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1200 New Jersey Avenue, SE
Room W12-140
West Building Ground Floor
Washington, DC 20590-0001

RE: Framework for Automated Driving System Safety (NHTSA-2020-0106)

To Whom It May Concern:

The U.S. Chamber Technology Engagement Center (“C_TEC”)¹ respectfully submits these comments to the Department of Transportation (“DOT”) in response to the request for comment in the above-referenced proceeding (“Safety Framework”) on the safety of automated driving systems (“ADS”). Broadly, C_TEC endorses the approach taken by the safety framework to facilitate the safe testing and deployment of ADS-equipped vehicles and advocates for the following approach as the National Highway Traffic Safety Administration (“NHTSA”) continues its efforts to further to ensure ADS safety.

I. The Benefits of Automated Vehicle Technology

Automated vehicles (“AVs”) are expected to bring numerous benefits to American consumers, workers, and the public at large. First, and most importantly, automated vehicles will significantly improve the safety of America’s transportation system through reducing the 36,096 annual traffic fatalities in the U.S. Automating the driving functions of a vehicle would help address this issue considering the vast majority of accidents, 94%, are primarily due to human

¹ C_TEC was launched to advance technology’s role in strengthening business by leveraging tech innovations that drive economic growth in the United States. C_TEC promotes policies that foster innovation and creativity and sponsors research to inform policymakers and the public.

error.² Second, the introduction of automated vehicles will enhance mobility for seniors and Americans with disabilities. A 2017 study estimated that automated vehicles will empower two million individuals with disabilities to find employment and save \$19 billion annually in missed medical appointments.³

Third, the introduction of ADS will bring significant environmental benefits as well. The University of Michigan estimated that efficiencies derived from ADS may reduce greenhouse gas emissions by up to 9%.⁴ Another study from automated trucking company TuSimple and the University of San Diego found that automated trucks could reduce fuel use by 10% and consequently reduce overall emissions.⁵ Finally, the U.S. will see significant economic benefits from ADS deployment in terms of reduced costs for shippers and jobs gains for Americans. A study from 2018 found that by 2050, the annual societal and economic benefits of ADS are projected to total \$796 billion through fewer accidents, reduced congestion, and time savings.⁶ Also, the adoption of automated commercial vehicles is projected to lower long-haul trucking costs for manufacturers by 30%.⁷

II. Preserve Existing Regulatory Models

The safety framework envisions that NHTSA may have to look beyond existing regulatory tools such as Federal Motor Vehicle Safety Standards (“FMVSS”) to apply to ADS. C_TEC believes that if NHTSA were to pursue this path an overarching principle to any novel approaches must be the preservation of foundational concepts that underlie NHTSA’s regulation of motor vehicle technology.

First, any safety framework must ensure that NHTSA remains the sole regulator of motor vehicle safety. Multiple regulators either at the federal level or at the state and local level will create regulatory confusion and uncertainty, and could lead to a patchwork of laws that hinders the safe deployment of ADS-equipped vehicles. Second, NHTSA should continue to adhere to the current self-certification model for ADS and avoid any policies that would require, explicitly or implicitly, pre-market approval for ADS-equipped vehicles. Over the last few decades, the self-certification model has proved to be an effective approach for ensuring motor vehicle safety

² See Congressional Research Service, Issues in Autonomous Vehicle Testing and Deployment (February 11, 2020), available at

https://www.everycrsreport.com/files/20200211_R45985_c6710a4ca9cb75b190169406df765cd31ea39426.pdf

³ See Ruderman Family Foundation, Self-Driving Cars: The Impact on People with Disabilities (January 2017), available at https://rudermanfoundation.org/wp-content/uploads/2017/08/Self-Driving-Cars-The-Impact-on-People-with-Disabilities_FINAL.pdf

⁴ See University of Michigan, Maximizing the environmental benefits of autonomous vehicles, (Feb. 2018) Available at <https://news.umich.edu/maximizing-the-environmental-benefits-of-autonomous-vehicles/>.

⁵ See University of California San Diego and TuSimple. Available at <https://www.sae.org/news/2019/12/tusimple-autonomous-trucks-cut-fuel>.

⁶ See Securing America’s Energy Future, America’s Workforce and the Self-Driving Future: Realizing Productivity Gains and Spurring Economic Growth (June 2018), available at https://aworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf.

