

# Automated/Connected Vehicle Update

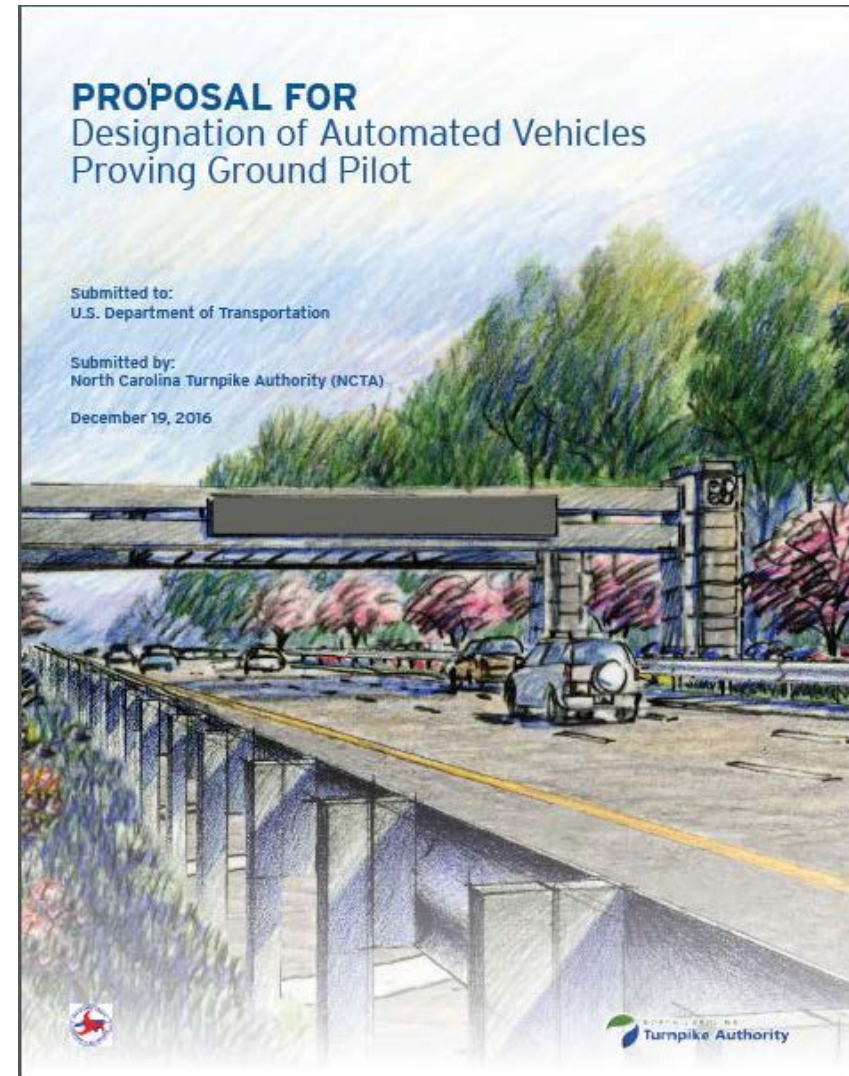
Dennis Jernigan, PE

North Carolina Turnpike Authority

November 8, 2018

# Triangle Expressway

- Advertisement 11/22/2016
- Proposal submitted 12/19/2016
- One of ten sites chosen
- 64 proposals received
- Why pursue?
  - Safety of our customers is paramount
  - Support our customer base - technology is becoming available
  - We have the infrastructure to support this technology



