

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 311 Autonomous Vehicles
SPONSOR(S): Fischer
TIED BILLS: IDEN./SIM. **BILLS:** SB 932 SB 932

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	14 Y, 0 N	Roth	Vickers
2) Transportation & Tourism Appropriations Subcommittee	9 Y, 0 N	Cobb	Davis
3) State Affairs Committee			

SUMMARY ANALYSIS

Current law authorizes the operation of autonomous vehicles equipped with the defined autonomous technology on Florida roads 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.

In general, the bill:

- Replaces the term “Autonomous Vehicle” with “Automated Driving System”, defined as the hardware and software that performs the dynamic driving task of an autonomous vehicle.
- Provides a definition for “On-Demand Autonomous Vehicle Network”, as a passenger transportation network that uses a digital means to connect passengers to fully autonomous vehicles for-hire.
- Removes the requirement for a person to possess a valid driver license to operate a fully autonomous vehicle. Additionally, the bill provides that an “automated driving system”, rather than a person, is deemed the operator of an autonomous vehicle operating with the automated driving system engaged.
- Specifies that certain provisions of law do not apply to fully autonomous vehicles operating with the automated driving system engaged if, in the event of a crash involving the vehicle, the vehicle owner, a person on behalf of the vehicle owner, or the autonomous vehicle, promptly contacts law enforcement to report the crash. Similarly, the bill specifies statutory provisions relating to unattended motor vehicles, wireless communication devices, and television receivers do not apply to autonomous vehicles operating with the automated driving system engaged.
- Allows the Florida Turnpike Enterprise to fund, construct, and operate test facilities for the advancement of autonomous and connected innovative transportation technology solutions.
- Requires that autonomous vehicles must comply with applicable federal law and regulations.
- Allows an on-demand autonomous vehicle network to operate pursuant to state laws.
- Requires the automated driving system of a fully autonomous vehicle to be capable of achieving a minimal risk condition if a failure of the system occurs. Provides a definition for “minimal risk condition”.
- Creates an exemption to driver licensing requirements when an autonomous vehicle is operated with the automated driving system engaged without a human operator physically present in the vehicle.
- Makes several conforming changes replacing the term “autonomous technology” with “automated driving system.”
- Makes other technical conforming changes.

The bill does not appear to have a fiscal impact on state or local governments. See Fiscal Comments.

The bill has an effective date of July 1, 2019.

This document does not reflect the intent or official position of the bill sponsor or House of Representatives.

STORAGE NAME: h0311c.TTA

DATE: 3/19/2019

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Definitions (Section 1)

Current Situation

Section 316.003(3), 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.

While multiple definitions for levels of vehicle automation exist, the National Highway Traffic Safety Administration (NHTSA) has adopted the Society of Automotive Engineers (SAE) International’s¹ Levels of Automation and other applicable terminology.”² The SAE International Standard J3016³ focuses on automated driving systems that function at Levels 3, 4, and 5 of driving automation and, along with related terminology, specifies the following six levels of driving automation:

- 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.

In October 2018, the United States Department of Transportation (USDOT) released new federal guidance for Automated Driving Systems in a document called *Preparing for the Future of Transportation, Automated Vehicles 3.0*.⁴ The new guidance builds on the previous policy and expands the scope to all surface on-road transportation systems. The new federal guidance is structured around three key areas: advancing multi-modal safety, reducing policy uncertainty, and outlining a process for working with USDOT.⁵

Additionally, to prevent confusion and support consistent terminology, USDOT encourages state legislatures to use terminology already being developed through voluntary, consensus-based, technical standards, such as SAE terminology.⁶ USDOT recommends that state legislators follow best practices,

¹ The SAE’s website describes itself as follows: “SAE International is a global association of more than 128,000 engineers and related technical experts in the aerospace, automotive, and commercial-vehicle industries. SAE International’s core competencies are life-long learning and voluntary consensus standards development. SAE International is a global body of scientists, engineers, and practitioners that advances self-propelled vehicle and system knowledge in a neutral forum for the benefit of society.” See the SAE’s website available at <http://www.sae.org/about/> (last visited January 25, 2019).

² See NHTSA’s Automated Driving Systems 2.0, A Vision for Safety, available at https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf (last visited January 25, 2019).

