

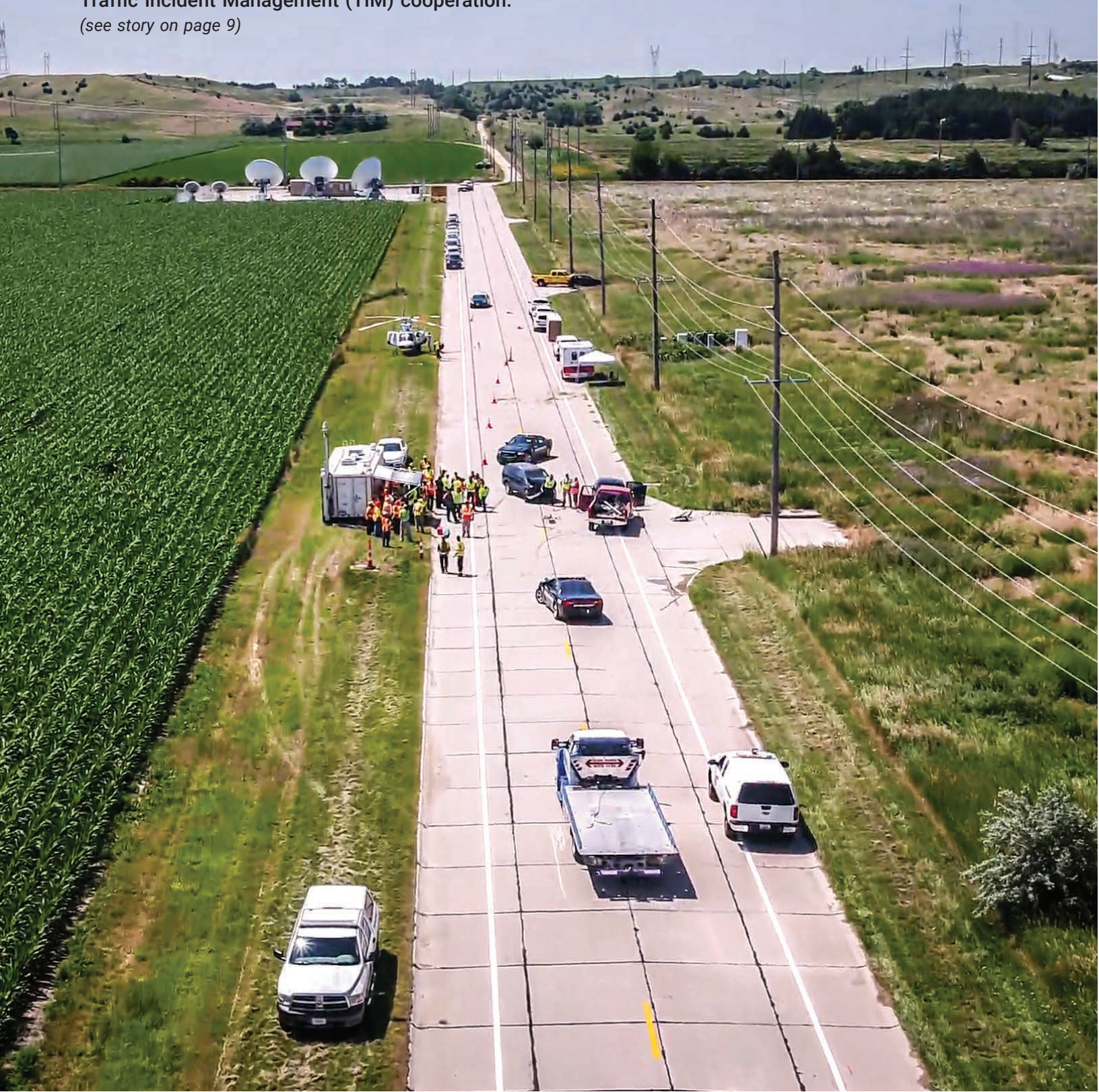
# THE ROADRUNNER

Nebraska Department of Transportation

Fall 2018

Mock crash scene in North Platte tests multi-agency Traffic Incident Management (TIM) cooperation.

*(see story on page 9)*





# Partnerships Reap Successes



Kyle Schneweis

It is that time of the year on the Great Plains. Farmers and their machinery are hard at work in fields from dawn until dusk (and beyond) bringing in this year's crop. For the Nebraska Department of Transportation (NDOT), our harvest is one of progress and partnerships. As we reap the benefits of both, it furthers NDOT's mission of providing the best possible statewide system for moving people and goods.

Partnering and progress blended perfectly in September, when NDOT and the Federal Highway Administration (FHWA) signed a memorandum of

understanding that allows NDOT to assume federal environmental-approval responsibility for transportation projects with a Categorical Exclusion (CE) classification. CE projects comprise about 95 percent of all infrastructure work in the state. The biggest benefits produced by state oversight of CE projects include the potential for a reduction in review times, allowing projects to be delivered more expeditiously and resulting in savings for taxpayers.

The seeds of further partnerships and innovation were sown during the 60th annual International Highway Engineering Exchange Program Conference, held during late September in downtown Lincoln. More than 300 professionals from around the world came to town to learn from one another and share ideas. Their connections will help the transportation industry optimize opportunities visited upon it by the future.

Speaking of maximizing opportunities, we continue to take advantage of our resources to ensure the safety of Nebraska's traveling public and first responders. We do this by organizing Traffic Incident Management (TIM) work groups, which serve as a coalition of law enforcement agencies, fire departments and other organizations that commit to working together to quickly clear crashes and traffic-related emergencies. The newly minted West Central Nebraska TIM Group, which integrates the response to emergencies in Dawson, Johnson and Keith counties, showcased the concept's cooperative principles during a summer exercise in North Platte. It is rewarding to see TIM setting down roots statewide, with two more groups—one in the Tri-City area and another in the Scottsbluff-Gering area—in the planning stages.

