July 10, 2019

The Honorable John Barrasso
Chairman
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

The Honorable Thomas R. Carper
Ranking Member
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Chairman Barrasso and Ranking Member Carper:

In anticipation of the Committee on Environment and Public Works upcoming hearing entitled “Investing in America’s Surface Transportation Infrastructure: The Need for a Multi-Year Reauthorization Bill,” the Intelligent Transportation Society of America (ITS America) writes to underscore our support for a Fixing America’s Surface Transportation (FAST) Act reauthorization that recognizes the added value of integrating technology into transportation infrastructure and services and provides funding for the rapid deployment of intelligent transportation technologies quickly and uniformly to transportation agencies and providers across the entire country.

Over the years since the FAST Act was signed into law, automated and connected vehicle technologies have advanced, the collection and use of big data has become an increasingly valuable tool for decision makers, electrification of vehicles of every type from human scale to large-scale continues, and Mobility on Demand services are transforming how we get around. These technologies allow additional freedom of movement for those who have limited mobility access, such as people with disabilities, older adults, and those living in transit deserts. Technology advancements will also help begin to reduce the epidemic of fatalities on our roadways.

Given the title and focus of this hearing, this letter summarizes ITS America’s FAST Act reauthorization platform: Moving People, Data, and Freight: Safer. Greener. Smarter—with a focus on policy and recommendations under the jurisdiction of the Committee on Environment and Public Works. Moving People, Data, and Freight bridges new and existing infrastructure technologies and new modes of mobility that we see across the country with the utmost importance of investments to bring our infrastructure to a state of good repair and integrate technology to maximize efficiencies and safety and secure the United States’ global leadership in the development and deployment of advanced transportation technologies. ITS America’s Moving People, Data, and Freight: Safer. Greener. Smarter. policy and recommendations include the following:

SAFEGUARD CRITICAL TRANSPORTATION INFRASTRUCTURE FROM CYBERSECURITY THREATS

ITS America supports policy that would provide states and localities funding and technical assistance under federal-aid highway programs and the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) to safeguard critical transportation systems that are more reliant than ever on connectivity to communicate and exchange data from cybersecurity threats.

As vehicles and infrastructure become more connected, our nation’s transportation system faces increasing cybersecurity risks. Given the ability to cause loss of life and inflict significant economic damage in a highly visible manner, cybersecurity attacks directed at those producing or operating technologies travelling over or connected to U.S. roadways will intensify.
ITS America recommends increasing the federal match to 100% for installation of V2I safety technologies. We also recommend expanding eligibility to include data collection and analysis software (including data acquisition through private sector partnership), maintenance and operations, fiber, integration, the costs associated with systems, and equipment required for V2I communications technology.

V2I communications, which involves the exchange of safety and operational data between vehicles and elements of the transportation infrastructure, offer a wide range of safety benefits. V2I provides vehicles and drivers information about infrastructure operations -- weather and pavement conditions, how signals are directing traffic, and even the location of potential hazards at intersections and other critical road safety hotspots. V2I applications include red light violation warnings, reduced speed zone warnings, curve speed warnings, and spot weather impact warnings. According to the National Highway Traffic Safety Administration (NHTSA), V2I technology helps drivers safely negotiate intersections and could help prevent 41 to 55 percent of intersection crashes. Another connected vehicle safety application that helps drivers with left turns at intersections could help prevent 36 to 62 percent of left-turn crashes. In addition to the lives saved, just these two applications alone could prevent up to 592,000 crashes and 270,000 injuries each year.

Fatalities in crashes involving at least one large truck increased by an estimated three percent in 2018, according to NHTSA’s preliminary statistics. As part of the USDOT’s Connected Vehicle Pilot Program, Wyoming is demonstrating what rural states can do to benefit travelers. Wyoming is deploying CV technology along the 402 miles of I-80 where winter wind speeds and gusts result in trucks blowing over and often lead to road closures. The Wyoming Department of Transportation (WYDOT) CV pilot focuses on commercial vehicle operators by developing applications to support advisories including roadside alerts, parking notifications and dynamic travel guidance. WYDOT is equipping 400 vehicles, a combination of fleet vehicles and commercial trucks with on-board units (OBUs). Of the 400 vehicles, at least 150 would be heavy trucks that are expected to be regular users of I-80. In addition, of the 400 equipped-vehicles, 100 WYDOT fleet vehicles, snowplows, and highway patrol vehicles will be equipped with OBUs and mobile weather sensors.

ITS America recommends expanding eligibility under the ATCMTD program to include V2P technologies.

Pedestrian deaths increased by an estimated 4 percent and “pedalcyclist” deaths increased by an estimated 10 percent in 2018, according to NHTSA’s preliminary statistics. V2X will enable deployment of safety solutions to protect these vulnerable users of the system. By allowing vehicles to communicate with users through sensors or vehicle-to-device communication, we can significantly reduce the number of people killed on our roadways. V2P encompasses a broad set of road users - people walking, children being pushed in strollers, people using wheelchairs or other mobility devices, passengers embarking and disembarking buses and trains, and people riding bicycles and scooters.

EXPAND INVESTMENTS IN ADVANCED MOBILITY IMPROVEMENTS

ITS America supports expanding eligibility under highway programs to include advanced mobility safety improvements including data infrastructure and analysis, smart mobility improvements such
as smart truck parking, smart work zones, smart pavements, predictive analytics platform, and build out of electric vehicle charging stations, hydrogen fueling infrastructure, natural gas fueling infrastructure, and other alternative fuels.

