The U.S. Senate Environment and Public Works Committee approved July 30, 21 to 0, a substitute amendment to its surface transportation bill, S. 2302 (116). The America’s Transportation Infrastructure (ATIA) Act of 2019 authorizes $287 billion from the Highway Trust Fund over five years for highway programs, which over 90% ($259 billion) is distributed to states by formula funding, thereby continuing the FAST Act program structure. ATIA maintains FAST Act intelligent transportation systems technology as eligible activities under several federal-aid funding programs.

The five-year funding level is more than a 27% increase above the FAST Act. Congress would need to identify $84 billion on top of Highway Trust Fund (HTF) revenues to fund just the highway title increase (does not include titles under Commerce, Science, and Transportation or Banking, Housing, and Urban Affairs).

The bill establishes an alternative fuel vehicle infrastructure program, a resiliency program to protect infrastructure from natural disasters and extreme weather events, a safety incentive program to reduce pedestrian fatalities, a new congestion relief program that would provide grants for Mobility-on-Demand, and calls for a study on vehicle-to-infrastructure communications technology.

Under research, the bill establishes a new program to test the feasibility of a road usage fee and other user-based alternative revenue mechanisms, data integration pilot program, an emerging technology research pilot program, and amends the Advanced Transportation Technologies Deployment program by inserting “Innovative Mobility” before “Deployment” and makes eligible on-demand transportation services and improved integration payment systems.

The bill would also establish a Center of Excellence to collect, conduct, and fund research on the impacts of new mobility, including docked and dockless bicycles, docked and dockless electric scooters, transportation network companies, and automated vehicles on land use, urban design, transportation, real estate, equity, and municipal budgets.

Below is an initial summary of the nearly 500-page bill with a focus on technology programs and other ITS America FAST Act reauthorization priorities.

**TITLE I—FEDERAL-AID HIGHWAYS**

**Subtitle A—Authorizations and Programs**

**Sec. 1119. (Page 89) Bridge Investment Program.** ATIA establishes a competitive grant program to assist State and local entities to rehabilitate or replace structurally deficient bridges. Authorizes $3.3 billion in dedicated funding from the HTF for fiscal years 2021 through 2025 and an additional $3.3 billion authorized for appropriations for fiscal years 2021 through 2025. Innovative technologies will be a factor in evaluating applications. ($600 million for 2021, $640 million for 2022, $650 million for 2023, $675 million for 2024, and $700 million for 2025)
Sec. 1124. (Page 129) Safety Incentive Program. ATIA provides formula and competitive grant funds to States and urbanized areas to expand and incentivize investments in transportation safety projects. Requires areas with high rates of fatalities for nonmotorized road users to focus investments on improvements to bicyclist and pedestrian safety. Installation of vehicle-to-infrastructure (V2I) communications equipment is an eligible activity. ATIA authorizes $500 million and $100 million per year from the Highway Trust Fund for formula and competitive grants, respectively years 2021 through 2025.

Subtitle B—Planning and Performance Management

Sec. 1204. (Page 183) Accessibility Data Pilot Program. ATIA establishes a pilot program to provide data on the level of transportation access the public has to important destinations, such as jobs, including areas with concentration of available jobs, health care facilities, child care services, education and workforce training facilities, affordable housing, food sources, and connections between modes including connections to transit or rail services, safe bicycling corridors, and safe sidewalks. Eligible entities include States, metropolitan planning organizations, and rural transportation and planning organizations. In calculating the measures for the data set under the pilot program, methodology is open source. Data under the pilot program available to units of local government within the jurisdiction of the eligible entity participating in the pilot program and researchers. The Secretary shall carry out the pilot program using amounts made available to the Secretary for administrative expenses to carry out programs under the authority of the Secretary.

Sec. 1205. (Page 187) Prioritization Process Pilot Program. Establishes a pilot program to support data-driven approaches to transportation planning. The program would provide funds for selected States and MPOs to develop and implement a publicly accessible, transparent prioritization process to evaluate and select projects to include in a transportation plan. The maximum amount of a grant is $2,000,000.

Sec. 1207. (Page 202) Travel Demand Data and Modeling. Requires a study that gathers travel demand data from a sampling of States and MPOs, and compares forecasts with observed travel, for the purpose of improving forecasting, and evaluating the impacts of transportation investments on travel demand. The program would track observed travel behavior responses, including induced travel, to changes in transportation capacity, pricing, and land use patterns.

