

MISSOURI LTAP

MISSOURI LOCAL TECHNICAL ASSISTANCE PROGRAM
LOCATED AT MISSOURI S&T

FALL 2022

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\$10 BILLION PLAN FOR ROADS, BRIDGES

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Photo by: Sam O'Keefe

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The Fine Print

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FROM THE *DIRECTOR*



Hello everyone!

Last newsletter I shared my travels to the North Central region meeting in Sioux Falls, SD held in late May. Since then, I had the opportunity to gather with an even larger LTAP group at the National LTAP Association (NLTAPA) Conference held in Seattle on July 18-21. One thing that stood out to me was FHWA's strong presence. Stephanie Pollack, FHWA's Deputy Administrator, who has been serving as Acting Administrator since July 21, 2022 attended on day two when she announced FHWA's funding for each LTAP center will be increasing in FFY 2023. Amy Lucero, Associate Administrator of Transportation Workforce Development and Technology Deployment, who oversees FHWA's Resource Center, the National Highway Institute, Knowledge Management, Accelerating Innovation, Workforce Development, and Local and Tribal Support, attended the entire conference. Her office assures a coordinated approach across FHWA for developing and enhancing the transportation workforce through technical training, technical assistance, and technology deployment. Joe Conway, Center for Local-Aid Support Director, and his entire staff updated LTAPers on funding, partnerships opportunities, and new training resources along with providing updates over the three days. This level of support from FHWA for the LTAP centers was extremely reassuring.

In other news from the NLTAPA Conference, I was elected to the president's track of the Association, which represents the 51 LTAP centers – one in each state along with Puerto Rico. I began serving as vice president of the Association from July of this year through July 2023. During this tenure, I will serve as co-chair of the partnership workgroup to maintain and cultivate strong working relationships with organizations such as the American Public Works Association and Association of State Highway Transportation Officials. I will become president-elect from July 2023 through July 2024 and primarily be responsible for planning the 2024 NLTAPA Conference. Beginning in July 2024, I will begin my tenure as president, representing all 51 LTAP's interests to the Federal Highway Administration. Throughout the three years, I will meet monthly with the executive committee, travel to various regional LTAP meetings, and ensure the leveraging capacity of NLTAPA with its funding agency as well as its partnering organizations.

Finally, I'm sad to share that Gidget Koestner has stepped down as Safety Circuit Rider. Gidget accepted a position at and will resume her career with MoDOT. Everyone involved with the SCR Program greatly appreciates her efforts in helping start the program in 2020. She was Missouri's very first SCR. Who knew the challenges she would face right out of the gate as the Pandemic shut so much down just a few months after she started? She refocused her energy into reviewing local crash data and developing programs to assist cities and counties in their efforts of implementing low-cost safety countermeasures. Once restrictions began to ease, she traveled the state attending various transportation related events and meeting with local agencies. Gidget provided a strong start to the program.

We will be advertising for Gidget's replacement in the coming months. If you know of a licensed engineer looking for flexible hours and an opportunity to impact the safety on local roadways, please alert them to this opportunity.

Best wishes!

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

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Whether you are traveling to other destinations or families visit your area, there will be a higher volume of vehicles on the roadways and likely more pedestrian traffic.



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The Missouri Highways and Transportation Commission approved a record \$10 billion plan for building and maintaining roads and bridges during the next five years.



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Innovative strategies to identify, train, and place workers in highway construction jobs that support the Nation's highway system.



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BRIDGING THE DIGITAL DIVIDE

Just like building a real bridge, when working to fill what is commonly known as the "Digital Divide," decision makers need to look at several factors to decide upon which type of bridge best fits the needs of the community.

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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.

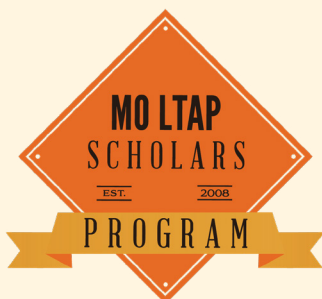
Join Our Team!

