ALLIANCE FOR AUTOMOTIVE INNOVATION

March 17, 2025

Peter Simshauser
Chief Counsel
National Highway Traffic Safety Administration
Department of Transportation
1200 New Jersey Ave, SE
West Building
Washington, DC 20590

RE: Notice of Proposed Rulemaking (NPRM); ADS-equipped Vehicle Safety, Transparency and Evaluation Program (AV STEP) Docket No. NHTSA-2024-0100; RIN 2127-AM601

Dear Mr. Simshauser:

The Alliance for Automotive Innovation (Auto Innovators) appreciates the opportunity to submit comments regarding the ADS-equipped Vehicle Safety, Transparency and Evaluation Program (AV STEP). These comments are offered to enhance the safety outcomes of the rule, encourage robust participation, and minimize unintended consequences for the industry.

Auto Innovators represents the full auto industry, including the manufacturers producing most vehicles sold in the U.S., equipment suppliers, battery producers, semiconductor makers, technology companies, and developers of automated driving systems. Our mission is to work with policymakers to realize a cleaner, safer, and smarter transportation future and to ensure a healthy and competitive auto industry that supports U.S. economic and national security. Representing approximately 5 percent of the country's GDP, responsible for supporting nearly 10 million jobs, and driving $1 trillion in annual economic activity, the automotive industry is the nation's largest manufacturing sector.

It is essential to American competitiveness that there be a federal framework for deployment of ADS-equipped vehicles. Facilitating the testing and deployment of such vehicles with one set of federal rules must be a priority of the Department of Transportation (Department) and the National Highway Traffic Safety Administration (NHTSA). Preempting the patchwork of state and local frameworks for program participants could encourage participation in AV STEP, facilitate deployments, and create harmonization nationally, and we encourage the program to offer such preemption to participants. States should rightly continue to oversee the operations of these vehicles, such as implementation and enforcement of traffic laws, vehicle registration and licensing, but a federal ADS regulatory framework can provide all stakeholders with regulatory certainty and increased efficiencies. This rulemaking, while an important component, is just one step on a road towards such a framework and widespread deployment. Any data submitted under this program should be focused on informing the creation of objective and practicable FMVSS for automated

driving systems, with clear and uniform standards. We look forward to working with the Department and NHTSA on future rulemakings on FMVSS for ADS-equipped vehicles.

All stakeholders should strive toward building trust within the ADS ecosystem. Companies evaluating whether to participate in this program must make a determination about the benefit that accrues relative to the burdens imposed by the program. A program that is too burdensome or restrictive will discourage participation and reduce insights and data available to the agency. Meaningfully reducing the burden for companies could encourage participation and allow NHTSA to achieve its data collection and information goals while maintaining safety. More participation in the program that collects select but useful data is more likely to facilitate a virtuous cycle that supports a path toward additional deployment and data collection.

In addition, if NHTSA wants Level 3 developers to participate in AV STEP, there may need to be reduced assessment and reporting requirements for those vehicles, such as those suggested in the "Less Stringent Program Alternative" as these entities are unlikely to require an exemption from FMVSS. Even still, challenges remain for participation of such developers. For example, deployments of Level 3 vehicles would still be required to obtain state level permits due to the lack of preemption.

We appreciate the agency's commitment to finding a way to support technological innovation, and we are hopeful that this process can be successful in helping to create additional opportunities for the testing and deployment of ADS-equipped vehicles.

In this vein, we offer comments in the following themes:

1. Prioritizing the safety of road users;
2. Simplifying application, reporting, and data requirements;
3. Supporting competitiveness and certainty through domestic and international regulatory harmonization;
4. Providing deadlines for NHTSA to respond to applicants;
5. Ensuring flexibility in the federal exemptions framework, particularly for Level 3 vehicles; and
6. Clarifying definitions and other provisions.