## U.S. DOT'S TEN PROVING GROUND DESIGNEES







U.S. Department of Transportation

*Automated Vehicles 3.0*

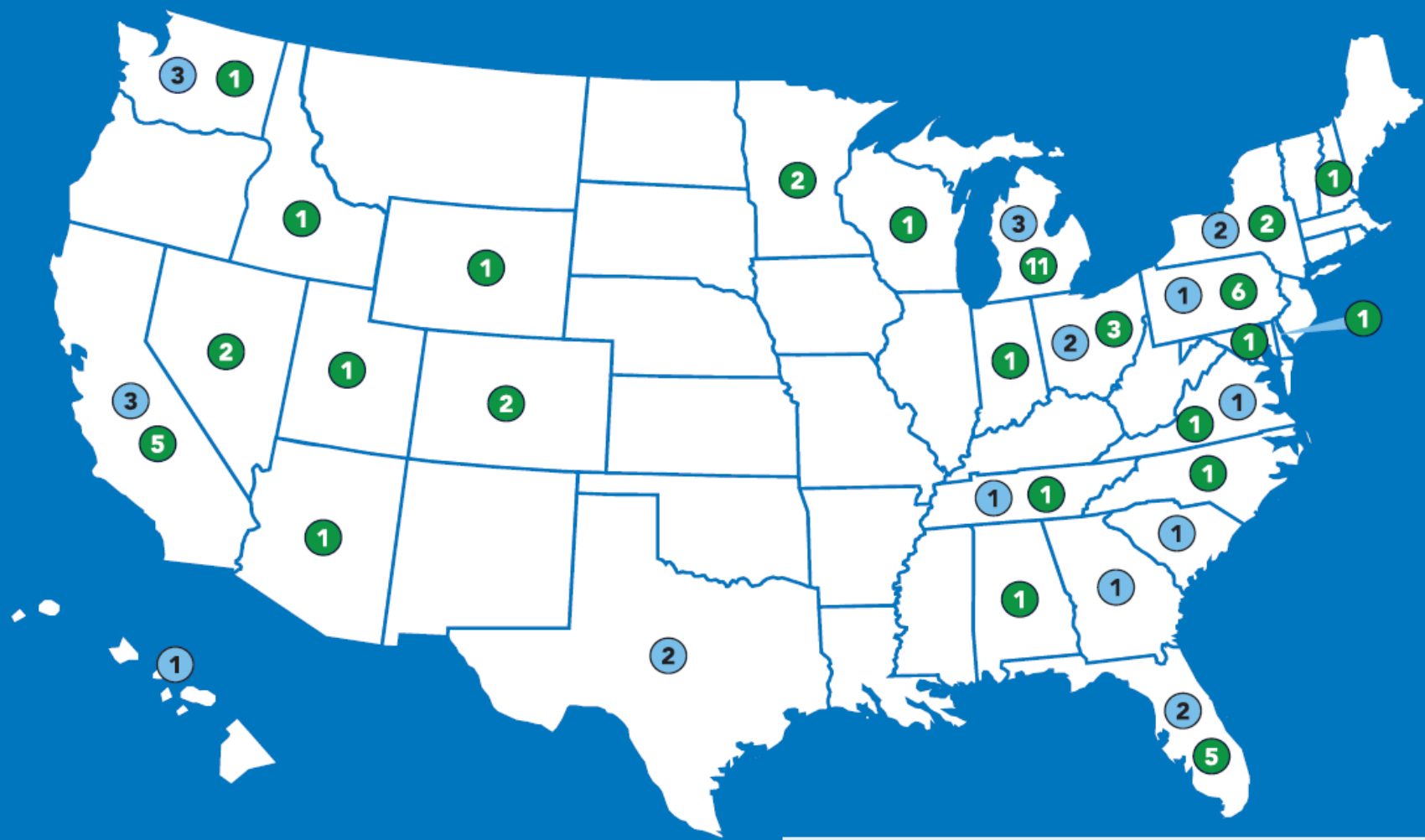
# **PREPARING FOR THE FUTURE OF TRANSPORTATION**





# Planned and Operational Connected Vehicle Deployments

Where Infrastructure and In-Vehicle Units are Planned or In Use



○ Planned Projects  
● Operational Projects  
Source: USDOT September 2018

	Infrastructure Units	In-Vehicle Units
Operational (52 Projects)*	2,044	3,340
Planned (23 projects)*, **	242	0
Total	2,286	3,340
* Projects shown include those sponsored by U.S. DOT and others.		
** Device numbers for many of the planned projects are currently unavailable.		

NCTA  
notified via  
conference  
call on Oct. 2  
and report  
released  
Oct. 4, 2018

and losers or to favor particular automated vehicle proving grounds over others. Therefore, the Department no longer recognizes the designations of ten "Automated Vehicle Proving Grounds" as announced on January 19, 2017. The Department has taken no actions to direct any Federal benefits or support to those ten locations on the basis of these designations, and these designations will have no effect—positive or negative—going forward on any decisions the Department may make regarding Federal support or recognition of research, pilot or demonstration projects, or other developmental activities related to automated vehicle technologies.



# Continuing AV/CV Efforts

- Continue to work with local, national and university partners for collaborations
- Continue to promote and market AV & CV efforts in North Carolina
- NC 55 Connected corridor – SPaT challenge
- Provide assistance/feedback on NCGA legislative committees and considerations

# Recent NCTA AV/CV Efforts

- Cadillac CT6 Super Cruise demonstration
- Driverless truck attenuator demonstration
- Volvo Platooning demonstration



