

ASSEMBLY, No. 5919

STATE OF NEW JERSEY

221st LEGISLATURE

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Sponsored by:

Assemblyman ROBERT J. KARABINCHAK

District 18 (Middlesex)

Assemblyman CLINTON CALABRESE

District 36 (Bergen and Passaic)

SYNOPSIS

Establishes autonomous vehicle pilot program.

CURRENT VERSION OF TEXT

As introduced.



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1 **AN ACT** establishing an autonomous vehicle pilot program and
2 supplementing Title 39 of the Revised Statutes.

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4 **BE IT ENACTED** *by the Senate and General Assembly of the State*
5 *of New Jersey:*

6

7 1. As used in P.L. , c. (C.) (pending before the
8 Legislature as this bill):

9 “Automated driving system” means a combination of hardware
10 and software systems within a motor vehicle that are collectively
11 capable of performing the entire dynamic driving task on a
12 sustained basis, regardless of whether the dynamic driving task is
13 limited to a specific operational design domain.

14 “Autonomous vehicle manufacturer” means: a person or entity
15 that builds or sells fully autonomous vehicles; a person or entity
16 that installs automated driving systems in motor vehicles that are
17 not originally built as fully autonomous vehicles; or a person or
18 entity that develops automated driving systems in fully autonomous
19 vehicles or motor vehicles that are not originally built as fully
20 autonomous vehicles.

21 “Autonomous vehicle tester” means an autonomous vehicle
22 manufacturer, institution of higher education, fleet service provider,
23 or automotive equipment or technology provider that tests the
24 autonomous vehicle’s operation and performance across urban,
25 suburban, rural, and highway settings and under varied weather and
26 traffic conditions.

27 “Chief administrator” means the Chief Administrator of the New
28 Jersey Motor Vehicle Commission.

29 “Closed testbed” means a closed facility with infrastructure
30 simulating real-world traffic control and road conditions for
31 autonomous vehicle testing that is not connected to live
32 transportation systems.

33 “Commission” means the New Jersey Motor Vehicle
34 Commission.

35 “Department” means the Department of Transportation.

36 “Dynamic driving task” means all real-time operational and
37 tactical functions required to operate a motor vehicle, including, at
38 a minimum, monitoring of the environment, steering, acceleration,
39 braking, and obstacle avoidance.

40 “Fleet service provider” means a person or entity that owns or
41 leases a fully autonomous vehicle and operates the fully
42 autonomous vehicle for commercial or public use.

43 “Fully autonomous vehicle” means a motor vehicle that is
44 equipped with an automated driving system and designed to
45 function without a human driver and has a level of automation that
46 is classified as a level four automation or level five automation as
47 defined in SAE J3016.

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1 “Open-road testbed” means a testbed instrumented with sensing,
2 computing, and connected motor vehicle technologies that is
3 capable of communicating with, and monitoring the operations of,
4 fully autonomous vehicles and their interaction with other motor
5 vehicles and road users.

6 “Operational design domain” means any operating conditions
7 under which a given automated driving system is specifically
8 designed to function, including, but not limited to, environmental,
9 geographical, and time-of-day restrictions, and the requisite
10 presence or absence of certain traffic or roadway characteristics.

11 “Operator” means the person seated in the driver’s seat of a fully
12 autonomous vehicle.

13 “Pilot program” means the fully autonomous vehicle pilot
14 program established pursuant to section 2 of P.L. , c. (C.)
15 (pending before the Legislature as this bill).

16 “Platooning” means a coordinated group of fully autonomous
17 vehicles controlled by a lead vehicle.

18

19 2. a. The New Jersey Motor Vehicle Commission, in
20 consultation with the Department of Transportation, shall establish
21 a five-year pilot program to allow autonomous vehicle testers to
22 operate fully autonomous vehicles in this State, including in closed
23 testbeds and open-road testbeds. A fully autonomous vehicle shall
24 not be tested or operated in the State unless the autonomous vehicle
25 tester has been authorized by the commission to participate in the
26 pilot program and complies with the provisions of P.L. ,
27 c. (C.) (pending before the Legislature as this bill).

28 b. The commission shall require an autonomous vehicle tester
29 to submit an application to the commission for approval to
30 participate in the pilot program, in a form and manner determined
31 by the commission.

32 c. The pilot program shall be overseen by a task force made up
33 of five members composed of public safety officials, transportation
34 experts, and autonomous vehicle industry representatives, including
35 autonomous vehicle developers and automobile insurance industry
36 representatives, and consumer advocates appointed by the
37 commission, in consultation with the department. The task force
38 shall:

39 (1) provide quarterly reports to the commission and to the
40 department regarding the status of the pilot program;

41 (2) solicit public feedback concerning the pilot program;

42 (3) assist the commission and department in establishing
43 responses and protocols related to fully autonomous vehicle
44 collisions, cyberattacks against autonomous vehicle manufacturers
45 and fully autonomous vehicles, major operational disruptions
46 concerning fully autonomous vehicles, and liability in event of fully
47 autonomous vehicle collisions; and

1 (4) coordinate with the New Jersey Division of State Police and
2 the Office of the Attorney General to develop guidelines to govern
3 pedestrian and driver security and safety.

