

TRANSPORTATION PLAN

■ OVERVIEW OF THE TRANSPORTATION PLAN

According to *Bridges and Tunnels of Allegheny County* (www.pghbridges.com), geology has exerted a strong influence on the development of transportation in Allegheny County. The County is located on the Allegheny Plateau. Our three rivers, together with their many tributaries, formed bluffs and steep slopes as they cut their way through layers of rock for millions of years. Long ago, Native Americans traveled on trails through the area, often following the tops of the ridges to avoid river and stream crossings.

Today, Pittsburgh and its suburbs are known for steep hillsides and streets requiring steps for sidewalks. Other metropolitan locations may have similar topography, but generally they are not as heavily urbanized as Allegheny County. Not surprisingly, our topographic features require that we have thousands of bridges and numerous tunnels. It is virtually impossible to travel any notable distance without crossing a bridge or passing through a tunnel here. Pittsburgh is known as the “City of Bridges” for the number and variety of structures spanning our watercourses.

Transportation has been instrumental to Allegheny County’s development and remains vital to its economic health. The County’s transportation system is comprised of six basic modes that combine to create the network of infrastructure which moves people, goods and services. The transportation network is depicted on Map 4I.1.

The *Allegheny Places* Transportation Element is organized into sections featuring these transportation modes:

- ROADWAYS AND BRIDGES
- PUBLIC TRANSIT
- BICYCLE AND PEDESTRIAN
- AIRPORTS
- RAIL FREIGHT
- WATERWAYS

For each mode covered in the Plan, you will find Today’s Conditions, Issues and Analysis, and Recommendations.

RELATIONSHIP TO THE FUTURE LAND USE PLAN

The purpose of the Transportation Plan is to maximize utilization of the existing transportation network, target new investment in the system for maximum return and provide all people equal access to growth opportunities, especially those associated with ‘Places’ designated on the Future Land Use Plan (see Map 4A.1).

The Future Land Use Plan focuses development in designated ‘Places’. Most ‘Places’ are along existing transportation corridors and all are highly accessible to each other, as well as to the region. One of the key benefits of concentrating development, investment and activities in ‘Places’ is that transportation alternatives can be developed that provide choices and options for movement between ‘Places’. This mobility will ensure a high level of access to jobs, shopping, schools, and other destinations. We have made choices resulting in the ability to concentrate investments for maximum effectiveness. Visible, usable, quantifiable and dramatic results can occur in a much quicker time frame by targeting funds to ‘Places’.

The County’s economic development policies for attracting new business as well as retaining existing businesses are dependent on efficiently moving people, goods and services. Therefore, it is critical that actions and recommendations promote a safe and dependable transportation infrastructure with maximized inter-connectivity for people as well as all types of freight movements. We want the best functioning system we can achieve, which requires careful, thoughtful planning and investment.

Provide all people equal access to growth opportunities, especially in defined Plan ‘Places’.



TRANSPORTATION PLANNING FOR THE REGION

The Region

Allegheny County's transportation system is part of the regional transportation network. Efficiently managing this network requires regional cooperation and coordination with all counties who are members of the Metropolitan Planning Organization (MPO). The MPO is the Southwestern Pennsylvania Commission (SPC). SPC is comprised of ten counties and the City of Pittsburgh. Regional coordination is critical to ensure that transportation systems are maintained, congestion is managed, and the safe and efficient movement of people and freight is attained. SPC's website contains extensive related information and can be accessed at:

www.spcregion.org.

The Planning Partners

Transportation planning in Allegheny County is a cooperative effort between the County, PennDOT, the City of Pittsburgh and the Port Authority of Allegheny County (PAAC); all together they comprise the transportation Planning Partners. SPC is the regional organization where the 10-county MPO's Planning Partners come together to produce the official, funded Transportation Improvement Program (TIP), and the Long Range Transportation and Development Plan (LRP). The most recent LRP is the 2035 LRP. The LRP is a strictly fiscally-constrained plan. The most recent LRP was developed through participation in SPC's "Project Region". The resulting document is named "2035 Transportation and Development Plan for Southwestern Pennsylvania". Chapter 6 of the 2035 Plan contains the most recent listings of programmed transportation projects the Planning Partners expect to construct through 2035 (see Supporting Documents). "Project Region" and the resulting plan integrated transportation planning and economic development into a coordinated vision, with associated actions. Included is the identification of needs and resources, development of a range of potential alternatives, and recommendations for implementing specific solutions on a regional level. The regional plan is consistent with County Plans. Major proposed transportation projects are shown on Map 4I.2.

Public Involvement

Public involvement is critical to transportation planning. SPC utilizes public participation panels (PPPs) appointed by each County. Together, they elicit the input and active involvement of individual stakeholders, groups and entire communities from the earliest planning stages of transportation projects and processes through completion.

Councils of Government

There are eight Councils of Government (COGs) in Allegheny County. The COGs are voluntary coalitions of municipalities organized by geographic area. Most of our 130 municipalities belong to a COG. The COGs act to:

- Discuss and bring into focus regional challenges and opportunities
- Collect and maintain data of a regional interest
- Facilitate improved communication, coordination and intergovernmental cooperation between all levels of government
- Facilitate cooperative agreements
- Seek technical assistance
- Coordinate Federal, State and Local programs of regional importance

The COGs hold regular meetings to discuss issues, including transportation needs.

The Pennsylvania Turnpike Commission

The existing, and planned, Pennsylvania Turnpike Commission roadway system also plays a vital role in both our transportation system and future land use in Allegheny County. The main PA Turnpike issue in the future will be obtaining funds for the completion of the Mon/Fayette Expressway and Southern Beltway Projects in Allegheny and Washington Counties. Programming for the Turnpike Commission's projects requires coordination through the SPC's Transportation Improvement Program and Long Range Plan. Funds to program new construction for the Turnpike are expected to come from non-traditional sources including partnerships and other creative finance methods.

ROADWAYS AND BRIDGES

■ TODAY'S CONDITIONS

FUNCTIONAL CLASSIFICATION

Highways are classified according to their function and the type of service they provide. The functional classification system serves as both a guideline for planning as well as means for determining funding for maintenance and upgrades. Table 4I.1 details the functional class breakdown and the definition of each class.

Table 4I.2 provides the total linear lane miles for each functional class within Allegheny County and Map 4I.3

shows the Allegheny County highway network by functional classification.

VEHICLE MILES TRAVELED

Figure 4I.1 shows that in recent years, average vehicle miles traveled (VMT) in the County increased. As development patterns spread out, people drive more frequently and drive longer distances to reach destinations. While the general trend for VMT is increasing, fluctuations do occur and are a response to shifts in the economy. The number of trips also increases due to changes in household patterns and locations of activities.

