

ELEMENT 9 TRANSPORTATION SYSTEM OVERVIEW

The transportation system is one of the most important and permanent elements of any community. Within the Tri-County Region, most daily activities are influenced by the availability of pedestrian/bike networks, parking facilities, streets, highways, bus services, rail facilities and airports which comprise the entire transportation system. Changes, disruptions and/or deficiencies to the Region's transportation system have an immediate effect on the general welfare of residents and the productivity of businesses. It is the performance of this system that has a significant impact on the quality of life, land use development and continued economic development success within the Tri-County Region.

While the Tri-County Region's basic transportation system (air, rail, highway) is in place, there is still much planning to be done. Various social, technological and economic forces are creating significant changes in the volume and type of travel that must be accommodated in the Region. These changes are also affecting the quality of transportation services and facilities provided in the Region.

Like other community facilities and services in the Tri-County Region, certain aspects of the transportation system must be identified and considered as regional growth management and transportation planning policies in the Tri-County Region are gradually integrated.

Regional Transportation Planning

HARRISBURG AREA TRANSPORTATION STUDY (HATS)

In the Tri-County region and metro Harrisburg area, transportation planning and decision making is conducted by the Harrisburg Area Transportation Study (HATS). This organization is a federally designated Metropolitan Planning Organization (MPO) comprised of elected and appointed representatives of the federal, state and local governments in the Region, PennDOT and Capital Area Transit.

HATS was officially formed in 1962 in response to the requirements of the Federal Highway Act of 1962. The formal organizational structure of HATS is comprised of a Coordinating Committee, which is responsible for developing transportation plans and improvement programs, and a Technical Committee, which oversees and analyzes the preparation of plans and studies in the Region and makes recommendations to the Coordinating Committee. These two committees work together to examine, monitor and plan for the wide variety of transportation related initiatives in the Region.

Encompassing approximately 1,675 square miles which includes Cumberland, Dauphin and Perry Counties, Palmyra Borough and North Londonderry Township in Lebanon County, and Fairview Township, York County, HATS is responsible for transportation improvement programming and planning for the entire region. This process emphasizes short and long term problem solving and involves the public in the preparation of a Regional Transportation Plan (RTP), Transportation Improvement Program (TIP), Short Range Transit Plan, and Congestion Management System. The transportation capital planning cycle culminates with the preparation and approval of the biennial TIP, which constitutes the first four-year period of the Commonwealth's Twelve-Year Program.

The Twelve-Year Program is updated every two years and begins with a comprehensive list of project suggestions submitted by municipalities, to supplement the major regional transportation priorities identified in the RTP. Along with other identified projects, prioritization is given to the projects by the three county planning commissions, TCRPC, HATS and PennDOT's District 8-0 office. The program is fiscally constrained and must be approved by the State Transportation Commission and then funded by Federal transportation monies.

Other important transportation planning activities conducted by the TCRPC staff includes traffic counting and physical condition inventory work for the federally initiated Highway Performance and Monitoring System and administration of the Regional Ridesharing Program, a computer-based matching program for commuters interested in sharing a ride to and from work. HATS and TCRPC are also involved in congestion management planning, transit planning, and recommendations for the Commonwealth's Twelve-Year Program.

REGIONAL TRANSPORTATION GOALS

In 1999, TCRPC and HATS completed a transportation planning process designed to develop a necessary policy framework for transportation decision-making at the local, county, and regional levels. Based on requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Transportation Equity Act for the 21st Century (TEA-21), TCRPC and HATS worked in cooperation with a variety of local organizations to prepare the 20-year Regional Transportation Plan (RTP). The plan's time frame extends to the year 2030 and considers land use, intermodal connectivity, enhancement of transit service, and "needs" identified through the management systems.

In recent years, the concept of intermodalism has begun to surface in planning circles. The intermodal transportation planning concept and strategy explores not only the importance of developing a variety of alternative transportation modes, but also emphasizes that there should be enhanced linkages among the different modes. A primary goal of intermodal transportation planning is a fluent and efficient transportation system, or "seamless" transportation system.

The overall transportation vision adopted by HATS is provided in the RTP as follows:

"In coordination with area land use planning, to make our transportation system safe, efficient, environmentally friendly, and balanced while serving the mobility and accessibility needs of our residents, businesses and through travelers."

The RTP also articulates specific goals and objectives to support this vision and establish a set of activities to be undertaken in the HATS planning program.