⁷ See Steer Group, Economic Impacts of Autonomous Delivery Services in the United States, (Sept. 2020). Available at https://www.steergroup.com/sites/default/files/2020-09/200910_%20Nuro_Final_Report_Public.pdf.

and has led to the regular introduction of new products into the marketplace and continued innovation in motor vehicle design. Third, and finally, NHTSA has ample enforcement tools to provide for ADS safety, such as recall authority. Historically, these tools have been helpful to enable motor vehicle safety and should be applied to ADS. Given the clear success of these tools, C_TEC does not believe it would be necessary to grant new enforcement authorities to NHTSA to ensure ADS safety.

III. Safety Framework Comments

In general, C_TEC supports the concept of an ADS safety framework to provide for safety assurance for ADS. As NHTSA seeks to further develop the safety framework, including through any rulemakings, it is essential that NHTSA continue to engage with the private sector to understand the impact of any policy changes on the development of ADS. C_TEC also encourages NHTSA to keep in mind the following issues and recommendations as NHTSA further develops its regulatory approach on ADS.

i. Core Elements and Other Safety Functions

The ANPRM outlines four core safety functions of ADS safety performance: sensing, perception, planning, and control. C_TEC agrees that the inclusion of these four core safety functions is appropriate. The ANPRM also states that these four safety functions may not be sufficient to determine ADS safety and that other safety functions could be included. C_TEC believes the inclusion of any additional safety functions must be predicated on exclusively advancing motor vehicle safety and safety-related cybersecurity and should avoid including non-safety objectives such as data privacy. While automated vehicle technology does raise a number of other policy issues unrelated to safety, NHTSA should remain solely focused on motor vehicle safety in related to safety assurance for ADS.

ii. Support Ongoing Voluntary Mechanisms

In the discussion on Administrative Mechanisms for Implementation and Oversight, the ANPRM outlines how various voluntary mechanisms can assist NHTSA in the oversight of ADS. In general, voluntary mechanisms can serve as an initial helpful policy tool for emerging technologies and automated vehicles are no exception. While significant progress has been made in the last decade, the United States still remains years away from widespread deployment. Consequently, C_TEC believes that in the short-term, NHTSA should continue to focus on voluntary mechanisms to ensure safety and enable flexibility and innovation, primarily through two existing mechanisms: Voluntary Safety Self-Assessments (“VSSAs”) and the Automated Vehicle Transparency and Engagement for Safe Testing (“AV TEST”) Initiative.

Voluntary Safety Self-Assessments, established by Automated Driving Systems 2.0: A Vision for Safety (“AV 2.0”), allows automated vehicle developers to voluntarily publically disclose and assess how they are addressing ADS safety in a manner that protects intellectual property and bolsters public trust through transparency into the activities of ADS developers. To date, 22 ADS developers have submitted VSSAs to NHTSA underscoring the importance of this program as this sector continues to mature. C_TEC agrees with the ANPRM that “VSSAs are an

important tool” and that NHTSA continue utilizing VSSAs during the early stages of ADS development. Moreover, VSSAs should remain voluntary and flexible and any changes to the VSSA guidance should be conducted in consultation with stakeholders, including industry.

Likewise, the AV TEST Initiative, a recent voluntary reporting mechanism established by NHTSA, should also remain as a priority as ADS testing continues throughout the United States. Currently, a number of ADS developers across the country are conducting safe, on-road testing that is important to the continued development of ADS. The AV TEST Initiative established a public platform to provide a transparent view on the full scope of ADS testing in the United States with participation from 52 companies, governments, and associations. This effort helps the public understand the role of ADS testing in motor vehicle safety and will contribute to public trust in automated vehicle technology.

iii. Timing and Phasing of Regulatory Mechanisms

As the ADS industry continues to develop, C_TEC encourages NHTSA to take a graduated approach towards ADS safety assurance. Premature regulatory action that either exceeds the current FMVSS framework through new regulatory obligations or modernizing FMVSS without necessary data would likely hinder the safe testing and deployment of ADS-equipped vehicles. Moreover, such an approach would put the United States at a competitive disadvantage compared to other jurisdictions globally.

As noted earlier, a more appropriate approach would be graduated that aligns regulatory activity to the real-world development of ADS. In addition to continuing existing voluntary mechanisms, NHTSA should, in the near term, leverage the existing Part 555 exemption process. Exemptions allow for the introduction of innovative and unconventional motor vehicle designs that may not comport with existing FMVSS. For example, in February 2020, NHTSA granted Nuro a temporary exemption that will allow the company to deploy its R2X model—a low-speed, unmanned electric delivery vehicle, which is the first type of exemption granted that involves a SAE Level 4 technology. Also, last October, General Motors (“GM”) and Cruise announced that they are seeking to utilize the exemption process to deploy the Cruise Origin that is all electric and does not have traditional vehicle controls such as a steering wheel and brake pedal. Importantly, exemptions also enable NHTSA to gather real world performance data to help develop future rulemakings, which is why exemptions are an essential near-term priority. However, while exemptions are an important tool, the current exemption process requires significant resources in the part of applicants and historically has been a lengthy process. Consequently, C_TEC recommends that NHTSA consider policy solutions to streamline the exemption process, in consultation with impacted stakeholders.

