

MISSOURI LTAP

MISSOURI LOCAL TECHNICAL ASSISTANCE PROGRAM
LOCATED AT MISSOURI S&T

SPRING 2023

5 MISSOURI, FEDERAL TRANSPORTATION
DEPARTMENTS PARTNER FOR ROAD SAFETY

6 MOVING INNOVATION FORWARD: A NEW ROUND
OF EVERY DAY COUNTS

14 BUILDING BRIDGES WITH THE NEXT GENERATION
OF OUR WORKFORCE

Photo by: Sam O'Keefe

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MISSOURI
S&T

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The Fine Print

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FROM THE *DIRECTOR*

Hello everyone!

I am excited to share the MO LTAP team has grown. We were able to create a new assistant director position. Please welcome Nicole Annis! You might remember Nicole from her time in the LTAP office when she was a graduate student at Missouri S&T. She worked here for seven years while completing her master's degree and then her PhD in 2015. She taught at Lawrence Technical University for three years and then five years in consulting, as a design engineer as well as a project manager. Not only does she have years of firsthand experience and insight into the training and services LTAP provides, but a diverse background in curriculum development, program administration, and various other areas related to her new role here. She started February 1 and hit the ground running. One of her priorities is the implementation of the new learning management system (LMS) with an integrated website. We had run into some snags with the data migration and final website design. She has been meeting regularly with the xCatalyst representatives to work through the remaining glitches. The LMS and new website are being finalized and should be online within a few months. Nicole will also be involved in planning and hosting the asphalt and concrete conferences held at Missouri S&T.

In related news, we also hired the new Missouri Safety Circuit Rider. Lauren Gehner, a licensed engineer in the State of Missouri, brings over thirteen years of experience working for a local public agency. During her years at St. Charles County Highway Department, she was involved in a variety of roles that should benefit smaller, more rural local agencies lacking in-house engineering services. Some of these activities include identifying funding for local road projects, collecting data, preparing grant proposals, coordinating efforts to improve safety, and managing design contracts. I am thrilled to also have her as part of the MO LTAP team. We held a kickoff meeting on February 3 with key MoDOT staff members and Missouri Division FHWA personnel as well as a follow-up meeting with the former SCR on February 22. Lauren will be continuing some of the projects started under the SCR Program in 2020 like developing Local Road Safety Plans and reference sheets that local agencies can use when assessing what safety measures make the most sense for their system. She will also focus on informing cities and counties about the funding opportunities available under the Bipartisan Infrastructure Law. Lauren, along with Nicole, are bringing a lot of great energy and new perspectives to the team. We are thrilled to have them both on board.

In closing, I want to encourage everyone to consider attending the upcoming Missouri Concrete Conference on April 25-26 at Missouri S&T in Rolla. This will be the second year my staff and I have helped host this long running event. Please look for more information in this newsletter on how to register as an attendee or be involved as an exhibitor or sponsor. You can also visit concrete.mst.edu.

Best wishes!

Heath A. Pickerill, Ph.D.
Director, Missouri LTAP



In this ISSUE

SPRING 2023



MISSOURI, FEDERAL TRANSPORTATION DEPARTMENTS PARTNER FOR ROAD SAFETY

The Missouri Department of Transportation has partnered with the U.S. Department of Transportation on a new, comprehensive approach to reversing the rise in traffic fatalities.

MOVING INNOVATION FORWARD: A NEW ROUND OF EVERY DAY COUNTS

The Federal Highway Administration (FHWA) rolled out seven new innovations in the latest round of its Every Day Counts (EDC) program.

THE E-TICKET: A CATALYST FOR DIGITAL INTEGRATION

e-Ticketing is an example of technology that enables additional innovation and growth in the e-Construction space.



STATES REPORT SUCCESS WITH HIGHLY MODIFIED ASPHALT

While it takes years to know if an overlay, specification, or technique will prove effective in the pavement world, the wait is over for news about highly modified asphalt (HiMA), as several agencies report success.

BUILDING BRIDGES WITH THE NEXT GENERATION OF OUR WORKFORCE

In response to a shrinking pool of skilled trade professionals, new workforce development tools, resources, and strategic programs to create pathways to public works and infrastructure jobs started to take shape several years ago.

4 THINGS TO KNOW ABOUT THE ENTRY LEVEL DRIVER TRAINING RULE

A driver-training regulation 30 years in the works that finally came into effect last year even now has many trucking fleets in a scurry to comply.

FOLLOW US ON SOCIAL MEDIA!

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The Local Technical Assistance Program (LTAP) and Tribal Technical Assistance Program (TTAP) are composed of a network of 58 Centers — one in every state, Puerto Rico and regional Centers serving tribal governments. 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. Through these core services, Centers provide access to training and information that may not have otherwise been accessible. Centers are able to provide local road departments with workforce development services, resources to enhance safety and security; solutions to environmental, congestion, capacity and other issues; technical publications; and training videos and materials.



