



WINTER 2021

KANSAS LTAP NEWSLETTER

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

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KANSAS LTAP APP: ANYTIME, ANYWHERE

By Sumon Mojumder & Hemin Mohammed, Kansas LTAP

Imagine having all the tools and resources of Kansas LTAP at your fingertips anytime, anywhere. Now stop imagining and go download the all-new Kansas LTAP smart app on your phone! The University of Kansas Transportation Center (KUTC) has made this one-stop tool a reality. This app has all the features and resources found on the Kansas LTAP webpage so that public works agencies around Kansas can quickly and easily access the information they need.

HIGHLIGHTED FEATURES:

- LTAP Calculator: figures area, volume, materials needed, and project cost
- Equipment Loan Program: apply for equipment on loan
- Work Zone Calculator: set up your work zones based on MUTCD guidelines
- Build a Better Mousetrap: submit your application
- View upcoming LTAP training and conferences
- Contact your local field liaison
- Read past and present newsletters
- Access hundreds of resources
- Contact LTAP directly through in-app messaging and social media

The app is available on Google Play for Android devices and the App Store for Apple devices. Visit the app website, <https://kutc.ku.edu/kansas-ltap-app>, for a direct link to download.

Once you install the app, it will ask you to sign in. You can choose to create an account or login via Facebook, LinkedIn, Apple ID, or Google. After signing in, you will be taken to the home screen that features 11 tools to choose from.



Figure 1: Kansas LTAP app home screen

EQUIPMENT LOAN PROGRAM

Through this feature equipment such as a radar speed trailer, retro-reflectometer, radar counter, and more are available for loan at no cost. Simply choose the equipment you would like to borrow, click apply, and provide the necessary information as prompted.

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WORK ZONE CALCULATOR

One of the most beneficial features of the app! This tool helps to calculate the length, tapering point, size, etc. of a work zone. To figure an estimate, the calculator requires inputs such as speed, grade, offset width, and other relevant information of the work zone. For example, Figure 2 shows the input for calculation and Figure 3 shows the results. The results also include a diagram of the work zone with labeling. Note that these two photos do not include all the inputs and results.

The screenshot shows the 'Work Zone Calculator' app interface. It features several input fields and a 'Calculate' button. The inputs are: Speed (20 to 75) set to 35, Grade (-8 to +8) set to -2, Offset Width (1 to 50) set to 19, Work Space Length set to 10, Road Type set to Rural, and a toggle for 'Calculate Number of Devices' which is currently off. A 'History' link is visible in the top right corner.

Figure 2: Example of imputing information to generate calculation

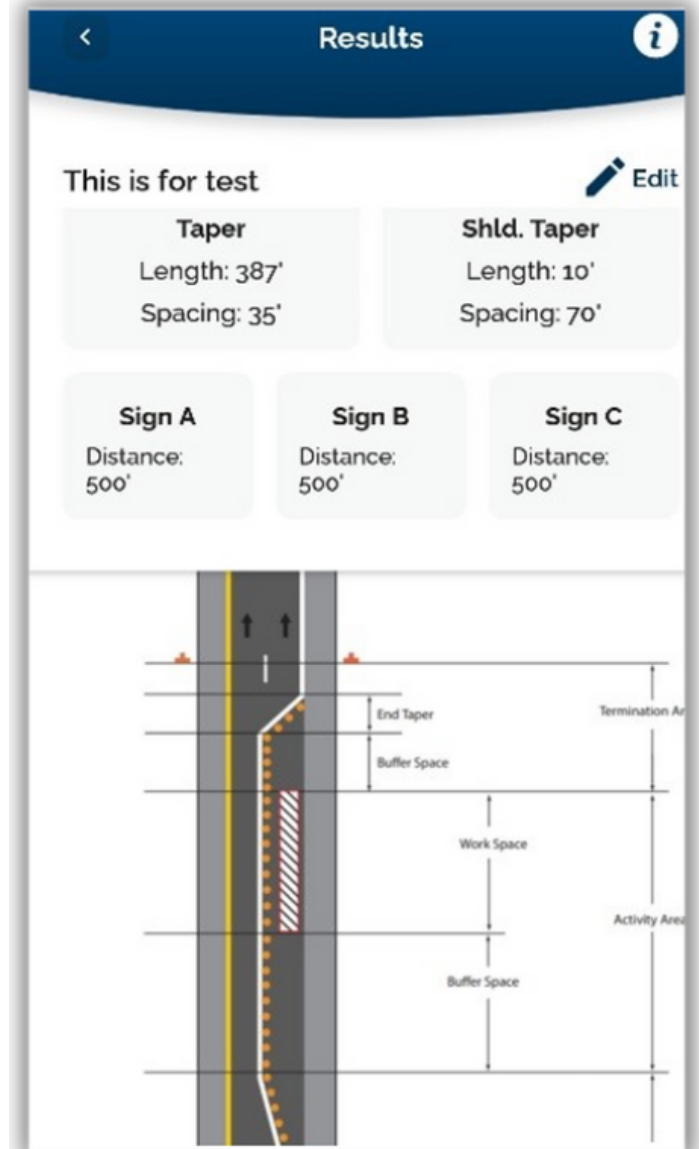


Figure 3: Results of calculations in Figure 2

LTAP CALCULATOR

This feature has four categories to choose from: areas, volumes, materials, and winter operations. Choose from a variety of geometric shapes to calculate the area and volume or choose from a list of materials to calculate how much material is needed for a project. The calculator can also provide calibration for salt spreaders pertaining to winter operations. All these estimations can be done after giving the necessary information and pressing "calculate." As an example, Figures 5 and 6 demonstrate the information needed and the results for an asphalt project.



Figure 4: LTAP Calculator main screen

KS LTAP TRAINING

This features a direct link to available LTAP training courses as well as information about the Road Scholar and Safety Star programs. Applications for both programs are available on the app.

The screenshot shows the 'Asphalt' calculation screen. It has a dark blue header with a back arrow and the title 'Asphalt'. Below the header, there are four input fields: 'Length(L)' with the value '10', 'Width(W)' with the value '15', 'Height(H)' with the value '16', and 'Cost' with the value '20'. At the bottom, there is a white button with the text 'Calculate'.

Figure 5: Example figures for calculating an asphalt project

The screenshot shows the 'Asphalt' results screen. It has a dark blue header with a back arrow and the title 'Asphalt'. Below the header, there are four light blue boxes containing calculated values: 'Area 150.00 feet²', 'Area 16.67 yard²', 'Volume 200.00 feet³', 'Mass 15.0 ton', and 'Total Cost 300.0 \$'.

