



ITE FAST ACT REAUTHORIZATION

WHITE PAPER: PLANNING AND SUSTAINABILITY

Introduction

Federal support of transportation planning has been in place since Congress included a requirement in the 1962 Federal-Aid Highway Act that transportation projects in urbanized areas of greater than 50,000 population be based on a planning process that was cooperative, continuing, and comprehensive. The Federal-Aid Highway Act of 1973 gave the “3C” planning process an institutional home by requiring that these urbanized areas have a Metropolitan Planning Organization (MPO), many of which had already been formed. MPOs were required to have a governing board comprised primarily of local elected officials representing at least 75% of the area’s population.

Statute and rules governing transportation planning have evolved over the intervening years. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 introduced concepts of multimodal planning and fiscal constraint. Moving Ahead for Progress in the 21st Century (MAP-21) in 2012 created a new requirement that metropolitan and statewide planning be performance-based. The Fixing America’s Surface Transportation Act (FAST Act) of 2015 created new requirements for freight planning. All of the current federal policy is included in the Final Rule on Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning¹ issued on May 27, 2016.

Taken together, the statewide and metropolitan transportation planning processes are designed to serve national priorities by supporting investment in an intermodal transportation system that provides for safe, efficient, reliable transport of people and freight. Highlights include:

- Statewide and metropolitan transportation plans that must have a horizon at least twenty years into the future, and address ten planning factors. Metropolitan plans must be fiscally constrained so that the estimated cost of all projects, adjusted for inflation, does not exceed an agreed upon reasonable estimate of revenues.
- Performance-based planning and programming. In order to ensure that investments of federal aid improve the performance of the transportation system, states are required to set targets for performance measures in safety, pavement and bridge condition on the National Highway System, and travel time reliability for persons and trucks on the National Highway System. MPOs may either establish their own targets or support state targets through appropriate

¹ 23 CFR Part 450

investments. MPOs in air quality non-attainment areas must address peak-hour excessive delay and non-SOV travel.

- The metropolitan transportation improvement program and statewide transportation improvement program (TIP/STIP) are a required four-year program that includes federally funded projects and programs, as well as other projects of regional significance. It must also be fiscally constrained.

The Institute of Transportation Engineers (ITE) includes many members engaged in the practice of transportation planning in public agencies and private firms. ITE recognizes the value of the long history of federal policy governing the process and content of transportation planning by states and MPOs. Transportation planning has itself evolved to focus less on the efficient movement of vehicles and more on the needs of people and businesses. This raises the importance of all modes of travel – automobile, transit, bicycle, pedestrian – and the connections among them that provide access to destinations within a neighborhood and across a region. It helps transportation professionals view the performance of transportation facilities and services through the eyes of the users. It establishes the movement of goods as foundational for supporting the local, state, and national economy, with planners focusing on terminals and ports, long distance moves by truck and rail, and the demands of e-commerce and urban delivery.

The importance of planning sustainable transportation systems that support sustainable communities has become more urgent. The impacts of climate change on transportation infrastructure and operations are occurring more frequently as severe weather events become more commonplace. The FAST Act added a new planning factor that requires states and MPOs to address system resilience in their plans. Many states have joined the federal government with policy incentives for the purchase of electric vehicles, an important strategy to reduce greenhouse gas emissions. Communities are more sustainable when the transportation infrastructure supports walking, cycling, and transit use in a meaningful way.

Transportation planners are beginning to work to understand how emerging technology of transportation will affect how they plan for their state or region. The rollout of shared transport through ride-hailing services like Uber and Lyft, as well as bikeshare and e-scooters has already changed the landscape of urban travel. The advent of connected and automated cars and trucks, now in testing in many locations, will be equally disruptive. Growth of the electric vehicle market creates challenges for electric utilities, but also challenges for traditional means of raising transportation revenue. The role of the public sector is continuously challenged by private mobility and technology companies.

The remainder of this paper presents additional detail on how ITE believes federal policy governing transportation planning and sustainability should be structured in the next transportation authorization.

ITE Reauthorization Principles

Supports continuing the federal requirement for metropolitan planning organizations (MPO) in urbanized areas with population of 50,000 or more.