TRANSPORTATION AND LAND USE

While, the TCRPC did revisit land use planning data and future land use planning in the late 1970's and more recently in the 1994 Regional Growth Strategy report, no formal region-wide planning policies for transportation planning in conjunction with changing land use conditions had been prepared by TCRPC or HATS until 1994.

In the early 1990's, land use planning at the county and regional levels began to receive renewed attention in the region due, in part, to (1) the requirements of the PA Municipalities Planning Code for County Comprehensive Planning; (2) a new revival in regional cooperation and regional "thinking" promoted by county and municipal leaders; and, (3) a strong interest denoted by HATS and TCRPC to improve "linkages" between transportation and land use planning in accordance with ISTEA and TEA-21.

Specifically in relationship to land use planning, the Regional Transportation Plan must consider:

- ISTEA – *"The likely effect of transportation policy decisions on land use and development, and the consistency of transportation plans and programs with the provision of all applicable short and long term land use and development plans."*
- TEA-21 – *"Protect and enhance the environment, promote energy conservation, and improve quality of life."*

These initiatives have lead to a renewed focus in regional growth patterns and continued coordination of land use and transportation planning.

Transportation System Overview

The Harrisburg urbanized area and the larger Tri-County region possess a sound transportation system, supporting the region's role as the Capital of the Commonwealth of Pennsylvania and a major residential and business center in Central Pennsylvania and the east coast of the United States. Transportation facilities in the form of local and intercity bus, passenger and freight rail lines, and passenger and freight airline services supplement an extensive highway network. Major highways such as the Pennsylvania Turnpike (Interstate 76), Interstates 81, 83 and 283 and US Routes 11, 15, 22, 322 and 422 converge and intersect within the Tri-County Region, providing linkages to other parts of Pennsylvania and beyond. As noted in the 1999 Regional Transportation Plan, the facilities and services, which comprise the transportation system must be maintained and improved in order to preserve the area's quality of life and to support business expansion and the location and development of new businesses.

Element 9 is not intended to provided a detailed reiteration and inventory of the region's transportation plan components. Instead, mapped and textual data from the 1999 Regional Transportation Plan is referenced and considered in defining the region's planned growth areas.

Detailed discussion and analysis is provided in Chapter 2 of the Regional Transportation Plan, addressing the following areas:

- Highway Functional Classification
- Traffic Volumes
- Special Highway Networks
- Goods Movement
- Public Transportation
- Major Traffic Generators
- Inter-City Bus and Passenger Rail
- Rail Freight
- Aviation
- Non-Motorized Modes - Bicycle/Pedestrian Plan (Updated 2001)
- Intermodal Facilities

Transportation and the Regional Growth Management Plan

Like other community facilities and services (sewer, water), existing and anticipated transportation facilities and services are an important factor in land use planning and the formulation of the Regional Growth Management Plan.

Basic transportation data related to commuting patterns, transportation facilities and transportation system access was be inventoried from the HATS Regional Transportation Plan. The data was analyzed using the TCRPC's Geographic Information System (GIS) to discover and define transportation service areas and other areas of transportation influence. Due to their general proximity to certain transportation facilities and intersecting modes of transportation, areas of transportation influence represent physical areas in the region with higher development potential. These corridors and nodes are identified and considered as the PGA is further defined in the planning process.

Transportation Influences and the PGA

In order for to physically determine potential PGAs, areas of transportation influence in the form of highway access points, trip generators, transit routes, commuter rail lines and airports must be considered. Six important regional transportation factors were considered in the formulation and delineation of PGAs for the Region. These factors include:

- Highway System Availability
- Major Employment Centers
- Regional Travel to Work Time
- Regional Availability of Other Modes of Transportation
- Planned Transportation Improvement Projects
- Regional Intermodal Transportation Potential

HIGHWAY SYSTEM AVAILABILITY

By having easy access to a major highway or road network, goods and services are made more readily available to a larger percentage of the population. In addition, businesses and industries are more conveniently accessed by trucks importing and exporting goods and by customers utilizing the goods and services.

Similar to commercial and industrial businesses, people often choose to reside near major roadways in order to expedite their travel to work and conveniently reach other destinations. As current development patterns suggest, interchanges of major roads, such as I-81 and Progress Avenue, I-83 and Union Deposit Road, and I-81 and the PA turnpike, tend to stimulate growth potential and the development of various services convenient to the traveler/commuter, such as gas stations, shopping centers, restaurants, convenience stores, and other commercial uses.

