




Transportation Vanguard Award 2020 Nomination Form

Who is being nominated?

| | | | | | |
|---|--|--------------------|---|--------------------------|--|
| Last Name: Josh | | First Name: Kellen | | Date: September 15, 2020 | |
| Email: jlkellen@ncdot.gov | | | Position Title: Training and Development Engineer | | |
| Department: North Carolina Department of Transportation (Maintenance Operations and Fleet Management Unit) | | | | Phone: 919-733-3725 | |
| Street Address: 4809 Beryl Road | | City: Raleigh | State: NC | Zip code: 27606 | |
| AASHTO Committee Membership (optional): Nominator is a member of the AASHTO Maintenance Committee | | | | | |

Who is nominating this person?

| | | | | | |
|---|--|-------------------|--|--------------------------|--|
| Last Name: McGraw | | First Name: Emily | | Date: September 15, 2020 | |
| Email: emcgraw@ncdot.gov | | | Position Title: State Maintenance Engineer | | |
| Department: North Carolina Department of Transportation (Maintenance Operations and Fleet Management Unit) | | | | Phone: 919-795-7161 | |
| Street Address: 4809 Beryl Road | | City: Raleigh | State: NC | Zip code: 27606 | |
| Endorsement of Member Department Secretary/Director (signature):  | | | | | |

Instructions:

Using a maximum of 2 additional single-sided pages, please explain why this individual should be selected as the 2020 Transportation Vanguard Award recipient. Please include as much specific information about the candidate as possible, including special projects, personal attributes, dedication, etc.

Send nominations by **September 30, 2020**, via e-mail to jdawkins@ashto.org. Nominations must be submitted **as a single file** in Microsoft Word format using **TVA2020_LastName_FirstName.doc** as the file name.

North Carolina Department of Transportation Nomination for the 2020 AASHTO
Transportation Vanguard Award
Josh L. Kellen, PE

Background:

Mr. Kellen joined the NCDOT on August 1, 2015 as the state's Disaster Recovery Engineer. Prior to joining NCDOT, Mr. Kellen worked for a consultant firm for four years and spent much of his time working on disaster response and recovery activities. Mr. Kellen completed his Bachelor of Science degree in Civil Engineering from North Carolina State University in May 2011 and is a registered Professional Engineer in the State of North Carolina. He is 31 years old.

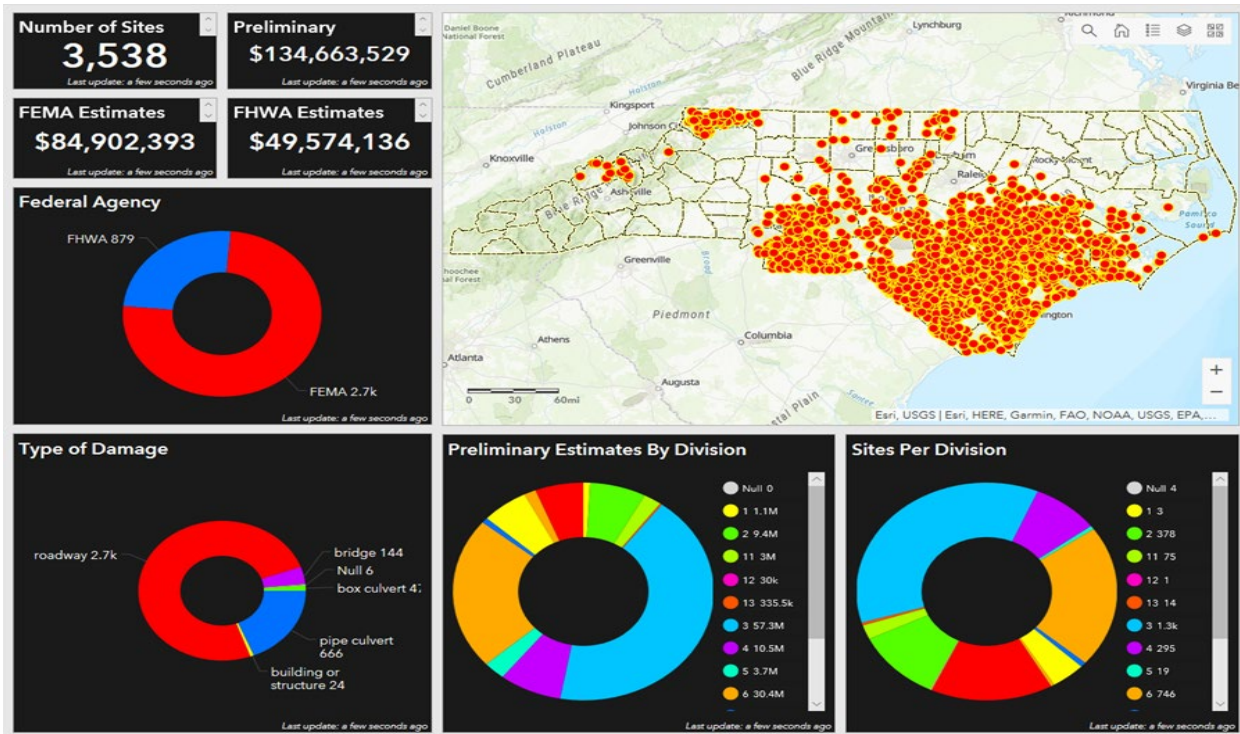
Mr. Kellen had responded to several disasters prior to joining NCDOT as the Disaster Recovery Engineer. Through his experiences of inspecting damage sites and managing debris operations, Mr. Kellen has come forth with many good ideas of how to improve NCDOT's disaster response and recovery efforts. During his first year at NCDOT, Mr. Kellen focused on training NCDOT field forces to heighten their knowledge of disaster response and financial recovery. In October 2016, North Carolina was impacted by Hurricane Matthew which resulted in over \$200 Million in damages across the state highway network. While field forces began repairs, Mr. Kellen began supplying information to both FEMA and FHWA for Public Assistance and Emergency Relief. Through this financial recovery process, Mr. Kellen identified a better way to manage data associated with disasters.

