# Table of Contents

## Appendix A: Transportation Planning Background

- Transportation History Highlights
- Transportation Planning Context
- Regional Implementation through Pennsylvania’s MPOs & RPOs

## Appendix B: Public and Stakeholder Engagement

- Internal Outreach and Coordination
- Stakeholder Engagement and Outreach
- Public Engagement and Outreach
Appendix A:
Transportation Planning Background

SECTION CONTENTS

Transportation History Highlights
Transportation Planning Context
Regional Implementation through Pennsylvania’s MPOs & RPOs
1970s

- 1979: PennDOT Center for Program Development and Management created
- 1970: Act 120 creates PennDOT as a multimodal agency

1980s

- 1982: PA Act 235 Billion-Dollar Bridge Bill
- 1980: Staggers Rail Act; Motor Carrier Act

 reddish-orange: U.S. MILESTONE

 blue: PA MILESTONE

 1971: Amtrak created
 1976: Conrail incorporated
 1978: Airline Deregulation Act

 Federal Transportation Act
1990s

- 1998: Vehicle Miles of Travel (VMT) exceeds 100 billion miles per year
- 1997: Act 3 provides additional funding for transportation
- 1996: Bicycle-Pedestrian Master Plan
- 1995: PennDOT Policy Plan; Double-stack rail freight initiative; Agility Program created
- 1993: Pennsylvania's population exceeds 12 million

2000s

- 2007: Act 44
- 2006: Mobility Plan
- 2005: Keystone Principles
- 2001: Keystone Building opens
- 2000: PennPlan; Municipalities Planning Code amended

U.S. MILESTONE

- 1990: Clean Air Act amended; Americans with Disabilities Act
- 1993: Federal gas tax set at 18.4 cents per gallon
- 1995: National Highway System designated
- 1998: CSX, NS acquire Conrail

December 1991: ISTEA
Intermodal Surface Transportation Efficiency Act

June 1998: TEA-21
Transportation Efficiency Act

August 2005: SAFETEA-LU
Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users
• 2019: Total number of registered electric vehicles exceeds 10,000
• 2017: First automated vehicle (AV) summit convened
• 2016: PennDOT Connects policy launched
• 2015: Interstate Steering Committee formed
• 2015: Leslie Richards became the first professional planner to lead PennDOT
• 2014: Rapid Bridge Replacement Project launched
• 2013: Act 89; Transportation Performance Report debuts
• 2011: Transportation Funding Advisory Commission

• 2019: Critical Urban & Rural Freight Corridors certified

July 2012: MAP-21
Moving Ahead for Progress in the 21st Century

December 2015: FAST Act
Fixing America’s Surface Transportation Act

• 2021: Transportation Revenue Options Commission
• 2020: PA Pathways initiated
• 2035: General Motors to have all-electric line up of vehicles
• 2028: Pennsylvania spending on interstates expected to reach $1B, annually
• 2026: Reauthorization expires (tentative)
• 2023: PennStart testing facility to become operational
• 2022: “Partial sunset” of Pennsylvania Turnpike Commission annual payments to PennDOT
• 2022: PA's 65+ population to exceed 20%
The practice of transportation planning has evolved over time. As Pennsylvania’s transportation system has matured, ongoing changes within the state, as well as nationally and globally with respect to our demographics, economics, and public preferences, have required planners to anticipate where the system needs to be with respect to these changes. Federal transportation policy too has evolved over the years, bringing new planning requirements that PennDOT and its network of metropolitan planning organizations and rural planning organizations (MPOs and RPOs, known as “Planning Partners”) must follow.

Thirty years ago, the Intermodal Surface Transportation Efficiency Act (ISTEA) was landmark legislation. The act introduced 16 federal planning factors, which have been revised over time with successive federal actions. The planning factors guide departments of transportation, MPOs, and RPOs on matters related to safety, accessibility, intermodalism, system preservation, and other goal areas of importance. PennDOT and its Planning Partners endorse the federal planning factors and incorporate them as part of planning policy for areas related to transportation, land use, and economic development. Certain MPOs were also required to develop congestion management systems (CMS) and intermodal management systems (IMS).

The Transportation Equity Act for the 21st Century (TEA-21), passed in 1998, continued the provisions of ISTEA, while consolidating the number of federal planning factors from 16 to seven. Congress replaced TEA-21 with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005. It added a planning factor addressing system security for motorized and non-motorized users. It was also during this period that PennDOT began planning for its Interstates as one strategic asset versus by region through the Planning Partners. PennDOT’s Planning Financial Guidance of 2007 established the Statewide Interstate Maintenance Program, with a set-aside of revenue to be used at the statewide level to identify the most critical Interstate maintenance projects on a statewide basis.

SAFETEA-LU also introduced new requirements for the MPOs and RPOs to coordinate with environmental resource agencies as part of the long-range transportation planning process. Many of the state’s Planning Partners began satisfying this requirement by engaging resource agencies through the Agency Coordination Meeting (ACM) process. MPOs and RPOs typically have taken a sample of projects from their draft program, performed a buffer analysis to consider the areas that would be affected by those projects, and coordinated with resource agencies in a discussion on those resources (e.g., farmland, steep slopes, etc.) and mitigation strategies.

Recognizing the complexity and financial risk that major public works projects pose, SAFETEA-LU also ushered in requirements for “Year of Expenditure,” whereby PennDOT and the Planning Partners would calculate the total cost of a proposed project based on the year of anticipated construction. The total estimate includes construction, engineering, acquisition of right-of-way, and related costs, in order to identify more reliable estimates. With this requirement, long-range plans moved another step further away from being a mere “wish list” to more closely aligning with projected funding.