MISSOURI LTAP SAFETY CIRCUIT RIDER — LOCAL FIELD LIAISON

The Missouri Local Technical Assistance Program (LTAP) in cooperation with MoDOT is pleased to announce that the Missouri LTAP Center is hiring a part-time Safety Circuit Rider as a contracted local field liaison to promote local road safety measures designed to provide safety-related information, training, workshops, and direct technical assistance to local agencies responsible for roadway safety throughout the State. The first year contract will be through June 30, 2023, with a subsequent contract based on performance from July 1, 2023 - June 30, 2024. The position is funded by the Highway Safety Improvement Program (HSIP). The position may be of special interest to retirees or other individuals seeking part-time employment, a flexible work schedule, and remote work from home the majority of the time. The position does require a Professional Engineering license in Missouri. Please see the attached job description and announcement for a complete explanation of job duties, qualifications, remuneration, and other related information. **For more information or a complete job description, please contact Heath A. Pickerill.**

Interested persons may apply by emailing a current resume and cover letter to Dr. Heath Pickerill, Missouri LTAP Director, at pickerillh@mst.edu or mailing both to Dr. Heath Pickerill, 710 University Drive, Suite 121, Rolla, MO 65409. Questions may also be addressed to Heath as well. The deadline for the application is September 15, 2022.

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SCHOLARS UPDATE AS OF 08.22.22

Level I Scholars – 376

Level II Scholars – 54

Level III Scholars – 1



**If you
need to
send mail
to the
MO-LTAP**

Office, please use zipcode

65409

MISSOURI TRANSPORTATION COMMISSION APPROVES \$10 BILLION PLAN FOR ROADS, BRIDGES



ONE LANE
BRIDGE

THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION APPROVED ON WEDNESDAY A RECORD \$10 BILLION PLAN FOR BUILDING AND MAINTAINING ROADS AND BRIDGES DURING THE NEXT FIVE YEARS.

The 2023-2027 Statewide Transportation Improvement Program (STIP) approves federal and state funding for all modes of transportation. Approximately \$7.65 billion is budgeted for road and bridge construction contractor awards, averaging approximately \$1.5 billion annually for the next five years.

The 667-page plan reviews project priorities and state and federal revenue sources. The Missouri Department of Transportation (MODOT) estimates an annual average of \$1.4 billion in federal reimbursements from fiscal year 2023 to 2027. The funds come from the \$1.2 trillion Infrastructure Investment and Jobs Act, enacted by President Joe Biden last November.

The plan states that 73% of every dollar MODOT receives is from motor fuel taxes, but other sources of state revenue include motor vehicle sales tax, vehicle and driver licensing fees and interest earned on investments.

MODOT estimates \$647 million in motor fuel tax revenue in fiscal year 2023, increasing to \$814 million in 2026. Senate Bill 262, signed into law in 2021, increases MODOT's revenue from the motor fuel tax by approximately \$500 million. The law increases Missouri's fuel tax 2.5 cents per gallon for five years to 29.5 cents per gallon in 2025. However, the law also allows taxpayers to get the additional tax refunded by submitting purchase records.

The report states the gas tax revenue will decline after 2026 "as we expect Missourians will turn to more fuel-efficient vehicles due to Corporate Average Fuel Economy

(CAFE) standards that reduce energy consumption by increasing the fuel economy of vehicles. While good for the environment, these actions erode motor fuel tax revenues."

Approximately \$100 million is from the Governor's Rural Route Program, appropriated to address the state's low-volume roads in fiscal year 2023.

"Just a few years ago, our 2016 STIP made available a fraction of this program with only \$2.6 billion," Patrick McKenna, director of the Missouri Department of Transportation, said in a statement. "The new STIP—our largest to date—is quite an achievement that has taken the collective efforts of policymakers, state leaders and the leadership of the commission, which has held firm on the need for resources to do the projects our citizens expect us to do. By working with planning partners across the state and listening to the needs of the communities we serve, we've made these plans to take care of this massive system."

THE PLAN FOCUSES ON PREVENTIVE MAINTENANCE IMPROVEMENTS TO APPROXIMATELY 34,000 MILES OF ROADS AND 10,400 BRIDGES.

