



moving FORWARD

SPRING 2023

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

Success Story

Wormleysburg Borough, Cumberland County

By Marvin Ta, EIT,
ENV SP, Pennoni

In August 2021, LTAP met with Wormleysburg Borough representatives due to safety concerns with pedestrian midblock crosswalks along South Front Street as seen in Figure 1. The main concern involves pedestrians crossing from the parking lots to the restaurants and businesses along the river. South Front Street through this pedestrian corridor has an 85th percentile speed of 36 miles per hour (MPH) per speed data collected by the borough. Data from the Federal Highway Administration (FHWA) shows that a pedestrian crash at a speed of 36 MPH is usually fatal.

There are four midblock crosswalks marked with PennDOT Type E – Herringbone decorative pattern. At the time of the field visit, all the midblock crosswalks either had faded, noncompliant warning signs (as seen in figure 2), or no warning signs at all at the crossing locations. Some of the crosswalks also had



Figure 1: This is an aerial view of the study area. Photo: Google Earth

ALSO IN THIS ISSUE

- Safe System Approach 2
- PennDOT’s Right-of-Way Encroachment and Outdoor Advertising Control..... 4
- Transportation News..... 5
- Website Updates 5
- STIC..... 6
- Upcoming Training..... 8
- Roads Scholars..... 8



Figure 2: These were the existing warning signs. Photo: PennDOT



Figure 3: A compliant Yield to Pedestrian Channelizing Devices (YTPCD) sign. Photo: PennDOT LTAP

noncompliant In-Street Pedestrian Crossing Signs (also known as Yield to Pedestrian Channelizing Devices or YTPCD). An example of a compliant YTPCD is shown in Figure 3.

Continued on page 7

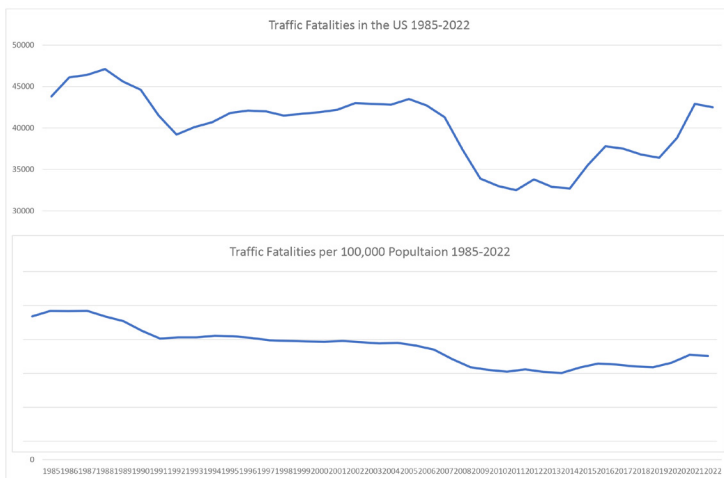
The Safe System Approach — A New Method to Improving Traffic Safety

An Important Piece of the National Highway Safety Strategy

Patrick Wright, LTAP Traffic Engineer

I once heard that the first rule of numbers is: “Numbers go up, and numbers go down.” Since I have been a traffic engineer (1985!), historical traffic safety numbers, especially the fatality rate per 100,000 people, have steadily declined in the United States. This decline includes the total number of fatalities on our roadways (including cars, trucks, buses, bikes, and pedestrians) as well as the rate of fatal crashes.

While the decline has been significant since the early 1990s, the decline has slowed, except for a notable drop during the great recession around 2009. Even more concerning is that pedestrian fatalities have increased at a much higher rate than vehicle occupant fatalities. In fact, the total of 7,485 pedestrian fatalities in the US in 2021 was the highest in four decades (source: Pedestrian Traffic Fatalities by State, Governors Highway Safety Association, 2021).



Total Traffic Fatalities and Fatality Rate in the US from 1985 to 2022.

Source: PennDOT LTAP

While traffic fatalities in the United States have steadily declined for decades, they have increased over the last several years, up to 42,900 in 2021.

This data shows:

- 1) When compared to similar developed countries, our rates of deaths per 100,000 population are significantly higher (e.g., the US rate of 11.10 is over twice that of Canada's 4.58 per 100,000 population, and Australia's 4.46: source: <https://www.worldlifeexpectancy.com/cause-of-death/road-traffic-accidents/by-country/>). While other countries, such

LTAP has two classes focused on safety and the Safe System Approach.

