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## **OLR Bill Analysis**

**sHB 6486**

### ***AN ACT CONCERNING AUTOMATED DRIVING SYSTEM EQUIPPED VEHICLES.***

#### **SUMMARY**

This bill (1) requires the Department of Transportation (DOT), in collaboration with other agencies, to develop a program to test and operate vehicles equipped with automated driving systems (ADS) (i.e., “ADS-equipped vehicles”) and (2) eliminates the autonomous vehicle (AV) testing pilot program, which never started.

In establishing the program, the bill requires DOT to adopt regulations that (1) incorporate state and federal laws and national best practices on testing and (2) set application requirements for ADS-equipped vehicle owners seeking approval to test or operate their vehicles on state roads. The bill also establishes requirements for testing and operating ADS-equipped vehicles, including that the vehicles must comply with federal safety standards, be registered, and be insured.

The bill also adds and modifies definitions related to ADS-equipped vehicles and eliminates definitions related to the AV testing pilot program.

EFFECTIVE DATE: July 1, 2021

#### **DEFINITIONS**

The bill adds new definitions and modifies existing ones related to ADS-equipped vehicles. By law, (1) “ADS” is the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether the ADS is limited to a specific operational design domain, and (2) “dynamic driving task” means the real-time operational and tactical functions required to operate a motor vehicle on highways, excluding the

strategic functions such as trip scheduling and selecting destinations and waypoints.

The bill eliminates the definition of fully autonomous vehicle and references to levels of automation, instead using the term “ADS-equipped vehicles” to refer to automated vehicles. The bill also eliminates the following definitions for terms used in the pilot program the bill eliminates: AV tester, fleet service provider, AV manufacturer.

### ***Technology-Related Definitions***

The bill adds numerous industry standard definitions related to automated vehicle technology and modifies existing state definitions to conform with industry standards. These definitions and standards were developed by SAE International and published in SAE J3016. (However, the bill eliminates the specific reference to this publication.) SAE International is an engineering professional organization that develops standards for the aviation, automotive, and commercial vehicle industries.

***Operational Design Domain.*** The bill redefines “operational design domain” as the operating conditions under which a driving automation system, or feature of it, is specifically designed to function, including, environmental, geographical, and time-of-day restrictions, and the requisite presence or absence of certain traffic or roadway conditions.

***Minimal Risk Condition.*** Under the bill “minimal risk condition” means a condition that a user or an ADS may bring a vehicle to after performing the dynamic driving task fallback to reduce the risk of a crash when a given trip cannot or should not be completed.

***Other Terms.*** Other defined terms added include: driving automation, dynamic driving task fallback, fallback-ready user, level three or conditional driving automation, operate, request to intervene, system failure, and trip.

### ***Driver, User, and Operator***

The bill defines “driver” as a “user” who performs in real-time part or all of the dynamic driving task. A “user” is a person who performs the human role in driving automation.

The bill also re-defines operator as the driver or the automated driving system that operates a vehicle. Under current law, an “operator” is the person who causes the ADS to engage while physically inside the vehicle.

As with the technology-related terms, these terms conform to SAE standards.

### **ADS-EQUIPPED VEHICLE TESTING**

By January 1, 2023, the bill requires the DOT commissioner to establish a program to test and operate ADS-equipped vehicles on state roads. In doing so, he must consult with the Office of Policy and Management (OPM) secretary and the commissioners of the Department of Motor Vehicles (DMV), Department of Emergency Services and Public Protection (DESPP), and Insurance Department.

The bill requires the commissioners and secretary to consider recommendations from municipalities and other interested stakeholders. As part of the program, they must (1) require ADS-equipped vehicle owners to submit applications with safety plans and (2) approve applications before allowing owners or drivers to test and operate ADS-equipped vehicles.

The commissioners and secretary must jointly adopt regulations establishing program requirements, which must, at a minimum:

1. incorporate state and federal laws and national best practices regarding testing and operating ADS-equipped vehicles on highways;
2. establish application procedures, including requiring each application to include a safety plan to manage the risks associated with crashes and driver inattentiveness and list countermeasures the owner or driver will take to manage the

risks; and

3. include criteria for approving or denying an application.

### ***Testing Requirements and Conditions***

The bill sets a number of requirements and conditions that must be met to test or operate ADS-equipped vehicles on roads.

***Federal Motor Vehicle Safety Standards.*** When required by federal law or regulations, the owner or driver of the ADS-equipped vehicle must, before an ADS-equipped vehicle is tested or operated on state roads, (1) receive certification that the vehicle complies with all federal motor vehicle safety standards and regulations and (2) place on the vehicle any required certification label, including any reference to exceptions granted under federal law or regulation.

***Registration.*** The owner or driver of an ADS-equipped vehicle must register it with DMV or validly register it in another state before operating or testing it on state roads.

***Insurance.*** Before testing or operating ADS-equipped vehicles on state roads, vehicle owners or drivers must maintain auto liability insurance coverage or a surety bond of at least \$5 million for damages because of bodily injury, death, or property damage caused by the vehicle.

***Compliance with Laws.*** ADS-equipped vehicles must comply with state law and municipal ordinances related to motor vehicle operation.

***Requirements During Testing or Operation.*** When an ADS-equipped vehicle is testing or operating on state roads and the ADS is engaged, the following requirements and conditions apply:

1. the ADS is the operator and must perform the entire dynamic driving task;
2. the ADS is not required to get or hold a driver's license;
3. the ADS-equipped vehicle owner is responsible for ensuring the

vehicle's compliant operation;

4. the ADS-equipped vehicle must operate within the operational design domain designated by the manufacturer, unless the vehicle is granted an exception under federal law or regulation; and
5. the ADS must achieve a minimal risk condition or make a request to intervene if an operational design domain exit or a system failure occurs that renders the vehicle unable to perform the entire dynamic driving task relevant to the intended operational design domain.

**Requirements in Event of a Crash.** If an ADS-equipped vehicle is involved in a crash, the vehicle must achieve a minimal risk condition and remain at the crash scene. The vehicle owner, or a person on the owner's behalf, must immediately report the crash to law enforcement and remain at the scene until an officer arrives. Upon the officer's request, the owner or person must provide the following information:

1. proof of registration and insurance;
2. the driver's license of the driver;
3. specific details about the crash, including its possible cause;
4. whether the ADS was engaged prior to and at the time of the crash; and
5. any other information the officer requests.

#### **TESTING PILOT PROGRAM (PA 17-69)**

The bill repeals the current AV testing pilot program, which was never fully operational. The pilot program was to be administered by OPM, in consultation with DMV, DOT, and DESPP, and allow AV testers to test AVs in up to four municipalities. OPM had to select at least (1) one municipality with a population of between 120,000 and 124,000, as listed in the 2010 census (i.e., Stamford), and (2) a different municipality with a population of at least 100,000, as listed in the 2010

census.

**COMMITTEE ACTION**

Transportation Committee

Joint Favorable Substitute

Yea 34 Nay 1 (03/26/2021)