Volume 25

Issue 1

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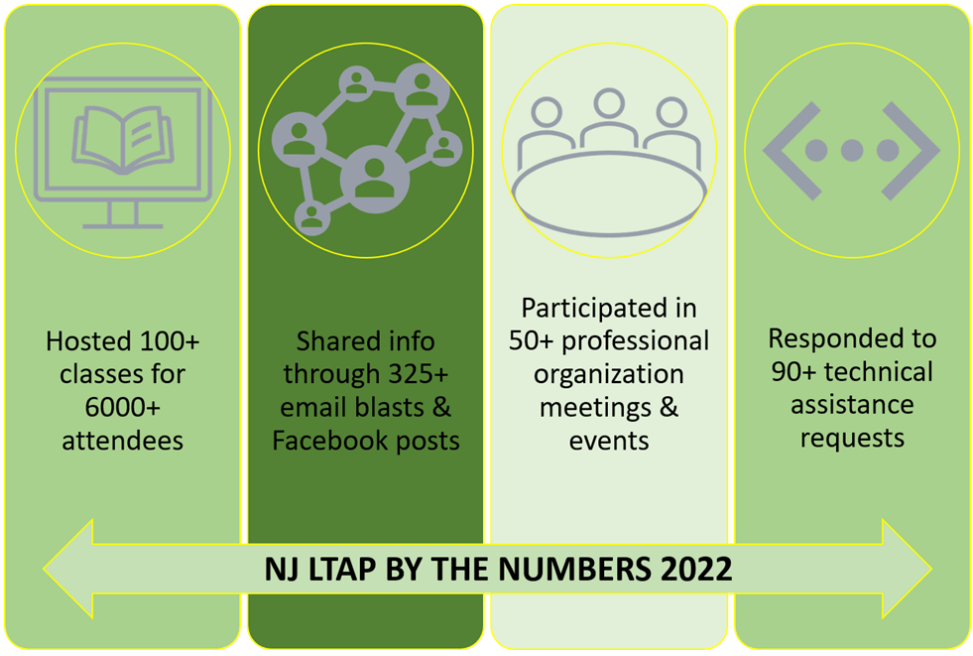
New Jersey Local Technical Assistance Program

Your Local Technology Transfer Newsletter

Message from the Director

Welcome to the first issue of our E-News for this year. Our team thanks all those who attended our trainings last year; we reached over 6,000 people in NJLTAP sponsored events alone. Rutgers Center for Advanced Infrastructure and Transportation's workforce development program reached another 4,000 people. We are working diligently to make sure those designing and maintaining our roadways in New Jersey have the educational tools to do their best.



As already mentioned, the New Jersey Local Technical Assistance Program enjoyed an extremely busy 2022- and we are already off and running with 2023! We have already worked with the New Jersey Society of Municipal Engineers and the New Jersey State Association of County Engineers to provide their members with professional development this year. We are currently planning several events with the New Jersey Chapter of the American Public Works Association. There are many upcoming workshops scheduled, both in-person and in webinar format. Have you checked the training and events calendar lately? Most workshops provide PDH and NJ CPWM credit. Don't forget the Annual Work Zone Safety Conference is coming up quickly (April 6) and will be in-person at The Conference Center at Mercer.

I would also like to remind our readers that if you are on Facebook, please visit and follow us at https://www.facebook.com/njltap We use our Facebook page as another tool to communicate course announcements and share pertinent information from other agencies, such as the Federal Highway Administration.

Issue Highlights

Complete Streets: Prioritizing Safety for All Road Users

Ensuring safety for all users including pedestrians, cyclists, automobile users, transit, and much more. FHWA has new resources to help.

2023 RAISE Grant Program Deadline Approaching

Applications for the Rebuilding America Infrastructure with Sustainability and Equity are due soon! Read more to see if this program can help your community!

Will Technology Solve All Our Road Safety Challenges?

Learn about the latest technologies and what role they can play in helping your organization make its roads safer.

