

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/HB 725 Autonomous Vehicles

SPONSOR(S): Transportation & Infrastructure Subcommittee; Brodeur and others

TIED BILLS: **IDEN./SIM. BILLS:** SB 1066

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	14 Y, 0 N, As CS	Johnson	Vickers
2) Government Accountability Committee			

SUMMARY ANALYSIS

Under Florida law, autonomous vehicles are vehicles equipped with autonomous technology. Autonomous technology is defined as technology installed on a motor vehicle that has the capability to drive the vehicle on which the technology is installed without the active control or monitoring of a human operator.

Current Florida law authorizes the operation of autonomous vehicles equipped with the defined autonomous technology on the public roads of this state by any person holding a valid driver license. The physical presence of an operator in the autonomous vehicle is not required under specified conditions. Autonomous vehicles registered in this state must continue to meet federal standards and regulations that apply to such vehicles.

The bill authorizes the use of vehicles in autonomous mode, with the autonomous technology being considered the human operator of the motor vehicle. The bill provides that various provisions of law regarding motor vehicles such as rendering aid in the event of a crash do not apply to vehicles in autonomous mode where a human operator is not physically present as long as the vehicle owner promptly contacts law enforcement. The bill also addresses the applicability of laws regarding unattended motor vehicles and passenger restraint requirements as they relate to vehicles operating in autonomous mode where a human operator is not physically present in the vehicle.

The bill provides that for autonomous vehicles operating in autonomous mode, the autonomous technology is considered to have a valid driver license.

The bill is not expected to have a fiscal impact on state or local governments.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Current Situation

While there are multiple definitions for various levels of vehicle automation, the National Highway Traffic Safety Administration (NHTSA) has adopted the SAE International (SAE) definitions for levels of automation. The SAE definitions divide vehicles into levels based on “who does what, when.”

Generally:

- At SAE Level 0, the human driver does everything;
- At SAE Level 1, an automated system on the vehicle can sometimes assist the human driver conduct some parts of the driving task;
- At SAE Level 2, an automated system on the vehicle can actually conduct some parts of the driving task, while the human continues to monitor the driving environment and performs the rest of the driving task;
- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment in some instances, but the human driver must be ready to take back control when the automated system requests;
- At SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and
- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.

Federal Policy

In an announcement on January 14, 2016, the U.S. Department of Transportation (USDOT) outlined the following 2016 autonomous vehicle milestones:

- NHTSA will work with industry and other stakeholders within six months of the announcement to develop guidance on the safe deployment and operation of autonomous vehicles, providing a common understanding of the performance characteristics necessary for fully autonomous vehicles and the testing and analysis methods needed to assess them;
- In the same six months, NHTSA will work with state partners, the American Association of Motor Vehicle Administrators, and other stakeholders to develop a model state policy on automated vehicles that offers a path to consistent national policy;
- Manufacturers are encouraged to submit rule interpretation requests where appropriate to help enable technology innovation;¹
- When interpretation authority is not sufficient, manufacturers are encouraged to submit requests for use of the agency’s exemption authority to allow the deployment of fully autonomous vehicles.² Exemption authority allows NHTSA to enable the deployment of up to 2,500 vehicles for up to two years if the agency determines that an exemption would ease development of new safety features,³ and
- USDOT and NHTSA will develop the new tools necessary for this new era of vehicle safety and mobility, and will consider seeking new authorities when they are necessary to ensure that fully

¹ As an example, the announcement links to a NHTSA response to a BMW request for an interpretation confirming that BMW's remote self-parking system meets the Federal Motor Vehicle Safety Standards. The response notes that NHTSA does not provide approvals of vehicles or vehicle equipment or make determinations as to whether a product conforms to the Federal Motor Vehicle Safety Standards (FMVSSs) outside of an agency compliance test. Instead, federal law requires manufacturers to self-certify that a product conforms to all applicable FMVSSs in effect on the date of product manufacture. *See* NHTSA response: <http://isearch.nhtsa.gov/files/15-005347%20BMW%20Brake%20Transmission%20Shift%20Interlock%20v5.htm> (last visited February 24, 2017).

² *See* 49 C.F.R. § 555.

³ *See* 49 C.F.R. § 555.6.

autonomous vehicles, including those designed without a human driver in mind, are deployable in large numbers when they are demonstrated to provide an equivalent or higher level of safety than is now available.

In September 2016, USDOT issued its model state policy on autonomous vehicles, whose objective is to ensure the establishment of a consistent national framework rather than a patchwork of incompatible laws. The model state policy addresses issues regarding autonomous vehicle testing, what would be considered the “driver” of an autonomous vehicle, registration and titling of autonomous vehicles, law enforcement considerations, and liability and insurance issues.⁴

Current Florida Law

Definitions

Section 316.003(2), F.S., defines “autonomous vehicle” as any vehicle equipped with autonomous technology. That subsection also includes a definition of “autonomous technology,” which means technology installed on a motor vehicle that has the capability to drive the vehicle on which the technology is installed without the active control or monitoring by a human operator.⁵

Operation

Section 316.85, F.S., provides for the operation of autonomous vehicles. A person possessing a valid driver license may operate an autonomous vehicle in autonomous mode on roads in this state if the vehicle is equipped with autonomous technology.

For purposes of Ch. 316, F.S., a person is deemed to be operating an autonomous vehicle operating in autonomous mode when he or she causes the vehicle's autonomous technology to engage. This is regardless of whether he or she is physically present in the vehicle while the vehicle is operating in autonomous mode.

Exemption from Liability

Section 316.86, F.S., provides that the original manufacturer of a vehicle converted by a third party into an autonomous vehicle is not liable in, and has a defense to and be must be dismissed from, any legal action brought against the original manufacturer by any person injured due to an alleged vehicle defect caused by the conversion of the vehicle, or by equipment installed by the converter, unless the alleged defect was present in the vehicle as originally manufactured.

