Washington Office

25 Massachusetts
Ave., NW Suite 500

Washington, D.C. 20001

(202) 789 -7850

Fax: (202) 789-7859

# Statement for the Record of

# The American Society of Civil Engineers

# on

# "Addressing the Roadway Safety Crisis: Building Safer Roads for All"

## Subcommittee on Highways and Transit
## Committee on Transportation and Infrastructure
## U.S. House of Representatives

**June 8, 2022**

## Introduction

The American Society of Civil Engineers (ASCE) appreciates the opportunity to submit a statement to the House Subcommittee on Highways and Transit for the hearing on *Addressing the Roadway Safety Crisis: Building Safer Roads for All*.

Safety underpins every aspect of civil engineers' work. As a representative for the professionals who design, construct, and inspect roadway systems, ASCE advocates for a sustained effort to reduce traffic crashes and related deaths through improvements to all aspects of highway system performance, such as standards for planning and design, the understanding of accident causation, and the implementation of safety improvement programs.

ASCE commends the House Subcommittee on Highways and Transit for holding a hearing on this subject. Federal, state, and local government agencies need to prioritize strategic investments dedicated to improving and preserving roadway conditions that increase public safety on the system we have in place as they plan for the roadways of the future.

## ASCE's *2021 Report Card for America's Infrastructure*

Every four years, ASCE publishes its Report Card for America's Infrastructure, which grades the nation's major infrastructure categories using an A to F school report card format. The most recent report card[1], released in March 2021, evaluated 17 categories of infrastructure and reflected an overall C- grade.

Roads earned a D on the report card, which recognized that the increasing volume of traffic has contributed to growing wear and tear our nation's roadways, presenting negative implications for safety and the economy. To raise this grade, ASCE recommends increasing funding from all levels of government and the private sector to address the condition and operations of the roadway system to maintain a state of good repair and ensure safety for all users.

## Safety

Federal data suggests a troubling trend in traffic fatalities. The National Highway Traffic Safety Administration (NHTSA) in May released estimates[2] that indicate 42,915 people died in traffic crashes in 2021. This estimate, which marks a 10.5% increase from the 38,824 traffic deaths recorded in 2020, is the highest number of such fatalities since 2005.

Safer roadway systems reduce loss of life and help keep the nation's economic network intact. ASCE believes safety initiatives must account for a variety of system users, such as pedestrians and bicyclists in addition to motor vehicle drivers.

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[1] https://infrastructurereportcard.org/

[2] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813298

ASCE supports a program where improvements in highway safety can be achieved by:

- Increasing funding for U.S. Department of Transportation's Highway Safety Improvement Program;
- Implementing performance and outcome-based programs established for the Federal-Aid Highway Program;
- Implementing innovative highway safety design features, proven effective in reducing the potential for—and severity of—traffic crashes on public roadways;
- Establishing and maintaining complete, current, and accurate electronic traffic crash data to better understand high-crash locations;
- Enhancing the organizational prominence of highway safety within federal, state, and local transportation agencies to provide a more effective voice in agency administration, leadership development, and program direction;
- Providing flexibility in federal-aid funding programs for high-priority highway safety improvement programs, and continuing to target national safety problems through categorical funding;
- Advancing the mission of Vision Zero to reduce traffic-related fatalities and serious injuries to zero.

Technology can also play a role in improving roadway safety by filling in the gaps of human performance. According to a Human Factors for Connected Vehicles study by NHTSA[3], connected vehicle technologies have the potential to address up to 82% of crash scenarios with unimpaired drivers. These technologies could save a significant number of lives and prevent crash-related injuries, and help avoid tens of thousands of crashes each year.

There are several areas where technology can complement human performance and improve safety and mobility. For example:

- Technology improvements can provide stability control, automatic braking, all-wheel drive, steering by wire, traction control, collision avoidance, blind spot warning systems, lane control, and automatic cruise control.
- Infotainment systems linked to cell phone technologies (e.g., Bluetooth and voice activated commands) in vehicles can reduce distracted driving (e.g., from texting, looking down at a phone for directions, searching for an address, etc.).
- Automated vehicles (AV) possess hardware and software collectively capable of performing some aspects of safety-critical control functions (e.g., steering, throttle, and braking) without direct driver input. AV may use vehicle sensors, cameras, GPS, and telecommunications to obtain information to make decisions regarding safety critical situations and act appropriately by effectuating control at some level. In this way, the AV infrastructure and the roadway infrastructure are interdependent.

[3] https://www.nhtsa.gov/sites/nhtsa.gov/files/812068-humanfactorsconnectedvehicles.pdf

## Infrastructure Investment and Jobs Act

ASCE was a strong supporter of the Infrastructure Investment and Jobs Act (IIJA) of 2021. A once-in-a-generation boost for the nation's roads and bridges, the legislation contains a five-year, $383.4 billion reauthorization of federal surface transportation and an additional $110 billion in appropriations for road and bridge programs.

Successful implementation of the IIJA has the potential to reduce the number of fatalities that occur on the nation's roadways. IIJA investments should include countermeasures to improve safety, such as guardrails, pavement markings, enhanced warnings, and friction surfaces on hazardous curves. On rural roads, standards such as a minimum two-foot paved shoulder and a minimum 10.5-foot lane width should be mandatory.

## Conclusion

ASCE thanks the House Subcommittee on Highways and Transit for hearing from a diverse panel of transportation experts on the subject of roadway safety.

Improving safety on America's roadways is critically important. A safe, reliable network of roads protects lives and facilitates a healthy economy. ASCE stands ready to assist Congress and industry leaders in addressing the roadway safety crisis.