

## HOUSE OF REPRESENTATIVES STAFF ANALYSIS

**BILL #:** CS/HB 353 Autonomous Vehicles  
**SPONSOR(S):** Appropriations Committee, Fischer, Brodeur and others  
**TIED BILLS:** **IDEN./SIM. BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	13 Y, 0 N	Roth	Vickers
2) Appropriations Committee	20 Y, 0 N, As CS	Cobb	Leznoff
3) Government Accountability Committee			

### SUMMARY ANALYSIS

Florida law currently 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.

In general, the bill:

- Replaces the term “Autonomous Vehicle” with “Automated Driving System”, defined as the hardware and software that performs the autonomous driving task.
- 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 in autonomous mode.
- Specifies that certain provisions of law do not apply to fully autonomous vehicles operating in autonomous mode 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 do not apply to autonomous vehicles operating in autonomous mode.
- Allows the Florida Turnpike Enterprise to fund, construct and operate test facilities for the advancement of autonomous and connected innovative transportation technology solutions.
- Prohibits local governments from imposing a fee, tax or other requirement on autonomous technology or vehicles or on a person who operates an autonomous vehicle.
- Provides several requirements related to autonomous vehicles and automated driving systems.
- Creates an exemption to driver licensing requirements when an autonomous vehicle is operated in autonomous mode without a human operator physically present in the vehicle.
- Makes several conforming changes replacing the term “autonomous technology” with “automated driving system.”
- Creates several insurance requirements related to automated driving systems, owners and operators of autonomous vehicles, and transportation network companies.

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

The bill has an effective date of July 1, 2018.

# FULL ANALYSIS

## I. SUBSTANTIVE ANALYSIS

### A. EFFECT OF PROPOSED CHANGES:

#### Definitions (Section 1)

##### Current Situation

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.

##### Vehicle Automation

While there are multiple definitions for levels of vehicle automation, the National Highway Traffic Safety Administration (NHTSA) has adopted the SAE International (SAE) definitions for levels of automation.<sup>1</sup> The SAE definitions<sup>2</sup> 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:<sup>3</sup>

- 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;<sup>4</sup>

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<sup>1</sup> SAE International, *NHTSA Adopts SAE International Standard Defining Autonomous Vehicles; SAE Releases New Version for Free - J3016 states and defines six levels of automation in on-road motor vehicles* (October 3, 2016), available at <https://www.sae.org/news/3550/> (last visited October 30, 2017).

<sup>2</sup> SAE International, *Automated Driving: Levels of Driving Automation are Defined in New Safe International Standard J3016* (2014), available at [https://www.sae.org/misc/pdfs/automated\\_driving.pdf](https://www.sae.org/misc/pdfs/automated_driving.pdf) (last viewed October 30, 2017).

<sup>3</sup> National Highway Traffic Safety Administration, *Secretary Foxx Unveils President Obama’s FY17 Budget Proposal of Nearly \$4 Billion for Automated Vehicles and Announces DOT Initiatives to Accelerate Vehicle Safety Innovations* (January 14, 2016), available at <https://www.nhtsa.gov/press-releases/secretary-foxx-unveils-president-obama%E2%80%99s-fy17-budget-proposal-nearly-4-billion> (last visited October 30, 2017).

<sup>4</sup> 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

- 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.<sup>5</sup> 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,<sup>6</sup> 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 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.<sup>7</sup>

In September 2017, USDOT released new federal guidance for Automated Driving Systems in a document called *A Vision for Safety 2.0*. The new guidance builds on the previous policy and incorporates feedback received through public comments and Congressional hearings. The document paves the way for the safe deployment of advanced driver assistance technologies by providing voluntary guidance that encourages best practices and prioritizes safety. The document also provides technical assistance to states and best practices for policymakers. Specifically, the new voluntary guidance:

- Focuses on SAE International Levels of Automation 3-5;
- Clarifies the guidance process and that entities do not need to wait to test or deploy their Automated Driving Systems;
- Revises unnecessary design elements from the safety self-assessment;
- Aligns federal guidance with the latest developments and industry terminology; and
- Clarifies federal and state roles going forward.<sup>8</sup>

#### Proposed Changes

The bill replaces the term "autonomous vehicle" with "automated driving system" and creates the following definition:

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, as specified in SAE International Standard J3016 (Revised September 2016). The term "autonomous vehicle" means any vehicle equipped with an automated driving system designed to function at a level of driving automation of Level 3, 4, or 5, as specified in SAE International Standard J3016 (Revised September 2016). The term "fully autonomous vehicle" means a vehicle equipped with an automated driving system

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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 October 30, 2017).

<sup>5</sup> See 49 C.F.R. § 555.

<sup>6</sup> See 49 C.F.R. § 555.6.

<sup>7</sup> United States Department of Transportation, *Federal Automated Vehicles Policy* (September 2016), available at <https://www.transportation.gov/sites/dot.gov/files/docs/AV%20policy%20guidance%20PDF.pdf> (last visited October 30, 2017).<sup>8</sup> United States Department of Transportation, *U.S. DOT Releases New Automated Driving Systems Guidance* (September 12, 2017), available at <https://www.nhtsa.gov/press-releases/us-dot-releases-new-automated-driving-systems-guidance> (last visited October 31, 2017).

<sup>8</sup> United States Department of Transportation, *U.S. DOT Releases New Automated Driving Systems Guidance* (September 12, 2017), available at <https://www.nhtsa.gov/press-releases/us-dot-releases-new-automated-driving-systems-guidance> (last visited October 31, 2017).

designed to function at a level of driving automation of Level 4 or 5, as specified in SAE International Standard J3016 (Revised September 2016).

