



SPRING 2025

# KANSAS LTAP NEWSLETTER

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

## INSIDE THE ISSUE

DIRECTOR'S UPDATE

EQUIPMENT LOAN  
PROGRAM UPDATE

2025 BUILD A  
BETTER MOUSETRAP  
COMPETITION

CONCRETE  
PAVEMENT:  
LESSONS LEARNED,  
WHAT HASN'T  
WORKED AND HOW  
WE FIXED IT



NLTAPA  
CONFERENCE  
COMING TO KANSAS  
CITY

COMMON  
QUANTITIES FOR  
GRADING AND  
OVERLAY  
PREPARATION

PARTNER UPDATES

KANSAS LTAP  
TRAINING UPDATE

# A MESSAGE FROM THE DIRECTOR

By Lindsay Francis , KS LTAP



Hello LTAP Community!

Spring in Kansas is here—at least for today!

Spring is a season of change and growth, and that feels especially true this year for many of our locals. If the weather so far has taught us anything, it's to expect the unexpected. From sudden temperature swings to winter storms that seem to come out of nowhere, 2025 has kept us on our toes. But just as we know that the sun will eventually shine after a storm, we can always look forward to better days ahead.

Across Kansas, communities are navigating shifts in policies, funding, and staffing. With these transitions come new challenges, but also opportunities to strengthen our communities. Many public works agencies are seeing significant staff turnover, which means a greater need for training, whether it's learning new skills, accessing technical resources, or simply understanding where to find the right information. These changes aren't just happening at just the local level; KDOT, KAC, and other key partners are

also experiencing shifts, making it more difficult to know whom to contact for guidance.

At KS LTAP, we recognize these challenges and are here to help. Our goal is to provide the training, tools, and connections you need to adapt and succeed. Whether you're looking for classes, technical assistance, or help navigating available resources, we want to be your go-to. We're also committed to helping you stay informed about key contacts and policy updates to help you stay connected in an evolving landscape.

Your dedication and hard work in maintaining and improving our local Kansas communities is more important than ever to ensure our communities continue to thrive. At KS LTAP, we're proud to support you with the training, resources, and technical assistance you need to adapt and thrive, no matter what challenges come our way. Together, we will continue working toward a stronger, more resilient Kansas. If there's anything we can do to assist, don't hesitate to reach out!

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## EQUIPMENT LOAN PROGRAM UPDATE

By Lindsay Francis, KS LTAP

We appreciate your patience as we work through inventory, internal process improvements, and a big move! Later this year, we'll be relocating our office to KU's West Campus. Preparing for this move has reinforced the importance of organizing and tracking the resources we are entrusted with to serve you! As part of this effort, we've been busy packing, sorting, and archiving 40 years of KS LTAP history—including our available and operational equipment. While this process is taking longer than expected, we remain committed to making the Equipment Loan Program more efficient and accessible. We're also exploring new equipment additions to expand the program's offerings.

The online application will reopen soon, but in the meantime, if you need assistance or have any questions, please don't hesitate to reach out to us directly. We appreciate your continued interest in the Equipment Loan Program, thank you for your support—we look forward to getting the program back up and running at full capacity soon!

# INNOVATION IDEAS AND BUILD A BETTER MOUSETRAP 2025

By Nelda Buckley, KS LTAP



We have used the Innovation Insight in the past to pass along products and ideas from agencies to agencies throughout the state of Kansas. We would love to hear from you about products you have used that were helpful, cost-saving, or time saving! They don't need to be grand ideas; often it's the smaller improvements that make the greatest impact. Even if an innovation only saves 15 minutes or \$100, if it's something that occurs often over the course of your work, it can add up to significant savings.

So – what innovations are you willing to share with others? Please email your ideas to [kutc\\_training@ku.edu](mailto:kutc_training@ku.edu). If you have pictures or other files, that would also be helpful. We will contact you if we need additional information.