Partnerships also help us identify and address issues for our roadway users. NDOT works closely with our trucking industry partners in the state, and because of this we are keenly aware of the growing problem of truck-parking shortages across the country. A step we took to help was creating NDOT's Big Springs truck parking facility. We transformed state-owned land inside an interstate interchange loop into an ideal locale for truckers to park and rest. This sort of problem-solving and creative thinking drew notice from the FHWA, and the act will be recognized by the agency as a best practice for being a parking-shortage solution.

The growth of NDOT partnerships such as these happens through hard work every day. They require constant tending by all of our department teammates, and your hard work yields bountiful successes. *Thanks for all you do!* ■

## the Roadrunner

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# NEBRASKA

Good Life. Great Journey.

DEPARTMENT OF TRANSPORTATION

# Stapleton Maintenance Staff Embrace Lean Six Sigma “5S” Project

By Jake Daniels  
Communication Division

Stapleton maintenance yard staff takes to heart the “Five S” methodology of Lean Six Sigma.

Standing in a secondary building in the Stapleton yard, Sonny Scott, maintenance supervisor, spies something that tweaks his organizational sensibilities. Scott says it’s a minor annoyance, but also admits his crew would say that he’s a bit compulsive.

“That bucket is driving me crazy,” he says, motioning at the 5-gallon tub. “It has a place it should go. It shouldn’t be just sitting out.”

He walks over and pushes the red bucket back into its place underneath a rack of signage. In this building, signs and equipment are stored in specially built racks and on hooks. Smaller pieces of machinery sit evenly against the walls and the concrete floors are swept and clear.

Back in the main building, evidence of the amount of organization at the yard is painted directly onto the floor – thick white, blue, and yellow lines with stenciled black letters denote the proper spaces for oils, containers and tools.

## Efficiency and Clarity

Between cutting down on clutter, revamping storage, and the clear-cut space management, the restructuring of the shop is geared toward efficiency and clarity.

“It’s a lot cleaner and a lot more organized,” says Tyler Werner, a District 6 mechanic. Werner says the new setup wasn’t too much of a difference for him.



Photos by Jake Daniels, NDOT

With the “Five S” method, everything has its place at the Stapleton maintenance shop.

One benefit of the system is how easily new employees can adjust to the workflow of the shop, Werner says. When they need a tool, it’s right where it says it should be. And when the task is complete, they know precisely where it needs to return.

Keeping up with the new system isn’t difficult, according to Scott. At the end of the day, if a tool is out on a bench, put it where it needs to be. If you don’t need the tools in your truck the next day, place them back in their bins.

*“... the outcome is being more organized and having a better work environment.”*

- Roger Klasna, D6 DOMM

“It’s common sense stuff,” he says.

The “Five S” protocol of Lean Six Sigma is derived from the Japanese words Seiri (sort), Seiton (straighten or set), Seiso (shine or sweep), Seiketsu (standardize), and Shitsuke (sustain). Extraneous equipment and clutter are removed, workspaces are organized for optimal efficiency and flow, areas are kept clean to more easily identify issue areas, color-coding and labels are used for efficiency, and behaviors – the “common sense stuff” mentioned by Scott – are developed to keep the workspace organized in the long term.

Scott says there was some misunderstanding about the initiative at first, but after a trip to Ogallala to see how the shops there had reorganized, he was sold.

## Amazing Process

“It was an amazing process that I thought we should get on board with,” he says. He brought the system back to Stapleton and started to roll it out with his crew, one step at a time.





The Stapleton maintenance yard staff has worked “Five S” methodology into their shop’s layout, including clearly labeled items.

“They reacted very well, very positive.”

First, they tackled new storage ideas and looked at what they could remove from the maintenance yard – “If you don’t have a 1948 Ford pickup, you don’t need parts for one,” Scott says. Afterward, their focus moved to revamping where they kept tools and items, especially things they used constantly. Multiple trips across the shop for tools for one job? There’s nothing efficient about that.

“You don’t want your stuff you use every day, five times a day, stored clear at the other end of the shop,” he said.

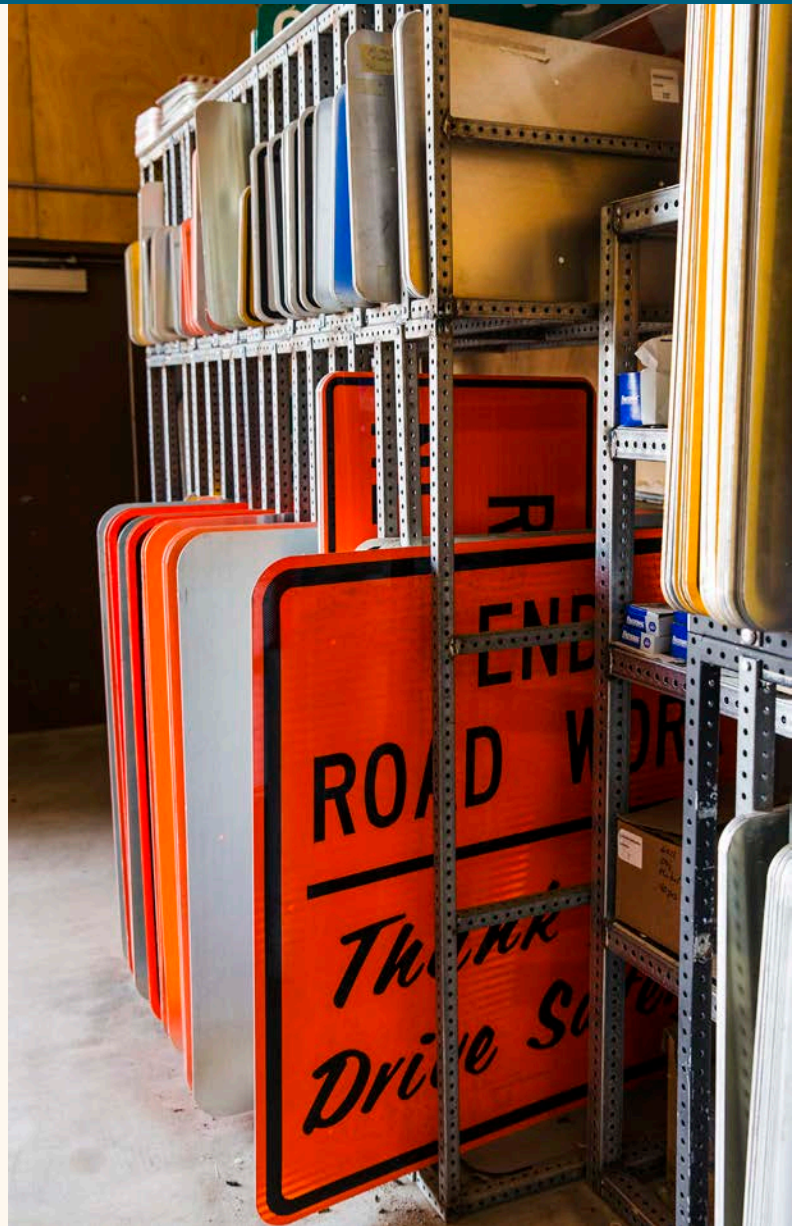
They tried different setups for days at a time, polishing their final arrangements until they were happy with the shop’s new layout. Then came the painting and labeling as they solidified their new workflow. And then a bit more painting.