4 d. An autonomous vehicle tester shall not operate a fully
5 autonomous vehicle in the State unless:

6 (1) the operator is:

7 (a) seated in the driver's seat of the fully autonomous vehicle;

8 (b) monitoring the operation of the fully autonomous vehicle;

9 (c) capable of taking immediate manual control of the fully
10 autonomous vehicle;

11 (d) an employee, independent contractor, or other person
12 designated and trained by the autonomous vehicle tester concerning
13 the capabilities and limitations of the fully autonomous vehicle;

14 (e) not under the influence of drugs or alcohol; and

15 (f) a holder of a valid basic driver's license or other appropriate
16 license, as determined by the commission;

17 (2) the autonomous vehicle tester registers each fully
18 autonomous vehicle to be operated with the commission; and
19 submits to the commission, in a manner and form determined by the
20 commission, proof of liability insurance, self-insurance, or a surety
21 bond of at least \$5,000,000 for damages by reason of bodily injury,
22 death, or property damage caused by the fully autonomous vehicle;
23 and

24 (3) the operator and the autonomous vehicle tester:

25 (a) comply with any provision of Title 39 of the Revised
26 Statutes or any other law of this State concerning the operation of a
27 motor vehicle;

28 (b) comply with the standards established by the National
29 Highway Traffic Safety Administration regarding fully autonomous
30 vehicles; and

31 (c) satisfy any other requirement as determined by the chief
32 administrator, in consultation with the Commissioner of
33 Transportation, as necessary to ensure the safe operation of fully
34 autonomous vehicles in the State.

35 e. The chief administrator may immediately prohibit an
36 operator or autonomous vehicle tester from operating a fully
37 autonomous vehicle if the chief administrator determines that the
38 operation of a fully autonomous vehicle by the operator or
39 autonomous vehicle tester poses a risk to public safety or that the
40 operator or autonomous vehicle tester fails to comply with the
41 provisions of P.L. , c. (C.) (pending before the Legislature
42 as this bill) or with the requirements of the pilot program.

43 f. An autonomous vehicle tester that participates in the pilot
44 program shall provide information to the chief administrator that
45 the chief administrator deems to be appropriate for measuring the
46 performance of the pilot program. The autonomous vehicle tester
47 may withhold any commercially valuable, confidential, or
48 proprietary information.

- 1 3. Any fully autonomous vehicle being operated as part of the
2 pilot program shall:
- 3 a. be equipped with a redundant safety system to ensure a
4 controlled stop in case of system failure and be equipped with
5 technology that ensures appropriate motor vehicle control;
- 6 b. allow the operator or emergency responders to override
7 autonomous functions through manual controls of an emergency
8 stop mechanism and allow operators to take control at any time
9 through various methods, including but not limited to, use of the
10 brake, the accelerator pedal, or steering wheel;
- 11 c. alert operators when fully autonomous vehicle technology
12 has been disengaged and the operator is required to take over
13 control of the motor vehicle;
- 14 d. retain data recordings beginning 30 seconds before a
15 collision and be capable of capturing operational data such as
16 speed, steering, braking, sensor inputs, and system failures;
- 17 e. be equipped with crash-avoidance systems, including
18 pedestrian detection, automatic emergency braking, and lane keep
19 assist systems;
- 20 f. comply with posted speed limits and emit artificial noise for
21 pedestrian safety;
- 22 g. meet industry cybersecurity standards to prevent
23 unauthorized access or hacking and ensure that all data is encrypted
24 for privacy protection; and
- 25 h. bear a marker that is visible to other drivers and pedestrians
26 to indicate the motor vehicle is a fully autonomous vehicle.
- 27
- 28 4. All fully autonomous vehicle collisions shall be reported,
29 along with any relevant data, to the department within 48 hours.
- 30
- 31 5. a. The department shall establish new fully autonomous
32 vehicle testing environments, including closed testbeds and open-
33 road testbeds, and shall also make use of any existing autonomous
34 vehicle testing environments.
- 35 b. The department shall identify funding sources to invest in
36 and shall coordinate with counties and municipalities to deploy
37 smart infrastructure for fully autonomous vehicles including sensor
38 equipped roads, communication systems, and real-time traffic
39 management technology.
- 40
- 41 6. a. Fully autonomous vehicles operating as taxis shall only
42 be permitted to operate on designated highways, shall be marked as
43 fully autonomous, shall be continuously monitored through data
44 reporting, and shall have communication systems for emergency
45 overrides by authorities.
- 46 b. Fully autonomous vehicles operating as commercial trucks
47 shall operate on designated highways under specific speed and
48 weight restrictions set by the department and shall require

1 appropriate licensing for operators ensuring operators are capable of
2 manually controlling the vehicle, if needed.

3 c. Platooning is authorized for fully autonomous vehicles
4 operating as commercial trucks on highways with a lead vehicle
5 controlled by an operator. Trucks that employ synchronized
6 braking and acceleration that follow the lead vehicle may operate at
7 a level five automation and without a human driver.

