

MEETING NOTES

Iowa Advisory Council on Automated Transportation (ATC)

Monday, August 31, 2020

1:00-3:00PM

Action Items:

- Daniel Yeh and Jacob Heiden – Share “Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles, Edition 2” with ATC once available
 - ATC and respective stakeholder groups – Review rule draft for Senate File 302 and send comments in early fall 2020
 - Communications & Outreach working group – Develop Response Plan
1. Welcome and Introductions - Scott Marler, Iowa DOT Director (ATC Chair) and Jacob Heiden, University of Iowa (5 minutes)
 - Scott Marler (ATC Chair) – Director, Iowa DOT
 - Colonel Nathan Fulk (Public Safety & Enforcement Chair) – Iowa State Patrol
 - Dylan Mullenix (Policy & Legislation Chair) – Des Moines Area MPO
 - Erin Mullenix (Infrastructure Readiness Chair) – Iowa League of Cities
 - Rick Peterson (Economic Development Chair) – Iowa Economic Development Authority
 - Andrea Henry (Outreach Chair) – Iowa DOT
 - Cathie Curtis - American Association of Motor Vehicle Administrators
 - Amanda Anderson – Peloton Technologies
 - Brooke Lovelace – Iowa Development Disabilities Council
 - Bruce Anderson – Iowa Automobile Dealers Association
 - Danny Waid – Iowa County Engineers Service Bureau
 - John Davis – City of Des Moines
 - Susan DeCourcy – National Highway Traffic Safety Administration
 - Drew Kamp – Council Bluffs Area Chamber of Commerce
 - John Gibson – Iowa Division of the FHWA
 - Jared Kirby, Travis Grassel – Iowa Insurance Division
 - Kraig Paulsen, Clara Wulfsen – Iowa Department of Revenue
 - Kristen Forret – EMC Insurance Companies
 - Sandra Larson – Stanley Consultants
 - Mark Nahra – Woodbury County Engineer
 - Shirley McGuire – Federal Motor Carrier Safety Administration
 - Mike Carberry – Green State Solutions
 - Mollie D’Agnostino – University of California, Davis
 - Tara Olds, Kristin White – Minnesota DOT
 - Rachel Bennett – Iowa County Engineers Association
 - Shannon Landauer – Carroll Iowa Development Corporation
 - Tim Burkhardt – Alliant Engineering
 - Todd Ashby – Des Moines Area MPO
 - Jessica White - Nationwide Insurance
 - Evan Gardiner - Affiliation unknown
 - Peter Rafferty, Lia Yakumithis – Gannett Fleming

- Neal Hawkins, Shauna Hallmark - Iowa State University
- Adam Shell, Daniel Yeh, Donna Matulac, David Lorenzen, Garrett Pederson, Angel Robinson, Jim Schnoebelen, Renee Jerman, Kristin Haar, Rianna Lane, Mikel Derby, Mitchell Dillavou, Melissa Gillett, Sara Siedsma, Tim Simodynes – Iowa DOT
- Jacob Heiden, Omar Ahmad, Dan McGehee – University of Iowa National Advanced Driving Simulator

2. Update on the Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles – Cathie Curtis, American Association of Motor Vehicle Administrators (AAMVA)
 - Cathie Curtis is the Director of Vehicle Programs at AAMVA. AAMVA represents Motor Vehicle Administrators of all 69 states, provinces, and territories of the U.S. and Canada. They work to support uniformity and reciprocity among jurisdictions. They also provide guidance and best practices on emerging issues.
 - AAMVA established an Automated Vehicle (AV) subcommittee in 2014 with twenty US and Canadian members. The subcommittee is multidisciplinary with expertise in vehicle and driver programs, law enforcement, and law and policy. Daniel Yeh with the Iowa DOT is currently part of AAMVA's AV subcommittee and helped coordinate Cathie's visit.
 - AAMVA published "[Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles, Edition 1](#)" in May 2018. This report provides "recommendations to jurisdictions that facilitate a consistent regulatory framework to balance current public safety with the advancement of vehicle innovations, to reduce crashes, fatalities, injuries, and property damage." These voluntary recommendations help jurisdictions regulate AVs while allowing flexibility to adapt to their community's specific needs.
 - The AV subcommittee has been updating the guidelines over the last two years. Edition 2 is expected in coming months. The updates include expanded and new topics, but little changes to the overall framework. Global changes in Edition 2 include:
 - The term "Highly Automated Vehicles" been retired and replaced by the term "ADS-equipped vehicles"
 - Several chapters now include information related to Advanced Driver-Assistance Systems (ADAS)
 - The Autonomous Vehicles Working Group (AVWG) was renamed the Automated Vehicles Subcommittee
 - Edition 2 will have eight chapters: 1. Executive Summary, 2. Definitions and Acronyms, 3. Administrative Considerations, 4. Vehicle Considerations, 5. Driver Licensing Considerations, 6. Law Enforcement Considerations, 7. Other Considerations, 8. Next Steps. The ATC will share Edition 2 once it's available.
 - The ATC and its subcommittees have already been discussing many of the highlighted updates from Cathie. For example, the Public Safety & Enforcement subcommittee has a focus of external vehicle indicators. Industry stakeholders have noted they're moving away from marking vehicles specifically for automation due to "bullying" (i.e. people recognizing the vehicle is automated so they decide to pull in front of it knowing it will stop). In addition, law enforcement will need to adapt to technology of the future: pulling in front of an AV now may cause the vehicle to stop, but the AVs of "tomorrow" will likely change lanes.
 - The updated guidelines allow flexibility for jurisdictions and technology advances. AAMVA will be publishing white papers between guideline updates to allow for more timely information.

Municipalities, AAMVA, the ATC, and stakeholders across the country must continue considering the wide-ranging impacts of automated transportation.

3. Automated Driving Systems Rulemaking Update – Sara Siedsma, Iowa DOT

- Sara Siedsma is a Compliance Officer with the Iowa DOT. Senate File 302 authorized the Iowa Department of Transportation to adopt administrative rules regulating autonomous vehicles. An internal DOT working group presented the management team with rulemaking recommendations in December 2019. The working group then met for several months developing draft administrative rules highlighted below.
- Chapter 380 is a new rule chapter dedicated to driverless-capable vehicles. What is a “driverless-capable” vehicle in Iowa? What are the definitions? Who is the front door? What is the contact information? An important piece of this chapter is testing. Iowa needs to have a process ready for applicants wanting to test AVs on Iowa roads. Topics of Chapter 380 include:
 - Definitions
 - Contact Information
 - Identification in registration
 - Operational restrictions
 - Identification of vehicle networks
 - Testing permit (application, supporting documents, driver qualifications, issuance, updates, suspension and hearing, reporting)
- Chapter 400 is the main chapter on vehicle titling and registration requirements. This is an existing chapter that needed conforming changes to address “driverless-capable vehicles.” A new addition to this chapter includes information on possible operational restrictions for driverless capable vehicles.
- Chapter 524 governs the intrastate motor carrier authority. The update now requires carriers to provide documentation on operational capabilities of their AVs.
- Chapter 540 governs transportation network companies (Uber, Lyft). The update similarly requires these companies to provide documentation to assess operational capabilities of their AVs.
- The next rulemaking steps include:
 - Settle any areas currently under discussion.
 - Send rule draft out for official stakeholder review and comment (early fall 2020).
 - Complete remainder of internal review/approval steps
 - Draft notice of intended action (late fall 2020).
 - Follow typical administrative rule adoption process overseen by committee of state legislators
- The rulemaking is still at the ground level, and the expectation is there will need to be more rulemaking in the future as technology advances.