“If you’re going to do it,” Tyler Werner says as a word of caution, “make sure that’s right where you want [a tool] to go.”

### Employee Engagement

District 6 Highway Operations and Maintenance Manager Roger Klasna says that he knew employee engagement was going to be a key component to carrying out the initiative. While they knew to expect some resistance to change, crews around the district took to the new methodology very quickly.

“I was impressed by the immediate buy-in in many superintendent areas,” Klasna says. “It was also a morale builder...structure is good, and the outcome is being more organized and having a better work environment.”



In keeping with the “Five S” method, signs are stored in specially built racks.

“We have really good people,” he says about the ease of implementation.

Keeping the methods going will be a matter of the new processes becoming standard operating procedures. His advice to other managers looking into the “Five S’s”: sustainability is key.

Maintenance Supervisor Sonny Scott feels like there’s a lot to be gained from the “Five S” method in pretty much any situation, even an office setting.

“There’s always a place for some type of efficiency,” he says. “I think you could use it anywhere.” ■

# Creighton Pedestrian Bridge: A Walk on Rarified Air

By Gary Peterson  
Communication Division

For this Creighton University alumnus, the view is nothing like any she encountered during her time on campus some 25 years ago. That alone is not what makes her view interesting, for Creighton has changed much since Shannon O'Neill walked its grounds.

No, what makes this spot so interesting is the fact she is standing about 20 feet above Omaha's busy North Freeway (U.S. Highway 75) in air owned by the State of Nebraska.

Air-space allowances are not common in NDOT's repertoire of responsibilities related to transportation projects, but NuStyle Development could not get its privately-funded pedestrian bridge built without them. Access to the air space was granted in 2017, and NuStyle is paying a little more than \$6,000 per year to lease that space.

## A Span of Time

In addition to permitting the bridge's construction over the North Freeway, NDOT also approved the nearly 600-foot-long bridge's design for safety and road clearance. The agency also scheduled road closures and established needed detours to facilitate placement of the steel-truss bridge's two prefabricated spans.

When it was completed late last spring, the bridge linked NuStyle's Atlas residential development on the west side of the North Freeway to Creighton on the east side. O'Neill noted Atlas' presence as another unique aspect to her walk on the bridge.

That is because for decades – and during O'Neill's four years at Creighton – NuStyle's residential-development site was St. Joseph Hospital. It later became Creighton University Medical Center, which closed in 2017, paving the way for NuStyle's Atlas project to create living space, shops and



Photo by Gary Peterson, NDOT

The new Creighton pedestrian bridge spans U.S. 75, connecting Creighton University with recently completed NuStyle Atlas residential development.

restaurants, as well as public space with a path to Creighton.

NuStyle did not spare expense on the bridge, which also was funded by Creighton. It is covered, fenced in and 10-feet wide. O'Neill called it almost a tourist attraction, in that the curious who enjoy marveling at the architecture of St. John's Church on campus, along with other historic university buildings, can stroll Creighton's pedestrian plaza, cross the highway and pass through the Atlas Concourse on the other side of U.S. 75. (The bridge is open to the public daily from 6 a.m. to 10 p.m.)

Some will have similar backgrounds as O'Neill from which to process the new view. Others will be able to enjoy it for the one-of-a-kind look at a roadway they may frequently drive. Still others will admire their sightlines as they go to and from class.

All will be walking on air leased with the permission of NDOT. ■



# IHEEP Conference Attendees Gather to Advance Innovation

More than 300 engineers and related professionals attended the 2018 International Highway Engineering Exchange Program (IHEEP) conference at the Cornhusker Marriott in late September as part of the organization's mission to advance transportation and engineering innovation through the exchange of knowledge and information technology.

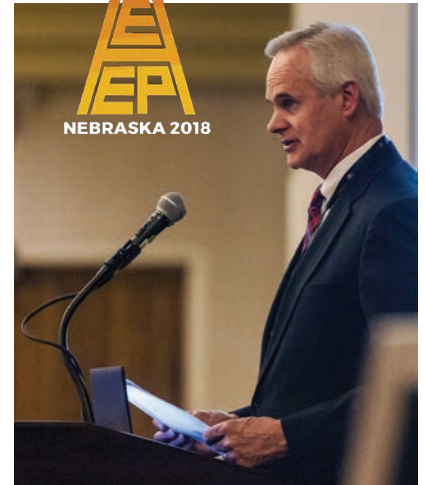
"This was a huge opportunity for NDOT and local consultants to get access to this content locally," said Jon Starr, NDOT engineering technology leader and 2018 IHEEP president. "The timing was perfect, as we are on the cusp, as an industry, to have major disruption with technological advances – Building Information Modeling (BIM), data-centric processes, drones, robots, autonomous vehicles, etc.

"This gave local attendees a snapshot on what is going on internationally, in order to help foster discussions locally as to what this means to us as an organization."

Photos by Jake Daniels, NDOT



NEBRASKA 2018



Lt. Gov. Mike Foley welcomes conference attendees.



Onlookers watch the drone demonstration.



