



AUTUMN 2024

KANSAS LTAP NEWSLETTER

A Service of The University of Kansas Transportation Center for Road, Street, & Bridge Agencies

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By Lindsay Francis, KS LTAP



Dear KS LTAP Community,

As we transition into the fall season and prepare for winter, I wanted to take a moment to reflect and to look ahead to what's on the horizon.

As public servants, we all share a commitment to making our communities safer. The Kansas "[Drive to Zero](#)" initiative highlights the importance of this mission, especially on our local roads, where over 60% of fatal and serious injury crashes occur on county-owned roads and highways. The work you do every day is more than just maintaining roads and infrastructure—it's about protecting your community and helping drive Kansas traffic deaths to zero! The national trend of increased funding for rural roadway safety, shows that we're united and on the right path. Every task you complete raises awareness, improves safety, and ultimately saves lives. Your dedication is truly making a difference, and your hard work is deeply appreciated. Keep up the great work; it truly matters!

We're excited to kick off our fall training in October, including our enhanced soft skills courses. Check out offerings in the training update section of this newsletter. We have also been pleased with our ability to fulfill several on-demand training requests this year. Additionally, due to the high demand for our traffic sign retroreflectometer, we're adding two more devices to our Equipment Loan Program to better serve your needs.

Please keep an eye out for our annual needs assessment survey. Your feedback is crucial in helping us prioritize the training and resources that matter most to you. And as always, we welcome your thoughts and suggestions at any time through our open feedback survey on our [website](#).

I'm excited to see many of you at the upcoming MINK Local Roads Meeting on September 25-26. It's a great opportunity to connect, share knowledge, and continue our work together in improving our local roads.

Thank you for the incredible work you do each day in your communities. Enjoy the rest of the newsletter, and I hope you find the content valuable.

Let's Connect KANSAS LTAP SOCIAL



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INNOVATION INSIGHT: KUTC HOST 2024 KITS & K-TRAN RESEARCH NEEDS DAY

By Lindsay Francis, KS LTAP

In this edition of Innovation Insight, we're taking a slight detour from showcasing individual local innovations to highlight a broader, yet equally impactful event: the 2024 Kansas Innovative Technology Summit (KITS). Just as we regularly spotlight cutting-edge ideas from our region, this summit brought together transportation leaders to explore the innovations shaping the future of transportation in Kansas — showing that progress often comes from collaboration and shared vision.

The University of Kansas Transportation Center (KUTC), which administers the KS LTAP, recently hosted the second annual Kansas Innovative Technology Summit, in Lawrence, Kansas. Held on August 7th, this event continued the momentum started last year in Salina, aiming to promote and share vital information about KDOT's Innovative Technology Program.

The summit drew a diverse group of participants from the public, private, and academic sectors, including presenters, sponsors, leaders, researchers and students. These professionals gathered to exchange the latest research, projects, and cutting-edge innovations in transportation.

The summit kicked off with an engaging panel discussion on "The Current and Future Role of Innovative Technology in Kansas' Transportation," featuring KDOT Secretary Calvin Reed and Kansas Asphalt Pavement Association Executive Director Dan Scherschligt. This session, moderated by Corey Davis, KDOT Director of Multimodal Transportation and Innovation, set the stage



KDOT Secretary Calvin Reed and Kansas Asphalt Pavement Association Executive Director Dan Scherschligt kick off the summit with a panel discussion.

for the day's discussions, focusing on how technology can shape the future of Kansas' transportation infrastructure.

Following the panel, attendees chose between two technical tracks that delved into the innovative uses of data, drones, autonomous and other technologies to tackle challenges related to mobility, maintenance, and infrastructure. These sessions showcased how Kansas is leveraging technology to enhance its transportation systems.

The summit concluded with presentations from leading researchers in Kansas. Dr. Robert Parsons from the University of Kansas presented his work on Geotechnical Asset Management for KDOT, while Dr. Husain Aziz from Kansas State University provided an overview of current research projects at the K-State University Transportation Infrastructure and Systems (TIS) research lab. These presentations highlighted the critical role of research in driving technological advancements in the transportation sector.