SAFETY CIRCUIT RIDER PROGRAM
OPERATED UNDER MISSOURI LTAP

MISSOURI, FEDERAL TRANSPORTATION DEPARTMENTS PARTNER FOR ROAD SAFETY



Hello everyone,

I am grateful to be selected as the second Safety Circuit Rider (SCR) for the State of Missouri. As you may know, the Safety Circuit Rider program was originally funded by FHWA with a State Transportation Innovation Councils (STIC) Program grant. Its main goal focuses on driving down Missouri's roadway fatalities and improving the safety of road systems. Created to primarily serve smaller municipalities without their own transportation safety staff, the Missouri SCR program offers multiple services like providing guidance for funding applications, identifying local safety concerns, suggesting appropriate data-driven counter measures, and providing training in all things safety-related. Since the program is still relatively new to Missouri, I welcome the opportunity to continue building it with MoDOT, FHWA and you.

You'll be hearing more from me on specific roadway safety information in future newsletters, but for now, I'd just like to introduce myself. I have been a Missouri resident all my life. I grew up in the St. Louis area and attended Missouri S&T where I received a B.S. in Civil and Architectural Engineering in 2009 and a Masters in Engineering Management in 2013. I am a professional engineer in the state of Missouri.

Before getting this opportunity as the SCR, I spent almost 13 years working for St. Charles County Highway Department. At the County, I supported both the maintenance and design groups where I was a part of all different aspects of a project, including funding applications, designing, tracking assets for replacement, and compiling specifications. This position provided me the experience of working on projects in both suburban settings as well as seeing roadway projects from conception to completion.

I have been spending my first few weeks in this position researching funding available through the Bipartisan Infrastructure Law (BIL), digging into MoDOT and FHWA crash data, learning about other safety circuit rider programs, and trying to determine the best way lead this program. I'm really looking forward to the opportunity to serve Missouri residents in this capacity, but I can't do it without you. Please feel free to reach out and let me know how we can partner together to improve safety on our local roads. Looking forward to hearing from you.

Lauren Gehner, PE
Missouri Safety Circuit Rider
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JEFFERSON CITY – The Missouri Department of Transportation has partnered with the U.S. Department of Transportation on a new, comprehensive approach to reversing the rise in traffic fatalities and serious injuries on the nation's highways, roads and streets.

This National Roadway Safety Strategy (NRSS) partnership comes after two consecutive years of more than 1,000 roadway fatalities in Missouri, a mark that hadn't previously been met since 2006.

MoDOT was recognized as a "First Mover" for the U.S. DOT's NRSS program. MoDOT has committed to a Call to Action centered around its Buckle Up Phone Down (BUPD) program. The BUPD program challenges Missourians to do their part in making Missouri's roads safer by using their seat belt and putting down, or turning off, their phone while driving.

"Missouri is honored to partner with the U.S. DOT in support of the national effort toward safer roads," said MoDOT Director Patrick McKenna.

"The fatalities on our nation's roads and here in Missouri are staggering. On average in Missouri, three people are killed each day on our roads and two of them weren't wearing a seat belt. It's imperative we commit ourselves to safer

driving habits and reverse this unacceptable trend. This national partnership is an important step, but the effort requires a commitment from every person on the road every trip."

MoDOT initiated the BUPD program in 2017, and it has spread steadily across Missouri and more than a dozen other states. The current program focuses outreach to drivers through educational materials and a BUPD pledge, which is available to individuals and businesses at www.modot.org/bupd.

This BUPD Call to Action commitment is just the latest in MoDOT's ongoing safety improvement efforts encompassed in Show-Me Zero, the state's strategic highway safety plan. The plan promotes safety for all road users by focusing on four key messages: buckle up, phone down, slow down and drive sober. Show-Me Zero also embraces a safe system approach which works by building and reinforcing multiple layers of protection to both prevent crashes from happening and to minimize the harm caused when crashes do occur. More information about Show-Me Zero is available at www.savemolives.com/mcrs/show-me-zero.

For more information on the U.S. DOT's National Roadway Safety Strategy Call to Action, visit <https://www.transportation.gov/NRSS/CallToAction>.

<https://newstalkkzrg.com/2023/02/03/missouri-federal-transportation-departments-partner-for-road-safety/>

MOVING INNOVATION FORWARD: A NEW ROUND OF EVERY DAY COUNTS

The Federal Highway Administration (FHWA) rolled out seven new innovations in the latest round of its Every Day Counts (EDC) program. The innovations selected for EDC round seven (EDC-7), which takes place during 2023 and 2024, focus on helping transportation agencies improve safety for all users, build a sustainable infrastructure for the future, and grow an inclusive workforce.

EDC is a State-based program that promotes market-ready and proven but underutilized innovations that merit widespread implementation. Every 2 years, FHWA asks State transportation agencies, local governments, Tribes, industry groups, and other stakeholders to help identify transformative, game-changing innovations that can have a national impact on the transportation system. The EDC-7 call for ideas yielded more than 70 suggestions.

In line with the U.S. Department of Transportation's recent commitment to expand the EDC model to more modes of transportation, some of the innovations chosen for EDC-7 were selected with multimodal State transportation agencies in mind and are of interest to both transit and rail agencies.

FHWA hosted a virtual summit in February 2023 that brought together transportation professionals from across the country for a more in-depth look at the benefits of each innovation. State Transportation Innovation Councils will then select innovations to adopt based on their State's program needs.

EDC deployment teams offer a variety of resources and technical assistance to help agencies accelerate the implementation of their adopted innovations during the 2-year cycle.