1. Prioritizing the Safety of Road Users

Auto Innovators shares NHTSA's commitment to maintaining a regulatory environment that prioritizes roadway safety for all users. The initial and most important goal of AV STEP should be to ensure the safety of ADS testing and deployment and to provide data to the agency on which it can build future rulemakings. Collected data should be focused on answering key open safety questions related to updates for relevant FMVSS as they relate to ADS-equipped vehicles. The proposed rule raises a broad range of deployment-related questions, including those related to equity, access, labor, and workforce. While these are important questions, we believe that they are secondary to the safety case, may differ between L3 vehicles and L4 and L5 vehicles, and would be better

addressed as the program evolves. The engineering and safety case for ADS-equipped vehicles alone will require significant time, resources, and analysis from NHTSA, and Auto Innovators recommends that NHTSA focus primarily on the engineering and safety case, at least initially.

Auto Innovators raises some areas about the Independent Safety case that would benefit from clarification or modification. We offer suggested amendments to the limitations on fallback drivers. Finally, we encourage NHTSA to provide context for any data the agency provides to the public.

Independent Assessment of the Safety Case. The proposal would require independent, third-party assessments of a safety case and compliance with industry consensus standards. If NHTSA considers this approach further, Auto Innovators seeks clarity on the criteria for an acceptable independent third party and an acceptable body of evidence (as cited in footnote 138) and seeks clarity on how such a process could be implemented consistent with the self-certification process. As part of an FMVSS for ADS-equipped vehicles, there will need to be an objective standard, and Auto Innovators expects that the AV STEP program will facilitate such a standard to which OEMs can self-certify.

The independent assessment also includes conformance with industry standards, best practices, and specific policies and capabilities. If NHTSA pursues an independent assessment, Auto Innovators emphasizes the need for efficient and transparent review by NHTSA. Because we operate in a global ecosystem, international harmonization is a desirable component of any regulatory framework. Therefore, we recommend that any assessment framework be grounded in international standards including, but not limited, to those developed by SAE, the International Organization for Standardization, and the United Nations.

The required safety case includes requirements for community engagement. Community engagement is a key component of any deployment and OEMs routinely work to educate consumers, law enforcement, emergency personnel, and others in areas where they are deploying. Ensuring safety through such community engagement, however, is often unique to the specific community, and it is unclear to Auto Innovators how NHTSA would establish an objective standard for such engagement. If, however, NHTSA pursues such a requirement, Auto Innovators recommends that the primary focus of such engagement be focused on identifying objective safety related concerns.

Lastly, Auto Innovators is concerned about the ability of independent entities to do the assessment as well as the potential deviation from the well-established self-certification model. Auto Innovators encourages NHTSA to allow OEMs to self-certify their ADS-equipped safety case just as OEMs self-certify their own products under FMVSS.

Roll of Fallback Personnel. NHTSA requests comment on the conditions under which AVs may permit public ridership including whether such ridership should be permitted during operations that rely on fallback personnel. We recommend amending this provision to allow for public passengers when the

ADS-equipped vehicle is operating with fallback personnel. The prohibition on fare collection should be eliminated in order to facilitate additional deployments. Companies are best situated to develop their testing, deployment, and revenue plans. Allowing for public passengers in this situation may help facilitate public understanding and acceptance of the technology while ensuring safety while also providing data to both NHTSA and AV STEP participants about how passengers interact with and respond to the vehicle. Fallback personnel may play roles such as tire changing, assisting passengers, and addressing unexpected situations. Fallback personnel enhance safety and passenger comfort in ways that may or may not be related to the driving task. For example, bus companies with ADS systems have personnel on board, and those individuals are not primarily responsible for driving. In fact, prohibiting passengers when fallback personnel are present may have the unintended consequence of companies pushing to remove the additional personnel even if they see benefits to maintaining such personnel.

NHTSA Should Provide Context for Data Provided to the Public. Auto Innovators applauds NHTSA's intention to provide transparency and information to the public about the safety of ADS-equipped vehicles. Greater public understanding about ADS-equipped vehicles will likely facilitate greater acceptance of these technologies. To that end, Auto Innovators recommends that NHTSA provide additional context and simplification (potentially gleaned as part of the submissions from participants) in the data that may be presented to the public. Simply presenting data without additional context or providing some simplification or heuristic to facilitate understanding does not meet the goals of transparency and greater public understanding. For example, the reporting should provide some context as to how ADS-equipped vehicles perform relative to conventionally-driven vehicles and should strive to create a data set that is comparable.[1] If this type of context cannot be provided, it will reduce the usefulness of the program to enhance public understanding.