The success of the 2024 summit would not have been possible without the generous support of our partners. Our esteemed GOLD partners included Olsson, HNTB, Wilson & Company, and HDR. We also extend our gratitude to our SILVER partner, Gades Traffic, and our BRONZE partner, D2 Traffic Technologies.

The day after the summit, key stakeholders gathered for



Conference attendees gather for the opening session of the Kansas Innovative Technology Summit at the University of Kansas.

the Kansas Transportation Research and New Developments (K-TRAN) 2024 Research Needs Day. This event brought together KDOT Area Panel Leaders, KDOT subject matter experts, university engineering faculty, and graduate or undergraduate researchers to discuss “Research Needs” and “Ideas” for the K-TRAN Program. This cooperative research program, a partnership between Kansas State University and the University of Kansas, aims to address specific transportation research needs of KDOT. The annual cycle of the K-TRAN program begins with the solicitation of research needs and ideas, ensuring that Kansas remains at the forefront of transportation innovation.

As Kansas continues to face evolving transportation challenges, these events underscore the importance of collaboration, research, and technology in driving the state’s transportation future forward. It was a pleasure and an honor for KUTC to host this year’s Innovative Technology Summit and Research Needs Day. We deeply appreciate KDOT’s trust in us to bring together key stakeholders and facilitate meaningful discussions on the future of transportation in Kansas.

Learn more about the Kansas Innovative Technology Program [here](#).

TRAFFIC STUDY ASSISTANCE

By Nelda Buckley, KS LTAP

Kansas LTAP’s Local Field Liaison (LFL) has mostly focused on visiting cities and counties ensuring all agencies are aware of training and resources available. One resource that only a few agencies have taken advantage of is assistance in the form of a small traffic study.

This is not intended to replace a consultant but to provide advice and/or guidance when engineering judgment is needed. It is also not intended to replace KDOT’s Traffic Engineering Assistance Program (TEAP), with which local agencies are eligible for a free traffic engineering study with a larger scope.

The process is straightforward. Contact the LFL, Nelda Buckley, at either nelda.buckley@ku.edu or 785-864-0489 and describe your situation. Concerns should be safety or traffic operations related. She will help determine if her assistance, a TEAP study, or hiring a consultant is most appropriate.

If it is determined that LTAP traffic study assistance is best, she will likely review the location initially on Google Maps, consult the Manual on Uniform Traffic Control Devices (MUTCD) or a similar reference, and decide what data is necessary. If traffic counts are needed, for example, LTAP’s Equipment Loan Program can be used if the agency doesn’t have their own counters. She will likely also investigate any crash records as well.

Once appropriate data is collected, she will schedule a time to review the location in person, preferably with a



representative of the agency requesting assistance. The field visit will provide information on current traffic operations and any site conditions that may be affecting the situation.

After the site review, a short report will be written, if appropriate, including any recommended improvements (e.g. brush clearing, sign installation/replacement/relocation, etc.). Typically, a draft report will be sent to the agency for review before finalization.

Examples of studies performed include:

- An uncontrolled intersection, where a two-way stop was recommended
- A two-way stop intersection, where a four-way stop was recommended due to limited sight distance
- Curves, where advisory speeds were revised or verified

At times, a study itself isn’t required, but simply advice

on how to interpret MUTCD requirements or how to improve traffic operations. Often this takes the form of a phone call discussing the situation and options available.

On the other hand, a Practical Road Safety Assessment (PRSA) is another option. In this situation, a location, generally a stretch of roadway, is reviewed with a small team organized by the LFL, generating low-cost, medium-cost, or high-cost suggestions for improvement. This approach leads to input from a variety of perspectives but does not result in engineering recommendations specifically.

The bottom line is that LTAP is here for local agencies and willing to help in whatever form is more appropriate for your situation. You are not alone.

CONSTRUCTING SMOOTH PAVEMENTS

By Mark Shelton, MO/KS Chapter ACPA

The traveling public's "seat of the pants" is the gauge most used by taxpayers to determine the efficiency and effectiveness of public transportation agencies. Our focus in this article will be on concrete pavements; however, most of the concepts discussed are certainly applicable to pavements constructed with all paving materials.