Autonomous Vehicle Requirements

Section 319.145, F.S., requires that an autonomous vehicle registered in this state⁶ must continue to meet federal standards and regulations for a motor vehicle. This section of law is expressly superseded when in conflict with NHTSA regulations. In addition, an autonomous vehicle must:

- Have a means to engage and disengage the autonomous technology which is easily accessible to the operator;
- Have a means, inside the vehicle, to visually indicate when the vehicle is operating in autonomous mode;
- Have a means to alert the operator of the vehicle if a technology failure affecting the ability of the vehicle to safely operate autonomously is detected while the vehicle is operating autonomously in order to indicate to the operator to take control of the vehicle; and

⁴ United States Department of Transportation, Federal Automated Vehicles Policy, September 2016. (Copy on file with Transportation and Infrastructure Subcommittee).

⁵ The latter definition does not include a motor vehicle enabled with active safety systems or driver assistance systems, including, without limitation, a system to provide electronic blind spot assistance, crash avoidance, emergency braking, parking assistance, adaptive cruise control, lane keep assistance, lane departure warning, or traffic jam and queuing assistant, unless any such system alone or in combination with other systems enables the vehicle on which the technology is installed to drive without the active control or monitoring by a human operator.

⁶ Chapter 320, F.S., reflects no vehicle registration provision specific to autonomous vehicles.

- Be capable of being operated in compliance with the applicable traffic and motor vehicle laws of this state.

Driver Licensing

Section 322.03, F.S., generally requires drivers to be licensed and provides penalties for operating a motor vehicle without a valid driver license. However, this statute does not discuss autonomous vehicles operating in autonomous mode.

Proposed Changes

The bill amends s. 316.85, F.S. relating to the operation of autonomous vehicles. The bill authorizes a person to operate an autonomous vehicle or engage autonomous technology to operate an autonomous vehicle in autonomous mode, on roads in this state if the vehicle is equipped with autonomous technology.

For purposes of determining compliance with all of the state's applicable traffic and motor vehicle laws, autonomous technology is deemed to be the operator of an autonomous vehicle operating in autonomous mode, regardless of whether a human person is physically present in the vehicle while the vehicle is operating in autonomous mode.

The state's traffic or motor vehicle laws do not prohibit autonomous technology from being deemed the operator of an autonomous vehicle operating in autonomous mode and does not require a licensed human operator to operate an autonomous vehicle, except as provided in s. 319.145(1), F.S.⁷

When an autonomous vehicle is operating in autonomous mode, the autonomous technology is deemed to be validly licensed⁸ to operate a motor vehicle and to satisfy all examinations and physical acts required of a human operator.

The bill specifies the following provisions do not apply to autonomous vehicles operating in autonomous mode if, in the event of a crash involving the vehicle, the vehicle owner, or a person on behalf of the vehicle owner, promptly contacts law enforcement to report the crash:

- Duty to give information and render aid as provided in s. 316.062, F.S.;
- Duty upon damaging unattended vehicle or property as provided in s. 316.063; and
- Crash reports as provided in s. 316.065, F.S.

Statutory provisions relating to unattended motor vehicles⁹ do not apply to autonomous vehicles operating in autonomous mode.

Statutory provisions regarding child restraint requirements¹⁰ and seat belt usage¹¹ only apply to a human person physically present in a motor vehicle.

The bill amends s. 319.145(1)(a), F.S., providing that regardless of whether a human operator is physically present in the vehicle the vehicle is required to have a system to safely alert a human operator physically present in the vehicle if an autonomous technology failure is detected while the autonomous technology is engaged. When the alert is given, the system must:

- If a human operator is physically present in the vehicle, require the human operator to take control of the autonomous vehicle; or
- If a human operator does not, or is not able to, take control of the autonomous vehicle, or if a human operator is not physically present in the vehicle, be capable of bringing the vehicle to a complete stop.

⁷ Section 319.145(1), F.S., requires autonomous vehicles to meet certain standards.

⁸ Section 322.03, F.S., requires drivers to be licensed.

⁹ Section 316.1975, F.S.

¹⁰ Section 316.613, F.S.

¹¹ Section 316.614, F.S.

The bill creates s. 322.03(5), F.S., providing that notwithstanding any other provision of law to the contrary, for autonomous vehicles operating in autonomous mode, the autonomous technology is deemed to be validly licensed as required by s. 322.03, F.S.

The bill also conforms a cross-reference in s. 322.15, F.S.

B. SECTION DIRECTORY:

Section 1 amends s. 316.85, F.S., relating to the operation of autonomous vehicles.

Section 2 amends s. 319.145, F.S., relating to autonomous vehicles.

Section 3 amends s. 322.03, F.S., providing that drivers must be licensed.

Section 4 amends s. 322.15, F.S., conforming a cross reference.

Section 5 provides an effective date of July 1, 2017.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill could serve to stimulate private sector investment in Florida and incentivize autonomous vehicle testing and research in Florida.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not Applicable. This bill does not appear to require counties or municipalities to spend funds or take action requiring the expenditures of funds; reduce the authority that counties or municipalities have to raise revenues in the aggregate; or reduce the percentage of state tax shared with counties or municipalities.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

On March 7, 2017, the Transportation & Infrastructure Subcommittee adopted one amendment and reported the bill favorably as a committee substitute. The amendment provided that for autonomous vehicles operating in autonomous mode the autonomous technology is deemed to be validly licensed.

This analysis is written to the committee substitute as reported favorably by the Transportation & Infrastructure Subcommittee.