- Local Road Safety Plans
- Road Safety Audits

as Mexico, China, and others have higher rates than the US, the countries with lower rates show we can do better.

- 2) The National Highway Traffic Safety Administration (NHTSA), Federal Highway Administration (FHWA) and PennDOT cite several factors for the crash rate in the US/PA, including:

- a) Speeding is cited the cause in over 26% of traffic deaths nationally and 23% in PA (2021 data).
- b) Seat belt use could be higher; in PA almost half of fatalities the occupant was NOT wearing a seat belt.
- c) Driving under the influence contributes to about 30% of fatalities in the US and 25% in PA.



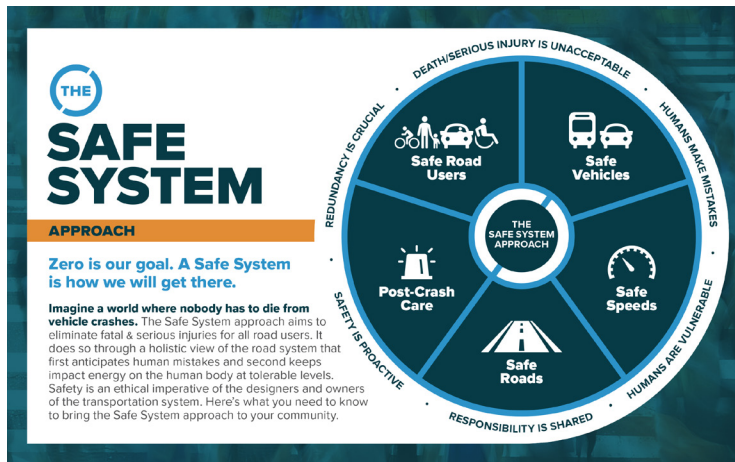
Doing it the way we always have is not always right.

What we have traditionally been doing for safety in the US is not working as well as it should. Times change — our standards change, the way we work, operate, and think changes too. If our approach to safety is not enough, then we need to change it for the better. Doing it “the way we always have done it” may not be appropriate anymore.

Safe System Approach *continued from page 2*

The National Roadway Safety Strategy and the Safe System Approach

In response to the increase in fatalities, the US Department of Transportation has created a National Roadway Safety Strategy



The Safe System Approach Infographic from FHWA.

Source: a snip from: https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/FHWA_SafeSystem_Brochure_V9_508_200717.pdf

(<https://www.transportation.gov/NRSS>). This strategy outlines a comprehensive approach to reducing fatalities and serious injuries in the US toward a long-term goal of zero deaths.

A key component of this strategy is a shift in the way we think about and implement safety called the Safe System Approach (<https://highways.dot.gov/safety/zero-deaths>). The Safe System Approach has six key principles:

- 1) Death/Serious Injury is Unacceptable.
- 2) Humans Make Mistakes.
- 3) Humans are Vulnerable.
- 4) Responsibility is Shared.
- 5) Safety is Proactive.
- 6) Redundancy is Critical.

This approach has been successfully deployed in other countries and will be the cornerstone to changing the safety culture in the US. We need to address safety in all aspects of our transportation system. This approach includes the following five key elements:

- 1) Safe Road Users;
- 2) Safe Vehicles;
- 3) Safe Speeds;
- 4) Safe Roads; and
- 5) Post-Crash Care.

These five elements create a redundant and shared approach to traffic safety.

How are We Applying the Safe System Approach in Pennsylvania?

PennDOT has also embraced the approach Toward Zero

Deaths and the Safe System Approach. This is reflected in the 2022 Strategic Highway Safety Plan (SHSP) (<https://www.penndot.pa.gov/TravelInPA/Safety/Documents/Pennsylvania%E2%80%99s%202022%20Strategic%20Highway%20Safety%20Plan.pdf>). The 2022 SHSP also identifies key strategies for local roads, including the application of Local Road Safety Plans and the Safe System Approach.