Nhung Hoang (Bridge Division) introduces speakers John Wilkerson, Cathy Cassar and Rachelle VanDeventer.



Conference attendees participate in a roundtable discussion on Digital Project Delivery and e-Construction.





Enjoying a lighter moment at one of the conference sessions.



Jon Starr, 2018 IHEEP President (center), presents the Kenneth G. Close Award to Rachelle VanDeventer, Michigan Infrastructure & Transportation Association (MITA), and Mike Dyrdahl, Montana DOT.

IHEEP Conference Continued

Conference attendees were treated to keynote speakers, including Aaron Davis, an entrepreneur and a member of the 1994 National Championship Nebraska Cornhuskers team; Miki Esposito, director of public works for the City of Lincoln; David Boardman, CEO of Stockpile Reports, and Stephen Jones, Dodge Data & Analytics.

In addition to building connections between departments of transportation from across the United States, members from Croatia, and Bosnia and Herzegovina also presented during breakout sessions. The sessions covered everything from electric and autonomous vehicles in Lincoln, to implementation of ITS in the Balkans, to the digital realm of e-Construction.

“The conference was excellent,” Starr said. “I, and others on our team, heard nothing but positive feedback from those attending.



NDOT's Zack Broshears performs at the Glacial Till Vineyard.



Conference guests take a stroll around the State Capitol.





Conference attendees network at Glacial Till Vineyard.

IHEEP Conference Continued

“This included comments from DOT staff and Europeans, who were glowing in their remarks not only about the event, but also the people they met both at the conference and around Lincoln.”

Just as Starr anticipated, drones and BIM were two of the standout items during the conference. The use of unmanned aerial systems (UAS) in modeling, surveying and inspection reappeared in discussions and breakout sessions throughout the week.

“We had a live BIM panel on site,” Starr said. “Alabama DOT and myself worked with the State Capitol and a local architecture firm to fly the State Capitol and create a DTM, reality model and gather high resolution images that the architecture firm can use in future project work.

“Meanwhile, ALDOT was able to use the lessons learned/reality model in their presentation to show other DOT’s how a UAS program can provide useful deliverables in a short duration.”

With such presentations occurring, even attendees initially unfamiliar with BIM were well versed in the topic by the event’s final day.

The conference was not all just presentations and keynote speakers: The group also toured downtown Lincoln and Memorial Stadium, spent an evening at Glacial Till Vineyard, and ventured to Omaha and its Henry Doorly Zoo. ■



Vendors share product information.



Tour of Memorial Stadium.



# NDOT Looking to Expand TIM Activities

By Gary Peterson  
Communication Division

New Traffic Incident Management (TIM) groups – successful in integrating multiple agencies’ responses to transportation-related emergencies in the North Platte, Lincoln and Omaha areas – could soon begin operating elsewhere in Nebraska.

First, the new groups will have to wait for budgetary approval for a consultant that will serve as the statewide TIM manager. If the consultant services are approved, planning for TIM groups in the Panhandle and the Tri-Cities areas will begin in earnest, said Austin Yates, NDOT Transportation System Management & Operations Engineer.

## Following the Example

If the new groups are established, they will travel a similar path to that of the West Central Nebraska TIM Group.

This past summer, NDOT Operations Division Manager Tom Sands lauded West Central’s Memorandum of Understanding (MOU), signed by various agencies in Dawson, Johnson and Keith counties for its potential to enhance safety on regional roadways. Meanwhile, Nebraska State Patrol Troop D Capt. Martin Denton appreciated its representation of crash-response evolution. Teamwork now is key, he said, giving individuals the trust that everyone is handling his or her responsibilities. North Platte Fire Chief Dennis Thompson echoed those sentiments, saying it comforted him to know fellow professionals engaged with his firefighters to get the necessary work accomplished.

The MOU formalized the commitment made by area law enforcement, fire departments, NDOT and others to work together to quickly clear traffic-related incidents. Presentation of the MOU culminated a year of meetings hosted by NDOT designed to foster greater communication, coordination and collaboration between incident-scene responders, from state troopers to local police, from firefighters to air ambulance personnel, and from NDOT workers to tow-truck operators, as they mitigate situations as quickly and safely as possible.

## Looking for Improvement

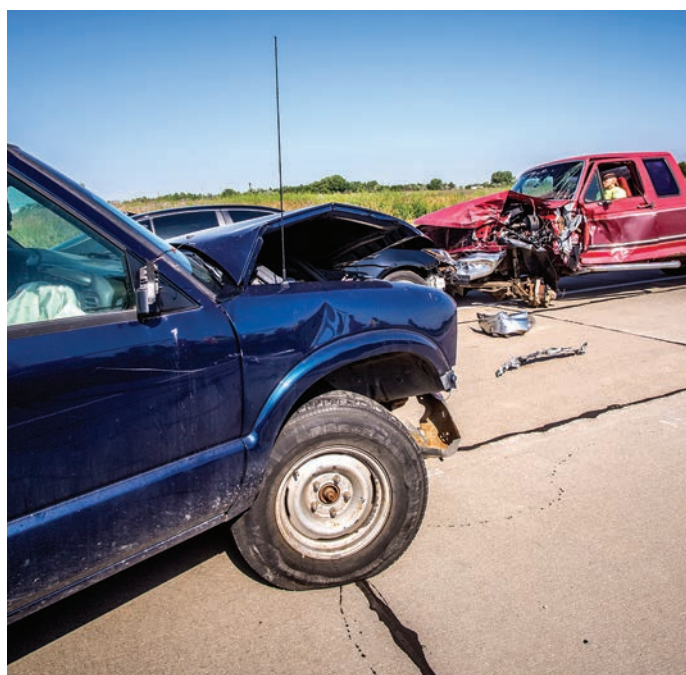
Bringing agencies together under the TIM umbrella is not new to NDOT, which has been a national leader in TIM training for first-responders. TIM facilitation is a

natural outgrowth of the NDOT mission to promote the safety of the traveling public and emergency personnel.

Under the “Communicate, Coordinate, Collaborate” mantra, TIM practices and procedures always are evaluated in a pursuit to improve outcomes.

