

Department of Legislative Services  
Maryland General Assembly  
2025 Session

FISCAL AND POLICY NOTE  
First Reader

Senate Bill 949

(Senator Love, *et al.*)

Judicial Proceedings

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Vehicle Laws - Fully Autonomous Vehicles

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This bill expressly authorizes a fully autonomous vehicle to be operated on a highway in the State without a human driver when (1) the vehicle meets certain technical specifications; (2) a person submits a law enforcement interaction plan to the Motor Vehicle Administration (MVA) before operating the vehicle; and (3) the owner of the vehicle submits proof of the required security (*i.e.*, insurance coverage) to MVA before operating the vehicle. The bill establishes related responsibilities for MVA and includes specifications about how the Maryland Vehicle Law applies to fully autonomous vehicles.

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Fiscal Summary

**State Effect:** MVA can implement the bill’s requirements using existing budgeted resources. It is anticipated that the Department of State Police can modify its enforcement processes and activities to account for fully autonomous vehicles using existing budgeted resources. Revenues are not anticipated to be materially affected.

**Local Effect:** It is anticipated that local law enforcement agencies can modify their enforcement processes and activities to account for fully autonomous vehicles using existing budgeted resources. Revenues are not affected.

**Small Business Effect:** Potential meaningful.

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Analysis

Bill Summary:

*Definitions*

“Automated driving system” means the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether it is limited to a specific operational design domain.

“Dynamic driving task” means all of the real-time operational functions required to operate a motor vehicle on a highway, including specified functionalities.

“Fully autonomous vehicle” means a motor vehicle equipped with an automated driving system designed to function without a human driver, including specified automation systems.

“Minimal risk condition” means a low-risk condition a fully autonomous vehicle achieves by way of the human driver or the automated driving system, when the vehicle cannot safely continue the trip.

“Operational design domain” means operating conditions under which a given automated driving system is specifically designed to function, including environmental conditions, roadway characteristics, or time-of-day restrictions.

#### *Fully Autonomous Vehicles Authorized*

A person is authorized to operate a fully autonomous vehicle on a highway in the State without a human driver and with the automated driving system engaged if the vehicle:

- will achieve a minimal risk condition if a failure of the automated driving system occurs that renders the system unable to perform the entire dynamic driving task relevant to its intended operational design domain;
- is capable of operating in accordance with the Maryland Vehicle Law, unless an exemption has been granted by MVA; and
- bears the required manufacturer’s certification label indicating that the vehicle is in compliance with all applicable federal motor vehicle safety standards, including any exemption granted by the National Highway Traffic Safety Administration.

Before operating a fully autonomous vehicle on a highway in the State without a human driver and with the automated driving system engaged (1) a person must submit a law enforcement interaction plan to MVA and (2) the owner of the vehicle must submit proof of required security (*i.e.*, car insurance) to MVA on the form MVA provides. The law enforcement interaction plan must include information on:

- how to communicate with a fleet support specialist who is available during the times the fully autonomous vehicle is in operation;
- how to safely remove the fully autonomous vehicle from the highway and steps to properly tow the vehicle;
- how to recognize whether the vehicle is operating autonomously; and

- any other information that the manufacturer, owner, or MVA considers necessary, including information regarding hazardous conditions or public safety risks associated with the operation of the vehicle.

The motor vehicle title and registration for a fully autonomous vehicle must identify the vehicle as a fully autonomous vehicle. A State agency or local political subdivision may not prohibit the operation of fully autonomous vehicles on highways under their jurisdiction.

### *Application of the Maryland Vehicle Law to Fully Autonomous Vehicles*

When a fully autonomous vehicle is operating with the automated driving system engaged, the system is considered to (1) be the vehicle operator for determining compliance with the Maryland Vehicle Law; (2) satisfy electronically all physical acts required by a vehicle driver; and (3) be licensed to operate the vehicle.

