



## Update on Regional & National AV Efforts

December 16, 2020

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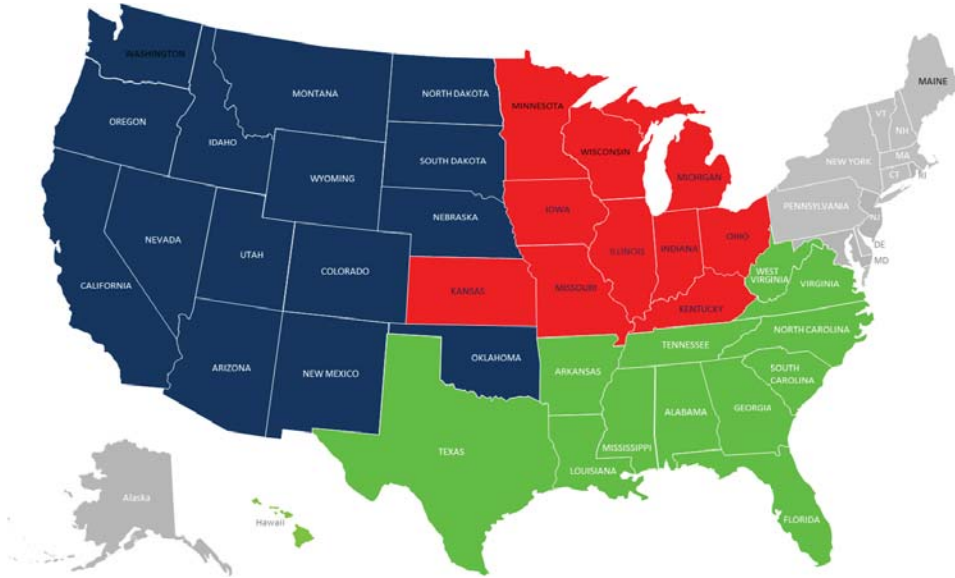


192  
TRAFFIC DEATHS  
THIS YEAR



- **MAASTO CAV Committee**
- **Federal Rulemaking**
- **State Rulemaking**
- **AAMVA AV Subcommittee**
  - Safe Testing and Deployment of Vehicles Equipped with Automated Driving Systems Guidelines - Edition 2

# MAASTO

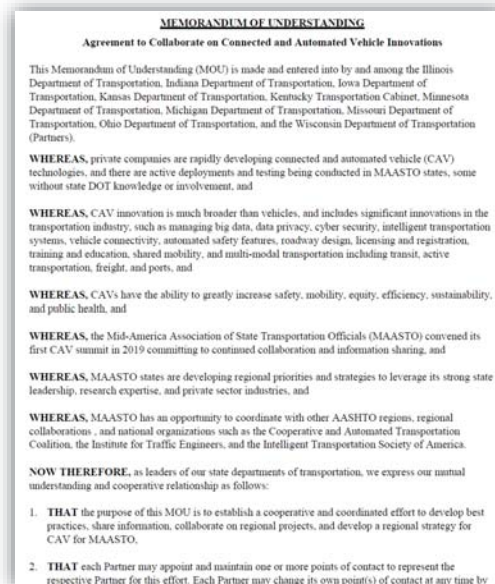


<http://www.maasto.net/>

- MAASTO
- NAASTO
- SASHTO
- WASHTO

# CAV MOU Commitments

- Ongoing information sharing, sharing best practices, collaborating on regional projects
- Develop a regional strategy for CAV for the region
- Host an annual summit
- The first U.S. region to develop an MOU and work towards developing a regional strategy



## MAASTO CAV Vision

A national leader in **collaborative advancement** of connected and automated technologies to increase transportation **safety**, create a **thriving Midwest economy**, shape national transportation **policy**, and **enhance quality of life**.

## MAASTO CAV Mission

Advance **regional safety** and collaboration to promote **unified policy, interoperability** across boundaries, and establish **cooperative public-private partnerships** to **safely test and deploy** emerging technologies that advance regional and **community transportation needs**.