Traffic Incident Management (TIM) as a Safety Initiative

Effective TIM can improve not only the care of individuals after a crash occurs, but also the safety of responders and motorists.

The Local Technical Assistance Program (LTAP) and Tribal Technical Assistance Program (TTAP) are composed of a network of 57 Centers – one in every state and Puerto Rico, as well as 6 serving Tribal Agencies. The LTAP/TTAP Centers enable local counties, parishes, townships, cities and towns to improve their roads and bridges by supplying them with a variety of training programs, an information clearinghouse, new and existing technology updates, personalized technical assistance and newsletters.

Complete Streets: Prioritizing Safety for All Road Users

© Ann McGrane / pedbikeimages.org.

A Complete Street is safe—and feels safe—for everyone using the street. According to the National Complete Streets Coalition, 1,533 jurisdictions across the United States—including two-thirds of the States—have adopted Complete Streets policies directing their transportation agencies to routinely plan, design, build, operate, and maintain safe street networks for everyone. Often, the real challenge of implementing Complete Streets policies is in changing project-development processes to consistently prioritize safety outcomes. To address this challenge, many jurisdictions have gone on to create new plans and Complete Streets design models that transform their project-development processes to prioritize safety for all users.

Complete Streets is a transformative strategy in which the transportation network is planned, designed, built, operated, and maintained to enable safe mobility and access for all road users, including, but not limited to, pedestrians, bicyclists, motorists, and transit riders across a broad spectrum of ages and abilities. Moving to a Complete Streets design model may help reverse the trend of increasing fatalities and serious injuries on the Nation's roadways to reach the goal of zero deaths and to create a healthier, greener, and more equitable roadway system. To support this mission, the Federal Highway Administration (FHWA) launched a Complete Streets initiative, which includes active participation by 10 program offices, several division offices, and the Federal Transit Administration (FTA).

In 2021, Congress directed FHWA to lay the groundwork for the adoption of a Complete Streets design model. As a result, FHWA began an extensive review of Federal rules, policies, and guidance to understand how Complete Streets could improve safety for all road users. The agency also interviewed stakeholders in State, regional, and local government and professional organizations; some of their insights are included in this article. The resulting report to Congress, Moving to a Complete Streets Design Model: A Report to Congress on Opportunities and Challenges.

Appropriate data on the modes of transportation that use the road network are critical for tracking the impact of projects and for ensuring that performance management efforts can incentivize projects that support safety for all roadway users. However, basic data about the transportation network, including roadway elements, traffic volumes, and even crash data, are often unavailable or incomplete, especially for people traveling outside of motor vehicles. Additionally, FHWA recognizes that traditional data collection and analysis methods may further underrepresent underserved communities that are disproportionately impacted by traffic fatalities and serious injuries.

Read more on FHWA's Public Roads

$1.5 Billion Available Nationwide through the 2023 RAISE Grants

The U.S. Department of Transportation has published a Notice of Funding Opportunity (NOFO) for $1.5 billion in grant funding through the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant program for 2023. The popular program helps communities around the country carry out projects with significant local or regional impact.

RAISE discretionary grants help project sponsors at the State and local levels, including municipalities, Tribal governments, counties, and others complete critical freight and passenger transportation infrastructure projects. The eligibility requirements of RAISE allow project sponsors to obtain funding for projects that are harder to support through other U.S. DOT grant programs.

Recent examples of funded projects include a critical bridge replacement in Tucson, new berth construction at Port Tampa Bay, a new pontoon bridge in Lafourche Parish, Louisiana, and a new snowmelt system in Berlin, New Hampshire. A full list of 2022 awarded projects can be found at the bottom of this page.

“The historic investments the Biden-Harris Administration is announcing today will help communities across the country modernize their transportation,” said U.S. Transportation Secretary Pete Buttigieg. “After decades of underinvestment in America’s infrastructure, we are supporting projects that help people and goods get where they need to go more safely, efficiently, and affordably.”