2. Simplifying Application, Reporting, and Data Requirements

The core of the AV STEP NPRM is the data and reporting requirements. As drafted, a company considering participation in AV STEP would have to make significant investments to comply with reporting requirements. While an unintended consequence, such investments could reduce the amounts available for developing the mobility systems and depressing the likelihood of successful participation and deployment. There is a high likelihood that for most potential applicants, the burdens of the current reporting requirements would outweigh the benefit of program participation.

[1] Di Lillo, L., Gode, T., Zhou, X., Scanlon, J. M., Chen, R., & Victor, T. (2024). Do Autonomous Vehicles Outperform Latest-Generation Human-Driven Vehicles? A Comparison to Waymo's Auto Liability Insurance Claims at 25.3M; and Miles.; Scanlon, J. M., Teoh, E. R., Kidd, D. G., Kusano, K. D., Bärgman, J., Chi-Johnston, G., … Victor, T. (2025). RAVE checklist: Recommendations for overcoming challenges in retrospective safety studies of automated driving systems. *Traffic Injury Prevention*, 1–14. ttps://doi.org/10.1080/15389588.2024.2435620

We recommend simplification and reduction of the burden on participants. Auto Innovators provides feedback below on several NHTSA requests for comment including quarterly reporting requirements, operational control, confidential business information, and cybersecurity. Generally, it would be helpful to create reporting requirements and analysis that distinguish between systems that are in a testing phase and those that have been deployed and we request that NHTSA develop a standardized format for reporting.

Reporting Requirements. NHTSA asks for additional information on the frequency of reporting and the value of requested reporting items. The quarterly reporting requirements are quite burdensome, and Auto Innovators recommends that these reporting requirements be refined to identify objectively defined, meaningful events and to collect only data that the agency needs to answer open questions related to the development of relevant FMVSS standards for ADS-equipped vehicles. Furthermore, since there is no justification for such burdensome reporting requirements, Auto Innovators objects to the requirement for crash reporting when ADS systems are not engaged and requests they be removed.

In addition, Auto Innovators raises several other issues with respect to the reporting requirements:

- Minimal Risk Condition (MRC). The NPRM asks for reporting on the description, duration and location of each event during the development stage. Such reporting could be quite burdensome not only to OEMs but also to NHTSA, which could easily be overwhelmed by the amount data to the point that it is not useful. Further, the reporting requirement does not apply to Level 3 vehicles. Having separate reporting requirements for testing and deployed systems is more appropriate. For in-vehicle supervised testing, the developers and manufacturers have a human backup for MRC and can ensure safe operations.

- Instances of Aggressive Vehicle Acceleration and Deceleration and Aggressive Jerk. The agency should objectively define these requirements and tailor those requirements to its future needs for developing an FMVSS. For example, a high jerk that does not result in high acceleration or decelerations, while likely an indicator of a poor-quality ride, is unlikely to represent a crash imminent scenario. However, if there is a high jerk rate that results in a high acceleration or deceleration it will be captured by the other requirements. As a result, we recommend eliminating the aggressive jerk requirement. Any required metric, however, will not provide enough context to understand the cause of the behavior and whether it was an appropriate reaction to another road user, and any chosen metric should provide such sensitivity. The agency still needs to consider the usefulness of this information and how it would inform future FMVSS development. Without context, an occurrence count alone may not achieve the objective and may not serve the goal of informing future FMVSS requirements.

- Location Reporting. Proposed reporting requirements include zip codes as well as road type. Tracking and reporting each zip code in which a vehicle operates would be overly burdensome, especially if, for example, the ODD is "highway in the United States". Alternatively, Auto Innovators recommends that reporting includes either the type(s) of highways and the states within the scope of the ODD or the highway number and the relevant exits that bound any incident which must be reported.