## 2020 CAV Summit

**Goal:** Hear from national industry leaders and researchers to collaboratively finalize a 10-year CAV strategic plan and regional strategy

**Audience:** DOT leadership and staff in key functional areas. Industry attended on day 1

Day 2 reserved for DOT staff

Day 1 Agenda National Perspectives and Research	Day 2 Agenda Finalizing a Regional Strategy
Welcome	Recap & Feedback
2019 Summit Recap	Overview of MAASTO Regional Strategy
MAASTO state CAV updates	Strategy Polling & Feedback
FHWA, AAMVA, TETC, ITS America National CAV Panel	8 Breakouts & Report-Outs
MAASTO Regional Research Updates	MAASTO States' Round Robin & Takeaways

## State CAV Program Updates & Themes

COMMONALITIES	DIFFERENCES
1. Strategy and planning	1. CAV corridor development
2. State councils/task forces	2. Few designated CAV offices
3. CAV lead/office/staff	3. UAS/drone coordination
4. Automated freight & platooning	4. EV/shared mobility/micro-mobility
5. Reviewing AV laws	5. AV laws
6. 6-inch markings	6. Investment and funding levels
7. Mixed fleet approach	7. Standards vs. testing
8. DMV coordination	
9. Broadband investment	



# 2030 MAASTO Regional Strategy

- Strategies based on a 2020 survey of member states, interactive MentiMeter exercises and discussions with the member states
- The 10-year MAASTO CAV Regional Strategy is divided into 3 phases: short-term strategies, medium-term strategies, and long-term strategies.



# MAASTO CAV Strategy Gaps to Address

SHORT-TERM STRATEGIES	MEDIUM-TERM STRATEGIES	LONG-TERM STRATEGIES
1. Research CAV impacts on transportation budgets, projects, operations and business needs	7. Develop model AV legislation	12. Understand how long-range transportation planning is impacted by platooning, connected vehicle technologies, autonomous shuttles, and other CAV technologies
2. Leverage industry partners/academia to research CAV issues	8. Engage law enforcement and first responders regarding enforcement and public safety	13. Support local governments in preparing for CAV through education and continued communication
3. Identify opportunities to share data collected across states (and address data governance)	9. Work with Mid-America Freight Coalition to prioritize freight movements for regional CAV efforts	14. Coordinate on US DOT grant opportunities
4. Work with local communities to address accessibility and equity for those with unmet transportation needs	10. Collaborate to develop uniform minimum following distance platooning laws	
5. Host an annual CAV conference	11. Create a CAV regional forecasting and scenario plans	
6. Encourage DOTs to understand legislative concerns about CAV, including those that impact DMVs		

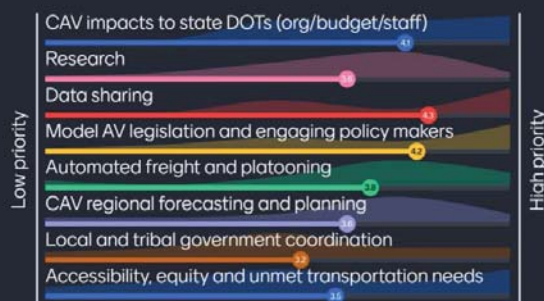
1. Safety focus
2. CAV strategic plans
3. Meeting with private sector
4. Uniform terms and definitions
5. Deployment timelines
6. National Strategy coordination
7. Outreach and engagement
8. Funding

## CAV Committee Working Groups

1. CAV impacts to DOTs (organizational development)
2. Research
3. Data sharing
4. Model AV legislation and engaging policy makers
5. Automated freight and platooning
6. CAV regional forecasting and planning
7. Coordination with local/tribal governments
8. Accessibility, equity and engagement

## Prioritizing this Work

### How would you prioritize the draft regional CAV strategies



1. Data sharing
2. AV policy
3. Organizational development and readiness
4. AV freight and platooning
5. Research
6. Planning and forecasting
7. Access, equity and outreach
8. Local/tribal coordination

# Final MAASTO CAV Strategy

SHORT-TERM STRATEGIES	MEDIUM-TERM STRATEGIES	LONG-TERM STRATEGIES
<ol style="list-style-type: none"> <li>1. DOT Organizational Readiness</li> <li>2. Data Sharing</li> <li>3. AV Legislation and Engaging Policy Makers</li> </ol>	<ol style="list-style-type: none"> <li>4. AV Freight and Platooning</li> <li>5. Research</li> </ol>	<ol style="list-style-type: none"> <li>6. Planning and Forecasting</li> <li>7. Local and Tribal Coordination</li> </ol>
ONGOING STRATEGIES		
<ul style="list-style-type: none"> <li>• Equity, Access and Engagement</li> <li>• Coordination on Federal Grants</li> <li>• Regular Convening and Annual CAV Summit</li> </ul>		