In 2022, RAISE funded 166 projects in all 50 states, the District of Columbia, Puerto Rico, the Northern Mariana Islands, and the U.S. Virgin Islands. RAISE projects are rigorously reviewed and evaluated on statutory criteria of safety, environmental sustainability, quality of life, mobility and community connectivity, economic competitiveness and opportunity including tourism, state of good repair, partnership and collaboration, and innovation.

This year’s NOFO builds on the success of the RAISE program as authorized in the Bipartisan Infrastructure Law by refining the rating rubric and continuing to give priority to safety, environmental sustainability, mobility and community connectivity, and quality of life. Additionally, projects designated “Reconnecting Extra” during the new FY 2022 Reconnecting Communities Program (RCP) competition and submitted for consideration under the FY 2023 RAISE NOFO will have a greater opportunity to be advanced during the FY 2023 RAISE evaluation process, as described in the NOFO. Half of the funding will go to projects in rural areas, and half of the funding will go to projects in urban areas. At least $15 million in funding is guaranteed to go towards projects located in Areas of Persistent Poverty or Historically Disadvantaged Communities, and projects located in these areas will be eligible for up to 100 percent federal cost share, as directed by Congress in the Bipartisan Infrastructure Law.

As was the case last year, the Department is encouraging applicants to consider how their projects can address climate change, ensure racial equity, and remove barriers to opportunity. The Department also intends to use the RAISE program to support wealth creation and the creation of good-paying jobs with the free and fair choice to join a union, the incorporation of strong labor standards, and training and placement programs, especially registered apprenticeships.

The NOFO is available here. Apply today!

Will Technology Solve All Our Road Safety Challenges?

Generally, road safety engineers are trained to focus on four things:

- Analyzing crash data
- Reviewing crash causal factors
- Using predictive methods to compute the expected number of crashes
- Identifying safety countermeasures, such as FHWA Office of Safety Proven Safety Countermeasures, that have good crash modification factors after implementation

With agencies experiencing rising infrastructure costs, communities are looking at innovative technology solutions to improve safety. Connected vehicle, automated vehicle, and infrastructure technologies will be the trend of the future. As communities start to change their street design approach by implementing Complete Streets, making technology part of the conversation becomes more important than ever.

Technology is not only being researched, developed, tested, and piloted to potentially save thousands of lives, but it is also being permanently deployed in many places. Technology needs to be a part of the roadway safety conversation. Where road safety infrastructure and behavioral countermeasures fall short, technology could bridge the gap. For example, there is ongoing in-vehicle technology research that will help when road users decide to drive while intoxicated. This technology has the potential to dramatically help reduce fatalities on our roadways by up to 30 percent. .

Safer Road Users

The City of Marysville, Ohio, has a smart mobility corridor where intelligent infrastructure has been enabled to improve safety for vulnerable road users with global positioning system coordinates and thermo cameras to track pedestrians. ITS monitors and analyzes camera metadata and broadcasts personal safety messages to connected vehicles and generates basic safety messages for nonconnected vehicles that can be used on dynamic message signs.

Safer Vehicles

There are many advanced driver assistance systems (e.g., pedestrian detection/avoidance, lane departure warning/correction, traffic sign recognition, automatic emergency braking, and blind spot detection) that help drivers with maneuvering intersection movement, left turning, and merging. Additionally, some cellular phones can identify when a vehicle has crashed based on the deceleration of the vehicle.

Post-Crash Care

The ability to clear incidents quickly while providing safety to on-scene responders and travelers is one measure of the success of a TIM program. The successful on-scene activities are supported by interagency communications and technology when adequate warning is provided to motorists approaching the incident queue (advanced traveler information systems) and positive traffic control is provided at all incident scenes on a 24–7 basis (advanced traffic management systems).