TABLE 4I.1 – Highway Functional Classes

FUNCTIONAL SYSTEM	SERVICES PROVIDED
Arterial	Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control. Includes interstates, expressways and freeways.
Collector	Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.
Local	Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

Source: AASHTO Green Book



Photo credit: McCormick Taylor

TABLE 4I.2 – Functional Classification of Highways in Allegheny County by Linear Mile

FEDERAL AID					SUB TOTAL	NON FEDERAL AID		SUB TOTAL	TOTAL
Interstate	Other Freeway/ Expressway	Other Principal Arterial	Minor Arterial	Major Collector		Minor Collector	Local Roads		
94	69	359	596	468	1,586	21	4,132	4,153	5,739

Source: PennDOT Bureau of Planning and Research, 2005 Highway Statistics



ROADWAYS AND BRIDGES

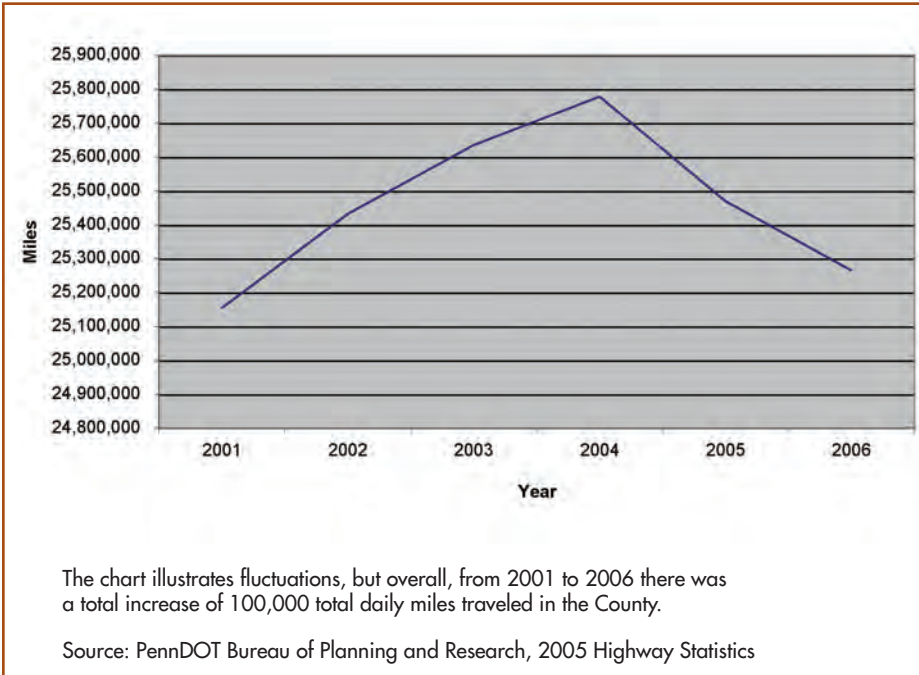


Figure 4I.1 – Total Daily Miles Traveled in Allegheny County

Annual vehicle miles traveled in Allegheny County are expected to increase in the next few decades, unless changes in development patterns occur that result in people needing to travel fewer miles. Figure 4I.1 shows that between 2001 and 2004 there was an increase of 600,000 total daily miles traveled. Between 2004 and 2006 there was a decrease of 500,000 total daily miles traveled in Allegheny County. At the highest fluctuation there was an increase of just over 2% of daily miles traveled, and there has been an overall increase of 100,000 daily miles traveled during the entire period.

CONGESTION

The Southwestern Pennsylvania Commission (SPC) manages the federally mandated Congestion Management Process (CMP) for the 10-county region that includes Allegheny County. Within the County, there are approximately 64 corridors that are included in the program. Table 4I.3 lists the 19 congested corridors that were chosen to be analyzed for *Allegheny Places* with their corresponding average weekday

traffic. Average Daily Traffic (ADT) for 2005 was used to determine the effects of the *Allegheny Places* land use scenarios, by comparing the base year traffic (2005) with projected traffic in 2025. *Allegheny Places'* future plan year is 2025.

In May 2007 SPC's Congestion Management Process ranked the Parkway West Corridor (I-376 between Downtown Pittsburgh and Pittsburgh International Airport) as experiencing the highest traffic delay in the region.

TRAFFIC SIGNALS

Allegheny County has over 1,600 signalized intersections. The City of Pittsburgh has 583 signalized intersections. A total of 106 municipalities in the County maintain signals. In Pennsylvania, traffic signals are generally maintained and operated by the municipality, whether the intersection is owned by the state, county or local municipality, and regardless of which entity maintains the roadways.

CRASH STATISTICS IN ALLEGHENY COUNTY

Of Pennsylvania's 67 counties, Allegheny County had the second highest number of reported crashes as well as the second highest number of traffic-related deaths in 2004. The number of crashes declined slightly every year from 1999-2004, but the number of traffic deaths fluctuated, as shown in Table 4I.4. Approximately 20% of these deaths were pedestrians. This information is tracked over time to determine which locations require additional safety measures.

ROADWAY OWNERSHIP

Of all the counties in Pennsylvania, Allegheny County has the highest number of roads owned by local municipalities. Local roads are maintained by approximately 130 public works

ROADWAYS AND BRIDGES

TABLE 4I.3 – Congested Corridors

CORRIDOR	LOCATION	2005 Daily Volume
Parkway West (Future I-376)	Fort Pitt Tunnels	118,900
Parkway East (I-376)	Squirrel Hill Tunnels	109,000
I-79	Wexford	102,200
Parkway North (I-279)	McKnight Rd	76,200
PA 60	Pittsburgh International Airport	72,100
I-79	Neville Island Bridge	60,300
Liberty Bridge	PJ McArdle Roadway, Pittsburgh	56,500
PA 28	31st St Bridge	44,600
PA 51 (Saw Mill Run Blvd)	Liberty Tunnels	40,800
PA 8	Etna	40,500
US 19 Truck (West Liberty Ave)	Liberty Tunnels	35,500
PA 65	McKees Rocks Bridge	34,500
US 19 (Banksville Rd)	Parkway West	33,900
PA 885 (Lebanon Church Rd)	PA 51	30,000
PA 121 (Greentree Rd/Cochran Rd)	Parkway West	27,600
Business US 22	Monroeville Mall/Thompson Run Bridge	23,700
US 30	Westinghouse Bridge	20,300
PA 88 (Library Rd)	PA 51	19,300
PA 837 (Duquesne Blvd/8th Ave/Carson St)	Kennywood	17,700

Source: SPC Cycle 7 Model

TABLE 4I.4 – Number of Crashes and Traffic-Related Deaths in Allegheny County

YEAR	2000	2001	2002	2003	2004	2005
Total Crashes	13,798	13,850	12,625	12,785	12,415	12,105
Number of Deaths	73	81	110	79	77	104
Number of Pedestrian Deaths	16	15	23	21	16	14

Source: PennDOT 2005 Crash Facts and Statistics



ROADWAYS AND BRIDGES

departments, except in cases where municipalities have voluntarily joined together with their Council of Government (COG) to share the responsibility of road maintenance, among other services.

Allegheny County owns more lane miles of road than all other counties in the Commonwealth combined.

Allegheny County is responsible for maintaining 800 lane miles of road. The ownership pattern of those lane miles is fragmented and lacks continuity. Figure 4I.2 illustrates road ownership in the County.

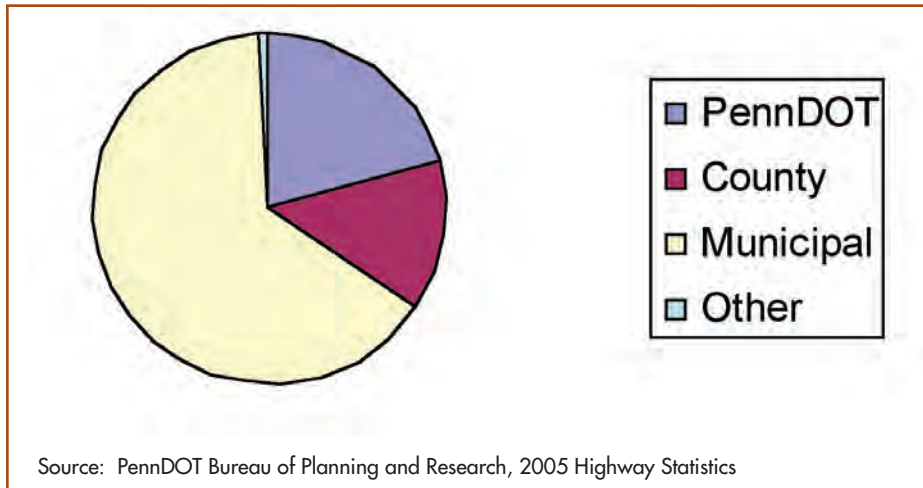


Figure 4I.2 - Road Ownership in Allegheny County by Lane Mile

BRIDGE OWNERSHIP

Within Allegheny County boundaries, there are 1,197 bridges which are 20 feet or greater in length, of which PennDOT owns 804, the County owns 174, municipalities own 186, and 33 are owned by other entities. Allegheny County also owns and maintains another 346 bridges which are less than 20 feet in length for a total of 520 bridges owned by the County. Inside the borders of Allegheny County, PennDOT owns another 349 bridges less than 20 feet in length for a total of 1,153 bridges, according to the

March 2008 Allegheny County Road and Bridge Ownership Evaluation report (see Supporting Documents).