It is vitally important to emphasize smoothness during the construction process. The main reason is that the smoother a pavement is immediately after construction, the longer it will remain smooth. Any bumps and uneven areas in a newly constructed pavement magnify traffic loading stresses and accelerate roughness. Additionally, a smoother ride provides better fuel efficiency for each vehicle on the pavement. The result of better fuel efficiency is less CO₂ emission during the life of the pavement. Finally, as mentioned in the opening paragraph, the public grades transportation agencies based on the smoothness of our pavements.

There are many factors that affect pavement smoothness. We will discuss just a few. One is concrete mix design—specifically, whether the combination of aggregates, cementitious materials, admixtures, and water will allow the mix to consolidate easily, resulting in a smoother pavement. Considering project phasing, has the project been designed and staged in a way that provides opportunities for longer rather than shorter paving runs? Longer runs allow contractors to deliver smoother pavements. Paving operation planning and paver setup is also key. Ensuring that a plan is in place and that everything is working properly limits unforeseen stops and starts during paving. Attention to detail prior to and during paving operations is essential.

The overarching concept of all the factors is consistency.

The idea is that if we can do the same thing repeatedly, we will get the same results. For the mix design, are the aggregate gradations consistent? How often do I verify their consistency? There may be an overall specification tolerance for the aggregates, but for this mix design, do I have a tighter control band in place to promote consistency? A consistent water/cement ratio is important. If the aggregate moisture content changes, then adjustments to the amount of mix water are required. At the batch plant, have there been trial batches to ensure everything is working properly and that the plant can and is producing uniform concrete? Is the concrete being delivered to the paver at a steady rate and placed on the grade in a manner that provides a consistent head of material in front of the paver? If so, then the paver should be able to maintain steady, consistent forward progress.

Finally, a few words about curing. Uniformly cured concrete, from bottom to top and side to side, affects pavement smoothness. Dry subgrades that will pull moisture from the concrete mix should be saturated prior to paving. The curing compound should be applied as soon as possible after finishing and after the bleed water has stopped. Once the curing compound is applied, the surface should appear uniform and as white as a sheet of paper.

Smooth pavements can certainly be achieved. The keys to success are attention to detail and consistency.

For more information contact:

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GRANT & FUNDING OPPORTUNITIES

By Nelda Buckley, KS LTAP

Below are lists of current and ongoing funding opportunities available. Click on any of the funding opportunities to learn more!

CURRENT FUNDING OPPORTUNITIES

[Cost Share – September 19, 2024 \(KDOT\)](#)

[National Culvert Removal, Replacement, & Restoration – September 23, 2024 \(FHWA\)](#)

[Railroad Crossings Elimination Program \(RCE\) – September 23, 2024 \(FRA\)](#)

[Reconnecting Communities Pilot Program – September 30, 2024 \(OST\)](#)

[Restoration and Enhancement Grant Program – September 30, 2024 \(FRA\)](#)

[Bridge Investment Program \(BIP\) Planning and Small Bridge Projects – October 1, 2024 \(FHWA\)](#)

[Environmental and Climate Justice Community Change Grants program – November 21, 2024 \(EPA\)](#)

[Innovative Technology Program – November 30, 2024 \(KDOT\)](#)

ONGOING FUNDING OPPORTUNITIES

[Access Management](#)

[Economic Development](#)

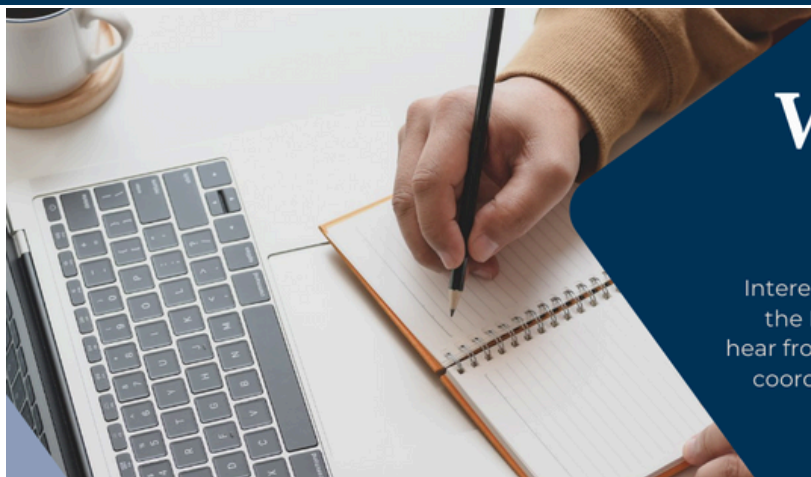
[Rail-Highway Grade Crossing](#)