The plan stated that 823 bridges in the state are currently in poor condition, and 961 are weight restricted. Approximately 119 additional bridges will be classified as poor each year due to aging infrastructure. The plan makes investments in approximately 1,064 bridges with a goal of keeping the number of bridges in poor condition below 900.

thecentersquare.com/missouri/missouri-transportation-commission-approves-10-billion-plan-for-roads-bridges/article_23c112be-fd7c-11ec-8f65-db8abc6af28b.html

TRANSPORTATION SAFETY A PRIORITY IN THE INFRASTRUCTURE INVESTMENT AND JOBS ACT

IN MAY, the National Highway Traffic Safety Administration (NHTSA) released a shocking Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories 2021 (bit.ly/3wRsOA4) report showing that nearly 43,000 people died in traffic crashes in 2021.

THIS NUMBER REPRESENTS A 10.5 PERCENT INCREASE OVER 2020 AND IS THE LARGEST JUMP IN TRAFFIC CRASH DEATHS IN 16 YEARS.

With our constant news cycle churning and too often filled with shocking news, this latest disgraceful statistic may be, unfortunately, quickly forgotten. Also, important to note is the fact that millions of people are seriously injured every year in roadway crashes.

As an association, APWA has long been focused on improving transportation safety, and it is a pillar of the APWA Surface Transportation Reauthorization policy priorities which have guided our advocacy work in this area to Congress since the fall of 2019. For awareness, APWA made the following specific recommendations:

- Increase funding for safety projects to reduce collisions, injuries, and fatalities on all public roads, rail crossings, sidewalks, and cyclist infrastructure;
- Increase funding for high risk rural roads;
- Increase investment in local bridges;
- Increase flexibility in the use of Highway Safety Improvement Program funds;

- Support for the Federal Highway Administration's (FHWA) Traffic Incident Management initiative to reduce and eliminate injuries and deaths of crash victims and crash responders.

The full APWA Surface Transportation Reauthorization policy document is available at apwa.net under the "Government Affairs" tab along with all APWA policy priority statements.

The Infrastructure Investment and Jobs Act (bit.ly/3x1dq4e) signed into law last November includes programs aimed at improving transportation safety and for which local government entities, known as "subdivisions of a state" in the law, are eligible to apply for federal funding. These programs include the Safe Streets and Roads for All (bit.ly/3PQJ9he) competitive grant program, which is authorized to provide \$5 billion directly to local governments to use for safety planning and implementing road projects to improve road safety. The application process opened in May with an application deadline of September 15, 2022.

In addition to the creation of the Safe Streets and Roads for All program, the transportation safety priorities listed above and which APWA successfully advocated for, are authorized to receive a marked increase in federal funding. The IIJA also provides greater flexibility in funding uses for many of its programs and more opportunities for direct funding to local entities. One component of the increased



Photo by: Sam O'Keefe

flexibility, in some programs, includes waivers for funding match requirements.

ALSO, WITHIN THE IIJA IS INCREASED FUNDING AND EMPHASIS FOR SAFETY IMPROVEMENTS TO RURAL ROADS, WHICH ARE AMONG THE MOST DANGEROUS FOR TRAVELERS, ACCOUNTING FOR NEARLY HALF OF ALL ROADWAY FATALITIES.

Several federal agencies have published rural fact sheets to specifically showcase resources to aid rural communities. Through the White House Bipartisan Infrastructure Law Rural Playbook ([whitehouse.gov/build/rural](https://www.whitehouse.gov/build/rural)) released in April, more specific information about these targeted opportunities may be found.

Since 2015, APWA has been an active member of the Federal Highway Administration's Executive Leadership Group for Traffic Incident Management (TIM), which focuses on training and coordinating effective response measures to traffic incidents amongst public works, departments of transportation, fire, police, EMS, 911 operators, and tow operators. TIM training and effective communication makes certain that the right responders arrive on a crash scene to collaborate and clear the incident, protect the traveling public and responders, preventing secondary crashes, while efficiently removing debris and getting traffic flowing again. Through the

years, APWA has hosted numerous onsite TIM training opportunities at both PWX and the North American Snow conference. Furthermore, all public works professionals are encouraged to seek out and collaborate with responder partners at the local level to work together in acquiring TIM training.