Figure 6: Asphalt materials estimated based on numbers in figure 5

EVENTS

·Through this feature users can view upcoming events organized by Kansas LTAP. Events can be found by searching through a list or by searching a specific date.

BUILD A BETTER MOUSETRAP

The Kansas Build a Better Mousetrap is a competition among local agencies in which ideas are submitted on enhancing efficiency and reducing cost. Through this feature users can submit an idea as well as see the winners of previous competitions.

LOCAL FIELD LIAISON

·This provides information about the Local Field Liaison Program. Through the Local Field Liaison Program, Kansas LTAP provides on-site technical support and training regarding roadway safety to county and city public work agencies.

NEWSLETTER

·Newsletters published by the Kansas LTAP are available under this feature.

RESOURCES

Access online resources through this feature. These resources include KDOT research reports, manuals & guidelines, training videos, and much more.

MEDIA

Jump to LTAP and KUTC social media platforms: Facebook, Instagram, LinkedIn, and YouTube. The Federal Highway Administration (FHWA) program, Every Day Counts, and other helpful links can also be accessed here.

MESSAGES

Contact a Kansas LTAP representative without having to leave the app! This feature allows you to directly message contacts and easily reference conversations held through the app.

UNIQUE ART PROJECT SHOWS THE IMPORTANCE OF SHARING THE ROAD WITH FARM VEHICLES

By Lisa Koch, Kansas LTAP

The harvest season brings a common sight to Kansas travelers...farm vehicles traveling on local roads and highways. Most farm vehicles travel at less than 25 miles per hour, which can lead to frustration from the traveling public. The speed differential between farm vehicles and general traffic is a safety challenge, and awareness is essential to reducing collisions. Kelley Quinn, an artist who lives in the town of Macomb, Illinois, wanted to bring awareness about farm vehicles on the roadway. She did this through the art installation, Tractor Town. This article will discuss the project and provide data on agricultural vehicle crashes.

Tractor Town was born out of tragedy. On May 22, 2019, local farmer Tim Sullivan was operating his tractor on the highway north of Macomb. A truck driver was traveling behind him and misjudged how slowly Sullivan was moving. When the truck hit Sullivan's tractor, Sullivan was thrown from the vehicle and died. The day of the funeral, many local farmers traveled to the funeral in their tractors, showing solidarity with the Sullivan family.

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Figure 1: Tractor Town, located in downtown Macomb, Illinois, provides awareness about sharing the road safely with farm vehicles. Image by Lisa Koch

Artist Kelley Quinn came up with the idea for Tractor Town after seeing the line of tractors. She went in search of a tractor at a local salvage yard. The 1939 Farmall H tractor she found was the perfect canvas for her project. She worked with many volunteers for two years to implement her mosaic design and in September of 2021 it was unveiled to the public at its new home near downtown Macomb. Quinn hopes that her artwork serves as a memorial to Tim Sullivan and reminds drivers to be aware of farm users on the road

The Sullivan family is happy with the memorial and think their father would love the project. "It promotes agriculture, it promotes farming, and it promotes our community. That makes it just perfect for him," said Brian Sullivan, Tim Sullivan's son. (Egger, 2021)

The University of Iowa conducted a study on data related to 7,000 farm equipment crashes in nine states (including Kansas). They found that 70% of these crashes occur in rural zip codes and are



more likely to occur on high-speed roadways (identified as roadways with a speed limit of over 50 MPH), have high traffic density, are on farm to market routes or have smaller lanes/road widths. They found that states with strict policies related to lighting and pavements markings have fewer crashes than those who don't. (Marizen Ramirez)

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Media campaigns, signage or, in the case of Tractor Town, public art can convey the importance of sharing the road with farm vehicles. Prior to the 2021 harvest season, the Kansas Highway Patrol shared the following tips for sharing the road during harvest season:

- Don't assume the farmer knows you're there. Most operators of farm equipment regularly check for vehicles behind them, however, most of their time must be spent looking ahead to stay on the road and watch for oncoming traffic. Implements are very loud, hindering the farmer's ability to hear your vehicle.
- Pass with extreme caution. Don't pass unless you can see clearly ahead of both your vehicle and the farm equipment you are passing. If there are curves or hills blocking your view of oncoming traffic, wait until you can clearly visualize the area you're passing in. You should not pass in a designated "No Passing Zone," even if you are stuck behind a farm vehicle. Do not pass if you are within 100 feet of any intersection, railroad grade crossing, bridge, elevated structure, or tunnel.
- When a farm vehicle pulls to the right side of the road, it does not mean it is turning right or allowing you to pass. Due to the size of some farm equipment, the farmer must execute wide left turns, so allow it plenty of room and time to turn, and be alert to see if there might be a driveway or field they may be turning into.
- Be patient. Don't assume that a farmer can move aside to let you pass. Shoulders may be soft, wet, or steep, which can cause the farm vehicle to tip, or the shoulder may not support the weight of a heavy farm vehicle. The farmer understands you are being delayed and will move over at the first safe location available.
- Think of the slow-moving vehicle emblem as a warning to adjust your speed. When you see the slow-moving vehicle emblem, you should immediately slow down. While the emblems are visible from a long distance away, it is often difficult to judge the speed at which you are closing in on a vehicle, especially at night.
- Pay attention. When you are not focused solely on the road, you increase your chances of a collision, especially if you should come upon a slow-moving farm vehicle.

KDOT UPDATE

By Tod Salfrank, KDOT

- Effective December 11, 2021, Michael Stringer has retired from KDOT. Effective December 12, 2021, Tod Salfrank will be the new Chief of the Bureau of Local Projects.
- On November 15, 2021, the Infrastructure Investment and Jobs Act (IIJA) was signed by President Joe Biden. This will bring at least \$225 million additional money for bridges to Kansas, as well many new programs and grant opportunities. KDOT will be sharing details and program requirements as the new regulations and guidelines become available.
- One of the new items in the bill is a new population group to be used for funding. The old groups were areas below 5,000, 5,000 to 200,000, and over 200,000. The middle group being split into 5,000 to 49,999 and 50,000 to 200,000. We do not know what impact this will have on programs like the FFE. We will be in touch as we figure those things out.

