

April 2, 2020

Mr. Finch Fulton
Deputy Assistant Secretary for Transportation Policy
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Docket No. DOT-OST-2019-0179-0001; ASCE Comments for the Notice of Request for Comments
“Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0 (AV 4.0)”

The American Society of Civil Engineers (ASCE) is pleased to submit the following comments to the US Department of Transportation (DOT) on the notice of request for comments “Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0 (AV 4.0),” issued on February 26, 2020. ASCE supports the planning and development of connected and autonomous vehicles (CAV) as part of an integrated transportation infrastructure system. ASCE also encourages CAV technology features that support stronger planning, design, operation, and maintenance of surface roadways; enhances research opportunities; and prevents traffic-related fatalities and serious injuries.

Founded in 1852, ASCE is the oldest national engineering organization and represents more than 150,000 civil engineers in private practice, government, industry, and academia. ASCE members are dedicated professionals who hold paramount public health, safety, and welfare as they design, build, construct, operate, and maintain the built environment. It is through this commitment that our members recognize the impacts of evolving technologies and advocate for policies that enhance human safety, support innovation, and strengthen the quality of our nation’s infrastructure.

ASCE’s 2017 Infrastructure Report Card, which gave the nation’s infrastructure a grade of “D+,” states that infrastructure challenges remain significant, but solvable. We can address our infrastructure deficit through strategic and sustained investment, bold leadership, thoughtful planning, and careful preparation for the needs of the future. Emerging technologies such as CAVs, must be considered as viable tools to save lives, improve our infrastructure, and enhance mobility.

As DOT continues to develop a framework and multimodal approach to the safe integration of CAVs into our nation's broader surface transportation system, ASCE encourages the following:

- CAV technology must be used as a tool to protect human safety on our nation’s roadways. In 2018, 36,750 people were killed as a result of traffic crashes. According to the Eno Center for Transportation, the number of annual crashes could be reduced by 211,000 and 1,100 lives would be saved even if only 10% of vehicles were converted to CAV. This technology has a possibility of enhanced safety through vehicle manufactured features and effective communication systems.
- To maximize CAV safety potential and support further research, federal regulators must preserve the dedicated 5.9 GHz band of spectrum allocated for transportation-related communications.

- Strong, resilient, and well-planned infrastructure is necessary to adopt new transportation technology and address the impact on infrastructure. Investing in the infrastructure systems like signal and CV systems should be included in new and/or existing discretionary grants programs to ensure CAV technology is properly implemented.
- A properly maintained infrastructure system is mandatory to maximize the safety benefits that CAV technology can provide. Looking to future development, civil engineers must be given the tools and funding necessary to properly plan for future concerns including alternative land use, lane and sign markings, and proper pavement conditions.
- As CAV technology continues to develop, cooperative systems must be achieved through strong partnerships between vehicles manufacturers, infrastructure owners and operators, government entities, and private sector actors.
- Industry interests should work cooperatively with Federal, State, and Local governmental agencies to establish national standards for the planning, design, deployment, and maintenance of transportation infrastructure and operating systems needed to support CAV deployment, including protections for data privacy.

As DOT continues to examine the impacts of this technology on our nation's roadways, we urge for further research and deployment guidance to ensure this technology is properly incorporated into infrastructure planning and development. While some see CAV deployment as an opportunity through shared mobility to reduce congestion, improve land use, and reduce our carbon footprint; others see this technology leading to more congestion, untamed community sprawl, and other foreseen consequences. Civil engineers across the nation need certainty to ensure they are properly planning and developing the built environment to meet this new reality. Future AV guidance must consider these factors to ensure there this a comprehensive approach to addressing current and unforeseen challenges.

ASCE applauds AV 4.0 for providing DOT automation principles that will protect CAV users, community interests, and facilitate coordinated efforts within the Federal government. Through this approach we can ensure human safety is held paramount, improve mobility access, research and development continues to respond to the ever-changing technology landscape, and provide coordinated federal agency efforts to ensure future CAV development remains consistent. Despite these positive steps, we continue to advocate for strong infrastructure investment to ensure 21st century technology can operate effectively on the current century's surface transportation network. It is only through a strong built environment we can fully utilize the positive impacts of this technology.

To summarize ASCE supports the planning and development of CAVs as part of an integrated transportation infrastructure system. ASCE encourages CAV technology features that support stronger planning, design, operation, and maintenance of surface roadways; enhances research opportunities; and prevents traffic-related fatalities and serious injuries. As DOT continues to develop guidance on this ever-changing technology, ASCE urges the opportunity to have a comprehensive national framework that improves safety and our infrastructure.