

SENATE BILL 949

R5

5lr1928
CF 5lr2803

By: **Senators Love, Benson, Gile, Hettleman, Lam, Muse, and Smith**

Introduced and read first time: January 28, 2025

Assigned to: Judicial Proceedings

A BILL ENTITLED

1 AN ACT concerning

2 **Vehicle Laws – Fully Autonomous Vehicles**

3 FOR the purpose of establishing certain standards and requirements for the operation of
4 fully autonomous vehicles on highways in the State; and generally relating to fully
5 autonomous vehicles.

6 BY adding to

7 Article – Transportation

8 Section 21–1501 through 21–1505 to be under the new subtitle “Subtitle 15. Fully
9 Autonomous Vehicles”

10 Annotated Code of Maryland

11 (2020 Replacement Volume and 2024 Supplement)

12 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
13 That the Laws of Maryland read as follows:

14 **Article – Transportation**

15 **SUBTITLE 15. FULLY AUTONOMOUS VEHICLES.**

16 **21–1501.**

17 (A) IN THIS SUBTITLE THE FOLLOWING WORDS HAVE THE MEANINGS
18 INDICATED.

19 (B) “AUTOMATED DRIVING SYSTEM” MEANS THE HARDWARE AND
20 SOFTWARE THAT ARE COLLECTIVELY CAPABLE OF PERFORMING THE ENTIRE
21 DYNAMIC DRIVING TASK ON A SUSTAINED BASIS, REGARDLESS OF WHETHER IT IS
22 LIMITED TO A SPECIFIC OPERATIONAL DESIGN DOMAIN.

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.



(C) "DYNAMIC DRIVING TASK" MEANS ALL OF THE REAL-TIME OPERATIONAL FUNCTIONS REQUIRED TO OPERATE A MOTOR VEHICLE ON A HIGHWAY, INCLUDING:

(1) LATERAL VEHICLE MOTION CONTROL THROUGH STEERING;

(2) LONGITUDINAL MOTION CONTROL THROUGH ACCELERATION AND DECELERATION;

(3) MONITORING THE DRIVING ENVIRONMENT THROUGH OBJECT AND EVENT DETECTION, RECOGNITION, CLASSIFICATION, AND RESPONSE PREPARATION;

(4) OBJECT AND EVENT RESPONSE EXECUTION;

(5) MANEUVER PLANNING; AND

(6) SIGNALING WITH LIGHTS OR GESTURES.

(D) (1) "FULLY AUTONOMOUS VEHICLE" MEANS A MOTOR VEHICLE EQUIPPED WITH AN AUTOMATED DRIVING SYSTEM DESIGNED TO FUNCTION WITHOUT A HUMAN DRIVER.

(2) "FULLY AUTONOMOUS VEHICLE" INCLUDES A LEVEL 4 OR 5 SYSTEM AS DEFINED BY "TAXONOMY AND DEFINITIONS FOR TERMS RELATED TO DRIVING AUTOMATION SYSTEMS FOR ON-ROAD MOTOR VEHICLES" PUBLISHED BY THE SOCIETY OF AUTOMOTIVE ENGINEERS INTERNATIONAL.

(E) "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.

(F) "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.

21-1502.

(A) A PERSON MAY 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 MEETS THE FOLLOWING CONDITIONS:

1 (1) IF A FAILURE OF THE AUTOMATED DRIVING SYSTEM OCCURS
2 THAT RENDERES THE SYSTEM UNABLE TO PERFORM THE ENTIRE DYNAMIC DRIVING
3 TASK RELEVANT TO ITS INTENDED OPERATIONAL DESIGN DOMAIN, THE FULLY
4 AUTONOMOUS VEHICLE WILL ACHIEVE A MINIMAL RISK CONDITION;

5 (2) THE FULLY AUTONOMOUS VEHICLE IS CAPABLE OF OPERATING IN
6 ACCORDANCE WITH THE MARYLAND VEHICLE LAW, UNLESS AN EXEMPTION HAS
7 BEEN GRANTED BY THE ADMINISTRATION; AND

8 (3) THE FULLY AUTONOMOUS VEHICLE BEARS THE REQUIRED
9 MANUFACTURER'S CERTIFICATION LABEL INDICATING THAT THE VEHICLE IS IN
10 COMPLIANCE WITH ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY
11 STANDARDS, INCLUDING REFERENCE TO ANY EXEMPTION GRANTED BY THE
12 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION.

13 (B) (1) BEFORE OPERATING A FULLY AUTONOMOUS VEHICLE ON A
14 HIGHWAY IN THE STATE WITHOUT A HUMAN DRIVER AND WITH THE AUTOMATED
15 DRIVING SYSTEM ENGAGED, A PERSON SHALL SUBMIT A LAW ENFORCEMENT
16 INTERACTION PLAN TO THE ADMINISTRATION.

