



## DEPARTMENT OF TRANSPORTATION

### National Highway Traffic Safety Administration

[Docket No. NHTSA-2017-0086]

#### Automated Driving Systems: Voluntary Safety Self-Assessments; Public Workshop

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation (DOT).

**ACTION:** Notice of public workshop.

**SUMMARY:** On September 12, 2017, NHTSA published *Automated Driving Systems 2.0: A Vision for Safety*. This voluntary guidance encourages entities involved in the testing and deployment of Automated Driving Systems on public roads to document for themselves how they are addressing safety. Further, the Guidance recommends that these same entities summarize their assessments and make it available to the public via Voluntary Safety Self-Assessments. NHTSA is announcing a public workshop to support entities that wish to make their self-assessment publicly available. The Agency emphasizes that the workshop is not intended to be a tutorial for a prescriptive document. NHTSA hopes to hear from entities if there are any challenges that would make it difficult for an entity to publicly disclose any portion of a Voluntary Safety Self-Assessment in a summary document, and discuss how those challenges might be overcome or mitigated. To provide the most benefit, this workshop will encourage active, focused participation.

**DATES:** NHTSA will hold the public workshop on October 20, 2017, from 10 a.m. to 3 p.m., Eastern Standard Time. Check-in will begin at 9 a.m. Attendees should arrive early enough to

enable them to go through security by 9:50 a.m. The formal docket comment period will close on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, but the Agency will continue to accept comments to the docket.

**ADDRESSES:** The public workshop will be held at DOT Headquarters, located at 1200 New Jersey Avenue, S.E., Washington, DC 20590 (Green Line Metro station at Navy Yard) in the [Oklahoma City Conference Room]. This facility is accessible to individuals with disabilities.

**FOR FURTHER INFORMATION, CONTACT:** If you have questions about the public workshop, please contact NHTSA staff at [av\\_info\\_nhtsa@dot.gov](mailto:av_info_nhtsa@dot.gov) or Debbie Sweet at 202-366-7179.

**SUPPLEMENTARY INFORMATION:**

Registration is necessary for all attendees. Attendees should register online at [https://docs.google.com/forms/d/e/1FAIpQLSeLcUn2Dw2fNWEa8f9zWh7NkleQgNv5GreVaP\\_I\\_Rv\\_sb6X8w/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSeLcUn2Dw2fNWEa8f9zWh7NkleQgNv5GreVaP_I_Rv_sb6X8w/viewform?usp=sf_link) by October 17, 2017. Please provide your name, email address, and affiliation. Also indicate whether you plan to participate actively in the workshop (speaking would be limited to 5 minutes per agenda topic), and whether you require accommodations such as a sign language interpreter. Space is limited, so advanced registration is highly encouraged.

**Docket:** Docket NHTSA-2017-0086 is available for members of the public to submit written comments regarding the Voluntary Safety Self-Assessment as laid out in *Automated Driving Systems 2.0: A Vision for Safety*. The formal docket comment period will close on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, but the Agency will continue to accept comments to the docket. For access to the docket, go to

<http://www.regulations.gov> at any time or to 1200 New Jersey Avenue, S.E., West Building, Ground Floor, Room W12-140, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays. Telephone: 202-366-9826.

**Privacy Act:** Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78), by visiting <http://www.dot.gov/privacy.html>.

## **Background**

On September 20, 2016, NHTSA released and published for comment the *Federal Automated Vehicles Policy*. The comment period officially closed on November 22, 2016, but comments were considered through February 16, 2017. NHTSA analyzed the docket comments, public meeting proceedings and other stakeholder discussions, Congressional hearings, and State activities and published on September 12, 2017, *Automated Driving Systems 2.0: A Vision for Safety*.<sup>1</sup> This notice focuses on Section I of that document.

*Section I: Voluntary Guidance for Automated Driving Systems* (Voluntary Guidance) provides recommendations and suggestions for industry's consideration and discussion. This Voluntary Guidance includes no compliance requirement or enforcement mechanism. The purpose of this Voluntary Guidance is to support the industry as it develops best practices in the design, development, testing, and deployment of automated vehicle technologies. It is a non-

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<sup>1</sup> Available at [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0\\_090617\\_v9a\\_tag.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf).

regulatory approach to the safety of Automated Driving Systems (ADS) (SAE International automation Levels 3 through 5 – Conditional, High, and Full Automation Systems).

NHTSA offers the Voluntary Guidance to help designers of ADSs analyze, identify, and resolve safety considerations prior to deployment using their own industry and other best practices. The Voluntary Guidance outlines 12 safety elements which the Agency believes represent the consensus across the industry, that are generally considered to be the most salient design aspects to consider and address when developing, testing, and deploying ADSs on public roadways. Among these elements are vehicle cybersecurity, human machine interface, crashworthiness, consumer education and training, and post-crash ADS behavior. Within each safety design element, entities are encouraged to consider and document their use of industry standards, best practices, company policies, or other methods they have employed to provide for increased system safety in real-world conditions.

In addition, the Voluntary Guidance encourages entities engaged in testing and deployment to prepare and publicly disclose Voluntary Safety Self-Assessments of their systems demonstrating their varied approaches to achieving safety. The Voluntary Safety Self-Assessment is intended to communicate to the public (particularly States and consumers) that entities are:

- (1) considering the safety aspects of ADSs;
- (2) communicating and collaborating with DOT;
- (3) encouraging the self-establishment of industry safety norms for ADSs; and
- (4) building public trust, acceptance, and confidence through transparent testing and deployment of ADSs.

