

1 State of Arkansas
2 92nd General Assembly
3 Regular Session, 2019
4

A Bill

HOUSE BILL 1822

5 By: Representative Christiansen
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For An Act To Be Entitled

8 AN ACT CONCERNING THE OPERATION OF AUTONOMOUS
9 VEHICLES AT RAILROAD CROSSINGS; AND FOR OTHER
10 PURPOSES.
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Subtitle

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13 CONCERNING THE OPERATION OF AUTONOMOUS
14 VEHICLES AT RAILROAD CROSSINGS.
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18 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:
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20 SECTION 1. Arkansas Code Title 27, Chapter 51, Subchapter 14, is
21 amended to add an additional section to read as follows:

22 27-51-1410. Autonomous vehicle operation at railroad crossing.

23 (a) As used in this section:

24 (1) "Automated driving system" means the hardware and software
25 that are collectively capable of performing the entire dynamic driving task
26 on a sustained basis, regardless of whether the automated driving system is
27 limited to a specific operational design domain;

28 (2) "Autonomous vehicle" means a vehicle equipped with an
29 automated driving system that can drive the vehicle for any duration of time
30 without the active physical control or monitoring of a human operator;

31 (3)(A) "Dynamic driving task" means the real-time operational
32 and tactical functions required to operate a vehicle in on-road traffic,
33 including without limitation the operational functions of:

34 (i) Lateral vehicle motion control via steering;

35 (ii) Longitudinal motion control via acceleration
36 and deceleration;



1 (iii) Monitoring of the driving environment using
 2 object and event detection, recognition, classification, and response
 3 preparation;

4 (iv) Object and event response execution;

5 (v) Maneuver planning; and

6 (vi) Lighting and signaling operation designed to
 7 enhance conspicuity of the vehicle.

8 (B) "Dynamic driving task" does not include the strategic
 9 functions of:

10 (i) Trip scheduling; or

11 (ii) Selection of destinations and waypoints; and

12 (4) "Operational design domain" means a description of the
 13 specific operating domain in which an automated driving system is designed to
 14 properly operate, including without limitation:

15 (A) Roadway types;

16 (B) Speed range;

17 (C) Environmental conditions; and

18 (D) Other domain constraints.

19 (b) An autonomous vehicle operated in the state shall have an
 20 operational design domain that is designed to safely negotiate railroad
 21 crossings in compliance with all applicable state and federal law and
 22 regulations concerning railroad crossings when the automated driving system
 23 is engaged.

24 (c) An autonomous vehicle operated without a driver shall have a
 25 dynamic driving task that is designed to safely negotiate railroad crossings
 26 when the automated driving system is engaged.

27 (d) The Arkansas Department of Transportation shall consult with
 28 railroad companies in this state when considering the authorization for the
 29 operation of autonomous vehicles on public streets, roads, and highways that
 30 have railroad crossings.

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