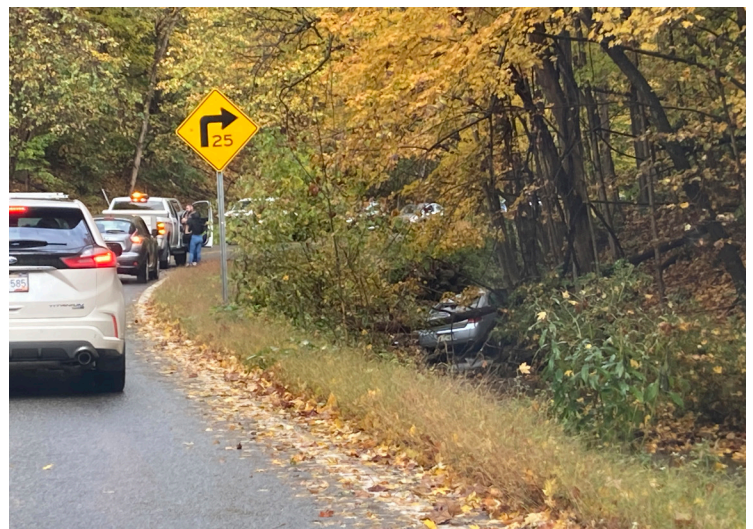
Looking for support to improve safety in your municipality? Sign up for a training course, or request direct technical assistance to help you with safety on your roads. While determining whether safety improvements at an intersection or curve in your community are worthwhile, a more comprehensive and proactive approach is necessary for the safety of your roads. Consider applying the Safe System Approach in your community by developing a Local Road Safety Plan that focuses your limited resources and utilizes low-cost, proven safety countermeasures to keep your roads safe. 🚦

For more information:

FHWA Safe System Approach Brochure: https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-06/FHWA_SafeSystem_Brochure_V9_508_200717.pdf

PennDOT Safety: <https://www.penndot.pa.gov/TravelInPA/Safety/Pages/default.aspx>

“The Safe System Approach requires a culture that places safety first and foremost in road system investment decisions.”



Apply the Safe System Approach to your roads to prevent future crashes.

Source: PennDOT LTAP

PennDOT's Right-of-Way (ROW) Encroachment and Outdoor Advertising Control

Federal regulation (23 CFR § 1.23) and the Pennsylvania State Highway Law (Section 425) require the area within the highway ROW be devoted exclusively to public highway purposes which generally means only official traffic signs are permitted within the ROW. Any sign or banner placed within the ROW without approval by PennDOT is considered an illegal encroachment. Additionally, the placement of outdoor advertising on land outside the ROW along interstates and highways is governed by the Outdoor Advertising Control Act of 1971 and its corresponding regulations.

PennDOT is responsible for enforcement of these regulations to comply with mandates established under the federal Highway Beautification Act of 1965. Neglecting to meet those mandates could result in Pennsylvania losing a significant portion of funding from the Federal Highway Administration (FHWA).

Encroaching signs within highway ROW are subject to removal by PennDOT without notice to the sign owner. For advertising devices outside the highway ROW that do not comply with the requirements, PennDOT will first provide the owner of the outdoor advertising sign a removal notice. If the owner does not

remove the outdoor advertising sign, PennDOT will remove the sign. Removed signs will be held for at least 30 days for retrieval.

Per state law, signs placed outside of the ROW along a controlled route on a non-interstate need an outdoor advertising device permit from PennDOT if they are not on the same premises as the advertised activity or are more than 100 feet from the activity. If they are on the same premises as the advertised activity, they still need a permit if they are visible from interstate roads. Along interstates, signs within 100 feet of the activity need an on-premise permit, and any signs further than 100 feet require an off-premise permit. The controlled routes are identified on PennDOT's interactive map at gis.pennndot.gov/HBMS.

A federal audit has identified deficiencies with PennDOT's encroachment and outdoor advertising control program. To address this, starting in 2023 PennDOT will increase its focus and resources to identify and remove non-compliant signs both inside and outside of the ROW.

Municipalities are the first line in controlling both encroachments and outdoor signs and have the first say in what is permitted. PennDOT will not approve an outdoor advertising device permit for a sign if the municipality's ordinance prohibits that sign.

PennDOT staff are available to help municipal officials understand all laws, regulations, and policies regarding encroachments and outdoor advertising devices. More information and resources are available at <https://www.pennndot.pa.gov/ProjectAndPrograms/RoadDesignEnvironment/RoadDesign/Right-ofWayandUtilities/Pages/Outdoor-Advertising-and-Junkyard-Control.aspx>

Districts contacts may be found at <https://www.hbms.pennndot.gov/HBMSWeb/hbms/viewContactInfo.do>.