The following major bridges are owned by Allegheny County:

- Mansfield Bridge
- Homestead Grays Bridge
- Rankin Bridge
- Glenwood Bridge*
- Rachel Carson Bridge
- Andy Warhol Bridge
- Roberto Clemente Bridge
- Sixteenth Street Bridge
- South Tenth Street Bridge

* The Glenwood Bridge is jointly-owned. The structure, deck and sidewalks are each owned by different entities. The County owns the superstructure, the city owns the sidewalks and PennDOT owns the pavement.

BRIDGE CONDITION

The condition of bridges is determined by inspections and summarized in a Sufficiency Rating. A Sufficiency Rating is a rating from 0 to 100, where 0 is entirely insufficient or deficient and 100 is entirely sufficient. The calculated rating indicates the bridge's sufficiency

or capability based on the following factors:

- The structure's adequacy and safety (accounts for 55% and based on inspection data)
- The structure's serviceability and functional obsolescence (accounts for 30% and based on ability of bridge to meet current traffic conditions)
- How essential the bridge is for public use (accounts for 15%)

The Sufficiency Rating is considered by the federal government when a state or county requests federal bridge dollars to improve the condition of the bridge. Bridges with low sufficiency ratings are eligible for more funds:

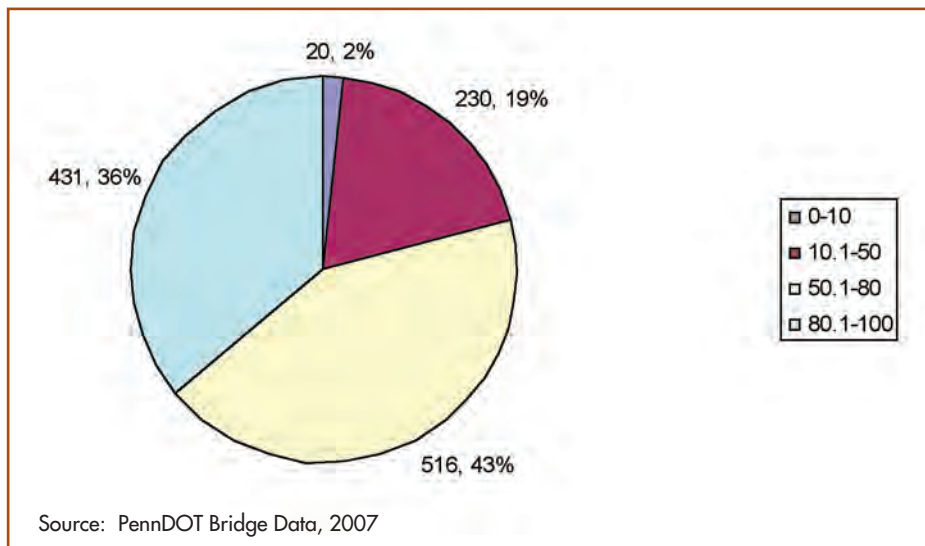
ROADWAYS AND BRIDGES

Sufficiency Rating	Funding Eligibility
80 – 100	Not eligible
50 – 79	Eligible for costs to rehabilitate bridge
0 – 49	Eligible for costs to replace bridge

As of August 2007, of the 1,153 State-owned bridges in Allegheny County on state routes, 229 or 20% have a sufficiency rating that qualifies them for funding for repair or replacement. Ten of these bridges have the lowest sufficiency rating, which places them in serious need of repair.



Photo credit: Kevin Smay



As all bridges in the County get older, more will fall into the category of being in disrepair or as having substandard conditions. This will increasingly require substantial funding be targeted toward their upgrade, maintenance and replacement. Regular maintenance activities may extend the life of a bridge. But, with heavy dependency upon bridges to maintain connectivity countywide, bridges will get precedence over roads for funding as they deteriorate. The bridge projects do compete with other types projects on the TIP. Therefore, the poor condition of bridges in Allegheny County will negatively impact the amount of funds available for highway, road and other transportation projects for the foreseeable future.

Figure 4I.3 indicates that in 2007, 2% or 20 of the bridges in Allegheny County over 20 feet in length have a sufficiency rating of 10 or below. Those 20 bridges are listed in Table 4I.5. In addition, there are another 230 bridges that are eligible for replacement and 516 that are eligible to rehab or refurbish. In total there are 766, or almost 64% of bridges located in the county, eligible for some type of repair. This is an incredible number of bridges that will need work over the next decade. These numbers do not account for the numerous bridges providing critical connectivity which are under 20 feet in length.

With insufficient funds to cover the costs for the large number of bridges falling into disrepair, an increase in transportation funding is necessary to complete just the required maintenance projects, not to mention any new capacity projects. Even though PA Act 44 was passed in 2007, and provided funding for bridge maintenance and rehabilitation, additional funds will still be needed. Recently the Governor's proposed budget for 2009 included a request for even more bridge funding. The outcome of the final budget will not be known until the 2009 budget is passed this year.

In Allegheny County, 766 - or almost 64% of all bridges over 20 feet in length - are eligible for some type of repair.

Figure 4I.3 – Sufficiency Rating of All Bridges in Allegheny County over 20 feet in Length



ROADWAYS AND BRIDGES

CURRENT FUNDING AND PROJECT PROGRAMMING

Almost all major transportation projects, whether maintenance or new capacity projects, involve the use of Federal funds. Federal regulations require the SPC, as the designated Metropolitan Planning Organization (MPO) for

the Pittsburgh Transportation Management Area, to develop and maintain a TIP and a Transportation Long Range Plan (LRP). The TIP identifies the region's highest priority transportation projects, develops a multi-year program of implementation, and identifies available federal and non-federal funding for the identified projects. The TIP covers a four-year period of investment and is updated every two

TABLE 4I.5 – Bridges in Allegheny County with a Sufficiency Rating < 10 as of August 2007

NAME	OWNER	TYPE	SUFFICIENCY RATING	STATUS
@ INT.W/SYGAN-BLYTHE RD	State	Steel, Girder riv/thru	2	Posted
GREENSBURG PIKE OVER RT 30	State	Steel, Girder riv/thru	2	Posted
BLVD ALLIES OVER FORBES AV	State	Steel, Girder riv/thru	2	Posted
GR01 GEORGE'S RUN NO. 1	County	Concr. encased steel, I beams	2	Open
HV04 HOMEVILLE CR # 4	County	P/S, Box beam - adj	2	Posted
301118 AT WEST PARK	Railroad	Steel, Truss - thru	2	Posted
1 MI.EAST OF SR 2045	Railroad	Steel, Girder riv/thru	2	Posted
HULTON BRIDGE	State	Steel, Truss - thru	3	Open
BETHEL PARK O/N&W RR	Railroad	Steel, Girder riv/thru	3	Posted
P09202 KENMAWR BRIDGE	Railroad	Steel, Girder riv/thru	4	Posted
DL06 LIT DEER CRK NO. 6	County	P/S, Box beam - adj	4	Posted
MT05 MONTOUR RUN NO. 5	County	P/S, Box beam - adj	4	Open
NORTH AVE-BRIGHTON RD	Railroad	Steel, Girder riv/thru	4	Posted
P09203 WALL BOROUGH	Railroad	Steel, Girder riv/thru	4	Posted
22'N.E. LINC-ELIZ LINE	State	Concr. encased steel, I beams	6	Posted
PI37 PINE CREEK TRIB#37	County	Steel, I beams	7	Open
449001 OVERLAND ST (XI01)	Municipal	Steel, Girder riv/thru	7	Posted
SQ02 SQUAW RUN NO. 2	County	P/S, Box beam - adj	9	Open
1/2 MI. S.E. OF SR 0050	State	Steel, Girder riv/thru	9.8	Open
1/2 MI.N.W.CORLISS TUNNEL	State	Concrete(in place), Slab (solid)	9.8	Open

ROADWAYS AND BRIDGES

years through a cooperative effort of local, county, state and federal agencies, including participation by the general public. The LRP is similar in nature and covers a 20-years time frame. Transportation projects with any amount of federal funding must be included in both the fiscally-constrained SPC TIP and LRP.