4. Communications & Outreach Working Group – Andrea Henry

- The Communications & Outreach working group has met three times since the last council meeting. This working group is crosscutting across all ATC activities and strives to educate and update the council and stakeholders on automated transportation information. Tactics for this working group include Active Coordination, Public Outreach, and Response Planning.

- The working group developed the ATC Press Clippings, an email sent to ATC members every other Monday. The email includes links to news and events related to automated transportation and the focuses of the ATC and its subcommittees. ATC members can email ideas to DOT-IowaATC@iowadot.us to include in the Press Clippings
- The finalized ATC logo and branded material templates for handouts and whitepapers can be found on [SharePoint](#) in the folder “Working Group - Communications, Outreach, & Education.” The group is also continually updating the website. ATC members can reach out whenever there is a need for more branded material.
- The Outreach group is beginning development of a response plan in case of an automated vehicle crash in Iowa. The response plan will focus on response structure, coordination of event-specific awareness, and general safety talking points including Iowa’s role in preparing for AT. An internal group made of key individuals from the Iowa DOT and Department of Public Safety will begin work on this plan.

5. Subcommittee Tactical Efforts

a. Infrastructure Readiness – Erin Mullenix

- The Infrastructure Readiness and Economic Development subcommittees held a [joint meeting on July 21, 2020](#) with overlapping focuses relating to building out fiber backbone and automation readiness.
- Dan Messerich from the Iowa DOT presented on the variety of applications of the Iowa Real Time Network (IaRTN). Dave Ness from the City of Dubuque shared their efforts to invest in communications improvements, leading to partnerships with companies and advanced transportation solutions. These comments led to an open discussion of how cities can improve broadband connectivity.
- Erin Mullenix has been contacted by faculty at Iowa State University since the meeting. The ISU faculty member has received funding to develop solutions to expand and build rural broadband connectivity.

b. Economic Development – Rick Peterson

- The Infrastructure Readiness and Economic Development subcommittees held a [joint meeting on July 21, 2020](#) with overlapping focuses relating to engaging with Iowa business and automation readiness.
- As discussed in 5a, the Iowa RTN and broadband connectivity are ways Iowa can leverage current capabilities to companies. Iowa received \$85 million of CARES Act funding for broadband deployment in rural communities.
- The Economic Development and Infrastructure Readiness subcommittees are continuing to position themselves for a CAT Challenge. This challenge would support businesses and the development of technologies related to automated transportation with the goal of deploying the technology into practice to benefit Iowa.

c. Public Safety & Enforcement – Colonel Nathan Fulk

- The Public Safety & Enforcement subcommittee held a [meeting on August 4, 2020](#) with a focus on capturing AV crash data, vehicle automation indicators, and following distance guidelines.
- Dennis Kleen from Iowa DOT and Pat Hoyer from the Governor’s Traffic Safety Bureau shared their efforts and perspective on AV crash data. The Model Minimum Uniform Crash Criteria (MMUCC) is being updated to include two new fields related to automated vehicles. Accurate data is vital to understanding safety on Iowa’s roads. Iowa is looking to evolve its data system from improved information.
- Dan McGehee from the University of Iowa presented on external Human-Machine Interfaces (eHMI). eHMIs will be prevalent with automation to help the outside world perceive information

about the vehicle's automation state. Iowa should work with other states and the Federal Motor Carrier Safety Administration while advancing toward automation.

- Major Randy Kunert is working with Asst. Chief Tom Bruun on developing minimum following distance guidance in Iowa. The Iowa State Patrol is still using reaction time, speed, and distance to determine "reasonable and prudent" following distance as the US DOT recommends. As automation increases, who is responsible for determining "reasonable and prudent" distance? Technology will likely outpace US DOT recommendations so vehicle manufacturers and engineers may need to be involved in following distance guidelines.

d. Policy & Legislation – Dylan Mullenix

- The Policy & Legislation subcommittee [met on August 13, 2020](#) featuring discussions on legislation, CAT planning, and state leadership.
- Kelli Huser, attorney with Iowa DOT, presented on the shift of thinking around liability in an automated vehicle car crash. Adam Shell shared information about NHTSA's rulemaking schedule and considerations by the FCC to reallocate the 5.9 GHz safety spectrum currently reserved for transportation-related communications.
- Dylan Mullenix is the president of the Iowa Chapter of American Planning Association (APA). There is a need for long-range, comprehensive planning for connected and automated vehicles. Local municipalities must also consider state and regional planning as well.
- Iowa currently has many individuals involved in leadership positions in organizations related to automated transportation. ATC members and subcommittee members are encouraged to become engaged in national, regional, and local organizations with a transportation focus to bring an Iowa and automation perspective to the table.

6. Wrap-up

a. Upcoming Events

- [NHTSA AV TEST](#) Initiative Virtual Event – Sept 2, 2020. The AV Transparency and Engagement for Safe Testing (TEST) is a pilot program developed by NHTSA to publicly display information on the testing and development of automated driving systems across the US. This event featured Secretary Chao, NHTSA leadership, and an ADS and rural safety panel with a presentation from Iowa DOT Director Marler.
- [MAASTO](#) CAV eSummit – October 22 and 23, 2020. Mid America Association of State Transportation Officials (MAASTO) is a ten-state region of the Midwest. This CAV summit will focus on developing a regional strategy for CAV.

b. The next round of ATC meetings is being scheduled. Dates are still being identified, but the hope is to have subcommittee meetings in late 2020 with the Council meeting in early 2021.

c. Adjourn



IOWA ADVISORY COUNCIL ON AUTOMATED TRANSPORTATION

Council Meeting
August 31, 2020

WELCOME AND INTRODUCTIONS

Scott Marler, Iowa DOT
Director (ATC Chair)

Jacob Heiden,
University of Iowa



Automated drive

Destination: 50° 43' 50.34" N - 6° 10' 55.294" E
Arrival: 08:55 pm - Distance 783 miles

TCP/IP: 192.56.327.684.1
SYNC: **enabled** | Sensors: **active** | Cameras: **active**

Automated drive

Destination: 50° 43' 50.34" N - 6° 10' 55.294" E
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UPDATE ON THE JURISDICTIONAL GUIDELINES FOR THE SAFE TESTING AND DEPLOYMENT OF HIGHLY AUTOMATED VEHICLES

- Cathie Curtis – Director, Vehicle Programs, American Association of Motor Vehicle Administrators (AAMVA)



American Association of
Motor Vehicle Administrators

Safe Testing and Deployment of Vehicles Equipped with Automated Driving Systems Guidelines - Edition 2

OUR VISION

Safe drivers

Safe vehicles

Secure identities

Saving lives!

OUR MISSION

serve North American
motor vehicle & law enforcement agencies
to accomplish their missions

OUR VISION

safe drivers
safe vehicles
secure identities
saving lives!

