



**SUBMITTED ELECTRONICALLY VIA REGULATIONS.GOV**

April 1, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Ave., S.E.  
Washington, DC 20590

The Honorable Michael Kratsios  
United States Chief Technology Officer  
Office of Science and Technology Policy  
1650 Pennsylvania Ave., N.W.  
Washington, DC 20504

**Re: Office of the Secretary (OST) U.S. Department of Transportation (DOT) Notice of Request for Comments: *Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0 (AV 4.0)*, Docket No. DOT-OST-2019-0179, 85 Fed. Reg. 7011 (February 6, 2020)**

Dear Secretary Chao and Mr. Kratsios:

The Alliance for Automotive Innovation (Auto Innovators) appreciates this opportunity to provide input to the US Department of Transportation's ("DOT" or "Department") and the White House Office of Science and Technology Policy (OSTP) request for public comment on *Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0 (AV 4.0)*.

Auto Innovators is the leading advocacy group for the auto industry, representing 37 innovative manufacturers and value chain partners who together produce nearly 99 percent of all light-duty vehicles sold in the United States.<sup>1</sup> The newly established organization, a combination of the Association of Global Automakers and the Alliance of Automobile Manufacturers, is directly involved in regulatory and policy matters impacting the light-duty vehicle market across the country. Members include motor vehicle manufacturers, original equipment suppliers, technology and other automotive-related companies and trade associations.

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<sup>1</sup> The members of Auto Innovators includes (alphabetically) Aptiv PLC, Aston Martin, Robert Bosch LLC, BMW Group, Byton, Cruise LLC, DENSO, Fiat Chrysler Automobiles, Ferrari S.p.A., Ford Motor Company, General Motors Company, Honda Motor Company, Hyundai Motor America, Intel, Isuzu Motors Ltd., Jaguar Land Rover, Karma Automotive, Kia Motors, Local Motors, Maserati, Mazda Motor Corporation, McLaren Automotive, Mercedes-Benz USA, Mitsubishi Motors, Nissan Motor Company, NXP Semiconductors, Panasonic Corporation, Porsche, PSA North America, Recreation Vehicle Industry Association, SiriusXM, Subaru, Suzuki, Texas Instruments, Toyota Motor Company, Volkswagen Group of America, and Volvo Car USA.

Auto Innovators' mission is to advance safer, cleaner, and smarter mobility options for the American public. Automated vehicles (AVs) reflect that mission, as this technology has the potential to significantly increase roadway safety and enhance personal mobility. In 2018 alone, 36,560 people died in the 2 million traffic crashes on our nation's roadways. Given that 94 percent of car crashes are attributable to human behavior or error, AVs can decrease the likelihood of these crashes by supplementing or even replacing the human driver. Unlike conventional human drivers, AVs can't get distracted, drive impaired, or fall asleep at the wheel. In addition to these safety benefits, AVs have the potential to provide numerous social and economic benefits, including less congestion, lower fuel consumption, and increased mobility for older adults and people with disabilities.

We commend the White House and the US Department of Transportation for developing a resource that unifies AV-related initiatives across 38 Federal departments, independent agencies, commissions, and Executive Offices of The President. The publication of AV 4.0 is an important step to provide cohesive Federal guidance to all stakeholders in the AV space, including OEMs, suppliers and AV-focused mobility providers. AV 4.0 clearly articulates the administration's efforts to support AV development and deployment and identifies opportunities for public-private collaboration. Now more than ever, a unified approach is critical to enable the successful testing and deployment of AV technologies.

In particular, Auto Innovators applauds the publication of government-wide AV Technology Principles. The 10 principles outlined in AV 4.0 are helpful to public and private entities alike as they work towards the common goal of advancing roadway safety. Additionally, as more and more companies enter the AV mobility space, it will be helpful to have a common reference of overarching principles.

The following includes Auto Innovators' comments and recommendations regarding priority issues areas.

### **Coordinated Federal, State, UNECE, and Industry Efforts**

As emphasized in AV Technology Principles 8 through 10, Auto Innovators supports the use of Federal guidance and harmonized policies that advance the integration of AVs through the transportation system. This should also include coordination with international activities and harmonization to the extent possible within the bounds of the US self-certification regulatory approach. To this point, Auto Innovators appreciates the National Highway Traffic Safety Administration (NHTSA) leadership within the UNECE WP.29. This engagement is critical to coordinate and advance international AV policy development. Auto Innovators supports and encourages NHTSA's continued leadership in the UNECE WP.29.

Auto Innovators supports the designation between Federal and state roles as expressed in the Department's AV guidance documents. As previously stated by the Department, NHTSA has purview over "design, construction, or performance of a motor vehicle or motor vehicle

equipment,"<sup>2,3</sup> which includes the automated driving system for vehicles so equipped. In this framework, it is essential that states maintain their traditional jurisdiction and oversight of driver licensing, registration, insurance, and traffic laws and enforcement. Auto Innovators will continue to work closely with the Federal government and states on these respective issues to promote a consistent approach that does not result in conflicting laws or regulations that would create unnecessary barriers to AV deployment.

Auto Innovators members continue to support the Voluntary Safety Self-Assessments (VSSA) approach, as this provides both transparency to the public about critical safety elements as well as flexibility for each AV developer to customize its assessment. In short, the VSSAs are an important tool for providing information to consumers, policymakers and the general public regarding AV safety features and functions. In addition, Auto Innovators members will continue working with the states and localities where they are testing and where AVs will ultimately be deployed. At an association and individual member level, Auto Innovators will continue working with State DOTs, DMVs, legislators and other state/local policymakers, law enforcement and first responders to ensure there is a consistent understanding of the technology.

### **DOT Rulemaking for AVs and Interim Use of DOT's Exemption Authority**

Auto Innovators supports a regulatory framework that allows for the safe testing and deployment of AV technologies. The Department has taken important steps to research, request comment, and begin rulemaking to address existing FMVSS barriers for AVs that do not have manual driver controls (e.g. steering wheel, pedals, and gear shifter). In addition, according to the *Fall 2019 Unified Agenda of Regulatory and Deregulatory Actions*, the DOT will soon be issuing an ANPRM titled *Safety Principles for Automated Driving Systems*. This will be a helpful input to develop new federal motor vehicle safety standards (FMVSS) for AVs or an alternate regulatory approach, if applicable.

However, while these workstreams have been initiated, it is well-recognized that they cannot be reasonably completed by the time that AVs are ready to be deployed. Thus, in the interim, FMVSS exemptions are necessary. This mechanism not only will allow AVs to be safely deployed but will generate the real-world data that is needed to establish new safety standards for AVs. The Title 49, U.S.C. Section 30113 exemption process, which is the standard method for enabling any new vehicle technology to come to market, has a current threshold of 2,500 vehicles per manufacturer and 2-year duration. This threshold should be increased if we truly want to realize the safety, economic and social benefits of AVs.

Auto Innovators supports the approach identified in the 2018 AV Pilot Program ANPRM, in which DOT could create a new program under Title 49, U.S.C. Section 30114 to enable a case-by-case evaluation and possible allowance of AV deployments with agreed-upon data sharing to the Department. Unlike Section 30113, a Section 30114 exemption is not constrained by any

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<sup>2</sup> *Automated Driving Systems 2.0: A Vision for Safety*, US Department of Transportation and the National Highway Traffic Safety Administration, pg 3, 2017.

<sup>3</sup> NHTSA Enforcement Guidance Bulletin 2016-02: *Safety-Related Defects and Emerging Automotive Technologies*, Docket No. NHTSA-2016-0040.

statutory maximum on the number of vehicles or the duration of the exemption. The AV Pilot Program would advance the Department's safety research and increase public acceptance of the technology. Auto Innovators views this approach as a critical step for the Department to provide the needed Federal leadership to help realize the safety and societal benefits of AVs.

Auto Innovators finds both Section 30114 and 30113 exemptions to be valuable, but situation dependent. Thus, the AV Pilot Program should proceed under Section 30114, while recognizing that some entities may continue to seek exemptions under Section 30113.

For any FMVSS exemption request, it is important for the Agency to act in a timely fashion. NHTSA and the Department took an important step in 2018 when it issued the *Temporary Exemption from Motor Vehicle Safety and Bumper Standards Final Rule*<sup>4</sup> to eliminate the provision calling for the Agency to determine a petition is complete before the Agency publishes a notice summarizing the petition to solicit public comments. However, more certainty regarding an expedient review and the criteria for evaluation would be helpful for applicants.

### **Preserve the Entire 5.9 GHz Safety Spectrum Band for V2X Applications**

Auto Innovators supports maintaining all 75 MHz in the 5.9 GHz band for Vehicle-to-Everything (V2X) applications. As detailed in our comments submitted to the Federal Communications Commission (FCC), a bifurcation of the 5.9 GHz band to re-allocate the lower 45 MHz to unlicensed wifi would be a detriment to transportation safety.<sup>5</sup> This action would effectively eliminate certain vehicle safety applications, affecting not only vehicle occupants but also vulnerable road users such as pedestrians and cyclists. Additionally, the action proposed by the FCC would compromise American leadership, reduce our nation's global competitiveness and result in economic harm.

V2X technologies can enhance the safety benefits of AVs by providing the capability to see beyond line-of-sight to provide roadway and traffic information where a view is obstructed. Also, V2X can enable cooperative driving, providing energy efficiency benefits and allowing AVs to exchange information about intended paths to make coordinated decisions on driving behaviors. In 2020, the SAE Committee that defined the levels of automation voted unanimously to approve J3216, a standard to define classes of cooperative automation. This standard formalizes technical aspects regarding the functions that require "cooperation" to enhance automated driving, e.g. platooning, decision-making for an ambiguous right-of-way, and coordinated intersection departure. In addition, the achievements of the DOT's Connected Vehicle Safety Pilot Program and CARMA research program further bolsters the ability for AV developers to incorporate cooperative driving into AV platforms. However, all this will be lost if the majority of the 5.9 GHz Safety Spectrum is re-allocated.

In addition, Auto Innovators members are very concerned about interference to V2X applications under the FCC's 5.9 GHz NPRM. Multiple studies have confirmed that there would be harmful

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<sup>4</sup> *Temporary Exemption from Motor Vehicle Safety and Bumper Standards Final Rule*, Docket No. NHTSA-2018-0103, 83 Fed. Reg. 66158 (December 26, 2018).

<sup>5</sup> March 9, 2020 Comments of the Alliance for Automotive Innovation to the FCC, ET Docket No. 19-138.

interference from unlicensed applications in the lower 45 MHz to V2X applications operating in the upper 30 MHz of the band.<sup>6,7</sup> It is axiomatic that any band plan that accommodates multiple technologies must avoid harmful interference. Given the life-saving value of V2X and the importance of reliability, it is essential that V2X services in the 5.9 GHz band are adequately protected from adjacent unlicensed operations.

The automotive industry is united with the Department, state DOTs, infrastructure owners and operators (IOOs), safety advocates, and other roadway safety stakeholders regarding the fact that all 75 MHz of the 5.9 GHz band should be preserved for automotive safety. Auto Innovators will provide additional information on this topic in our Reply Comments to the FCC docket.

### **Improving Vehicle Accessibility**

Auto Innovators supports Secretary Chao's multi-modal initiatives to improve access and mobility for all, including people with disabilities, older adults, and other underserved populations. The 2019 DOT Access and Mobility for All Summit did an excellent job to highlight the access and mobility opportunities and challenges as well as raise awareness of the DOT and government-wide efforts to address these challenges. For instance, the \$40 million announced for Complete Trip Deployment research and \$5 million in cash process for the Inclusive Design Challenge will advance the state-of-the-art in transportation accessibility. Additionally, the new Federal Transit Administration (FTA) funding opportunity for the 2020 Mobility for All Pilot Program will help spur new innovations in accessible public transportation. As highlighted in AV 4.0, these types of public-private collaborations are essential to unlock the full societal potential of AV technologies.

Just prior to the DOT Access and Mobility for All Summit, the Alliance of Automobile Manufacturers organized a three-part workshop series, "AVs & Increased Accessibility," hosted at the National Academies of Science. Among other objectives, the workshops identified considerations for designing and operating a transportation solution that meets the needs of older adults and people with physical, sensory and cognitive disabilities. A complete list of findings and recommendations from the workshop series can be found in pages 1-4 of the *AVs & Increased Accessibility Workshop Series Report*.<sup>8</sup> Of particular relevance for DOT, one recommendation is for the DOT to publish guidance to help automotive and mobility companies navigate the current legal and regulatory framework for vehicle accessibility.<sup>8</sup> Another is to assist with the development of a "Best Practices" document pertaining to accessible AV design.<sup>8</sup>

### **Publish AV Updates to the MUTCD**

As described in AV 4.0, the Federal Highway Administration (FHWA) is planning to update the Manual on Uniform Traffic Control Devices (MUTCD) to incorporate the needs of automated driving systems (ADS). The automotive industry provided input on these revisions via comments

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<sup>6</sup> March 9, 2020 Comments of the Ford Motor Company to the FCC, ET Docket No. 19-138.

<sup>7</sup> March 9, 2020 Comments of the US Department of Transportation to the FCC, ET Docket No. 19-138.

<sup>8</sup> *AVs & Increased Accessibility Workshop Series Report*, Alliance of Automobile Manufacturers, 2019.

<https://autoalliance.org/wp-content/uploads/2019/10/AVs-Accessibility-Workshop-Series-Report-16OCT2019.pdf>

to the 2018 FHWA *Automated Driving Systems Request for Information*<sup>9</sup> and subsequently to the National Committee on Uniform Traffic Control Devices (NCUTCD). The NCUTCD has completed their work and submitted recommendations of necessary updates to the FHWA.<sup>10</sup> Auto Innovators supports and encourages the FHWA to adopt these recommendations and publish the updated MUTCD in a timely fashion.

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Auto Innovators appreciates this opportunity to provide comment and looks forward to working with the Department and White House OSTP on AV related initiatives.

Sincerely,

A handwritten signature in cursive script that reads "Anne Marie Lewis".

Anne Marie Lewis, PhD  
Senior Director, Technology, Innovation and Harmonization  
Alliance for Automotive Innovation

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<sup>9</sup> *Automated Driving Systems Request for Information*, Docket No FHWA-2017-0049, 83 Fed. Reg. 2721 (January 18, 2018).

<sup>10</sup> *NCUTCD Approved Changes to the MUTCD: Pavement Marking Standards for Automated Driving Systems and Improved Driving Safety*, NCUTCD Markings Committee. <https://ncutcd.org/wp-content/uploads/meetings/2020A/04.19B-MKG-02.LineWidthforCAV.pdf>