Allegheny, Armstrong, Beaver, Butler, Fayette, Lawrence, Indiana, Greene, Washington, and Westmoreland Counties, and the City of Pittsburgh, are the ten counties and the city that comprise our region. Together they comprise the membership and geographic coverage of SPC, our MPO. Major transportation projects being pursued in Allegheny County must be part of official SPC transportation plans and programs to receive federal funding.

SPC's current TIP (Years 2007-2010) contains the following funding plan for highway and bridge projects in Allegheny County and the City of Pittsburgh. Highways and bridges receive funding from the "Title 1" Federal category, and bridges also receive state bridge bill funds.

SPC TIP Year 2007-2010 highway funding levels, including TIP funds for City, County and PennDOT projects in Allegheny County, total \$185,400,000 average annual funding per year, and \$741,900,000 total for this four-year TIP period.

For updated information, you can view the TIP on SPC's website at www.spcregion.org. The TIP is adjusted frequently; checking SPC's website will update information included in this plan on the date the plan went to print. Once on SPC's website, click on Transportation, then on the TIP, then scroll down and choose the Allegheny County TIP.

The significance of SPC funding levels is twofold. First, the SPC program is under limitations of fiscal constraint. Regional funding levels are a budgeted portion of the Commonwealth's overall transportation program. Therefore, the amount of federal and matching state funding is capped. Second, the amount of funding for Allegheny County including the City of Pittsburgh is also a function of the transportation needs of all the counties comprising the SPC Region. Within SPC's region, there are three PennDOT districts. Allegheny County is located in District 11-0 with Beaver and Lawrence Counties. PennDOT has established a set of criteria to ensure equitable distribution of anticipated Title I (or highway and bridge) funding. Criteria considered are data such as roadway lane miles, vehicle travel data,

bridge condition, air quality attainment status, percent of urban population and accidents at rail-highway crossings. However, once the block of funds are received by a PennDOT district, the funds may not be targeted to specific counties based on those formulas. There are many reasons for this discussed in other sections of the Transportation Element and supplemental materials.

FUTURE TRAFFIC VOLUMES

For this plan, future highway use was projected to year 2025 by a traffic modeling methodology established to work in conjunction with SPC's transportation model. SPC provided its current highway network files and associated Cycle 7 data to be used as a base from which traffic produced by the proposed land use scenarios could be projected. The model assumes that the PA Turnpike's Mon Fayette Expressway and Southern Beltway are constructed.

Base year traffic volumes on key routes in Allegheny County were compared between the proposed land use scenarios. These volumes are shown in Table 4.6. The largest increase in traffic volumes are near the Pittsburgh International Airport along PA 60 (I-376) due to targeted development in that area of the County, illustrated in the Future Land Use Plan. These volumes are expected to grow by 160%. Other corridors that grow significantly are Parkway West/I-376 near I-79, Route 28 and Route 65. Negative growth in the volumes is a result of the Mon Fayette Expressway being included in the model, as it takes some of the pressure off existing routes. Additional evaluation measures were also developed such as total vehicle miles traveled and total delay times among others. Further documentation on the methodology, as well as the complete set of results, can be found in the Supporting Documents.

In 2008 the full length of the Parkway West Corridor/I-376 is currently congested and backing-up during the AM and PM peak hours. By 2025 the Parkway West Corridor/I-376 is expected to be backed-up continuously for the entire day. It is obvious that we must plan to mitigate this prediction. The Parkway West (I-376), from Pittsburgh International Airport to Downtown Pittsburgh and on to Oakland, is the main spine highway of the County and the region. It is the lifeline for economic development opportunities, and it is the most heavily traveled highway in Southwestern Pennsylvania.



ROADWAYS AND BRIDGES

TABLE 4I.6 – 2025 Traffic Projections for PennDOT Congested Corridors

CORRIDOR	LOCATION	2005	2025	% CHANGE
PA 60	Pittsburgh International Airport	72,100	187,700	160%
Parkway West (Future I-376)	West of I-79	95,195	176,259	85%
I-79	Neville Island Bridge	60,300	104,700	74%
PA 28	31st St Bridge	44,600	72,200	62%
PA 65	McKees Rocks Bridge	34,500	54,200	57%
I-79	Wexford	102,200	144,700	42%
Parkway North (I-279)	McKnight Rd	76,200	101,300	33%
US 19 Truck (West Liberty Ave)	Liberty Tunnels	35,500	45,800	29%
PA 88 (Library Rd)	PA 51	19,300	24,800	28%
Parkway West (I-279, SR 22, US 30)	Fort Pitt Tunnels	118,900	148,100	25%
Liberty Bridge	PJ McArdle Roadway, Pittsburgh	56,500	70,500	25%
PA 8	Etna	40,500	49,300	22%
PA 51 (Saw Mill Run Blvd)	Liberty Tunnels	40,800	48,400	19%
US 19 (Banksville Rd)	Parkway West	33,900	38,900	15%
PA 885 (Lebanon Church Rd)	PA 51	30,000	32,700	9%
Parkway East (I-376)	Squirrel Hill Tunnels	109,000	106,500	-2%
PA 837 (Duquesne Blvd/8th Ave/Carson St)	Kennywood	17,700	17,100	-3%
PA 121 (Greentree Rd/Cochran Rd)	Parkway West	27,600	26,100	-5%
US 30	Westinghouse Bridge	20,300	18,600	-8%
Business US 22	Monroeville Mall/Thompson Run Bridge	23,700	15,600	-34%

Source: SPC Cycle 7 Model, URS

ROADWAYS AND BRIDGES

■ ISSUES AND ANALYSIS

This section examines ways to improve mobility on the County's roadways and bridges and to provide for effective maintenance.

KEY CHALLENGES

In developing the Transportation Plan, the Transportation Resource Panel helped to identify these key challenges:

- There is an overall transportation funding shortfall to adequately address needed maintenance. And, there is very little opportunity for new capacity additions to the roadway system in Allegheny County. That situation was not fully addressed by recent legislation (PA Act 44) which provided some new funding statewide, but did not cover the entire shortfall, and Act 44 may not receive needed final federal enabling approvals for full implementation.
- Increasing congestion levels on corridors of concern such as I-376 (Parkways West and East), I-79 and Route 28 will limit opportunities and plans for economic development, and will result in more time spent in vehicles for freight operators and all citizens.
- Core areas such as Downtown Pittsburgh and Oakland have internal mobility problems that restrict movement and connectivity with other areas. Lack of a 'Transit First' (bus priority) traffic management policy negatively affects Downtown bus operations.
- Cost-effective congestion reduction strategies, such as traffic signal retiming projects, are underutilized. Other alternatives such as restricting transit traveling on core city streets may present viable options to congestion in Pittsburgh and Oakland.
- There is a lack of options for intermodal and multi-modal connectivity. These types of connectivity would create more options and modes for efficient travel.
- There is a lack of access management strategies on poorly functioning corridors. This situation can create unsafe conditions and high congestion levels.
- Disjointed or fragmented local municipal, County and State roadway ownership creates obstacles to effective road program strategies.