- Founded in 1933, the American Association of Motor Vehicle Administrators (AAMVA) represents to Motor Vehicle Administrators of all 69 states, provinces and territories of the U.S. and Canada
- Support uniformity and reciprocity among jurisdictions
- Provide guidance and best practices on emerging issues.

Established fall 2014 - 20 US and Canadian jurisdictional members and AAMVA staff with wide range of expertise in:

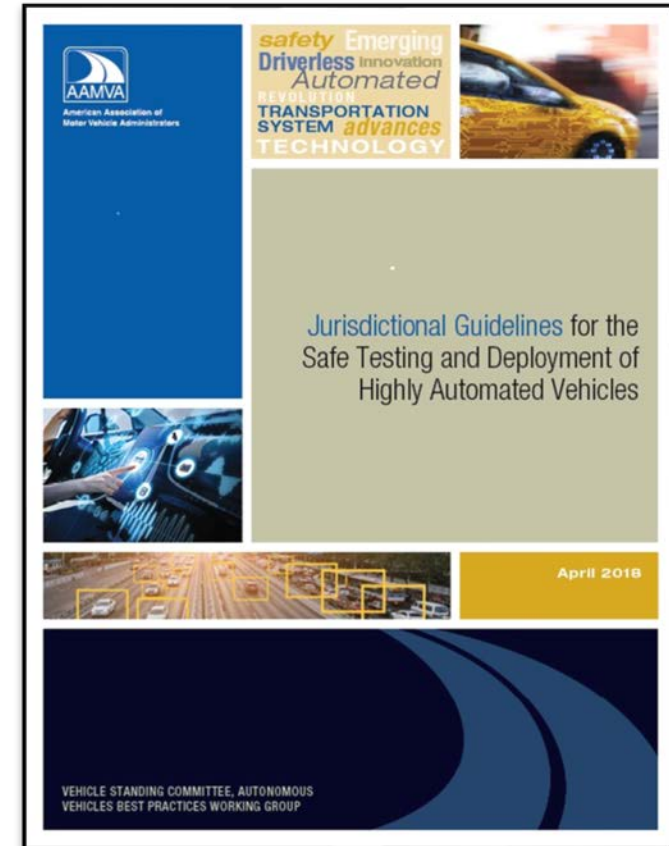
Vehicle and driver programs
Law enforcement
Legal and policy



Report: “Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles”

Provides voluntary recommended guidelines.

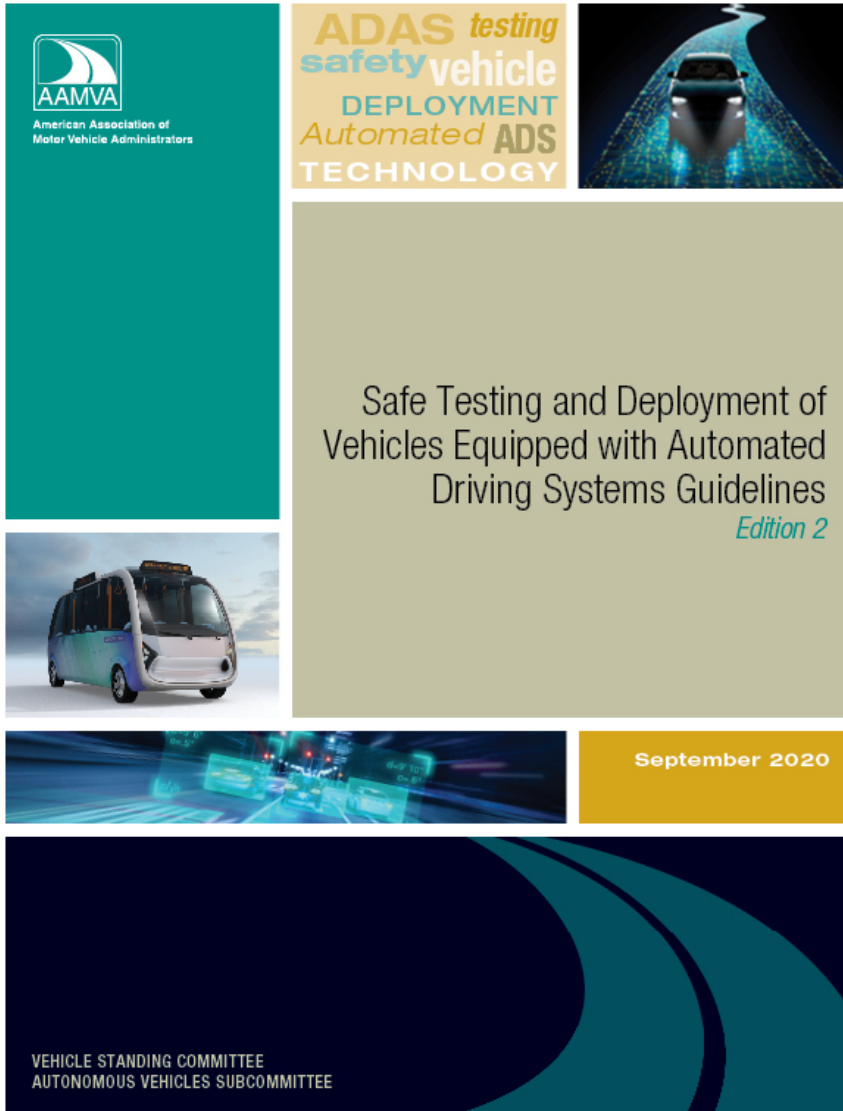
Edition 1 Published May 2018



<https://www.aamva.org/GuidelinesTestingDeploymentHAVs-May2018/>

Purpose:

Provide recommendations to jurisdictions that facilitate a consistent regulatory framework to balance current public safety with the advancement of vehicle innovations, to reduce crashes, fatalities, injuries, and property damage.