Subtitle C—Project Delivery and Process Improvement

Sec. 1304. (Page 220) Intelligent Transportation System. Requires guidance for using flexibilities with respect to the systems engineering analysis to ensure nationwide consistency, wide dissemination to Federal-aid recipients, and minimal delays and paperwork for low-risk and exempt intelligent transportation systems.

Subtitle D—Climate Change

Sec. 1401. (Page 237) Grants for Charging and Fueling Infrastructure to Modernize and Reconnect America for the 21st Century. ATIA establishes a competitive grant program to strategically deploy electric vehicle charging infrastructure, hydrogen fueling infrastructure,
and natural gas fueling infrastructure along designated alternative fuel corridors that will be accessible to all drivers of electric vehicles, hydrogen vehicles, and natural gas vehicles. ATIA provides the following amounts from the Highway Trust Fund: $100 million for each year of fiscal years 2021 and 2022; $200 million for fiscal year 2023; and $300 million for each of fiscal years 2024 and 2025. Eligible entities include a State or political subdivision of a State; a metropolitan planning organization, a unit of local government, and a special purpose district or public authority with a transportation function, including a port authority. An eligible entity that receives a grant under this program may use a portion of the funds to provide to a private entity operating assistance for the first 5 years of operations while the facility transitions to independent system operations. Operating assistance is limited to costs allocable to operating and maintaining the infrastructure, including labor, marketing, and administrative costs.

Sec. 1404. (Page 271) Congestion Relief Program. ATIA provides competitive grants to urbanized areas over one million in population to advance innovative, integrated, and multimodal solutions to congestion in the most congested metropolitan areas. Eligible projects include deployment and operation of mobility services, including establishing account-based financial systems, commuter buses, commuter vans, express operations, paratransit, and on-demand micro transit. Additional eligibility includes deployment and operation of a system that implements or enforces high occupancy vehicle toll lanes, cordon pricing, parking pricing or congestion pricing. The Federal share shall not exceed 80 percent of the total project cost. This bill provides a total of $200 million in funding for the program out of the HTF for fiscal years 2021 through 2025 ($40,000,000 for each of the fiscal years 2021 through 2025). A grant provided under the program shall be not less than $10,000,000.

Sec. 1405. (Page 277) Freight Plans. ATIA adds two studies into the national freight strategic plan. For the purpose of facilitating the integration of freight transportation into an intelligent transportation system network powered by electricity, ATIA calls for two or more studies relating to preparing to supply power to applicable electrical freight infrastructure and safely integrating freight into a smart vehicle world.

Subtitle E—Miscellaneous

Sec. 1511. (Page 390) Cybersecurity Tool; Cyber Coordinator. Requires FHWA to develop a tool to assist transportation authorities in identifying, detecting, protecting against, responding to, and recovering from cyber incidents. Requires FHWA to designate an office as a “cyber coordinator” for monitoring, alerting, and advising transportation authorities of cyber incidents. ATIA would provide to transportation authorities educational resources, outreach, and awareness on fundamental principles and best practices in cybersecurity for transportation systems.

Sec. 1512. (Page 392) Study on Most Effective Upgrades to Roadway Infrastructure. ATIA would support a study with TRB to identify immediate and long-term types of upgrades necessary to benefit the largest segment of road users, autonomous vehicles, and automated driving systems, and examine how to best achieve uniformity in roadway infrastructure to facilitate the safe deployment of autonomous vehicles and automated driving systems.
Sec. 1513. (Page 394) Study on Vehicle-to-Infrastructure Communication Technology. ATIA supports an agreement with the TRB to identify immediate and long-term safety benefits of Vehicle-to-Infrastructure (V2I) connectivity technologies and technologies that would allow motor vehicles and roadway infrastructure to communicate using Dedicated Short-Range Communications (DSRC) and related safety applications. The study shall include recommendations to Congress on specific improvements to roadway infrastructure that would be needed to facilitate the implementation of technologies that would allow motor vehicles and roadway infrastructure to communicate using DSRC, and other V2I connectivity technologies. The study would evaluate the safety, mobility, and environmental impacts resulting from a delay of the adoption of proven DSRC communication technologies for V2I. ATIA would provide an opportunity for public comment.

Sec. 15__. (Revised Duckworth Amendment) Study of Impacts on Roads from Self-Driving Vehicles. The FHWA Administrator shall initiate a study on the existing and future impacts of self-driving vehicles to transportation infrastructure, mobility, the environment, and safety, including impacts on the Interstate System, urban roads, rural roads, corridors with heavy traffic congestion, transportation systems optimization, and any other areas or issues relevant to operations of the FHWA.