- There is a lack of attention to funding for 'Complete Streets', which have multi-modal functionality.

The following provides an understanding of these issues.

TRANSPORTATION FUNDING SHORTFALL

The Commonwealth's dedicated roadway funding sources have not kept pace with inflationary roadway/bridge construction cost increases. Additionally, federal funds have not increased to the Commonwealth of Pennsylvania, relative to many other states, and the nationwide federal allocation fund is predicted to become insolvent by 2009.

Inadequate Transportation Funding does not meet state, county and municipal maintenance cycles due to:

- The Commonwealth sponsored "liquid fuels allocation system for counties" is based solely on the ratio of each County's average gas consumption in the years 1927, 1928 and 1929. Allegheny County has 54% of the County-owned roads in Pennsylvania and gets 13% of the liquid fuels allocation. In comparison Philadelphia has no county roads, but receives 15% of the statewide county funds and receives additional funds that only cities and local municipalities are eligible for; those other local municipal allocations are based upon road miles and population.
- The statewide allocation to the Commonwealth's MPOs does not directly consider a county's roadway and bridge systems in their allocation process. Only State owned/maintained systems are considered. Therefore Allegheny County's situation, with more ownership of roads than all the rest of the counties in Pennsylvania combined, and more and bigger bridges owned by Allegheny County, by far, than any other county, is not adequately addressed in the State funding process.
- Additionally, the allocation formula also does not consider the severe impact of topography and geologic conditions on the cost of transportation systems, and difficulty of connectivity and maintenance, in regions of the State such as Allegheny County that have these more challenging conditions.



ROADWAYS AND BRIDGES

INCREASING CONGESTION LEVELS ON CORRIDORS OF CONCERN

Congestion results when traffic demand approaches or exceeds the available capacity of the roadway network. Demand for vehicular travel in Allegheny County continues to rise as development expands to outlying areas. Road capacity changes throughout the day based on weather, work zones, traffic incidents or other non-recurring events. Building new capacity has not kept pace with travel demand due to lack of funds. The need for new capacity must be carefully weighed with many other factors because as more capacity is created, more vehicles miles are traveled, until the roadway system is congested again. Additionally, we are at the point where we cannot afford to maintain the system we already have. This cycle will continue until policies are put in place to help reduce congestion. There is a delicate balance between gridlock and acceptable levels of congestion. This plan points to pathways that can result in mitigation for this situation. But, the path will be long, and the needed changes will require open minds with a new way of looking at and solving issues. The new path will not be a business-as-usual approach.

CORE AREAS HAVE INTERNAL MOBILITY PROBLEMS

Congestion is present throughout Allegheny County, and that can be especially true in the core areas of Downtown Pittsburgh and Oakland. These locations are the major economic generators of the region, and are key locations for corporations and businesses as well as institutions of higher education, cultural facilities and medical facilities. Naturally these areas also experience a great deal of freight traffic. They are accessible via major highways, but also have an internal grid system that is served well by transit. The sheer volume of automobiles, buses, trucks, pedestrians and other service vehicles can cause severe mobility issues within the core areas. The congestion restricts movements and connectivity with other areas. Conflicts arise between modes and that can also limit movements, cause delays and create unsafe situations for transportation system users. In addition, accessing available parking locations can be an issue.

COST-EFFECTIVE CONGESTION REDUCTION STRATEGIES ARE UNDERUTILIZED

Roadway congestion can be temporarily reduced by increasing capacity. Increased capacity on a permanent basis is usually a time-consuming and costly endeavor. There are a number of cost-effective congestion reduction strategies that are underutilized. Examples of these are signal retiming projects, access management strategies, traffic incident management and road/weather management. These strategies can all be cost-effective means to improve service on existing roadways.

LACK OF OPTIONS FOR INTERMODAL AND MULTI-MODAL CONNECTIVITY

Multi-modal and intermodal facilities are connection points where someone can access or link with another mode of travel. They can be facilities such as park-and-ride lots with transit service or parking lots with sidewalks and/or clearly marked bike routes or bikeways. While Allegheny County's vehicle miles traveled and hours of delay are increasing, multi-modal and intermodal connections can make a difference and provide a choice of mode to the user. Overall, our transportation system lacks sufficient amounts of important connections between modes. Getting people out of their cars and traveling via another mode can reduce or slow the growth of congestion and the amount of delay.

LACK OF ACCESS MANAGEMENT STRATEGIES

Access Management is the proactive management of vehicular access points to land adjacent to all types of roadways. Good access management promotes safe and efficient use of the transportation network. US 19, 22 and 30 and SR 8, 28, 48, 50, 51, 60, 65 and 88 are highway corridors lacking good access management strategies. These roadways and the types of development along them, which tend to be strip development, are not designed for the high speeds of vehicles that travel these roads. Driveways and curb cuts are spaced very close together in some instances. This can cause safety issues due to poor sight distances and lack of turning lanes or controlled access points. In addition to these major roads coupled with strip development patterns,

ROADWAYS AND BRIDGES

access management strategies could also benefit many local roads. Lack of good access management negates the investment made in highways and reduces their function.

Access Management encompasses a set of techniques that state and local governments can use to control access to highways, major arterials and other roadways. These techniques include Access Spacing, Driveway Spacing, Service Roads, Safe Turning Lanes, Median Treatments and Right-of-Way Management.

DISJOINTED ROADWAY OWNERSHIP

The pattern of roadway ownership throughout the County is very fragmented. PennDOT, the County and a local municipality can each own portions of the same roads as they wind throughout our County. Ownership is not necessarily based on functional class or volume of traffic. Allegheny County owns major roadways that have a higher classification and would typically be owned by the State. This situation results in the County maintaining roads that would be usually be paid for with State maintenance dollars. The County can wait in a long line and compete with State roads for those dollars, or spend County tax dollars to maintain roads. That type of spending makes our County taxes relatively higher than those of other counties and reduces the competitiveness of our County when attracting new population or business here. The current ownership pattern makes maintenance difficult and can result in uncoordinated and therefore more costly maintenance. The situation frequently increases the cost to perform basic functions such as snow removal and salting roadways during the winter months. County or State trucks must pass over roads they do not own to get to their area of responsibility. There are some cooperative agreements in place that result in entities trading snow removal duties with each other to rationalize the process, but sensible, rational road ownership patterns would be a big step toward making positive “good government” change (see Allegheny County Road and Bridge Evaluation Report in Supporting Documents).

Because Allegheny County owns more roads than all the other counties in the state combined, proportionately the County spends more County tax dollars on roads than other counties.

Of all the counties in Pennsylvania, Allegheny County has the highest number of roads owned by the County. But the largest percentage of all roads here are owned by local municipalities. These roads are maintained by approximately 130 public works departments, except in cases where municipalities have voluntarily joined together with their Councils of Government to share the responsibility of road maintenance, among other services. This large number of public works departments further complicates the coordination of maintenance activities within the County and naturally keeps costs high.

In some cases, some local municipalities cannot handle their responsibilities for the roads they own, due to limited budgets. There are also duplicative capital costs for municipalities in maintaining their roadways because they each must own and maintain service and maintenance equipment, and staff the departments. Discontinuous sections of roadway requiring county, municipal and PennDOT personnel attention leads to inefficiencies, compared to a situation where continuous ownership would be more efficient.

LACK OF FUNDING FOR ‘COMPLETE STREETS’

The term ‘Complete Streets’ refers to the concept of making streets comfortable, safe and convenient for travel by auto, foot, bicycle and transit. This policy ensures that the entire right-of-way is routinely designed and operated to enable safe access for all users. Many of the streets within Allegheny County do not provide for users other than motor vehicles and buses. With the lack of funds available for routine maintenance activities, adding additional amenities for bicyclists and pedestrians can be difficult to require local municipalities to include in their operating and roadway design budgets.



