

April 2, 2020

US Department of Transportation
Office of the Secretary
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: The National Society of Professional Engineer’s Public Comments on Docket ID No. DOT-OST-2019-0179, Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0

On behalf of the nearly 23,000 members of the National Society of Professional Engineers, these comments are submitted in response to the Department of Transportation’s request for comment on “Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0.”

NSPE is committed to creating a world where the public can be confident that engineering decisions affecting their lives are made by qualified and ethically accountable professionals. [NSPE Position Statement No. 03-1772](#) states that the testing and deployment of AVs must include a professional engineer. Because professional engineers have technical expertise and an ethical duty to protect the public, they are uniquely positioned to contribute to the development of automated vehicles.

It is with this role in mind that the National Society of Professional Engineers urges DOT to employ the subject-matter expertise of professional engineers when creating regulations for automated vehicles. By doing so, DOT will be taking an important step in protecting the public health, safety, and welfare as this technology becomes more prevalent.

Regarding the document’s first AV technology principle of prioritizing safety, NSPE finds that DOT is not doing enough. Allowing AV developers to innovate without any level of oversight or regulation puts the public at risk. NSPE recommends that DOT and the National Highway Traffic Safety Administration follow a key recommendation made by the National Transportation Safety Board during its investigation into the Uber AV crash in Tempe, Arizona: Require autonomous vehicle developers to submit safety self-assessments.¹ NSPE would like to further NTSB’s recommendation and ask that NHTSA enact a third-party verification of these safety self-assessments, including the involvement of a

¹ National Transportation Safety Board, Accident Report “Collision Between Vehicle Controlled by Developmental Automated Driving System and Pedestrian, Tempe, Arizona, March 18, 2018” <https://www.nts.gov/investigations/AccidentReports/Reports/HAR1903.pdf>

professional engineer. Taking these actions would minimize the number of deceptive claims coming from industry and ensure the public is protected as AV technology advances.

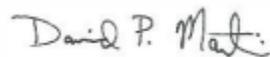
Additionally, a regulatory framework is needed for AVs. With the nonexistent regulation of automated vehicles, manufacturers and developers are able to produce automated vehicles that can present potential harm to the public. This lack of oversight fails to provide the public with confidence that this technology will be a net benefit for them. NSPE supports guidelines that protect the public and do not allow developers to create products with minimal regard for public safety.

Voluntary consensus standards are another recommendation in AV 4.0. However, voluntary consensus standards can be problematic because they create an opening for industry to self-regulate and self-certify the technology they are developing. Who in industry is thinking about how automated vehicles can affect the public health, safety, and welfare? Individuals working in the private sector might have loyalty to their company, to the product they're developing, or to cost, superseding any obligation or accountability to protecting the public. The March 2018 autonomous vehicle crash in Tempe is a prime example of the errors and harm that can occur when self-certification of safety is relied upon. In this case, the automated driving system was not capable of properly identifying the pedestrian and, because of this, was unable to choose a safe course of action, resulting in the pedestrian's death.

NSPE asks DOT to revisit its position on voluntary consensus standards and use the expertise of licensed professional engineers when making decisions about AV regulation. NSPE members who are subject-matter experts stand ready to provide guidance to DOT on developing standards that protect the public while continuing to encourage innovation.

NSPE greatly appreciates this opportunity to comment on AV 4.0. Any further questions can be direct to Margaret Edwards, policy associate, at medwards@nspe.org.

Sincerely,



David Martini, PE, F.NSPE
President