More than half of the \$1.2 trillion authorized through the IIJA is for transportation, and over the law's five-year implementation, there are many new funding opportunities for local government entities. This column has highlighted only a few components of the IIJA that can help improve safety for public works professionals and the traveling public. APWA is very focused on making certain that our membership is aware of these opportunities, and all aspects of the new law that apply to public works. A U.S. Infrastructure Law Resource page has been created and is linked from the front page of [apwa.net](https://www.apwa.net). Updates about funding opportunities, links to federal agencies with programs that are part of the new law, and information about regulations, are available on the resource page and intended to be a "one-stop shop" for public works professionals. Be sure to check it out on a regular basis to stay informed about the law's implementation.

apwa.partica.online/reporter/july-2022/columns/transportation-safety-a-priority-in-the-infrastructure-investment-and-jobs-act

PUBLIC WORKS CONNECTION

STICS OPEN ROADWAYS TO INNOVATION

THE STATE TRANSPORTATION INNOVATION COUNCIL (STIC) INCENTIVE PROGRAM PROVIDES RESOURCES TO HELP STICS MAKE PROVEN INNOVATIONS STANDARD PRACTICE IN THEIR STATES. THE PROGRAM OFFERS FUNDING OF UP TO \$100,000 A YEAR PER STIC TO OFFSET SOME OF THE COSTS OF THESE EFFORTS.

Recently completed STIC Incentive projects demonstrate how far this funding can go in helping to improve safety and efficiency and accelerate construction. These include a Kansas coordinate mapping system that minimizes distortion, new uses for unmanned aerial systems (UAS) in New Jersey, a Missouri system for improving traffic incident management data collection, and the development of design-build documentation in Vermont.

KANSAS IMPROVES STATEWIDE MAPPING SYSTEM

The Kansas DOT (KDOT) used STIC funds to design the Kansas Regional Coordinate System (KRCS), a statewide mapping system made up of low-distortion projections (LDPs).

Map distance does not equal ground distance in the real world due to topographical features. The difference between the map (grid) and horizontal surface (ground) is called linear distortion. This linear distortion must be accounted for, for example, when developing construction plans and surveys. LDP systems are one tool for minimizing this "grid versus ground" distance problem.

Traditionally, KDOT scaled State Plane Coordinate System coordinates to ground measurements to reduce linear distortion. However, this approach was not ideal for large land areas and often required a new coordinate system be created and managed for every project. The results were also not fully compatible with spatial software platforms such as a geographic information system (GIS).

The KRCS divided Kansas into 20 zones that optimally minimize distortion, especially over large areas. The system eliminates the need to keep creating new coordinate systems and is compatible with a wide range of commonly used commercial surveying, engineering, and GIS software.

LDP systems such as the KRCS can also simplify data management and facilitate data transfer between internal groups and outside organizations. Learn more on the KRCS website.

MISSOURI ADVANCES TRAFFIC DATA COLLECTION

The Missouri DOT (MoDOT) used STIC funds to combine incident and work zone data with probe data in one system that enables better analysis, reporting, and situational awareness.

Probe data is data generated by monitoring the position of individual vehicles (probes) over a certain space and time. These measurements can then be converted into performance measures. MoDOT uses the Regional Integrated Transportation Information System (RITIS) to access third-party probe data as well as the National Performance Management Research Data Set.

WITH THIS PROJECT, MODOT ADDED TO RITIS ALL WORK ZONE AND INCIDENT DATA GENERATED BY THE ADVANCED TRAFFIC MANAGEMENT SYSTEMS IN THREE OF ITS TRANSPORTATION MANAGEMENT CENTERS (TMCS) AS WELL AS ITS TRAVELER INFORMATION MAP.

MoDOT worked with University of Maryland to transfer the data to RITIS in a usable format. Data is directly transferred once per minute by the TMCs. It is then incorporated into existing tools, including tools that are newly accessible due to the increase in data and access. MoDOT utilizes the combined data on performance measures in the “Operating a Reliable Transportation System” section of its statewide tracker.

