U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

March 6, 2020

The Honorable Robert L. Sumwalt, III Chairman
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594

Dear Chairman Sumwalt:

On December 11, 2019, the National Transportation Safety Board (NTSB) notified the National Highway Traffic Safety Administration (NHTSA) about its safety report *Collision Between Vehicle Controlled by Developmental Automated Driving System and Pedestrian, Tempe, Arizona, March 18, 2018*, NTSB/HAR-19/03.

Based on this investigation, the NTSB issued the following safety recommendations to NHTSA.

- **H-19-47:** Require entities who are testing or who intend to test a developmental automated driving system on public roads to submit a safety self-assessment report to your agency.

- **H-19-48:** Establish a process for the ongoing evaluation of the safety self-assessment reports as required in Safety Recommendation H-19-47 and determine whether the plans include appropriate safeguards for testing a developmental automated driving system on public roads, including adequate monitoring of vehicle operator engagement, if applicable.

NHTSA's Responses and Requested Designations

While NHTSA encourages manufacturers to report on the number of aspects of their Automated Driving Systems (ADS) product development activities, NHTSA is not aware of any consensus among the developers of ADS regarding how to evaluate that information from a safety perspective. NHTSA and developers of ADS continue to work toward objective and practicable evaluation parameters for ADS development, testing, and safety performance. Meanwhile, NHTSA maintains that the current, voluntary approach to these public disclosures is the best and quickest way to advance the shared goals of public transparency and safety, and does not believe that requiring reports would be appropriate at this time.

NHTSA's mission is to reduce fatalities, injuries and crashes involving motor vehicles of all types. As such, NHTSA shares NTSB's concerns about the safety of testing vehicles equipped with ADS on public roadways. NHTSA thanks NTSB for its analysis of safety issues presented in *Collision Between Vehicle Controlled by Developmental Automated Driving System and Pedestrian, Tempe, Arizona, March 18, 2018*, NTSB/HAR-19/03.

To promote timely improvements in safety for ADS, NHTSA developed voluntary guidance titled, *Automated Driving Systems 2.0 – A Vision for Safety*, and building upon that guidance, contributed to the U.S. Department of Transportation's *Preparing for the Future of Transportation: Automated Vehicles 3.0.* These documents provide guidance to the automotive industry and other stakeholders as they consider design best practices for the testing and safe deployment of ADSs. They also provide technical assistance to States.

A key part of the guidance is that it encourages entities to publish Voluntary Safety Self-Assessments (VSSAs) and defines 12 critical safety elements to include as part of a VSSA. These elements include defining, documenting, and validating an ADS design with respect to: System Safety, Operational Design Domain, Object Event Detection and Response, Safe Fallback, Human Machine Interface, Vehicle Cybersecurity, Crashworthiness, Post-Crash ADS Behavior, Data Recording, Consumer Education and Training, as well as documenting how the ADS system will account for Federal, State and local laws.

To support VSSA development, NHTSA provided a template to illustrate the types of summary information entities can provide to the public to demonstrate how they are addressing safety.

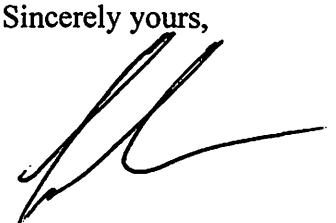
The guidance encourages ADS developers to use the VSSA as a tool to promote transparency and strengthen public confidence in ADS technologies. It discusses the necessity of on-road testing for ADS development, and encourages industry to collectively develop consistent testing protocols and appropriately manage risks during the development process of ADS technologies.

When there is greater understanding and consensus in this area, NHTSA will re-examine the practicality and appropriateness of the NTSB recommendations. In the meantime, NHTSA and numerous industry and public stakeholder groups continue to research and evaluate the critical safety topic of potential frameworks that may be used to effectively and objectively evaluate and regulate the safety performance of ADS-equipped vehicles in the future.

Based on the information provided, NHTSA respectfully requests that NTSB classify Safety Recommendations H-19-47 and H-19-48 as "**Open-Acceptable Responses.**"

If you have any questions or require additional information, please contact me or Sara Peters, Deputy Director, Governmental Affairs, Policy and Strategic Planning at 202-366-8849.

Sincerely yours,



James C. Owens
Acting Administrator