SAFETEA-LU also introduced new requirements for planning for public transportation, with each MPO and RPO being required to develop and maintain a Local Coordinated Transportation Plan—a requirement that remains in place.

The passage of Moving Ahead for Progress in the 21st Century (MAP-21) in 2012 significantly elevated the role of freight planning, and required state departments of transportation to develop and maintain a statewide freight plan on a five-year cycle in order to be eligible to receive federal freight funding through the National Highway Freight Program (NHFP). PennDOT in 2016 developed Pennsylvania’s inaugural freight plan, which served as a guide for transportation planners at the regional level. PennDOT also acquired and shared commodity flow data with its partners at the regional level. This investment would have been cost-prohibitive for MPOs and RPOs, but aided the regions in developing freight plans of their own. At the national level, FHWA adopted a National Freight Strategic Plan in September 2020, establishing the framework of national freight policy.
The Fixing America’s Surface Transportation (FAST) Act was passed in December 2015. It continued the freight emphasis of its predecessor while placing a greater emphasis on system performance.

As part of the performance focus, the FAST Act required each state DOT to develop a Transportation Asset Management Plan (TAMP). The TAMP is used to encourage each DOT to achieve and sustain a “state of good repair” over the life cycle of transportation assets, establish targets for NHS pavement and bridge condition, and forecast asset conditions. PennDOT submitted its first TAMP plan in June 2019 and updated it in June 2021.

Accompanying the asset management focus are tools to guide system investments. PennDOT’s Pavement Asset Management System (PAMS) and Bridge Asset Management System (BAMS, or “Bridge Care”) can provide projections across multiple budget scenarios (e.g., baseline, 5% budget increase, 5% budget decrease, etc.). These tools will be used for defining what the targets should be for system performance measures. PennDOT is looking to providing training to its engineering districts and Planning Partners on these new tools as part of implementing new asset management principles.

The implementation of these tools is changing PennDOT’s approach to long-range planning and project programming. The focus historically has been on system preservation by prioritizing work on poor-condition infrastructure. With the new asset management approach, PennDOT and its Planning Partners aim to undertake timely maintenance and repairs to extend the life of the pavement or bridge asset and prevent or delay the need for more expensive rehabilitation or replacement. This shift can be described as transitioning from a “worst first” approach to a “lowest life-cycle cost” strategy.

Another PennDOT initiative of importance to transportation planning is PennDOT Connects, a landmark policy aimed at addressing planning concerns at earlier stages of project development and enhancing intergovernmental collaboration. The initiative improved upon the previous Linking Planning and NEPA process and added planners in each of the PennDOT engineering districts. The PennDOT Connects policy meshes well with the federal emphasis on performance-based planning and programming. MPOs and RPOs are engaged in the PennDOT Connects initiative, which yields better scopes of work and more accurate project cost estimates, all while considering community preferences as part of project development. The implementation of PennDOT Connects helps ensure that the state’s planning is more results-oriented and outcomes-based.
PennDOT’s transportation planning program is carried out through a statewide network of 23 regional entities. These include 18 metropolitan planning organizations (MPOs), four rural planning organizations (RPOs), and one independent county (Wayne). Collectively they are often referred to as PennDOT’s “Planning Partners.” Figure 1 illustrates PennDOT’s Planning Partner regions.

Although federal requirements for Metropolitan Planning Organizations (MPOs) do not formally extend to Rural Planning Organizations (RPOs), Pennsylvania’s RPOs have signed memorandums of understanding with PennDOT which hold them to the same standard and status MPOs which hold them to the same standard and status MPOs.

PennDOT maintains a close working relationship with each MPO and RPO. Each Planning Partner has an established Program Manager within the PennDOT Program Center who serves as a liaison and point of contact. PennDOT has convened formal meetings with the Planning Partners as a group on a recurring basis since the mid-1990s. By November 1997, PennDOT, FHWA, and all of the Planning Partners established a new, re-engineered process for administering the statewide transportation planning program. There were many elements of this reengineering which continue to be core components to today’s planning and programming process.

MPOs and RPOs collaborate with their peers and with PennDOT on matters related to Financial Guidance, General and Procedural Guidance, and other key topics. They share best practices and lessons learned to refine and improve the planning and programming process in Pennsylvania. This tradition of relationship-building and information sharing has continued to the present day to keep Pennsylvania as a nationwide leader in transportation planning and programming. FHWA has commended PennDOT for the way in which it collaborates with its Planning Partners in administering the statewide planning and programming process as a national best practice.

Each of the Planning Partners is responsible for maintaining its own long-range transportation plan. These plans are subject to FHWA requirements and are updated on a four- or five-year cycle, depending upon their region’s conformity with FHWA’s air quality standards. Plans identify existing conditions and driving forces affecting transportation at the regional level, needed changes in transportation policy, and culminate in a listing of fiscally constrained projects over a 20-year horizon. Projects identified within the first four-year period of the regional LRTPs are incorporated into the four-year Statewide Transportation Improvement Program (STIP) and approved by the State Transportation Commission (STC). The STIP essentially becomes the first four-year period of the 12-Year Program (12YP). Note that the 12YP is a PennDOT creation, and is not recognized or regulated by FHWA.

