Defining a Core PA Transportation System

TIER 1

T2

T2

T2

T2

MPO CORE

TIER 2

SMALLER ECO. CENTER

T3

T3

WEST 6

WEST BUS 660 15
Covington
Canoe Camp

Pennsylvania State Transportation Advisory Committee

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What is a Core System?

A Core System considers the **Big Picture** of Pennsylvania transportation.

It is a **Tool** to help improve the flow of people and goods between regions and beyond Pennsylvania's borders.

It identifies the most vital transportation links at a **Statewide** level.

It helps evaluate how well those facilities and services are performing as a **System**.

It considers all **Modes** and the connections between those modes.

An efficient statewide **Framework** in turn benefits regional and local systems, which are also an essential aspect of Pennsylvania transportation.

Identifying a Core PA Transportation System is one of the "breakthrough" areas in the Pennsylvania Mobility Plan, our statewide long-range transportation plan. The aim is to improve the performance of Pennsylvania's statewide transportation system—a unified system, encompassing all modes.

All transportation infrastructure is important, from small town sidewalks linking pedestrians to Main Street shops, to major facilities such as Interstate 80, connecting Pennsylvania with the rest of the U.S. and the world.

A state core system refers to those facilities and services that have "statewide significance." That means they are essential for moving people and goods between regions in Pennsylvania and beyond our borders to other states and nations.

By identifying those core elements of our transportation system, the many entities that influence transportation in Pennsylvania can collaborate to improve connections, eliminate bottlenecks, and enhance operations—making local improvements that enhance transportation at a system level.

A Starting Point

The Pennsylvania State Transportation Advisory Committee (TAC), an advisory body that analyzes transportation issues and provides recommendations to our state leaders, undertook the task of identifying an illustrative Core PA Transportation System. Work began in October 2005 and the final report was adopted in July 2006.

The study aimed to answer the question, "If Pennsylvania focused transportation planning around a core system, how would we identify the facilities that comprise that system, and how might the core system concept be used?

TAC members from across the state, PennDOT staff representing each mode, and other private and public sector partners worked together on the complex process of identifying an illustrative core system—a starting point. This is the first time there has been an effort in Pennsylvania to define a single multimodal system of statewide significance.

This summary provides background on the core system concept and communicates the highlights of the TAC study.

The full TAC report is available at:

www.dot.state.pa.us/Internet/pdCommissCommitt.nsf

The Core PA Transportation System is:

- **Primarily a planning tool**
- **Aligned with the PA Mobility Plan**
- **A conceptual recommendation of the Pennsylvania Transportation Advisory Committee**

How a Core PA Transportation System Would be Used

The core system concept provides a focal point for analyzing how modes work as a system, where there are disconnects or bottlenecks, and how the many organizations responsible for Pennsylvania's overall transportation system can best collaborate in its planning, improvement, operations, and maintenance.

In practice, that might mean:

- Improving intermodal connections.
- Better linking transportation and economic development.
- Encouraging coordinated implementation of technology to improve system operations.
- Establishing an integrated framework for PennDOT's planning efforts.
- Coordinating the priorities of regional plans.
- Providing a basis for system-level performance monitoring.
- Clarifying state and regional transportation responsibilities.
- Reinforcing Pennsylvania's long-range transportation vision, "To provide the best performing transportation system for people, business, and places."

The following pages explain how the TAC defined an illustrative core system. This study does not present a final definition of a Core PA Transportation System. Rather, it provides a foundation for PennDOT to ultimately refine and implement such a system at the state level and to encourage similar approaches regionally. The core system outlined by the TAC may be modified to be consistent with other state plans and policies and to best support the mobility needs of Pennsylvania.

PA CORE SYSTEM: NODAL AND MODAL CRITERIA
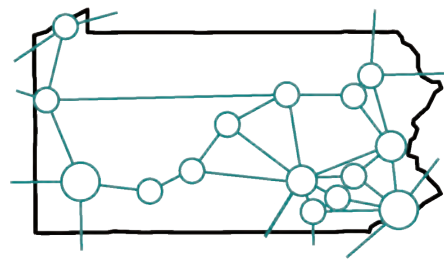
TIER 1
The hubs of Tier 1 are the state's 15 largest economic centers, or Metropolitan Planning Organization (MPO) core cities.
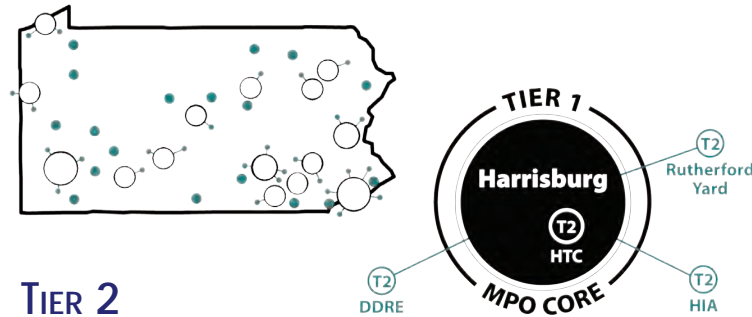
TIER 2
Nodes of Tier 2 include smaller economic centers, urban clusters of micropolitan statistical areas, and activity centers that support Tier 1 economic centers.