[State Rail Service Improvement Fund](#)

[Traffic Engineering Assistance Program](#)

[Economic Adjustment Assistance Program](#)

[Public Works Program](#)



WRITE FOR KS LTAP

Interested in writing and sharing articles in the Kansas LTAP newsletter? We want to hear from you! Contact our communications coordinator, Kara Cox at kara.cox@ku.edu

RRFB – SAFETY MEASURE

By Nelda Buckley, KS LTAP

According to the Federal Highway Administration (FHWA), Rectangular Rapid Flashing Beacons (RRFB) are proven safety countermeasures (FHWA, 2021). An RRFB consists of two, rectangular-shaped yellow indications, each with a light-emitting diode (LED)-array-based light source. RRFBs flash with an alternating high frequency when activated to enhance the conspicuity of pedestrians at the crossing to drivers. Most RRFBs in Kansas are solar-powered.



RRFBs can reduce pedestrian crashes by up to 47 percent, but even more impressive is that they can increase motorist yield rates up to 98 percent! This varies by speed limit, number of lanes, crossing distance, and time of day, but certainly justifies the “proven safety countermeasure” designation.

RRFBs are placed on both sides of a crosswalk below a pedestrian, school, or trail crossing warning sign and above the diagonal downward arrow plaque pointing at the crossing. The flashing pattern is usually activated with pushbuttons but can also use passive detection such as video or infrared. The flashing stops after a predetermined crossing time and remains unlit until the next activation. The crossing time should be determined by the crossing distance and expected crossing speed of users; consideration should be given to lengthening the duration of the crossing time to account for the time for pedestrians to confirm that a vehicle will yield or stop.

The FHWA indicates that RRFBs are particularly effective at multilane crossings with speed limits of less than 40 miles per hour. The Kansas Department of Transportation's (KDOT) Crosswalk Guide recommends

RRFBs in the following situations (AADT is annual average daily traffic) (KDOT, 2022):

- 2-lane roadways
 - AADT less than 15,000 and 35 mph or greater posted speed
 - AADT greater than 15,000 and 35 mph or less posted speed
- 3-lane roadways with a raised median
 - AADT less than 9,000 and 35 mph or greater posted speed
 - AADT between 9,000 and 15,000 at all posted speeds
 - AADT greater than 15,000 and 35 mph or less posted speed
- 3-lane roadways without a raised median
 - AADT less than 15,000 and 35 mph or less posted speed
 - AADT greater than 15,000 and 30 mph or less posted speed
- 4+ lanes with or without a raised median
 - AADT less than 15,000 and 35 mph or less posted speed
 - AADT greater than 15,000 and 30 mph or less posted speed

The 11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD) includes the new chapter 4L on Rectangular Rapid Flashing beacons (USDOT, 2023). It has a few additional requirements: the size of each RRFB indication shall be at least 5 inches wide by at least 2 inches high; the two RRFB indications for each RRFB unit shall be aligned horizontally, with the longer dimension horizontal and with a minimum space between the two indications of at least 7 inches; if pedestrian push button detectors are used to actuate the RRFB indications, a PUSH BUTTON TO TURN ON WARNING LIGHTS/AWAIT GAP IN TRAFFIC (R10-25) shall be installed explaining the purpose and use for the pedestrian push button detector.

The cost to furnish and install an RRFB can vary depending on site conditions and the type of RRFB used. The estimated material cost for a solar-powered RRFB system is \$10,000. If you are interested in supplier contacts, contact me at nelda.buckley@ku.edu.