Planning Partners maintain their respective programs through the Unified Planning Work Program, or UPWP. The UPWP is developed in collaboration with PennDOT and FHWA. It identifies various work program elements for a two-year period, including activities such as traffic counting, plan maintenance, and special studies, and others that assist PennDOT in its statewide planning work. Both the LRTP and UPWP are subject to public review and comment through the provisions of the guidelines in each Planning Partner’s own Public Participation Plan, which is reviewed and approved by PennDOT and FHWA.
Appendix B: Public and Stakeholder Engagement

SECTION CONTENTS

- Internal Outreach and Coordination
- Stakeholder Engagement and Outreach
- Public Engagement and Outreach
Outreach to the public and stakeholders (organizations with a significant interest in LRTP outcomes) was foundational to the Long-Range Transportation Plan (LRTP) and Freight Movement Plan (FMP) development process. To properly capture transportation system needs and concerns across Pennsylvania, input on the plans was solicited in several outreach forums throughout plan development.

Outreach and engagement opportunities conducted throughout the planning process are presented in three categories:

- **Internal Outreach and Coordination, or “In-Reach”** – Review and input on draft goals and objectives, and identification of supporting actions and initiatives. In-reach included metropolitan and rural planning organizations (MPOs and RPOs, known as PennDOT’s Planning Partners) and other state agencies.

- **Stakeholder Engagement and Outreach** – Discusses the results of focus groups, workshops, intergovernmental collaboration opportunities, and other forums used to engage external stakeholders.

- **Public Engagement** – Summarizes the results of public comment opportunities throughout the planning process, including surveys and the formal 30-day review and comment period for both plans.
Internal Outreach and Coordination

Planning Catalyst Team
The PennDOT Planning Catalyst Team served as the Steering Committee for development of the LRTP, meeting on a quarterly basis during the two-year plan development period. The Catalyst Team was established in 2013 to promote collaborative and improved transportation planning and programming throughout Pennsylvania. Members provided a diverse perspectives of planning and engineering, oversight, and input at several milestones in the plan development process. Catalyst Team membership represents transportation planning interests across all areas of the state and includes some members from the following:
- PennDOT Central Office Bureaus/Divisions
- PennDOT Districts
- MPOs and RPOs
- Pennsylvania Department of Community and Economic Development (PA DCED)
- Federal Highway Administration (FHWA) – Pennsylvania Division

Freight Plan Advisory Group
The Freight Plan Advisory Group (FPAG) was developed as an additional opportunity for PennDOT staff and partners to provide oversight and direction on the development of the FMP. These individuals were selected as a subset of PennDOT’s Freight Work Group. The FPAG participated in discussions surrounding freight-related issues and challenges, as well as future opportunities and solutions impacting freight movement in Pennsylvania. Membership comprised the following:
- Center for Program Development and Management
- Bureau of Planning and Research
- Bureau of Rail Freight
- Multimodal Transportation – PennPORTS
- Executive Policy Office
- PennDOT Districts
- MPOs/RPOs
- PA DCED
- FHWA – Pennsylvania Division

Transportation Leadership Interviews
In the early phases of the planning process, it was critical to engage PennDOT’s leaders to guide the LRTP’s overall direction and to help ensure leadership’s sense of ownership and implementation. The planning team held 15 interviews with PennDOT leaders, including executive leadership, Bureau Directors, District Executives, and State Transportation Commission and Transportation Advisory Committee officials. Interviews were also conducted with staff members of the Federal Highway Administration’s Pennsylvania Division, the Pennsylvania Turnpike Commission and the Southeastern Pennsylvania Transportation Authority (SEPTA).
Leadership Interview Themes
Driving Plan Direction

The plans should:
- Improve the land use and transportation connection
- Produce an implementable, actionable, and accountable plan
- Position for future impacts of emerging technologies
- Maintain asset management as a major focus
- Establish realistic, beneficial connections between the LRTP, FMP, and project funding
- Equitably address the transportation needs of our diverse population and geographic variations
- Develop the LRTP to help inform direction setting for capital programs
- Address the relationship between transportation and quality of life
- Ensure the LRTP and FMP are multimodal and intermodal in development and implementation

The process should:
- Include the STC and PennDOT Districts in plan/program development and implementation
- Ensure plans are user-friendly and accessible
- Develop and implement the LRTP with an interagency and intergovernmental focus

The interviews resulted in a series of themes and other key considerations to guide LRTP development. Key PennDOT leaders continued to provide direction throughout the planning process.

Working/Advisory Group and Committee Briefings

PennDOT also met with several of the Commonwealth’s existing transportation planning and policy bodies to communicate progress and build momentum for plan implementation:
- State Transportation Commission
- Transportation Advisory Committee
- Municipal Advisory Committee
- Interstate Steering Committee
- Motor Carrier Safety Advisory Committee
- Freight Work Group
- Planning Partners
- District Executives
- Pennsylvania State Planning Board

PennDOT Follow-up In-Reach Interviews

In early summer 2021, a second series of 20 interviews was conducted with 40 members of PennDOT’s staff. Many of these individuals had been engaged through the first set of leadership interviews. The purpose of the in-reach process was to review and refine the draft goals and objectives, and to identify actions for both plans and to ensure they aligned with other PennDOT initiatives.
Stakeholder Engagement and Outreach

The development of the LRTP and the FMP included an extensive engagement process that gave many varied stakeholders the opportunity to offer input. Stakeholders provide specific input and insight into their industries and sectors and a unique viewpoint on what Pennsylvanians want from their statewide transportation system. Stakeholder expertise and input was collected from all areas of the state through many forums including focus groups, workshops, interviews, and a day-long Virtual Freight Forum.