Based on US Census 2000, the average or mean travel time in the Tri-County Region is 25.4 minutes, 6.4 minutes more than in 1990. Perry County had the highest mean travel time of 34.7 minutes and Cumberland had the lowest of 20.5 minutes.

REGIONAL BUS SERVICE

Major highway corridors and interchanges that provide for highway availability (or other access points) have been inventoried and identified to consider their future development potential. The present arterial and collector road classifications were used in determining roadway and intersection areas of influence. In accordance with the Regional Transportation Plan, these are defined below.

- Arterial Roads
Arterial roads (both non-limited and limited access arterial roads) are defined as highways which are major traffic corridors, providing for traffic of substantial volumes. Generally, these highways should accommodate operating speeds of 35 to 55 miles per hour, and have an estimated Average Daily Traffic (ADT) count of 5000 vehicles or greater.
- Collector Roads
Collector roads include streets which connect local access highways to arterial highways. Generally, these streets should accommodate operating speeds of 35 miles per hour, and have an estimated Average Daily traffic (ADT) count of 400 to 5000 vehicles.

Using the GIS, a buffer area has been plotted on **MAP 9-1** to graphically illustrate areas where the presence of "Non-limited Access" highway infrastructure may influence future development. The buffer included:

- Non-Limited Access Arterial Buffer
A 0.5 mile buffer has been placed around all non-limited access principal arterial highways. A 0.25 mile buffer has been placed around all minor arterials.

Due to that fact that Limited Access Arterial Highways (I-76, I-83, I-81, PA 283, I-283 and portions of US 322) provide for only interchange access points and do not provide for direct access along their corridors, a buffer was not provided along these highway segments.

Similar to roadway corridors, classifying different interchanges is also important in identifying development potential. On **MAP 9-1** key interchanges on the region's transportation system have been divided into three categories based on the highway functional classification of the roads.

REGIONAL TRAVEL TIME TO WORK

Travel time to work is another important consideration for determining where people may wish to live, where transportation facilities are more efficient, and where future development may occur. People moving or relocating in an area often will attempt to locate near their place of employment so that the least amount of time will be spent on the daily commute to and from work. Similarly, businesses often desire to locate where efficient transportation facilities exist so that employees have easy access to work locations. When people and employers locate near major roadways, commuting times are decreased and travel patterns are simplified. While traffic congestion plays a key role in travel to work time, traffic problems usually have little significance to commuters with convenient access, or whom live in close proximity to their employment location.

Travel time zones were generated from US Census 2000 travel to work data. Based on "level of service" standards for travel, those commuters traveling less than 20 minutes to work, are considered to be located within convenient proximity to their work destinations. It is likely that residential and non-residential development will be desirable within this zone and along its edges. **MAP 9-2** depicts travel time to work zones.

AVAILABILITY OF OTHER MODES OF TRANSPORTATION

It is important for the Regional Growth Management Plan process to identify and examine the location and extent of the regional transit and rail services. Similar to other public facilities, residential and commercial development can influence and be influenced by the placement of transit and rail service corridors. Developing PGAs in the region that may be supportive of other modes of transportation requires that bus and rail service areas be identified and considered together with the highway system.

The Harrisburg metropolitan region has several public transportation providers and services. Capital Area Transit (CAT) is the regional transit authority offering fixed route bus service to Harrisburg and surrounding communities, including Carlisle, Cumberland County and Dillsburg, York County. CAT also has programs geared toward senior citizens and Special Efforts Transportation (SET) for those handicapped individuals in need of accessible public transportation. CAT has taken over the administration of the Dauphin County Transportation Department as of

January 1998. Cumberland County Transportation Department and Perry County Transportation Authority offer demand responsive services to consumers with special needs. The Yellow Cab Company also supplies accessible vehicles.

Several intercity bus companies also serve the Harrisburg area. Capitol Trailways, R&J Transportation, Fullington, Greyhound, and Hegin Valley Lines all provide service to the region. The 2001 Short Range Transit Plan lists additional information about each service and provides phone numbers for customer inquiries and ticket sales. Copies of the transit plan can be requested from TCRPC.

