others, including:
- Road supervisors/roadmasters
- Public Works Department
- Road crew
- Elected officials
- Managers and secretaries
- Engineers

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