TITLE III—RESEARCH, TECHNOLOGY, AND EDUCATION

Sec. 3001. (Page 432) Surface Transportation System Funding Alternatives. ATIA would establish a program to test the feasibility of a road usage fee and other user-based alternative revenue mechanisms to maintain the long-term solvency of the HTF, through pilot projects at the State and regional level. Objectives include design, acceptance, equity, and implementation of user-based alternative revenue mechanisms, including among differing income groups and among rural and urban drivers. The program would also test solutions to ensure the privacy and security if data collected for the purpose of implementing a user-based alternative revenue mechanism. The Federal share may not exceed 70 percent. Of the funds made available to carry out section 503(b) of title 23, U.S. Code, for each fiscal year 2021 through 2025, $12,500,000 shall be used for State pilot projects under this section.

Sec. 3003. (Page 435) Data Integration Pilot Program. Authorizes a pilot program, funded with General Fund appropriations, to research and develop models that integrate near real-time information, including weather conditions, roadway conditions, incidents, work zones, and information from emergency responders. $2,500,000 for each of fiscal years 2021 through 2025.

Sec. 3004. (Page 437) Emerging Technology Research Pilot Program. Establishes a pilot program to conduct emerging technology research, including advanced and additive manufacturing (3-D printing) technologies to increase the structural integrity and cost-effectiveness of surface transportation infrastructure. The pilot would support research and development activities including laboratory and test track supported accelerated pavement testing research regarding the impacts of connected, autonomous, and platooned vehicles on pavement and infrastructure performances to reduce the impact of automated and connected driving systems and advanced driver-assistance systems on pavement and infrastructure.
performance; and to improve transportation infrastructure design in anticipation of increased usage of automated driving systems and advanced driver-assistance systems. Authorizes $5 million per year for each of fiscal years 2021 through 2025.

**Sec. 3005. (Page 438) Research and Technology Development and Deployment.**

ATIA expands the objectives of the *Turner Fairbank Highway Research Center* to support research on non-market ready technologies in consultation with public and private entities. The bill supports studies on the deployment and revenue potential of the deployment of energy and broadband infrastructure in highway rights-of-way, including potential adverse impacts of the use or nonuse of those rights-of-way.

Under ATIA, the *Highway Research and Development Program*, which operations at Turner Fairbank Highway Research Center is funded, would receive $153,431,378 million for each of fiscal years 2021 through 2025.

ATIA expands on the *Technology and Innovation Deployment Program* by adding a focus on accelerated market readiness efforts, and increases funding for the program, including $100 million in new and innovative construction technologies. ATIA establishes the *Accelerated Implementation and Deployment of Advanced Digital Construction Management Systems Program* (Page 445) under the Technology and Innovation Deployment Program to promote, implement, deploy, demonstrate, showcase, support, and document the application of advanced digital construction management systems, practices, performance, and benefits. For each of the fiscal years 2021 through 2025, the Secretary shall obligate from funds made available to carry out this subsection $20,000,000 to accelerate the deployment and implementation of advanced digital construction management systems.

*Technology and Innovation Deployment Program* would receive $135,000,000 for each of fiscal years 2021 through 2025.

Under the ATIA, the modified *Advance Transportation Technologies and Innovative Mobility Deployment Program* (Page 450) (formerly Advanced Transportation Technologies Deployment program) will provide grants to deploy, install, and operate advanced transportation technologies to improve safety, mobility, efficiency, system performance, intermodal connectivity, and infrastructure return on investment (including access and on-demand transportation services, payment system performance, integrated corridor management systems, advanced parking reservation or variable pricing systems).

ATIA authorizes a *New Center of Excellence on New Mobility and Automated Vehicles* to collect, conduct, and fund research on the impacts of new mobility, including docked and dockless bicycles, docked and dockless electric scooters, transportation network companies, and automated vehicles on land use, urban design, transportation, real estate, equity, and municipal budgets.

*Intelligent Transportation Systems Program* would receive $110,000,000 for each fiscal year 2021 through 2025.
University Transportation Centers Program would receive $82,500,000 for 2021, $84,000,000 for 2022, $85,000,000 for 2023, $87,000,000 for 2024, and $88,500,000 for 2025.

For more questions/comments on ITSA’s Committee on Environment and Public Works America’s Transportation Infrastructure Act (ATIA) of 2019, contact ITSA Vice President of Legislative Affairs Ron Thaniel at rthaniel@itsa.org.