Developed Edition 2 over the last 2 years

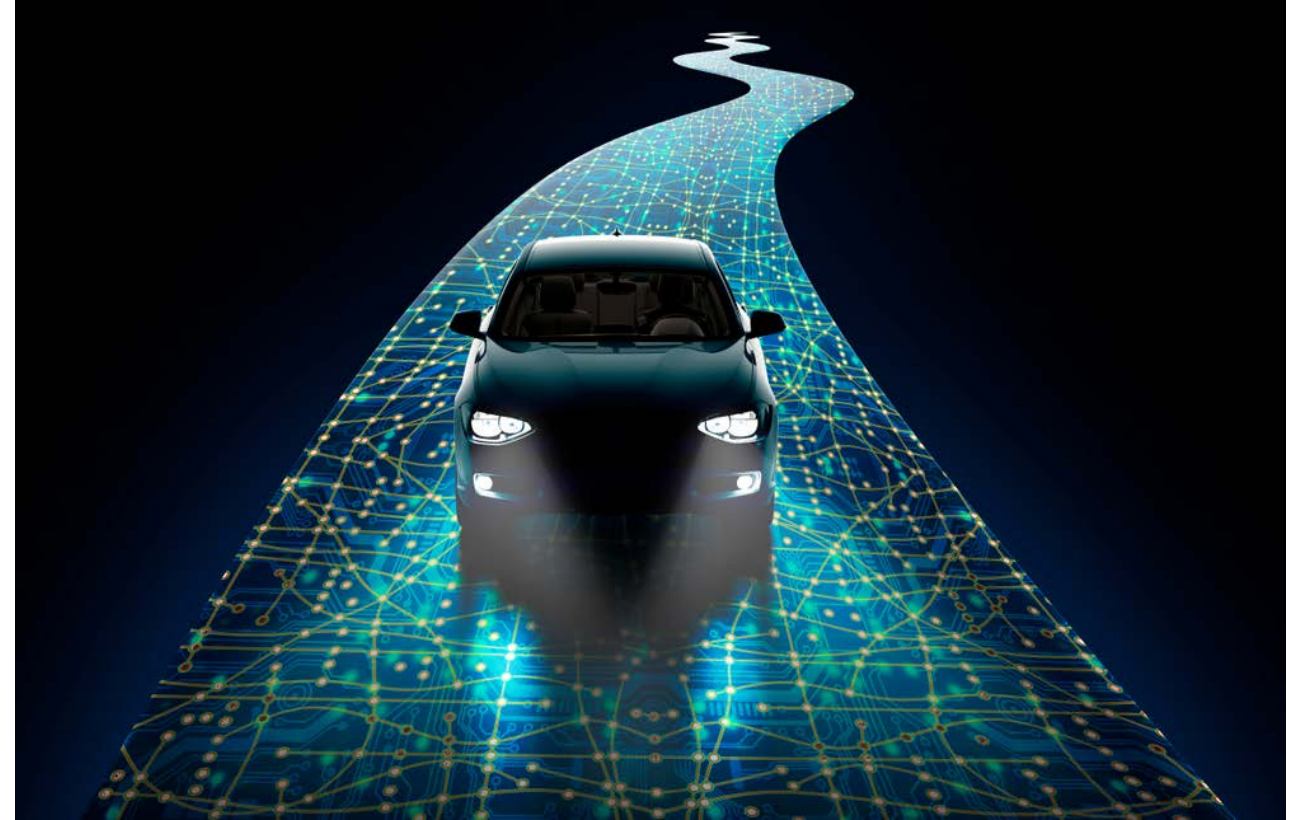
Will be published Fall 2020
Replaces Edition 1

Global Changes In Edition 2:

- The term “Highly Automated Vehicles” been retired and replaced by the term “ADS-equipped vehicles”
- Several chapters now include information related to Advanced Driver-Assistance Systems (ADAS)
- The Autonomous Vehicles Working Group (AVWG) was renamed the Automated Vehicles Subcommittee

8 Chapters

1. Executive Summary
2. Definitions and Acronyms
3. **Administrative Considerations**
4. **Vehicle Considerations**
5. **Driver Licensing Considerations**
6. **Law Enforcement Considerations**
7. **Other Considerations**
8. Next Steps



Contains a total of 11 recommendations directed to jurisdictions and 2 directed to Manufacturers and Other Entities (MOEs), also adds 1 new subsection*

3.1 Administration

*3.2 Advanced Driver-Assistance Systems (ADAS)



This chapter is reorganized. Contains 36 recommendations in 10 subsections; 33 recommendations directed to jurisdictions and 3 are directed to MOEs.

4.1 Application and Permit for Manufacturers or Other Entities to Test Vehicles on Public Roadways

Updated

Includes 2 additional recommendations

4.2 Actions on Permit Process

Rewritten to include 2 new recommendations

4.3 Information on the Manufacturer's Certificate of Origin (MCO) and New Vehicle Information Statements (NVIS)

Includes some minor updates

4.4 Titling and Branding for New and Aftermarket ADS-Equipped Vehicles – Includes some updates

4.5 Vehicle Registration Includes some updates

4.6 License Plates



4.7 Financial Responsibility also known as Mandatory Liability Insurance –

This subsection included several updated recommendations



4.8 Jurisdictional Approval of the ADS as the Driver

New section

4.9 Federal Motor Vehicle Safety Standards (FMVSS) and Canadian Motor Vehicle Safety Standards (CMVSS) – rewritten and updated

4.10 Periodic Motor Vehicle Inspections – new section



Edition 2 reorganizes this chapter, includes a total of 36 recommendations (some new) and adds 3 new subsections

5.1 Driver and Passenger Roles Defined

5.2 Driver License Requirements for Testing by Manufacturers and Other Entities (MOE)

5.3 Remote Driver – new section

5.4 Endorsements and Restrictions for Deployed Vehicles





5.5 Driver Training for Drivers on Vehicle Technologies – updated

5.6 Training for Driver Educators and Considerations for Driver Education and Driver Training Programs – rewritten and updated

5.7 Driver License Skills testing with Vehicle Technologies

5.8 Training Motor Vehicle Agency Examiners on Vehicle Technologies



5.9 Training Motor Vehicle Agency Staff on Vehicle Technologies

new section

5.10 Commercial Driver Licensing (CDL)

new section

Edition 2 reorganizes the chapter, includes 36 recommendations (some new) and added 2 new subsections*

6.1 Vehicle Identification

6.2 Crash/Incident Reporting

6.3 Criminal Activity

6.4 Distracted Driving

6.5 Establishing Operational Responsibility and Law Enforcement Implications

6.6 Law Enforcement/First Responder Interaction Plans (LEIP)

6.7 Law Enforcement Protocols for Level 4 and 5 Vehicles



6.8 Law Enforcement/First Responder Safety and Training

6.9 Adherence to Traffic Laws

6.10 Vehicle Response to Emergency Vehicles, Manual Traffic Controls and Atypical Road Conditions

6.11 System Misuse and Abuse

New chapter, includes 41 recommendations

7.1 Cybersecurity for Vehicles with Automated Driving Systems

7.2 Data Collection

7.3 Low-Speed Automated Shuttles

7.4 Connected Vehicles

7.5 Platooning

7.1 Cybersecurity for Vehicles with Automated Driving Systems



7.2 Data Collection





7.3 Low-Speed Automated Shuttles

7.4 Connected Vehicles



7.5 Platooning



Next Steps

The subcommittee will be developing whitepapers over the next year

Automated Delivery
Vehicles



Updating Distracted
Driving Laws





Thank you!

Questions?

Contact Information:

Cathie Curtis ccurtis@aamva.org



AUTOMATED DRIVING SYSTEMS RULEMAKING UPDATE

- Sara Siedsma, Compliance Officer, Iowa DOT

Iowa ADS Draft Rulemaking Overview

Iowa Advisory Council on Automated Transportation
August 31, 2020





Agenda

- Background
- Draft rules
- Next steps
- Discussion



Senate File 302

AN ACT
RELATING TO MOTOR VEHICLES OPERATED BY AN AUTOMATED DRIVING
SYSTEM, AND MAKING PENALTIES APPLICABLE.


Background

Background

- Senate File 302 authorized the Department to adopt administrative rules regulating autonomous vehicles. Statute refers to driverless-capable vehicles.
- Internal DOT working group presented management team with rulemaking recommendations in December 2019.
- Working group met for several months developing draft administrative rules.



Rulemaking Draft



Chapter 380 - Definitions

761—380.2(321) Definitions. The definitions in Iowa Code section 321.514 are adopted and incorporated herein. In addition:

“*ADS-equipped vehicle*” means the same as a driverless-capable vehicle as defined in this chapter.