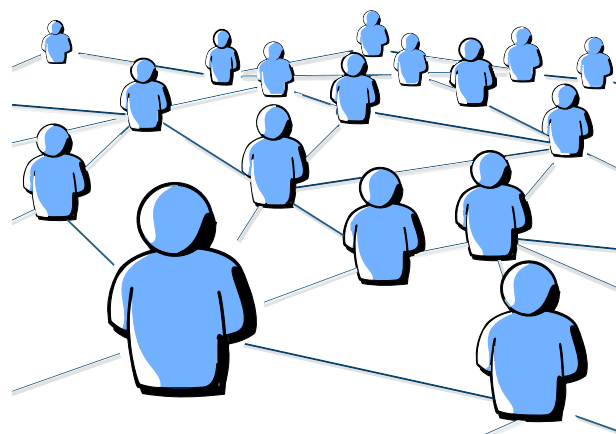
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- The deadline for HRRR project applications was December 1, 2021. We are reviewing applications now and hope to make an announcement after the first of the year. This round we received 41 applications requesting \$21.2M in Federal Funds for \$23.5M in total project costs. This year's selection is anticipated to be about \$3.5M in Federal Funds.
- If your County has not signed up to do a Local Road Safety Plan (LRSP) and you want to be able to use Federal Funds to help pay for it, the deadline to do so is March 15, 2022. That is when we need to start the negotiations on the final year of our contract with the consultant to do the plans.

COMMUNITY THROUGH COMMUNICATIONS: TIPS FOR SOCIAL MEDIA

By Kara Cox, Kansas LTAP

"Communication leads to community, that is, to understanding, intimacy, and mutual valuing." This quote by psychologist, Rollo May, expresses the importance of establishing community through communication. In the past decade we have seen a tremendous rise in communication in the form of social media. While social media appears as an easily accessible and affordable method of mass communication, it can also be intimidating to those trying to build community through communication. From knowing your business to diversifying content, there are many pieces to consider when promoting your agency through social media. In this factsheet we will examine various aspects and resources to keep in mind while setting your agency up for social media success and establishing community through those communications.



content to get lost and become irrelevant. Having a refined mission and purpose for your agency written out makes it easy to keep the mission at the forefront of your mind or something to easily refer to.

SET YOUR GOALS

Along with defining your agency's mission, it is a good idea to set a plan for your communication goals. Without a plan, you have no clear goal of what you are trying to achieve. Taking the time to set up a social media plan upfront will save you time and headaches in the long run. Social media hub, Hootsuite, provides a breakdown of how to set and reach your social media goals in this strategy resource: ["How to Set and Reach Social Media Goals \(+10 Goals to Track\)."](#)

KNOW YOUR BUSINESS

Knowing your business is the first step towards promoting your agency. Having a clearly defined and focused mission will help build your brand and relevant content. This may seem like an arbitrary point, but without a clear goal for communication in your agency it is easy for

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KNOW YOUR AUDIENCE

Once you fully understand the purpose of your agency and your social media goals, it is easier to define your target audience, the people you want to reach via social media. Understanding your audience's demographics provides the knowledge needed for diversifying marketing styles and strategies in social media. Depending on the demographic you are targeting, this can determine what social media platforms are best for your agency as well. Hubspot.com provides seven techniques in this article that will help you capitalize on the knowledge and understanding of your audience: ["7 Proven Ways to Know Your Audience Better."](#)

DIVERSIFY CONTENT

Diversifying your content will help keep your audience engaged and promote further followers. There are many ways to diversify. Polls offer some great insight into your audience's opinions and in turn provide valuable feedback for your business. Highlighting your agency's accomplishments or spotlighting an employee is another great source of content. Often audiences like to see the faces behind the agency, so showing employees at work or being recognized makes the audience feel more connected to the agency and those involved. Contests are typically successful in engagement and help to grow your audience through liking, tagging, and sharing. Popular communications tool, MailChimp, offers further insight into the pros and cons of diversifying your content in this article, ["The Top 12 Types of Social Media Content to Create."](#)

GET ORGANIZED

Social media calendars lend a huge helping hand

when it comes to staying organized and planning out your content. These calendars can also save you time and be used as a resource to record high engagement posts to refer to later. Hootsuite provides tips on creating a successful social media calendar in this article, ["How to Create a Social Media Calendar: Tips and Templates."](#)

Scheduling social media content ahead of time can help you stay organized and consistent. There are several tools to help you stay ahead of the game, whether it is going directly through the media platform or using a scheduling assistant such as Hootsuite. There is no right or wrong way, but some can be more productive than others. If you post to multiple platforms, having a centralized location to schedule everything at once is beneficial. The Influence Marketing Hub breaks down some of the top social media posting and scheduling tools in this article, ["29 Best Social Media Posting and Scheduling Tools for 2022."](#)

STAY ENGAGED

Throwing content on your social media pages can be easy enough but staying engaged with your audience can be more challenging. As the goal is to promote community through communications, it is important to encourage conversation on social media. If you are encouraging your clients to respond, it is good practice to have timely responses to those clients. Having that connection and conversation between the clients and the agency creates a relationship that can benefit the promotion of the agency.

While we can hope that all conversation on social media is positive, there is always the possibility that a client can issue some negative feedback on the platform. Do not let negativity be intimidating though! Use this as an opportunity to promote your customer service. Quickly reach out to the individual making the complaint and let them know