These signs are along Route 118 in Columbia County. Photo: PennDOT

Transportation News Briefs

LATEST INFORMATION FROM PENNDOT & OTHERS

Vegetation Management Equipment Catalog (PUB 920)

Thanks to the hard work and ingenuity of the Innovation Development Team under the STIC's Maintenance Technical Advisory Group, the Vegetation Management Equipment Catalog (PUB 920 <https://www.penndot.pa.gov/about-us/StateTransportationInnovationCouncil/Innovations/Pages/Vegetation-Management-Catalog.aspx>) is now available. The catalog provides maintenance personnel with information about the different types of PennDOT-owned vegetation management equipment and attachments and brings awareness to other equipment and attachments available for future purchase or rental by the department. The catalog also serves as a guide for municipal governments looking to request service exchanges that would utilize the equipment and attachments on local roads through PennDOT's Agility Program. To learn more visit PennDOT's website (<https://www.penndot.pa.gov/Doing-Business/LocalGovernment/AgilityProgram/Pages/default.aspx>)



A boom arm mower being used in District 6 for roadside vegetation. Photo: PennDOT







Missing a certificate from an LTAP class?

You can now download your certificates from the LTAP website (gis.penndot.gov/LTAP). Log on to the website and go to "My Tools", then "View My Schedule", and then click on the

certificate icon to download your certificate.

Certificates are available for classes that are completed. It may take up to 30 days to reconcile and complete a class.

Classes Found:

		CLASSID	REGID	COURSE	PROGRAM
	 	6083	80530	WINTER MAINTENANCE/A2 (RS-M06-A2)	ROADS SCHOLAR 1
	 	6087	80745	BRIDGE MAINTENANCE & INSPECTION (RS2-M01-A2)	ROADS SCHOLAR 2

STIC Spotlight Specification Update Aims to Improve Concrete Durability

The State Transportation Innovation Council (STIC) innovation for certifying Pennsylvania concrete finishers, along with the new PennDOT Class S concrete specification, provide advantages for every municipality and resident across Pennsylvania.

The goal of the Certified Concrete Finishers course (<https://www.penndot.pa.gov/about-us/StateTransportationInnovationCouncil/Innovations/Pages/Certified-Concrete-Finishers-Course.aspx>), which includes classroom and practical, hands-on work, is to help improve the durability and extend the service life of concrete and eliminate mistakes in concrete finishing that can result in costly repairs or reconstruction.

Working together on this STIC innovation, PennDOT and the Pennsylvania Aggregates and Concrete Association (PACA), have teamed up to provide a new specification for the construction requirements and the materials used for sidewalks across Pennsylvania.

At the core of this innovation are two items:

- The Class S specification and revision to Section 676, which is new as of the April 2023 version of PennDOT Publication 408; and
- The requirement for concrete finishers to be certified, which was introduced into Section 704 of PennDOT Publication 408 in April 2022.

It was realized early on that both the material specifications and the quality of the work in placing and finishing the concrete are of equal importance to providing the long-term durability of sidewalks and exterior concrete flatwork.

Pennsylvania's municipalities are most often the specifier, and many times the owner of sidewalks placed



Concrete finishers class participants take part in hands-on instruction.

Photo: PennDOT

in commercial and residential developments across the commonwealth. Ensuring these are built in accordance with a specification that provides for their maximum service life will be of benefit to everyone.

For additional information about how to include these innovations into upcoming construction within your municipality contact:

Anja Walker

PA Department of Transportation, Bureau of Innovations
400 North Street, 8th Floor, Harrisburg, PA 17120
(717) 425-6288
anjwalker@pa.gov

Jim Casilio, P.E.

Pennsylvania Aggregate and Concrete Association
2040 Linglestown Road, Suite 204, Harrisburg, PA 17110
(610) 730-2385
www.pacaweb.org, www.specifyconcrete.org
jjmc@pacaweb.org



**State Transportation
Innovation Council (STIC)**
(717) 772-4664

RA-pdPennDOTSTIC@pa.gov
www.penndot.gov/about-us/PennDOT2020



Students take part in a concrete finishers class. Photo: PennDOT

Success Story *continued from page 1*

Based on the analysis, recommendations for the crosswalks include:

- Updating warning signs to standard at the crossing location and in advance.
- Assess existing nighttime lighting.
- Consider pedestrian yield signs and markings for the two-lane approach.