Freight Focus Groups

In October 2020, five virtual focus group meetings were held with freight transportation stakeholders representing a variety of interests (Figure 1). Each focus group explored the challenges and opportunities faced by freight industries and economic development leaders for consideration in both the LRTP and FMP. Participating stakeholders included PennDOT staff, MPOs, major freight facilities, other private-sector stakeholders, and economic development professionals. Participants were provided with general discussion questions as well as focus-group-specific questions in advance of the meeting. A summary of the key feedback from the focus groups is provided in Figure 2.

<table>
<thead>
<tr>
<th>Focus Group Name</th>
<th>Number of Participants</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Air Cargo</td>
<td>20</td>
<td>October 8, 2020</td>
</tr>
<tr>
<td>2 Trucking</td>
<td>10</td>
<td>October 15, 2020</td>
</tr>
<tr>
<td>3 Rail Freight</td>
<td>15</td>
<td>October 20, 2020</td>
</tr>
<tr>
<td>4 Ports and Waterways</td>
<td>21</td>
<td>October 21, 2020</td>
</tr>
<tr>
<td>5 Economic Development and Land Use</td>
<td>10</td>
<td>October 29, 2020</td>
</tr>
</tbody>
</table>

Figure 1: Freight Focus Group Dates and Attendance
### Figure 2: Key Themes from Freight Focus Groups

<table>
<thead>
<tr>
<th>Group Name</th>
<th>Key Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Cargo</strong></td>
<td>- The planning process should be mindful that air cargo is intermodal in nature—landside access is key.</td>
</tr>
<tr>
<td></td>
<td>- Links between air cargo and economic development are critical. Improvements and enhanced air cargo amenities should be tied closely to industrial recruitments in order to accommodate their needs.</td>
</tr>
<tr>
<td></td>
<td>- Better incorporation of aviation/air cargo and airport master plans is needed in intermodal freight planning activities/initiatives.</td>
</tr>
<tr>
<td></td>
<td>- Consider drones/unmanned aircraft deliveries, related initiatives, and their economic benefits. There are minimal legislative efforts at the state level regarding drones currently. Any work in the state must complement ongoing developments in federal drone regulations.</td>
</tr>
<tr>
<td><strong>Trucking</strong></td>
<td>- Collaboration among PennDOT, MPOs/RPOs, local planning officials, and industrial development officials is needed to better understand trends in warehousing/logistics development, trucking demand, and needs of the trucking industry.</td>
</tr>
<tr>
<td></td>
<td>- Truck parking continues to be a statewide and national concern. Capacity is not meeting demand and some parking locations are not visible to truck drivers. Truck parking and pre-staging areas should be included as part of zoning and land development regulations. Trucks parked alongside roadways while waiting to access these facilities cause safety concerns for motorists.</td>
</tr>
<tr>
<td></td>
<td>- It is important for the planning process to consider emerging technologies, such as platooning, autonomous trucks (and their associated parking needs), automated size/weight enforcement, electrification of trucks/charging infrastructure.</td>
</tr>
<tr>
<td><strong>Rail Freight</strong></td>
<td>- Pennsylvania has extensive older rail infrastructure to maintain and it is expensive to repair and replace. Smaller railroads need a lot of assistance with bridge and track maintenance and would not be able to operate successfully without existing grant programs.</td>
</tr>
<tr>
<td></td>
<td>- Railroads and MPO/RPO partners should work together to identify and pursue opportunities on the railroad network. Transportation planning professionals are looking for input and relying on the public sector to identify these opportunities.</td>
</tr>
<tr>
<td></td>
<td>- There should be a focus on improving intermodal connections between railroads, trucking, and water ports. Trucks are queuing in the streets to access intermodal facilities and rail facilities are under-used or under-designed for intermodal use.</td>
</tr>
<tr>
<td></td>
<td>- Existing state funding opportunities should be re-evaluated and a regular schedule (application window and firm deadlines for awarding funds) should be established to improve speed of rail project delivery.</td>
</tr>
<tr>
<td><strong>Ports and Waterways</strong></td>
<td>- Overall, port and waterway stakeholders would like to see a more substantial ports/waterways section as part of the plan, including how they contribute to the state’s overall economic competitiveness.</td>
</tr>
<tr>
<td></td>
<td>- Historically, ports and waterways have had to compete for and rely on rail funding to enhance river freight operations; but they acknowledge and appreciate the intermodal elements to the Consolidated Rail Infrastructure Safety Improvements (CRISI) federal funding program. It was recently used to fund major river-to-rail transfer equipment at a terminal operation in Cincinnati.</td>
</tr>
<tr>
<td></td>
<td>- The role of the river system in moving oversized cargo through regions across Pennsylvania should be considered.</td>
</tr>
<tr>
<td><strong>Economic Development and Land Use</strong></td>
<td>- Pennsylvania’s location among many busy markets truly makes it the Keystone State, but investment in freight infrastructure is not keeping up with overall demand.</td>
</tr>
<tr>
<td></td>
<td>- Freight planning aims to match public investments with private initiatives, which is difficult, so collaboration and communication between both sectors is necessary.</td>
</tr>
<tr>
<td></td>
<td>- Consider increased sustainability in freight movement, including opportunities to reduce greenhouse gases and increase fuel efficiencies.</td>
</tr>
<tr>
<td></td>
<td>- Local ordinances could provide opportunities for on-site truck parking and staging at newly constructed warehousing and logistics facilities. Local roadway design needs to be adequate to accommodate truck queues at industrial facilities.</td>
</tr>
<tr>
<td></td>
<td>- Pennsylvania’s resources, location, and transportation system are major contributors to the level of freight activity seen across the state. While the manufacturing sector has seen decline for many years, there is expectation of planning efforts for a resurgence of the sector.</td>
</tr>
<tr>
<td></td>
<td>- Consumer education and public outreach regarding the vitality of freight movement in Pennsylvania is important for locals to understand the impacts of moving finished products to consumers.</td>
</tr>
</tbody>
</table>
Statewide Virtual Freight Forum

On November 5, 2020, PennDOT hosted a Virtual Statewide Freight Forum. The event was designed to engage public- and private-sector stakeholders in a virtual workshop to help inform the freight plan direction. More than 170 stakeholders with an interest in transportation and freight participated in the forum’s interactive sessions (Figure 3). The initial draft goals for the Freight Movement Plan were substantially vetted through this forum, which was organized around those goals. The agenda is shown in Figure 4.