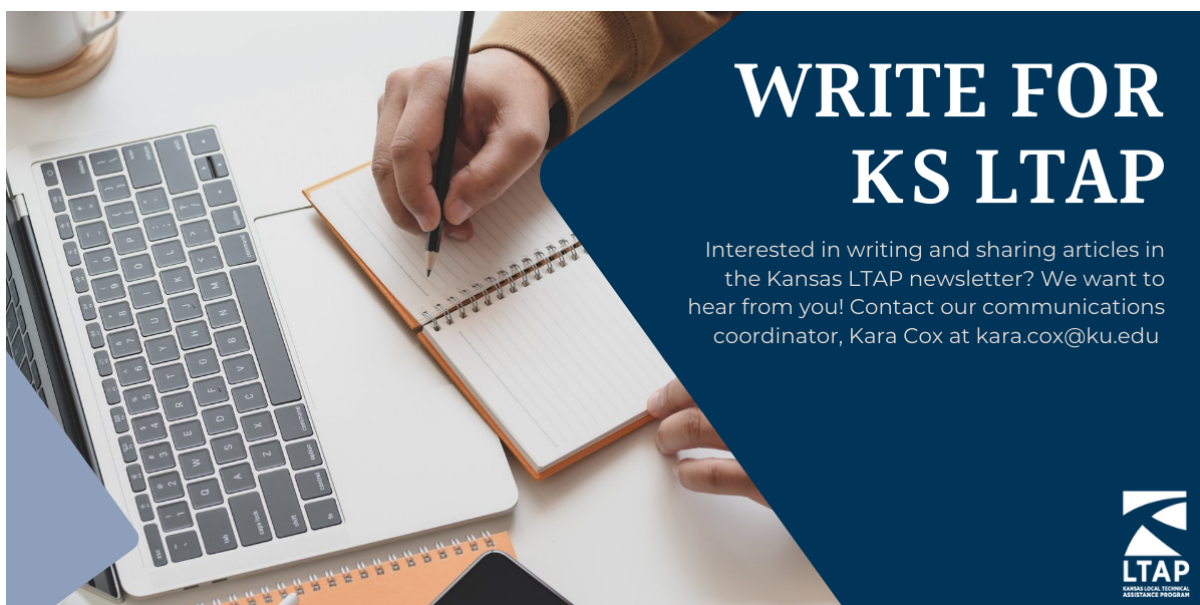
you are disappointed to hear about their negative experience but would like to hear more and have them send you a private message. Not only does this allow the client to feel that they are being heard, but it also shows other clients that you genuinely care about your agency's reputation and that you are willing to rectify any misgivings. The goal again is to build a community, so anything that can be shown in a positive light will be beneficial to you and your business.

Timely responses to audience members on social media can make or break a business. Sprout Social breaks down the why's and how's of timely

responses in this article, "[Why you need to speed up your response time \(and how\).](#)"

CONCLUSION

Social media is an excellent tool for growing community out of your communications. With a multitude of platforms available, it is easy to target your audience and engage with individuals on levels that were not available prior to the social media era. Given the tools in this article, hopefully you are now ready to set your agency up for success on the social media front!



HOW TO ACCESS CERTIFICATES IN THE LEARNING MANAGEMENT SYSTEM

By Megan Hazelwood, Kansas LTAP

Kansas LTAP recently launched their new Learning Management System that allows users to create accounts for themselves and others, view past and present enrollments, and register multiple people for multiple classes.

Previously, Kansas LTAP would send certificates to course attendees via e-mail a few weeks after the training. Now, users and their registration managers can access their certificates for courses they've completed in the Learning Management System on their own time.

Below is a fact sheet for how registration managers can access their employees' certificates in the Learning Management System:

HOW TO ACCESS EMPLOYEES' CERTIFICATES AS A REGISTRATION MANAGER

USING THE LEARNING MANAGEMENT SYSTEM

1 The registration manager will log-in to the site: events-kutcc.ku.edu/login.asp

2 Click the “Registration Managers” link in the upper right hand corner of the page (the link will be right next to the “portal” link).

3 The registration manager will be taken to a page that lists all the users attached to the company they are a part of.

4 Then, the registration manager will click the “view registrations” link for the user in question.



Last Name	First Name	Middle Initial	Phone	Email	Registrations
Judy					View Registrations
Anita					View Registrations
Deb					View Registrations
Donald					View Registrations
Nancy					View Registrations
Ashley					View Registrations
Diana					View Registrations

5 This will take the registration manager to a page that lists the courses the user is registered for.

6 From there the registration manager will see the “attended” link if the user has completed/passed the course.

7 Click the “Attended” button to access the certificate.



Course Session	Program	Date	Attendance
Defensive Driving and Emergency Procedures		10/6/2021	Attended

Not a registration manager but need to become one? Please contact Megan Hazelwood at mhazelwood@ku.edu.

Below is a fact sheet for how individuals can access their certificates in the Learning Management System:

HOW TO ACCESS YOUR CERTIFICATE

USING THE LEARNING MANAGEMENT SYSTEM

- 1 The user will log-in to their account by visiting:
events-kuttc.ku.edu/login.asp



- 2 Once logged in, click the "Portal" link in the upper right hand corner of the page.

- 3 The user will be taken to their "Registration Portal." Here they will see all of the courses they have registered for.



- 4 If the user has completed/passed the course, there will be an "Attended" button.

- 5 The user will click the "Attended" button to access their certificate.

Don't have a Learning Management System account? Create a new profile by visiting: events-kuttc.ku.edu/login.asp. If you're still having issues logging in, contact Megan Hazelwood at mhazelwood@ku.edu

If you're still having difficulties with accessing your certificate in the Learning Management System, please send us an email at kuttc_training@ku.edu for assistance.

THIS WINTER, PUBLIC WORKERS ARE DOING MORE WITH LESS

By Marilee Enus, Director at UNH Technology Transfer Center

Public works agencies are encouraged to share this article with their communities!

At home is the safest place to be during winter weather, but those who must travel during storms can rest assured that their local highway teams and state DOT are working hard to maintain roadways for winter travel. This year, many public works teams will be working even harder, with longer shifts and additional demands because of a snowplow driver shortage.

Current estimates suggest the trucking industry is short 80,000 drivers nationally- a record high. A lack of individuals with Commercial Drivers' Licenses (CDLs) is being felt across the country, including in Kansas where many local highway agencies have struggled to fill temporary seasonal positions for snowplow operators and other snow and ice-fighting positions.

Despite these challenges, public works teams are working hard to be ready for whatever winter might throw at us, and to always live up to the motto that Public Works Makes It Happen. They're thinking creatively about how to minimize any impact to Levels of Service, such as shifting team members within municipal departments, recruiting fire and medical responders, bringing on retired public servants, and hiring contractors to fill critical roles. Some crews are adding new tools to their winter response toolbox this year, including innovative liquids and treated salts to use on icy roadways. These innovative strategies are aimed at increasing the efficiency of snow and ice operations while simultaneously reducing costs, impact to the environment, and Spring clean-up time.

In addition to reviewing your community's Level of Service plan to understand your highway agency's

department websites, or social media pages. And if you have a question about how your streets are being maintained, give your public works director or road agent a call. Community service teams take pride in their supportive role to our municipalities and are happy to talk about their activities and efforts.

Want to lend a helping hand? It's slow-going when cleaning up sidewalks after a snowstorm; there's specific equipment needed to do the job, and from a logistics perspective, this is often the final step in the snow removal process. Shoveling the sidewalk in front of your home and keeping the hydrants cleared not only helps your public works team, but also pedestrians and your neighbors.