Improve Safety for All Users

Nighttime Visibility for Safety

The nighttime crash fatality rate is three times the daytime rate. Enhancing visibility along corridors, intersections, and pedestrian crossings can help reduce fatalities. This initiative promotes traffic control devices and properly designed lighting to improve safety for all users.

Next-Generation TIM: Technology for Saving Lives

More than 6 million crashes occur each year in the United States that put responders and other vulnerable road users at risk. Next-generation traffic incident management

(TIM) programs promote emerging technologies such as emergency vehicle lighting and queue warning solutions. These and other tools can advance safety and operations to mitigate incident impacts.

Build a Sustainable Infrastructure for the Future

Integrating GHG Assessment and Reduction Targets in Transportation Planning

Transportation is the largest emitter of greenhouse gases (GHG) in the United States. This initiative provides resources to help agencies quantify GHGs and set goals to decrease motor vehicle, construction, and life-cycle emissions through planning and project development.

Enhancing Performance with Internally Cured Concrete (EPIC2)

Cracking in concrete is a limiting factor in achieving long-term concrete performance. Internal curing mitigates shrinkage cracking and has the potential to substantially extend the service life of concrete bridge decks and enhance the performance of pavements and repairs.

EPDs for Sustainable Project Delivery

Construction materials such as concrete and asphalt have

environmental impacts during their life cycle. Environmental product declarations (EPDs) document those impacts. This tool helps States support procurement decisions and quantify embodied carbon reductions using life-cycle assessments for sustainable pavements.

Grow an Inclusive Workforce

Rethinking DBE for Design-Build

Many design-build contracts do not adequately provide opportunities for disadvantaged businesses. New practices are available to support the effective integration of program requirements to help small, disadvantaged businesses compete for design-build contracts.

Strategic Workforce Development

The demand for highway workers is growing, and emerging technologies require new skills. This innovation helps stakeholders improve their ability to identify, train, and place highway construction workers. The focus will expand to rural and Tribal communities to increase career opportunities.

[fhwa.dot.gov/innovation/innovator/issue94/page_01.html](https://www.fhwa.dot.gov/innovation/innovator/issue94/page_01.html)



THE E-TICKET: A CATALYST FOR DIGITAL INTEGRATION

e-Ticketing is an example of technology that enables additional innovation and growth in the e-Construction space. This innovation does more than just provide stakeholders with an electronic means to produce, transmit, and share materials data and track and verify materials deliveries.

According to Kathryn Weisner, Every Day Counts round six (EDC-6) team co-lead, “e-Ticketing is a gateway technology to many other digital applications and integrations in the e-Construction space.” The information contained on e-Tickets is now being used by numerous partners in a roadway’s lifecycle to enhance the quality of construction, use, and maintenance.

At the Minnesota Department of Transportation (MnDOT), e-Tickets are one part of a much larger e-Construction effort that seeks to digitally connect the lifecycle of a roadway from end-to-end. MnDOT is the steward for the American Association of State Highway and Transportation Officials (AASHTO) provisional standard (pre-publication) for the material delivery management system (MDMS). MDMS is a system that integrates digital information across a spectrum of users from contract administration, construction, materials, civil rights and labor compliance to industry partners. e-Ticketing fits uniquely into MDMS because an e-Ticket provides much of the information that will be used across these groups. A great deal of information is required to create a digital roadway. MDMS is a complex system where the information has many “on- and off-ramps,” but it all starts with an e-Ticket.

One e-Ticket’s Journey

Moving through the lifecycle of a roadway, an e-Ticket begins by capturing source data and loading and delivery events. On-site testing can add information to a ticket such as material temperature, ambient conditions, laboratory and field test results, paver-mounted thermal profiling, and more. Equipment operators using MDMS can use the delivery time reporting to better time their work, reducing paver stops that would normally negatively affect the quality of the pavement. The information contained on the e-Ticket then flows to agency departments and systems, including:

- The Civil Rights Department for use on prevailing wage reports—indicating time on site, how long items take to deliver, etc.
- Contract administration for reconciling quantities for payments and for future estimates.
- Materials engineers for geolocation information on dump sites with respect to material source, mix design, laboratory and field test results, paver-mounted thermal profiling, and more, which can be used for assistance in monitoring quality, specification refinements, etc.
- Pavement management systems for lab- and field-testing efforts on the finished roadway, along with other intelligent construction technology information to link to roadway performance.

Eventually, this information will all come together to develop a digital material as-built of the roadway. Over time, the information will be used again and again by asset management, pavement management, and materials groups, providing valuable data for roadway lifecycle costs, maintenance, and future project scoping.

Mix design reviews will now include specific geolocated information that goes all the way back to the plant where it was loaded.

Access to this information is already providing MnDOT with tangible benefits. Trucking is the second-largest expense for contractors in Minnesota, and digital integration of e-Ticket information is reducing the time needed for audits to verify hauling information such as driver information, load verification, load acceptance, and reconciliation.

The Road Ahead

According to Rebecca Embacher, MnDOT advanced materials and technology engineer, “We are only scratching the surface in terms of what digital integration and the creation of the digital roadway can accomplish.”