Better dissemination of information was a primary topic of a summertime meeting of the Omaha-Council Bluffs Metro Area TIM’s Communications & Public Outreach Team. Discussion focused on reaching a wider audience about TIM issues, including how to educate the public about its ability to assist in incident management, such as moving over and slowing down, avoiding rubbernecking and avoiding distractions.

Additionally, team members brainstormed ideas about how to standardize messaging from respective agencies engaged in clearing an incident and the value of more rounds of TIM training for members of the media. The latter was deemed valuable, as law enforcement representatives credited previous media training for improving relationships, and team members called the media a crucial resource for helping inform the public about issues related to TIM. ■



*Photo courtesy of HDR Inc.*

**Traffic Incident Management (TIM) groups work together to quickly clear traffic-related incidents.**



# NDOT's Pavement Research Earns National Recognition



Photos by Matt Beran, NDOT

The first 1-inch thin-lift overlay pavement using new SLX mix was built on US-77 – Lincoln South, a four-lane roadway.

By Linda Wilson  
Communication Division

NDOT's pavement research program has experienced a sea change over the past few years, shining a positive light on projects completed both within the department and in collaboration with transportation partners. The program continues to gain momentum, receiving national attention and recognition.

Nebraska's research on thin-lift overlay pavements was recently published in the September 2018 issue of the American Society of Civil Engineers (ASCE) Journal of Transportation Engineering. Over the past five years, thin-lift overlays have been used to improve smoothness on some of Nebraska's highways. Pavement smoothness extends the life of the roadway, reduces wear and tear on vehicles and provides a much-improved driving experience. In addition, this thinner surface treatment enables faster project delivery than traditional overlay strategies.

This project measured the cost and performance of 1-inch thin-lift overlays compared to the standard 2-inch overlay designs and analyzed the new Type SLX (Surface Laminate Xtreme-thin-lift) from a mixture design and

structural aspect for use in maintenance and pavement preservation overlays. The Type SLX mix is a finely graded, smaller sized aggregate mix composed of 35% recycled asphalt pavement (RAP), and is generally used on overlays of 1 inch in thickness, but is versatile enough to be used on overlay thicknesses up to 5 inches.

## Collaborative Effort

After performing preliminary designs and laboratory testing of the new mix, the very first 1-inch SLX section was built by NDOT District 1 staff and Constructors Inc. of Lincoln, Nebraska on US-77, a four-lane roadway, just north of the intersection with N-33, known as the Crete Corner, for a distance of approximately 5 miles in the northbound lanes. This section is now 5 years old, and performing very well, with a PSI (Present Serviceability Index) of 4.4 out of 5. The PSI is a national standardized rating system that takes into account several quality factors such as smoothness, cracking, rutting, etc.

The NDOT then organized a research project to measure, model and test the materials on a section of Interstate 80 near Kearney, Nebraska. This project was a collaboration between the University of Nebraska, NDOT's District 4 in south-central Nebraska, Materials and Research Division, and Werner Construction of Hastings, Nebraska.

This test section was constructed on the I-80, Kearney to Minden project. The standard overlay design was a 2-inch mill-off of the pavement, then place 2 inches of Type SPH (SuperPave Heavy), a standard interstate type mixture, but the

last quarter mile of the project, the mix was changed and tapered all the way down to only 1-inch thickness of the new type SLX mix. This section is going on its third year of monitoring and is performing very well with a current PSI rating of 4.1 in both the test and control sections.

The University of Nebraska Research Professor Dr. Yong-Rak Kim completed 18 months of research, which included mixture testing, modeling and finite element analysis to predict the pavement performance

*"Density is everything.  
The higher the density,  
the better the performance  
of the pavement..."*

- Robert Rea, NDOT





Five years later, the first 1-inch thin-lift overlay pavement using SLX mix, built on US-77 – Lincoln South, is performing well.

and cost/benefit analysis. The findings verified that thin-lift overlays are a very beneficial, cost-effective and viable strategy for continued use in pavement preservation and resurfacing work, capable of performing well on heavy traffic loading conditions such as I-80. The pavement performance measurements of the test sections will continue over the next several years, with an anticipated design life for thin-lifts expected to be five to seven years, and as many as 10+ years, depending on traffic volume and condition of the existing roadway.

According to Robert Rea, Flexible Pavements and Quality Assurance Engineer at NDOT, these thin-lift pavement strategies have generated excitement in the Transportation Sector. “It is a great time to be in this field and apply some of this new technology. The aggregates have not changed – they have been here for millions of years – but the ‘glue’ that holds these ‘rocks’ together has changed quite a bit. We can specify polymers that provide better flexibility, elasticity and adhesion to our mixes, and that can equate to better performance.”

### Current Areas of Research

Another major area of research and partnering between NDOT and the University of Nebraska involves the use of rejuvenators and softening agents in the asphalt binders – ‘glue’ to condition and replenish the oxidized oil in aged recycled RAP material. The Nano Engineering Lab at the University of Nebraska was used to examine and classify the molecular composition of the binders. Also, Dynamic Shear Rheometry testing was

conducted to measure the physical properties of these binders, such as stiffness or ‘brittleness’ of an aged and oxidized binder. This testing was done to determine what was needed to rebuild and rejuvenate this material for use in pavements.

Rea predicts this area of research will continue into the foreseeable future, due to the many savings derived from the use of RAP material. He estimates that NDOT can have better performing paving products at a lower cost. A savings of \$30 to \$40 million a year can be realized with the use of recycled materials in asphalt paving, along with a 50% reduction in the use of raw materials. In addition to improved performance and lower cost with recycled materials, this research also underscores the value of conservation and being good stewards of our natural resources.

Most recently, in coordination with the Federal Highway Administration, an In-Place Density Optimization project is underway and scheduled to begin in early October, on the Hastings to Doniphan project on US-281. The duration of the project is four days, one day for each of the compaction strategies/methods: Delivery, Compaction, Chemistry and Mix Design. Measuring tools will include coring the new roadway for samples, non-destructive testing using non-nuclear wave element technology, GPR (Ground Penetrating Radar), and thermal imaging using Infra-Red technology along with GPS technology.