Public works professionals will labor tirelessly to maintain our roadways and infrastructure, all while dealing with unique challenges this winter. When the snowflakes start falling, please don't forget to slow down and move over for the plow, and to extend any additional courtesy possible to the dedicated men and women that maintain our public roadways. This winter, although they may be doing more with less, they will be giving their best for our towns and cities.

Know someone who might be interested in a career or part-time job, and wants to work with a dedicated team that makes a difference every day in the lives of Kansas citizens and drivers? Encourage them to check out the great opportunities available with our state and local highway teams and public works departments.

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The University of Kansas Transportation Center fosters a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers. As the site of the state's Local Technical Assistance Program, it

works to enable local counties, 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.

SOMETHING DIFFERENT: COLLABORATIONS CREATE NEW ACCESSIBLE OVERLOOK IN DOUGLAS COUNTY

By Lisa Harris-Frydman, Kansas LTAP



Figure 1: Passerine Pavilion at Wells Overlook Park.

Douglas County Public Works took on a different and interesting project recently – one that was celebrated in a ribbon-cutting this past October. The department collaborated with county residents and a University of Kansas architecture class to create an accessible viewing platform called Passerine Pavilion at Wells Overlook Park, about two miles south of Lawrence. The new structure is at the northern end of the park and provides a breathtaking view of Lawrence, the University of Kansas campus and the surrounding hills, valleys, and farmlands. It provides an alternative to another overlook structure that requires viewers to climb multiple flights of stairs to see the view.

The pavilion is part of a project that began in January 2020 with the help of a \$44,000 grant from the Kansas Department of Wildlife, Parks and Tourism. The project was spearheaded by Douglas County resident Ken Lassman, whose grandfather William H. Wells donated the land for the park in 1971. We spoke with Douglas County Public Works Director Chad Voigt about the county's involvement in the design and construction process.

A COLLABORATIVE PROCESS

Voigt said the viewing platform was designed by University of Kansas Associate Professor Chad Kraus and his students in the School of Architecture & Design. The county helped with the design by making sure the platform was sufficiently wind resistant, given its unique shape and location.

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"The design has a cantilevered, inverted valley roof, making it almost like a sail. It also has a projected deck," Voigt said. Wind-resistance challenges were further complicated by the site, which is an exposed hillside. "It took some careful evaluation to consider the effects of wind from any direction," Voigt said. The resulting design is a viewing platform with a massive concrete foundation and a steel framework, with a lighter, timber structure on top.

The county's Parks and Vegetation Crew prepared the site – no easy task. They needed to dig a deep hole in the steep hillside and clear scores of volunteer trees that covered the site and other trees that would block the structure's view. This was the most difficult part of the job, Voigt said, with a lot of physical work required. Being a steep hillside, the trees had to be removed and taken out on foot. Weeds were controlled after clearing, and the crew planted native grasses on the hillside after the overlook structure was in place. "This crew spent a lot of time and work on this project, and had the hardest jobs," Voigt said. "They did a great job."

The concrete foundation, was built by the county's Bridge Crew. "It provides the stability to carry all kinds of eccentric loads," Voigt said. The project had complex geometry the crew had never seen. "They had to learn their way through an odd set of plans. It was a fun challenge for them," Voigt said.

The fortification has proven successful, and the structure has withstood some very severe winds without any issue.

The crews and students worked side by side at various times throughout the project. For example, "the county assisted with winching the steel beams into place," Voigt said, "and the students got to put on their hardhats and bolt the beams down. It was good to see everyone working together and enjoying that process."

Other collaborations produced wayside informational panels created with assistance from Douglas County Heritage Conservation Coordinator Jan Shupert-Arick, Douglas County GIS Analyst Tyler Fleming, and Lassman. There is also an adjoining native garden planted by local Master Gardener volunteers.

FUNDING

Funding for the project came from a grant from the National Park Service's Land & Water Conservation Fund. Keith Browning, the county's previous public works director, created the application, along with Lassman and a team of partners who have direct experience with accessibility issues.

Voigt encourages other counties to look into this grant opportunity. "I think a lot of counties could make use of it," he said. The NPS grant is administered through the Kansas Department of Wildlife, Parks and Tourism. KDWP will be accepting applications for the next round until September 15, 2022. You can learn more at <https://ksoutdoors.com/KDWP-Info/Grants>

A PICNIC PAVILION TOO

Douglas County's grant also includes construction of an accessible picnic pavilion, which is nearly complete. The students designed it and provided most of the labor. The nail-laminated timber roof was especially labor intensive, Voigt said.

Voigt credited Professor Kraus with having a steep challenge teaching a class to design and build structures during the pandemic that involved students working within COVID protocols, with material shortages and delays, and within grant and county requirements.

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CONCLUSION

Everyone's hard work and collaborative efforts resulted in beautiful accessible structures that can be enjoyed by visitors who would otherwise not be able to enjoy the park and the beautiful view. Congratulations to Douglas County!

SOURCES

Community invited to ribbon-cutting ceremony Oct. 14 for new accessible viewing platform at Wells Overlook Park, by Karrey Britt.

<https://douglascountyks.org/depts/administration/county-news/2021/09/07/community-invited-ribbon-cutting-ceremony-oct-14-new>

Interview with Chad Voigt, December 16, 2021.

KANSAS LTAP 2022 TRAINING UPDATE

By Megan Hazelwood, Kansas LTAP

Public service organizations had to adjust and adapt to the ever-changing environment that was 2021. Kansas LTAP started the year by offering virtual classes and pre-recorded courses, free of charge, that were accessible at any time. We adjusted in the Fall to offer in-person classes, all while adhering to federal, state, local, and venue COVID-19 mandates.

Kansas LTAP is looking forward to continuing in-person training for all of 2022 and reintroducing catering. Participants will have the opportunity to receive training in Asphalt Road Maintenance, Gravel Road Maintenance, Snow and Ice Control, and many other courses. We will train in locations such as Garden City, Emporia, Wichita, Atchison, and other locales. Be sure to visit our Learning Management System [here](#) in January 2022 to view our course offerings.

Kansas LTAP will continue to offer virtual, pre-recorded trainings that participants can access via our Virtual Training Portal [here](#). As always, if you don't see a course you're interested in being offered, contact us about hosting an on-demand training at your location. To contact us about hosting an on-demand course, or for questions regarding the Learning Management System or the 2022 training schedule, please email us at kutc_training@ku.edu or call Megan Hazelwood at 785-864-1344.



