



TDOT 25-YEAR LONG-RANGE TRANSPORTATION POLICY PLAN








PLAN DEVELOPMENT

TN TDOT
Department of
Transportation



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1.0 INTRODUCTION

In 2013, the Tennessee Department of Transportation (TDOT) embarked on the creation of a new 25-Year Policy Plan. It was envisioned that this plan would connect the old with the new by retaining and aligning with the principles that the Department had previously outlined in PlanGo as well as looking to the current and future implications of the Moving Ahead for Progress in the 21st Century (MAP-21) legislation. With the enactment of MAP-21, eight planning factors were established to guide each state's statewide transportation planning process. Throughout the mandated continuing, cooperative, and comprehensive planning process, states are required to consider and implement actions to address these planning factors, described below:

- Support the economic vitality of the United States, the States, metropolitan areas, and non-metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.

In order to accomplish its vision of serving the public by providing the best multimodal transportation system in the nation, TDOT adopted seven Guiding Principles in the process of developing its 2005 long-range transportation plan, PlanGo. After minor revisions, the following principles, described below, were carried forward to align with the MAP-21 Planning Factors and guide the overall direction of this planning effort:

- **Preserve and Manage the Existing System** – Balance maintenance and preservation needs with critical capacity enhancements and operations. Optimize system capacity and safety through cost effective management and new technologies.
- **Provide for the Efficient Movement of People and Freight** – Deliver an integrated, multimodal transportation system that optimizes the movement of people and goods by providing greater access to transportation services for all people and by building better connections among different modes of transportation.
- **Support the State's Economy** – Invest in transportation infrastructure that advances quality economic development and redevelopment, economic competitiveness, tourism, and increased access to people, places, goods and services within and through the State.
- **Maximize Safety and Security** – Reduce injuries and fatalities in all modes of transportation; minimize construction-related safety incidents; improve disaster and extreme weather preparedness and incident response.
- **Build Partnerships for Sustainable and Livable Communities** – Provide early and

ongoing opportunities for broad public input on plans and programs; work closely with local public and private planning efforts; proactively coordinate land use and transportation planning to optimize the efficiency and long term viability of the transportation system.

- Protect Natural, Cultural, and Environmental Resources – Responsibly plan and manage the transportation system to maintain the integrity of communities, historical sites and the natural environment, minimize and mitigate impacts of transportation projects, and develop a transportation network that improves congestion and addresses air quality issues.
- Emphasize Financial Responsibility – Provide accountability; maximize Tennessee’s share of federal transportation funding; develop alternative funding strategies; select projects based on identified regional needs; allow flexibility in local management of projects where feasible

Overall, the purpose of this plan was not only to fulfill federal requirements, but also to steer the Department in a newly-defined direction for both policy and investment decisions. Noting the national fiscal environment that continues to constrain all Departments of Transportation, it was determined that this planning effort would be undertaken utilizing a different format than what has been used in Tennessee’s previous long-range plans. Specifically, this planning effort was approached from two different directions, a policy level and an investment level, which ultimately translated into two main components, a 25-Year Policy Plan and a 10-Year Strategic Investment Plan.

The 25-Year Policy Plan is comprised of eight policy papers, which are summarized in an easy to read format for public consumption in a final summary document that references these eight papers. The resultant policy recommendations were developed through an extensive TDOT internal review process as well as far-reaching engagement efforts to the public, external agencies, and TDOT’s many planning partners.

The 10-Year Strategic Investment Plan is a fiscally-constrained, high-level, and programmatic approach to funding transportation investments over the next 10 years. It makes use of a variety of planning data and tools to prioritize deficiencies and needs across the multimodal transportation system. The development of the 25-Year Policy Plan and the 10-Year Strategic Investment Plan are detailed in the remainder of this document. While the public involvement process is mentioned briefly as it relates to development of the 25-Year Plan, more detail on engagement efforts is provided in a separate document.

2.0 DEVELOPMENT OF THE 25-YEAR POLICY PLAN

2.1 POLICY PAPER THEMES

As previously mentioned, the 25-Year Policy Plan is comprised of eight policy papers. These policy papers, as presented below, were used to guide discussion under each of TDOT's Guiding Principles as well as support the Department's overall Statewide Long Range Transportation Planning Program.

