ITS AMERICA

EQUITY, CLIMATE, SAFETY, AND INFRASTRUCTURE PRINCIPLES FOR AUTOMATED AND AUTONOMOUS MOBILITY

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ITS America Equity, Climate, Safety, and Infrastructure Principles for Automated and Autonomous Mobility

Introduction

More than 38,000 people died on US roads in 2020. Our cities, the engine of the U.S. economy, are revving once again, leading to increased congestion. Some interstates divide our communities. The transportation sector is responsible for 29 percent of the country's greenhouse gas emissions. Our highways and bridges, built largely between the mid-1950s to 1970s, are crumbling and struggling to move goods and people with the efficiency required by the technology-driven global economy.

Twenty-one years into the 21st century, automated and autonomous vehicles (AVs) present us with a generational opportunity to reimagine our transportation system and transform outcomes – saving tens of thousands of people, reducing greenhouse gas emissions and congestion, and leading to more vibrant, equitable places.

Critical to achieving this future is the federal government putting in place national regulatory frameworks and investments for the physical and digital infrastructure with developers of AV technology around areas such as equity, climate, safety, and intelligent infrastructure, as the technology moves from expanded pilots to full deployment of AV fleets. AVs present significant opportunities to expand mobility for people who currently have limited transportation options and increase access to mobility more broadly.

ITS America's Automated Vehicle Standing Advisory Committee established task forces on equity, climate, safety, and infrastructure to develop a set of principles to ensure AV benefits are broadly realized. The resulting principles are intended to inform federal programs, regulations, and recommend best practices that can be implemented today and in the future.

Principle Recommendations

Improving Transportation Safety

1. Laying the groundwork for the transformation of our nation's transportation systems and communities starts with safety. ITS America supports enacting a federal regulatory framework to accelerate and guide AVs' continued safe development and deployment, establishing a national AV pilot program, and enacting innovative regulatory approaches while ensuring compliance with state and local traffic laws and rules, and an improved exemption petition process. We urge the U.S. Department of Transportation (USDOT) to promote comprehensive public education that can be uniformly messaged across industry, research, and government sectors to advance responsible public education and marketing, including awareness of the capabilities and limitations of AVs and the transition from Advanced Driver Assistance Systems (ADAS) to Automated Driving Systems (ADS). We call on the USDOT to provide the National Highway Traffic Safety Administration (NHTSA) with adequate resources, funds, staff, and

public message resources to guide the safe development and deployment of AVs, including funding to work with industry, state, and local governments on regulations and laws that may need to be updated to address AVs, and work with industry, government, and research sectors to develop shared AV terminology for engineers, policymakers, and consumers with precise definitions that the public can understand.

Expanding Transportation Equity

2. Both the public and private sectors' thoughtful integration of AVs can lead to more affordable, accessible, and equitable mobility access and delivery options for underserved and low-resourced communities. ITS America supports conducting or encouraging pilot programs and research activities in Areas of Persistent Poverty (APP) within state and local AV testing and deployment sites, which will allow these communities to experience the technology and develop a thorough understanding of opportunities for AVs to deliver more equitable transportation outcomes.

3. ITS America supports the integration of AVs with other pilot programs focused on enhancing equity, such as programs that provide subsidized access to transit and transit-integrated Mobility on Demand (MOD) and Mobility-as-a-Service (MaaS) programs, and Universal Basic Mobility (UBM), including mobility wallets. This integration should include a focus on increasing job access or increasing investment in public transit services and providing transit agencies with increased flexibility to fund smart transit technologies that support first-mile/last-mile connections, including integrating shared ride services and flex routes to increase access in APP. ITS America supports increased federal and state research for AV pilot funding for rides and deliveries that demonstrates innovation and learnings, with an emphasis on programs that enhance mobility for areas of persistent poverty, individuals with disabilities, older adults, communities of color, tribal communities, unbanked and underbanked populations, rural communities, food deserts, and pharmacy deserts.

4. ITS America supports developing criteria to evaluate and prioritize AV pilot program selection on the priorities identified in USDOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grants funding directives.

Accessible Transportation

5. ITS America supports accelerating the modernization of federal regulations to allow for the implementation of new vehicle designs, technologies, and capabilities that improve accessibility and equitable access while complying with state and local traffic laws and rules.

ITS America urges NHTSA to modernize federal motor vehicle safety standards (FMVSS) to allow for the safe introduction of AVs with innovative designs, including vehicles that are designed from the ground up for purposes such as accessible personal transportation, connections to mass transit, and facilitating deliveries. ITS America urges NHTSA to use its statutory authority while FMVSS are being updated to issue exemptions for vehicles with novel designs that are safe. NHTSA should streamline the process for considering FMVSS exemption petitions. Reducing regulatory uncertainty and providing greater clarity will enable manufacturers to introduce new types of AVs that will enhance USDOT's base of knowledge on the safety, efficiency, and equity benefits of AVs with novel designs—while informing ongoing and future rulemakings and complying with state and local traffic laws and rules.

