

0-7130: Investigate Potential Connected and Automated Vehicle (CAV) Liability Issues Within TxDOT

Background

Connected and automated vehicles (CAVs) and associated technologies promise momentous changes. Mobility is likely to be characterized by collaborative, communicative, and driverless vehicles operating in a connected network of vehicles, infrastructure, and wireless devices. One of the most uncertain areas where change can be expected is legislation surrounding the licensing and operation of these technologies. Questions of liability about how to manage new mobility paradigms, including in areas of state and local government tort liability, dominate debate. Although governmental entities typically enjoy some level of sovereign immunity, there are areas where they have limited liability for specific torts. This research project identified potential tort liability associated with CAV technologies for the Texas Department of Transportation (TxDOT) and other governmental agencies.

This foundational research provides the information necessary for TxDOT to proactively identify, assess, and address legal liabilities that may arise under current law, and legal liabilities that may arise under new law as the result of CAV implementations. Specifically, the research answers three questions:

- What is the role of TxDOT?
- What liabilities does the operation of CAVs on public roads present for TxDOT and local governments, if any?
- How can the identified liabilities be avoided or mitigated?

What the Researchers Did

This project is one of the first CAV research projects focused on liability issues from a state department of transportation perspective. The research team was a collaboration between the Texas A&M Transportation Institute and Stantec. Six research tasks were conducted to identify potential tort liability from the deployment of CAV technologies.

A literature review was informed by the examination of 45 guidance, policy, research, and legal documents, including legally focused papers, statutes, and case law. The goal of the review was to identify which tort liabilities may arise. Areas of investigation included:

- Sovereign immunity.
- Federal preemption/Supremacy Clause.
- Design immunity.
- Data management, security, and privacy.
- Notice regarding infrastructure condition.
- Insurance.

The research team also conducted guided interviews with 14 individuals working in the CAV arena. The interviewees' backgrounds included transportation law, policy, industry, research planning, and engineering.

A state and federal law analysis explored statutes and case law in five topical areas:

- Federal and state roles.
- Tort liability and immunity.
- Data collection and management.
- Notice of infrastructure condition.
- Product liability.

TxDOT and the research team collectively identified seven use cases that represented specific issues of concern to TxDOT related to CAV operations. Previous tasks informed the definition of the use cases and were written as fact patterns that applied relevant existing laws and regulations to the facts to perform a legal analysis of each case.

A peer symposium virtually convened a group of individuals that represented implementers from state, regional, and local governments and the private sector, as well as legal experts that are guiding them through testing and deployment of CAV technologies. The experts spoke

Research Performed by:

Texas A&M Transportation Institute

Research Supervisor:

Gretchen Stoeltje, TTI

Researchers:

Billy Hwang, TTI

Todd Hansen, TTI

Tina Geiselbrecht, TTI

Max Steadman, TTI

Project Completed:

7-31-2023

about tort liabilities in their jurisdictions and what approach was taken to those issues.

Finally, a web-based tool was designed to serve as a living digital asset to house a growing archive of materials that address tort liabilities. The web tool is maintained by TxDOT and includes all the research project deliverables and additional matrices that can be used to track issues as they develop and change over time.

What They Found

State Law

Sovereign Immunity

The Texas Tort Claims Act provides sovereign immunity against tort claims for government agencies like TxDOT. That immunity can be waived if one of the following two conditions occurs:

- An intentional or negligent act of an employee arising from the operation of a motor vehicle or equipment occurs and proximately causes damage to property or human injury or fatality.
- The condition or use of tangible personal or real property proximately causes damage to property or human injury or fatality.

Regardless of whether the facts comprising the claim also involved data, CAVs, roadway, or traffic signal defects, or the acts of third parties, these threshold elements constituting a waiver must be present for liability to attach to a state agency. If they are not, that agency is likely protected by sovereign immunity.

Gaps and Silences in the Law

The research project affirmed that the law has not been tested or is silent in three general areas:

- Electronic data.
- Whether Federal Motor Vehicle Safety Standards requirements and recent Texas state law may be in conflict.
- Whether product-related injuries may expose the agency to tort liability.

The law is clearer with regard to premises defects; special defects; and traffic signs, signals, warning devices, and other traffic control devices (including lane markings). Liability for these issues in an environment with CAVs is likely similar to that in the current environment. Dangerous roadway conditions will still potentially create unreasonable risk of harm to passengers in CAVs just as they do in human-operated vehicles.

Federal Law

For a variety of reasons, it has been difficult for Congress to act on CAVs. However, there continue to be rulemakings and requests for comments around CAVs. The information being gathered should lead to informed regulatory action that considers the flexibility needed as CAV technologies continue to mature and use cases evolve. While there are few specific references to CAVs in federal legislation currently, several bills are being debated that address issues touching CAVs.

What This Means

There are a number of legislative, operational, and relational mitigation strategies that TxDOT can consider in order to best prepare for managing or mitigating the risks identified around the growing operation of CAVs on Texas roads.

Legislative strategies to mitigate risks mostly consist of ways to amend existing sections of the Texas Civil Practices and Remedies, Transportation, and Local Government Codes to expand or narrow definitions or requirements related to preserving or strengthening TxDOT's sovereign immunity. Opportunities also exist to clarify protections for proprietary and confidential information resulting from public and private partnerships.

Relational strategies to mitigate risks include several comments from the Peer Symposium focused on fostering robust collaboration between different levels of government and the CAV community. This collaboration is needed to understand capabilities and use cases for the technology, support public engagement and adoption, and ensure resources are in place to support changes that may be needed to support full commercial deployment.

For More Information

Project Manager:

Joanne Steele, TxDOT, (512) 416-4657

Research Supervisor:

Gretchen Stoeltje, TTI, (512) 407-1165

Project Monitoring Committee Members:

Becky Blewett, Misty Barham, Emilie Schulz, Jame Kuhr, Mark Johnson, and Robert Davis

Research and Technology Implementation Office
Texas Department of Transportation
125 E. 11th Street
Austin, TX 78701-2483

www.txdot.gov
Keyword: Research

Technical reports when published are available at
<http://library.ctr.utexas.edu>.