

ARIZONA LTAP ELECTRONIC NEWSLETTER

Spring 2018 Vol. 1, No 10

National Work Zone Awareness Week

April 9–13, 2018

ATSSA Go Orange Day Wednesday, April 11, 2018

All roadway safety professionals across the country are encouraged to wear orange to proudly show their support of work zone safety. Go Orange Day and NWZAW is an important time to show your support of the roadway safety industry, especially to the families of victims who have lost their lives in work zones.

This year on Go Orange Day, ATSSA hopes you will join us for a Facebook Live on Wednesday, April 11 at 12:30 p.m. Eastern!



The AZ LTAP mission is to foster a safe, efficient and environmentally sound transportation system by improving skills and knowledge of the transportation provider through training, technical assistance and technology transfer. The AZ LTAP vision is to be recognized as a premier resource in developing and transferring innovative technologies, proven solutions and reliable services to successfully meet the evolving educational and training needs of the transportation community within Arizona. AZ LTAP will actualize its vision and accomplish its mission by paying personal attention to customer needs.

All courses on the AZ LTAP training schedule have been requested by our customers. You may request training to be delivered at your location by completing an on demand request form, please visit:

www.azltap.org.



**2018 NATIONAL WORK ZONE AWARENESS WEEK:
EVERYBODY'S RESPONSIBILITY**






Work Zone Safety: Everybody's Responsibility


That phrase is the theme for this year's [National Work Zone Awareness Week](#) (NWZAW), an annual nationwide event that brings the American Traffic Safety Services Association (ATSSA), federal agencies, state departments of transportation, national roadway safety organizations, companies, and individuals together to promote keeping roadway workers safe.

According to the most recent Fatality Analysis Reporting System Encyclopedia (FARS) data available from the [Federal Highway Administration](#) (FHWA), there were 700 work zone fatalities in 2015. And FARS statistics from

Nationwide in 2015,
700 fatalities and
35,536 injuries
occurred in work zones.



**2018 WORK ZONE SAFETY:
EVERYBODY'S RESPONSIBILITY**



But how did NWZAW get started?

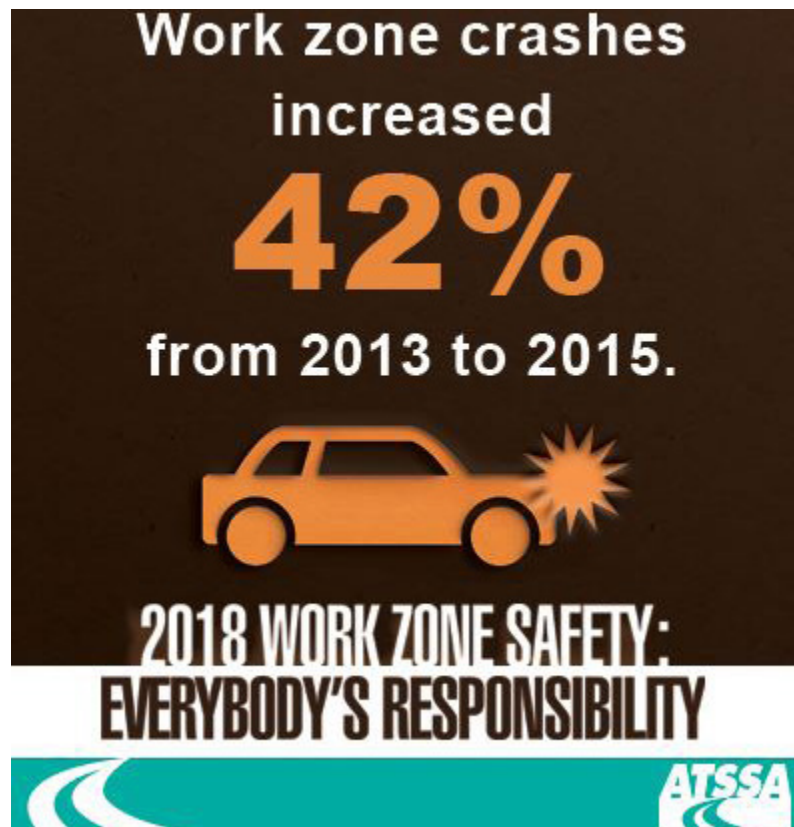
In 1997, a group of Virginia Department of Transportation (VDOT) staff members, located in southwestern Virginia, wanted to dedicate a week to raise awareness about work zone safety among all district employees before construction projects picked up during the warmer months. Following the successful promotion of this first event, VDOT took the idea statewide to raise awareness, and in 1999 the California Department of Transportation (Caltrans) began its statewide public awareness campaign, "Slow for the Cone Zone."