³ See the SAE’s website available at https://www.sae.org/standards/content/j3016_201806/ (last visited January 25, 2019).

⁴ United States Department of Transportation, *Preparing for the Future of Transportation: Automated Vehicles 3.0*. (October 2018), available at <https://www.transportation.gov/sites/dot.gov/files/docs/policy-initiatives/automated-vehicles/320711/preparing-future-transportation-automated-vehicle-30.pdf> (last visited March 1, 2019).

⁵ *Id.* at viii – x.

⁶ *Id.* at 20.

such as providing a technology-neutral environment, licensing and registration procedures, and reporting and communications methods for public safety officials. States should consider reviewing and potentially modifying traffic laws and regulations that may be barriers to automated vehicles.⁷

Proposed Changes

The bill incorporates SAE terminology already adopted by NHTSA and replaces the term “autonomous vehicle” with “automated driving system”. In addition, the bill includes the following SAE definition for automated driving system:

The hardware and software that are collectively capable of performing the entire dynamic driving task of an autonomous vehicle on a sustained basis, regardless of whether it is limited to a specific operational design domain. The term:

(a) "Autonomous vehicle" means any vehicle equipped with an automated driving system.

(b) "Dynamic driving task" means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic within its specific operational design domain, if any, excluding strategic functions such as trip scheduling and selection of destinations and waypoints.

(c) "Fully autonomous vehicle" means a vehicle equipped with an automated driving system designed to function without a human operator.

(d) "Operational design domain" means a description of the specific operating domain in which an automated driving system is designed to properly operate, including, but not limited to, roadway types, speed ranges, environmental conditions such as weather and time of day, and other domain constraints.

The bill also creates a definition for “On-Demand Autonomous Vehicle Network”. This term is defined to mean:

A passenger transportation network that uses a software application or other digital means to connect passengers to fully autonomous vehicles, exclusively or in addition to other vehicles, for transportation, including for-hire transportation and transportation for compensation.

Duty to Give Information and Render Aid (Section 2)

Current Situation

Section 316.062, F.S., requires a driver involved in a crash resulting in injury to or death of any person or damage to any vehicle or other property to provide certain information to any person injured in such crash or to the driver or occupant of or person attending any vehicle or other property damaged in the crash, and to any law enforcement officer involved. Additionally, any person responsible for such a crash is required to render aid to the victim, including the carrying, or the making of arrangements for the carrying, of such person to a physician, surgeon, or hospital for medical or surgical treatment if it is apparent that treatment is necessary, or if such carrying is requested by the injured person.

Proposed Changes

The bill amends s. 316.062, F.S., to exempt fully autonomous vehicles, operating with the automated driving system engaged, from giving information and rendering aid if the vehicle owner or a person on behalf of the vehicle owner promptly contacts a law enforcement agency to report the crash or if the autonomous vehicle has the capability of alerting a law enforcement agency to the crash.

⁷ *Id.* at 19

Duty Upon Damaging Unattended Vehicle or Other Property (Section 3)

Current Situation

Section 316.063, F.S., requires a driver of any vehicle which collides with, or is involved in a crash with, any vehicle or other property which is unattended, resulting in any damage to such other vehicle or property, to notify the owner of the vehicle or other property damaged and to provide certain information, or to attach a written notice to the vehicle containing certain information.

Proposed Changes

The bill amends s. 316.063, F.S., to exempt fully autonomous vehicles operating with the automated driving system engaged from notifying the owner of the vehicle or other property damaged if the vehicle owner or a person on behalf of the vehicle owner promptly contacts a law enforcement agency to report the crash or if the autonomous vehicle has the capability of alerting a law enforcement agency to the crash.

Crashes, Reports and Penalties (Section 4)

Current Situation

Section 316.065, F.S. requires the driver of a vehicle involved in a crash resulting in injury to or death of any persons or damage to any vehicle or other property in an apparent amount of at least \$500 to immediately give notice of the crash to the local police department, if such crash occurs within a municipality; otherwise, to the office of the county sheriff or the nearest office or station of the Florida Highway Patrol.