MoDOT staff in its Southwest District are using the RITIS tools as part of their traffic incident management strategies. After-action reviews for incidents now include visualizations of congestion from crashes, which helps illustrate the impact of lane closures and lane clearance to both MoDOT personnel and external partners.

NEW JERSEY EXPANDS UAS CAPABILITIES

The New Jersey DOT (NJDOT) used STIC funds to purchase equipment for field operations and provide training for UAS remote pilots. These efforts helped launch the NJDOT Bureau of Aeronautics UAS Program.

NJDOT has pursued a variety of UAS applications to improve safety and efficiency. Its program has demonstrated UAS feasibility for structural inspections, real-time construction project monitoring, traffic incident management, aerial three-dimensional (3D) mapping, traffic congestion assessments, and more. An agency video, Drone Technology at NJDOT, highlights these efforts to integrate UAS into its operations.

An NJDOT report, Unmanned Aircraft System (UAS): Purchase and Training, describes the use of STIC funding to help establish the UAS program as well as current and planned UAS applications and benefits. The report describes the pilot training curriculum and two applications—high mast light pole (HMLP) inspection and traffic incident management—and offers lessons learned and best practices.

VERMONT DEVELOPS DESIGN-BUILD DOCUMENTATION

The Vermont Agency of Transportation (VTrans) used STIC Incentive funds for its design-build documentation effort. Design-build is an alternative contracting method that combines the design and construction phases of a project into a single contract, potentially saving time and cost compared to traditional design-bid-build delivery. VTrans developed standard processes and documents that program managers and groups could use to properly implement this innovative contracting method.

VTrans formed a small working group, consisting of two VTrans staff members and a consultant, to spearhead the effort. The documents developed include design-build definitions for VTrans’ standard specification book, a sample request for qualifications (RFQ), and a process for using alternative technical concepts with design-build. The tools produced include RFQ scoring criteria, an example design-build schedule, and an Alternative Delivery Decision Matrix—a tool that allows project managers to determine which alternative contracting method (between design-build or construction manager/general contractor) is appropriate for a proposed project.

All of the materials developed can be found on the VTrans design-build resources website.

[fhwa.dot.gov/innovation/innovator/issue91/page_04.html](https://www.fhwa.dot.gov/innovation/innovator/issue91/page_04.html)

STRATEGIC WORKFORCE DEVELOPMENT



INNOVATIVE STRATEGIES TO IDENTIFY, TRAIN, AND PLACE WORKERS IN HIGHWAY CONSTRUCTION JOBS THAT SUPPORT THE NATION'S HIGHWAY SYSTEM.

The demand for highway construction, maintenance, and operations workers is growing while industry is experiencing a revolution of emerging technologies that will require new skills. To attract and retain workers in the Contractors' workforce, new resources are available to help compete with other industries and demonstrate the value of a career in transportation.

AN INDUSTRY AND PUBLIC WORKFORCE COLLABORATION

According to a 2018 national survey by the Associated General Contractors of America (AGC), 80 percent of construction firms reported difficulty finding qualified workers. In addition, a 2015 report by the U.S. Departments of Transportation, Education, and Labor estimated that the transportation sector will need to hire approximately 4.6 million workers between 2012 and 2022.

Government agencies, trade organizations, private agencies, and communities nationwide need new, collaborative approaches to meeting this challenge. The Nation depends on the highway system, and the highway system depends on qualified workers.

FHWA partnered with the American Association of State Highway and Transportation Officials (AASHTO), AGC, the American Road & Transportation Builders Association (ARTBA), and the U.S. Department of Labor's Employment and Training Administration to conduct a 2-year pilot that explored how industry representatives could work collaboratively with the public workforce system to improve their ability to recruit, train, and retain highway construction workers. The pilot was conducted in 12 locations—six States and six cities—from 2016 to 2018.

This effort resulted in a highway construction workforce development playbook called "Identify, Train, Place." The playbook is aimed at helping State and local agencies identify, train, and place workers in the Contractors' workforce to meet resource needs to deliver highway construction jobs. The playbook condenses the lessons learned from the pilot into simple, repeatable "plays" that others can use. The plays reflect solutions to challenges that affected the pilot participants and are customizable to local needs.