A QUICK GUIDE TO ROADWAY SAFETY RESOURCES FOR LOCAL AGENCIES

By Lisa Harris-Frydman, Kansas LTAP

Local road departments in Kansas have a host of challenges in keeping their systems safe. Common safety problems for local agencies are:

- Intersection safety
- School area safety
- Roadway corridor safety
- Speeding
- High accident locations

How should local agencies address these concerns? The first step is to have good resources at hand. We've listed below some basic resources you (or your engineering consultant) should consult when considering a safety problem.

Having good up-to-date information pays off in two ways: it helps provide greater safety for your community—and in court. Attorneys in Kansas refer to these resources for commonly accepted practices when defending crash victims, especially the MUTCD and the Green Book.

Resources that address and prevent roadway safety problems:

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

2009 edition, with Revisions 1 and 2, Federal Highway Administration (FHWA). This is the most current edition of this national standard on traffic control. Available free online at https://mutcd.fhwa.dot.gov/kno_2009r1r2.htm or purchase in hard copy from the American Association of State Highway Transportation Officials (AASHTO) or the American Traffic Safety Services Association (ATSSA).

THE "GREEN BOOK" AKA A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS

2001, AASHTO. Purchase at <https://store.transportation.org/item/collectiondetail/180>

This publication contains the current design research and practices for highway and street geometric design.

GUIDELINES FOR GEOMETRIC DESIGN FOR VERY LOW VOLUME ROADS

2019, AASHTO. This publication presents geometric design guidelines that help highway designers select appropriate geometric designs for roads with low traffic volumes. These guidelines may be used on low-volume local and minor collector roads in lieu of the applicable policies presented in AASHTO's "Green Book." Purchase at <https://store.transportation.org/Item/PublicationDetail?ID=4192>

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

2014, 4th Edition with July 215 errata, AASHTO. The guide is intended to be used as a resource document from which individual highway agencies can develop standards and policies. It includes a synthesis of current information and operating practices related to roadside safety. It focuses on safety treatments that can minimize the likelihood of serious injuries when a motorist leaves the roadway. This guide was written for use by design engineers and professionals involved in roadside safety. <https://store.transportation.org/item/collectiondetail/105>

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HIGHWAY SAFETY MANUAL

2010, First Edition, AASHTO. This is the premier guidance document for incorporating quantitative safety analysis in the highway transportation project planning and development processes. It presents contemporary scientific methodologies for estimating safety performance of highways and streets to inform the transportation decision-making process. Learn more and purchase at <http://www.highwaysafetymanual.org/Pages/default.aspx>

TRAFFIC ENGINEERING HANDBOOK

2016, 7th Edition, ITE. A go-to source for essential traffic engineering solutions. Purchase at <https://ecommerce.ite.org/IMIS/ItemDetail?iProductCode=LP-691>

FIELD GUIDE FOR RURAL ROADS

2020, Kansas LTAP. A safety guide on application of traffic control devices and road management techniques for local road agencies. https://kutcresources.ku.edu/storage/1621444666_LTAP%20Field%20Guide_2020_web.pdf

FIELD GUIDE FOR GRADER OPERATORS

2020, Kansas LTAP. The purpose of this "glovebox" guide is to provide assistance to grader operators who are responsible for day-to-day maintenance of unpaved roads. It provides a convenient reference to keep in the motor-grader to help address safety and maintenance issues commonly encountered in the field. The guide identifies potential safety issues

during daily operations that should be reported to a supervisor.

https://kutcresources.ku.edu/storage/1621444586_LTAP%20Grader%20Handbook_2020_web.pdf

GUIDE FOR INSTALLATION AND REMOVAL OF HANDRAIL AND GUARDRAIL ON LOW VOLUME RURAL ROADS

2020, Kansas LTAP/Kansas Association of Counties. Norman Bowers wrote this convenient reference to help address safety concerns commonly encountered in the field related to guardrail and bridge handrails.

https://kutcresources.ku.edu/storage/1621446585_LTAP%20Guard%20Rail%20Guide_FINAL.pdf

THE YELLOW CARD AKA ROAD & BRIDGE TASKS IN KANSAS

2005. Kansas LTAP. This card lists tasks that must be done by law by a licensed engineer and those that can be done by a non-engineer.

https://kutcresources.ku.edu/storage/1621618265_Road%20and%20Bridge%20Tasks%20in%20Kansas.pdf

SETTING A SPEED LIMIT: HOW IT'S DONE

2010, Kansas LTAP. Tips for setting a speed limit to reflect a reasonable speed according to safety, engineering, and majority rule.

https://kutcresources.ku.edu/storage/1621883630_LTAPFS10-Speedlimit.pdf

PEDESTRIAN SAFETY ISSUES IN SCHOOL ZONES

2014, Kansas LTAP. This article highlights some of the safety concerns common in school zones provided in a webinar on the topic hosted by the Association

of Pedestrian and Bicycle Professionals.

https://kutcresearch.ku.edu/storage/1621615986_LTAPFS14-PedestrianSafetySchoolZone.pdf

STEPS FOR ADDING OR REMOVING TRAFFIC CONTROL DEVICES

2011, Kansas LTAP. Regarding adding or removing a traffic control device, this article will answer questions such as: What steps do you take? Who do you contact? Are there regulations that you must follow? Can you make this decision if you are not an engineer? The article shares what federal and state manuals say, and provides advice from practitioners. https://kutcresearch.ku.edu/storage/1621884733_LTAPFS11-Trafficdevices.pdf

WHICH TYPE OF TRAFFIC CONTROL IS NEEDED AT THIS INTERSECTION, IF ANY?

2014, Kansas LTAP. This article outlines the considerations for installing different types of traffic control (or no control) on local roads for optimal traffic safety. https://kutcresearch.ku.edu/storage/1621964295_LTAPFS14-TrafficcontrolforIntersection.pdf

TOWNSHIP BOOK

2019. Norman Bowers, Kansas Association of Counties. A guide to help township officials in Kansas understand their safety-related and other duties and responsibilities regarding roads they maintain. https://kutcresearch.ku.edu/storage/1621963188_Township%20Book%20November%20202019.pdf

GUIDE FOR THE PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES

2020, Second Edition, AASHTO. This guide provides guidance on the planning, design, and operation of pedestrian facilities along and across streets and highways. Purchase at <https://store.transportation.org/item/collectiondetail/224>

BICYCLE FACILITY IMPLEMENTATION QUICK REFERENCE GUIDE

2020, Minnesota Local Road Research Board. This guide is intended to demystify common questions about appropriate facility selection and design to help practitioners confidently implement low-stress bicycle transportation networks. The Guide provides information on the variety of bicycle facility selection and design guidance documents available and identifies which to use as primary resources. <https://www.dot.state.mn.us/research/reports/2020/2020RIC03.pdf>

AND MORE...