In the medium and long term, C_TEC recommends that NHTSA continue modernizing FMVSS to accommodate ADS. One of the challenges with this approach is the lengthy timeline associated with updating the FMVSS, which creates uncertainty for ADS developers, particularly companies that do not have conventional vehicles in the market. To help address this issue, NHTSA and DOT should develop and regularly update a long-term regulatory roadmap that identifies key regulatory barriers to ADS deployment and provides a timeline towards a long-term regulatory framework. A roadmap would guide NHTSA and DOT as they build on this

ANPRM and provide some additional certainty for industry. The initial roadmap, along with subsequent iterations, should also be developed with robust stakeholder input.

iv. Additional Research

Question 14 of the ANPRM asks what additional research should be conducted by NHTSA to support the creation of a safety framework. Research is a fundamental component of informing future regulatory actions given the emerging state of ADS development in the United States. C_TEC believes that NHTSA's research priorities should focus on the following areas: simulation, track testing, and gathering real world data.

First, through utilizing the Virtual Open Innovation Collaborative Environment for Safety ("VOICES") project, as funded by DOT, NHTSA may help research, develop, and assess transportation solutions in a distributed virtual environment that produces an accurate representation of the transportation system. Second, through expanding ADAS test procedures, NHTSA may conduct research and include ODD-specific test scenarios for ADS-equipped vehicles. Third, NHTSA should leverage real world test data to understand testing and deployment performance in a variety of realistic environments. The exemption process, as discussed earlier, can assist in providing that real world data. However, NHTSA should also move forward with the "Pilot Program for Collaborative Research on Motor Vehicles with High or Full Driving Automation" ANPRM, which will enable greater deployment and collaboration with NHTSA to gather real world data.

v. Additional Considerations

As NHTSA continues its process to determine how to approach ADS regulation subsequent to this ANPRM, C_TEC strongly encourages NHTSA to take into account two other important considerations. First, the ANPRM suggests that additional reporting and information sharing requirements may be necessary. If NHTSA proceeds with this approach, it is critical that these mechanisms include protections for intellectual property and confidential business information. Second, as discussed earlier in these comments, NHTSA should retain its role as the safety regulator for motor vehicles and ADS, and as NHTSA continues to evaluate ADS, NHTSA should not expand its regulatory role beyond motor vehicle safety. Consequently, any new mechanisms or revisions of existing mechanisms to evaluate ADS should relate solely to motor vehicle safety and avoid consideration of unrelated issues such as privacy and workforce considerations. Adherence to this approach also prevents NHTSA from being overburdened and potentially unable to effectively focus on ADS safety.

IV. Additional Required Legislative Authorities

The ANPRM requests comments on any administrative mechanisms that require additional statutory authority. C_TEC supports using the existing approach contained in the Motor Vehicle Safety Act is sufficient to provide for ADS safety. However, C_TEC believes that Congressional action on automated vehicle technology, through previously introduced legislation, such as the SELF DRIVE Act and the AV START Act can catalyze the safe development, testing, and deployment of automated vehicle technology through two main

policies. First, both proposals increase the number and duration of motor vehicles that may be exempted by a single applicant. This will empower NHTSA to better leverage the exemption process to gain real-world data from ADS-equipped vehicles. Second, both proposals affirmed and clarified the appropriate delineated of traditional federal, state, and local regulatory roles for ADS. Highly automated vehicles (Levels 4 & 5) integrate the duties traditionally held by a human driver, including core elements of ADS safety performance, into the design of the vehicle. Consequently, NHTSA's role in regulating motor vehicles equipped with ADS will increase in importance and additional legislative clarification may be helpful to prevent a patchwork of state and local laws and provide certainty for industry.

V. Conclusion

Automated vehicle technology will bring significant benefits for American consumers, workers, and the public at large. NHTSA has a significant role in ensuring the safe development, testing, and deployment of ADS-equipped vehicles. C_TEC looks forward to continuing to partner with NHTSA and DOT to on future efforts to advance an appropriate regulatory approach for ADS.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Furlow', with a stylized flourish at the end.

Matt Furlow
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U.S. Chamber Technology Engagement Center (C_TEC)