Proposed Changes

The bill amends s. 316.065, F.S., to exempt owners of fully autonomous vehicles operating with the automated driving system engaged from notifying the local police department, office of the county sheriff, or the Florida Highway Patrol if the vehicle owner or a person on behalf of the vehicle owner promptly contacts a law enforcement agency to report the crash or if the autonomous vehicle has the capability of alerting a law enforcement agency to the crash.

Unattended Motor Vehicle (Section 5)

Current Situation

Section 316.1975, F.S., prohibits a person driving or in charge of any motor vehicle from permitting the vehicle to stand unattended without first stopping the engine, locking the ignition, and removing the key. A vehicle may not be permitted to stand unattended upon any perceptible grade without stopping the engine and effectively setting the brake and turning the front wheels to the curb or side of the street.

Proposed Changes

The bill amends s. 316.1975, F.S., to exempt owners of fully autonomous vehicles operating with the automated driving system engaged.

Television Receivers and Wireless Communications Devices (Sections 6 and 7)

Current Situation

Section 316.303, F.S., prohibits individuals from operating a motor vehicle on the highways if the vehicle is actively displaying moving television broadcast or pre-recorded video entertainment content that is visible from the driver's seat while the vehicle is in motion. This section does not apply to autonomous vehicles operating in autonomous mode.

Section 316.305, F.S., prohibits individuals from operating a motor vehicle while manually typing or entering multiple letters, numbers, symbols, or other characters into a wireless communications device or while sending or reading data on such a device for the purpose of nonvoice interpersonal communication, including, but not limited to, communication methods known as texting, e-mailing, and

instant messaging. This section does not apply to autonomous vehicles operating in autonomous mode.

Proposed Changes

The bill amends ss. 316.303 and 316.305, F.S., to conform to changes in terminology made elsewhere in the bill.

Autonomous Vehicles, Operation, and Driver License Exemptions (Sections 8 and 10)

Current Situation

Section 316.85, F.S., requires an individual to possess a valid driver license to operate an autonomous vehicle in autonomous mode if the vehicle is equipped with autonomous technology. In addition, an individual, rather than the autonomous technology, is considered the operator of the vehicle when the vehicle is operated in autonomous mode.

Proposed Changes

The bill provides that a licensed human operator is not required to operate a fully autonomous vehicle. A fully autonomous vehicle may operate regardless of whether a human operator is physically present in the vehicle and the automated driving system, when engaged, is deemed to be the operator of the autonomous vehicle.

The bill amends s. 316.85, F.S., to provide that the automated driving system, rather than a human, shall be deemed the operator of the autonomous vehicle operating in autonomous mode, and prohibits motor vehicle laws that state otherwise.

The bill further amends s. 316.85, F.S., to allow the Florida Turnpike Enterprise to fund, construct, and operate test facilities for the advancement of autonomous and connected innovative transportation technology solutions for the purposes of improving safety and decreasing congestion for the traveling public and to otherwise advance the objectives of the Florida Turnpike Enterprise as set forth in the Florida Transportation Code.

The bill authorizes on-demand autonomous vehicle networks to operate pursuant to state laws governing the operation of transportation network companies (TNC) and vehicles. However, provisions in s. 627.748, F.S., that reasonably only apply to a human driver do not apply to the operation of a fully autonomous vehicle with the automated driving system engaged in an on-demand autonomous vehicle network.

On-demand autonomous vehicle networks will be bound by the same regulations and requirements (other than those requirements that would reasonably only apply to a human driver) as TNCs. Some of the requirements that on-demand autonomous vehicles networks will be subject to under this provision include:

- Designating and maintaining an agent for service of process in Florida;
- Providing identification of the vehicle's license plate number;
- Providing certain disclosures to passengers related to the collection of fares;
- Maintaining varying levels of automobile insurance;
- Maintaining individual ride records for at least one year after the date of the ride; and
- Submitting specified examination reports to the Department of Financial Services.

Lastly, the bill creates s. 322.015, F.S., to exempt fully autonomous vehicles operated in autonomous mode without a licensed human operator physically present in the vehicle from Chapter 322, F.S., which relates to driver licenses.

Autonomous Vehicles (Section 9)

Current Situation

Section 319.145, F.S., contains general requirements related to autonomous vehicles. In general, autonomous vehicles registered in Florida must continue to meet applicable federal standards and regulations for such motor vehicles.