Safer Speeds

Many agencies already use reduced speed zones, work zone warnings, dynamic speed harmonization, and curve speed warning systems. Agencies can also make more use of speed safety cameras (SSCs) to supplement more traditional methods of enforcement, engineering measures, and education to alter the social norms of speeding. SSCs use speed measurement devices to detect speeding and capture photographic or video evidence of vehicles that violate a set speed threshold. SSCs can be deployed in many forms, including:

- Fixed units: a single stationary camera targeting one location
- Point-to-point units: multiple cameras to capture average speed over a certain distance
- Mobile units: a portable camera, generally in a vehicle or trailer

Safer Roads

In 2021 the City of Bellevue, Washington, began applying traffic conflict analysis to its high injury network (HIN) corridors. Traffic conflict analysis leverages cloud computing, artificial intelligence (AI), and video analytics to offer predictive insight into when, where, and why crashes are most likely to occur. Integrating conflict analytics into road safety assessments, the traffic conflict analysis then identifies and prioritizes projects.

Technology and Safety

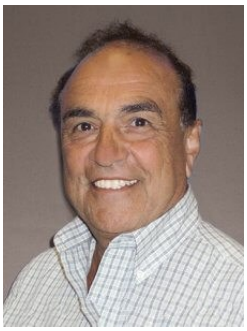
Technology should be part of the safety conversation among road safety engineers when it comes to safety, infrastructure, roadway departure, intersection safety, speed management, and pedestrian and bicyclist safety improvements. Joint review and implementation of infrastructure countermeasures and technology deployments need to happen simultaneously in many cases, as they can complement each other. Technology has a positive impact on road safety and enhances mobility for all. Vehicle-to-everything technology is important at intersections and key locations where there are safety concerns, such as curves and grade crossings, evacuation routes, and special event areas.

Looking for more technology resources and information? Visit the Smart Community Resource Center, which was designed to connect States, Tribal governments, and local communities with resources that can be used to develop ITS and smart community transportation programs.

So, is technology going to solve all our road safety challenges? We know there is no single solution but deploying safety technologies will be critical to our success in reaching zero fatalities and serious injuries more rapidly. There is no time to spare!

For more information, please contact Norah Ocel at norah.ocel@dot.gov.

Jacob's Junction



As an instructor for the New Jersey Local Technical Assistance Program (NJLTAP) at CAIT, Lloyd Jacobs draws on four decades of experience when he teaches professional development courses and trainings.

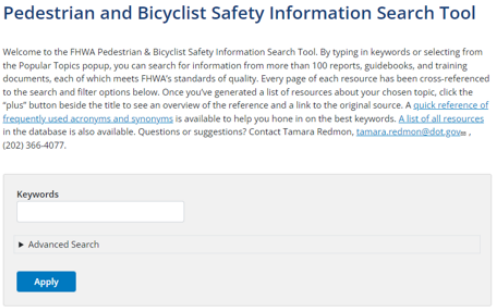
Question: What kinds of items are considered source documents? Are receipts enough to fulfill my obligations?

Lloyd Jacobs: Source documents are the LPA's handwritten receipt of exactly what was delivered, and how many or how much. They are the single most important form of documentation that substantiate quality and quantities and provide the required basis for payment to the contractor. Lack of source documentation can result in the loss of federal participation of funds. Source documents consist of notes/documentation of counts; measurements (length, width, depth, and slope); calculations of area, volume, weights; sketches; a statement of compliance with contract plans and specifications; field changes; comments; and delivery tickets collected and initialed by the inspector at the point of unloading.

Question: Can a person in "responsible charge" of a project have multiple projects under their purview? Can a project have multiple people providing oversight?

LJ: The regulations do not preclude sharing of these duties and functions among a number of public agency employees. The regulations also do not preclude one employee from having responsible charge of several projects and directing project managers assigned to specific projects, as long as the prescribed duties are carried out.

