# Automated Vehicles, Technical Assistance - North Carolina

Date(s) and Time of Meeting: **February 27 and 28, 2020**

Agenda Prepared By: Cathie Curtis

Location: 4809 Beryl Road, Raleigh, NC 27606 - Engineer's Conference Room

Type:In-person meeting

Purpose of Meeting: To provide technical assistance on Automated Vehicles to state officials in North Carolina.

## Meeting Attendance:

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| North Carolina Attendees | Agency | Attended | Name | Agency | Attended |
| Steve Abbott | DOT, Communications |  | Torre Jessup | DMV Commissioner  |  |
| John Brockwell | DOT, Communications |  | Cathy Kelsay | DMV, Commissioner's Office |  |
| Charlotte Boyd-Malette | DMV, Driver Services |  | Blake King | DOT, Communications |  |
| Reba Calvert | DMV, Vehicle Services |  | Jamie Kritzer | DOT, Communications |  |
| Chuck Church | DMV, Legislative |  | Kevin Lacy | DOT, State Traffic Engineer |  |
| Johanna Cockburn | DOT, Bike and Pedestrian |  | Portia Manley | DMV, Vehicle Services |  |
| John Congleton | DOJ, Attorney General's Office |  | Drew Marsh | DMV General Counsel |  |
| Eric Copeland | DMV, License & Theft Bureau |  | Neil Mastin | DOT, Research and Development Office |  |
| clamann@hsrc.unc.edu | UNC, Highway Safety Engineer |  | Brandon Mattox | DMV, Commissioner's Office |  |
| Justin DeLancey | DOT, Legislative |  | Timothy Peterson | Public Safety, Highway Patrol |  |
| JJ Eden | DOT, Turnpike |  | Johanna Reese | DOT, Legislative |  |
| Mark Ezzell | DOT, GOV. Highway Safety |  | Robert Sawyer | DMV, License & Theft Bureau |  |
| Rebecca Gallas | DOT, Communications |  | Warren Smith | DOT, GovHighway Safety |  |
| Amanda Good | DOT, Contractor, CAV |  | Stephanie Sudano | DOT, Multi-Modal |  |
| Steve Hairston | DMV, Strategy and Research |  | Maggie Thomas | DMV IT  |  |
| Shelly Heath | DOT, Traffic Engineer |  | Julie White | DOT, Chief Deputy Sec Office |  |
| Rena Henry | DMV IT  |  | Paula Windley | DMV Vehicle Services |  |
| Kristal High | Chief Deputy Sec. Office |  | Frank Winn | DMV IT  |  |
| Logan Hodges | DOT, Communications |  | Basil Yap | DOT Turnpike |  |
| Dennis Jernigan | DOT, Turnpike |  |  |  |  |
| AV Technical Assistance Team |  |  |  |  |  |
| Cathie Curtis | AAMVA, Director of Vehicle Programs |  | Brett Robinson | Highway Safety Services, LLC |  |
| Brian Ursino | AAMVA, Director, Law Enforcement Programs |  | Jackie Milani | NHTSA, Senior Highway Safety Specialist |  |
| James Fackler | Michigan, Secretary of State, Bureau of Motor Vehicles, Customer Services Administration |  | Debbie Sweet | NHTSA, Program Analyst(Will call in)  |  |
| David Glasser | District of Columbia, DMV, General Counsel |  |  |  |  |

**Meeting Schedule/Agenda:**

**Day 1 Thursday, February 27, 2020 - 9:00 am to 4:00 pm**

9:00 - 9:30 1. Welcome and Meeting Overview – Cathie

9:30 - 9:45 2. Discuss goals for technical assistance – Jackie and Debbie

9:45 - 10:15 3. The federal government’s role and responsibilities in vehicle safety - Jackie and Debbie

**10:15 - 10:30 Break**

10:30 - 11:15 4. The jurisdictional role and responsibilities in vehicle safety - James and David

11:15 – 12:00 5. Common terminology – Brian

 SAE taxonomy and additional terms commonly used

**12:00 – 1:00 Lunch**

1:00 – 1:45 6. Levels of Automated Vehicles - Cathie

Levels 0-2- Advanced Driver Assistance Systems (ADAS)

 Levels 3-5 - Automated Driver Systems (ADS)

1:45 – 2:30 7. Update on North Carolina Automated Vehicle Initiatives – Amanda Good, Kevin Lacy

**2:30 – 2:45 Break**

2:45 – 3:45

 8. ADS-equipped vehicles in development and testing - Cathie

1. Examples of ADS-equipped vehicles being testing
* low speed shuttles
* automobiles
* platooning
* Transportation Network Companies (TNC)
* Local delivery vehicles
1. Companies testing ADS-equipped vehicles
* Traditional vehicle manufacturers
* Software developers
* Start-up companies
* Research and educational institutions
1. Remote drivers and remote operations -
* Different types of remote drivers and operation and challenges
1. Testing locations being used for ADS-equipped vehicles
* pilots
* Short term, cross country trips
* Long term testing in specific cities

3:45 – 4:00 Wrap-up - All

**4:00 Adjourn**

**Day 2 Friday, February 28, 2020- 9:00 am to 3:00 pm**

9:00 – 9:309. Welcome and recap yesterday’s discussion – Cathie/All

9:30 – 10:30 10. Examples of different approaches jurisdictions are using to address

 AV testing - James and David

* Permits/authorization, required by statute or rules
* Permits/authorization, voluntary by policy
* Manufacturer plates
* Notification required by tester to jurisdiction, but no permit issued
* Minimal regulations
* No regulations

**10:30 – 10:40 – Brief Break**

10:40 – 11:30 11. Information to help law enforcement officers – Brian

* Identifying ADS-equipped vehicles
* Vehicle interactions with and without human drivers
* Challenges for law enforcement officers
* Testing entity’s safety plan
* Law Enforcement Protocol

11:30 – 12:00 12. ADS Testing - Potential information and data - Cathie

**12:00 – 1:00 Lunch**

1:00 – 2:00 13. Impacts on jurisdictional driver licensing programs by Advanced Driver Assistance Systems (ADAS) – Brett and Cathie

* Examples of ADAS technology
* Consumer understanding of technology
* Inconsistency in terminology
* Impacts on driver examiners
* Impacts on driver testing
* Impacts on driver education

2:00 – 3:00 14. Open Discussion and closing; opportunity to take a deeper dive into any topics

 Ask questions, identify follow-up items

**3:00 Adjourn**