Rea emphasized the importance of this research, noting, “Density is everything. The higher the density, the better the performance of the pavement, due to less moisture and oxidation damage from water and air.” To drive home its importance, he stated, “For every 1% density improvement, the life performance of the pavement is improved by 5%.”

He added, “Today’s technology provides us with better equipment and measuring tools, and this is probably the biggest impact, single property, on quality we have. It is our number one focus right now – getting that density and designing our mixes accordingly, will provide a significant increase to performance and is a fairly easy lever for us to pull.” ■



Core sample of new SLX mix used on US-77 – Lincoln South.



# Categorical Exclusion MOU Signed By NDOT, FHWA

By Gary Peterson  
Communication Division

Nebraska Department of Transportation (NDOT) Director Kyle Schneweis compared it to “changing a tire at 80 mph,” as NDOT staff spent the past several months working toward assuming environmental approval responsibilities from the federal government while simultaneously delivering Nebraska transportation projects.

“It’s big day today, and it’s been a massive undertaking” Schneweis said at a Sept. 5 ceremony in the State Capitol Rotunda commemorating that undertaking with a signing of a Memorandum of Understanding (MOU) for Categorical Exclusion (CE) assignment.

With the MOU, NDOT will assume environmental-review responsibilities for federally funded Categorical Exclusion transportation projects.

CEs are the most common level of review under the National Environmental Policy Act of 1969 for infrastructure projects in Nebraska. Such projects compose approximately 95 percent of all of the state’s infrastructure activities.

*“We’ve worked together for innovative ways to improve customer service and project delivery.”*

- Joe Werning, FHWA Administrator

Gov. Pete Ricketts touted the CE assignment as fruit of a continuing effort to create efficiencies that deliver infrastructure benefits to the state more quickly and economically.

“I couldn’t be more excited to be here to witness the signing of this MOU,” he said during the ceremony, adding that it stands as evidence of “Nebraska doing something really forward-thinking.”

## Customer Service

FHWA Deputy Administrator Brandye Hendrickson echoed Gov. Ricketts, saying “as public servants, we are all in the customer-service business.”

She said customer service will be heightened by taking administrative duties from Washington, D.C., and giving



Photo by Jake Daniels, NDOT

NDOT Director Kyle Schneweis and FHWA Nebraska Division Administrator Joe Werning sign Memorandum of Understanding (MOU) for Categorical Exclusion (CE) assignment on Sept. 5, while Nebraska Governor Pete Ricketts and FHWA Deputy Administrator Brandye Hendrickson look on.

them back to the people of Nebraska. It is an example of a “lighter federal touch” she believed was needed when she was an executive with the Indiana Department of Transportation. After all, she said, people often approached her about the “burden of federal oversight.”

Nebraska’s inaugural employment of the shifting administrative duties Hendrickson described was in suburban Omaha. There, the Western Douglas County Trail in Valley benefitted from NDOT serving as the environmental-approval authority under the CE MOU.

NDOT’s approval permitted the Papio-Missouri River Natural Resources District to move ahead with the trail without potentially being required to repay federal money used in the development of the project.

As the Western Douglas County Trail progresses, it can symbolize comments made by FHWA Nebraska Division Administrator Joe Werning at the Sept. 5 MOU signing.

“Over the years, we’ve worked together for innovative ways to improve customer service and project delivery,” he said. “The technical teams from both departments performed at a superhuman level.

“Congratulations to NDOT for taking this step. When we work together, we can accomplish great things.” ■



*Pictured (l to r) Randy Stroup, ALDOT Transit Administrator; Garry Havron, Auburn University RTAP Coordination; Kari Ruse, NDOT Transit Manager; Davis Minor, ALDOT Computer Services; Bill Bivin, UNK Program Manager; Ed Phillips, ALDOT Local Transportation Bureau Chief; Brad Lindsey, ALDOT Local Transportation Deputy Bureau Chief; Nate Roberson, ALDOT Computer Services; and Wiley Brooks, ALDOT Transit Manager.*

*Photo courtesy of Alabama DOT*

# Innovations in NDOT Transit Technology

By Kari Ruse  
Intermodal Planning

In June, Kari Ruse, NDOT Transit Manager, and Bill Bivin, Program Manager at the University of Nebraska Kearney, traveled to Montgomery, Alabama, to demonstrate customized transit technology tools developed for NDOT by the University.

The technology tools were developed for NDOT Transit staff and 150 subrecipients of funds passed through NDOT from the Federal Transit Administration (FTA). The tools include an online dashboard system for data collection, reporting, invoicing, grant application submittal, asset management, agreements processing and training registration. Internally, the online system provides for an efficient workflow, automates data collection and improves program oversight. NDOT's external customers have the ability to submit reimbursement invoices, reports and grant applications electronically.

Ruse and Bivin introduced other states to the technology at the 2018 Rural Transit Assistance Program (RTAP) Technical Assistance Conference in Omaha. Ed Phillips, Jr., P.E., Local Transportation Bureau Chief at the Alabama DOT (ALDOT), attended the presentation.

Phillips said, "I was so impressed with Nebraska's system that I invited Kari Ruse from NDOT and Bill

Bivin from the University of Nebraska to come to Alabama to share and discuss Nebraska's online transit portal in detail with the ALDOT Transit Staff and Auburn University's RTAP Coordinator. I wanted to know more and see if a similar system might be developed and utilized in the Alabama transit program. Nebraska graciously presented details of how they developed, implemented and administered their system and how it has improved transit operations in their state. It was very beneficial to learn the functionality of the Nebraska system and what it provides to the NDOT transit staff and the transit providers throughout Nebraska.

ALDOT and Auburn University are extremely thankful to Kari and Bill who took the time to come to Alabama to share and give us some insight into how we might be able to improve our transit system and RTAP program. My personal thanks to Kari and Bill for sharing their expertise and experiences with Alabama. Nebraska truly has a transit system to be proud of."