And we can't think of innovations without thinking of the Build a Better Mousetrap competition. Although it's not so much a competition (though there will be a winner) as more idea sharing. This year's entries must be submitted at the national level by June 6, so again this year we are asking for state entries about a month earlier – by **Friday, May 9**. This will give us time to review the entries, select state winner(s), and put together a great submission for the national competition.

As a reminder, there are four award categories in the Build a Better Mousetrap program. From the Build a Better Mousetrap Planning Guide (U.S. Department of Transportation & Zaharewicz, 2025):

- Innovative Project – Any solution that addresses any or all phase(s) of the “project” life cycle – Planning, Design/Engineering, Construction, Operations, and Maintenance. This project shall introduce new ideas and be locally relevant, original, and creative in thinking.
- SMART Transformation – A locally relevant, significant change in any transportation activity or process that is SMART, “Specific, Measurable, Achievable, Realistic, and Time bound,” in nature that results in improved efficiencies.
- Bold Steps – Any locally relevant, high-risk project or process showing a breakthrough solution with demonstrated high reward.
- Pioneer – A locally relevant, product/tool that is among the first to solve a maintenance problem with a home-grown solution.

The Planning Guide indicates that submissions will be evaluated based on overall impact, community/agency benefit, originality, applicability to others, cost effectiveness, time savings, and quality of the submitted application. This last criterion emphasizes the importance of photographs and/or spotlight videos. If possible, photos or videos are greatly encouraged. If that is not possible, LTAP may be available to help with those we intend to submit to the national competition.

**CONTINUED ON NEXT PAGE**

Now, get your ideas ready – both those for future Innovation Insight articles and for the Build a Better Mousetrap competition!

## RESOURCES

*U.S. Department of Transportation, & Zaharewicz, J. (2025). Build a Better Mousetrap Planning Guide [Report].*

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# LESSONS LEARNED, WHAT HASN'T WORKED AND HOW WE FIXED IT

By Mark Shelton, MO/KS Chapter ACPA

At the 45th Annual MO/KS ACPA Portland Cement Concrete Pavement Conference held February 24th -26th, 2025 I had the opportunity to moderate a panel discussion. The overall topic is the title of this article and the individual subjects we discussed were, covid, new technology/new specifications, staffing, materials supply and communication. Our panel consisted of quality managers from three major construction companies and a KDOT and MoDOT representative, the DOT representatives are responsible for delivering quality projects from a statewide perspective. All our panelists are “hands on” when it comes to dealing with challenges and implementing solutions. In this article I would like to share a summary of the panel discussion.

The first topic discussed was covid. The details of dealing with covid cross over into all the areas we discussed. In summary, success during covid was dependent on having a team that is willing to do the hard work when things go bad and a team that looks for how to get things done rather than dwelling on why something can't be done. So, while things are going well, be sure to build a team with an indomitable spirit. (Did you notice I used team 3 times in this paragraph?)

In the concrete industry there are many new technologies and specifications in front of us. All looking to build a more sustainable and resilient product. Keys to success in implementing these include sticking with fundamentals, planning, attention to detail and consistency. Sometimes when new technologies and specifications are implemented, focus on the new draws away from sticking to the details of consistent processes in concrete production. It is possible that losing focus on details and consistency are a major contributing factor to problems with new specs/technology. Or sometimes the new spec/technology simply requires more attention to detail that could be masked with the previous specs or technology because there isn't the same “safety factor” built in with the new technology.

Staffing was discussed by our panelists. Since and even prior to covid having staffing has been a challenge. There simply don't seem to be enough people to go around to meet the needs of the industry. Proactive was the word of choice during this discussion. Proactive with plugging into schools, middle schools, high schools, tech schools and colleges. Proactive with internships and mentoring and training. And one other, proactive in listening. Listening to new employees and not dismissing their thoughts and ideas. They want to be an integral part of the team and feel valued.

Materials supply was another topic. Asking a lot of “what ifs” during the planning stage while preparing to build the project was the most common response. It involved what if the planned material source couldn't meet their obligations, what if a new mix design was needed? What are contingency and back up plans and sources. One panelist brought the discussion over to equipment and parts. Will a needed part be on backorder and which parts does it make sense to have on hand or double order.