In addition to the playbook, FHWA developed a comprehensive outreach campaign called Roads To Your Future. The campaign includes free messaging and marketing materials to help recruit the next generation of highway construction workers. Many of the materials can be customized with local information to market open jobs and training to potential applicants.

INCREASING THE CONTRACTORS' CONSTRUCTION WORKFORCE CAN HELP COMMUNITIES THRIVE WHILE SOLVING ONE OF TODAY'S MOST PERSISTENT NATIONAL TRANSPORTATION PROBLEMS.

It also offers an opportunity to recruit minorities and women to jobs that can change their lives, and the lives of their families, for the better.

BENEFITS

Effective Solutions. Advancing the lessons learned through the highway construction workforce pilot offers the transformational ideas and support needed to fill the gaps in the workforce.

Proven Training. Training programs, practices, and tools from across the country are available to help plan workforce development activities.

Flexibility. Free materials are available to support workforce marketing efforts. Posters, flyers, mailer cards, and social media graphics can be customized with local contact information.

STATE OF THE PRACTICE

The Highway Construction Workforce Partnership, a collaboration of national partners, is providing knowledge, resources, and technical support to assist local efforts. Besides the playbook, other programs, practices, and tools from around the country that may help with planning workforce development efforts include the Alabama Road Construction Training Course, Arizona Industry Readiness Course, Denver WORKNOW Navigator Program, and the Future Road Builders Gaming App.

fhwa.dot.gov/innovation/everydaycounts/edc_6/strategic_workforce_development.cfm

BRIDGING THE DIGITAL DIVIDE

AN INTERVIEW DISCUSSING THE “BROADBAND MODELS FOR UNSERVED AND UNDERSERVED COMMUNITIES” STUDY.

Just like building a real bridge, when working to fill what is commonly known as the “Digital Divide,” decision makers need to look at several factors to decide upon which type of bridge best fits the needs of the community. The term “digital divide” is used to reference the gap between those who readily have access to information (computers, internet, etc.) and those who have limited to no access.

Addressing the digital divide is complicated. When Palmdale selected to move forward with a partnership to deploy fiber throughout the city, several departments and divisions were part of the decision-making process and are still involved with deployment efforts.

The “Broadband Models for Unserved and Underserved Communities” Study was developed to help. I had the opportunity to interview Mari Silbey and Jigyasa Sharma of US Ignite, a high-tech nonprofit working towards accelerating smart communities, along with Charles Cieutat of Altman Solon, a consulting firm that works across telecommunications, media, and technology sectors,

to discuss their study (*please go to us-ignite.org to access the study*).

The study was completed pre-pandemic. With witnessing what happened, what was your reaction to see how things unfolded? Was there anything that caught you by surprise?

MS – It laid bare that there were gaps and students couldn't get online to do their remote learning. I think honestly, the thing that shocked me the most was how quickly we had to adapt. From businesses who said they will never go remote or online, or it was in their five-year plan, suddenly, in two weeks, they had everything up and running virtually. We now understand that we have the capacity to do these things and to make these things accessible if we put in the work, but we also need to make sure that everybody has access to the same resources.

It's interesting how your Business Model Options for Broadband Expansion and other models reflect a “one-size-does-not-fit-all” approach. Did your interviews demonstrate that early on?

CC – That was clear from the start, every situation was different. Each city was coming in from a different

perspective with different assets. The perspectives would pretty much align, bringing quality broadband across the city, which means low-income areas versus non-low-income and how to offer to all the constituents in a city. Then how to get there varied dramatically with different assets, different amount of capital or lack of capital, etc.

Your study found that either by private investment or with public funds, a city with 100,000 residents is looking at a capital investment of \$150M+ with operating margins often less than 50%. For cities that didn't have the advantage of your study, how did that reality affect their efforts?

MS – There's been learning along the way and some trial and error. People were trying to figure out the financial instruments that are available. Some recent models are relatively unique and haven't been out there for a long time, certainly not within the U.S. at least. People have learned along the way, and we've started to get more best practices and understanding of how to finance these projects. There are certainly examples out there of communities that unfortunately had to learn the hard way.