CAT is currently involved in a study to explore future transit opportunities for the region. A corridor, running from Carlisle, through Harrisburg, to Lancaster has been designated as the primary focus of the study and is now entitled, CORRIDOR ONE. Details of the study and how Corridor One was chosen can be found in Volumes I and II of CAT's Transit Alternative Study (1993, 1996). In July of 1997, a Modern Transit Partnership was formed, with both general and specific goals in mind. The partnership's mission statement is as follows:
"To support and promote public transportation, with the ultimate goal of bringing rail service to the Region."

REGIONAL COMMUTER RAIL SERVICE

The Tri-County Region has been served by commuter rail for many years. Today, Amtrak provides rail service into and out of the Harrisburg Transportation Center at 4th and Market Streets in Harrisburg. A secondary local commuter rail stop is also available in the Borough of Middletown, Dauphin County. The location and availability of rail transit service is another important transportation service.

Harrisburg International Airport (HIA) is in the process of building a new rail station adjacent to the airport along PA 230. This new station will connect Corridor One and Amtrak users directly to HIA.

REGIONAL COMMERCIAL/FREIGHT RAIL SERVICE

While the level of commercial freight rail activity has diminished since its peak in the 1950's and early 1960's, the region remains a strategic location in relation to major cities and the existing rail infrastructure.

Norfolk-Southern and CSX have made full acquisition of Conrail's properties. It is anticipated as the rail transportation industry begins to reorganize into the next century, the region, due to its location, appears to be in a position to offer great promise for expansion of rail freight service.

AIRPORT FACILITIES The Tri-County Region has several large airport facilities and "airstrips" which offer a variety of services to residents and business of the Region.

Major Airports:

- Harrisburg International Airport (HIA)
- Capital City Airport
- Carlisle Airport

Minor Airports:

- Bendigo Airport (Rush Twp, Dauphin County)

Over the past several years, privatization has become a primary issue in respect to the region's airports. Ownership of HIA and Capital City Airports has been transferred from Commonwealth interests to the Susquehanna Area Regional Airport Authority. Comprised of local leaders and officials, this authority will be responsible for the overall operations and promotions of the region's two largest airports. In an effort to link transportation and development, a major goal of the authority is to enhance regional economic growth by promoting the development of unused or under-used land within close proximity to the airports and related transportation services. The Authority has recognized the potential for industrial park development, distribution centers, hotels, warehouses and other related uses.

Harrisburg International Airport is the leading commercial airport in South Central Pennsylvania. The airport has direct service to a number of East Coast and Midwest markets, and connections from these airports to hundreds of airports nationwide. The airport also handles significant freight traffic, particularly for Federal Express.

PLANNED TRANSPORTATION IMPROVEMENT PROJECTS

There are always a variety of transportation system improvement projects taking place in the Region in any given year. Ongoing and projected projects are as follows:

- PROJECT LIST:
 - I-81 and I-83 (various improvements)
 - U.S. 11/15 Safety Improvements
 - St. John's Church Road Ramps
 - South Third Street Extension (Southern Gateway Project)
 - Lemoyne Transfer Center
 - Corridor One

To what extent each project may impact the regional transportation system, in terms of normal road conditions and traffic flow, is an important consideration. PennDOT and HATS are continuously looking for ways to improve the quality of our regional transportation network, including the efficiency of travel during construction periods.

REGIONAL INTERMODAL TRANSPORTATION POTENTIAL

HATS and PennDOT have recognized in today's society one mode of transportation cannot stand alone in meeting the complex travel needs and demands for transportation services. Even when more than one mode of transportation exists in a region, each transportation service cannot exist independently and remain successful.

Characteristics of a seamless transportation system may include:

- transit schedules coordinated for minimum transfer time;
- buildings designed for safe, efficient pedestrian movement
- one-ticket/one-ride fare structures, and;
- advanced travel information systems, among other factors, that make mass transit more efficient and desirable.

In the Tri-County Region, the Harrisburg Transportation Center at 4th and Market Streets has the potential to be a viable intermodal facility. Passenger rail service, intercity buses, and taxi service presently utilize this facility.

Other intermodal opportunities being explored and implemented include:

- Bus service and rail service to the airports;
- Enhanced shuttle, taxi, and limo service to train stations and airports;
- Bike racks on buses
- Rails to Trails initiatives
- Bicycle and Pedestrian path and trail improvements
- Additional park and ride facilities near interchange areas
- HIA Intermodal