The final topic was communication. In a world with so many options, communication is still a problem. One of the challenges discussed was proper use of cell phones, whether that is use while operating equipment and not devoting full attention to equipment operation or realizing that our personal lives on social media affect our professional standing. Even with lots of methods of communication, radios, e-mail, phones, meetings, virtual meetings, texts and whatever else might be available, all parties having clear expectations and understanding is the age-old problem. As much as I may think you can, you can't read my mind, and I can't over-communicate.

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# KANSAS LTAP TO HOST NATIONAL CONFERENCE IN JULY



Kansas LTAP is thrilled to announce that we will be hosting the 2025 National Local Technical Assistance Program Association (NLTAPA) Conference in Kansas City from July 20-24, 2025! That National Local Technical Assistance Program Association (NLTAPA) represents transportation centers from every part of the country, including 51 LTAPs and 7 TTAPs. This premier event brings together transportation professionals, local agencies, and industry experts from across the country to share knowledge, explore innovations, and strengthen the local infrastructure network.

With the conference taking place right in our backyard, we encourage cities and counties across Kansas to take advantage of this incredible opportunity. Mark your calendars and plan to join us in Kansas City from July 20-24, 2025! Stay tuned for more details on registration and session topics.



Register at <https://nltapa.org/conferences/>

# COMMON QUANTITIES FOR GRADING AND OVERLAY PREPARATION

By Brendan Mackay, Ellis County & Lindsay Francis, KS LTAP

Proper planning and accurate material estimation are essential for successful grading and overlay projects. This fact sheet provides quick reference charts to help local agency road and bridge crews calculate material quantities and application rates for a variety of tasks. Whether applying aggregate, asphalt, or seal coats, these tools will assist in ensuring efficient and cost-effective project execution.

## CONVERSION FACTORS

This chart provides quick reference conversions for length, area, volume, asphalt, and aggregate commonly used in road maintenance. It includes conversions such as miles to feet/yards, acres to square feet/yards, cubic feet to cubic yards/gallons, and square yards or cubic yards to tons, ensuring accurate material estimates.

CONVERSION FACTORS	
<b>Length</b>	
1 mi	5280 ft
1 mi	1760 yd
<b>Area</b>	
1 ac	43560 sq ft
1 ac	4840 sq yd
<b>Volume</b>	
1 cu ft	0.04 cu yd
1 cu ft	7.48 gal
1 cu yd	27 cu ft
1 cu yd	a
<b>Asphalt</b>	
1 cu yd	2.025 tons
<b>Aggregate</b>	
1 cu yd	1.4 tons

## SQUARE YARDS PER MILE

Understanding the surface area to be treated is key to accurate material estimates. This chart converts linear measurements into square yards per mile, taking road width into account.

SQUARE YARDS PER MILE	
Road Width	Square Yards
24	14080
26	15253
28	16427
30	17600
32	18773
1mile = 1760 sq yd	

## COMMON APPLICATION RATES FOR ASPHALT EMULSION SEALS (GAL/SQ YD)

This chart outlines typical application rates for various types of asphalt emulsion seals, ensuring that the correct amount of material is applied for track coats, chip seals, scrub seals, fog seals, and prime seals.

COMMON APPLICATION RATES		
Asphalt Emulsion Seals (gal/sq yd)		
Type		
Tack Coat	SS-1H	0.12
Chip Seal	CRS-1H	0.38
Scrub Seal	CMS-1PC	0.31
Fog Seal	CQS-1F	0.12
Prime Seal	AE-P	0.14



## CONCRETE CALCULATOR

This chart helps crews, including bridge crews, estimate the amount of concrete needed for pours by providing a reference for converting dimensions into cubic yards. It includes standard thicknesses and corresponding conversion factors to simplify ordering the correct volume of concrete.