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9 7. No later than six months after completion of the three-year
10 pilot program, the commission shall submit to the Governor and,
11 pursuant to section 2 of P.L.1991, c.164 (C.52:14-19.1), to the
12 Legislature a report that evaluates the pilot program and includes
13 recommendations for the safe integration of fully autonomous
14 vehicles on the highways of this State.

15
16 8. The commission shall adopt, in consultation with the
17 department, and pursuant to the “Administrative Procedure Act,”
18 P.L.1968, c.410 (C.52:14B-1 et seq.), rules and regulations to
19 effectuate the purposes of P.L. , c. (C.) (pending before the
20 Legislature as this bill).

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22 9. This act shall take effect immediately and shall expire upon
23 the submission of the report required to be submitted pursuant to
24 section 7 of P.L. , c. (C.) (pending before the Legislature
25 as this bill).

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28 STATEMENT

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30 This bill requires the New Jersey Motor Vehicle Commission
31 (commission), in consultation with the Department of
32 Transportation (department), to establish a three-year pilot program
33 to allow autonomous vehicle testers (testers) to operate fully
34 autonomous vehicles (AVs) in the State.

35 The pilot program is to be overseen by a task force made up of
36 five members composed of public safety officials, transportation
37 experts, and AV industry representatives, and consumer advocates
38 appointed by the commission, in consultation with the department.
39 The task force is required to: (1) provide quarterly reports to the
40 commission and to the department regarding the status of the pilot
41 program; (2) solicit public feedback concerning the pilot program;
42 (3) assist the commission and department in establishing responses
43 and protocols related to AV collisions, cyberattacks against AV
44 manufacturers and AVs, major operational disruptions concerning
45 AVs, and liability in event of AV collisions; and (4) coordinate with
46 the New Jersey Division of State Police and the Office of the
47 Attorney General to develop guidelines to govern pedestrian and
48 driver security and safety.

1 Testers are not permitted to operate AVs in the State unless
2 certain conditions are met. Specifically, the operator is required to:
3 be seated in the AV's driver's seat; monitor the AV's operation; be
4 capable of taking immediate manual control of the AV; be an
5 employee, independent contractor, or other person designated and
6 trained by the AV tester concerning the capabilities and limitations
7 of the AV; not be under the influence of drugs or alcohol; and
8 possess a valid basic driver's license or other appropriate license.
9 The tester is required to register the AV and submit proof of
10 liability insurance, self-insurance, or a surety bond of at least \$5
11 million to the commission.

12 The Chief Administrator of the commission (chief administrator)
13 is permitted to immediately prohibit an operator or tester from
14 operating an AV if the chief administrator determines that such
15 operation poses a risk to public safety or that the operator or AV
16 tester fails to comply with the provisions of the bill.

17 A tester participating in the pilot program is required to provide
18 the chief administrator with certain information appropriate for
19 measuring the performance of the pilot program, but is permitted to
20 withhold commercially valuable, confidential, or proprietary
21 information.

22 Any AV being operated under the pilot program is required to:
23 (1) be equipped with a redundant safety system and technology that
24 ensures appropriate motor vehicle control; (2) allow the operator or
25 emergency responders to override autonomous functions and allow
26 operators to take control of the AV; (3) alert operators when AV
27 technology has been disengaged and the operator is required to take
28 control of the vehicle; (4) retain data recordings beginning 30
29 seconds before a collision and be capable of capturing operational
30 data; (5) be equipped with certain crash-avoidance systems; (6)
31 comply with posted speed limits and emit artificial noise for
32 pedestrian safety; (7) meet industry cybersecurity standards and
33 ensure that all data is encrypted; and (8) bear a visible marker that
34 indicates the vehicle is an AV.

35 Under the bill, all AV collisions are to be reported to the
36 department within 48 hours. Additionally, the bill requires the
37 department to establish new AV testing environments, including
38 closed testbeds and open-road testbeds, and to utilize existing AV
39 testing environments. The department is required to identify
40 funding sources to invest in and to coordinate with counties and
41 municipalities to deploy smart infrastructure for AVs, including
42 sensor equipped roads, communication systems, and real time
43 traffic management technology.

44 AVs operating as taxis are to: operate on designated highways;
45 be marked as fully autonomous; be continuously monitored through
46 data reporting; and have communication systems for emergency
47 overrides by authorities. AVs operating as commercial trucks are to
48 operate on designated highways under specific speed and weight

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1 restrictions set by the department and operators are required to have
2 appropriate licensing to handle manual controls if needed. Finally,
3 platooning is authorized for AVs operating as commercial trucks on
4 highways with a lead vehicle controlled by an operator. Trucks that
5 employ synchronized braking and acceleration and that follow the
6 lead vehicle may operate as a fully autonomous vehicle without a
7 human driver.

8 The commission is required, no later than six months after
9 completion of the three-year pilot program, to submit to the
10 Governor and to the Legislature a report that evaluates the pilot
11 program and includes recommendations for the safe integration of
12 AVs on State highways.