Special Project:

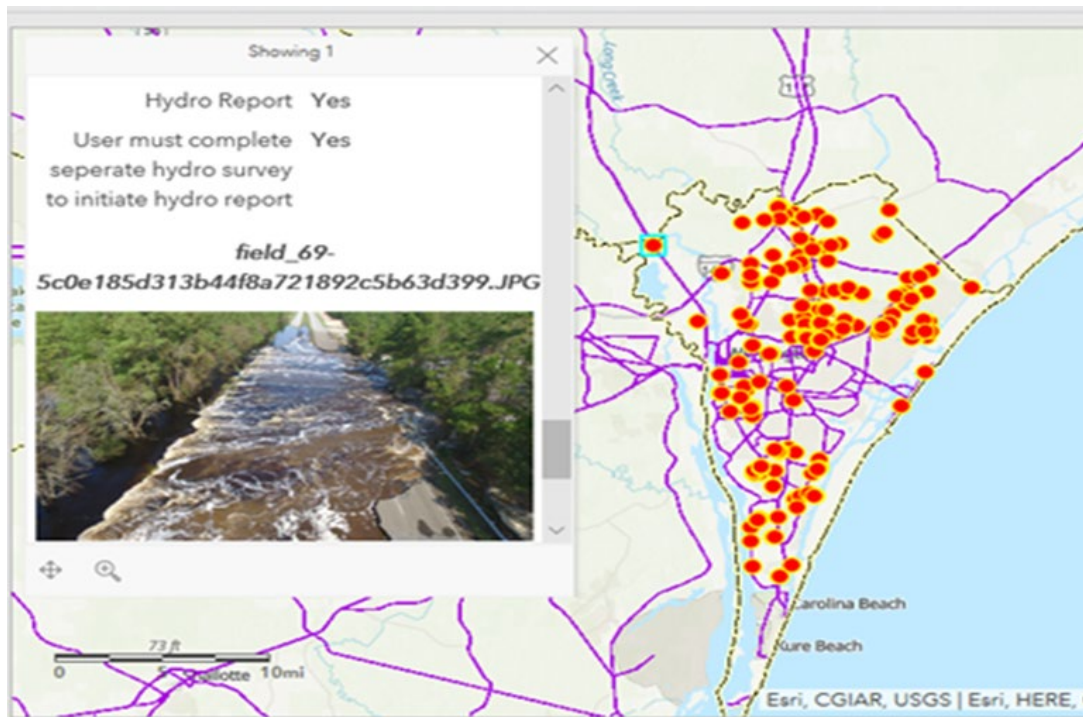
In 2017, Mr. Kellen began exploring tools that could be utilized in capturing data required for financial recovery efforts. Using an ESRI product, Survey 123, Mr. Kellen developed an application named ASSIST (Application for Site Specific Information Storage and Tracking). ASSIST is a georeferenced, online form that may easily be downloaded onto mobile devices and tablets. Field inspectors use this tool to document and photograph damage information which is ultimately used in the financial recovery process. Because it is a real-time application, NCDOT management can review the documented damages without interrupting the recovery processes that are being coordinated across units and other agencies. Other units have access to this information which expedites design and procurement processes. While still under development, Mr. Kellen demonstrated the application at the 2018 AASHTO Maintenance Committee meeting in Charlotte, NC and has since shared this application with other states.

NCDOT first deployed this tool in September 2018 when Hurricane Florence caused more than \$225 Million in damages to the state highway infrastructure. Once the flood waters began receding, field personnel began utilizing the ASSIST tool to gather information for preliminary damage assessments. The real-time information was utilized by NCDOT executive management, NCDOT central and field offices, North Carolina Emergency Management, FEMA and FHWA. Attached is a screenshot of the dashboard developed during Hurricane Florence as well as a screenshot of one site.

Since deploying ASSIST in the Fall of 2018, NCDOT has deployed this tool for natural disasters, including hurricanes, heavy rain events and even an earthquake. Mr. Kellen consistently seeks to improve the functionality of the tool and is coordinating improvements with the GIS Information Technology team, SAP Financial System team and field users.



Hurricane Florence ASSIST Dashboard



US 421 Site in New Hanover County, NC

Personal Attributes:

Mr. Kellen constantly looks for ways to improve processes. In addition, he is an effective communicator and seeks to serve the “boots on the ground” who respond to emergencies and disasters. He excels in customer service. Mr. Kellen brings form to feedback and ideas. His work is excellent! Mr. Kellen exemplifies a commitment to excellence and has implemented ASSIST, an innovative technology in North Carolina. For these reasons, we highly recommend Mr. Josh Kellen for the 2020 AASHTO Transportation Vanguard Award.