However, it was 1998 when VDOT first presented the idea to create a national campaign to ATSSA officials. In December of 1999, ATSSA approached FHWA and the American Association of State Highway Transportation Officials (AASHTO) to launch the first official NWZAW. The first official NWZAW kick-off event was held in 2000 in Springfield, Va. The site where the kick-off event is held now alternates each year from being hosted in the Washington, D.C., area to different locations across the United States. State transportation departments can submit applications to host the event on those alternate years.

Over the years, as more state agencies held their own NWZAW events, themes were eventually included in the campaign, starting in 2004. The NWZAW Executive Committee has continued to promote NWZAW each spring, prior to the construction season to raise awareness of work zones and the need to drive responsibly through them.

This year, NWZAW is April 9–13. For this 19th year, the NWZAW kick-off event will be held in Chicago and hosted by the [Illinois Department of Transportation](#) on April 10, and Go Orange Day is on April 11. All are encouraged to wear orange and post photos to help celebrate Go Orange Day.

Use #orange4safety and #NWZAW in social media posts and don't forget to tag us: @ATSSAHQ on Twitter and @ATSSATraffic on Facebook. For more details about NWZAW, visit [NWZAW.org](#).



Road Sleuth

Myths & Facts Revealed

Myth: It can't cost that much to pave.



Rough and bumpy roads in need of repair are very frustrating for drivers. The public often thinks that road agencies have a surplus of money they can use to pave roads or that it cannot really cost that much to make repairs. However, paving is an expensive process, and both state and local road agencies have large areas of pavement to maintain with limited budgets.



Photos taken by WV LTAP staff.

One common method that roadway agencies use to restore roadways is called overlaying, which involves adding a new surface onto old pavement to restore the road. Overlaying a road is not a cheap endeavor; in large part, due to transportation costs in getting material to the job site and because asphalt binder (the black sticky stuff) is made from petroleum. Production of the binder was once seen as a good way to use the waste from refining oil, but today, this material is refined into plastics more often than asphalt. In fact, only about 25% of oil refineries currently produce asphalt. Since asphalt binder is made from oil, its price fluctuates with the price at the pump.

So how much does it cost to pave a road? A West Virginia Division of Highway's (WVDOT) paving project on a single 12-foot wide lane with a typical 2-inch overlay costs approximately \$100,000 per lane mile. This cost does not include milling (grinding down) the old pavement surface, which is needed for the new pavement to properly adhere. In fact, milling alone adds approximately \$25,000 to the overlay price per lane mile. The WVDOT maintains over 90% (72,000 lane miles) of the roads in West Virginia. To put a 2-inch overlay on just 20% of these roads would cost over \$1.5 billion!

The cost for a West Virginia municipal agency paving project, assuming 12-foot wide lanes and a 1.5 inch overlay, is closer to \$60,000 per lane mile. The cause for the large difference in price is partly because West Virginia municipalities tend to apply a 1.5 inch overlay while the state uses a 2-inch overlay; the WVDOT also tends to use higher performance asphalt than municipal agencies. The 2-inch overlay and higher performance asphalt are used so the roads can handle the greater volumes and weights of traffic typically experienced on state routes.

With roadway agencies facing stagnant or decreasing budgets, fewer roadways can be paved. Whether it's a state owned, city owned, or even privately owned road, paving is expensive. Roadway agencies work hard to prioritize their paving and repair needs; unfortunately, the needs often far exceed the funds.





EDC-4 Innovations (2017–2018)

Automated Traffic Signal Performance Measures (ATSPMs)

Highway agencies typically rely on complaints or manual data collection to identify the need for signal retiming projects and their outcomes. These projects are typically scheduled on a 3- to 5-year cycle, at a cost of approximately \$4,500 per intersection. The costs and effort associated with collecting performance data translates into congestion, reduced safety, and increased delays for vehicles, pedestrians, and bicyclists.