Browse through the roadway safety-related resources available for download in the Kansas LTAP Resources Collection. Go to <https://kutcresearch.ku.edu/resources/LTAP> and choose "Roadway and Traffic Safety" under the list of topics.

Many safety resources exist relevant to local governments. This article highlights some that we recommend.

THE BIPARTISAN INFRASTRUCTURE WILL DELIVER FOR KANSAS

U.S. Department of Transportation

the official article can be found at

https://www.transportation.gov/sites/dot.gov/files/2021-11/BIL_Kansas.pdf



President Biden and Vice President Harris's Bipartisan Infrastructure Law is the largest long-term investment in our infrastructure and competitiveness in nearly a century. The need for action in Kansas is clear, and recently released state-level data demonstrates that the Bipartisan Infrastructure Law will deliver for Kansas. For decades, infrastructure in Kansas has suffered from a systemic lack of investment. In fact, the American Society of Civil Engineers gave Kansas a C on its infrastructure report card. The historic Bipartisan Infrastructure Law will make life better for millions of Kansas residents, create a generation of good-paying union jobs and economic growth, and position the United States to win the 21st century.

Specifically, with regard to transportation, the Bipartisan Infrastructure Law will:

Repair and rebuild our roads and bridges with a focus on climate change mitigation, resilience, equity, and safety for all users, including cyclists and pedestrians. In Kansas there are 1,321 bridges and over 1,995 miles of highway in poor condition. Since 2011, commute times have increased by 6.6% in Kansas, and on average, each driver pays \$509 per year in costs due to driving on roads in need of repair. The Bipartisan Infrastructure Law is the single largest dedicated bridge investment since the construction of the interstate highway system. **Based on formula funding alone, Kansas would expect to receive approximately \$2.8 billion over five years in Federal highway formula funding for highways and bridges.** On an average annual basis, this is about 31.7% more than the State's Federal-aid highway formula funding under current law (1). Kansas can also compete for the \$12.5 billion Bridge Investment Program for economically significant bridges and \$15 billion of national funding in the law dedicated to megaprojects that will deliver substantial economic benefits to communities. Kansas can also expect to receive approximately \$63 million over five years in formula funding to reduce transportation-related emissions, in addition to about \$72 million over five years to increase the resilience of its transportation system (2). States may also apply federal aid dollars towards climate resilience and safety projects.

Improve the safety of our transportation system. The Bipartisan Infrastructure Law invests \$13 billion over the Fixing America's Surface Transportation (FAST) Act levels directly into improving roadway safety. Over five years, Kansas will receive approximately \$28 million in 402 formula funding for highway safety traffic programs, which help states to improve driver behavior and reduce deaths and injuries from motor vehicle-related crashes. On an average annual basis, this represents about a 29% increase over FAST Act levels (3). Local and tribal governments in Kansas will also be eligible to compete for \$6 billion in funding for a new Safe Streets for All program which will provide funding directly to these entities to support their efforts to advance "vision zero" plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians. In addition, Kansas can expect to receive approximately \$32 million over five years in funding to augment their commercial motor vehicle (CMV) safety efforts to reduce CMV crashes through the Federal Motor Carrier Safety Administration's Motor Carrier Safety Assistance Program (MCSAP) formula grant. This represents about

a 42% increase in funding compared to FAST Act levels (4). Kansas will be able to apply for funds to modernize data collection systems to collect near real time data on all reported crashes, including fatal ones, to enhance safety and to allow the Department to understand and address trends as they are identified. Kansas also includes communities that will be eligible to apply for grants to community owned utilities to support the repair or replacement of leaky and unsafe cast iron and bare steel natural gas distribution pipelines, some of which are over 100 years old.

Improve healthy, sustainable transportation options for millions of Americans. Kansans who take public transportation spend an extra 65.7% of their time commuting and non-White households are 3 times more likely to commute via public transportation. 11.8% of transit vehicles in the state are past useful life. Based on formula funding alone, Kansas would expect to receive about \$259 million over five years under the Bipartisan Infrastructure Law to improve public transportation options across the state (5). In the first year, this represents about a 34% increase over 2021 FAST Act formula transit funding levels.

Build a network of EV chargers to facilitate long-distance travel and provide convenient charging options. The U.S. market share of plug-in electric vehicle (EV) sales is only one-third the size of the Chinese EV market – in 2020, plug-in electric vehicles made up only 2.3% of new car sales in the U.S., compared to 6.2% in China. The President believes that must change. The law invests \$7.5 billion to build out the first-ever national network of EV chargers in the United States and is a critical element in the Biden-Harris Administration's plan to accelerate the adoption of EVs to address the climate crisis and support domestic manufacturing jobs. Under the Bipartisan Infrastructure Law, Kansas would expect to receive about \$40 million over five years to support the expansion of an EV charging network in the state (6). Kansas will also have the opportunity to apply for grants out of the \$2.5 billion available for EV charging.

Modernize and expand passenger rail and improve freight rail efficiency and safety. The Bipartisan Infrastructure Law includes \$66 billion above baseline to eliminate the Amtrak maintenance backlog, modernize the Northeast Corridor, and bring world-class rail service to areas outside the northeast and mid-Atlantic. Within these totals, \$22 billion would be provided as grants to Amtrak, \$24 billion as federal-state partnership grants for Northeast Corridor modernization, and \$12 billion for partnership grants for intercity rail service, including high-speed rail. On top of this, Kansas will be eligible to compete for \$5 billion for rail improvement and safety grants and \$3 billion for grade crossing safety improvements.

Improve our nation's airports. The United States built modern aviation, but our airports lag far behind our competitors. Under the Bipartisan Infrastructure Law, airports in Kansas would receive approximately \$110 million for infrastructure development for airports over five years (7). This funding will address airside and landside needs at airports, such as improving runways, taxiways and airport-owned towers, terminal development projects, and noise reduction projects. In addition, \$5 billion in discretionary funding is available over five years for airport terminal development projects that address the aging infrastructure of our nation's airports, including projects that expand accessibility for persons with disabilities, improve access for historically disadvantaged populations, improve energy efficiency, and improve airfield safety.