Participants represented a variety of freight and transportation planning interests including federal, state, and local government agencies as well as all freight modes and economic development interests.

<table>
<thead>
<tr>
<th>Figure 3: Virtual Freight Forum Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industry</strong></td>
</tr>
<tr>
<td>State Government</td>
</tr>
<tr>
<td>Local Government</td>
</tr>
<tr>
<td>Federal Government</td>
</tr>
<tr>
<td>Education/Academia</td>
</tr>
<tr>
<td>Consulting/Construction</td>
</tr>
<tr>
<td>Business &amp; Development</td>
</tr>
<tr>
<td>Aviation</td>
</tr>
<tr>
<td>Rail Freight</td>
</tr>
<tr>
<td>Ports/Waterways</td>
</tr>
<tr>
<td>MPO/RPO</td>
</tr>
<tr>
<td>Motor Carriers</td>
</tr>
<tr>
<td>Logistics/Warehousing</td>
</tr>
</tbody>
</table>

Figure 4: Statewide Virtual Freight Forum Agenda

**Morning Plenary Sessions**

- **Welcome and Opening Remarks**
  - Brian Hare, P.E., Bureau Director, PennDOT Program Center
  - Larry S. Shifflet, Deputy Secretary for Planning, PennDOT

- **Keynote Presentation: International Connections through the Great Lakes and Landside Connections**
  - Brenda A. Sandberg, Executive Director, Erie-Western PA Port Authority

- **Building the Freight Movement Plan**
  - Tom Phelan, P.E., P.Eng., President, BHX Engineering
  - Michael D. Rimer, AICP, Transportation Planning Specialist Supervisor, PennDOT Program Center
  - Brian Funkhouser, AICP, Project Manager, Michael Baker International

- **Policy Matters – National and State Landscapes**
  - Ryan Endorf, Economist, USDOT Office of the Secretary
  - Nicole Katsikides, Ph.D., Research Scientist, Texas Transportation Institute
  - Anne Strauss-Wieder, Director of Freight Planning, North Jersey Transportation Planning Authority

**Afternoon Plenary Sessions**

- **Align Freight Mobility with Economic Development and Land Use**
  - Becky Bradley, AICP, Executive Director, Lehigh Valley Planning Commission

- **Improve Multimodal Freight Transportation Operations and Safety**
  - Doug Tomlinson, P.E., Chief of Traffic Operations, PennDOT Bureau of Maintenance and Operations

- **Advance Project Investments that Enhance Freight Mobility**
  - Angela Watson, AICP, Special Assistant to the Deputy Secretary for Multimodal Transportation, PennDOT

- **Provide Planning, Data, and Analytical Tools for Improved Decision Making**
  - Dan Szekeres, Technical Manager, Michael Baker International
Municipal Association Focus Groups

As a result of briefings with the Municipal Advisory Committee (MAC), four focus group discussions were conducted with Pennsylvania’s municipal associations in early 2021:

Attendees provided input on the LRTP’s draft goals and objectives as well as opportunities for collaboration during plan implementation. As part of the meeting, they identified challenges and opportunities related to each goal area as well as some opportunities for collaboration between state and local agencies. The top five collaboration opportunities from each group are shown in Figure 6. Further efforts will be made following a process to establish which of these opportunities may be jointly advanced by PennDOT and the associations. The rankings were developed by polling the participants of each focus group.

Figure 5: Municipal Association Focus Group Dates and Attendance

<table>
<thead>
<tr>
<th>Association Name</th>
<th>Number of Participants</th>
<th>Focus Group Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pennsylvania State Association of Boroughs (PSAB)</td>
<td>12</td>
<td>February 11, 2021</td>
</tr>
<tr>
<td>2 County Commissioners Association of Pennsylvania (CCAP)</td>
<td>13</td>
<td>February 16, 2021</td>
</tr>
<tr>
<td>3 Pennsylvania State Association of Township Supervisors (PSATS)</td>
<td>15</td>
<td>February 25, 2021</td>
</tr>
<tr>
<td>4 Pennsylvania Municipal League &amp; Pennsylvania State Association of Township Commissioners (PML/PSATC)</td>
<td>17</td>
<td>April 21, 2021</td>
</tr>
</tbody>
</table>
PennDOT and staff from each municipal association convened in July 2021 for a second workshop. The purpose of the workshop was to identify the strategic initiatives or actions that PennDOT and the associations could advance collaboratively. Prioritized implementation initiatives were categorized according to the themes from the first round of workshops: funding, collaboration, education and outreach, and land use and planning.
• Identify new funding sources and revenue streams that allow for innovation, flexibility, and blending in implementation.

• Work with local and county officials to inventory needed transportation improvements and costs. Track costs and benefits to assess return on investment upon project completion.

