

# RESEARCH AND DEVELOPMENT NEWS

HIGHLIGHTS OF THE RESEARCH AND DEVELOPMENT UNIT



April 2025, Issue 1



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## Recent News!

2025 NCDOT Research and innovation Symposium (formerly Summit) was held at the McKimmon Center at North Carolina State University.

February 11-12, 2025 in Raleigh, NC

# WELCOME

**Back!!....After too long of a break the R&D Newsletter returns...check out our new design!!!**

04/25



# New Staff

- **Simone Bailey, Administrative Specialist II**
- **Catherine Bryant, PE, Research Implementation Manager**
- **Jaehoon Kim, Ph.D., Research Engineer, Mobility, Safety and Roadway Design**
- **Dahee Kim, Transportation Planner, AECOM**
- **Nathan Spencer, Transportation Planner, AECOM**
- **Evan Volkin, Survey & Statistical Analyst, AECOM**

## Congratulations to John Kirby for his 2024 AASHTO High Value Research Award



The AASHTO Research Advisory Committee (RAC) each year asks states to identify and document recently completed “high-value” research projects. Predicting Roadway Washout Locations During Extreme Rainfall Events which focused on the data NCDOT provided to locations where hydraulic structures(culverts and bridges) washed out during Hurricanes Matthew and Florence and during extreme flooding that occurred in 2020.



**Some of the R&D Team after setting up for a work event!**

## FRESH AND TRENDING!

### “Research Reels”

Learn more about how the R&D Unit works with University Researchers and NCDOT Engineers to develop innovative transportation solutions to make travel in North Carolina safer and more efficient.



## NC Transportation Center of Excellence: Connected and Automated Vehicle Technology

The NC Transportation Center of Excellence on Connected and Autonomous Vehicle Technology (NC-CAV) was initially funded by the North Carolina Department of Transportation in 2020. The NC-CAV Center brings together a strong and diverse team of researchers from North Carolina A&T State University (NCAT), North Carolina State University (NCSU), and the University of North Carolina at Charlotte (UNCC) with the goal of **....establishing a multidisciplinary Center of Excellence in "Advanced Transportation Technologies" to investigate the adoption, utilization, and deployment of CAVs and their impacts on the transportation system in North Carolina and the nation.**

## Staff Highlight: Jaehoon Kim

**Title: Research Engineer, Mobility, Safety and Roadway Design**

**Hired: October 2023**

**Favorite thing about working in R&D: Friendly and kind colleagues, Curtis's (our manager) brisket BBQ**

**Hobbies: Fishing**

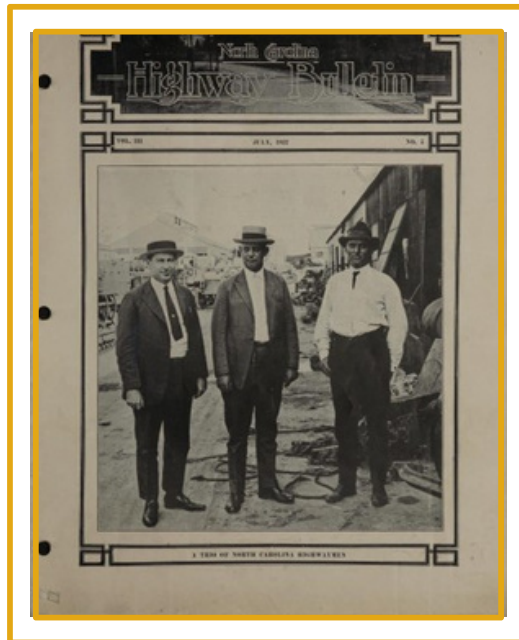
**Favorite Drink: Coffee (black, no cream and no sugar)**

**Fun Fact: I am a Ph. D (poor and hungry doctor)**

## Recently Completed Research Projects

- [Comparison of Stress States in the Interface Shear Fatigue with Field Conditions](#)
- [Evaluation of Macrottexture and Friction of Alternative Asphalt Surface Course Material](#)
- [LED Traffic Signal Lifespan and Replacement Assessment](#)
- [Prioritizing NCDOT Bridge Preservation Projects Using Bridge Element Inspection Data](#)

**Library Notes**  
**Lamara Williams-Jones**  
**NCDOT Librarian**



Take a step back in **time** and check out what was happening at the North Carolina Department of Transportation (then called the State Highway Commission) way back in July 1922. Learn about how the state cared for its motor equipment and read about bids that were opened in June of that year on fourteen projects aggregating 139.34 miles of road construction, including 56.96 miles which would be immediately hard-surfaced. As for the captioned “A Trio of North Carolina Highwaymen.” They are from left to right State Highway Engineer Chas Upham who is describes as ably holding up the engineering end of NC’s road building program, State Highway Commissioner Frank Page whose efforts placed North Carolina on the map as one the foremost road building states in the Union and Charlie Farmer the proprietor of the “Truck Patch” who rejuvenated worn out war material for use in building state roads.



**Contact us**  
**919-707-6660**  
**[research@ncdot.gov](mailto:research@ncdot.gov)**

*Newsletter Editor:*  
*Lamara Williams-Jones*  
*Newsletter Design:*  
*Canva*