RESOURCES

Federal Highway Administration. (2021). *Rectangular Rapid Flashing Beacons (RRFBs). Proven Safety Countermeasures*. Retrieved September 5, 2024, from <https://highways.dot.gov/safety/proven-safety-countermeasures/rectangular-rapid-flashing-beacons-rrfb>

Kansas Department of Transportation. (2022, October). *KDOT Crosswalk guide*. www.ksdot.gov/assets/wwwksdotorg/kansasatp/documents. Retrieved September 5, 2024, from https://www.ksdot.gov/Assets/wwwksdotorg/KansasATP/documents/KDOTCrosswalkGuide_FINAL.pdf

US Department of Transportation. (2023). *Manual on uniform traffic control devices (p. 643) [Manual]*. Retrieved September 5, 2024, from https://mutcd.fhwa.dot.gov/pdfs/11th_Edition/part4.pdf

KDOT UPDATES

By Lindsay Francis, KS LTAP

BUREAU OF LOCAL PROJECT UPDATES:

- Tod Salfrank has retired as Bureau Chief of Local Projects as of September 1, 2024. Dawn Hueske can be contacted in Tod's absence until an official announcement of Tod's replacement is made. We want to thank Tod for his service to Kansas locals and wish him well in his future endeavors.
- Jenny Egging has been promoted to the Assistant Road Team Leader. Chris Griffin's last day with KDOT will be September 9, 2024. Please contact Jenny at Jenny.Egging@ks.gov on projects that Chris was managing.
- KDOT BLP Inspection Manual has been updated. You can find the updated manual on the KART website (<https://kart.ksdot.gov/>).
- KDOT BLP is emphasizing the importance that counties are getting projects ready for letting on time. A recent imbalance in bridge project lettings caused fewer contractors to bid, which increases costs for everyone. Please meet project schedules (starting at the onset with project programming and project and consultant agreements) to help maintain a balanced bidding process and keep costs down.
- There are several Kansas counties that still have substantial unobligated ARPA funds available. The deadline to obligate ARPA funds is December 31, 2024, and the deadline to spend those funds is December 31, 2026.
 - Please review this latest spreadsheet, developed quarterly by the US Dept of Treasury, showing

- ARPA funding details for all cities and counties in Kansas.
<file:///Users/l341f492/Downloads/April-2024-Reporting-Data-through-March-31-2024.xlsx>
- If your county has unobligated money available, please speak with your county administrator and/or Board of County Commissioners about what is needed to obligate the remaining funds by the end of this calendar year.
- More information about the American Rescue Plan Act can be found at [ARPA State and Local Fiscal Recovery Fund Obligation Updates and Guidance \(naco.org\)](https://www.naco.org/resources/arpa).

INNOVATIVE TECHNOLOGY PROGRAM:

For those interested in the Fall round of funding, please note that the application period for the Innovative Technology Program will close on November 30, 2024. For this program, "innovative technology" is broadly defined as any technology that does not currently exist in the local community of the project. All transportation system projects that promote safety, improve access or mobility and implement new transportation technology are eligible. More information can be found here: [Innovative Technology FactSheet.pdf \(ksdot.gov\)](https://www.ksdot.gov/technology).

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KDOT'S SAFE ROUTES TO SCHOOL:

In July, the Kansas Department of Transportation's Safe Routes to School Program announced six Kansas communities received the 2024-2025 Planning and Programming (P&P) grants covering a total of eight schools.

CITY CONNECTING LINK IMPROVEMENT PROGRAM (CCLIP):

33 projects were awarded funding in July through the Kansas Department of Transportation's City Connecting Link Improvement (CCLIP). These projects improve intersection and roads in cities across the state. Cities will receive a combined total of approximately \$26 million, which included \$5.5 million state fiscal year 2026 and \$20.5 million in state fiscal year 2027.

COST-SHARE PROGRAM:

- \$8.6 million was awarded to 14 transportation construction projects through the Kansas Department of Transportation's Cost Share Program for spring 2024.
- The deadline for Cost-Share applications is fast approaching on September 19, 2024. All transportation projects are eligible for the program, including local road and bridge projects. More information and an application link are available at [Cost Share Program \(ksdot.gov\)](https://ksdot.gov/cost-share).