• Develop a consistent program for educating public and private sector partners on the basics of land use in Pennsylvania along with best practices. Consistently update the program as legislative and regulatory changes occur and new best practices are implemented.

• Develop and implement a protocol/knowledge hub to retain institutional knowledge at state agencies, local governments, and MPO/RPOs.

• Identify state agency goals for both regional and central offices and develop a unified, seamless approach to partner and share resources with local governments.

• Further leverage and expand the success of PennDOT Connects by advancing a consistent, collaborative partnership between private and public sector to tackle local government issues and needs.

• Identify and adopt changes to the Municipalities Planning Code (MPC), local government ordinances and regulations, and state agency policies and regulations to keep pace with rapidly changing land use patterns.
Equity and Diversity Workshops

In April 2021, the planning team met virtually with the Pennsylvania Commission on Latino Affairs and the Pennsylvania Commission on African American Affairs as part of the outreach efforts for both the LRTP and FMP. The two-hour virtual sessions were designed to engage members in a discussion to inform the plans’ strategic directions and ensure the needs of the Latinx and African American communities were reflected. Although the FMP was included in the presentation, the focus was primarily on the LRTP.

The meeting objectives were to gain an understanding of the needs of and the challenges facing the Latinx and African American communities as they relate to transportation and to identify collaboration opportunities by increasing communication and engagement. Participants were provided with an overview of the long-range transportation planning and programming processes at PennDOT and were engaged using an interactive platform. The key issues and challenges identified by both groups are listed in Figure 9.

Since these workshops were conducted, PennDOT also issued a key report related to equity that is linked below that has various planning implications in relation to the LRTP equity goal:


Figure 8: Governor’s Affinity Group Workshop Dates and Attendance

<table>
<thead>
<tr>
<th>Affinity Group Name</th>
<th>Number of Participants</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Commission on Latino Affairs</td>
<td>12</td>
<td>April 14, 2021</td>
</tr>
<tr>
<td>Pennsylvania Commission on African American Affairs</td>
<td>15</td>
<td>April 23, 2021</td>
</tr>
</tbody>
</table>

Figure 9: Key Themes from Freight Focus Groups

<table>
<thead>
<tr>
<th>Key Theme</th>
<th>Needs/Challenges/Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>• Public Crossings • Sidewalks • Bike Paths • Stop signs being obstructed by overgrowth • Roadway safety • Community safety at transit locations</td>
</tr>
<tr>
<td>Mobility</td>
<td>• Bus service availability • Train service to and from metropolitan areas • Less dependency on vehicles • More access to public transportation • Congestion reduction (e.g., HOV lanes, efficient commute options)</td>
</tr>
<tr>
<td>Conditions</td>
<td>• Quality of roads and bridges</td>
</tr>
<tr>
<td>Communications</td>
<td>• Language barriers • Public - private freight planning collaboration</td>
</tr>
<tr>
<td>Accessibility and Affordability</td>
<td>• Long-term impacts of price increases in public transportation • Lack of reliable bus service and convenient bus schedules • Desire for more rideshare opportunities, especially for students</td>
</tr>
<tr>
<td>Procurement and Equitable Opportunities</td>
<td>• More contracting opportunities in transportation for minority firms • Opportunities for employment and career growth in the transportation sector at all levels and job types • Workforce development</td>
</tr>
</tbody>
</table>
Public Transportation Focus Group

On June 29, 2021, PennDOT’s Bureau of Public Transportation and the LRTP team held a focus group with selected members of the Pennsylvania Public Transportation Association (PPTA), a non-profit association made up of public transportation agencies and advocates across the state. In the hour-long session, participants were provided the opportunity to review both the LRTP and the FMP goals and objectives as well as a series of discussion topics and questions, presented in Figure 10.

**Figure 10: Public Transportation Focus Group Results**

<table>
<thead>
<tr>
<th>Discussion Topic</th>
<th>Feedback</th>
</tr>
</thead>
</table>
| **Trends and forecasts in public transportation that the LRTP should be mindful of** | • Microtransit as a new tool for providing rural and suburban public transportation  
• Measuring transit demand by established planning zones  
• The need for mode flexibility - providing multimodal connections for bikes and scooters |
| **Major drivers of change that the LRTP should consider in development and implementation** | • Technology and the speed of technological advancement (i.e., autonomous vehicles, other shared mobility services)  
• Commuting changes post-pandemic and transition to work-from-home  
• Suburban-to-suburban service rather than a hub and spoke system |
| **Demographic trends affecting public transportation delivery**                   | • Aging population  
• Passengers with mobility devices/disabled passengers  
• Accommodation of large shopping hauls  
• Movement from urban to rural environments during the pandemic (affects distance to bus stops and shared ride enrollments)  
• Young adults are shifting away from driving single occupancy vehicles |
| **Greatest challenges facing public transportation**                              | • Funding availability  
• Lasting impacts of COVID-19 on ridership numbers  
• New generation of travel trends including the desire for flexibility and more sustainable transportation  
• Telecommuting, flexible schedule policies (shift away from 5-day in-office work weeks)  
• New development may not be conducive to public transit systems  
• Development of work shuttles  
• First and last mile access gaps in rural areas |
| **Greatest opportunities for public transportation moving forward**               | • Reimagining transit services post-COVID, including the development and implementation of pilot programs  
• Shift from a traditional set of commute patterns  
• Transit considerations in the District traffic units and the Highway Occupancy Permit (HOP) process  
• Identification of public private partnership opportunities  
• Operations and maintenance practices for public transit vehicles  
• Leverage, improve, and/or innovate access to public transportation using existing services (e.g., where fixed routes do not exist) |
| **How the LRTP can be useful for public transportation agencies**                | • Funding for public transportation activities  
• Metrics for other modes of transportation beyond the automobile including value-based, quality of live measures  
• Flexibility in monitoring performance measures – defining success and how we measure it  
• Reexamine the prioritization of modal investments beyond just highway projects  
• Consideration for safety and asset-related public transportation measures throughout all of the plan’s goals |
Public Engagement and Outreach

In addition to stakeholder engagement, PennDOT provided opportunities for the public to get involved and provide feedback on the LRTP and FMP development processes.