Your study also addressed underserved communities within cities that do have a level of connectivity. Does the level of underserved communities create an impediment to truly grasping the level of need that is out there?

CC – It's challenging for some, we've seen relatively sizable cities with a deployment of fiber from a private operator, with maybe a 30% or 50% deployment and the remainder was not served. You may have other options, but it was challenging because then what do you do with that remainder and how do you motivate others? The underserved piece hides a more complex situation, telling a story of two worlds, then what about the part that's really unserved or dramatically underserved? Often it sadly aligns with low income, which is probably the one most in need, and where the digital divide is the largest problem for a city.

Any pointers on using your Decision Tree to determine what is right for a community?

JS – It's self-explanatory; however, there might be some grey areas or subjectivity that can confuse people, but there are definitions and examples provided that can help. One of the ways of really figuring out where you stand is talking to your stakeholders and getting a good hold of how they would rate things. Of course, there might be some bias, but engaging local leaders, industry partners, or nonprofits can give a reality check of whether you have a good existing infrastructure or if it's poor.

This could be one of those issues where not one employee or section checks all the boxes of the knowledge needed to address the issue. What advice do you have for those working on this who might not have all the needed knowledge base?

CC – There's a lot of work and research that needs to be done before you start doing something and using consultants could be helpful. Some of the consultants out there have a lot of war stories and typically have a broader perspective on what things work and what don't. There's so many models and they've seen a lot of different things that can help with making faster decisions.

Could you please outline why fiber deployment shouldn't be met with the concern of why do it if it might be obsolete soon?

MS – Fiber is incredibly high capacity and resilient. The other thing is often the way it's deployed can get the difficult part done by having the infrastructure in place. The conduit is underground, and once in place there are systems for feeding new strands as needed. There are ways to add capacity to infrastructure that is already there. Sometimes you need to change out electronics, etc., but it's not as much of a hurdle as that first dig.

The efforts don't end once everything has been fully deployed. What recommendations do you have for figuring out what should be the next step to help those in the community who are not yet connected?

JS – I think one of the things that people constantly ask is, what business model can make it sustainable? Some were initially providing free or highly subsidized internet and they are now trying to transition to a more sustainable model. Second, a lot of work needs to be done with providing digital training and adoption. Think about digital skills of the 21st Century no longer being limited to being able to send an email or create a Word doc. There is also a lot of concern around privacy, how can you safely navigate the digital world? How do you get access to the digital economy? I think those are the more important questions that we should help people address.

Benjamin Lucha, Environmental Resources Manager, City of Palmdale, California; member, APWA Utilities and Public Rights-of-Way Committee and UPROW Knowledge Team

apwa.partica.online/reporter/august-2022/columns/bridging-the-digital-divide

TARGETED OVERLAY PAVEMENT SOLUTIONS (TOPS)

Photo by: MoDOT

SOLUTIONS FOR INTEGRATING INNOVATIVE OVERLAY PROCEDURES INTO PRACTICES THAT CAN IMPROVE PERFORMANCE, LESSEN TRAFFIC IMPACTS, AND REDUCE THE COST OF PAVEMENT OWNERSHIP.

Approximately half of all infrastructure dollars are invested in pavements, and more than half of that investment is in overlays. By enhancing overlay performance, State and local highway agencies can maximize this investment and help ensure safer, longer-lasting roadways for the traveling public.

IMPROVED PAVEMENTS THAT LAST LONGER

Many of the pavements in the Nation's highway system have reached or are approaching the end of their design life. These roadways still carry daily traffic that often far exceeds their initial design criteria. Overlays are now available for both asphalt and concrete pavements that enable agencies to provide long-life performance under a wide range of traffic, environmental, and existing pavement conditions.

Concrete overlays now benefit from performance-engineered mixtures, including thinner-bonded and unbonded overlays with fiber reinforcement, interlayer materials, and new design procedures that improve durability and performance. Asphalt overlay mixtures have also advanced significantly with the use of stone-matrix asphalt (SMA), polymer-modified asphalt (PMA), and other materials and agents that reduce rutting, increase cracking resistance, and extend pavement life.

