

BEST PRACTICES FOR STATE HIGHWAY SAFETY OFFICIALS

States have a general responsibility to reduce traffic crashes and the resulting deaths, injuries, and property damage for all road users in their jurisdictions. States use this authority to establish and maintain highway safety programs addressing: driver education and testing; licensing; pedestrian safety; law enforcement; vehicle registration and inspection; traffic control; highway design and maintenance; crash prevention, investigation, and recordkeeping; and emergency services. This includes any legal components States may wish to consider upon drafting legislation on ADSs.

The following sections describe a framework for States looking for assistance in developing procedures and conditions for ADSs' introduction onto public roadways. NHTSA and AAMVA's collaborative partnership on a Model State Policy is the foundation of the following discussion; however, it has been upgraded to incorporate additional concerns of State stakeholders, the clarification of roles, and an emphasis on the States' consideration of the information—rather than a directive for action. NHTSA does not expect that States will necessarily need to create any new processes or requirements in order to support ADS activities. Instead, the references below are intended as guidance for those States that may be looking to incorporate ADSs into existing processes or requirements or States who are considering such processes or requirements.

1. Administrative: States may want to consider new oversight activities on an administrative level to support States' roles and activities as they relate to ADSs. NHTSA does not expect that States will need to create any particular new entity in order to support ADS activities, but States may decide to create some of these entities if the State determines that they will be useful. The references below are intended as examples of those that may be appropriate for participation.

- a. Consider identifying a lead agency responsible for deliberation of any ADS testing.

- b. Consider creating a jurisdictional ADS technology committee that is launched by the designated lead agency and includes representatives from the governor's office, the motor vehicle administration, the State department of transportation, the State law enforcement agency, the State Highway Safety Office, State office of information technology, State insurance regulator, the State office(s) representing the aging and disabled communities, toll authorities, trucking and bus authorities, and transit authorities.
- c. To encourage open communication, the designated lead agency may choose to inform the State automated safety technology committee of the requests from entities to test in their State and the status of the designated agency's response to companies.
- d. In an effort to implement a framework for policies and regulations, the designated lead agency could take steps to use or establish statutory authority. This preparation would involve examination of laws and regulations in order to address unnecessary barriers to ADS operation on public roadways.
- e. Consider developing an internal process to include an application for entities to test in their State.
- f. Consider establishing an internal process for issuing test ADS vehicle permits.

2. Application for Entities to Test ADSs on Public Roadways:

For those States with an existing application process for test vehicles, the following are considerations for applications involving testing of an ADS on public roadways. It is recommended that the application for testing remain at the State level; however, if a State chooses to request applications at a local level, these considerations would carry to those jurisdictions.

- a. States could request that an entity submit an application to the designated lead agency in each State in which it plans to test ADSs. A process should be considered for application submission in those situations in which multiple entities are involved in the testing of an ADS.
- b. States could request the following information from entities to ensure accurate recordkeeping:
 - Name, corporate physical and mailing addresses, in-State physical and mailing addresses (if applicable), and the program administrator/director's name and contact information;
 - Identification of each ADS that will be used on public roadways by VIN, vehicle type, or other unique identifiers such as the year, make, and model; and
 - Identification of each test operator, the operator's driver license number, and the State or country in which the operator is licensed.
- c. Inclusion of the entity's safety and compliance plan for the ADS could provide increased safety assurance to the State.
- d. Inclusion of evidence of the entity's ability to satisfy a judgment or judgments for damages for personal injury, death, or property damage caused by an ADS in the form of an instrument of insurance, a surety bond, or proof of self-insurance could provide increased safety assurance to the State.³⁴
- e. Inclusion of a summary of the training provided to the employees, contractors, or other users designated by the entity as test operators of the ADS could provide increased safety assurance to the State.

3. Permission for Entities to Test ADSs on Public Roadways:

For States that grant permission for testing of vehicles, the following are considerations for granting permission for ADS testing on public roadways. It is recommended that permission to test remain at the State level; however, State and local governments should coordinate. If a State chooses to request applications at a local level, these considerations would carry to those jurisdictions.

- a. For greater public safety, it is recommended that a State's lead agency involve law enforcement agencies before responding to the application for testing from the entity.
- b. It would be appropriate to suspend permission to test if the entity fails to comply with the State insurance or driver requirements.



- c. It would be appropriate for the lead agency to request additional information or require an entity to modify its application before granting approval.
- d. If a State requires an application, it should consider notification to the entity indicating permission to test that ADS in the State. A State may choose to request that entity's test vehicles carry a copy of proof of permission to test that ADS in those vehicles.

4. Specific Considerations for ADS Test Drivers and Operations:

Considerations for States providing access for test-ADSs as they are operated under designated circumstances and with entity-based operators.

- a. If a State is concerned about the training of an ADS test driver, the State could request a summary of the training provided to the test driver.
- b. For test vehicles, the test driver should follow all traffic rules and report crashes as appropriate for the State.
- c. States regulate human drivers. Licensed drivers are necessary to perform the driving functions for motor vehicles equipped with automated safety technologies that are less than fully automated (SAE Levels 3 and lower). A licensed driver has responsibility to operate the vehicle, monitor the operation, or be immediately available to perform the driving task when requested or the lower level automated system disengages.
- d. Fully automated vehicles are driven entirely by the vehicle itself and require no licensed human driver (SAE levels 4 and 5), at least in certain environments or under certain conditions.³⁵ The entire driving operation (under specified conditions) is performed by a motor vehicle automated system from origin to destination.

5. Considerations for Registration and Titling:

Specific considerations regarding identification and records for ADS deployed for consumer use and operation.

- a. Consider identification of an ADS on the title and registration. This could apply to all ADSs or only those capable of operating without a human driver.
- b. Consider requiring notification of ADS upgrades if the vehicle has been significantly upgraded post-sale. Applicable State forms could be adjusted to reflect the upgrade.

6. Working With Public Safety Officials:

General considerations as public safety officials begin to understand vehicles and needs.

- a. States could consider training public safety officials in conjunction with ADS deployments in their jurisdictions to improve understanding of ADS operation and potential interactions.
- b. Coordination among States would be beneficial for developing policies on human operator behaviors, as to monitor behavior changes—if any—in the presence of ADSs when the vehicle is in control.

7. Liability and Insurance:

Initial considerations for State relegation of liability during an incident and insurance of the driver, entity, and/or ADS. These considerations may take time and broad discussion of incident scenarios, understanding of technology, and knowledge of how the ADSs are being used (personal use, rental, ride share, corporate, etc.). Additionally, determination of the operator of an ADS, in a given circumstance, may not necessarily determine liability for crashes involving the ADS.

- a. Begin to consider how to allocate liability among ADS owners, operators, passengers, manufacturers, and other entities when a crash occurs.
- b. For insurance purposes, determine who (owner, operator, passenger, manufacturer, other entity, etc.) must carry motor vehicle insurance.
- c. States could begin to consider rules and laws allocating tort liability.