17 (2) A LAW ENFORCEMENT INTERACTION PLAN SHALL CONTAIN
18 INFORMATION ON:

19 (I) HOW TO COMMUNICATE WITH A FLEET SUPPORT
20 SPECIALIST WHO IS AVAILABLE DURING THE TIMES THE FULLY AUTONOMOUS
21 VEHICLE IS IN OPERATION;

22 (II) HOW TO SAFELY REMOVE THE FULLY AUTONOMOUS
23 VEHICLE FROM THE HIGHWAY AND STEPS TO PROPERLY TOW THE VEHICLE;

24 (III) HOW TO RECOGNIZE WHETHER THE FULLY AUTONOMOUS
25 VEHICLE IS OPERATING AUTONOMOUSLY; AND

26 (IV) ANY OTHER INFORMATION THAT THE MANUFACTURER,
27 OWNER, OR ADMINISTRATION CONSIDERS NECESSARY, INCLUDING INFORMATION
28 REGARDING HAZARDOUS CONDITIONS OR PUBLIC SAFETY RISKS ASSOCIATED WITH
29 THE OPERATION OF A FULLY AUTONOMOUS VEHICLE.

30 (C) BEFORE OPERATING A FULLY AUTONOMOUS VEHICLE ON A HIGHWAY IN
31 THE STATE WITHOUT A HUMAN DRIVER AND WITH THE AUTOMATED DRIVING
32 SYSTEM ENGAGED, THE OWNER OF THE VEHICLE SHALL SUBMIT PROOF OF
33 REQUIRED SECURITY TO THE ADMINISTRATION ON THE FORM THE

1 ADMINISTRATION PROVIDES.

2 (D) WHEN A FULLY AUTONOMOUS VEHICLE IS OPERATING WITH THE
3 AUTOMATED DRIVING SYSTEM ENGAGED, THE AUTOMATED DRIVING SYSTEM IS
4 CONSIDERED TO:

5 (1) BE THE VEHICLE OPERATOR FOR DETERMINING COMPLIANCE
6 WITH THE MARYLAND VEHICLE LAW;

7 (2) SATISFY ELECTRONICALLY ALL PHYSICAL ACTS REQUIRED BY A
8 VEHICLE DRIVER; AND

9 (3) BE LICENSED TO OPERATE THE VEHICLE.

10 (E) (1) A HUMAN DRIVER MAY OPERATE A FULLY AUTONOMOUS VEHICLE
11 IF THE AUTOMATED DRIVING SYSTEM IS NOT ENGAGED.

12 (2) A PERSON SHALL OPERATE A FULLY AUTONOMOUS VEHICLE IF
13 THE AUTOMATED DRIVING SYSTEM MAKES A REQUEST FOR THE PERSON TO
14 INTERVENE WHEN THE AUTOMATED DRIVING SYSTEM IS NOT CAPABLE OF
15 PERFORMING THE ENTIRE DYNAMIC DRIVING TASK WITHIN THE OPERATIONAL
16 DESIGN DOMAIN.

17 (F) (1) IN THE EVENT OF A VEHICLE CRASH INVOLVING A FULLY
18 AUTONOMOUS VEHICLE, THE FULLY AUTONOMOUS VEHICLE AND THE OPERATOR OR
19 PASSENGER IN THE FULLY AUTONOMOUS VEHICLE SHALL COMPLY WITH THE
20 REQUIREMENTS UNDER TITLE 20 OF THIS ARTICLE.

21 (2) ALL NOTICE AND REPORTING REQUIREMENTS UNDER TITLE 20
22 OF THIS ARTICLE SHALL BE SATISFIED WITHIN 15 DAYS AFTER A VEHICLE CRASH
23 INVOLVING A FULLY AUTONOMOUS VEHICLE, UNLESS AN EXTENSION IS GRANTED
24 UNDER TITLE 20 OF THIS ARTICLE.

25 21-1503.

26 (A) SUBJECT TO SUBSECTION (B) OF THIS SECTION, A TRANSPORTATION
27 NETWORK COMPANY, FOR-HIRE VEHICLE COMPANY, OR OTHER GROUND
28 PASSENGER TRANSPORTATION COMPANY MAY USE FULLY AUTONOMOUS VEHICLES.

29 (B) ANY PROVISION OF THE MARYLAND VEHICLE LAW THAT BY ITS NATURE
30 APPLIES ONLY TO A HUMAN DRIVER DOES NOT APPLY TO THE OPERATOR OF A FULLY
31 AUTONOMOUS VEHICLE WITH THE AUTOMATED DRIVING SYSTEM ENGAGED BEING
32 USED BY A TRANSPORTATION NETWORK COMPANY, FOR-HIRE VEHICLE COMPANY,

1 OR OTHER GROUND PASSENGER TRANSPORTATION COMPANY.

2 21-1504.

3 THE MOTOR VEHICLE TITLE AND REGISTRATION FOR A FULLY AUTONOMOUS
4 VEHICLE SHALL IDENTIFY THE VEHICLE AS A “FULLY AUTONOMOUS VEHICLE”.

5 21-1505.

6 A STATE AGENCY OR LOCAL POLITICAL SUBDIVISION MAY NOT PROHIBIT THE
7 OPERATION OF FULLY AUTONOMOUS VEHICLES ON HIGHWAYS UNDER THEIR
8 JURISDICTION.

9 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect
10 October 1, 2025.