- Demographic and Employment Changes & Trends
- Travel Trends & System Performance
- Financial Revenues & Fiscal Outlook
- Safety, Security, & Transportation Resilience
- Freight Logistics & Planning
- Mobility: Public Transportation, TDM, & Non-Motorized Modes
- Accessibility: Land Use Planning, Access Management, Complete Streets, and Health & Environment
- Coordination, Cooperation, & Consultation

Unlike many long-range plans that may be separated by mode, the intent of this 25-Year Policy Plan was to take a more holistic approach to the topical areas for each policy paper. These topics were designed to align with the Guiding Principles as well as areas of emphasis expressed by residents through TDOT's previous Customer Survey. Each paper was researched and written by members of TDOT's consultant team according to their expertise.

2.2 DEVELOPMENT OF POLICY PAPERS

The intent of the eight policy papers is to provide an in-depth understanding of TDOT's existing programs in each of the aforementioned emphasis areas as well as trends occurring in other peer states and nationally that TDOT could learn from as it strives to achieve its stated mission. To accomplish this, the papers are organized into the following sections: Introduction; Summary of Findings; Existing TDOT Policy, Plan, and Data Analysis; Future Growth, Trends, and Technology; and Conclusions and Recommendations.

The Introduction section is used to set the stage for each policy paper and link the policy topic(s) to one or more of the Guiding Principles. The main goal of the Existing TDOT Policy, Plan, and Data Analysis section is to document the programs, initiatives, policies, and data that the Department currently employs to provide and manage the transportation system. The Future Growth, Trends, and Technology section is primarily used to examine the various programs used across peer and surrounding states collectively and to determine how Tennessee compares in regards to the performance of these programs. The Summary of Findings and Conclusions and Recommendations sections are both used to summarize the key findings of each paper and propose a set of policy-level recommendations based on the information presented throughout the paper.

As mentioned previously, the accuracy and value of these policy papers and their outcomes relied heavily on engagement of TDOT staff across all divisions within the Department. To begin dialogue with division directors early in the plan development process, TDOT's consultant team conducted 17 meetings with division directors as well as meetings with each of the four TDOT Region directors

and their key staff to understand their priorities for the 25-Year Policy Plan and the status of various programs within different divisions and different parts of the state. This engagement also helped to determine which states would be considered peers; ultimately, these were chosen to align with those states identified as peers in TDOT's 2013 Customer Survey. These meetings also provided vital information on other efforts already underway within the Department such as the Tennessee Multimodal Freight Plan, the University of Tennessee's financial revenue model, and TDOT's formation of a committee on access management, among many others.

Based on the information gathered in these meetings and the development of the initial construct of each policy paper, outlines for each policy paper were developed by TDOT's consultant team. These draft outlines were then made available electronically to division directors throughout TDOT for review and comment. Once comments were received, the outlines were revised followed by the drafting of the policy papers, their review by division directors and other TDOT staff, and then the finalization of the eight documents.

2.3 POLICY PAPER RECOMMENDATIONS

One of the primary outcomes from each of the policy papers is a set of recommendations that will define the direction of the Department for the next 25 years. Due to their significance, there were numerous meetings held with division directors in conjunction with executive leadership to determine which policy directives aligned with the Department's planning process and overall goals. In total, over 15 meetings were held with this audience. Each member was provided a clicker, which was used to anonymously vote in favor or against each policy recommendation after much discussion on each topic. Once every policy recommendation had been reviewed, the executive leadership studied all of the surveyed responses to determine the final recommendations for the 25-Year Policy Plan.

Once the final set of recommendations were approved, they were classified into short-, mid-, and long-term time frames. This was accomplished by identifying efforts that had some action already underway, those that should be a continual effort on behalf of the Department, those that would need to be accomplished before or after another recommendation, and the time needed realistically to accomplish each of the recommendations. Short term was categorized as being accomplished within three years, mid-term between three and five years, and long-term was any effort taking over five years to complete. Once classified into a specific time frame, electronic surveys were then sent to the division directors asking for their approval and input. After the recommendations and their associated time frames were finalized, it was determined that those classified as short-term would be included in the summary document as action items for TDOT.

In addition to policy recommendations, it was initially envisioned that these documents would aid in the determination of performance measures and targets. Specifically, the policy paper on Travel Trends & System Performance was used to collect and evaluate all performance metrics utilized by the Department in support of a performance-based approach for the development of the 25-Year Policy Plan. However, in the absence of federally-established performance measures, it was determined that measures and targets, compliant with federal transportation legislation, would be established once final rulemakings are published, likely after the completion of the 25-Year Policy Plan.