A human driver may operate a fully autonomous vehicle if the automated driving system is not engaged. A person must operate a fully autonomous vehicle if the automated driving system makes a request for the person to intervene when the system is not capable of performing the entire dynamic driving task within the operational design domain.

In the event of a vehicle crash involving a fully autonomous vehicle, the vehicle and the operator or passenger must comply with State law governing accidents and accident reporting. However, all notice and reporting requirements must be satisfied within 15 days after a vehicle crash involving a fully autonomous vehicle, unless an extension is granted, as specified.

A transportation network company, for-hire vehicle company, or other ground passenger transportation company may use fully autonomous vehicles. Any provision of the Maryland Vehicle Law that by its nature applies only to a human driver does not apply to the operator of a fully autonomous vehicle with the automated driving system engaged being used by one of these entities.

### **Current Law:**

#### *Autonomous Vehicles*

Autonomous vehicles are governed and regulated primarily at the federal level through plans and guidance developed by the U.S. Department of Transportation. The current [Automated Vehicles – Comprehensive Plan](#) includes the three major goals of promoting collaboration and transparency, modernizing the regulatory environment, and preparing the

transportation system for autonomous vehicles. Among other things, it includes safety and operational standards developed by the Society of Automotive Engineers International.

Chapters 500 and 501 of 2023 authorize an autonomous vehicle converter to sell, transfer, lease, offer for sale, or resell a converted autonomous vehicle or a motor vehicle purchased by an autonomous vehicle converter with the intent to convert the motor vehicle into a converted autonomous vehicle. This authorization only extends to motor vehicles intended for commercial or industrial use. A converted autonomous vehicle is a motor vehicle that (1) is equipped with an aftermarket automated driving system capable of operating in accordance with some or all of the automated driving standards; (2) meets or exceeds weight or capacity thresholds established under federal law; and (3) is capable of operating in accordance with applicable State and federal law.

### *Maryland Vehicle Law*

Titles 11 through 27 of the Transportation Article, which are also considered the “Maryland Vehicle Law,” statutorily regulate the use of vehicles on the State’s roads and highways. Among numerous other requirements and provisions, the Maryland Vehicle Law:

- grants general regulatory authority of vehicles in the State to MVA;
- specifies the types of vehicles that must be titled and registered with MVA;
- specifies that an individual must be appropriately licensed to operate a motor vehicle on a highway in the State;
- specifies the required security (*i.e.*, insurance coverage) that must apply for a motor vehicle that is registered in the State;
- includes specific requirements that apply for standard rental vehicles and vehicles rented through a peer-to-peer car sharing program;
- specifies the procedures that must be followed and general requirements that apply when a person is involved in an accident involving a motor vehicle;
- specifies the rules of the road that must be followed when a person is operating a vehicle on a road or highway in the State; and
- includes specifications for the type of technology and equipment that is authorized or required to be used or prohibited from use on motor vehicles.

**Small Business Effect:** The bill expressly authorizes for-hire vehicle companies and other ground passenger transportation companies to use fully autonomous vehicles, and some of these companies are likely small businesses. A small business that purchases an autonomous vehicle may experience significant personnel cost savings compared to a traditional vehicle (after the likely significant initial cost to purchase such a vehicle).

**Additional Comments:** MVA staffs the Connected and Automated Vehicles (CAV) Working Group, which was established by the Secretary of Transportation in 2015 to be the central point of coordination for the development and implementation of emerging CAV technologies in the State. MVA advises that the working group has developed a statewide strategic framework and issues testing permits to interested companies. More information about the working group's ongoing activities can be found on the [CAV Working Group website](#).

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### **Additional Information**

**Recent Prior Introductions:** Similar legislation has not been introduced in the last three years.

**Designated Cross File:** HB 1256 (Delegate Ziegler, *et al.*) - Environment and Transportation.

**Information Source(s):** Department of State Police; Maryland Department of Transportation; Maryland Municipal League; U.S. Department of Transportation; Department of Legislative Services

**Fiscal Note History:** First Reader - February 27, 2025  
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