MnDOT, along with other participating Transportation Pooled Fund (TPF-5 (466)) States and the Federal Highway Administration (FHWA), continue to develop a standardized testing and contract administration software, called Veta, which integrates with the MDMS. Veta currently provides the agency with geospatial and statistical information on intelligent compaction, paver-mounted thermal profiling, dielectric profiling systems, and pavement spot tests. The pooled fund continues to expand Veta’s e-Construction capabilities, with plans to further integrate with MDMS, ground-penetrating radar systems for roadway thickness and depth, and other upcoming intelligent construction technology applications. Future approved funding will integrate the material and geometric as-built information contained within Veta with pavement and asset management systems.

Once Veta collects and prepares this data, it can be transferred or pulled by AASHTOWare or other agency systems. Being part of the greater MDMS digital environment, this software not only receives data from other nodes, but can also feed information back into the system for greater synergy.

The digital space for e-Construction is rapidly expanding with potential reach into all aspects of highway construction and management. The e-Ticket’s role has grown and expanded since its inception to enable many of these digital advancements in e-Construction.

“e-Tickets continue to expand and integrate into an increasing number of other e-Construction systems as time goes on,” said Rob Elliott, EDC-6 team co-lead. “e-Tickets improve efficiencies around data workflows and get our project delivery teams out of harm’s way, enhancing project safety. Our team is available to help agencies, whether their e-Ticketing programs are in their infancy or are well developed but looking to advance to the next level, through technical assistance or peer exchanges.”

fhwa.dot.gov/innovation/innovator/issue94/page_03.html

STATES REPORT SUCCESS WITH HIGHLY MODIFIED ASPHALT

While it takes years to know if an overlay, specification, or technique will prove effective in the pavement world, the wait is over for news about highly modified asphalt (HiMA), as several agencies report success. HiMA contains more than two times the polymer content of traditional modified grades, which makes the binder behave more like rubber and enhances cracking resistance and rutting performance. This versatile product can be used in high-performance thin overlays (HPTO), stone matrix asphalt (SMA), crack attenuating mixtures, and open-graded friction courses—all of which are part of the FHWA targeted overlay pavement solutions (TOPS) Every Day Counts round six (EDC-6) initiative.

OKLAHOMA

A decade ago, the Oklahoma Department of Transportation (ODOT) used mill and overlay with HiMA on a 2-mile stretch of Interstate 40 (I-40) west of Oklahoma City. The I-40 section endures more than 25,000 vehicles daily, 30 percent of which are trucks. Ten years after receiving the new overlay, the I-40 span's international roughness index averaged 50 inches per mile, which is smooth enough to result in ride quality bonuses for new construction in some States.

Conventional polymer concentration that exceeds 3 percent becomes more challenging to produce in the plant and less workable for the paving crew, but HiMA is a unique binder.

The product can be used in significantly larger amounts than conventional polymer modifiers—up to 7.5 to 8 percent while retaining workability. The result is a more durable pavement that stands up to truck traffic while permitting thinner sections. While a highly polymerized mix is more expensive, reducing the required thickness can offset the cost and provide a longer-lasting pavement.

NEW YORK CITY

The New York City Department of Transportation (NYC DOT) typically resurfaces major arterial streets every 2 years, but an HPTO project with HiMA on 1st Avenue has provided significantly longer life.

There were two needs—repair a roadway in poor condition from years of utility projects and add lanes to accommodate buses and bicycles. This would require the costly rehabilitation of 53 city blocks and 11,000 tons of asphalt mix. Conventional pavement design practice would have required the closure of several blocks and intolerable disruption to residents and city leaders. Also, curb and utility cover requirements prohibit the use of thick

asphalt overlay, and any substantial removal of surface materials could damage underlying utilities.

The agency decided to place two exploratory HPTO sections on two blocks of 1st Avenue in 2012. A year later, the sections were in very good condition, so NYC DOT decided to move forward with an HPTO approach for the entire project conducted at night with minimal traffic disruption. The construction included micro-milling the existing surface, joint sealing and patching with a hot-applied polymer material, using a pavement fabric, and installing a 1.5-inch HPTO with HiMA. According to the NYC DOT website, the roadway is still in good condition 9 years later.

VIRGINIA

The Virginia Transportation Research Council (VTRC), the research division of Virginia DOT, published a report detailing HiMA laboratory and field performance evaluations. VTRC initiated the study in 2014 to evaluate HiMA constructability, laboratory performance, and initial field performance. As part of this effort, in 2015 VDOT placed dense-graded and SMA overlays with HiMA over existing jointed concrete pavement and cracked asphalt pavements to mitigate reflective cracking. This project was the first in the United States to include an HiMA binder in an SMA mix. The objective was to assess the viability of using HiMA mixtures in Virginia as a reflective crack mitigation technique or as a tool for increased crack resistance on high-volume facilities.

Researchers concluded that the HiMA test sections showed the most promising performance 5 years after construction (2015 to 2020) regardless of traffic level and the pre-existing pavement conditions compared to conventional polymer-modified asphalt (PMA). They determined that HiMA extended the life of pavements by approximately 34 percent compared to PMA.

FHWA's Tim Aschenbrener, an EDC-6 TOPS team co-lead, said that, in addition to these promising performance reports, accelerated performance for HiMA was observed over multiple 3-year research cycles on the National Center for Asphalt Technology Pavement Test Track.