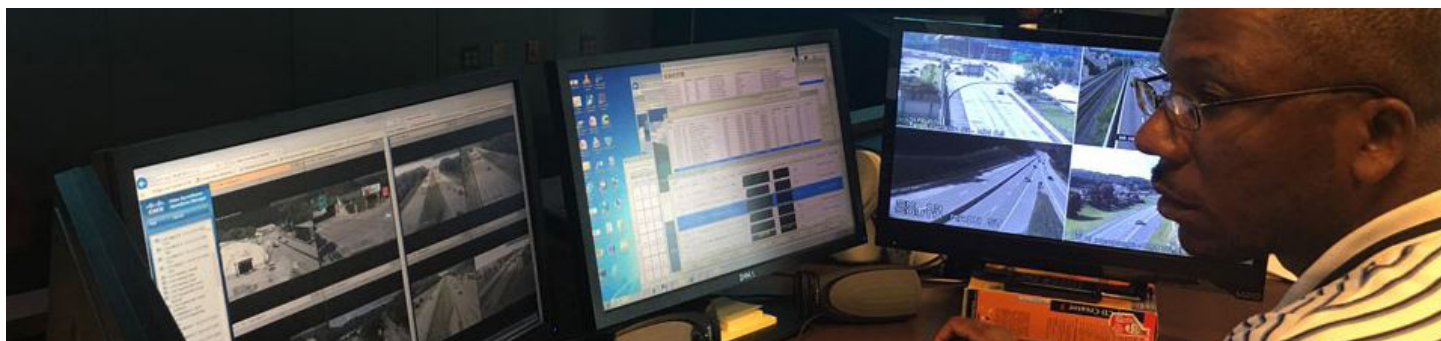
That's where automated traffic signal performance measures come in. They will revolutionize the management of traffic signals by providing the high-resolution data needed to actively manage performance. High-quality service can be delivered to customers with significant cost savings to agency maintenance and operations. A number of implementation options are available, ranging from a low-cost, open-source code framework to a fully integrated traffic signal system.

Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)

Current modeling techniques used for hydraulic design apply several assumptions that can lead to overly conservative or inaccurate results. Advanced hydraulic modeling technologies offer planners, scientists, and engineers tools to depict specific physical, environmental, and habitat characteristics more accurately through 3-D visualization of flow, velocity, and depth.

Community Connections

Many cities have highways that have reached, or exceeded, their useful lives. The timing is ripe to hold forums for transportation professionals to discuss and consider highway retrofitting, rehabilitation, or removal options to improve connections between urban cores and neighboring communities. This innovation underscores the value of transportation in community revitalization, such as improving connectivity between disadvantaged populations and essential services.



[Data-Driven Safety Analysis \(DDSA\)](#)

Data-driven safety analysis is the use of cutting-edge methods and tools to analyze crash and roadway data and determine the expected safety performance of roadway projects more reliably. This type of analysis enables agencies to predict the safety implications of their decisions with confidence. Engineers now can quantify the safety impacts when making investment decisions, just as they do with environmental, traffic, and other traditional impacts. The analyses result in more scientifically sound, data-driven approaches to committing resources, as well as fewer and less severe crashes on the Nation's roadways.

[e-Construction and Partnering: A Vision for the Future](#)

State DOTs have traditionally administered contracts and managed construction of highway projects using extensive, paper-based documentation systems. By using digital e-Construction technologies, DOTs can enhance partnering among stakeholders on project teams, while improving communications and workflow to streamline the delivery of projects.

[Integrating NEPA and Permitting](#)

Integrating the NEPA and permitting processes seeks to transform how agencies and stakeholders conduct concurrent, synchronized environmental and permitting reviews, saving time and cost for the agencies involved.

[Pavement Preservation \(When, Where, and How\)](#)

Applying a pavement preservation treatment at the right time (when), on the right project (where), with quality materials and construction (how) is a critical investment strategy to help meet performance expectations. This innovation helps deploy an array of different analyses, treatments, and construction methods to help infrastructure owners achieve and sustain a desired state of good road repair despite tight budgets.



Road Weather Management – Weather-Savvy Roads

Weather events lead to traffic delays, reduced operational effectiveness, and increases in crashes. This innovation deploys two distinct road weather management solutions: (1) Pathfinder, which brings together DOTs and the National Weather Service to provide consistent messaging on adverse weather and road conditions and (2) advanced vehicle-based technologies, also referred to as integrated mobile observations. These two solutions have the potential to be transformative, by enabling State and local agencies to be proactive when it comes to weather, so they can manage the road system ahead of heavy rain, snow, or other storms.

Safe Transportation for Every Pedestrian (STEP)

Pedestrians account for an estimated 15 percent of all roadway fatalities, the majority of which are at uncontrolled crossing locations (such as non-intersections) or at intersections with no traffic signal or STOP sign. This innovation helps transportation agencies address such crashes by promoting cost-effective countermeasures with known safety benefits.