Currently, the program developers at the University of Nebraska are working to organize the various functions into separate modules to streamline the technology transfer to the Alabama DOT and other states interested in the technology. ■



# Kimball Co. Transit Mgr. Receives Service Awards

By Kari Ruse  
Intermodal Planning

Christy Warner, Kimball County Transit Manager, received the 2017 “Rookie Manager of the Year Award” at the annual Nebraska Transit Managers Workshop held in June 2018. At the same event, representatives from the Federal Transit Administration’s (FTA) Region VII office also presented Warner with the “Award of Excellence” for having the highest ridership with only three vehicles. This was the second consecutive year Kimball County Transit won the FTA award.



Photo courtesy of the Nebraska Association of Transportation Providers (NATP)

Christy Warner (right), Kimball County Transit Manager, receives the Rookie Manager of the Year Award from Beth Siegfried, McCook Transit Manager, at the annual Transit Managers Workshop.

Kimball County Commissioner, Daria Anderson-Faden, nominated Warner for the Rookie Manager award. In her nomination narrative, Anderson-Faden said, “With the hire of Christy Warner, we found a true administrator for our shuttle. Christy hit the floor running and has not stopped improving and expanding the Kimball County Transit System.”

Thanks to her ongoing marketing efforts, transit ridership has increased nearly 40% since 2016. To meet the growing demand for public transportation services in the Panhandle Region, Ms. Warner has added additional vehicles, hired more drivers and expanded their hours of operation. She has also expanded service to Banner County, which previously had no service, and Cheyenne County, which only had service within the City of Sidney. Now residents of both counties have access to reliable, affordable public transportation.

The NDOT Transit Section has supported Warner’s marketing efforts by providing the technical assistance of a graphic designer from the University of Nebraska and subsidizing promotional bus wraps for all the Kimball County transit vehicles. ■



Photo by Jill Aksamit

NDOT employees use this van provided by Enterprise Rideshare for their vanpool commute from Omaha to the Lincoln campus.

## Nebraska Vanpool Program Offers Commuters Solutions

By Kari Ruse  
Intermodal Planning

The Nebraska statewide vanpool program launched in 2017 when NDOT signed a contract with Enterprise Rideshare to provide a turnkey vanpool operating in Nebraska. The program continues to expand across the state as more businesses and commuters become aware of the opportunity. Enterprise Rideshare provides vans, insurance and roadside assistance for vanpool participants. NDOT subsidizes the vanpool program with funds from the U.S. Department of Transportation. There are currently five active vanpools in the state providing safe, reliable transportation for over 40 commuters.

Earlier this year, NDOT employees organized a vanpool commuting from Omaha to the Lincoln campus. Tim Meyer, Highway Materials and Test Technician, is the coordinator of the vanpool and frequently drives the vehicle. Tim says, “Everyone in the group is excited about the whole experience. They are all pleased about the money they are saving by not having all the expenses that come with using their own personal vehicles.”

If you would like more information about the NDOT vanpool or to schedule a test ride, please contact Tim Meyer at 402-479-4860 or Kari Ruse at 402-479-4694. ■



# Meeting Needs by Making Do

## NDOT's Innovation Brings Truck Parking to Big Springs

By Gary Peterson  
Communication Division

The need for truck parking in the country is a chronic problem that is becoming acute.

Recognizing the trend, the Nebraska Department of Transportation (NDOT) fashioned an innovation near Big Springs to address the condition. NDOT utilized existing state property within the Interstate 80/US-138 interchange to create a parking lot that could accommodate 100 to 200 trucks.

The agency's improvisation and problem-solving skills landed the parking solution on a listing of best practices being compiled by the Federal Highway Administration's Office of Freight Management and Operations' National Coalition on Truck Parking. The best practices are to be published in documents aimed to increase the supply of truck parking across the nation.

"As truck traffic increases, so does the need for parking for drivers in order to meet their service hours," said Kent Grisham, president and CEO of the Nebraska Trucking Association (NTA).

That is a fact that past state rest area studies routinely highlighted, said NDOT Roadway Design Engineer Mike Owen.

### Suitable Areas

"It's a challenge sometimes to find areas that are suitable (for parking lots)," he said, "and it is very expensive when you consider right of way, pavement and utility services that generally accompany the facilities."

NDOT was able to check off each of the impediments enumerated by Owen at the Big Springs lot. One, the state already owned the site. Two, the site was surfaced with asphalt millings salvaged from past projects and stored at the location. Three, no improvements—other than the placement of garbage dumpsters—were made to the site. (Lighting was provided by already-in-place high mast tower light poles.)

*"As truck traffic increases, so does the need for parking for drivers in order to meet their service hours."*

- Kent Grisham, Nebr. Trucking Assoc.

NDOT Construction Division Engineer Jim Knott said the Big Springs lot was recommended to the Federal Highway Administration (FHWA) in 2003 as a test site, adding that NDOT had previously created a similar facility at the Sidney eastbound rest area when the Chappell and Kimball eastbound rest areas were closed.

In a 2010 letter to the FHWA, Knott touted the usefulness of the Big Springs facility, saying that while not being desirable as a modern rest area, it had functioned well as a pull-off for tired drivers.

Additionally, District 5 Engineer Doug Hoevet echoed Knott's statement that no significant problems occur at the parking lot.

Truckers have traditionally policed and cleaned up after themselves. Hoevet said minor trash and refuse issues are all that have emerged.

"The hassle of those things is not enough to discount the value (the parking lot) provides," Hoevet said.

### Safe Parking

That value is one reason the United States Department of Transportation created the National Coalition on Truck Parking (NCTP) in 2015. It was formed to bring together stakeholders from transportation organizations, the freight industry and other groups to advance safe truck parking.

Over the past year, the NCTP has met to discuss best practices related to four priority areas: Parking Capacity; Technology and Data; State, Regional, and Local Government Coordination; and Funding, Finance, and Regulations. The NCTP is putting out several research documents highlighting these best practices, including NDOT's Big Springs project.

Meanwhile, industry executives, such as the NTA's Grisham, also recognize the import of NDOT's response to trucking's needs.

"With electronic logbooks, there's less flexibility for drivers," Grisham said. "Any additional parking and facilities (that are created), the better off drivers are." ■



# NDOT Hwy. Safety Office Grants Program Focuses on Driver Behavior



Fred Zwonechek speaks at the Highway Safety Office/NHTSA Media Training for Grantees.