“*Conventional human driver*” means the same as defined in Iowa Code section 321.514, but does not include a driverless-capable vehicle user.

“*Driverless-capable vehicle*” as defined in Iowa Code section 321.514 a driverless-capable vehicle means the vehicle meets one of the following classifications:

- *Level 3 – Conditional Driving Automation.* The vehicle is capable of achieving the sustained and specific performance of the entire dynamic driving task as provided in the operational design domain. A level 3 vehicle must have a conventional human driver present in the vehicle capable of responding to a request to intervene issued by the automated driving system, as well as to dynamic driving task performance-relevant system failures in other vehicle systems.
- *Level 4 – High Driving Automation.* The vehicle is capable of achieving the sustained and specific performance of the entire dynamic driving task as provided in the operational design domain. A level 4 vehicle does not require a conventional human driver and does not require a driverless-capable vehicle user present in the vehicle or performing remote operation to respond to a request to intervene issued by the automated driving system.
- *Level 5 – Full Driving Automation.* The vehicle is capable of achieving the sustained and unconditional performance of the entire dynamic driving task. A level 5 vehicle is capable of performing all driving functions under all conditions A level 5 vehicle does not require a conventional human driver and does not require a driverless-capable vehicle user present in the vehicle [or performing remote operation] to respond to a request to intervene issued by the automated driving system.

“*Driverless-capable vehicle user*” means a natural person who does not control the in-vehicle accelerating, braking, steering, and transmission gear selection input devices in order to operate a motor vehicle and who is not otherwise expected to respond to a request to intervene issued by the automated driving system of a driverless-capable vehicle.

“*Functional highway classifications*” means the process by which streets and highways are grouped into classes, or systems, according to the character of service the street or highway is intended to provide, and may include, but not be limited to a functional highway classification established under 23 CFR Section 470.105.

“*Operational design domain*” means the same as defined in Iowa Code section 321.514 and can be either a specific document or set of documents defining the domain under which an automated driving system is designed to properly operate.

“*Public highways*” means the same as “Street or Highway” as defined in Iowa Code section 321.1.



Chapter 380 - Contact Information

761—380.3(17A) Information and addresses. Information and forms concerning driverless-capable vehicles are available as follows:

380.3(1) Information and forms pertaining to driverless-capable vehicle testing permits and vehicle registration and operational restrictions issued by the department or a county treasurer for a driverless-capable vehicle may be obtained in the form and manner prescribed by the department by mail from the Vehicle and Motor Carrier Services Bureau, Iowa Department of Transportation, P.O. Box 9278, Des Moines, Iowa 50306-9278; in person at 6310 SE Convenience Blvd., Ankeny, Iowa; by telephone at (515)237-3264; by email at vsusto@iowadot.us; or on the department's website at www.iowadot.gov.

This rule is intended to implement Iowa Code section 17A.3.



Chapter 380 - Identification

761—380.4(321) Identification of driverless-capable vehicles in registration. The classification level of a driverless-capable vehicle subject to registration under chapter 761—Chapter 400 shall be listed in the department's records system established under Iowa Code section 321.31.


This rule is intended to implement Iowa Code sections 321.20, 321.31, 321.515 and 321.519.



Chapter 380 - Restrictions

761—380.5(321) Operational restrictions. The department may impose operational restrictions on a driverless-capable vehicle as provided in rule 761-400.21(321) as a condition of registration of the vehicle.

This rule is intended to implement Iowa Code sections 321.515 and 321.519.



Chapter 380 - Vehicle Networks

761—380.6(321) Identification of driverless-capable vehicle networks. A person seeking to operate a for hire driverless-capable vehicle network in Iowa, including an on-demand driverless-capable vehicle network, may be required to submit to the department the operational design domain or any other documentation required by the department to assess the operational capabilities for any driverless-capable vehicle to be used in the driverless-capable vehicle network as part of the application for the applicable permit under rule 761-524.3(325A) or 761-540.4(321N).

This rule is intended to implement Iowa Code sections 321.518 and 321.519.



Chapter 380 - Testing Permit (application)

761—380.7(321) Driverless-capable vehicle testing permit. The department may issue a driverless-capable testing permit, not to exceed one year, to a manufacturer or other entity seeking to test one or more driverless-capable vehicles that meet the operation standards set forth in Iowa Code section 321.515. The department reserves the right to consult with any expert in the field of driverless-capable vehicle technology, including, but not limited to, any educational institution in evaluating any application for a testing permit under this chapter.

380.7(1) Application. An application for a driverless-capable vehicle testing permit shall be made to the department on a form designated by the department, electronic or otherwise, and prescribed for that purpose. The form shall require all of the following:

- a.* The full legal name of the manufacturer or entity and the federal employer identification number.
- b.* The address of the manufacturer's or entity's principal place of business.
- c.* If incorporated or otherwise organized, the manufacturer's or entity's state of incorporation or organization.
- d.* The name, address, telephone number and e-mail address of the person submitting the application on behalf of the manufacturer or entity.
- e.* A statement signed by the manufacturer's or entity's authorized representative confirming the manufacturer's or entity's agreement to comply with all applicable requirements of Iowa Code, including sections 321.515 to 321.519 and this chapter.
- f.* A statement signed by the manufacturer's or entity's authorized representative confirming that the vehicle or vehicles do not exceed the limits set forth in Iowa Code 321.454, 321.456, 321.457, and 321.463 and acknowledging that a separate permit would be required under Iowa Code 321E and rule chapter 761—511 if otherwise applicable.
- g.* The name and address of the manufacturer's or entity's agent for service of process in the state of Iowa.



Chapter 380 - Testing Permit (supporting documents)

380.7(2) Supporting documents. An application for a driverless-capable vehicle testing permit shall be accompanied by the following:

- a.* Copy of the manufacturer's or entity's testing plan, including the goal of the proposed testing.
- b.* Proof of compliance with the financial responsibility requirement of Iowa Code section 321.516.
- c.* Vehicle specific information for all vehicles to be included under the permit, including:
 - (1) Vehicle identification number.
 - (2) Vehicle year, if assigned by the manufacturer.
 - (3) Vehicle make, if assigned by the manufacturer.
 - (4) Vehicle model, if assigned by the manufacturer.
 - (5) License plate number and jurisdiction of issuance if applicable.
 - (6) Driverless-capable vehicle classification level.
 - (7) Whether the vehicle is intended to be tested with or without a conventional human driver or driverless-capable vehicle user present in the vehicle.
 - (8) Vehicle type, for example, whether the vehicle is a passenger, commercial, low-speed, or unmanned vehicle, including any combination thereof.
- d.* List of all drivers to perform testing for the manufacturer or entity under the permit, including:
 - (1) The person's full name.
 - (2) The person's date of birth.
 - (3) The person's driver's license number and jurisdiction or country of issuance.
 - (4) A certified copy of the person's driving record if the person's driver's license was not issued by the state of Iowa.
- e.* Summary of the training provided to owners, employees, contractors, or other person's designated by the manufacturer or entity as drivers of test vehicles.
- f.* List of each jurisdiction to which the manufacturer or entity has applied, been issued or been denied a testing permit.
- g.* Copy of manufacturer's or entity's safety plan for testing vehicles, including but not limited to, a minimal risk condition component.
- h.* Copy of the operational design domain of any vehicle intended to be used as a test vehicle.
- i.* Routes to be used when testing the vehicle under the permit, including whether a human is intended to be controlling the vehicle, either inside or outside of the vehicle, on a particular route.
- j.* Evidence of the manufacturer's or entity's financial liability coverage required under Iowa Code section 321.516.
- k.* Copy of the manufacturer's or entity's plan for notifying local law enforcement within the testing vicinity of the intent to test driverless-capable vehicles under a permit issued under this chapter.
- l.* Any other documents determined necessary by the department.