Supports continuing without change the Planning Factors as enumerated in the FAST Act.

Supports continuing without change the requirements for performance-based planning and programming.

ITE Supports Retaining These Federal Policies

ITE recognizes that the long involvement of federal law that has shaped statewide and metropolitan planning has resulted in the creation and operation of multimodal transportation systems that effectively serve the needs of their states and regions. As such, these policies should be retained:

- Metropolitan transportation planning: MPOs. Retain the current requirements for MPO designation, including the minimum urbanized area population of 50,000 and the transportation management area (TMA) population of 200,000. Retain flexibility in how adjacent and embedded urbanized areas coordinate their transportation planning processes.
- Metropolitan transportation planning: Megaregions. Recognizing the complexity of transportation planning and project delivery in the nation's megaregions that may encompass multiple urbanized areas across many states, avoid imposing prescriptive rules. Support continuing research on the topic.
- Statewide transportation planning. Retain the current policy that requires a reasoned approach to transportation plans without being overly prescriptive.
- Planning factors. The concept of planning factors for the metropolitan transportation plan and statewide transportation plan that was introduced in ISTEA has proven its value. The plans must address at an appropriate scale these items that support national policy. The number and definition of planning factors has changed in many authorizations, with factors being deleted, added, or redefined. ITE finds that the 10 planning factors enumerated in the FAST Act are comprehensive and should not be changed.
- Performance-based planning and programming. The linkage between investment of public funds in transportation and the performance of the system from the user perspective is important. This approach is too new to fully appreciate its impact; when the initial rules were promulgated, STIPs and TIPs were fully programmed with four years of projects. As such, there is no reason to consider modifications to the overall array of performance measures, the target setting methodologies, and the underlying data sources.
 - When FHWA moved from its original plan to issue a single rule, and divided implementation into three rules, there was great concern about the confusion of target setting schedules. FTA has its own set of rules and target calendars for transit performance measures.

ITE Reauthorization Principles

Supports a United States national transportation policy that includes long-range goals set by the president and Congress and clear, attainable objectives set by the secretary of transportation.

These goals should include those specified in MAP-21: safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays,

Supports continuation of existing programs consisting of a limited number of broad categories with flexibility to transfer funds between categories based on state or local priorities.

Flexibility should also be provided to enable choices between capital and operational/maintenance improvements.

ITE supports rationalization of target submissions across safety, infrastructure, system performance, and transit applications.

- Focus on the National Highway System (NHS). There have been repeated debates on the proper scope of federal transportation policy. As Congress added many programs to the offerings of FHWA and FTA, questions were raised as to whether the federal government should subsidize the operating deficits of transit systems, or help local governments create safe routes to school, or maintain recreational trails. MAP-21 eliminated many of what were seen as niche programs. It focused federal funding and performance measure requirements on the National Highway System, while allowing states and MPOs flexibility through the Surface Transportation Block Grant Program. Given the role of the NHS in supporting the national economy through personal and freight mobility, ITE supports retaining this focus of federal transportation policy.
- Asset Management. The physical assets that comprise the nation's multimodal transportation systems represent an investment of trillions of dollars. Actively managing those assets to achieve and maintain a state of good repair is essential. States are required to develop and use a Transportation Asset Management Plan to direct investments toward state of good repair for pavements and bridges on the NHS. Transit operators must do the same for rolling stock, infrastructure, and facilities. Utilizing this risk-based approach to asset management has significant benefits and should be maintained.
- Freight Planning and Investment. The FAST Act created the first FHWA programs dedicated to freight improvements and raised the importance of the State Freight Plan. It is critical that federal transportation policy and mandated planning processes retain a freight component. According to USDOT, freight tonnage is forecast to grow 44% between 2015 and 2045. This growth in freight movement will equate to over 20.5 billion tons being transported annually on our nation's infrastructure. The freight mobility landscape continues to change, requiring more accommodations for multimodal freight transportation. Today, 71% of freight is moved by truck. By 2030, this market share is projected to fall below 69%. The American Trucking Association attributes this reduction to a forecasted increase in market share for other modes including intermodal rail, air, and waterborne transportation. Freight transportation is also a major contributor to the nation's gross domestic product (GDP). According to the USDOT Bureau of Transportation Statistics, freight transportation contributed an estimated \$734.7 billion (3.9%) to the US GDP in 2016. With these

ITE Reauthorization Principles

Supports steps to adapt transportation facilities and services to increasing weather extremes and other growing threats from climate change.

