

Chair Clemens & Members of the Senate Transportation Committee,

HB 1614 is an important study bill on autonomous and semiautonomous vehicle technology. It is critically important that we look deeper into the complexities of this emerging technology prior to its presumably inevitable widespread adoption.

Please note that all of the opposition testimony in LAWS was submitted before the bill was changed into a study. The original version was a bill requiring a human operator in automated truck tractors operating in North Dakota. This was due to a wide array of concerns relating to road safety, loss of critical trucking jobs, and the need for ensuring public trust as we transition into a new era. However, upon further discussion by the House Transportation committee, it was decided that the best path forward was to instead study the issue further.

Currently, autonomous vehicles (AV) technology is already in use on North Dakota's highway system. There is existing century code; 39-01-01.2. Autonomous vehicle operations (<https://ndlegis.gov/cencode/t39c01.pdf#nameddest=39-01-01p2>), and chapter 8-12 (<https://ndlegis.gov/cencode/t08c12.pdf#nameddest=8-12-01>), which addresses an on-demand autonomous vehicle network. The state allows the operation of AVs on public roads, provided they follow all applicable federal and state traffic laws, insurance requirements, accident reporting procedures, and titling and registration regulations.

The NDDOT approves limited trucking platooning operations, in which an AV follows another vehicle that does not have a human operator. They must present an operational plan to be approved by the NDDOT, and are allowed to operate with reduced following distances. Additionally, the NDDOT has also utilized federal grant dollars to operate an Autonomous Impact Protection Vehicle (AIPV), in controlled work zone environments. The state has not imposed additional requirements, taxes, or performance standards on autonomous vehicles beyond federal and state regulations.

Most of current law came out of a study bill from the 2017 session, HB 1202, which established a core working group on AV technology. This study reviewed current laws related to licensing, registration, insurance, data ownership, and inspection. The group ultimately agreed that existing state law and consumer protection/liability claims processes cover data issues and insurance issues, at least until the AV business and use/ownership models are better known.

**There are three main reasons we need HB 1614:**

1. These technologies have advanced significantly in the last 8 years since the previous study.
2. This study tasks the Upper Great Plains Transportation Institute (UGPTI) with research because they possess specialized expertise that NDDOT does not have.
3. We are behind some states in determining regulatory and statutory priorities.

**The study will address four main areas:**

1. Infrastructure
2. Accident & Safety Data

3. Liability
4. Data Privacy and Cybersecurity

### **Infrastructure**

It is unclear if our state's infrastructure is fully prepared for widespread AV deployment. Uneven road surfaces, poorly marked lanes, and limited communication infrastructure can all pose challenges for AVs. This study will answer these questions.

### **Accident & Safety Data**

In the future, after time and trial, AVs are likely to be significantly safer than their human counterparts. However, this technology is still evolving, and since operations have been limited in scope and geography, making clear safety claims on data is currently not sufficient to guarantee public safety should widespread adoption occur. As one example of how narrow safety data is, one operator in North Dakota states they have traveled 50,000 miles on our highways and have an unblemished safety record. That's promising, but consider that the total vehicle miles traveled in the state on all roadways by all vehicles was 9,921,000,000. Therefore, this safety data is simply not a large enough sample size from which to draw reasonable conclusions or develop expectations on how these systems might work on a wider scale.

According to the National Highway Traffic Safety Administration (NHTSA), there were 3,979 incidents involving autonomous vehicles reported from August 2019 through June 17, 2024, including 473 in 2024 so far. These incidents resulted in 496 injuries and fatalities, with 83 fatalities and 58 serious injuries reported. Tesla vehicles were involved in 53.9% of the total incidents. For Level 2 autonomous vehicles, which require full human attention, nearly 400 crashes were reported between July 2021 and May 2022, with Tesla accounting for 273 of these crashes. However, it's important to note that the data does not always clarify whether self-driving features were engaged at the time of the accidents or if the automated technology was directly connected to the incidents. Also, due to the wide variation of capability and design, the uniformity of this data is very limited. Therefore, HB 1614 attempts to develop a clearer uniformity for analyzing safety data.

Examples of Potential Problems with Safety Data:

1. Difficulty in formalizing driving behavior: Translating human-oriented rules of the road into formal specifications for AVs is challenging, which could lead to inconsistencies in how AVs interpret and follow traffic laws.
2. Variability in human benchmarks: The human driver benchmarks used for comparison may vary across studies and locations, making it difficult to establish a consistent baseline for comparison.
3. Lack of standardized metrics: There is no universally accepted set of metrics for comparing AV safety to human drivers, which can lead to inconsistencies in how safety is measured and reported across studies.
4. Evolving technology: As AV technology rapidly evolves, older data may not accurately represent the current state of AV safety, potentially leading to outdated conclusions.

