

# ARKANSAS REGISTER

## Proposed Rule Cover Sheet



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ARKANSAS DEPARTMENT OF TRANSPORTATION  
**AUTONOMOUS VEHICLE PILOT PROGRAM RULES**

I. Introduction

Pursuant to Arkansas Code Annotated (A.C.A.) § 27-51-2002, the Arkansas State Highway Commission (Commission) may approve a proposed autonomous vehicle pilot program submitted by a person. These rules are issued in accord with the statutory authority set out in subsection (d).

II. Definitions

(a) As used in these rules:

(1) "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 the automated driving system is limited to a specific Operational Design Domain.

(A) An Operational Design Domain (ODD) is the description of the specific operating domain(s) in which an automated function or system is designed to properly operate, including but not limited to roadway types, speed range, environmental conditions (weather, daytime/nighttime, etc.), and other domain constraints.

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

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

(A) Lateral vehicle motion control via steering;

(B) Longitudinal motion control via acceleration and deceleration;

(C) Monitoring of the driving environment using object and event detection, recognition, classification, and response preparation;

(D) Object and event response execution;

(E) Maneuver planning; and

(F) Lighting and signaling operation designed to enhance conspicuity of the vehicle.

(4) "Dynamic driving task" does not include the strategic functions of:

(A) Trip scheduling; or

(B) Selection of destinations and waypoints.

(5) "Fully autonomous vehicle" means a vehicle equipped with an automated driving system designed to function as a level four-"high automation" or level five-"full automation" system under Society of Automobile Engineers "Taxonomy and Definitions

for Terms Related to Driving Automation Systems for On-Road Motor Vehicles and may be designed to function solely by use of the automated driving system, or when the automated driving system is not engaged, to permit operation by a human operator.

(6) "Person" means every natural person, firm, co-partnership, association, corporation, or any political subdivision of the State of Arkansas, individually or collectively, including all counties, municipal corporations, public transit authorities, school districts, and special improvement districts.

(7) "Minimal risk condition" means a low-risk operating mode in which a fully autonomous vehicle operating without a human operator is brought to a complete stop upon experiencing a failure of the vehicle's automated driving system that renders the vehicle unable to perform the entire dynamic driving task.

(8) "Disengagement of the autonomous mode" means a deactivation of the autonomous mode when a failure of the autonomous technology is detected or when the safe operation of the vehicle requires that a human operator that is physically in the vehicle or that is remotely located takes control of the vehicle.

### III. Application

(a) Any person seeking approval for an autonomous vehicle pilot program shall submit to the Commission an application providing the following information:

(1) A statement of the commercial purpose of the autonomous vehicle pilot program;

(2) The identification of any additional requirements for proof of insurance under the Motor Vehicle Safety Responsibility Act, A.C.A. §§ 27-19-101 et seq., and 27-22-101 et seq.;

(3) A statement acknowledging that:

(A) The autonomous vehicle or fully autonomous vehicle is capable of complying with all applicable traffic and motor vehicle safety laws of this state and rules adopted by the Office of Motor Vehicle, including without limitation the laws and rules concerning the capability to safely negotiate railroad crossings unless an exemption for the operation of autonomous vehicles or fully autonomous vehicles at railroad crossings has been obtained from the owner of the railroad by the person submitting the application;

(B) The fully autonomous vehicle is capable of achieving a reasonably safe state or "minimal risk condition" if a failure of the automated driving system occurs that renders the automated driving system unable to perform the entire dynamic driving task; and

(C) A fully autonomous vehicle involved in a motor vehicle accident is capable of meeting the requirements of A.C.A. §§ 27-53-101, 27-53-102, and 27-53-105.

(4) A description of how a fully autonomous vehicle is capable of meeting the requirement of the statement required in A.C.A. § 27-51-2002 (b)(3)(C).