# Planning & Forecasting Strategy (Draft)

#	Topic	Strategy	Next Steps and Action Items	Deliverable	Lead	Timeline	Resources
6	Planning and forecasting	6.1 Create a CAV regional forecasting and scenarios	<ol style="list-style-type: none"> <li>1. Identify members between MAASTO CAV Committee and MAAASTO Planning Committee to serve as liaisons</li> <li>2. Host discussion with AASHTO Planning Committee's AV Group and MAASTO Planning Committee</li> <li>3. Monitor NCHRP/TRB AV planning and forecasting research</li> <li>4. Develop a list of MAASTO members that are following this research</li> <li>5. Host discussion on CAV trends and forecasting</li> <li>6. Review AV scenario planning resources used by MAASTO states</li> <li>7. Need to build a shared understanding of what CAV transportation planning looks like</li> <li>8. Develop a regional model by creating common baseline assumptions, such as lane capacity and a range of deployment scenarios.</li> <li>9. Address whether a common timeframe across MAASTO is helpful. Some states may see deployment earlier than others, but there is strong consensus that a common framework is needed.</li> </ol>	Lead champion identified  Group membership finalized  Documented list of CAV trends  Draft regional CAV scenarios	Minnesota (Philip Schaffner)	2025	Staff time; potential \$300k funding for consultant support
	Planning and forecasting	6.2 Understand how long-range transportation planning is impacted by platooning, connected vehicle technologies, autonomous shuttles, and other CAV technologies	<ol style="list-style-type: none"> <li>1. See item #6.1 [Create CAV forecasting and scenarios]</li> <li>2. Meet with MAASTO/AASHTO Planning Committees to discuss CAV planning</li> <li>3. Host discussion on MAASTO states' CAV strategic plans and roadmaps</li> <li>4. Conduct economic analysis amongst the states</li> <li>5. Address how do we include shorter/mid-term strategies (e.g. 5-10 years) for CAV since DOT long-range plans look 20 years out.</li> <li>6. Are trigger points/thresholds needed to make more serious revisions to plans, such as market penetration rates?</li> <li>7. Select a few focus areas to prioritize in long-range plans as a region to have a common approach, e.g. lane markings; usability, accessibility; prioritizing winter; thinking about rural transportation. We could collectively push the national conversation through this work.</li> </ol>	Lead champion identified  Group membership finalized  Documented strategies and framework	Minnesota (Philip Schaffner)	2026	Staff time; potential \$300k funding for consultant support

## Next Steps



## Federal Rulemaking

### NHTSA ([URL](#))

- Automated Driving System Safety Framework
- Docket Number: NHTSA-2020-0106
- Comments close: 2/1/2021

### FHWA ([URL](#))

- National Standards for Traffic Control Devices; MUTCD for Streets & Highways – Revision
- Docket Number: FHWA-2020-0001
- Comments close: 3/15/202



# State Rulemaking

## AV Framework ([SF302 - 2019](#))

- Based on model legislation
- Passenger & Commercial MVs
- New code sections:
  - Definitions
  - Operation
  - Insurance
  - Accidents
  - On-demand driverless-capable vehicle network
  - Authority



# State Rulemaking

## AV Framework (cont.)

- Iowa DOT AV Policy Working Group
- Draft Rulemaking
  - Additional Definitions (SAE levels)
  - Identification in Vehicle Registration
  - Operational Restrictions (e.g. ODD)
  - Testing Permit
- Stakeholder Engagement
- Goal: Finalize Early 2021





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!*



American Association of  
Motor Vehicle Administrators

## AAMVA Mission and Vision

### OUR MISSION

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

### OUR VISION

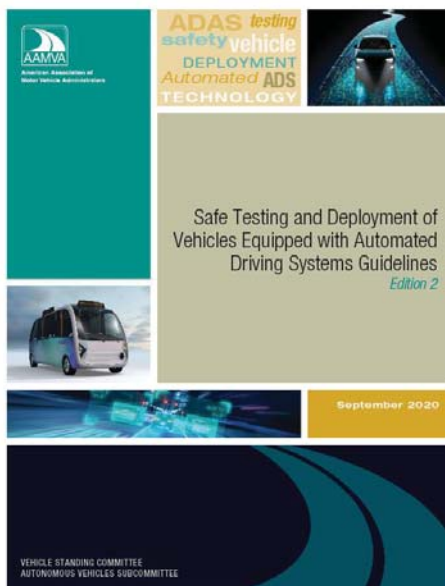
safe drivers  
safe vehicles  
secure identities  
saving lives!

- 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



Developed Edition 2 over the last 2 years

Published September 2020  
Replaces Edition 1

<https://www.aamva.org/SafeTestingandDeploymentOfVehiclesEquippedwithADSGuidelines/>



## 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



## 7.3 – Low-Speed Automated Shuttles



The subcommittee will be developing whitepapers over the next year

**Automated Delivery  
Vehicles**



**Updating Distracted  
Driving Laws**







THANK YOU!



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