Supports federal leadership to help pursue new priorities needed to address change and innovation in the transportation landscape.

Supports federal leadership for future mobility planning - envisioned as a short-range strategic plan that assesses the current state of knowledge and practice on this changing landscape, evaluates the impact on the MPO region, and proposes possible actions that may include policy, program, and projects

factors in mind, it is important that federal transportation policies and planning processes continue to incorporate considerations related to multimodal freight transport.

- **Resilience.** The FAST Act added a new planning factor to “Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.”²Climate change has led to more frequent severe storm events. Storm surge, coastal and river flooding have had large impacts on highway and transit infrastructure. In general, response has been reactive, with states and localities rebuilding damaged facilities during the recovery phase. ITE supports retaining this new approach of proactively planning for impacts and creating a resilient transportation system that will maximize the benefits of long-term investments.

ITE Supports These New Policy Initiatives

ITE supports federal leadership to help pursue new priorities needed to address change and innovation in the transportation landscape. These new priorities should include the impacts of transformational technologies, smart communities, equity, health, and climate change.

- **Future mobility planning.** States and MPOs have struggled to incorporate emerging transportation technology and services in existing planning processes. The long-range metropolitan and statewide transportation plans, with a 20- year horizon, cannot capture the rapid changes that are occurring.

ITE proposes a new planning requirement for a Future Mobility Plan. Modeled after the existing congestion management process (CMP) that TMA MPOs must conduct, this plan would be short-range and strategic. The planning process would begin with an assessment of automated, connected, electric, and shared transport that is currently available in the region, and forecasted to be tested or operational over the next five to ten years. The next step would investigate the impacts on mobility of people and goods including not only direct transportation impacts like congestion and use of curb and sidewalk space, but also issues of accessibility, equity, land use, and economy. The product would be a set of strategic actions that could include projects, programs, policies, and regulations.

Justification: Federal law and policy has a powerful influence on the planning work of states and MPOs. Congress and USDOT have demonstrated an understanding of the importance of emerging

² 23 CFR 450.306(b)(9)

ITE Reauthorization Principles

Supports new federal priorities to include transformational technologies, smart communities, emerging transportation modes, equity, health and climate change impacts of transportation on climate change, and vice-versa

Urges the implementation of measures that can best mitigate such impacts while at the same time enhance the ability to meet other mobility, environmental and societal goals

transportation technology and transport services. An appropriate federal role is to provide a framework that states and MPOs can follow that will create a consistent yet flexible planning approach. The result will be a well-defined role for the public sector and its investment capacity to provide a positive response to continued emergence of new transport technology and services.

- **Smart Communities.** ITE recognizes that the USDOT Smart City Challenge in 2015³ initiated and supported broad interest in how digital technology can be used to improve a wide range of urban functions including mobility of people and goods. As more cities and regions are exploring this approach, ITE believes there is a continued role for the federal government. The goal is to be a champion for a people-based approach that uses new and emerging technologies, such as the Internet-of-things (IoT), big data, and automated and connected vehicles as enablers to support livable, prosperous communities that provide opportunities for all citizens.

ITE proposes a federal policy initiative that continues support for Smart Community planning that may include

- *People-first planning. A focus on technology can obscure the necessary emphasis on the people-moving role of transportation facilities across multiple modes to provide more choice, improve air quality, and reduce congestion. Because a Smart Community is a healthy place, plans should map the impact of transportation facilities and services to overall community health.*
- *Data. A federal role in managing big data is essential, as many local governments are not equipped to fully address these issues. Policies should be developed for transportation data security, data sharing across mobility platforms, mobility data standards for various modes and inter-operability across various systems to facilitate effective MAAS, connected vehicle technology and automated driving systems. There is a clear need to develop a data standard for bikes, e-scooters, rideshare, urban air mobility (UAM) and other emerging modes that continue to impact sustainability, congestion, reliability, and health. Government agencies and private providers have very limited visibility of the entire mobility landscape which impedes effective management.*
- *Managing New Mobility Services. While managing and operating transport systems has been a state and local responsibility, Smart Communities create new challenges in managing increasingly complex transportation systems and services. With the advent of private*