2.4 FINAL SUMMARY DOCUMENT

Realizing that the technical information represented in the eight policy papers may not be consumable by all audiences, it was determined that there was a need for a summarized version of the 25-Year Policy Plan. This summary document pulls pertinent information from all of the

policy papers to succinctly describe the purpose of the 25-Year Policy Plan, the changes and trends Tennessee is expected to see in the future, and how TDOT can respond to those changes with the policy recommendations in an effort to provide the best multimodal transportation system in the nation.

3.0 DEVELOPMENT OF THE 10-YEAR STRATEGIC INVESTMENT PLAN

While the eight policy papers form the foundation of TDOT's direction for the next 25 years, they do not address where, when, and how to invest in the transportation system. It is well-known that funding for transportation at the federal level has been unpredictable for some time with the future still unknown. As such, the investments and programs laid out in the investment plan are intended to be for a 10-year horizon and be fiscally-constrained, meaning that sufficient funds are reasonably expected to be available for the proposed programs. For these reasons, the investment portion of the long-range plan was developed separate from the policy document as a 10-Year Strategic Investment Plan.

3.1 DEFICIENCY ANALYSIS TOOL

The primary goal of the 10-Year Strategic Investment Plan is to identify areas of need across the state and coordinate investments with the direction outlined by the 25-Year Policy Plan to meet those needs. Ultimately, the 10-Year Strategic Investment Plan is a more programmatic approach to investing. Specific projects are not identified, but rather the needs associated with each program have been determined through a data-driven process to support the programmatic allocations. This data-driven process manifested itself in the development of a deficiency analysis tool that was developed by TDOT staff and the consultant team.

Simply put, the deficiency analysis tool breaks the state's network functionally-classified as collectors and above into thousands of roadway segments defined by physical termini and then attributes various data to them based on their spatial location. Once all of the data is attributed to the network, segments can be examined for their deficiencies relative to all other segments.

The deficiency analysis tool uses data from a combination of sources (i.e. Tennessee Roadway Information Management System (TRIMS), TDOT's statewide travel demand model, US Census, etc.) with an overall goal of combining information on structural deficiencies, roadway conditions, bicycle and pedestrian conditions, freight infrastructure, economic development, safety issues, and environmental impacts to determine the areas in most need of investment. To define deficiencies within these areas, data was collected from various divisions within the Department as well as from external partners (i.e. Tennessee Department of Environment and Conservation (TDEC), National Parks Services, Tennessee Wildlife Resources Agency (TWRA), etc.).

There are a few key features in this tool that make it a valuable asset for the development of the 10-Year Strategic Investment Plan as well as future project selection efforts. First, this network was built to align with the statewide travel demand model network; this feature allows for easy updates to the deficiency analysis tool based on information that is updated in the model as well as in TDOT's TRIMS database. The alignment with the statewide travel demand model also implicitly provided some alignment with the travel demand models used by each of the MPOs. In the beginning stages of model development at the state level, surveys were first distributed to each of the 11 MPOs; these surveys collected information on model base years, future horizon years, the model networks, zonal structures, planning data used, and planning assumptions. All of this information was incorporated into the determination of zonal structures and networks as well as data and assumptions for the statewide travel demand model, which in turn feeds the 10-Year Strategic Investment Plan. Second, the set of data resources collected in this tool combine a multitude of information into a singular location. These data resources were supplied directly from the agencies that maintain them, providing a new level of collaboration and partnership with outside organizations as well as a continuous use and integration of this data into TDOT's overall long-range transportation planning process that had not been fully utilized in the past.