ROADWAYS AND BRIDGES

■ RECOMMENDATIONS

GOAL OF THE PLAN

An excellent multi-modal transportation network – integrated with the Future Land Use Plan – that:

- Efficiently connects all people to jobs, schools and activities
- Supports mobility of existing communities
- Provides efficient access to proposed development
- Facilitates the movement of people, services and freight
- Is well maintained in a cost effective and rational manner, and
- Utilizes smart techniques and strategies to achieve goals while stretching available road and bridge funds.

OBJECTIVES OF THE PLAN

The objectives of the Roadways and Bridges portion of the Transportation Plan are to:

- A.** Support the Future Land Use Plan through strategic prioritization of transportation system maintenance and operations. Funds for new road capacity will be scarce, and those types of projects must be considered very judiciously within the framework of the guiding principles of the Plan.
- B.** Target transportation investments to support job and housing growth as shown on the Future Land Use map.
- C.** Use demand management strategies to reduce highway congestion. Encourage options of telecommuting, ridesharing, staggered work weeks, flex-time, intelligent transportation systems and many other related techniques.
- D.** Coordinate transportation systems, modes and facilities to increase connectivity and mobility for all, including car, truck, barge, pedestrian, transit, rail, air, roads and bridges, bicycle, etc.

- E.** Protect and enhance the environment by promoting energy conservation, emissions reduction and use of alternative fuels.
- F.** Review County road and bridge ownership to identify ways to improve operation and maintenance efficiencies.
- G.** Use efficient and creative funding strategies such as public/private partnerships, privatization, and leveraging current and future assets.

The following provides an understanding of the objectives.

A. Support the Future Land Use Plan through Strategic Prioritization of Transportation System Maintenance and Operations

The 'Places' designated in the Future Land Use Plan will be accessible via the traditional County system of circumferential belt roadways. Roadways will provide vital linkages between Places to facilitate commuting to jobs and schools, and for shopping, entertainment, and cultural and recreational trips. This will be accomplished by utilizing as many mode options as are practical.

To provide good mobility and connectivity from Place to Place and to further connect these Places to the region, we need to maintain our existing roadway system and provide intermodal and multi-modal connections where feasible. New capacity projects would be generally limited to transit and private development of access roadways to new development. Similarly, upgrades to the system of limited-access highways should be undertaken. In general, these roadway projects should:

- Identify and promote improvements on congested corridors that are consistent with *Allegheny Places*.
- Identify projects to improve the capacity of existing roadways consistent with *Allegheny Places*. Make sure complete streets are incorporated with accommodations for ADA, walkers, bikers, transit users, etc.

ROADWAYS AND BRIDGES

- Perform access management studies for corridors (see full list in next paragraph) designated in the Future Land Use Plan, and adopt access management ordinances.
- Develop modified grid street systems for best circulation in designated Places where they are feasible within topographic constraints; and once again, provide for complete streets.
- Ensure that Places can be accessed by existing roadway systems and other transportation modes.

In addition, a key recommendation of the Plan is the completion of access management plans and their implementation for U.S. Routes 19, 22 and 30, and PA Routes 8, 28, 48, 50, 51 60, 65 and 88. Access management measures will allow these arterial roadways to function effectively as thoroughfares and provide a high level of accessibility for Places, as well as for current and future development along each of the identified roadway corridors.

Places themselves need to have effective systems of roadways and complete streets to allow circulation within each Place (by various modes) and to connect to external systems of roads, transit and trails. The Future Land Use Plan shows a number of locations for new Places where a modified street grid would work, but most are existing centers, to be reinforced and revitalized. For existing centers, the challenge will be to optimize the existing roadway system so that a balance is achieved between the movement of motorized vehicles and the establishment of transit, pedestrian and bicycle-friendly streetscapes, which are key to retaining current residents and attracting new residents, employment and activity.

Most Places are to be closely-knit, mixed-use centers of residences, shopping, employment, community facilities and open space. For new Places, a hierarchy of roads should be planned to provide for the intended walkable and transit-supportive character for these locations. Arterial, collector, boulevard, commercial, residential and alley types of roadways should be in the mix, with appropriate functions, design speeds, rights-of-way and

cross-sections. A grid or modified grid of streets with small blocks is widely recognized as the most supportive for pedestrian and bicycle mobility and creates the most flexible kind of network for cars, trucks and buses as well.

Master plans, design guidelines and development codes should be completed for new Places in particular, to ensure that roadways are constructed as 'complete streets', with sidewalks, crosswalks, landscaping, pedestrian-oriented lighting, provisions for transit stops and bicycle movement and, in most cases, on-street parking.

B. Target Transportation Investments to Support Job and Housing Growth

Transportation investments should be targeted to support the job and housing growth identified on the Future Land Use map. SPC has set up the following investment categories that can help guide where transportation funding is spent, based on desired development patterns and need for improvements within the County.

Capital Maintenance

- Roadway Preservation or Reconstruction
- Bridge Preservation and Reconstruction/Replacement

Traffic Operations and Safety

- **Efficiency/Operations** – Projects that improve traffic flow, reduce congestion, and improve the operational characteristics of the existing transportation system.
- **Travel Demand Management** – Projects such as carpooling, vanpooling, emergency ride-home programs, telecommuting, commuter benefit strategies, parking incentives, park-n-ride lots, job access reverse commute programs, and other nontraditional types of projects that work to affect the demand side of transportation systems.



ROADWAYS AND BRIDGES

- Safety** – While virtually every transportation project improves safety by bringing the transportation network up to current design standards, these are stand-alone projects to address specific safety issues.

Several major roadway improvement projects are recommended for Allegheny County, although the effects of these projects will be felt on a regional level. Table 4I.7 shows the projects from the TIP and SPC’s 2030 Transportation and Development Plan which will assist in the advancement of the Future Land Use Plan in Allegheny County.

The PA Turnpike Commission’s Mon Fayette Expressway, currently under development, will stretch 70 miles southward from Allegheny County through the

Monongahela River Valley to Interstate 68 near Morgantown, West Virginia. The highway will improve access to economically depressed Mon River towns, and support brownfield reclamation and redevelopment efforts in these communities. Additional funding to complete the project sections in Allegheny County is being sought through innovative means by the PA Turnpike Commission. Privatization or public/private partnership arrangements are being explored. The funding source for PA Turnpike projects is separate from the sources for municipalities, the County and PennDOT, although Turnpike projects must appear on the TIP.

TABLE 4I.7 – 2030 Long Range Transportation and Development Plan, Allegheny County Projects

PROJECT / CORRIDOR	DESCRIPTION	LIMITS	MUNICIPALITY
PARKWAY WEST			
Interstate 376 designation	Upgrade I-279, US 22/30 and SR 60 to interstate standards <i>PennDOT</i>	Fort Pitt Bridge to Beaver County Line	Various
Campbells Run Road	Widening and reconstruction Parkway West reliever <i>Allegheny County</i>	I-79- to SR 60	Robinson
Parkway West Widening and Tunnel Upgrades	Upgrade and widen corridor <i>PennDOT</i>	Fort Pitt Bridge to Robinson Town Center	Various
I-79/I-376 Interchange	Missing Ramps now under construction <i>PennDOT</i>		Robinson Township
PARKWAY NORTH			
Parkway North HOV	Lane Extension <i>PennDOT</i>	Perrysville to I-79	Various
I-79			
Complete Warrendale Interchange	Upgrade and Reconstruction <i>PennDOT</i>	I-79 Interchange	Marshall Township
Southern Beltway	Design and Construction of Tolled, Limited Access Facility <i>PA Turnpike Commission</i>	Connection between the Findlay Connector to the Mon Fayette Expressway	Various