³ <https://www.transportation.gov/smartcity>

ITE Reauthorization Principles

Supports programs to provide mobility while maintaining a balance between the three pillars of sustainability: social, environmental, and economic considerations

Supports giving increased priority to health and equity considerations

sector mobility providers and new business models like software-as-a-service (SaaS) and mobility-as-a-service (MaaS), the need for operating funds will increase significantly in the foreseeable future. Furthermore, the rapid change in emerging technologies has merged planning and operations functions in some cases. For example, micromobility was not part of most agencies' transportation plans three years ago and yet it has inundated streets across the country. Providing federal funds to support management of emerging transport models would be beneficial.
Justification: The Smart Communities approach to incorporating new technology across many urban functions creates opportunities for improving mobility and access for people and goods. It merits continued federal support in ways that will assist governments in planning to ensure positive outcomes.

- **Climate Change.** According to the U.S. Environmental Protection Agency, transportation now produces more greenhouse gas (GHG) emissions than any other sector⁴. Transportation infrastructure also suffers the impact of severe weather events with storm surge and coastal and river flooding destroying roads, bridges, and transit lines. It is therefore incumbent that Congress consider how federal policy can have a positive influence on both mitigation of GHG emissions and adaptation of transportation facilities.

The most important strategies for reducing transportation GHG emissions are shifting both cars and trucks to electric propulsion (ideally supported by renewable electricity generation), and shifting trips to non-motorized modes. Improved battery technology has increased the driving range of EVs and reduced the cost.

Mitigation: Congress should extend the tax credit for EV purchase, and consider removing the OEM cap on the number of vehicles sold, as this has proven to be an effective incentive for EV purchase. Supporting the construction of charging stations on the National Highway System is another means of encouraging EV use. Federal support of continued research in battery improvements that can extend range, especially for diesel powered heavy trucks, would be beneficial.

Adaptation: While the resilience planning factor encourages states and MPOs to be proactive in developing strategies to respond to climate change impacts, federal funding programs support a more reactive response. The FHWA Emergency Relief program that is often used to rebuild infrastructure after a storm event generally supports replacement; building to a more resilient design is considered a

⁴ <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

“betterment” that may be funded only if economically justified to prevent future recurring damage⁵. Congress may consider language that makes a project eligible for ER funding when it contributes to a more resilient system as documented in a state or metropolitan resilience plan. Justification: The growing impacts of climate change that include sea level rise; extreme weather events with storm surge, coastal and river flooding, and mudslides; and wildfires will continue to damage transportation infrastructure and interfere with the mobility of people and freight not only during evacuation, emergency response, and recovery, but also in the long term. Federal transportation policy should support both mitigation and adaptation actions that will reduce the need for reactive investment.

- **Equity.** Ever since the issuance of Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” in 1994 and subsequent implementation by FHWA and FTA, state DOTs and MPOs have applied measures of equity in their transportation plans. What is being added to the equity discussion is how minority and low-income communities and neighborhoods are affected by new methods of personal mobility including ride-hailing services, microtransit, and micromobility. As stated in a report from the National Academies of Sciences, Engineering, and Medicine, “The innovative mobility options...have the potential to increase the accessibility of transportation for many Americans, including disadvantaged populations. But they may also leave people who are already transportation-disadvantaged further behind, either because they will not be able to take advantage of these new services (making them relatively worse off) or because the rise of these new services could reduce some existing services (making them absolutely worse off).”⁶ *ITE recognizes that regulation of mobility services is primarily a local government responsibility. Nonetheless, federal policy may be used to ensure that state and metropolitan transportation plans address the issue of access of minority and low-income populations to new personal mobility services.*

⁵ <https://www.fhwa.dot.gov/specialfunding/er/191011.cfm>

⁶ National Academies of Sciences, Engineering, and Medicine 2016. *Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21875> .