New Pedestrian and Bicyclist Safety Information Search Tool



The FHWA Office of Safety just launched the updated Pedestrian and Bicyclist Safety Information Search Tool. The tool is a page-by-page assessment of more than 100 carefully selected reports, guidebooks, and training materials. They are cross-referenced by mode, the 4 E's (engineering, enforcement, education, and emergency services), topics addressed, and other categories. Reports and guidance documents abound for anyone engaged in planning, designing, or advocating for safe pedestrian and bicycle facilities. The information packed into these resources is valuable, but practitioners must track it down from a wide variety of websites, clearinghouses, and printed documents.

Anyone with a web connection can search the library by typing keywords, picking from drop-down lists, or using other search filters available on the site. Whether you are a community member looking for ways to make your neighborhood safer for kids on bicycles, a researcher studying the application of safety countermeasures, a planner writing a local policy on multimodal safety, or an engineer designing a cycle track, this library can help you find the resources you need.

Traffic Fatalities Continue to Climb

For decades, transportation agencies have leveraged coordinated, multidisciplinary efforts to detect and respond to traffic incidents with a goal to clear roadways faster. As a by-product of clearing roadway incidents faster, TIM seeks to reduce secondary crashes and the exposure of incident responders. The operations focus always has safety at its heart—as do all aspects of engineering—but safety has increasingly become the focus for TIM.

TIM is embodied in the objectives of the NRSS, and specifically in the actions of responders and care of individuals after a crash occurs. Improving responder and motorist safety through TIM training and TIM technology deployment are key actions of the NRSS and are actions that are tracked by the NRSS dashboard.

TIM Training

Advancing incident safety begins with safer people. The National TIM Responder Training program has trained more than 600,000 traffic incident responders, such as police, fire, emergency medical services, transportation, and towing organizations. Through those efforts, the people responsible for managing incidents are operating on a common footing with proven and standardized approaches designed to make them and others safer.

The National TIM Responder Training program is delivered in classroom and online formats, as well as in an instructor-led virtual approach that has boosted the number of trainers around the country. Most important, feedback from students overwhelmingly reinforces the value of the training for advancing responder safety.

TIM Technology

Technology presents one of the biggest opportunities to advance TIM. Through FHWA's Every Day Counts (EDC) program, State and local agencies have been embracing next-generation TIM technologies that improve safety by warning approaching road users, improving responder situational awareness, and improving responder efficiency.

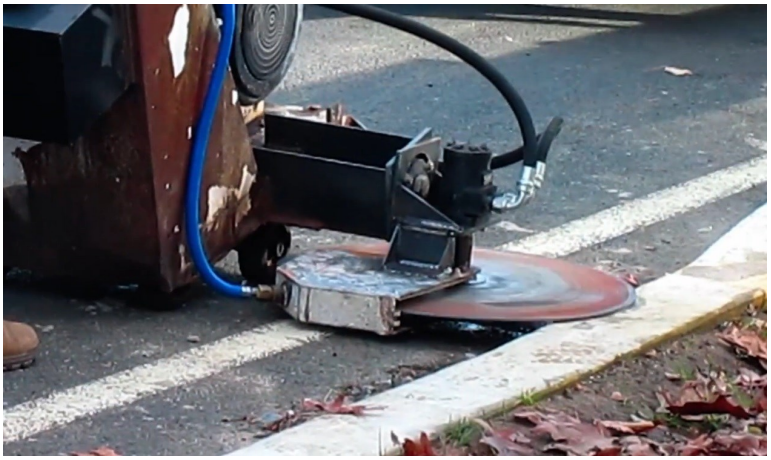
Communicating appropriate driving maneuvers (i.e., reduce speed, move over a lane) with drivers approaching traffic incident scenes is a principal way that TIM can advance safety. Smart emergency lighting systems intelligently manage the color, pattern, intensity, and flash rate of emergency vehicle lights to communicate with approaching motorists more effectively. Similarly, new temporary traffic control devices can warn and direct drivers with lights and sequential flash patterns. Response vehicle-mounted message and arrow boards capable of displaying directional information and caution messages are complimentary to these technologies.