ROADWAYS AND BRIDGES

PROJECT / CORRIDOR	DESCRIPTION	LIMITS	MUNICIPALITY
PARKWAY EAST			
Mon Fayette Expressway	Design and Construction of Tolled, Limited Access Facility <i>PA Turnpike Commission</i>	from Route 51 to I-376 in Monroeville (Squirrel Hill Bypass, and then to Bates Street)	Various
S.R. 286	Widening <i>PennDOT</i>	SR 22 to SR 380	Plum, Monroeville
ROUTE 28			
I-279 Connector with Route 28	Direct connection <i>PennDOT</i>	SR 28 to I-279 near Veteran's Bridge	City of Pittsburgh
Troy Hill to Millvale	Upgrade and Reconstruction of SR 28 <i>PennDOT</i>	Troy Hill to Millvale	City of Pittsburgh, Millvale
Etna Interchanges	Upgrade and Reconstruction of SR 28 <i>PennDOT</i>	SR 28 interchanges at Etna and with SR 8	City of Pittsburgh, Etna
Highland Park Bridge Interchange	Upgrade and Reconstruction of SR 28 <i>PennDOT</i>	At Highland Park Bridge	City of Pittsburgh, O'Hara Township
Fox Chapel Interchange	Upgrade and Reconstruction of SR 28 <i>PennDOT</i>	At Fox Chapel Road	Fox Chapel Borough, O'Hara Township
Route 28 Third Lane Widening north of Harmarville	Widening <i>PennDOT</i>	Harmarville to East Deer	Various
ROUTE 22			
Route 48 Interchange	Upgrade and Reconstruction <i>PennDOT</i>	At Route 22	Monroeville
ROUTE 50			
Painters Run Road	Reconstruction and Widening <i>Allegheny County</i>	Gilkeson to Bower Hill Road	Upper Saint Clair
ROUTE 51			
West End Bridge Direct Connection to Route 51	Construct Direct Connection- now underway <i>PennDOT</i>	West End Bridge to Route 51	City of Pittsburgh
S.R. 51/88	Interchange Improvement <i>PennDOT</i>		City of Pittsburgh



ROADWAYS AND BRIDGES

PROJECT / CORRIDOR	DESCRIPTION	LIMITS	MUNICIPALITY
ROUTE 51 (cont'd)			
Brownsville and Broughton Rd	Intersection Improvement <i>Allegheny County</i>		South Park
Baptist at Broughton	Intersection Improvement <i>Bethel Park with PennDOT</i>		Bethel Park
ROUTE 837			
McKeesport/Duquesne Bridge Ramps	Construction Duquesne ramp now underway <i>McKeesport and Duquesne with PennDOT and Allegheny County</i>		McKeesport and Duquesne RIDC Sites
MAJOR BRIDGE MAINTENANCE/UPGRADE PROJECTS			
Hulton Bridge	Replacement <i>PennDOT</i>		Oakmont/O'Hara
Rankin Bridge	Replacement and Reinforcement <i>Allegheny County</i>		Rankin/Whitaker
Mansfield Bridge	Replacement and Reinforcement <i>Allegheny County</i>		
30/Greensburg Pike Bridge	Replacement <i>Allegheny County</i>		North Versailles
Roberto Clemente/Andy Warhol/Rachel Carson Bridges	Rehabilitation <i>Allegheny County</i>		City of Pittsburgh
10th Street Bridge	Rehabilitation <i>Allegheny County</i>		City of Pittsburgh
Fleming Park Bridge on Neville Island	Rehabilitation <i>Allegheny County</i>		Neville Twp
Dookers Hollow Bridge	Replacement and Reinforcement <i>Allegheny County</i>		North Braddock
Homeville Viaduct	Replacement and Reinforcement <i>Allegheny County</i>		West Mifflin
Glenwood Bridge Interchange Ramps	Reconstruction <i>PennDOT, Allegheny County, City of Pittsburgh</i>		City of Pittsburgh

ROADWAYS AND BRIDGES

PROJECT / CORRIDOR	DESCRIPTION	LIMITS	MUNICIPALITY
CITY OF PITTSBURGH / MISC. ROADWAY PROJECTS			
Forbes/Market	Reconstruction <i>City of Pittsburgh</i>		City of Pittsburgh
Penn Circle	Rehabilitation/Conversion to 2-way <i>City of Pittsburgh</i>		City of Pittsburgh
East Carson Street/ Southside Works	Upgrades underway now <i>City of Pittsburgh</i>		City of Pittsburgh
Wenzell Avenue/ Carnahan Rd	Reconstruction <i>City of Pittsburgh</i>		City of Pittsburgh
Brookline Boulevard – Reconstruction	Reconstruction <i>City of Pittsburgh</i>		City of Pittsburgh
Bates Street/2nd Ave	Improvements <i>City of Pittsburgh</i>		City of Pittsburgh
Reedsdale Street	HOV Modification <i>City of Pittsburgh</i>		City of Pittsburgh
Browns Hill Road	Improvements underway now <i>City of Pittsburgh and Allegheny County</i>		City of Pittsburgh
Route 51	Signal Enhancements <i>City of Pittsburgh</i>		City of Pittsburgh
SR 88/McNeilly	Intersection Widening <i>City of Pittsburgh</i>		City of Pittsburgh
Brighton Road Extension	Roadway Extension <i>City of Pittsburgh</i>		City of Pittsburgh
CITY OF PITTSBURGH / MISC. RAMPS, BRIDGES AND TUNNELS			
West Carson Street Bridge	Rehabilitation <i>City of Pittsburgh</i>		City of Pittsburgh
Liberty Tunnel	Rehabilitation <i>PennDOT and City of Pittsburgh</i>		City of Pittsburgh
McArdle Viaduct #1	Rehabilitation <i>City of Pittsburgh</i>		City of Pittsburgh



ROADWAYS AND BRIDGES

PROJECT / CORRIDOR	DESCRIPTION	LIMITS	MUNICIPALITY
CITY OF PITTSBURGH / MISC. RAMPS, BRIDGES AND TUNNELS (cont'd)			
South Highland Ave Bridge	Reconstruction <i>City of Pittsburgh</i>		City of Pittsburgh
Ohio River Road Bridge	Rehabilitation <i>City of Pittsburgh</i>		City of Pittsburgh
Ridge Avenue Bridge	Replacement <i>City of Pittsburgh</i>		City of Pittsburgh
Forbes/Blvd of Allies Ramps & Blvd of Allies Bridge	Replacement underway now <i>PennDOT and City of Pittsburgh</i>		City of Pittsburgh
South Main Street Bridges	Rehabilitation <i>City of Pittsburgh</i>		City of Pittsburgh
McKees Rocks Bridge	Painting <i>City of Pittsburgh</i>		City of Pittsburgh
<p>Note: The 2035 plan is now available on the SPC website, www.spcregion.org. There are updates to the region's long range plan (LRP) every two years. Once adopted, <i>Allegheny Places</i> will be a continually updated plan, and will incorporate changes at regular intervals, but those changes may appear on the SPC website earlier.</p>			

C. Use Demand Management Strategies to Reduce Highway Congestion

Demand Management Strategies can result in a more efficient use of the County's transportation system and resources. Table 4I.8 lists several possible strategies to employ throughout the County to assist in reducing congestion as well as unsafe travel conditions.

Numerous Federal Highway Administration (FHWA) studies have shown how a dedicated traffic signal coordination program can yield consistent benefits in terms of reduced travel time and increased fuel savings. On average the retiming of one signalized intersection can result in an annual fuel saving of 4,000 gallons of fuel. At current fuel prices, this translates into a savings of \$12,000 per year assuming \$3.00 per gallon. This savings is likely to increase with rising fuel prices.

D. Coordinate Transportation Systems, Modes and Facilities to Increase Connectivity and Mobility

A common roadway attribute for all the Future Land Use Plan Places are signalized intersections. Upgrading signalized intersections, along with an ongoing retiming and coordination program, will yield the most cost-effective results of any other type of transportation improvement.