Chapter 380 - Testing Permit (driver qualifications)

380.7(3) Driver qualifications. To be qualified to perform testing under the driverless-capable vehicle testing permit, a person must:

a. Hold a valid driver's license pursuant to Iowa Code section 321.174 that permits unaccompanied driving, other than a motorized bicycle license or a temporary restricted license.

b. Have a clear driving record for the previous two years. A clear driving record means the person has:

(1) Not been identified as a candidate for driver's license suspension under the habitual violator provisions of rule 761—615.13(321) or the serious violation provisions of rule 761—615.17(321), or the equivalent provisions under the law of the person's jurisdiction or country of driver's license issuance.


(2) No driver's license suspensions, revocations, denials, cancellations, disqualifications or bars.

(3) Not committed an offense that would result in driver's license suspension, revocation, denial, cancellation, disqualification or bar.

(4) No record of a contributive motor vehicle accident that caused the death or serious injury of another person.

(5) No record of two or more contributive motor vehicle accidents in a two-year period.

c. Be an owner, employee, contractor of or person designated by a manufacturer or entity to test driverless-capable vehicles on behalf of the manufacturer or entity.



Chapter 380 - Testing Permit (issuance)

380.7(4) Issuance, renewal, and display of permit. When all requirements are met, and the department is satisfied that all safety considerations have been addressed, the department may issue the driverless-capable vehicle testing permit.

a. A manufacturer or entity shall not test driverless-capable vehicles in Iowa without a valid permit issued under this chapter.


b. The permit may include operational restrictions as provided under rule 761—400.21 or as determined necessary by the department to protect the health, safety and welfare of the public.

c. The manufacturer or entity shall make a copy of the permit and carry it in each driverless-capable motor vehicle being tested under the permit at all times. The copy may be in either a physical or an electronic format as prescribed by the department. The permit shall be available for display to any peace officer upon request.

d. The state of Iowa, the department, and any other permit-issuing authority assume no responsibility for the property of the permit holder. Permit holders shall hold permit-issuing authorities harmless of any damages that may be sustained by the traveling public, adjacent property owners or the streets or highways of this state on account of movements made under permit.

e. Testing a driverless-capable vehicle without a valid permit issued under this chapter or operating a driverless-capable vehicle outside the terms of the testing permit or this chapter may result in a violation of Iowa Code section 321.381 or 321.482.

f. A testing permit may be renewed. If more than one vehicle is included on the original permit, vehicles may be deleted on the renewal application. The application for renewal shall be submitted to the department within 60 days of the expiration date, unless otherwise approved by the department.



Chapter 380 - Testing Permit (updates)

380.7(5) *Update to a driverless-capable vehicle testing permit.* To change the parameters of a testing permit issued under this chapter, other than a change of name or address of the manufacturer or entity issued the permit or to delete a vehicle from the permit, an updated application and supporting documentation must be submitted to the department. The updated application shall include the permit number. Any testing or operation of a driverless-capable vehicle not listed on the permit shall not commence until a new permit or temporary permit has been issued and is carried in the vehicle.

380.7(6) *Change of name or address for a driverless-capable vehicle testing permit.* Notification of a name or address change shall be sent to the department within 30 days after the change. Notification shall include the permit number, old name or address and new name or address.


380.7(7) *Vehicle deletion.* A permittee may remove vehicles from the permit at any time after the permit is issued. Vehicles shall be deleted in the form and manner prescribed by the department.



Chapter 380 - Testing Permit (suspension and hearing)

380.7(8) *Suspension or revocation and reinstatement.* The department may suspend or revoke a driverless-capable vehicle testing permit if the permit has been issued in conflict with the statutes or rules governing the permit's issuance, for a violation of Iowa Code sections 321.515 to 321.519, 761—Chapter 400 or this chapter. The suspension or revocation shall continue until the manufacturer or entity is no longer in violation. After revocation, a new permit shall be issued upon application.


380.7(9) *Hearings.* A manufacturer or entity whose application for a driverless-capable vehicle testing permit has been suspended or revoked may contest the decision in accordance with Iowa Code chapter [17A](#) and [761—Chapter 13](#). The request for a hearing shall be submitted in writing to the director of the vehicle and motor carrier services bureau. The request shall include, as applicable, the manufacturer's or entity's name, permit number, complete address and telephone number. The request must be submitted within 20 days after the date of the notice of suspension, revocation or denial.



Chapter 380 - Testing Permit (reporting)

761—380.8(321) Reporting. Each manufacturer or entity issued a driverless-capable vehicle testing permit under rule 761—380.7(321) may be required to submit a disengagement report if requested by the department, which shall include, but not be limited to, a description of any unintended disengagement or failure of a test vehicle’s automated driving system. The department may request any other report the department determines necessary to assess the progress of any testing. Any reports required by the department shall be provided to the department on a frequency and in a format determined by the department.

This rule is intended to implement Iowa Code sections 321.515 and 321.519.



Chapter 400 - Vehicle Registration & Titling (definitions)

761—400.1(321) Definitions. The definitions in Iowa Code section 321.1 are hereby made part of this chapter. In addition, the following words and phrases, when used in Iowa Code chapter 321 or this chapter, shall have the meanings respectively ascribed to them, except when the context otherwise requires.

.....

“Driverless-capable vehicle” means the same as defined in rule 761—380.2(321).



Chapter 400 - Vehicle Registration & Titling (application)

761—400.3(321) Application for certificate of title or registration for a vehicle.

400.3(1) *Application form.* To apply for a certificate of title or registration for a vehicle, the owner of the vehicle shall complete an application form prescribed by the department, which may be electronic. Application shall be made in accordance with Iowa Code chapter 321, these rules, and other applicable provisions of law.

....

400.3(16) *Driverless-capable vehicle.* As provided in Iowa Code sections 321.20 and 321.515 and rule 761—400.21(321), the applicant shall indicate on the application whether the vehicle is a driverless-capable vehicle as defined in rule 761—380.2(321).



Chapter 400 - Vehicle Registration & Titling (supporting documents)

761—400.4(321) Supporting documents required. This rule describes the basic supporting documents to be submitted by an applicant for a certificate of title or registration.

....

400.4(10) Driverless-capable vehicles. If an application is made for a driverless-capable vehicle, the department may require the application to be accompanied by all applicable documents identified in rule 761—380.7(2) or any other documentation the department may require to assess the vehicle's operational capabilities.