CONCRETE CALCULATOR	
Length(ft) x Width(ft) Divided by Thickness(in) Factor	
Thickness (in)	Factor
4	81
5	64.8
6	54
7	46.28
8	40.5
9	36
10	32.4
11	31.9
12	27

## ASPHALT SURFACING BY ROAD WIDTH

This table breaks down the amount of asphalt surfacing required based on road width. It is useful for determining the volume of material needed for paving or resurfacing.

ASPHALT SURFACING BY ROAD WIDTH								
	24'		26'		28'		30'	
Depth (in)	cu yd	tons	cu yd	tons	cu yd	tons	cu yd	tons
1	391	792	424	858	456	924	489	990
2	782	1584	847	1716	913	1848	978	1980
3	1173	2376	1271	2574	1369	2772	1467	2970
4	1564	3168	1695	3432	1825	3696	1956	3960
5	1956	3960	2119	4290	2281	4620	2444	4950
6	2347	4752	2542	5148	2738	5544	2933	5940
7	2738	5544	2966	6006	3194	6468	3422	6930
8	3129	6336	3390	6864	3650	7392	3911	7920

## AGGREGATE SURFACING BY ROAD WIDTH

Like the asphalt surfacing chart, this table calculates the amount of aggregate required based on road width. It ensures appropriate coverage and thickness for gravel roads or base layers.

AGGREGATE SURFACING BY ROAD WIDTH								
	24'		26'		28'		30'	
Depth (in)	cu yd	tons	cu yd	tons	cu yd	tons	cu yd	tons
1	391	548	424	593	456	639	489	684
2	782	1095	847	1186	913	1278	978	1369
3	1173	1643	1271	1780	1369	1916	1467	2053
4	1564	2190	1695	2373	1825	2555	1956	2738
5	1956	2738	2119	2966	2281	3194	2444	3422
6	2347	3285	2542	3559	2738	3833	2933	4107
7	2738	3833	2966	4152	3194	4472	3422	4791
8	3129	4380	3390	4745	3650	5111	3911	5476

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## GALLONS OF ASPHALT OIL PER MILE AT VARIOUS APPLICATION RATES

This table provides a quick reference for calculating the amount of asphalt oil required per mile. Application rates are listed in gallons per square yard to help crews apply the correct amount for seal coats, prime coats, and overlays.

GALLONS OF ASPHALT OIL PER MILE AT VARIOUS APPLICATION RATES										
Road	Gallons Per Square Yard									
Width (Ft)	0.10	0.15	0.20	0.25	0.30	0.33	0.35	0.40	0.50	0.60
20	1173	1760	2347	2933	3520	3872	4107	4693	5867	7040
22	1291	1936	2581	3227	3872	4259	4517	5163	6453	7744
24	1408	2112	2816	3520	4224	4646	4928	5632	7040	8448
26	1525	2288	3051	3813	4576	5034	5339	6101	7627	9152
28	1643	2464	3285	4107	4928	5421	5749	6571	8213	9856
30	1760	2640	3520	4400	5280	5808	6160	7040	8800	10560
32	1877	2816	3755	4693	5632	6195	6571	7509	9387	11264

## TONS OF AGGREGATE PER MILE FOR VARIOUS APPLICATION RATES

This chart helps estimate the amount of aggregate needed per mile, based on different application rates (pounds per square yard). It's a valuable reference when determining materials for surface or base applications.

TONS OF AGGREGATE PER MILE FOR VARIOUS APPLICATION RATES										
Road	Pounds Per Square Yard									
Width (ft)	10	15	20	25	30	35	40	45	50	60
20	59	88	117	147	176	205	235	264	293	352
22	65	97	129	161	194	226	258	290	323	387
24	70	106	141	176	211	246	282	317	352	422
26	76	114	153	191	229	267	305	343	381	458
28	82	123	164	205	246	287	329	370	411	493
30	88	132	176	220	264	308	352	396	440	528
32	94	141	188	235	282	329	375	422	469	563

These charts provide a valuable reference to streamline material calculations and ensure project success.