Time is a critical element in terms of safety because it is equated to exposure for responders and everyone involved. The quicker roadways can be cleared, the safer everyone can be. Unmanned aerial systems (UAS), sometimes called unmanned aircraft systems, are small aircraft remotely piloted to capture video and photographs. When used with traffic incidents, UAS are an effective tool for law enforcement to expedite measurement and mapping of serious crash scenes. They also help with incident verification, response routing, queue detection, secondary crash detection, and detour route monitoring.

Read more at FHWA's Safety Compass

New Jersey Mousetrap Competition Winner

People involved in the transportation industry often find better ways to do their jobs. Whether it's a new gadget that improves the quality and safety of a project, or an innovative process that reduces costs and improves efficiency, the people on the front lines are often the source of the innovations that become the latest and best practices. Every year in New Jersey, state and local employees submit their innovative ideas that have saved their organizations money and improved efficiency .



In 2022, two NJDOT employees, Gary Liedtka-Bizuga and Henry Jablonski were awarded the Build a better Mousetrap Award for their Sawcut Vertical Curb innovation. The Sawcut Vertical Curb was recognized as an innovative response to a change in standards requiring existing curbing at guide rails to be reduced height. The Sawcut Vertical Curb innovation saves time and money and increases safety and efficiency by obviating the need to pour new concrete curbing and allowing guide rail to remain in place during the process.

The typical process involved necessitated excavating out sections of asphalt, and then curing concrete over several days. Once cured, the asphalt in front and the turn behind the curb would have to be leveled. This water –cooled saw reduces the amount of temporary traffic control required by reducing the time needed to complete the task. This means that the job is not only done more safely, but costs less money.

You can watch the video of Gary and Henry describing their project on the NJDOT Tech Transfer Website.

Are you looking for ideas, or want to see more videos of past winners in New Jersey? Check out the video library here!

New Jersey's Build a Better Mousetrap Competition Open for Entries!

People involved in the transportation industry often find better ways to do their jobs. Whether it's a new gadget that improves the quality and safety of a project, or an innovative process that reduces costs and improves efficiency, it is typically the people on the front lines that often realize the latest and best practices.

Now is the time to share those new ideas with others in New Jersey's **Build a Better Mousetrap Competition.** We are looking for submissions from any employee of a local or state public agency (municipalities, counties, parks commissions, NJ Department of Transportation, NJ Transit) that has create an alternate or better way of doing something in a transportation project. We will gather the best ideas from around the state and judge them using a 5 point rating system. As a reminder, this competition is open to any local, county, or state transportation agency, including New Jersey Department of Transportation and New Jersey Transit employees. Two winners will be selected; one for the best local agency and another for the NJDOT/NJT Submission.

> **"Build a better mouse trap, and the world will beat a path towards your door."**
>
> - Ralph Waldo Emerson

Visit https://cait.rutgers.edu/mousetrap/ for more information and to download the entry form today!

Publication Statement

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Upcoming Events

This spring we would like to remind you of some available courses in the LTAP catalogue. Whether you're a seasoned veteran or new to the job, LTAP's courses will provide you with the best instruction on what you need to know. Register today!

NJLTAP - Pavement Management Systems (Middlesex) -

March 14, 8:30 a.m. - 4:00 p.m.

Pavement Management Systems provides the basics for developing a pavement management system to help local governments manage their pavement network by providing an understanding of the concept and importance of road surface inventories and condition surveys. Register here!

INJLTAP – Design of ADA Curb Ramps and Pedestrian Access Routes (Webinar) -

March 29-31, 1:00 p.m. – 3:00 p.m.

This training is designed to ensure that pedestrian facilities and access routes, in particular curb ramps, along our roadways are properly design and constructed for all individuals, including those with disabilities. This training was developed to provide information and good practices for those involved in the design and maintenance of curb ramps and pedestrian facilities, and for those individuals that ensure the compliance to applicable accessibility laws and guidelines. Register here!

Our full online catalogue of courses can be found at our website, https://cait.rutgers.edu/cait/events or email Shane Mott at caitregistrar@soe.rutgers.edu for more information!

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