Online Public Survey

The LRTP team coordinated with PennDOT’s 12-Year Program (12YP) Division on the biennial transportation survey for the 2023 12YP. The survey is intended to gather feedback from the public on transportation modes, issues, and priorities. The survey was open from March 1, 2021, through April 14, 2021, and 7,424 responses were received. Input received from the survey helped inform the LRTP and FMP.

The LRTP and 12YP teams promoted the survey and online public forum through a robust marketing effort, involving the development of a large-scale stakeholder database used to send out promotional e-mail blasts and scheduled social media posts on a weekly basis. Public e-mail blasts were distributed to those individuals who signed up for the Talk PA Transportation mailing list. Social media posts and materials were translated into Spanish and Mandarin (Figure 11) for further accessibility to Limited English Proficiency individuals.

Of the 5,000 respondents who chose to identify their age on the survey, 93 percent were between ages 25 and 74, as shown in Figure 12. When compared to Pennsylvania’s 2019 statewide population estimates, respondents between the ages of 35 and 74 were well represented, with a response rate higher than their portion of the statewide population. In contrast, young people (up to 24 years old) and the elderly (75 and older) were not as well represented. Over three-quarters of survey respondents were of working age, between 25 and 64 years.
Survey Responses by County

Of Pennsylvania's 67 counties, at least one response was received from each county, with total responses ranging between 1 and 645 per county. The median response rate was 30 per county. The percentage of responses for a given county generally correlated with the percentage of total PA population in that county.

Figure 13: Survey Responses by County
Survey Responses by Affiliation

When considering representation, most survey respondents were members of the general public, while 11 percent represented a governmental agency or elected office. Those representing transportation organizations comprised 5 percent of the respondents. This category included public and private engineers, planners, and professionals in transportation departments; transportation non-profits and advocacy groups; and public transit services. Other organizations represented in the survey included metropolitan or rural planning organizations, tourism organizations, non-profit organizations, businesses, and others.

Figure 14: Survey Responses by Representation
Survey Results: Modes Used Most Frequently

The most common mode of transportation used by nearly 5,000 survey participants was driving alone. Walking and biking followed with 35 percent and 12 percent, respectively, representing more than 2,300 respondents. Other modes of transportation such as public transit, carpool/rideshare, and passenger rail are used daily or frequently by less than 10% of survey participants. Motorcycles and aviation had the lowest number of frequent users and many respondents indicated they rarely or never use these modes. Other modes of transportation are used regularly by 95 respondents. These include watercraft, horse, carriage, and other modes used for purposes other than recreation.

**Figure 15: Percentage of Respondents Using Transportation Mode Every Day or Often**

- **Drive Alone**: 75%
- **Walking**: 35%
- **Bicycling**: 12%
- **Public Transit**: 9%
- **Carpool/Rideshare**: 4%
- **Aviation**: 3%
- **Passenger Rail**: 2%
- **Motorcycle**: 2%
Survey Results: Modes Ranked by Priority

For ranking purposes, respondents were given a total of 20 points that could be distributed among the 10 categories shown in Figure 16 and described below. A category could receive a value between 0 points (not important) and 5 points (most important).

1. **Road Pavement**
   - Repairing, restoring, reconstructing, and maintaining Pennsylvania’s 120,000 miles of state and local roadways

2. **Traffic Flow**
   - Using technology to improve traffic flow and construction of new roads and additional travel lanes to move people and goods more efficiently

3. **Bridges**
   - Repairing, replacing, and maintaining Pennsylvania’s 31,000 state and local bridges

4. **Interstate Highways**
   - Specific, prioritized investments in reconstructing Pennsylvania’s 1,868 miles of Interstate Highways

5. **Walking**
   - Accessible, safe, and connected routes

6. **Transit**
   - Accessible and frequent public transportation that covers an extensive service area and crosses regions

7. **Bicycling**
   - Safe bicycle routes and facilities throughout the state

8. **Passenger Rail**
   - Intercity and commuter rail service across Pennsylvania with out-of-state connections

9. **Freight**
   - Modern highways, railways, airports, and waterways to support the economy and ensure the efficient movement of goods and services

10. **Aviation**
    - Modern facilities, operations, and a wide range of commercial airline choices at airports

Categories that received the highest prioritization were road pavement, traffic flow, and bridges. Walking, transit, bicycling, and passenger rail had similar levels of intermediate prioritization, while freight and aviation were of low importance to most survey respondents, relative to the other modes, as shown in Figure 16. Respondents were invited to list additional priorities. Common themes included funding and managing toll costs, congestion, environmental protection, roadway safety and maintenance, affordable accessibility between cities and for people with disabilities, management of freight and rail systems, electric vehicle charging, and expansion of bicycle, pedestrian, and micromobility (e-bikes, scooters) infrastructure.
Figure 16: Transportation Priorities Identified by Respondents