## **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 in autonomous mode from giving information and rendering aid if the vehicle owner or a person on behalf of the vehicle owner immediately 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.

## **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 contains certain information.

### Proposed Changes

The bill amends s. 316.063, F.S., to exempt fully autonomous vehicles operating in autonomous mode from notifying the owner of the vehicle or other property damaged if the vehicle owner or a person on behalf of the vehicle owner immediately 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 a 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 by the quickest means of communication 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 in autonomous mode from notifying the local police department or the Florida Highway Patrol if the vehicle owner or a person on behalf of the vehicle owner immediately 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 in autonomous mode.

### **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. Also, 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 and a fully autonomous vehicle may operate regardless of whether a licensed human operator is physically present in the 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.

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 prohibits local governments from imposing any tax, fee, or other requirement on autonomous technology or autonomous vehicles or on a person who operates an autonomous vehicle, including a person who operates an autonomous vehicle for purposes of providing passenger transportation services.

Lastly, the bill creates Section 322.015, F.S., to exempt fully autonomous vehicles operated in autonomous mode without a licensed human operator physically present in the vehicle from ch 322 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 vehicle.

### 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 capable of bringing the vehicle to a complete stop if a failure of the system occurs. Additionally, the bill creates additional requirements for autonomous vehicles that are not fully autonomous.

## **Financial Responsibility (Sections 11, 15 and 16)**

### Current Situation

Chapters 324 and 627 contain provisions related to motor vehicle insurance such as minimum insurance requirements, proof of vehicle insurance, and other matters related to motor vehicle insurance.

### Proposed Changes

The bill creates s. 324.033, F.S., which provides the following insurance requirements:

- All fully autonomous vehicles must have uninsured and underinsured vehicle coverage as required by s. 627.727, personal injury protection coverage as provided by s. 627.736, and liability coverage in the amount of at least \$500,000 for combined bodily injury liability and property damage liability or at least:
  - One hundred thousand dollars for bodily injury to, or the death of, one person in any one accident;
  - Subject to such limits for one person, \$300,000 for bodily injury to, or the death of, two or more persons in any one accident; and
  - Fifty thousand dollars for damage to, or destruction of, the property of others in any one accident.
- The owner or operator of an autonomous vehicle, as defined in s. 316.003(2), except in the circumstance of a digital network connecting a user to a driver or an autonomous vehicle, used commercially for the pickup or delivery of passengers or goods or for providing other services for compensation may prove financial responsibility by furnishing satisfactory evidence of having automobile insurance that provides all of the following:
  - Primary automobile liability coverage of at least \$2 million for death, bodily injury, and property damage.
  - Personal injury protection benefits that meet the minimum coverage required under ss. 627.730-627.7405.
  - Uninsured and underinsured vehicle coverage as required by s. 627.727.

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

Lastly, the bill creates insurance requirements for autonomous vehicles used by transportation network companies. Specifically:

- Beginning July 1, 2018, the following insurance requirements apply to all autonomous vehicles, as defined in s. 316.003(2), used by a TNC during prearranged rides while the vehicles are being driven by an automated driving system:
  - Primary automobile liability coverage of at least \$1 million for death, bodily injury, and property damage;
  - Personal injury protection benefits that meet the minimum coverage amounts required of a limousine under ss. 627.730-627.7405; and
  - Uninsured and underinsured vehicle coverage as required by s. 627.727.

**M.P.O., Strategic Intermodal Plan, federal pilot programs (Sections 12, 13 and 14)**

Current Situation

Sections 333.175, 339.64, and 339.83, F.S., contain references to “autonomous technology”.

Proposed Changes

The bill amends ss. 333.175, 339.64, and 339.83, F.S., changing the references from “autonomous technology” to “automated driving systems”.

**B. SECTION DIRECTORY:**

**Section 1:** Amends s. 316.85, 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.

**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 exemptions.

**Section 11:** Amends s. 324.033, F.S., relating to financial responsibility; autonomous vehicles.

**Section 12:** Amends s. 339.175, F.S., relating to metropolitan planning organizations.

**Section 13:** Amends s. 339.64, F.S., relating to strategic intermodal system plan.

**Section 14:** Amends s. 339.83, F.S., relating to enrollment in federal pilot programs.

**Section 15:** Amends s. 627.0653, F.S., relating to insurance discounts for specified motor vehicles.

**Section 16:** Amends s. 627.748, F.S., relating to transportation network companies.

**Section 17:** Provides an effective date of July 1, 2018.

## **II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT**

### **A. FISCAL IMPACT ON STATE GOVERNMENT:**

1. Revenues:

None

2. Expenditures:

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.

### **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.

2. Other:

None.

### **B. RULE-MAKING AUTHORITY:**

None.

### **C. DRAFTING ISSUES OR OTHER COMMENTS:**

None.



#### **IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES**

On January 22, 2018, the Appropriations Committee adopted a strike-all amendment and reported the bill favorable as a committee substitute. In summary the strike-all amendment:

- Replaces the term “autonomous vehicle” with “automated driving system” in Chapter 316 definitions.
- Changes references in the bill from “autonomous vehicle” to “fully autonomous vehicles”.
- Replaces terminology in Chapter 316 related to autonomous vehicles regarding television receivers and wireless communications devices.
- Provides insurance requirements related to autonomous vehicles.
- Replaces terminology in Chapter 339 related to automated driving systems regarding metropolitan planning organizations, strategic intermodal systems plan, and enrollment in federal pilot programs.

This analysis is written to the committee substitute as passed out of the Appropriations Committee.