- Compliance with Local Laws.
    - Auto Innovators recommends that the speed limit requirement in section IV (A)(2) Location Sheet be removed as duplicative. Speed limits should already be covered through reporting related to compliance with local laws in addition to imposing significant burdens on the manufacturer.
    - In addition, Table V-1, which addresses event triggered reporting, requires that AV STEP participants report both ticketed and non-ticketed traffic safety violations. That requirement includes all citable offenses that occur within 30 seconds of ADS deactivation. The event triggered requirements contained in Table V-1 would impose significant burdens on participants even if participants were able to detect all such events, especially for Level 3 vehicles which are likely to be individually owned. The requirement could imply, for example, any exceeding of a posted speed limit would need to be reported to NHTSA within 5 days. Earlier in the document, NHTSA says that this requirement "would not create an affirmative duty to search for those incidents," but it is unclear how this could be avoided.[2] We would recommend that such reporting requirements be explicitly limited to ticketed offenses. We do not object to NHTSA's review of the idea that "participants would provide information about their processes for identifying applicable traffic safety laws and monitoring adherence to them".[3] Again, Auto Innovators questions the ability of NHTSA to process and effectively use the data generated from such reporting.

- Data Governance Plan. NHTSA proposes to require applicants to identify the titles and responsibilities of key individuals. Auto Innovators suggests an alternative approach. The agency could require applicants to enumerate the roles and responsibilities of particular positions and to provide updates in the case of changes in corporate structure. Specific individuals within a role could change; however, the roles and responsibilities should remain relatively consistent.

[2] Section V(A)(2) Event. Triggered Reporting.
[3] Ibid.

- Preservation of Personally Identifiable Information (PII). Auto Innovators encourages NHTSA to consider that some vehicles within the program may be personally owned, especially for Level 3 vehicles, and to consider how to protect the PII of an individual who may be utilizing a vehicle approved through the AV STEP program.

- Standardized Format for Reporting. Auto Innovators members request that NHTSA provide details and request further comment on any proposed fines, penalties, and timing requirements that will be imposed and what the standardized format for reporting may be.

Operational Control. Companies are eager to have what the NRPM refers to as "an opportunity to demonstrate their operational safety and their commitment to transparency for their vehicles and operations by engaging in a national program with well-defined participation and reporting criteria focused on advancing safety." However, Auto Innovators notes that while the AV STEP program is technically open to Level 3 vehicles, the requirements of the operational control section appear to make Level 3 participation in the program unlikely because it excludes personally owned vehicles. As seen in other countries that have already allowed broad Level 3 deployment, most, if not all, Level 3 vehicles will be privately owned and the manufacturer, developer, fleet operator, or system integrator will not maintain operational control of the vehicle. We support the inclusion of Level 3 vehicles in AV STEP. However, if NHTSA wants Level 3 developers to participate in the program, it should consider reducing the assessment and reporting requirements for those vehicles such as those suggested in the "Less Stringent Program Alternative" described in the section titled "Regulatory Approaches Considered".

Confidential Business Information (CBI). Much of the information provided to NHTSA as part of the application could be confidential business information. Applicants must be able to specify what components of their application are CBI. Specifically, the requests for information on the sensing suite and data reporting are likely to be CBI.

Sensing Suite and Data Reporting. The NPRM would require applicants to provide information about sensing suites. This information related to sensor type, quantity and location before launch is proprietary and must be considered CBI. As part of the application, we recommend against including the level of sensor make and model to NHTSA because these may change.

Cybersecurity. NHTSA requests comment on how participants should validate to NHTSA that they have taken the proper precautions in evaluating and mitigating cyber risks associated with ADS operations. NHTSA asks whether participants should be required to report on cyber-related incidents.

Cybersecurity protects ADS-equipped vehicles, vehicles without ADS capabilities and riders from unauthorized access. Because even vehicles without ADS capabilities are increasingly connected,

NHTSA already has cybersecurity best practices as does NIST and UNECE.[4] These best practices should be sufficient. In addition, cybersecurity incidents that pose an unreasonable risk to safety already would be required to be reported to NHTSA as a potential safety defect. As a result, it is unnecessary to create a new and separate reporting requirement for cyber-related safety impacts specific to ADS-equipped vehicles.