- **Road Pavement**: 32.3% Most Important, 17.1% Important, 18.3% Slight Importance, 10.7% Not Important, 4.7% Very Not Important, 16.8% Not Very Important
- **Bridges**: 21.6% Most Important, 15.7% Important, 23.3% Slight Importance, 14.4% Not Important, 6.3% Very Not Important, 19.8% Not Very Important
- **Traffic Flow**: 23.7% Most Important, 14.1% Important, 17.87% Slight Importance, 11.6% Not Important, 7.6% Very Not Important, 24.2% Not Very Important
- **Interstate Highways**: 19.8% Most Important, 13.8% Important, 18.6% Slight Importance, 12.2% Not Important, 8.0% Very Not Important, 27.6% Not Very Important
- **Walking**: 16.3% Most Important, 8.6% Important, 14.6% Slight Importance, 13.6% Not Important, 13.4% Very Not Important, 33.6% Not Very Important
- **Transit**: 13.6% Most Important, 13.6% Important, 11.8% Slight Importance, 12.0% Not Important, 13.7% Very Not Important, 42.1% Not Very Important
- **Passenger Rail**: 11.7% Most Important, 7.1% Important, 12.4% Slight Importance, 12.1% Not Important, 15.3% Very Not Important, 42.6% Not Very Important
- **Bicycling**: 11.6% Most Important, 5.7% Important, 9.3% Slight Importance, 11.3% Not Important, 16.0% Very Not Important, 44.8% Not Very Important
- **Freight**: 5.9% Most Important, 5.7% Important, 12.6% Slight Importance, 14.2% Not Important, 13.2% Very Not Important, 48.4% Not Very Important
- **Aviation**: 2.8% Most Important, 7.8% Important, 11.5% Slight Importance, 17.2% Not Important, 57.8% Very Not Important

Legend:
- Most Important
- 4
- 3
- 2
- 1
- 0 (Not Important)
Survey Results: Budget Exercise

Transportation needs continue to outstrip available funding. Respondents were asked to create a hypothetical transportation budget using $100 allocated across the following categories:

- **Maintenance and Preservation:** All existing transportation assets are maintained and preserved at a high level of safety, reliability, and performance. This includes, but is not limited to, highway resurfacing and bridge repair and replacement.

- **Bicycling/Walking:** Providing safe options to access walking and biking, linking cities and communities. Investments could include bicycle lanes, pedestrian safety improvements and improved connections to other types of transportation.

- **More Lanes, New Roads:** Building new roadways and reconstructing existing highways to increase capacity and ease traffic.

- **Technology:** Integrate state-of-the-art technology to improve the operation and safety of the transportation network. Investments could include smart traffic signals, highway message boards and other services to better inform drivers, connected and autonomous vehicle technology, and other highway, transit, and passenger rail technology.

- **Ride more, drive less:** Public transit, passenger rail, rideshare, and carpooling offer alternatives to driving alone. Investments could include new transit service, high-speed rail lines, increased frequency of service, High Occupancy Vehicle (HOV) lanes, and park-and-ride lots.

- **Economic support:** Emphasize improvements to ensure the reliable movement of goods. This would include additional roadway capacity and connections to support critical highway, rail, water, and airport facilities.

As shown in Figure 17, most spending, $35 on average out of the $100 hypothetical budget, was proposed to be allocated toward maintenance. The next-highest spending category was technology with $17, followed by $14 toward more lanes, new roads. “Ride more, drive less, also received $14 on average. The categories with the lowest spending were economic support and bicycling/walking, each with $10. These results show a preference among survey respondents for continuing to prioritize maintenance and preservation as well as continue to explore and use new technology.
New Transportation Funding Ideas

Respondents were invited to suggest ideas for how to increase transportation funding to meet needs. Generally, responses suggested new or increased taxes, fees, tolls, and fines. Additionally, many comments insisted on better accountability for existing funding, decreased spending, and the decrease or removal of funding of the Pennsylvania State Police through the transportation budget. More specifically, the most-suggested funding sources were Vehicle-Miles Traveled (VMT) taxes, the reallocation of funding, and expanded tolling.

Virtual Public Forum

The online survey was supplemented by an online public forum on March 23, 2021, with 203 registered participants. In total, the stream on the PAcast platform received nearly 2,000 views and attendees submitted a total of 75 questions to the panel of speakers, made up of PennDOT Secretary Yassmin Gramian, Deputy Secretary for Planning Larry Shifflet, and STC Board Member Ron Drnevich.

Formal Public Review and Comment Period

The draft LRTP and FMP were made available for a 30-day public review and comment period from September 20, 2021, through October 19, 2021. Both plans were made available for review online through links on the PennDOT Planning webpage as well as the TalkPA Transportation website. Print versions of the plans were distributed to public libraries across the state for Pennsylvanians who may not have access to a computer. Comment forms were made available both in print and digitally for members of the public to provide their feedback on the LRTP and FMP.

To publicize the review period, the PennDOT planning team issued a series of media promotions including a press release, social media posts, and public service announcements to local radio stations. E-blasts were sent through the PennDOT Planning Network eNews. A communications toolkit was also developed and sent to stakeholders for distribution to their internal mailing lists, which included informational materials such as plan factsheets, a comment form, social media and e-mail content, and graphics.

Informational materials were developed and distributed in compliance with federal requirements as well as PennDOT’s Accessibility Policy and Public Participation Plan. Foreign language resources included translatable online documents; Spanish and Mandarin translations for social media images, fact sheets, and comment forms; as well as telephone translation support.

Following the public review period, all comments and questions received by members of the public were considered and responses were provided. Revised, final versions of the LRTP and FMP were made available with updated links on both the PennDOT Planning webpage and TalkPA Transportation website.