As a result of this study, the borough updated the traffic control devices such as the warning signs to be compliant with PennDOT and the Manual on Uniform Traffic Control Devices (MUTCD) as seen in Figure 4.


Need help with conducting crosswalk studies in your municipality? Call 1-800-FOR-LTAP or email LTAP@pa.gov. For more information on crosswalks, check out the Pedestrian and Crosswalks Course. 




Figure 4: The new warning signs that were installed. Photo: PennDOT LTAP

Become Trained as a Roads Scholar and Increase Your Employee Value

Through the LTAP Roads Scholar Program, municipal employees and officials are trained in the latest transportation-related technologies and innovations and receive recognition as a certified Roads Scholar.

The Roads Scholar Program consists of four designations — Roads Scholar I and Roads Scholar II, Police, and Administrative — and provides a professional certification to employees and

officials who attain a certain number of LTAP courses within a three-year period (10 courses for Roads Scholar I, eight for Roads Scholar II, and six for Police and Administrative). During these courses, participants are educated on up-to-date maintenance and safety topics so that they become even more valuable members of their municipal team.

Courses eligible for Roads Scholar credit are offered virtually and will be conducted at convenient locations throughout the state. To learn more, go to gis.penndot.gov/ltap and click on “Roads Scholar Program.” 

2023 ROADWAY MANAGEMENT CONFERENCE

SAVE
THE
DATE!



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

October 17-19, 2023

Seven Springs Mountain Resort
Located in Seven Springs, Pennsylvania



Use your CPR training as class credit toward your Roads Scholar designation

Successful completion of an approved CPR training course accepted by your employer or the Pennsylvania Department of Health earns you one workshop credit toward Roads Scholar certification. A copy of a completion certificate must be forwarded to the LTAP office in Harrisburg within the three-year training window.

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!**

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.

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.

New Courses Available in the Summer of 2023

- Municipal Stormwater Facilities Program, Roads Scholar I
- Stormwater Control Measures O&M, Roads Scholar II
- Traffic Signals Basics, Roads Scholar II
- Winter Maintenance Planning, Roads Scholar II
- Public Works Safety, Roads Scholar I

Check the website for new courses or reach out to your Planning Partner or LTAP to schedule a class at your facility.

Asphalt Roads CMP
October 17 – Lancaster County

Principles of Paving v.II
July 13 – Somerset County

Traffic Signs Basics
June 6 – Berks County
June 15 – Lancaster County

Drainage: The Key to Roads that Last
October 18 – Berks County
November 1 – Lancaster County

Project Estimating Using Mathematical Principles
July 11 – Berks County

Unpaved and Gravel Roads Common Maintenance Practices
September 11 – Huntingdon County

Erosion and Sedimentation Control
June 6 – Lehigh County
August 10 – Berks County

Public Works Safety
August 31 – Lancaster County
September 26 – Cambria County

Winter Maintenance
November 15 – Lancaster County

Micro-Surfacing and Ultra-Thin Friction
September 13 – Berks County

Stormwater Control Measures O&M
August 22 – Lancaster County
October 3 – York County

Winter Maintenance Planning
September 21 – Lancaster County

Municipal Stormwater Facilities
August 15 – Lancaster County
September 28 – York County

Traffic Signals Basics
June 13 – Lancaster County
September 21 – York County

Congratulations to the following Roads Scholars!

The following scholars were certified between November 1, 2022 and January 31, 2023

Roads Scholar I:

- Timothy Eller, Lancaster Township, Lancaster County
- Zachary P. Shober, Lancaster Township, Lancaster County
- Ryan Stoltzfus, Upper Leacock Township, Lancaster County

Roads Scholar II:

- Barry L. Geltmacher Jr., Borough of Mount Joy, Lancaster County
- Zachary P. Shober, Lancaster Township, Lancaster County
- Slade A. Bugajinsky, Orwigsburg Borough, Schuylkill County
- Devin J. Deibert, Orwigsburg Borough, Schuylkill County
- Shawn M. Reichart, Orwigsburg Borough, Schuylkill County

Roads Scholar Administrative:

- Zachary P. Shober, Lancaster Township, Lancaster County
- Devin J. Deibert, Orwigsburg Borough, Schuylkill County
- Shawn M. Reichart, Orwigsburg Borough, Schuylkill 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:

400 North Street, 6th Floor, Harrisburg, PA 17120
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.