Proposed Changes

The bill amends s. 319.145, F.S., stating that autonomous vehicles must comply with applicable federal law and regulations. The bill requires all autonomous vehicles to bear the required certification labels when required by federal law. The bill also requires fully autonomous vehicles to be able to achieve a minimal risk condition if a failure of the automated driving system occurs. The bill defines “minimal risk condition” as, a reasonably safe state, such as bringing the vehicle to a complete stop and activating the vehicle’s hazard lamps. The bill creates additional requirements for autonomous vehicles that are not fully autonomous and requires all autonomous vehicles to be capable of being operated in compliance with the applicable traffic and motor vehicle laws of the state.

Additional Technical and Conforming Changes (Sections 11, 12, 13, 14, and 15)

Current Situation

Section 339.175(7), F.S., currently requires each metropolitan planning organization to develop a long-range transportation plan that, in part, must make the most efficient use of existing transportation facilities to relieve vehicular congestion, improve safety, and maximize the mobility of people and goods. Such efforts currently include, but are not limited to, consideration of infrastructure and technological improvements necessary to accommodate advances in vehicle technology, such as “autonomous technology” and other developments.

Section 339.64(3), F.S., provides certain requirements with respect to updates of the Strategic Intermodal System (SIS) Plan. The Department of Transportation (DOT) is directed to coordinate with federal, regional, and local partners, and industry representatives, to consider infrastructure and technological improvements necessary to accommodate advances in vehicle technology, such as “autonomous technology” and other developments, in SIS facilities. Subsection (4) of that section requires the SIS Plan, among other items, to include a needs assessment that must include, but is not limited to, consideration of infrastructure and technological improvements necessary to accommodate advances in vehicle technology, such as “autonomous technology” and other developments.

Section 339.83, F.S., authorizes the DOT secretary to enroll the state in any federal pilot program or project for the collection and study of data for the review of federal or state roadway safety, infrastructure sustainability, congestion mitigation, transportation system efficiency, “autonomous vehicle technology,” or capacity challenges.

Section 627.0653, F.S., authorizes the Office of Insurance Regulation to approve a discount to any motor vehicle insurance policy for a vehicle that is equipped with “autonomous driving technology”.

Proposed Changes

The bill amends ss. 339.175, 339.64, and 339.83, F.S., changing the references from “autonomous technology” to “automated driving systems.”

The bill also amends s. 627.0653, F.S., changing the reference from “autonomous driving technology” to “automated driving system.”

The bill makes technical conforming changes to s. 655.960, F.S.

B. SECTION DIRECTORY:

Section 1: Amends s. 316.003, F.S., relating to definitions.

Section 2: Amends s. 316.062, F.S., relating to duty to give information and render aid.

Section 3: Amends s. 316.063, F.S., relating to duty upon damaging unattended vehicle or other property.

Section 4: Amends s. 316.065, F.S., relating to crashes; reports; penalties.

Section 5: Amends s. 316.1975, F.S., relating to unattended motor vehicle.

Section 6: Amends s. 316.303, F.S., relating to television receivers.

Section 7: Amends s. 316.305, F.S., relating to wireless communications devices; prohibition.

Section 8: Amends s. 316.85, F.S., relating to autonomous vehicles; operation.

Section 9: Amends s. 319.145, F.S., relating to autonomous vehicles.

Section 10: Creates s. 322.015, F.S., relating to exemption.

Section 11: Amends s. 339.175, F.S., relating to metropolitan planning organization.

Section 12: Amends s. 339.64, F.S., relating to strategic intermodal system plan.

Section 13: Amends s. 339.83, F.S., relating to enrollment in federal pilot programs.

Section 14: Amends s. 627.0653, F.S., relating to insurance discounts for specified motor vehicle equipment.

Section 15: Amending s. 655.960, F.S., relating to definitions.

Section 16: Provides an effective date of July 1, 2019.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

The bill does not appear to have a fiscal impact on state or local governments; however, the bill allows, but does not require the Florida Turnpike Enterprise to fund, construct, and operate test facilities for the advancement of autonomous and connected innovative transportation technology solutions. To the extent the Turnpike Enterprise utilizes this authorization, there would be an indeterminate negative impact on state expenditures.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

The bill does not appear to have a fiscal impact on local governments.

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 affect county or municipal governments.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES