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The Honorable Mark R. Rosekind
Administrator, National Highway Traffic Safety Administration (NHTSA)
U.S. Department of Transportation
1200 New Jersey Ave SE
Washington, DC 20003.

Reference: NHTSA–2016–0090

Dear Administrator Rosekind,

Thank you for the opportunity to provide comments to the September 23, 2016 Federal Automated Vehicles Policy (FAVP). The Intelligent Transportation Society of America (ITS America) believes NHTSA's guidance is an important first step forward and commends NHTSA for establishing a baseline set up assumptions regarding the treatment of new "highly automated vehicle" (HAV) systems from a federal perspective.

ITS America is an association public and private organizations that are focused on advanced vehicle technology, smart cities, and new models for mobility. Our members include auto, telecomm, traditional IT and emerging tech, and consumer apps and industrial electronics. We also include public agencies and non-profits, such as road, transit and other transportation infrastructure operators and the research community focused on bringing new technology from the lab to our roads, cars, buses and trucks. Our association's goal is to identify collaborative, technology-driven opportunities to dramatically improve the mobility, safety, security, privacy, sustainability, and accessibility of our transportation system.

ITS America believes the potential improvements in safety and mobility that highly automated vehicles (Society of Automotive Engineers [SAE] J3016 Levels 3 and above) can deliver may be enormous, but that further operational testing and other groundwork is required. The association believes that public and private sector must collectively must guard against both overly prescriptive requirements that would stifle innovative approaches, as well as a patchwork of different rules at federal, state and local levels that will burden commercialization. We think the NHTSA guidelines generally sets the right balance between the requirements for safety assurance and flexibility needed for inventive strategies in the early days of the technology as it is proven through testing in real-world environments.

We agree with NHTSA that a notice-and-comment rulemaking process is not a suitable strategy for a technology that is still under development and where even basic technology components are still being defined and assumptions are subject to widely varied interpretations among stakeholders.[1] We commend NHTSA on its review of Federal Motor Vehicle Safety Standards (FMVSS) and its commitment to streamline review processes for HAV related interpretations, rulings and exemptions. However, we disagree with the co-mingling of requirements between those systems that are being tested, versus those that are being offered to the public (production-level systems) as commercially available products or services.

There are currently no HAV systems that have made the transition from testing to wide scale production. However, the guidance does not draw fine distinctions between HAV systems that are being tested and those in production, especially in reference to the fifteen point "Safety Assessment Letter." For example, in reference to figure 1 Framework for Vehicle Performance Guidance, all fifteen items must be reported in the context of Operational Design Domain, Object and Event Detection, Response and Fall Back (Minimal Risk Condition) and Testing and Validation, which are all key elements that should to be addressed before proceeding with trials on a test

[1] For example, NHTSA admits in its FAVP guidance that it foresees the agency potentially drawing different conclusions from those of a potential HAV technology provider as to even the proper classification of the system in reference to SAE J3016. This suggests there is likely to be great differences in regard not just how different HAV systems may should treated, but also even to the basic definition of those systems.

track or a limited operational public roadway environment. However, a number of items within the 15-point assessment, such as data sharing, privacy, consumer education, or even ethical considerations are beyond the scope of an HAV system under development, and that part of the purpose of testing would be to explore these considerations and develop a more definitive strategy to address these items in a production level system.

Moreover, FAVP suggests that although compliance with the guidance is voluntary, any software or hardware updates that "…materially changes the way in which the vehicle complies (or takes out of compliance) with any of the 15 elements of the Guidance…" requires technology provider to submit a new Safety Assessment Letter to NHTSA. This process could have the unintended consequence of making testing more difficult because of efforts to maintain compliance with NHTSA guidance. In a test environment, updates are not the exception, but a normal process of iterating on a given approach to improve safety and performance. The benefits of such an indefinite assessment condition and requirement should be better balanced with costs imposed on innovation in reference to testing.

In general, ITS America believes that relying on existing authority is preferable to creating new regulatory authorities before specific safety assurance requirements have been identified. ITS America generally agrees with NHTSA that its cease-and-desist authority addressing defects and unreasonable risks to safety allows the Agency to address dangers in early testing- and later in production-level automated vehicles. However, NHTSA should also note that for HAV systems that frequently cross state jurisdictions, such as potential automated heavy vehicles in commercial service, separate efforts must be taken to address unique regulatory requirements for these systems.

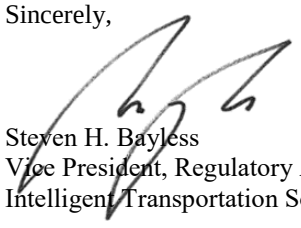
ITS America strongly agrees with NHTSA that HAV design decisions "…should be linked to assess risks that could impact safety critical system functionality." ITS America believes that for production-level systems, the 15-point safety assessment is useful and will help build confidence in the design and safety of systems as they are more widely deployed in different contexts. ITS America also believes that as production-level vehicles begin to be seen widely on public roads, data sharing such as "early warning" systems will help in identifying problems before they appear as fatality or injury crashes. We think that industry in the long run will need to establish a collaborative data sharing and research capability, working closely with NHTSA, to identify potential rare scenarios (for example scenarios challenging even for human drivers) where HAVs would have difficulty from an operational and safety assurance perspective.

In addition, ITS America believes that the model state policy is a good start, but that the guidance should encourage state agencies not to co-mingle requirements for test-level with those of production-level HAV systems. In general, ITS America believes states should focus on allowing limited testing, with a view to transitioning HAV from a testing to a production-level environment over time, as the technology is proven and fall back (minimal risk conditions) and operational design constraints are firmly established.

Lastly, ITS America believes there is a long term role for states to make road infrastructure and operations more accommodating and predictable for HAVs. For highly automated vehicles to navigate safely, roadways must be better maintained and modernized, as traffic signals and ramp meters must be further standardized and connected, and road signage and lane markings must be upgraded. New driving conventions, such as how robotic vehicles might "wave through" pedestrians on crosswalks, or they how to identify and pull over for emergency vehicles, will be required for robotic vehicles to interact with other road users. Operations research must be conducted in order to ensure that the infrastructure operations and traffic codes can be adjusted where necessary to improve traffic safety while accommodating these new classes of advanced vehicles.

ITS America is encouraged by NHTSA's work on this guidance, and commits to helping our members work with the agency to create foundation for the deployment of this new life-saving technology.

Sincerely,



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