# Cadillac CT6 Super Cruise

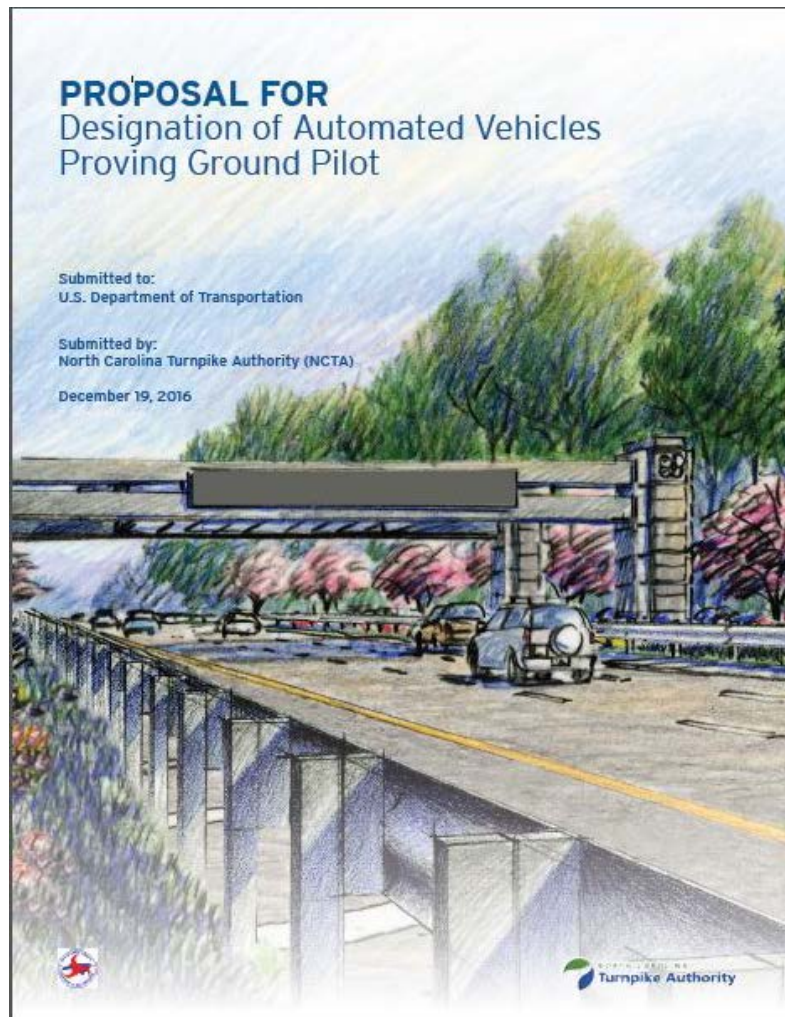
- February 2018
- Partnership with General Motors
- GM loaned NCTA a 2018 Cadillac CT6 with Super Cruise technology
- Logged over 1,000 miles over 30 hours







# Volvo Platooning Demonstration



- Triangle Expressway designated as a USDOT Autonomous Vehicle Proving Ground in January 2017
- First meeting with Volvo team in March 2017
- Collaborated with Volvo team, NCDOT and NCDMV on platooning legislation that was passed in July 2017
- Volvo submitted a plan for trials in March 2018
- Ordinances issued March 29, 2018
- Trials began in early April 2018







Drivers: Ulysses, Justin, Cindy



Technical Team: Franklin, Bob, George

# Media Outlets

Ever heard of truck platooning? It's happening on the Triangle Expressway.

BY RICHARD STRADLING  
rstradling@newsobserver.com

June 27, 2018 05:00 PM  
Updated June 27, 2018 09:39 PM



## BRIEF Volvo, FedEx test truck platoons in North Carolina

Volvo Trucks and FedEx Successfully Demonstrate Truck Platooning on N.C. 540 (Triangle Expressway)



## Transport Topics

Business Technology Equipment Safety Fuel Logistics

Business Technology Equipment Safety Burney Simpson | Staff Reporter  
June 27, 2018 1:00 PM, EDT

## Volvo, FedEx Team on Live Platooning in North Carolina



BLOGS LIFE CUSTOM RIGS EQUIPMENT BUSINESS

Post a dash vid in Dashcam Central ELD mandate Spot rates Niche haul

Volvo deploys truck platooning demo on designated autonomy testing highway in N.C.

autoblog RESEARCH BUY NEWS & REVIEWS OWNERSHIP VIDEOS Make

Volvo, FedEx test autonomous truck 'platooning' on public U.S. road

We've got a little convoy in N.C., and expect testing in other states

15



## Volvo Trucks/FedEx Platooning Demonstration

Platooning technology tested for first time in US, on Wake County soil

Volvo Trucks, FedEx Demo Platooning Tech on North Carolina Interstate

# Volvo, FedEx test truck 'platooning' on public U.S. road By Reuters

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Bloomberg

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## Hyperdrive FedEx, Volvo Test U.S. Truck 'Platoons' to Catch Up to Europe

By Thomas Black

June 27, 2018 1:00 PM Updated on June 27, 2018 5:4

- Courier joins with Volvo to do highway test in North Carolina
- Technique is designed to provide fuel-efficiency, safety gains



Volvo Trucks, FedEx Demonstrate Truck Platooning in North Carolina





# Questions?

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