BENEFITS

Safety. Thousands of miles of rural and urban pavements need structural enhancement and improved surface

characteristics, such as smoothness, friction, and noise. Targeted overlay pavement solutions can improve the condition of highways significantly in a relatively short time.

Cost Savings. Timely and well-designed overlay applications are consistently cost-effective because less subsurface work is required. In urban areas, impacts to utilities and pedestrian facilities are minimized.

Performance. Targeting overlay solutions to high-maintenance areas such as intersections, bus lanes, ramps, and curved alignments can pay immediate dividends in terms of reduced maintenance needs, fewer work zones, and improved safety.

STATE OF THE PRACTICE

Recent improvements to design methods, interlayer technology, slab geometry, and concrete mixtures have broadened concrete overlay surface treatment applicability, reliability, sustainability, and cost-effectiveness. A joint effort by Georgia, Iowa, Kansas, Michigan, Minnesota, Missouri, North Carolina, and Oklahoma resulted in the development of an improved design procedure for jointed unbonded concrete overlays on either concrete or composite pavements.

For asphalt overlays, several State departments of transportation (DOTs) have adopted SMA due to increased service life and performance. The Maryland, Alabama, and Utah DOTs each used over 1 million tons of SMA during a 5-year period. DOTs in Florida, Georgia, New Jersey, New York City, Tennessee, and Virginia found highly modified asphalt in thin overlays is more resistant to reflective cracking. It has increased pavement life by two to four times for DOTs in Alabama and Oklahoma.

[fhwa.dot.gov/innovation/everydaycounts/edc_6/targeted_overlay_pavement.cfm](https://www.fhwa.dot.gov/innovation/everydaycounts/edc_6/targeted_overlay_pavement.cfm)

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Attendance Policy

The Missouri LTAP staff would like to remind all agencies registering for classes that it is important to sign-up before the registration deadline to allow us time to plan for course materials, refreshments, etc. It is equally important that you let us know at least 48 hours before the class if some of your employees will not be attending. Please note that you will be charged for any no-shows; therefore, it is very important that you let us know at least 48 hours before. This policy was approved by our Missouri LTAP Advisory Board and ensures that we have an accurate count for class attendance. Thank you and we look forward to meeting your training needs.

Need training but don't have the budget to pay for travel expenses?

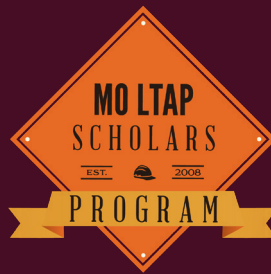
We can train your employees on location for a minimum of 20 people. You can invite other interested agencies in your area if necessary to meet the minimum. Call and discuss your training needs with our staff.

CONTACT US TO FIND OUT MORE!

**T: 866.MO ROADS
(667-6237)**

E: moltap@mst.edu

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



**National
Center**
for
**Rural
Road
Safety**

**YOUR TRUSTED “SAFETY SIDEKICK” TO MAKE
RURAL ROAD TRAVEL SAFER!**

The National Center for Rural Road Safety opened in December 2014. Funded by the Federal Highway Administration, this Center of Excellence is focused on enhancing safety on rural roads by supporting local, state and tribal road owners and their stakeholders. Resources include education, training, tools and technical assistance.

*To learn more about the National Center for Rural Road Safety,
visit their website ruralsafetycenter.org*



Photo by: Sam O'Keefe

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UPCOMING EVENTS

MML 88th Annual Conference
September 11-14, 2022

**Missouri Highway Safety and Traffic
Conference**
September 27-29, 2022

MINK Local Roads Conference,
September 28-29, 2022

2022 MACTO Conference
October 18-19, 2022

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For information about the program,
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Eligibility requirements can be found under
“Read about the Program”

REALTY FOR SALE

The Missouri Department of Transportation is responsible for managing realty assets owned by the Missouri Highways and Transportation Commission. Realty assets are periodically reviewed to determine if they are essential to current operations, or are expected to be in the near future. When realty assets are no longer essential to operations, they may be made available for sale to the public.

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



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**NO EQUIPMENT FOR SALE
AT THIS TIME**