3. **Supporting Competitiveness and Certainty Through Domestic and International Regulatory Harmonization**

A patchwork of rules, whether within the United States or internationally, creates barriers for testing and deployment of ADS-equipped vehicles. Facilitating the testing and deployment of these technologies is essential to maintain current and future United States competitiveness in the automotive sector. In the absence of Federal action, many state and local governments have been acting to create safety and regulatory frameworks that relate to design, construction, and performance requirements as well as incident reporting requirements. Action which preempts the patchwork of state and local frameworks for program participants could encourage participation in AV STEP. Ultimately, the safety improvements derived from the widespread deployment of ADS-equipped vehicles are likely to save lives and reduce injuries which has the added benefit of improved productivity. Aligning the AV STEP regulatory framework with those being developed internationally can also help state governments align with those standards.

Further, by their nature, personally owned Level 3 vehicles will be required to cross state lines and should be able to do so while maintaining consistent performance. Auto Innovators would strongly encourage the scope of AV STEP to exempt Level 3 vehicles from any state-specific law related to the design, construction, or performance of the vehicle.

Specifically, the following preemptive rules would help promulgate the nationwide deployment of ADS-equipped vehicles by providing common rules across the states, not only for design, performance, and construction of the vehicle hardware, but also to rules which apply to the person operating in the driving position:

- NHTSA should preempt state laws which prohibit the operation and usage of ADS.
- NHTSA should consult with States in order to remove restrictive state laws that do not align with laws surrounding secondary tasks (e.g. cell phone usage, infotainment system usage) during driving, by giving exemptions to the person operating in the driving position to which these tasks do not apply when an ADS is engaged.

[4] https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-09/cybersecurity-best-practices-safety-modern-vehicles-2022-tag.pdf
https://nvlpubs.nist.gov/nistpubs/CSWP/NIST.CSWP.29.pdf: UNECE WP.29 R155 and R156

The United States regulatory regime for ADS-equipped vehicles is lagging behind the rest of the world. The UNECE's ADS regulation and Global Technical Regulation (to which the U.S. is a contracting party) are due to be finalized by the end of this year with formal adoption by WP.29 in June 2026. Those rules, that represent the best consensus standards of international experts, will outline how to demonstrate through objective evidence that an ADS will not present an unreasonable safety risk. NHTSA should build on these efforts.

NHTSA has played key roles in developing the regulation. Harmonization with the output of the ADS International Working Goup can facilitate the development and deployment of ADS-equipped vehicles and allow U.S. communities to reap the safety benefits these vehicles will bring. However, in participating in these efforts, NHTSA should prioritize the development of objective performance requirements for ADS that can be implemented into an FMVSS. Without ensuring that the output of international standards can be implemented into FMVSS, the ability of the U.S. to harmonize to these requirements will be significantly hampered. Auto Innovators strongly supports NHTSA's efforts to harmonize with international standards and encourages the agency to prioritize the development of ADS performance standards that are objective and can be implemented in an FMVSS, especially those related to the ODD and location data.

4. Providing Deadlines for NHTSA to Respond to Applicants

NHTSA enumerates many deadlines for potential applicants but does not impose timelines for the agency to review applications and respond to requests for entry into the program. Companies require efficient and timely responses to facilitate testing and deployment strategies and plans. (In comparison, the current exemption program has proven challenging and unworkable). As part of the proposal, NHTSA will require applicants to have third party assessments. Those will complete the majority of the technical review. As a result, the review completed by NHTSA should be relatively uncomplicated. Auto Innovators recommends that NHTSA codify responding within 180 days of the submission of an application with an acceptance or a denial. If NHTSA neither grants nor denies the application, the application shall be deemed approved. This is consistent with 49 CFR 543.8(c), which requires NHTSA to issue a decision on exemption petitions within 120 days after the filing of the complete petition, and notes that if NHTSA does not make a decision within that time period that the petition shall be deemed approved.[5]

5. **Ensuring Flexibility in the Federal Exemptions Framework**

The AV STEP program is likely to be most beneficial for companies and developers that require exemptions. Auto Innovators offers three key points related to exemptions and the overlap between AV STEP and exemptions to 23 USC 30122.