### **Liability**

In the event of an accident involving an autonomous vehicle, determining liability and ensuring accountability become incredibly complex and raises serious ethical and legal questions that must be addressed before widespread deployment is accelerated. Other states are looking into these topics with more detail. For example, a report from the Montana legislature's research office titled 'Autonomous Vehicle Legislation Review & Considerations' considered the varying complexity of liability presumption relating to the operation of AV technology. Montana

Research: <https://archive.legmt.gov/content/Committees/Interim/2023-2024/Transportation/Meetings/240508-May-08-2024/06.010-AV-Report-LSD.pdf>

HB 1614 seeks to answer some of these outstanding legal questions. Relatedly, the complexity of AV technology necessitates specialized oversight and regulation as it relates to safety, and this study will propose a framework by which they can occur.

**Data Privacy and Cybersecurity:**

The vast amount of data collected by AVs raises privacy and security concerns. I highly recommend reading this article on potential cyber threats or data misuse, raised in the Dakota Digital Review, published by the NDUS, and available here: <https://dda.ndus.edu/ddreview/are-self-driving-cars-safe/>

**Conclusion**

The reality is that autonomous systems, while promising and undoubtedly the future, are still prone to errors and unexpected behavior as AI advances. Inclement weather conditions in North Dakota, such as snow, ice, and high winds, can potentially impair the sensors and algorithms that AVs rely on. There is an extremely basic legal framework for the operation of AV technology in century code, but it fails to address many potential concerns. This study will notably address outstanding questions about accident liability, the readiness of highway infrastructure for these technologies, address concerns about data privacy and security, and present ideas for a regulatory framework to the legislature. It is a measured approach that allows for technological advancement while prioritizing safety, job protection, and oversight. The bill aligns with North Dakota's ongoing efforts to study and integrate AV technology safely, balancing innovation with caution.

25.1255.02001  
Title.

Prepared by the Legislative Council  
staff for Representative Hendrix  
March 19, 2025

Sixty-ninth  
Legislative Assembly  
of North Dakota

**PROPOSED AMENDMENTS TO  
FIRST ENGROSSMENT**

**ENGROSSED HOUSE BILL NO. 1614**

Introduced by

Representatives Hendrix, D. Johnston

1 A BILL for an Act to provide for ~~a department of transportation~~an upper great plains  
2 transportation institute study regarding autonomous and semiautonomous vehicle technologies;  
3 ~~and to provide~~ for a legislative management report; and to provide an appropriation.

4 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

5 **SECTION 1. ~~DEPARTMENT OF TRANSPORTATION~~UPPER GREAT PLAINS**  
6 **TRANSPORTATION INSTITUTE STUDY - AUTONOMOUS AND SEMIAUTONOMOUS**  
7 **VEHICLE TECHNOLOGIES - REPORT TO LEGISLATIVE MANAGEMENT.**

- 8 1. During the 2025-26 interim, the upper great plains transportation institute, under the  
9 advisement of the department of transportation, shall study relevant issues ~~in order to~~  
10 ~~develop~~to aid the department in developing a ~~preemptive~~-regulatory and  
11 recommended statutory framework for the operation of autonomous and  
12 semiautonomous vehicles on the North Dakota highway system. The study must  
13 include:
- 14 a. A ~~process for determining where the state's infrastructure may or may not be fully~~  
15 ~~prepared~~review of the state's infrastructure readiness for widespread deployment  
16 of autonomous and semiautonomous vehicle technologies;
  - 17 b. A Development of a uniform process to review accident and traffic data for  
18 autonomous and semiautonomous vehicle systems with independent oversight  
19 on the industry operators;

- 1 c. ~~If there is a need to promulgate rules relating to~~A review of accident liability  
2 ~~regarding~~laws and how the laws may be applied to autonomous and  
3 semiautonomous vehicle technologies; and  
4 d. A determination of ~~common~~potential vulnerabilities relating to privacy concerns  
5 and data security with proposed solutions for addressing the vulnerabilities.  
6 2. Before August 1, 2026, the upper great plains transportation institute and the  
7 department of transportation shall report ~~its~~their findings and recommendations,  
8 ~~together with any legislation required to implement the recommendations;~~ to the  
9 legislative management.

10 **SECTION 2. APPROPRIATION - UPPER GREAT PLAINS TRANSPORTATION**

11 **INSTITUTE - AUTONOMOUS AND SEMIAUTONOMOUS VEHICLE TECHNOLOGIES STUDY**  
12 **- ONE-TIME FUNDING.** There is appropriated out of any moneys in the general fund in the  
13 state treasury, not otherwise appropriated, the sum of \$100,000, or so much of the sum as may  
14 be necessary, to the upper great plains transportation institute for the purpose of conducting an  
15 autonomous and semiautonomous vehicle study, for the biennium beginning July 1, 2025, and  
16 ending June 30, 2027. The funding provided in this section is considered a one-time funding  
17 item.