“The HiMA and other TOPS overlays not only maximize previous investments,” said Aschenbrener, “they also reduce user delays thanks to fewer work zones due to the extended service life of pavement structures.”

fhwa.dot.gov/innovation/innovator/issue93/page_03.html



HOW TO LEAD BEFORE YOU MANAGE

Charlie Fredericks, MPA, Streets Engineering Technician, City of Eagan, Minnesota; member, APWA Young Professionals Committee

Practicing leadership from a non-management role.

It is a common belief that leaders are only those in roles with official authority—such as having direct reports, supervisory duties, or ranking highly within an organization. This assumption would effectively mean that the only way to become a leader is to first become a manager. When in reality, leadership is a skill that can (and should) be learned, practiced, and refined long before “Manager” is in your title...the question is how?

“Lead by example!” How many times have you heard that ambiguous advice? While it’s true that a leader should set a good example, let’s be honest, that phrase is utterly useless when trying to practice specific aspects of leading. However, hidden in the details of what that phrase might really mean, we find actionable and explicit advice that can be practiced by anyone.

MINDSET

The mindset of a leader drives what they do and why; it is the lens through which they process and respond to the various situations they come across. For example, a leader’s mindset will determine how feedback from a teammate is received; one may see it as a threat to their authority, while another will see it as an opportunity to learn and grow. Psychologist Dr. Carol Dweck coined the terms that

describe these two examples, as the fixed mindset and the growth mindset, respectively; the latter being a belief that you, and others, are capable of improving talents and intellect.

Developing a growth mindset starts with acknowledging and learning from failures. Fear of failure is a common thing, especially for those of us early in our careers or starting a new role. If we acknowledge our inevitable failures and start seeing them as learning opportunities rather than setbacks, we become better equipped to continually push the boundaries of our own growth and that of our team. The obstacles along the way become challenges to take on, and failure becomes a chance to learn and grow.

SYSTEMATIC THINKING

The next time your team is problem-solving, notice the first thing that the group likely does is dive right into finding a solution and discussing next steps. When that happens, you have a perfect opportunity to practice leadership. Effective leaders learn to think systematically, collecting information, analyzing the cause of a problem, then proposing next steps based on this analysis. This can be practiced by simply asking the right questions: “Do we have the information we need to fully understand the problem?” ... “Can we focus on determining the cause of the problem?”

... “Can we start by clarifying our goals for this project?” Good leaders ask more questions and make fewer statements, and you certainly don’t need to be a manager to ask more questions. Doing so allows you to lead a group through a much more effective dialog.

Of course, our line of work does not always grant us the luxury of time; we are emergency responders, after all. Yet the practice of thinking systematically will prepare you to make the best decisions possible, even when a situation requires urgency.

ASKING FOR FEEDBACK

Great leaders are great learners, and it’s the endless pursuit of growth that pushes them to continually improve. A vital aspect of continuous growth is receiving feedback, and the ability to do so skillfully takes practice.

To be clear, the “you’re doing a great job, keep doing what you’re doing” or the “nice work on that!” is not the feedback you seek, that’s praise. And while it may be nice to hear, it could not be less helpful to our growth. To get the feedback that will be helpful, you need to ask for feedback tactically. “Do you have any feedback for me?” is not tactical because it will rarely produce a helpful response. Instead, ask open-ended, specific questions that solicit feedback on a specific event (what I call micro level feedback):

“What did you hear when I presented my thoughts on that proposal?” ... “When I led that project, how often did I create space for others to share their thoughts and ideas?” ... “In that meeting, how could I have improved my communication?”

RECEIVING FEEDBACK

Receiving feedback on your behaviors and traits (what I call macro level feedback) at work is also important and can be accomplished in various ways, but the most effective tends to be anonymous online surveys. These types of surveys are often big picture but provide detailed feedback for you to use in setting and refining goals on a consistent basis. Do others see you as approachable? Do they think you acknowledge and learn from failures? Are you open to change and responsive to their ideas? These are the questions that will be answered, giving you insight into the perspective of those around you, allowing you to continually improve and become a more effective leader at any level of your organization.

If you seek either type of feedback in a face-to-face set-

ting, give your full and undivided attention (this means your cell phone isn’t even in the room). Listen intently, resisting the impulse to defend or correct what they are saying. Receiving feedback can be tough, and it is a skill that takes practice to do well.

You may find yourself disagreeing with what you are hearing; this prompts an opportunity to practice self-awareness and notice your reactions, but never offer contradictory evidence or contest their claims. If you defend yourself, you are going to seem closed off to feedback and there is a good chance that’s the last time you hear candid advice from that person—not at all the outcomes you are trying to achieve.

GIVING FEEDBACK

The day will come, if it hasn’t already, where your colleagues seek your insight on their growth and development, and the tables are turned. Similar concepts can be applied when giving feedback as a leader; be specific and reference real situations, encourage and coach consistently, be attentive during the conversations, and ask for their feedback in return. Learning how to effectively seek and receive feedback will better prepare you to give helpful feedback in return, helping others continue their own growth and development.

Learning from our failures, thinking systematically, and utilizing feedback to continue our growth are all essential skills of leadership that we can practice and refine without “Manager” in our title. They are just a few of the skills we must practice and refine if we want to reach our full potential as leaders, and eventually help others do the same.