Ultra-High Performance Concrete Connections for PBES

Prefabricated bridge elements and systems (PBES) offer superior durability and speed the onsite construction of bridges. The durability of prefabricated spans and how quickly they can be constructed is dependent on the connections between the elements. Ultra-high performance concrete can be used to help provide simple, strong, and durable connections for prefabricated bridge elements.

Using Data to Improve Traffic Incident Management

A TIM program is the systematic, planned, and coordinated use of human, institutional, mechanical, and other resources to shorten the duration and impact of incidents on U.S. roadways, and improve the safety of motorists, crash victims, and incident responders. This innovation focuses on improving the adoption and consistency of the collection of TIM data and increasing the volume of data from transportation, law enforcement, and other responder agencies. Further, this innovation promotes the use of low-cost, off-the-shelf technologies that streamline data collection, so agencies can measure and improve the performance of their programs.



First Quarter 2018 Road Scholar Graduates

Congratulations to the following Road Scholar participants for their achievements this year in the Road Scholar Program. Thank you for your hard work!

Level I

Tucson Airport Authority

Celestino Robles
Gilberto Rodriguez
Jamie Romero
Jay Lane

Town of Queen Creek

Anthony Moore

Pinal County

Aaron Murrieta
Michael Gerback
Richard Christensen
Richard Juarez
Thomas Miller
Timothy Brown
William Todd Graham



Calendar of Events

Risk Management	4/3/2018	4/3/2018	Phoenix
Risk Management	4/4/2018	4/4/2018	Phoenix
ATSSA - Workzone Traffic Control Technician	4/11/2018	4/11/2018	Kingman
ATSSA - Workzone Traffic Control Technician	4/17/2018	4/17/2018	Tucson
Work Zone Traffic Control II	4/18/2018	4/18/2018	Payson
ATSSA - Workzone Traffic Control Technician	4/18/2018	4/18/2018	Yuma
BWTC/ Flagger	4/24/2018	4/24/2018	City of Yuma
ATSSA - Workzone Traffic Control Supervisor	4/24/2018	4/25/2018	Flagstaff
Work Zone Traffic Control II	4/25/2018	4/25/2018	City of Yuma
Signing & Striping I	4/25/2018	4/25/2018	Benson
Certified Payroll Workshop	4/26/2018	4/26/2018	Phoenix
ATSSA - Workzone Traffic Control Supervisor	5/2/2018	5/3/2018	City of Goodyear
ATSSA - Workzone Traffic Control Technician	5/2/2018	5/2/2018	Phoenix
ATSSA - Workzone Traffic Control Technician	5/3/2018	5/3/2018	Phoenix
Maintenance Math	5/8/2018	5/8/2018	Benson
ATSSA - Workzone Traffic Control Technician	5/15/2018	5/15/2018	Prescott Valley
Certified Payroll Workshop	5/17/2018	5/17/2018	Phoenix
Two-Way Radio / Effective Communication	5/23/2018	5/23/2018	Tucson
Work Zone Traffic Control II	5/24/2018	5/24/2018	Sierra Vista
ATSSA - Workzone Traffic Control Technician	5/29/2018	5/29/2018	Prescott Valley
Signing & Striping II	6/6/2018	6/6/2018	Tucson
Certified Payroll Workshop	6/14/2018	6/14/2018	Phoenix
ATSSA - Workzone Traffic Control Supervisor	6/20/2018	6/21/2018	Phoenix
Certified Payroll Workshop	7/12/2018	7/12/2018	Phoenix
Safety in the Workplace	7/24/2018	7/24/2018	Tucson
Maintenance Math	8/14/2018	8/14/2018	Tucson
Technical Math	8/15/2018	8/15/2018	Tucson
Certified Payroll Workshop	8/16/2018	8/16/2018	Phoenix
Drainage Course	9/20/2018	9/20/2018	Tucson
Asphalt Pavement Maintenance	10/18/2018	10/18/2018	Tucson
Certified Payroll Workshop	10/25/2018	10/25/2018	Phoenix
Certified Payroll Workshop	11/29/2018	11/29/2018	Phoenix
Certified Payroll Workshop	12/13/2018	12/13/2018	Phoenix



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Tapping In!

(email request to ttraining@azdot.gov Please include Name, Agency, Location, Email Address)

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