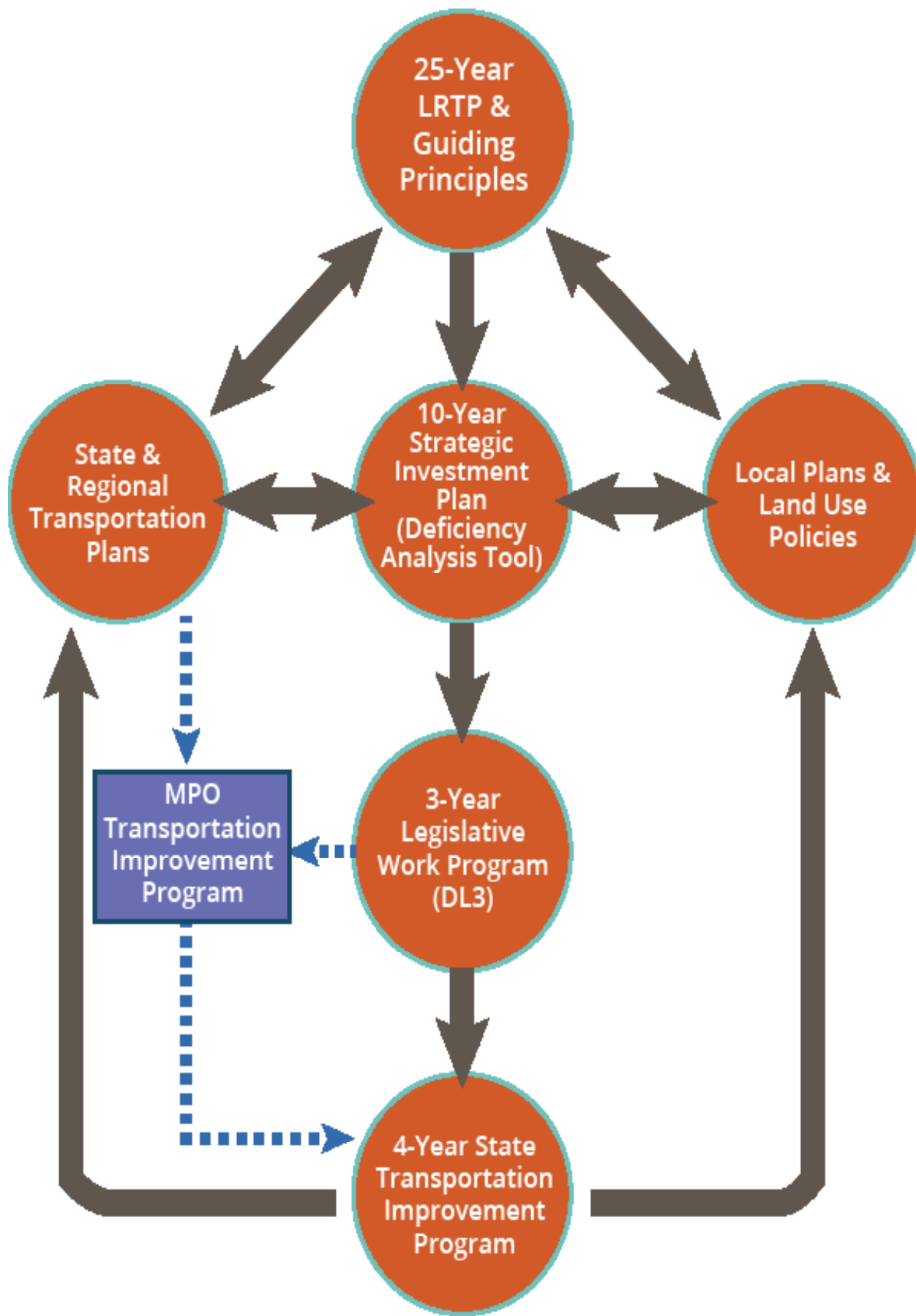
In addition to being used for the 10-Year Strategic Investment Plan development, the deficiency analysis tool has the potential to be used for other planning and project selection activities. Internal to TDOT, it is envisioned that this tool will be used continually in the evaluation of potential projects that have yet to be identified as needs. These findings can ultimately feed into TDOT's 3-Year Work Program, which is determined annually by the state legislature and based on the availability of funds, by helping to evaluate deficiency needs for those projects. In addition to internal collaboration among TDOT divisions and processes, the deficiency analysis tool has the potential for use outside of the Department. This tool can be made available to the MPOs to aid in the understanding of system deficiencies and ultimately the selection of policies and projects within urban areas. Ideally, this collaboration would result in similar priorities in the urban areas between MPOs and TDOT.

3.2 COLLABORATION WITH AND CONNECTION TO OTHER PLANNING EFFORTS

As with any planning process, TDOT's long range transportation planning approach employs a highly dynamic and interactive approach that is supported by an overarching process of collaboration and connection. The 25-Year Long-Range Plan is directed by a set of guiding principles. These guiding principles link and connect back to plans, programs, and policies of the Department. In the case of the 10-Year Strategic Investment Plan, program needs are assessed using the deficiency analysis tool, which evaluates system conditions from the perspective of the seven guiding principles. Factors that play into this assessment also account for existing state and regional plans (e.g. Statewide Multimodal Freight Plan, MPO Long-Range Transportation Plans, etc.) as well as local plans and policies (e.g. city and county major thoroughfare plans, land use policies, etc.).