TIER 3
Centers of Tier 3 are activity centers that support Tier 2 economic centers.

Tier 1 Core System Modal Criteria

The following table illustrates the recommended modal criteria to be used in defining facilities and services that provide for inter-regional movement as well as connections to national and international markets. It is recognized that these criteria may be modified beyond this TAC study.

Mode	Aviation	Public Transportation	Passenger Rail	Highways	Rail Freight	Ports & Waterways
Tier 1 Modal Criteria	Commercial service airports within a 60-minute drive of an MPO core city	1.) Inter-city service between MPO core cities both within and immediately outside of Pennsylvania. 2.) Areas with > 5% transit trips as a percentage of total journey-to-work trips. 3.) Routes or services in which transit provides a critical back-up or redundancy with major highway facilities.	Passenger rail service between the state's Tier 1 MPO core cities and beyond. This includes Amtrak presently.	Highest order facilities that directly connect the urbanized areas of the Tier 1 MPOs. Also includes NHS connectors.	Rail lines that connect Tier 1 regions within PA and to those outside PA with greater than 10 million net tons annually	Waterways that connect Tier 1 regions with other state and international markets

DEFINING TIERS OF THE PA CORE SYSTEM

The TAC used a tiered approach to defining an illustrative core system. While all facilities may not be of true "statewide significance," they may be vital at the regional or local levels, and may feed the core statewide system.

Tier 1 system elements comprise the illustrative Core PA Transportation System.

The hubs, or "nodes" of this tier are the state's 15 largest economic centers: Allentown, Altoona, Erie, Harrisburg, Johnstown, Lancaster, Lebanon, Philadelphia, Pittsburgh, Reading, Scranton/Wilkes-Barre, Sharon, State College, Williamsport, and York. Also considered are the destinations just beyond Pennsylvania's borders that contribute to traffic on our system, such as Binghamton, New York, and Baltimore, Maryland.

The Core PA Transportation System is made up of the major transportation facilities or services that link these hubs.