Chapter 400 - Vehicle Registration & Titling

(information appearing on
title or registration)

761—400.7(321) Information appearing on title or registration. In addition to the requirements of Iowa Code sections [321.24](#), [321.52](#), [321.69](#), [321.71](#) and [322G.12](#), a certificate of title or registration receipt or both shall contain the following information when applicable:

....


[400.7\(12\) Driverless-capable vehicle indicator.](#)



Chapter 400 - Operational Restrictions

400.21(5) When a vehicle registered in this state is modified to make it a driverless-capable vehicle as defined in Iowa Code section 321.514, the person in whose name the vehicle is registered shall within thirty days notify the department upon a form prescribed by the department.

400.21(6) As provided in Iowa Code sections 321.515 and 321.519, the department may restrict the operations of a driverless-capable vehicle registered in this state or another state, but which operates in this state. The restrictions may include, but are not limited to, the restrictions provided in subrules 400.21(1) and 400.21(2) and any operational restrictions based on a specific functional highway classification, weather conditions, days of the week and times of day. The department may require the vehicle owner to submit to the department the automated driving system's intended operational design domain for the vehicle on a form prescribed by the department or any other documentation the department requires to assess or inspect the vehicle's operational capabilities. The department may evaluate the automated driving system's intended operational design domain for the vehicle or any other documentation the department requires to assess the vehicle's operational capabilities, to establish restrictions. The department may establish additional operational restrictions to ensure safe operation of the vehicle. The department may establish restrictions under this subrule for a vehicle regardless of whether the vehicle's automated driving system technology is continuously engaged. The department shall issue a certificate of restriction as provided in subrule 400.21(3) for any restriction established under this subrule.



Chapter 524 - Intrastate Motor Carriers (supporting documents)

761—524.3(325A) Applications and supporting documents.

...

524.3(3) Supporting documents. An application for a motor carrier permit or motor carrier certificate must be accompanied by the following supporting documentation in the form and manner prescribed by the department:

....

f. All applicable documents identified in rule 761—380.7(2), and any other documentation, if required by the department, necessary to assess the operational capabilities of any driverless-capable vehicles the motor carrier intends to operate including for the purpose of determining whether to impose operational restrictions as authorized under rule 761—400.21(321).



Chapter 540 - Transportation Network Companies (supporting documents)

761—540.4(321N) Application for transportation network company permit and supporting documents.

...

540.4(3) Supporting documents. An application for a transportation network company permit shall be accompanied by the following:

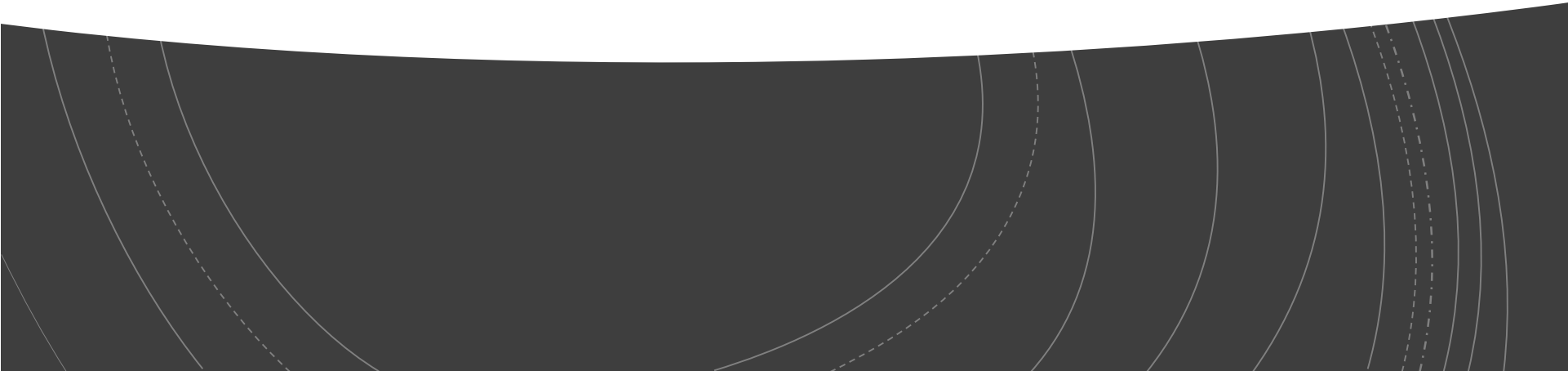
....

j. All applicable documents identified in rule 761—380.7(2), and any other documentation, if required by the department, necessary to assess the operational capabilities of any driverless-capable vehicles the transportation network company intends to operate including for the purpose of determining whether to impose operational restrictions as authorized under rule 761—400.21(321).

Next Steps

- Settle any areas currently under discussion.
- Send rule draft out for official stakeholder review and comment (early fall 2020).
- Complete remainder of internal review/approval steps.
- Draft notice of intended action (late fall 2020).

Discussion





THANK YOU



Sara Siedsma
Compliance Officer
Motor Vehicle Division
sara.siedsma@iowadot.us

COMMUNICATIONS & OUTREACH WORKING GROUP



Automated drive

Destination: 50° 43' 50.34" N - 6° 10' 55.294" E
Arrival: 08:55 pm - Distance 783 miles

TCP/IP: 192.56.327.684.1
SYNC: **enabled** | Sensors: **active** | Cameras: **active**

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ANDREA HENRY, IOWA DOT (CHAIR)

Active Coordination

Public Outreach

Response Planning



2.1 Tactics Summary Table

	Deliverables	Lead(s)	Resources	Scenarios	Timeline
Active Coordination	<p>Engagement across all council and subcommittee meetings</p> <p>Standing outreach agenda item</p>	Andrea Henry	Team member time	n/a	Ongoing
Public Outreach	<p>Web, print, & presentation material</p> <p>ATC presence at stakeholder meetings</p>	Andrea Henry	<p>Website capabilities</p> <p>Graphic designers</p> <p>Funding for materials</p>	Updating public via: in-person / virtual public meetings; website; media	Ongoing
Response Planning	Communications / response plan for eventual AV incident	Andrea Henry	Collaboration between DOT, DPS, of U of IA	<p>Robust plan for a major AV incident</p> <p>Simpler plan for minor AV incident</p>	<p><i>(draft)</i></p> <p>Sep 2020 – outline/draft</p> <p>Nov 2020 – condensed plan</p> <p>Jan 2020 – major incident plan</p>

Press Clippings

Email ideas to:

DOT-IowaATC@iowadot.us



The Iowa Advisory Council on Automated Transportation is intended to increase roadway safety, personal mobility, and freight movement within the state of Iowa by advancing highly automated vehicle technologies. The Council provides guidance, recommendations, and strategic oversight of automated transportation activities in the state. The structure of the ATC Press Clippings is done to align with the subcommittees and working groups that exist for the Council while aiming to keep the Council and other interested parties informed. Learn more at iowadrivingav.org/