It also allows companies an opportunity to showcase their approach to safety, without needing to reveal proprietary intellectual property. NHTSA expects much of the work associated with the consideration of the 12 safety elements in the Voluntary Guidance to be an extension of good and safe engineering practices already in place within an entity, therefore entities will have access to all the information needed to craft a Voluntary Safety Self-Assessment if they so choose. NHTSA envisions the Voluntary Safety Self-Assessments would contain concise summary information on these practices.

### **Public Workshop Details**

With new information in the safety elements and a new means for disclosing an assessment summary to the public provided in *Automated Driving Systems 2.0: A Vision for Safety*, NHTSA is holding a public workshop to engage stakeholders and assist entities as they develop a Voluntary Safety Self-Assessment as well as clarify and address concerns for those entities looking to disclose such information to the public.

The public workshop will include representatives from entities developing a Voluntary Safety Self-Assessment, States looking to review Voluntary Safety Self-Assessments, members of the public interested in reading the Voluntary Safety Self-Assessments to understand the steps taken to address the safety of ADSs, and other Voluntary Safety Self-Assessment users. The open discussion among these interested parties will serve to assist in the development of the most broadly beneficial Voluntary Safety Self-Assessment. Discussion at the workshop will include:

- (1) How entities might summarize efforts they already undertake in addressing the safety elements provided in the *Voluntary Guidance*;
- (2) challenges entities face in developing their summary statements for the Voluntary Safety Self-Assessment and the means to overcome them;

(3) information helpful to stakeholders looking to use the Voluntary Safety Self-Assessment; and

(4) methods by which an entity may publicly disclose the Voluntary Safety Self-Assessment.

A template of the types of summary information an entity might provide in a Voluntary Safety Self-Assessment is provided below. The example is being provided as an effort to offer assistance in the development of a Voluntary Safety Self-Assessment and to guide discussion during the public workshop. This template illustrates the type of summary information that may be provided for the safety element of Crashworthiness, just one of the 12 safety elements presented in the Voluntary Guidance. The details in the template are based on a fictitious vehicle and provided for illustration, guidance, and discussion purposes only. This fictitious vehicle is one that has received necessary exemptions from NHTSA. It is a Level 4 ride-share vehicle with four seats and two large doors. We are providing one safety element example for the template, however all safety elements are open for discussion at the public workshop. Stakeholders are encouraged to review this information and determine how this aligns with their ideas regarding the development of a Voluntary Safety Self-Assessment.

## CRASHWORTHINESS

### Structural Integrity

- Summary of crash simulation scenarios, component testing, and physical tests.
- Summary of bench marks for testing.

### Protection of Occupants in the Vehicle

- Summary information about how the vehicle design leverages industry best practices and internal standards for crashworthiness.

- If the vehicle contains a non-traditional seating configuration, include summary information related to the following:
  - Protection for the occupants expected to use the vehicle.
  - Testing and countermeasures related to crash impact protection and the impact directions considered.
  - If appropriate, discussion of methods related to rollover protection.
- If the vehicle will transport children (those under age 12), a summary of child passenger safety measures to address:
  - Child occupant detection and accommodations;
  - Car seat use: anchors, tethers, designated seat locations; and
  - Booster seat use and designated seat locations.

#### Protection of Other Road Users

- Summary information of how the vehicle considers crash forces from other road vehicles or the infrastructure.
- Summary information of how the vehicle seeks to mitigate injuries to pedestrians and other vulnerable road users.

The public workshop is formatted for active participation and open discussion. The intention is to seek input from stakeholders to provide the greatest assistance to entities to develop a Voluntary Safety Self-Assessment. NHTSA will begin the workshop with a presentation of the safety elements included in the *Automated Driving Systems 2.0: A Vision for Safety*, the Voluntary Safety Self-Assessment and its content, and the template provided in this notice. Participants should be prepared to discuss their reaction to the template. Further

discussion at the public workshop may include other safety elements as well as public disclosure of the Voluntary Assessment.

NHTSA will conduct the public workshop informally; thus, technical rules of evidence will not apply. We will arrange for a written transcript of the workshop. You may make arrangements for copies of the transcripts directly with the court reporter. The transcript will also be posted in the docket when it becomes available.

Should it be necessary to cancel the workshop due to inclement weather or other emergency, NHTSA will take all available measures to notify registered participants.

### **Draft Workshop Agenda**

9 – 10 a.m.	Arrival/Check-In through Security
10 – 10:10 a.m.	Welcome/Important Notices
10:10 – 10:30 a.m.	NHTSA Presentation
10:30 – 12 a.m.	Presentation by Stakeholder Representatives
12 a.m. – 1p.m.	Lunch (not provided)
1 – 1:45 p.m.	Open Discussion Regarding Challenges to Disclosure
1:45 – 2:30 p.m.	Open Discussion Regarding Approaches to Public Disclosure
2:30 – 2:50 p.m.	Open Discussion
2:50 – 3 p.m.	Closing Remarks/Adjourn

Issued in Washington, D.C. under authority delegated by 49 CFR 1.95.

**Nathaniel Beuse,**  
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