OFF SYSTEM BRIDGE (OSB) PROGRAM:

KDOT's fiscal year 2026 project awards will be announced soon.

KANSAS LOCAL BRIDGE IMPROVEMENT PROGRAM (KLBIP):

KDOT's fiscal year 2025 project awards will be announced soon.

RECONNECTING COMMUNITIES PILOT (RCP) PROGRAM:

- The deadline for FY024 RCP applications is September 30, 2024. This is a continuation of two previous rounds of RCP Funding in FY22 and FY23. Funding in FY24 is a combined allocation of FY24-FY26 and up to \$607 million is available for planning, capital construction and technical assistance. More information can be found on the US DOT website at [Reconnecting Communities Pilot Program Overview \(transportation.gov\)](https://www.transportation.gov/reconnecting-communities-pilot-program-overview).

LTAP TRAINING UPDATES

By Megan Hazelwood, KS LTAP

Happy Fall from Kansas LTAP! We hope all Kansans had a fun, relaxing, and productive summer! Kansas LTAP is excited to get back to providing valuable training throughout the state this Fall.

This summer, we announced our soft skill courses that will be offered in October and November. These classes round out our Fall 2024 training schedule. You can expect to see classes like Snow and Ice Control, Risk & Liability, Conflict Resolution, Managing Employee Performance, and many others offered in locations such as Montezuma, Parsons, Hays, and Salina.

Below is a look at the final Fall 2024 training schedule:

OCTOBER	10/7	Snow and Ice Control	Montezuma	Level 1
	10/8	Snow and Ice Control	Salina	Level 1
	10/9	Snow and Ice Control	Emporia	Level 1
	10/10	Snow and Ice Control	Parsons	Level 1
	10/18	Snow and Ice Control	Leawood	Level 1
	10/15 & 16	Public Works 1 & 2	Hays	Level 2
	10/17	Risk and Liability	Hays	Level 1
	10/22	Culverts & Drainage	Montezuma	Level 1
	10/24	Culverts & Drainage	Leawood	Level 1
	10/23	Signing Low Volume Roads	Hays	
	10/29	Supervisor's Role in Enhancing Cooperative Work Relationships	Lawrence	Level 2
	November	11/6	Managing Employee Performance	Wichita
11/12		Fundamentals of Supervision	Salina	Level 2
11/13		Foundations in Customer Service	Salina	Level 1
11/14		Conflict Resolution	Salina	

2024 REMINDER: Kansas LTAP will no longer be offering lunches during our trainings. Instead, we will be providing a morning kickstart for our attendees that may consist of coffee, juice, pastries, granola bars, etc. This will decrease the registration fee from \$80 to \$65. We hope that this change will allow more people to attend our trainings who may have been deterred due to the registration price previously.

It's never too early to plan for the future! If you would like to host a training in 2025, please email mhazelwood@ku.edu. Remember, all of our hosts receive one free attendee per hosted training as a "thank you!" Kansas LTAP looks forward to serving you all!

SHARE!

If you know individuals who would like to receive our newsletter, please have them go to: www.kutc.ku.edu/ltap and sign up for the Kansas LTAP email list. There is a box to check to request electronic notification of each new issue of the LTAP Newsletter. Back issues are available at our website in the newsletter archives section.



KANSAS LTAP NEWSLETTER

The Kansas Local Technical Assistance Program (LTAP) is an educational, technology transfer and service program of the Kansas University Transportation Center (KUTC). Its purpose is to provide information to local government highway departments and their personnel and contractors by translating into understandable terms the latest technologies in the areas of roads, highways and bridges.

The Kansas LTAP Newsletter is published quarterly and is free to counties, cities, townships, tribal governments, road districts and others with transportation responsibilities. Editorial decisions are made by Kansas LTAP. Engineering practices and procedures set forth in this newsletter shall be implemented by or under the supervision of a licensed professional engineer in accordance with Kansas state statutes dealing with the technical professions.

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