This is a short summary of a few ways I have found to be helpful in my practice of leadership, but I know there are many others; I would love to hear your thoughts on these ideas and other ways that you lead and practice leadership from non-management roles! For those in management roles, which leadership skill do you wish you would have practiced or refined more prior to becoming a manager? How could those of us non-managers best learn and practice that skill? Reach out to me, or better yet, share with an aspiring leader in your organization during a conversation on the topic.

I can be reached at (651)-675-5310 or cfredericks@cityofeagan.com.

apwa.partica.online/reporter/december-2022/columns/how-to-lead-before-you-manage

BUILDING BRIDGES WITH THE NEXT GENERATION OF OUR WORKFORCE

Marilee Enus, Director, Technology Transfer Center, University of New Hampshire, Durham, New Hampshire; member, APWA New England Chapter Public Works Awareness Committee

BE HONEST—when was the last time you didn't find yourself wondering when and where the workforce shortage happened? We're all talking about it—the media, industry and professional associations, leadership teams, and peer crews.

In response to a shrinking pool of skilled trade professionals, a rising “gig” economy, and looking ahead to a generation of workers scheduled to retire, new workforce development tools, resources, and strategic programs to create pathways to public works and infrastructure jobs started to take shape several years ago. Recent events increased the urgency to accelerate and expand these programs.

Through my work with NH's Local Technical Assistance Program (LTAP), I've learned about many of these exciting workforce development programs. While training and education cannot be overemphasized (it's the backbone of what we do at UNH T2 every day!), I'm impressed with the ways our industry is going beyond the classroom to build public works awareness and engage with the future generation of our workforce. After all, nothing tells the public works story better than getting people involved in doing it.

This summer, our center partnered with the UNH Tech Camp Techventures Bridge Program and NH Good Roads to take campers in grades eight through 10 on a bus tour to a local bridge project. Onsite, students learned about some of the unique and important aspects of the project, including its placement in an environmentally sensitive area and its impact to the local neighborhood.

NH Department of Transportation staff, ED Swett, and Pike Industries supported campers in using an auto-level, working with the real blueprints that had the foreman's ongoing notes scribbled on them, and measuring rebar. They talked about how bridge engineers and the build team change course to respond to challenges that arise and encouraged campers to come back with their families in the fall when the bridge was completed, to feel that sense of pride in telling their families that they “had a hand” in this bridge.

New Hampshire's Construction Career Days (NHCCD) takes a similar approach to raising awareness to the construction and transportation workforce through real-world, hands-on activities. At this annual event made possible by a vast team of partners and volunteers, almost 1,500 students a year actively participate in dozens of construction-related hands-on activities—from electrical wiring to welding, driving a backhoe to operating plow controls.

Since its inception in 2009, NHCCD has introduced more than 12,000 students to the many options they have for a career in construction or transportation.

These students also return from their NHCCD experience to their families and communities with a deeper, broader appreciation for all the tools, tasks, jobs, and people that bring infrastructure to life and support our communities' quality of life.

While students get a quick taste for all things construction at NHCCD, some agencies have adopted programs with deeper experiential learning for those considering a public works career.

MassDOT-UMTC On-the-Job Supportive Services program offers a select number of students who successfully complete a pre-apprenticeship training program additional employment support services to enter the transportation field, including four-week co-op placements at local highway departments.

While working as the highway superintendent in Berlin, Mass., Dave was introduced to Aidan, a junior and high achieving welding student from nearby Keefe Regional Technical School. Dave candidly told Aidan the department didn't have much work specific to welding, but Aidan was eager to participate in the core work of the team and learn more about public works. Through Aidan's initiative and a team member's interest in providing behind-the-wheel time with the trucks and heavy equipment, Aidan obtained his CDL-B while at DPW. When his co-op with Berlin was complete, Dave ensured Aidan had a placement in public works at a nearby town, and eventually was pleased to welcome Aidan back to his own team (although in Sudbury) a few years later.

One important thread in the examples above is that the public works awareness and outreach activities were not driven or owned by those at the top of the organization, they were not director-directed.

Each involved crew team members, site supervisors, volunteer heavy equipment operators, or peers who took an interest in sharing what they were doing with someone else, and to encourage someone towards a career in public works.

I asked Dave if he had encountered any skepticism that investing time in someone who may not stay with the

department would be a futile cause, and he replied, “If I can help somebody's career path, I'm all for it. If you can be a piece of the puzzle to help them improve, that's a good reflection on you as a leader.” There is opportunity for all of us—in fact, a critical need for all of us—at all levels of the organization to become a piece of that puzzle and raise awareness to public works and promote the workforce.

I say often, “This is not your grandfather's public works.” To be clear, the men and women of past generations who built our infrastructure and communities did so with the same commitment, skill, dedication, and service to others as today's public works workforce.

However, each generation undoubtedly accomplishes their work through different means—be it improvements in materials, safety protocol, or construction. We're always working differently.

The question I have for us is: Are we doing everything we can to tell the story of how we work today, and what we think tomorrow's work will look like?

Have we done an adequate job sharing and creating awareness of what a week in public works looks like? In sharing the tools, technologies, and practices public works employees use to build longer lasting streets that accommodate every user, to construct bridges in previously unimaginable time frames, to apply water monitoring to understand trends in disease and illness?