To systematically determine which specific facilities and services of each mode should be included in Tier 1 of the Core PA Transportation System, the TAC developed recommended criteria for each mode. For example, the criteria used for rail freight is rail lines that connect Tier 1 regions within and beyond PA carrying more than 10 million tons of freight annually.
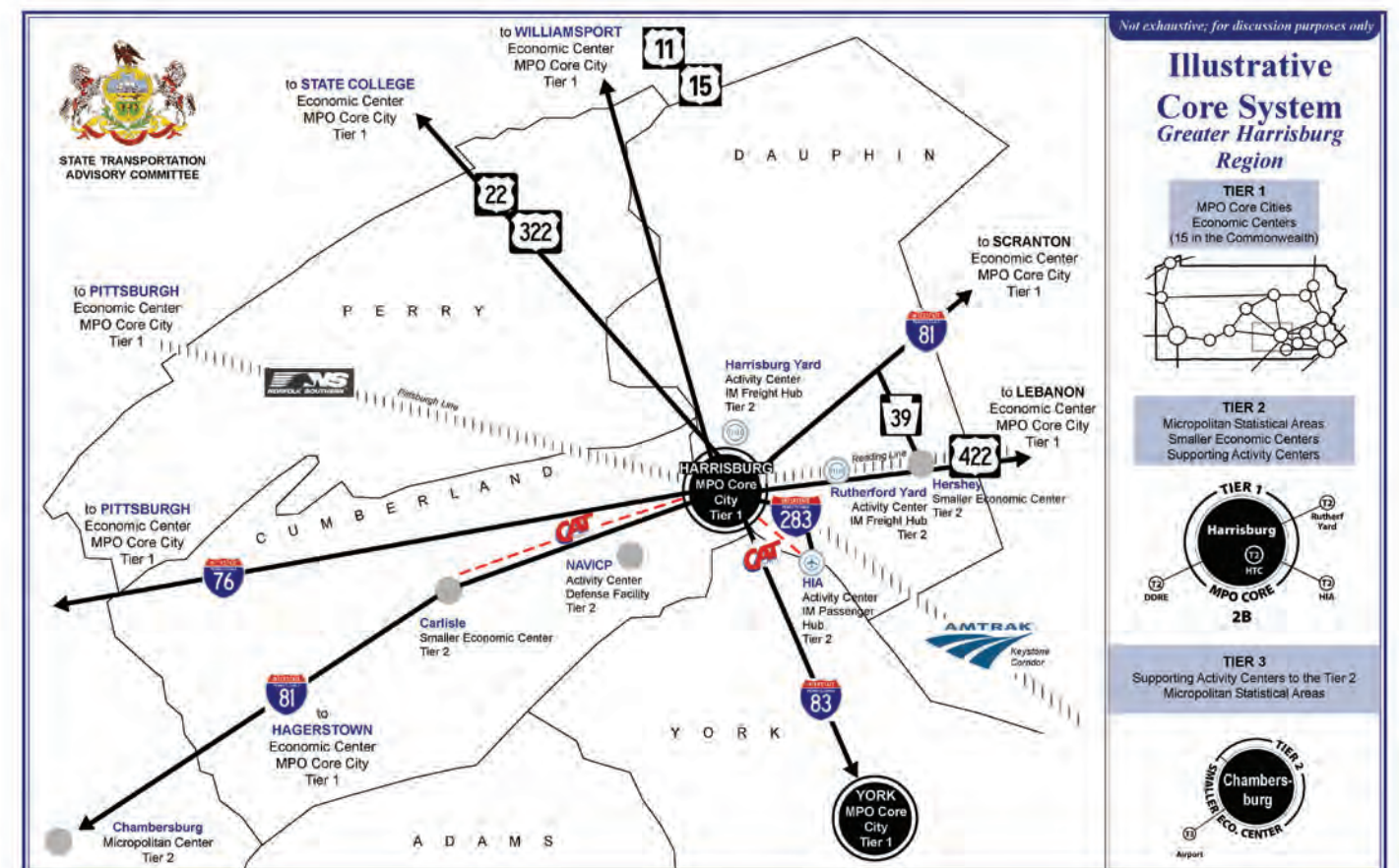
Tier 2 represents facilities or services that are outside of TAC's definition of a core system, but are significant at a regional level. In the future, PennDOT and its planning partners may examine these facilities for improved connection with the statewide core system.
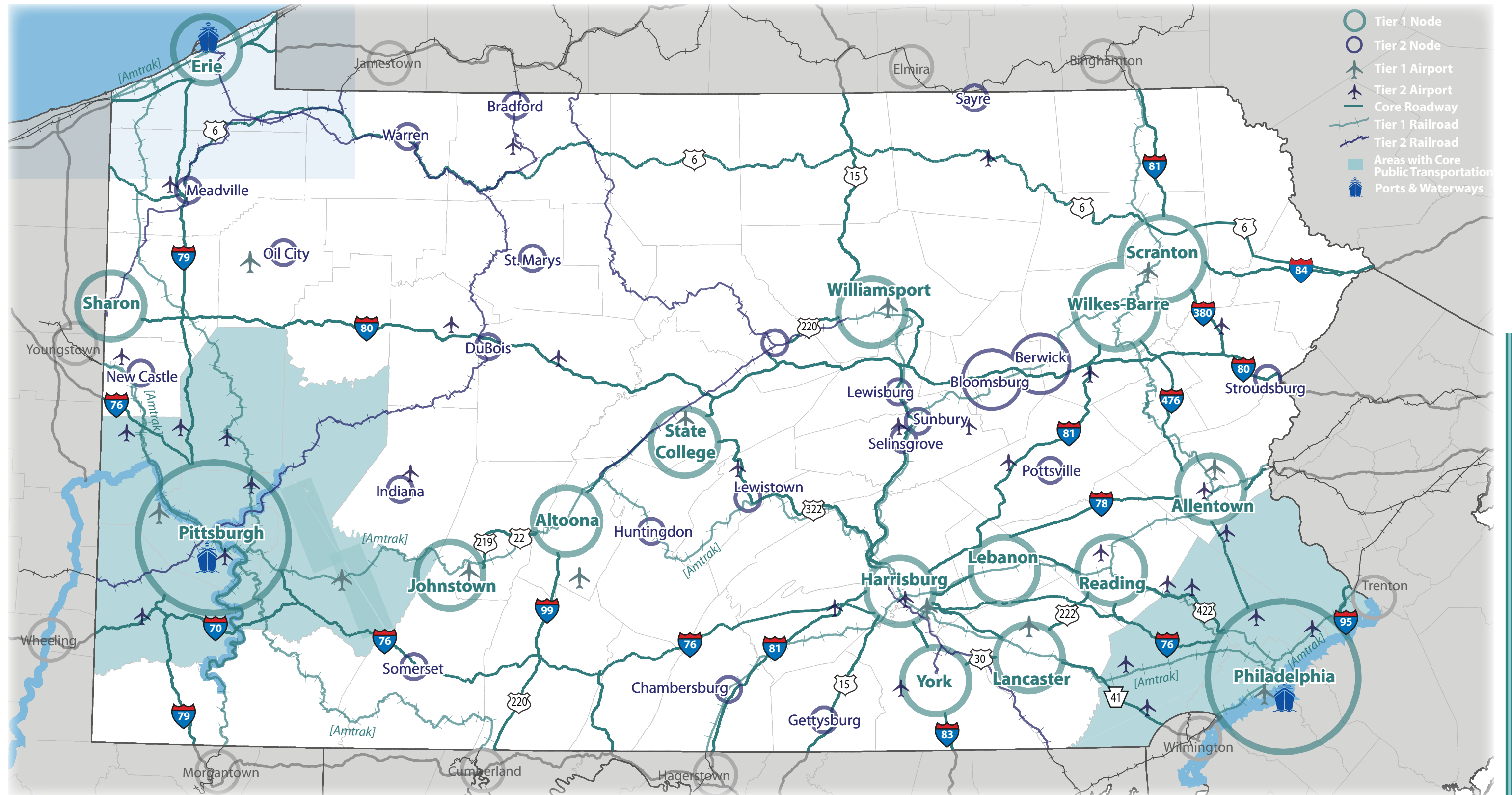
There are three types of nodes for Tier 2:
- Smaller economic centers, such as Carlisle.
- Areas that are neither truly metropolitan nor truly rural—officially classified as "urban clusters of micropolitan statistical areas"—such as Sayre.
- Activity Centers supporting Tier 1 cities. These are major origins and destinations that may be important to tourism (such as Steamtown near Scranton), defense (such as the Naval Inventory Control Point in Cumberland County), intermodal connectivity (such as Pitcairn Intermodal Yard), or other economic activity.