By Linda Wilson  
Communication Division

In the highway safety realm, everything is data driven and based on driver behavior. Which is why Nebraska Highway Safety Administrator Fred Zwonechek is keenly aware of the top two issues that influence traffic fatalities and injuries – impaired driving and not wearing seatbelts.

“It hasn’t changed much over the last three or four decades and these are the areas we prioritize and focus our funding,” he noted. “If we could solve those two problems, half of our fatalities would disappear overnight, let alone the number of serious injuries that would be prevented.”

While a recent statewide observation survey conducted by Health Education Inc. showed that 86% of Nebraskans are using seatbelts regularly, a 6% increase since 2015, Zwonechek pointed to the 14% that are not, which accounts for 70% of fatalities. “By maintaining focus and trying to increase seatbelt use by just 1%, that’s an additional 19,000 people buckling up every day.”

What has changed, says Zwonechek, is the increase in other types of impaired driving besides alcohol. “While still a major issue, we are seeing a growing influence of drugs combined with alcohol. We are also dealing with distracted driving, which has grown worse with the advent of cellular phones. Another area of concern that has gained more prominence is drowsy driving, with research showing that sleep-deprived drivers are impaired at some levels higher than someone who is under the influence of alcohol.”

## Successful Programs

Zwonechek noted that NDOT’s Highway Safety Office has been fortunate to receive special grants in some key areas. In July, Nebraska was one of five state Highway Safety Offices awarded funds from the Governors Highway Safety Association (GHSA) and Ford for the teen Driving Skills for Life (DSFL) campaign supporting teen safe driving programs. This is the second time that Nebraska received this grant, the first time in 2015.

NDOT’s Highway Safety Office will use the \$15,000 to collaborate with law enforcement, the Nebraska Department of Motor Vehicles, local Ford dealerships and other state safety agencies to host an event next spring

at the UNK Safety Center, featuring ride and drive exercises and traffic safety activities. The event will also launch a contest encouraging participants to create

*According to NHTSA, 94% of fatal crashes are a result of driver error, 4% roadway issues and 2% are vehicle issues.*

safety presentations for their peers, based on Ford DSFL resources. Parents will be encouraged to attend to help reinforce the safety messages.

## Targeted Messages

The GHSA and the National Road Safety Foundation also awarded a \$15,000 grant to the Highway Safety Office, focused on drowsy driving and targeted toward two groups with the greatest sleep deprivation issues – teens and senior citizens. Also planned for spring, messaging will go to population groups in specifically identified counties.

Another new grant, made available through the Nebraska Crime Commission, provides funding for NDOT's Hwy Safety – Accident Records Section to assist the State Patrol in providing and transmitting data to support infrastructure for the new Driver's E-Crash Report System. This electronic crash system provides a quick way to submit vehicle crash reports to NDOT.

In addition to these "special" one-time grants, "continuation" grants are made possible through annual funding provided by the National Highway Traffic Safety Administration (NHTSA). The Highway Safety Office applies for these funds each year, which average between \$6 million and \$7 million annually, with about 600 individual grants awarded, according to Zwonechek.

Funding supports programs of education, equipment, training and enforcement.

Public information and education (PI&E) campaigns, using both traditional and social media, are key

**"Sleep-deprived drivers are impaired at some levels higher than someone who is under the influence of alcohol."**  
- Fred Zwonechek HSO Administrator

in disseminating safety messages. The PI&E activities, working with other agencies and organizations, are critical in supporting the enforcement efforts.

On the enforcement side, grant funds are being made available to support training of

officers through the Law Enforcement Training Center in Grand Island. Grants also provide equipment assistance, access to new technology, and overtime traffic enforcement efforts are supported on an annual basis.

Throughout the grant funding process, Zwonechek says it all comes down to influencing driver behavior. "According to NHTSA, 94% of fatal crashes are a result of driver error, 4% are roadway issues and 2% are vehicle issues. We target the 94% of careless, negligent, and reckless driver behavior, with the goal of getting to zero fatalities." ■



April Child Passenger Safety Technician Training in Kearney (Instructor certifying properly installed safety seat).



Media Panel: Andrew Ozaki KETV, Jane Monic KLIN, and Paul Hamel Omaha World Herald.





# Air Race Classic Comes to Beatrice

By Diana Smith  
Beatrice Airport Mgr., Aeronautics Division

This year Beatrice was chosen as one of the official stop airports for the Air Race Classic, an annual transcontinental air race for female pilots. Route lengths are approximately 2,400 statute miles. All flights are conducted in day visual flight rules (VFR) conditions.

This race is the epicenter of women's air racing. Pilots range in age from 17 to 90 years old. Race teams, consisting of at least two women pilots, must fly VFR during daylight hours only and are given four days to make flybys at each en route timing point, then land at the terminus.

Fifty-six aircraft with around 120 women stopped at the Beatrice Airport on Tuesday, June 19, starting around 11:00 a.m. After a very stormy overnight stay, some racers were able to take off Wednesday afternoon, with the remaining leaving Thursday morning. Unfortunately, they all had to bypass their next stop, (also due to weather), which was Faribault, Minnesota, and instead flew directly to Galesburg, Illinois.

Tuesday night we received over four inches of rain, making the ground very wet and miserable to move aircraft out of the grass to the hard surfaces, which the guys started first thing Wednesday morning. Everyone seemed to take it in stride and made the best of all of the issues that were thrown at them.

Beatrice Airport and the City of Beatrice were very fortunate to have all of the gal's land at BIE, wishing the weather would not have been an issue for them. It was a great economic impact for the City of Beatrice and also a super experience for Beatrice Airport.

These pilot teams surely weren't lacking any humor, as names like the Houston Hot Flashes, DC3(-1), Missile Minions, Over the Moon, and the War Eagle Women, all finished in the top 10. Collegiate teams placed 5th, 7th and 9th. ■



Photos by Diana Smith, Beatrice Airport Manager



Fifty-six aircraft stopped at the Beatrice Airport for the 2018 Air Race Classic.