By creating synergies between public works awareness efforts and workforce development strategies, we help the next generation envision themselves as part of the workforce making our towns and cities run smarter, more efficiently, sustainably, and effectively. To envision themselves as part of the public works teams that make it happen.

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apwa.partica.online/reporter/december-2022/columns/building-bridges-with-the-next-generation-of-our-workforce

4 THINGS TO KNOW ABOUT THE ENTRY LEVEL DRIVER TRAINING RULE



A DRIVER-TRAINING REGULATION 30 YEARS IN THE WORKS THAT FINALLY CAME INTO EFFECT LAST YEAR EVEN NOW HAS MANY TRUCKING FLEETS IN A SCURRY TO COMPLY.

That's because it sets a mandatory baseline for the training of entry-level truck drivers — at a time when the trucking industry continues to grapple with high turnover and changing driver-pool demographics.

The Federal Motor Carrier Safety Administration's Entry Level Driver Training (ELDT) final rule is a negotiated rulemaking, thoroughly informed by reams of industry input over the decades and forged through years of back and forth between FMCSA and the courts. The final rule was issued in December 2016, with full implementation last February.

According to FMCSA, the ELDT rule was based, in part, on consensus recommendations from the agency's Entry-Level Driver Training Advisory Committee, a negotiated

rulemaking committee that held a series of meetings back in 2015. The rule was mandated under the Moving Ahead for Progress in the 21st Century Act (MAP-21) highway bill, which took effect on Oct. 1, 2021.

Implementing the rule is toughest on fleets that did not already have some sort of comprehensive training programs for new commercial drivers' license holders in place. These carriers now must look to registered third-party providers to ensure compliance of their new-to-the-industry hires or set up their own ELDT-complaint training. Those fleets that did have similar driver training up and running can adjust their programs to meet the new ELDT standards and register as providers.

In simple terms, the ELDT rule sets new federal minimum standards for CDL training schools, including those operated by motor carriers.

Any company that trains entry-level drivers to get their

CDL for the first time is subject to the rules. For-profit CDL schools, non-profit community colleges, local trade organizations, private fleets running dock-to-driver programs, and over-the-road fleets with their own schools are all examples of organizations that must apply to the registry.

When registering with FMCSA, training providers self-certify that they meet applicable federal and state training requirements.

4 THINGS TO KNOW ABOUT ELDT

1. The ELDT rule only sets training requirements for those seeking to:
 - Obtain a Class A or Class B CDL for the first time.
 - Upgrade an existing Class B CDL to a Class A CDL.
 - Obtain a school bus (S), passenger (P), or hazardous materials (H) endorsement for the first time.
2. The ELDT regulations are not retroactive. Drivers issued a CDL or an S, P, or H endorsement prior to Feb. 7, 2022, are not required to complete training

for their respective CDL or endorsement. Also, an applicant who obtained a commercial learner's permit before Feb. 7, 2022, and obtains a CDL before their commercial learner's permit expires, is not subject to the ELDT requirements. Any driver who meets one of the exceptions for taking a skills test in 49 CFR Part 383 is also exempt from the ELDT requirements.

3. A state is not permitted to administer the CDL skills or knowledge test to a driver if they cannot electronically verify that these requirements are met. However, a state may issue a CLP to a driver who has not yet completed entry-level driver training.
4. FMCSA's Training Provider Registry retains a record of which CDL applicants have completed the new training and certification process outlined in the ELDT regulations. States verify that certification information has been submitted to the registry before allowing a driver to take their required CDL skills or knowledge test.

WHAT DO DRIVERS NEED TO DO TO MEET ELDT REQUIREMENTS?

Prospective entry-level drivers subject to the Entry-Level Driver Training regulations must select a training provider listed on the Training Provider Registry, which may include the fleet hiring them.

Critical to bear in mind: This training must be completed before the driver takes a commercial driver's license skills test or, if the driver is applying for the H endorsement, the knowledge test.

Perhaps due to providers being allowed to self-certify, FMCSA states, "Drivers are strongly encouraged to use care when selecting a training provider that will help them meet their specific ELDT requirements."

The FMCSA recommends that those seeking to become commercial drivers download the ELDT minimum federal curricula requirements to learn more about training topics required for each applicable license and endorsement.

A few other things FMCSA says drivers should know:

- Federal regulations allow receiving ELDT training and taking the CDL skills test in a state other than the state a driver is licensed in.
- States with training requirements that exceed the federal minimum standard may prohibit a driver from taking the skills or, in the case of the H endorsement, knowledge test, until the driver meets their state, as well as federal, requirements.
- For more information on a state's training requirements, contact the state Department of Transportation,

Department of Education, local business licensing authorities, or a local state driver licensing agency, such as the Department of Motor Vehicles.

- Many options exist to assist CDL applicants in obtaining funding to cover the cost of entry-level driver training. Look into contacting state Workforce Development offices; ask employers about tuition assistance programs and tuition reimbursement programs; and research employer-based training programs.

FMCSA also advises that it has heard from some CDL applicants that they are “experiencing difficulty locating a training provider that offers only behind-the-wheel training, as some providers require trainees to enroll in both theory and [behind-the-wheel]. CDL applicants should be aware of this and do their due diligence if they intend to enroll in theory training with one provider and BTW with a different provider.”

Once ELDT training is completed, each driver should check his or her compliance record by reviewing the information the training provider or providers have submitted to the Training Provider Registry at tpr.fmcsa.dot.gov/Check.