Tier 3 nodes are activity centers that support Tier 2 economic centers. For example, the Tier 3 St. Marys Municipal Airport supports St. Marys, a Tier 2 smaller economic center.

The map below illustrates the tiered concept for the greater Harrisburg area.

Illustrative Core System — Greater Harrisburg Region

STATEWIDE ILLUSTRATIVE CORE SYSTEM

Legend:
- ○ Tier 1 Node
- ○ Tier 2 Node
- ✈ Tier 1 Airport
- ✈ Tier 2 Airport
- — Core Roadway
- Tier 1 Railroad
- Tier 2 Railroad
- Areas with Core Public Transportation
- Ports & Waterways

Map labels: Erie [Amtrak], Jamestown, Elmira, Binghamton, Bradford, Sayre, Warren, Meadville, Oil City, St.Marys, Williamsport, Scranton, Sharon, Wilkes-Barre, Youngstown, DuBois, Berwick, Bloomsburg, Stroudsburg, New Castle, Lewisburg, Sunbury, Selinsgrove, State College, Pottsville, Indiana, Lewistown, Allentown, Altoona, Huntingdon, Pittsburgh, Johnstown, Lebanon, Reading, Harrisburg, Wheeling, Somerset, Chambersburg, York, Lancaster, Philadelphia, Trenton, Gettysburg, Wilmington, Morgantown, Cumberland, Hagerstown

This map is illustrative of the Core System concept. Detailed maps of Core System facilities and associated activity centers are available in the final TAC report. Intercity service between MPO core cities and other city pairs is also included in the Core Public Transportation definition but not mapped. The final TAC report details all the recommended modal criteria which categorizes facilities.

Note--The circles drawn around the economic centers are for illustration purposes only and do not represent a set geographic boundary.

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The State Transportation Advisory Committee (TAC) is an independent body that consults with and advises the State Transportation Commission (STC) and the Secretary of Transportation in planning, development and maintenance programs, and technologies for transportation systems. It includes 30 members: eight ex officio members, the Secretary of Transportation, the Director of the Governor's Office of Policy Development, Chairman of the Public Utility Commission, the Secretaries of Community and Economic Development, Education, Environmental Protection, and Agriculture; two members of the House of Representatives appointed by the Speaker and two members of the Senate appointed by the President Pro Tempore; and 18 additional public members, seven appointed by the Governor, six by the Speaker and six by the President Pro Tempore.

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