Due to the lack of truck parking availability information and safe and convenient truck parking spaces, tired commercial vehicle operators may continue to drive while searching for a place to park and rest, resulting in fatigue-associated crashes. Florida, Texas, Arizona, and California are among a growing number of states planning and deploying smart truck parking technologies for real-time truck parking availability. Smart truck parking technology uses a combination of in-pavement space occupancy detection for the location with mixed vehicle type usage and microwave vehicle detection for monitoring of ingress/egress at the weigh stations.

Another example of an advanced mobility improvement is data analytics. The Regional Transportation Commission of Southern Nevada (RTC) is using predictive analytics to improve safety and efficiency on freeways, including key freight corridors and major arterials by compiling and analyzing data to report in real-time the location of accidents and predict where dangerous driving conditions or congestion may occur. This technology enables faster validation and response to roadway incidents as well as a more efficient use of resources to proactively deploy traffic patrols and abatement efforts with the goal of preventing incidents.

PLAN FOR TRANSFORMATIVE TRANSPORTATION TECHNOLOGIES

ITS America supports additional planning funds to help regions and states better address complexities around transformative transportation technologies and climate change in the context of an integrated multimodal transportation system. ITS America also supports additional planning funds and flexibility to the planning process to prepare for a range of possible connected and automated vehicle future scenarios.

States, providers of public transportation, and Metropolitan Planning Organizations (MPOs) are expanding beyond traditional long-range scenario planning, which holds fixed certain transportation and land use assumptions, to consider big questions facing the transportation system, including whether connected and automated vehicles will increase the vehicle capacity of existing highway lanes; how automation and active transportation connections might help solve the first mile/last mile transit challenge; what roadway investments could incentivize the shift to connected and automated vehicles; how to make sure the entire transportation system is working together; and how to expedite technology safety benefits. Increased funding and flexibility will help planners analyze project performance across a range of different futures, including ensuring all modes of transportation work in concert and will lead to more informed project prioritization that maximizes the benefits of connected and automated technologies.

BUILD TRANSFORMATIVE AND ADAPTIVE INFRASTRUCTURE FOR DEPLOYMENT OF INTELLIGENT TRANSPORTATION TECHNOLOGIES TO MITIGATE CLIMATE CHANGE

ITS America recommends establishing a new flexible program to make transportation networks more resilient in the face of a changing climate and more responsive to the technology-fueled transformation in how people and goods move.
The program should be highly flexible, mode-neutral and include formula and discretionary components. Eligible projects should include capital and operational investments that improve both near-term and long-term system safety and performance. Examples include programs to support deployment of automated vehicles; V2X communications technologies; priced managed lanes; transportation demand management programs; strategic micro-transit investments; advanced parking freight delivery and incident management systems; alternative fuel charging infrastructure and other advanced technologies to support a clean transportation system; and climate mitigation/resiliency improvements.

**ITS America supports policy to make eligible funding for renewable energy projects in the Interstate rights-of-way for transportation use by states and localities for transportation related purposes.**

States, metropolitan regions, and cities will require substantial investment to adapt infrastructure to be resilient in a changing climate and responsive to a new mobility paradigm. Federally supported, near-term infrastructure improvements will provide the dual benefit of immediately mitigating carbon-emitting congestion while preparing our nation for intelligent mobility and smart infrastructure.

Just as transportation infrastructure was critical to the development of our economy in the 20th century, maintenance of infrastructure and deployment of intelligent mobility and smart infrastructure will be critical for our global competitiveness in this century. Advances in robotics, artificial intelligence, and wireless communications will define the way people, goods, services, and information move. With vision and leadership, the Committee on Environment and Public Works added intelligent transportation technology as eligible under several Federal-aid highway programs in the FAST Act. ITS America stands ready to continue to work with the Committee on a reauthorization that increases investments in intelligent transportation technologies that advance transportation safety and mobility, reduce congestion, improve air quality, and enhance American productivity. ITS America’s full FAST Act reauthorization platform: [Moving People, Data, and Freight: Safer, Greener, Smarter](www.itsa.org/policy-infrastructure), is available at [www.itsa.org/policy-infrastructure](http://www.itsa.org/policy-infrastructure).

Sincerely,

Shailen P. Bhatt  
President and CEO  
Intelligent Transportation Society of America

Cc: Senate Committee on Environment and Public Works  
Ron Thaniel, ITS America Vice President of Legislative Affairs, rthaniel@itsa.org

The ITS America Board is represented by the following companies: AAA, AECOM, Arizona Department of Transportation, California Department of Transportation, California PATH University of California Berkeley, Conduent, Central Ohio Transit Authority, Crown Castle, Cubic, Delaware Department of Transportation, District of Columbia Department of Transportation, Econolite, Ford Motor Company, General Motors, Gridsmart, HNTB, Iteris, Kapsch TraffiCom North America, MCity, Michael Baker International, Michigan Department of Transportation San Francisco Bay Area Metropolitan Transportation Commission, National Renewable Energy Lab, New York City Department of Transportation, Panasonic North America, Pennsylvania Department of Transportation, PrePass Safety Alliance, Qualcomm, Southwest Research Institute, State Farm Insurance, Toyota, Texas Transportation Institute, Utah Department of Transportation, Washington State Department of Transportation.