Rule Unlikely to Change

The Commercial Vehicle Training Association, which represents 72 CDL training schools operating in 43 states, says it strongly supports the FMCSA's ELDT rule, but encourages FMCSA to “fine-tune its” implementation.

“While FMCSA did not incorporate all of the ELDTAC recommendations into its final rule, specifically an agreed-upon minimum of 30 hours of required [behind-the-wheel] training for Class A programs, CVTA believes it will greatly enhance highway safety because the curriculum requirements and demonstration of student skills performance far exceeds what most states currently require,” CVTA wrote in an association policy statement.

A recent bill, S.4861 (TRUCKS Act of 2022), introduced in September by Sen. Mike Rounds (R-SD), would exempt employees in certain farm-related service industries and employees of state, local, and tribal governments from

complying with ELDT requirements. It would also allow states to issue restricted commercial driver's licenses to owners and employees of certain small businesses, and for other purposes.

The ELDT rule took three decades to be put in place and is well-received by trucking lobbies, so it's not likely to be rewritten. Rounds' bill was referred to the Committee on Commerce, Science, and Transportation, and has yet to secure a single cosponsor from either party, which indicates it's not going anywhere fast — if at all — in the new Congress.

HIGHLIGHTS OF THE ELDT STANDARDS

The Commercial Vehicle Training Association lists the entry-level driver training requirements that all states, at a minimum, must ensure:

- All students undergo a three-part curriculum comprising classroom (theory), and behind-the-wheel (range and road). This collectively embodies approximately 30 subjects and requires students to demonstrate proficiency in all subjects and skills.
- Each training provider certifies its students are “proficient” in the skills curriculum based on their performance before students can take the CDL exam.

Instructors have two years' teaching or industry experience.

- All training providers register, be approved, and listed on the FMCSA's Training Provider Registry. Students who are not certified by a school on the registry will not be able to take their CDL test.
- All training providers disclose how many behind-the-wheel hours the student completed on the student's certificate (although there are no federal minimum hours of behind-the-wheel training.)
- State driver's license authorities modify their data systems to be able to record the behind-the-wheel curriculum hours completed by each CDL applicant.

truckinginfo.com/10192039/4-things-to-know-about-the-entry-level-drive-training-rule

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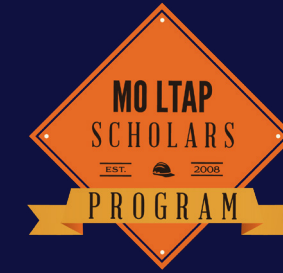
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MO-LTAP SCHOLARS PROGRAM
A Training & Recognition Program



About The Program

The primary purpose of the MO-LTAP Scholars Program is to recognize skilled transportation and public works personnel in local agencies throughout Missouri. The program is intended to enhance the skills of all those involved in the maintenance, delivery, and management of local transportation and infrastructure. Training is aimed at increasing each participant's technical, maintenance, administrative, and supervisory skills depending on the program level. Electives can be selected to meet the individual's area of responsibility. Special emphasis will be given to safety in the workplace as well as in the field and in the development of a local transportation system. The program will allow participants to attain three levels of achievements: Level I, Level II, and Level III Super Scholar. Participants must complete the requirements for Level I before completing Level II.

Getting Started

Registration is available on the Missouri LTAP website (www.moltap.org). There is no registration fee for the program, but there is a fee for each class, which varies for each level. Classes are offered on an ongoing basis at various locations throughout the state. Contact Missouri LTAP for classes in your area or view the online training calendar.

Recognition

Certificates will be awarded by the Missouri LTAP Director to those individuals who successfully complete the requirements of the program during award ceremonies held at various conferences throughout the state and/or at a ceremony held at the graduate's place of employment.

LTAP TRAINING RESOURCES

FHWA Essentials for Local Public Agencies

Federal-aid Essentials for Local Public Agencies is a transportation resource designed to help local agency professionals navigate the Federal-aid Highway Program. Federal-aid Essentials is structured for busy agency staff who want further understanding of Federal-aid policies, procedures, and practices.

fhwa.dot.gov/federal-aidessentials/indexofvideos.cfm

Missouri Local Public Agency Program

The Federal Highway Administration (FHWA) and MoDOT offers a free 4-hour training class designed to meet the recently implemented requirements for a Full Time Sponsor Employee to serve the role as the Person In Responsible Charge in order to receive Federal-aid funding for Locally Administered Projects. Local public agencies and consultants will be required to have taken this basic training course.

design.modot.mo.gov/lpatraining/

APWA – Professional Development

APWA offers online, face-to-face, and on-demand programs, with educational content that fits within your time and travel constraints. The Donald C. Stone Center provides professional development opportunities for the next generation of public works leadership.

apwa.net/learn

NHI – Training Resources

National Highway Institute, NHI, is the training and education arm of the Federal Highway Administration (FHWA) with its rich history of innovation and expertise in delivering transportation training.

nhi.fhwa.dot.gov/home.aspx

In cooperation with the Department of Civil, Architectural and Environmental Engineering at Missouri S&T and Missouri LTAP.

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VISIT:
[www6.modot.mo.gov/
PropertyForSale](https://www6.modot.mo.gov/PropertyForSale)



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