IV. Application Review, Approval, Denial, or Withdrawal of Approval

- (a) Upon receipt of an application, the Commission will refer it for consideration to the Director of the Arkansas Department of Transportation.
- (b) An autonomous vehicle pilot program is automatically approved sixty days after the date of submission of the application to Commission unless the Director approves or denies the application prior to the end of the sixty days.
- (c) The Director will:
  - (1) Review the application, and approve or deny the application based upon its compliance with these rules; and
  - (2) Notify the applicant of the decision in writing.
- (d) The Director can withdraw approval of an autonomous vehicle pilot program at any time for any reason. If approval of an autonomous vehicle pilot program is withdrawn, the Director will notify the applicant of the decision in writing.
- (e) The applicable administrative adjudication provisions of the Arkansas Administrative Procedure Act found in A.C.A. §§ 25-15-208 to -210, and §§ 25-15-212 to -214, shall apply to a decision of the Director to deny an application or withdraw approval of an application.

V. Operational Allowances and Limitations

- (a) Upon approval of an autonomous vehicle pilot program, a person may operate a maximum of three autonomous vehicles or fully autonomous vehicles simultaneously on the streets and highways of this State;
- (b) During the first six months of an approved autonomous vehicle pilot program, a human operator will be required to be physically present in the vehicle while it is operating on the streets and highways of this State;
- (c) After completion of the first six months of the autonomous vehicle pilot program, an application may be submitted to the Commission to remove the requirement of a human operator to be physically present in the vehicle while it is operating on the streets and highways of this State providing the following information:
  - (1) A copy of the approved application for the autonomous vehicle pilot program;
  - (2) Total number of trips accomplished;
  - (3) Total number of miles traveled;
  - (4) Total number of times a disengagement of the autonomous mode occurred;
  - (5) A copy of all law enforcement accident reports that have involved an autonomous vehicle operating under the autonomous vehicle pilot program or a statement that no accidents have occurred that involved an autonomous vehicle operating under the autonomous vehicle pilot program; and
- (d) The review, approval, denial, or withdrawal of approval of the application to remove the requirement of a human operator to be physically present in the vehicle will be handled as noted in Section IV of these rules.

(e) Upon approval of an autonomous vehicle pilot program that does not require a human operator to be physically present in the vehicle, a person may operate autonomous vehicles or fully autonomous vehicles that are not equipped with the following:

- (1) Seat belts;
- (2) A steering wheel; and
- (3) A rearview mirror.

(f) If a vehicle operating under an autonomous vehicle pilot program is involved in a serious injury or fatal accident, the following actions will be taken:

- (1) The person responsible for the autonomous vehicle pilot program will notify the Director immediately;
- (2) All vehicles operating under the autonomous vehicle pilot program will cease operations until a review of the accident can be completed;
- (3) The person responsible for the autonomous vehicle pilot program will submit the following to the Director:
  - (A) A copy of the accident report;
  - (B) A report of actions taken by the human operator that was physically located within the vehicle or actions taken by the human operator that was remotely located or a statement that no actions were taken by a human operator;
  - (C) A description of actions taken to prevent subsequent accidents;
  - (D) A request to restart operations of the autonomous vehicle pilot program, if the person responsible for the autonomous vehicle pilot program desires to do so;
- (4) The review, approval, or denial of the application to restart the autonomous vehicle pilot program will be handled as noted in Section IV of these rules.

## VI. Reporting

(a) A report will be submitted to the Director by January 31<sup>st</sup> for the previous calendar year's operations providing the following information:

- (1) A copy of the approved application for the autonomous vehicle pilot program;
- (2) Total number of trips accomplished;
- (3) Total number of miles traveled;
- (4) Total number of times a disengagement of the autonomous mode occurred; and
- (5) A copy of all law enforcement accident reports that have involved an autonomous vehicle operating under the autonomous vehicle pilot program or a statement that no accidents have occurred that involved an autonomous vehicle operating under the autonomous vehicle pilot program.