6. ITS America supports accessible and barrier-free universal design practices for AVs and infrastructure. USDOT should work with automakers, wheelchair devices manufacturers, and stakeholders to advance the development of design standards that will provide regulatory clarity and guidance to assist in building accessible AV designs for wheelchair securements including wheelchair self-securement. Ultimately, USDOT should work to increase the overall number of vehicles that can be operated and ridden by wheelchair users without extensive modification. It should also convene relevant government agencies to explore ways to modify existing regulations to allow for greater access to crash tested and transit compatible wheelchairs. USDOT should work with AV developers and infrastructure owners and operators to coordinate vehicle and infrastructure design. AVs can significantly enhance mobility options for individuals without a driver's licenses—especially people with disabilities and older adults. However, many states require a licensed driver to be present when a vehicle is being operated. USDOT should work with states to ensure that unlicensed individuals are not prevented from using fully automated vehicles that do not require human intervention (SAE Level 4 and 5) while complying with state and local traffic laws and rules.

7. ITS America supports disseminating best practices to ensure that learnings from publicly funded pilot programs are broadly shared. ITS America supports the exchange of best practices and learnings pertaining to vehicles' design and development, transportation operators and providers, impact on communities, and impacts on underserved and vulnerable populations where AVs are in a position to enhance management of mobility, promote the creation of innovative planning tools, and create positive outcomes.

Sustainable Transportation

8. ITS America supports AVs and alternative and sustainable fuels policies that support and supplement, not replace, high-efficiency modes of transportation such as public transit; it also

supports multimodal, growth management, and transportation demand management (TDM) objectives. ITS America supports AV policies that will prioritize higher occupancy trips and modes made by AVs that will reduce vehicle miles traveled, including ride-hailing AV fleets and policies that increase vehicle utilization rates, decrease the need for vehicle parking to reclaim and repurpose real-estate for other purposes, and doesn't require roadway expansion. ITS America supports combining AV technology with V2X connectivity, according to well-developed technical standards, to save energy and reduce emissions through more efficient driving speed profiles and aerodynamic drag reductions for AVs, regardless of their powertrain technology.

Advancing Electrification Goals

9. ITS America urges Congress to eliminate the statutory obstacles to electric vehicle charging on federal-aid highway right of way and increase funding for publicly accessible electric vehicle charging infrastructure and the electric grid that will be accessible to all drivers of electric vehicles. ITS America supports the development of recyclable and environmentally-friendly battery technology, incentivizing a domestic recycling industry, reducing the amount of rare-earth materials needed to build batteries, and research into renewable recyclable materials that are still crash- worthy and produce fewer greenhouse gas emissions. ITS America supports policies that encourage widescale adoption of zero-emission vehicles (ZEVs) including tax credits for manufacturing of ZEVs; incentives for consumers, especially low-income consumers, to purchase ZEVs; tax credits for the purchase of EV charging equipment, including for residential, commercial, multi-family condo, and apartment complexes; funding for zero-emission infrastructure; and credits for AV/ZEVs that are shared use.[1]

Modernizing America's Infrastructure

10. ITS America supports increased digital infrastructure investments, including broadband, 5G, and intelligent transportation systems, to support human drivers and AVs. ITS America prioritizes state of good repair investments for transportation infrastructure to support a mixed fleet of AVs and human-driven vehicles. ITS America does not believe AV-specific infrastructure programs are needed as long as AVs are being designed to operate under current nationwide infrastructure standards, not just areas with specific AV infrastructure improvements. ITS America supports including infrastructure improvements in the Manual on

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[1] It is noted that for item nine, under Advancing Electrification Goals, the Texas Department of Transportation (TxDOT) and Arizona Department of Transportation (AZDOT) are not positioned to support language regarding tax credits or incentives for consumers, as these are not issues over which they have jurisdiction or oversight. Therefore, TxDOT and AZDOT should be considered to have abstained from item nine as included in ITS America's "Automated Vehicle Standing Advisory Committee Equity, Climate, Safety, and Infrastructure Principles for Automated and Autonomous Mobility."

Uniform Traffic Control Devices (MUTCD) update as a more prescriptive standard for infrastructure investments that benefit AVs and human-driven vehicles. As the MUTCD evolves to become more multimodal, with a more balanced focus on vehicles and active transportation modes (e.g., walking and biking), ITS investments, including V2X applications, that support improvements in transportation services will be more fully realized.