[5] 49 U.S.C. 33106(d)

Number of exemptions. Auto Innovators urges NHTSA to provide exemptions under AV STEP for a high volume of vehicles, allowing for applicants to have a suitable pathway to deployment without restricting economic viability. The number of exemptions issued may be a decision point for participation in the program for some companies. The exemption authority upon which NHTSA is relying is not statutorily capped, so there is no maximum number of vehicles that may be exempted.

Entities that Do Not Require Exemptions. We urge NHTSA to consider less burdensome reporting requirements for entities that do not require exemptions in order to incentivize those entities to participate in the AV STEP program. This is particularly true for L3 vehicles as these vehicles are Category 1 compliant and certified with all applicable FMVSS. Auto Innovators recommends that the reporting requirements laid out under "Protocols for ADS Operations" in Section IV(B) be waived for those companies not requiring an exemption. In addition, for Step 2 applicants that do not require exemptions, NHTSA should consider waiving requirements enumerated under Section V(A)(1)(c), "Step 2 Unique Reporting". As indicated above in the section addressing Level 3 vehicles, for applicants that do not require exemptions, NHTSA should generally consider the "Less Stringent Program Alternatives" as enumerated in "Regulatory Approaches Considered" for those vehicles that do not require exemptions.

Make Inoperative. Existing DOT regulations prohibit manufacturers from knowingly making inoperative any feature or system installed on or in a motor vehicle in compliance with an applicable motor vehicle safety standard. Auto Innovators appreciates that the proposed rule provides a pathway for participants to obtain a "Make Inoperative" exemption.[6] However, Auto Innovators encourages NHTSA to resolve the issue more broadly for ADS-equipped vehicles, including those that do not participate in the AV STEP program. This prohibition could have unintended implications for "dual mode" vehicles that are equipped with selectable ADS features that temporarily deactivate conventional driver controls while the vehicle is operating safely while engaged in driverless operation.

6. Clarifying Definitions and Other Provisions.

Auto Innovators generally supports the definitions as enumerated within the NPRM. Aligning definitions in the ADS ecosystem with international standards is important, and Auto Innovators applauds NHTSA's general conformance with SAE J3016 "Levels of Driving Automation" definitions.[7] However, the exact definition of "remote driving" from J3016 is not used. Auto Innovators recommends conforming to this definition.

Terms and Conditions. Auto Innovators has some concern about provisions within the "terms and conditions" section. As part of the terms and conditions, the proposed rule seeks to have

[6] 49 CFR part 595

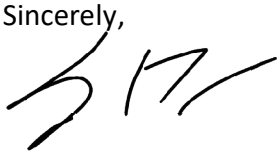
[7] https://www.sae.org/standards/content/j3016_202104/

individualized terms and conditions for each participant in AV STEP. However, most applicants require information about the terms and conditions before deciding to enter into an application. Furthermore, there are significant costs to applicants to complete the safety case and third-party certifications before they know what terms and conditions may apply or how many vehicles may be produced. If this program is to achieve the objective of providing data to support future FMVSS development, it should encourage wide participation. Auto Innovators recommends that NHTSA maintain as much commonality and harmonization as possible for participants and provide as much information as possible to potential applicants before the application process commences. Auto Innovators recommends that the terms and conditions should be a part of the rulemaking, so that they are known and consistent for each applicant. Auto Innovators does acknowledge and appreciate that NHTSA proposes that the terms and conditions for each participant be disclosed publicly.

Auto Innovators appreciates the opportunity to offer comments on the NPRM. A path towards deployment of ADS-equipped vehicles will support American competitiveness and improved roadway safety.

If you have any questions, please do not hesitate to reach out.

Sincerely,



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