# KDOT UPDATES

By Lindsay Francis, KS LTAP

The following are updates from KDOT on recent developments and ongoing projects:

## BUREAU OF LOCAL PROJECT UPDATES

- Dawn Hueske has been promoted to Bureau Chief of Local Projects as of October 2024. Dmitry Lomachenko will be joining the BLP Road Team in March 2025 to manage projects.
- KDOT has a new website. The Bureau of Local Projects can be found here: [KDOT Bureau of Local Projects](#)
- KDOT Local Projects LPA Project Development Manual has been updated. You can find the updated manual on the KART website (<https://kart.ksdot.gov/>).
- KDOT BLP is emphasizing the importance of cities and counties meeting project schedules. It is advantageous to balance the number of projects in any month's bid letting. Meeting project schedules will help maintain a balanced bidding process and keep costs down.

## HIGH RISK RURAL ROAD PROGRAM:

- KDOT received 29 HRRR applications which are currently being reviewed and scored.

## CITY CONNECTING LINK IMPROVEMENT PROGRAM:

- KDOT is accepting project applications until March 28, 2025. The application is available at: <https://www.ksdot.gov/programs/local-opportunity-programs/city-connecting-link-improvement-program>

## COST-SHARE PROGRAM:

- KDOT is accepting project applications until March 27, 2025. The application is available at: <https://www.ksdot.gov/programs/economic-development-programs/cost-share-program>

## OFF SYSTEM BRIDGE (OSB) PROGRAM AND THE KANSAS LOCAL BRIDGE IMPROVEMENT PROGRAM (KLBIP):

- KDOT anticipates accepting project applications starting in April 2025 for the Off System Bridge (OSB) Program AND the Kansas Local Bridge Improvement Program (KLBIP). Start preparing now and be on the lookout for the announcement. The application is available at: <https://www.ksdot.gov/programs/bridge-programs>

## KANSAS HUB UPDATES:

- The HUB recently announced a new Grant Assistance Program (GAP). This program will provide funding to local agencies for professional grant writing services. Visit the [Kansas Infrastructure Hub](#) website for more information.
- Kansas Infrastructure Summit on April 23, 2025 in Lindsborg, KS

Thank you for staying engaged with these important updates as we work together to improve Kansas' transportation infrastructure!

# FALL 2025 LTAP TRAINING UPDATE

By Megan Hazelwood, KS LTAP

It is hard to believe that Kansas LTAP is almost done with our Spring 2025 training schedule. For the first time in years, we had to reschedule several classes due to inclement weather. Despite the setbacks, Kansans still showed up in the droves to our trainings. We had a record breaking eight Asphalt Road & Street Maintenance classes scheduled this year and we were able to offer several Level II Road Scholar supervisory trainings to the state!

The Kansas LTAP Fall 2025 schedule is almost finalized! We are still getting training requests from Kansans and we are doing our best to build you all into our fall schedule. Below is a look at the classes we've confirmed already for Fall 2025.

5/5	New Road Supervisor Training	KCHA Meeting – Hays, KS
8/25	Workplace, Jobsite, Equipment Safety Training	Great Bend, KS
8/26		Salina, KS
8/27		Emporia, KS
8/28		
9/16		Fundamentals of Supervision
9/17	Supervisor's role in Enhancing Cooperative Work Relationships	Gray County, KS
9/18	Problem Solving for Effective Supervision	Gray County, KS
10/7	Snow & Ice Control	Wichita, KS
10/8		Great Bend, KS
10/9		Salina, KS
10/10		
10/13		Louisburg, KS
10/14		

If you don't see a training you're needing scheduled near you, please reach out to Megan Hazelwood at [mhazelwood@ku.edu](mailto:mhazelwood@ku.edu) if you'd like to get on the Fall 2025 schedule or secure your spot in our 2026 training schedule. As always, Kansans can request on-demand trainings throughout the year.

If you have any questions regarding the Fall 2025 training schedule or if you'd like to host a training in 2026, please email [mhazelwood@ku.edu](mailto: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 this year and beyond!

**SHARE!**

If you know individuals who would like to receive our newsletter, please have them go to: [www.kutc.ku.edu/ltap](http://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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