Equally important to this process is the linkage of program investments to projects selected as part of TDOT's 3-Year Work Program. The deficiency analysis tool was developed from TDOT's 3-Year Work Program project evaluation system. The same categories of decision, which are aligned with TDOT's guiding principles, are found in both the deficiency analysis tool as well as the 3-Year Work Program project evaluation system. This linkage creates a strong connection between the 10-Year Strategic Investment Plan and the 3-Year Work Program. Ultimately, projects included in the 3-Year Work Program are fed into the 4-Year Statewide Transportation Improvement Program (STIP) in concert with projects originating from Metropolitan and Rural Planning Organization (MPO and RPO) areas.

As seen in the following diagram, TDOT's planning process is dynamic and supports consistency between plans, programs, and projects. This occurs through the underlying influence of the 25-Year Policy Plan guiding principles. This occurs not only within the 10-Year Strategic Investment Plan and the 3-Year Work Program, but also in the project and program funding decisions that are ultimately included in TDOT's STIP.



4.0 ENGAGEMENT, COORDINATION, AND CONSULTATION

Throughout the development of the 25-Year Policy Plan, public and stakeholder engagement was vitally important, especially in determining the public's priorities and their transportation needs as well as in coordinating metropolitan and non-metropolitan areas planning efforts with TDOT's priorities.

Significant efforts were made to engage the general public regarding the development of the policy recommendations and the emphasis areas for the 10-Year Strategic Investment Plan. TDOT staff ventured to public meetings and civic organizations to present information on TDOT's 25-Year Long-Range Plan process. Residents all over Tennessee were engaged through the use of clickers so that they could anonymously answer questions regarding transportation tradeoff decisions that TDOT faces every day. Answers to those questions provided insight into the public's priorities in both urban and rural settings, which in turn helped TDOT to understand how those needs differ by area of the state and how they would need to be addressed separately in the 10-Year Strategic Investment Plan. Greater detail regarding the extensive public involvement efforts undertaken throughout the development of this 25-Year Plan can be found in the Public & Stakeholder Involvement documentation.

In addition to engaging the general public, TDOT's planning partners were brought into discussions on this planning effort early in the process. Realizing that there is oftentimes a disconnect between statewide transportation planning and planning within the urban areas, MPOs were consulted heavily during the development of the statewide travel demand model. The goal of this engagement was to better integrate the MPOs' planning assumptions and data into the statewide model in an effort to better align the planning of state and urban transportation investments. More detailed information on how MPO data was integrated into the statewide travel demand model can be found in the Technical Documentation for the Statewide Travel Demand Model.

The most comprehensive engagement effort undertaken in this process was the effort put forth in requesting comments on the policy papers from a variety of audiences. Emails, letters, and online correspondence were used to reach out to the general public, planning partners such as the MPOs and RPOs, environmental justice groups, special interest and advocacy organizations, and other resource agencies and stakeholders such as the Army Corps of Engineers and the Tennessee Department of Environmental Conservation, among many others. While this correspondence provided them the opportunity to comment on policy-level decisions, consideration at the project level was incorporated into the development of the 10-Year Strategic Investment Plan through the data used in the deficiency analysis tool, as detailed above. The correspondence between TDOT and all of the above mentioned parties can be found in further detail in the Public & Stakeholder Involvement documentation.

5.0 CONTINUATION OF THE 25-YEAR POLICY PLAN

The purpose of updating a statewide long-range transportation plan is not to create a document that sits on a shelf. Instead, it should be used to examine the changing landscape of a state and how those changes impact a department's policies, programs, and project investments. Tennessee's population and economy are growing, changing, and moving at a rapid pace. It is envisioned that this 25-Year Policy Plan will be dynamic in that its policies and programs will be able to adapt to changing demographics, industries, and resident priorities. Furthermore, the potential impacts of future federal transportation legislation and rulemakings necessitate the flexibility of this plan. Therefore, as new data is made available and federal planning regulations change, it can be expected that the 25-Year Policy Plan may need to be modified. These revisions can be considered as minor amendments, which have little to no effect on the recommendations of the plan, or major amendments, which may significantly affect policy and project needs. Each of these situations have their own process for approval as outlined in TDOT's Public Involvement Plan.

Additionally, for this plan to be useful, the Department must act on the policy recommendations and allow them to influence the location, type, and extent of investments. In order to ensure that this 25-Year Policy Plan has an impact on TDOT's future operations, internal efforts will be made to track performance of the plan in terms of how many recommendations are put into action as well as how long those processes take to complete. The intent of this performance monitoring is to ultimately ensure that TDOT is making strides in achieving its vision, mission, and stated goals.