Articles and upcoming events August 31, 2020

Infrastructure Readiness

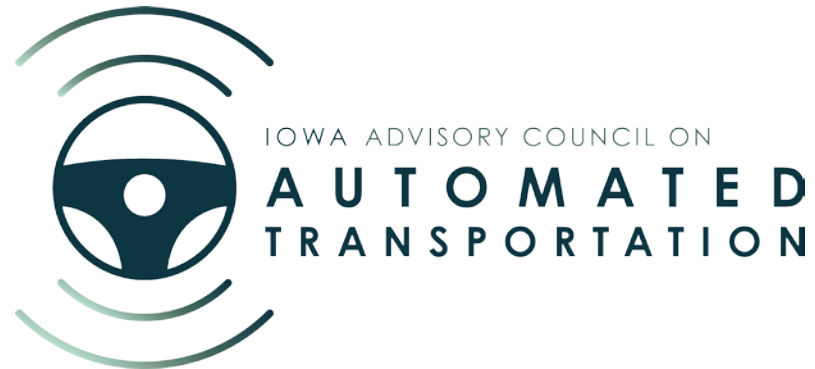
[FHWA Proposes New Rule To Improve Highway Rights-Of-Way Coordination](#)
- Roads & Bridges

[Georgia Tech's Smart Communities Challenge Inspires City Innovation](#)
- Government Technology

Branded Materials

Find all under Communications Working Group/
Branding

- Logo finalized – on website



- Handout/Whitepaper Template on Sharepoint



iowadrivingav.org
DOT-IowaATC@iowadot.us

TITLE HERE

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SUBHEADING

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Branded Materials

*Find all under Communications Working Group/
Branding*

- Short sub-committee descriptions added to website

INFRASTRUCTURE READINESS

Subcommittee chair: Erin Mullenix, Iowa League of Cities

Spans the various dimensions of physical, digital, energy, security, institutional, workforce, and supporting topics.

- Review of ATC flier
- What else is needed?





Communications Plans

- Emergency Response
 - Working on formation of input group
 - Focus will be on:
 - Response structure
 - Coordination of event specific awareness
 - General safety talking points and Iowa's role in preparing for AT
- General DOT-led plan focused on AT related technologies/initiatives.

SUBCOMMITTEE TACTICAL EFFORTS



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INFRASTRUCTURE READINESS – ERIN MULLENIX, IOWA LEAGUE OF CITIES (CHAIR)

Build Out Fiber Backbone

Automation Readiness



2.1 Tactics Summary Table

	Deliverables	Lead(s)	Resources	Scenarios	Timeline
Assess and Advance AT Readiness	Readiness assessment Incremental readiness improvements	Adam Shell	Funding DOT and University staff time	Specific integration case Robust program	2020 discussions and initial steps 2021+ improvements
Implement Pilot Program	(led by Economic Development – refer to that work plan for details)				
Improve Pavement Marking	Phased implementation plan Updated pavement marking policy	Neal Hawkins	Staff time for planning Funding needed for equipment and materials	Phased implementation	Refer to DOT marking task force
Build Out Fiber Backbone	Gap identification Expansion plan	ICN or IEDA (TBD)	Short term staff time or consultant support Long term fiber investment	Incremental	2018 SLP and ERI 2020 Rural Summit
Define Data Systems Architecture	Plan for AT-related data management	DOT (TBD)	Staff time or consultant support	N/A	TBD



ECONOMIC DEVELOPMENT – RICK PETERSON, IOWA ECONOMIC AUTHORITY (CHAIR)

Engage with Iowa Businesses

Automation Readiness

2.1 Tactics Summary Table

	Deliverables	Lead(s)	Resources	Scenarios	Timeline
Implement Pilot Program	New program established Targeted deployments	IEDA (TBD)	Seed funds to be identified	Funding dependent	Ongoing, pending resources
Engage with Iowa Businesses	Targeted engagements	Rick Peterson	Staff time	N/A	TBD
Assess Platooning Corridors	Assessment Plan for next steps	DOT (TBD)	Staff time	May be combined with other platooning tactic or the broader readiness assessment	2019 discussion and legislation
Initiate Platooning Study	Scope Study Recommendations	DOT (TBD)	Staff time and/or consultant support	May be combined with other platooning tactic or the broader readiness assessment	2019 discussion and legislation
Engage with Iowa Community Colleges	Targeted engagement (IACCT)	IEDA (TBD)	Staff time	TBD	2020 webinar series

PUBLIC SAFETY & ENFORCEMENT – COL. NATHAN FULK, IOWA STATE PATROL (CHAIR)

Capture AV Crash Data

Explore Vehicle Automation Indications

Develop Following Distance Guidelines



1.2 Tactics Summary Table

	Deliverables	Lead(s)	Resources	Scenarios	Timeline
Capture AV Crash Data	Revised TraCS form and DB Other data through RDT&E	Dennis Kleen & Pat Hoye	Stakeholder engagement, technical staff to revise the TraCS database	TBD (dependent on resources and priorities)	TBD (recurrent agenda item)
Explore Vehicle Automation Indicators	List of potential AV indicators Reconnaissance and recommendations	Dan McGehee	Analysis of existing guidance	Compromise on indicators	Initiated June 2019
Develop Following Distance Guidelines	Best practice synthesis Guidelines for enforcement	Major Randy Kunert & Asst. Chief Tom Bruun	Stakeholder engagement w/ law enforcement, analysis of existing guidance	Dependent on experience with changed law	TBD
Address VRU Safety	Addressed in SHSP update and other modal plans	Greg Shill (?)	Staff time and dedication to updating SHSP	N/A	Upon specific plan update timelines
Inform TIM and Safety Community	Presentation	TBD (Statewide TIM Committee / Current TIM Committee Chair or designee)	Outreach to the Statewide TIM Committee	N/A unless major AV incident occurs	TBD
ODD Compliance	(in development)	TBD (Iowa DOT MVD)	TBD	TBD	TBD



POLICY & LEGISLATION – DYLAN MULLENIX, DES MOINES AREA MPO (CHAIR)

Monitor Legislation

Bolster State Leadership

Ensure CAT in Planning

2.1 Tactics Summary Table

	Deliverables	Lead(s)	Resources	Scenarios	Timeline
Monitor Legislation	Tracking and feedback on Iowa, other states, and federal activity	Renee <u>Jerman</u> & Adam Shell	Staff time and engagement	N/A	Follows annual cycle
Implement Pilot Program	(led by Economic Development – refer to that work plan for details)				
Ensure CAT in Planning	Incorporation of CAT into various plans and programs	Garrett Pedersen, Iowa DOT	Staff awareness and follow-up with in/outreach	In/outreach materials, organizational meetings	With planning and conference cycles
Bolster State Leadership	Specific engagement and general education opportunities	Dylan <u>Mullenix</u> , Des Moines Area MPO	Staff time, collaboration with Communications work group	Visits, tours, presentations, meetings, etc.	Ongoing
Modify Administrative Rules	Stakeholder meetings, research, draft and final recommendations	Sara <u>Siedsma</u> , Iowa DOT	Staff time, consultant support	Subject to rulemaking needs that arise	
Improve Equity & Accessibility	Recommendations and outreach	Mindi Nguyen, Iowa DOT	Staff time	Focus on a specific disadvantaged community	TBD



WRAP-UP

- Upcoming Events
 - [NHTSA AV TEST](#) Initiative Virtual Event – Sept 2, 2020
 - [MAASTO](#) CAV eSummit – October 22 and 23, 2020
- Next Meetings
- Adjourn



THANK YOU