State and local governments can look forward to these new & expanded competitive grant programs in the Bipartisan Infrastructure Law (BIL) anticipated to launch over the course of the next year:

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- Safe Streets for All (\$6B, new) – This program will provide funding directly to local and tribal governments to support their efforts to advance “vision zero” plans and other improvements to reduce crashes and fatalities, especially for cyclists and pedestrians.
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants (\$15B, expanded) – RAISE grants support surface transportation projects of local and/or regional significance.
- Infrastructure for Rebuilding America (INFRA) Grants (\$14B, expanded) – INFRA grants will offer needed aid to freight infrastructure by providing funding to state and local government for projects of regional or national significance. The BIL also raises the cap on multimodal projects to 30% of program funds.
- Federal Transit Administration (FTA) Low and No Emission Bus Programs (\$5.6B, expanded) – BIL expands this competitive program which provides funding to state and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses as well as acquisition, construction, and leasing of required supporting facilities.
- FTA Buses + Bus Facilities Competitive Program (\$2.0B, expanded) – This program provides competitive funding to states and direct recipients to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities.
- Capital Investment Grants (CIG) Program (\$23B, expanded) – The BIL guarantees \$8 billion, and authorizes \$15 billion more in future appropriations, to invest in new high-capacity transit projects communities choose to build.
- Federal Aviation Administration (FAA) Terminal Program (\$5B, new) – This discretionary grant program will provide funding for airport terminal development and other landside projects.
- MEGA Projects (\$15B, new) – This new National Infrastructure Project Assistance grant program will support multi-modal, multi-jurisdictional projects of national or regional significance.
- Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program (\$8.7B, new) – PROTECT will provide \$7.3 billion in formula funding to states and \$1.4 billion in competitive grants to eligible entities to increase the resilience of our transportation system. This includes funding for evacuation routes, coastal resilience, making existing infrastructure more resilient, or efforts to move infrastructure to nearby locations not continuously impacted by extreme weather and natural disasters.
- Port Infrastructure Development Program (\$2.25B, expanded) –BIL will increase investment in America’s coastal ports and inland waterways, helping to improve the supply chain and enhancing the resilience of our shipping industry. BIL overall doubles the level of investment in port infrastructure and waterways, helping strengthen our supply chain and reduce pollution.
- 5307 Ferry Program (\$150M, existing) – BIL retains the \$30 million per year passenger ferry program for ferries that serve urbanized areas.
- Electric or Low Emitting Ferry Program (\$500M, new) – This competitive grant program will support the transition of passenger ferries to low or zero emission technologies.
- Rural Ferry Program (\$2B, new) – This competitive grant program will ensure that basic essential ferry service continues to be provided to rural areas by providing funds to States to support this service.
- Federal Highway Administration (FHWA) competitive grants for nationally significant bridges and other bridges (\$12.5B, new) – This new competitive grant program will assist state, local, federal, and tribal entities in rehabilitating or replacing bridges, including culverts. Large projects and bundling of smaller bridge projects will be eligible for funding

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- FTA All Station Accessibility Program (\$1.75B, new) – This competitive grant program will provide funding to legacy transit and commuter rail authorities to upgrade existing stations to meet or exceed accessibility standards under the Americans with Disabilities Act.
- Charging and fueling infrastructure discretionary grants (Up to \$2.5B, new) – This discretionary grant program will provide up to \$2.5 billion in funding to provide convenient charging where people live, work, and shop.
- Reconnecting Communities Pilot Program (\$1B, new) – This new competitive program will provide dedicated funding to state, local, MPO, and tribal governments for planning, design, demolition, and reconstruction of street grids, parks, or other infrastructure.
- FHWA Nationally Significant Federal Lands and Tribal Projects (\$1.5B, expanded) – This discretionary program provides funding for the construction, reconstruction, and rehabilitation of nationally-significant projects within, adjacent to, or accessing Federal and tribal lands. BIL amends this program to allow smaller projects to qualify for funding and allows 100% federal share for tribal projects.
- Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Program (\$1B, new) – The SMART Grant program will be a programmed competition that will deliver competitive grants to states, local governments, and tribes for projects that improve transportation safety and efficiency.
- Rural Surface Transportation Grant Program (\$2B, new) – This new competitive grant program will improve and expand surface transportation infrastructure in rural areas, increasing connectivity, improving safety and reliability of the movement of people and freight, and generate regional economic growth.

(1) These values are estimates and may change based on updated factor data each fiscal year.

(2) These values are estimates and may change based on updated factor data each fiscal year.

(3) These values are estimates based on the 2020 FHWA public road mileage data for FYs 2022–2026. Formula funding amounts in FYs 2023–2026 are subject to change as a result of the annual public road mile data certified by FHWA. The 402 amounts do not include redistribution of unawarded 405 balances per 23 USC § 405(a)(8) as that information is unknown at this time. The Bipartisan Infrastructure Law specifies NHTSA must distribute the supplemental appropriations for Section 402 in “equal amounts for each fiscal year 2022 through 2026”. This analysis is subject to provisions of FY 2022–FY2026 appropriations acts.

(4) These values are estimates and may change based on updated factor data each fiscal year.

(5) Transit formula funding amounts are subject to changes resulting from the 2020 census or from annual transit service data reported to FTA’s National Transit Database.

(6) These values are estimates and may change based on updated factor data each fiscal year.

(7) Precise allocations would change each year because the formulas use current passenger boarding and cargo data, and this estimate is based on 2019 data.

DIRECTOR'S MESSAGE

By Emily Wilder, Kansas LTAP

I truly can't believe how fast this year has gone by! It feels like just a few weeks ago I was writing an end of year note for 2020. This year we had a bit of a return to normalcy along with new challenges that faced Kansas LTAP and our local public works agencies. You have faced staffing shortages, budget cuts, covid restrictions, and more. Despite those challenges you remained dedicated to providing high quality service. You've adapted, innovated, and just plain made do with the resources available to you. As always, thank you for all that you do for your communities and Kansas. We're looking forward to continuing to serve you in 2022!

Kansas LTAP prides itself in providing excellent service to local public works agencies across Kansas. Please contact KS LTAP Director, Emily Wilder, at ewilder@ku.edu if you need training or technical assistance.

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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