SPC has hired a full time staff person to assist municipalities with signal retiming projects. Effective use of this available resource is important and can be requested by contacting SPC (www.spcregion.org)

ROADWAYS AND BRIDGES

E. Protect and Enhance the Environment by Promoting Energy Conservation, Emissions Reduction and Use of Alternative Fuels

Clean air is an important part of a healthy environment. Unfortunately, many industrial and transportation activities that sustain our economy can also produce air pollutant emissions which degrade our air quality and threaten our environment. Safeguarding our air

from such contamination is an important priority of PennDOT and Allegheny County.

The Congestion Mitigation and Air Quality (CMAQ) Improvement Program is a funding mechanism that provides funds for congestion mitigation transportation projects that provide air quality benefits by reducing emissions. This program currently is valued at approximately \$100 million for each TIP period.

TABLE 4I.8 – Demand Management Strategies

Alternative Work Schedules	Flextime, Compressed Work Week (CWW), and staggered shifts
Bike/Transit Integration	Ways to integrate bicycling and public transit
Bus Rapid Transit	Bus Rapid Transit (BRT) systems provide high quality bus service on busy urban corridors
Carsharing	Vehicle rental services that substitute for private vehicle ownership
Cycling Improvements	Strategies for improving bicycle transport
Flextime	Flexible daily work schedules
Guaranteed Ride Home	An occasional subsidized ride home for commuters who use alternative modes
Individual Actions for Efficient Transport	Actions that individuals can take to increase transport system efficiency
Nonmotorized Facility Management	Best practices for managing nonmotorized facilities such as walkways, sidewalks and paths
Nonmotorized Planning	Planning for walking, cycling, and their variants
Park & Ride	Providing convenient parking at transit and rideshare stations
Pedestrian Improvements	Strategies for improving walking conditions
Ridesharing	Encouraging carpooling and vanpooling
Shuttle Services	Shuttle buses, jitneys and free transit zones
Taxi Service Improvements	Strategies for improving taxi services
Telework (Telecommuting, Distance-Learning, etc.)	Use of telecommunications as a substitute for physical travel
Traffic Calming	Roadway designs that reduce vehicle traffic speeds and volumes

Source: Victoria Transport Institute



ROADWAYS AND BRIDGES

Criteria have been developed to determine eligible TIP projects (see Table 41.9 for CMAQ Eligible Project Categories). SPC performs Air Quality conformity analysis for projects on the TIP and in the LRP to assist in determining project eligibility. These projects include the following:

- Diesel Engine Retrofit
- Signal Upgrades
- Traffic Flow Improvements
- Travel Demand Management Strategies
- Ride Sharing Programs
- Pedestrian and Bicycle Programs
- Education and Outreach
- Transit and Public Transportation Programs
- Inspection and Maintenance Programs
- Extreme Cold Start Programs
- Alternative "Clean" Fuels
- Flex-Time and Telecommuting

The County can inform and educate the public on ways to protect the environment. Allegheny County can lead by example and, for instance, use alternative fuels in its vehicle fleet and continue to advance CMAQ projects in the process described above.

F. Review County Road and Bridge Ownership to Identify Ways to Improve Operation and Maintenance Efficiencies

The County owns and maintains 800 linear lane miles of roadways. In addition, there are 130 municipalities that own and maintain roadways. This large number of public works departments complicates the coordination of maintenance activities in the county.

The ownership patterns are disjointed and should be reviewed to determine the best way to rationalize the system. One option for defining road ownership within the County is to use the Federal Functional Classification System as a guide. If this classification system is used, the State would maintain, at a minimum, all Interstate Highways, other Freeways and Expressways, other Principal Arterial Highways and Minor Arterials outside the boundaries of the City of Pittsburgh. In addition, it assumes the State will maintain all of the major highway/bridge river crossings within these functional

classifications, whether inside or outside of the City of Pittsburgh limits. Under the current road ownership situation in Allegheny County, the State owns highways in all functional classifications including local roads.

Under this proposal, Allegheny County Public Works road ownership would consist of a combination of Urban Collectors or Rural Major Collectors, Rural Minor Collectors and Local Roads. These same roadway classifications could also be owned by the City of Pittsburgh or local municipalities.

In addition to the roadways mentioned above, the following bridges should also be owned by PennDOT, based on their functional classification and traffic volumes:

- Mansfield Bridge
- Homestead Grays Bridge
- Rankin Bridge
- Glenwood Bridge
- Rachel Carson Bridge
- Andy Warhol Bridge
- Roberto Clemente Bridge
- Sixteenth Street Bridge
- South Tenth Street Bridge
- Windgap Bridge

(See the full report, Allegheny County Road and Bridge Ownership valuation Report – March 2008, in the Supporting Documents.)

G. Use Efficient and Creative Funding Strategies

Construction of new roadways for Places is likely to be completed by a number of different means. Roadways for new Places may be built by private developers in accordance with locally-adopted master plans, design guidelines and development codes, and then dedicated to a municipality. Some major roadways may be constructed or upgraded as part of public-private partnerships. For instance, the Squirrel Hill Tunnel Bypass section of the Mon Fayette Expressway (that is the section from Monroeville to Oakland that parallels Parkway East) is considered by many to be the most important roadway section in our region in terms of

ROADWAYS AND BRIDGES

TABLE 4I.9 – CMAQ Eligible Project Categories

Transit and Public Transportation Programs	CMAQ funds may be used to support the use of public transportation: service or system expansion; provision of new transit service; and financial incentives to use existing transit services.
Traffic Flow Improvements	This strategy reduces emissions by promoting efficient traffic movement, thereby reducing unproductive travel delays and emissions resulting from engine idling. There are many ways to reduce and improve air quality by improving traffic flow.
Travel Demand Management Strategies	The demand for transportation can be moderated by adopting policy incentives that minimize the aggregate number of single occupancy vehicle trips and miles traveled.
Ride Sharing Programs	Ride sharing programs are designed to increase vehicle occupancy in an attempt to reduce emissions. This can be achieved by minimizing the total number of vehicles on the road and these programs are most effective for commuting purposes.
Pedestrian and Bicycle Programs	No mobile source emissions are produced by travelers using bicycles or walking; therefore, programs that promote these options are eligible for CMAQ funds.
Education and Outreach	CMAQ funding may be used to increase public knowledge of transportation-related emissions and opportunities to reduce them through mitigation strategies and improved transportation choices.
Inspection and Maintenance Programs	Poor engine maintenance and malfunctioning of pollution control equipment can significantly increase the amount of emissions released per vehicle. Consequently, CMAQ funds may be used to introduce, conduct and provide start-up costs for automobile inspection and maintenance programs.
Extreme Cold Start Programs	CMAQ funds may be directed towards the development and implementation of programs that are designed to reduce or mitigate excessive cold start emissions.
Alternative ‘Clean’ Fuels	For CMAQ purposes, an ‘alternative’ fuel must reduce emissions to be eligible. These fuels can include natural gas, ethanol, methanol, electricity and liquefied propane gas.
Public/Private Partnerships	Partnerships between public and private enterprises can leverage scarce funding resources by allowing private firms to own or operate a service developed with public funds.
Experimental Pilot Projects	Experimental pilot projects are innovative initiatives that are designed to provide a funding mechanism for well thought out strategies that extend beyond current experience and are not explicitly eligible under the law.

Source: Federal Highway Administration



ROADWAYS AND BRIDGES

reducing congestion. This Mon Fayette section also has multi-modal potential as a Monroeville link with the East Busway. Viewing this section from the standpoint of multiple partnership opportunities can provide funding opportunities for its construction. See illustrative example below.*

Currently there is no legislation in place to govern the use of Public/Private Partnerships (P3s) to fund public improvements. The Commonwealth of Pennsylvania must enact P3 enabling legislation for this to occur. The County needs to encourage the appropriate legislation through its legislative delegation.

*** One example of a potential creative public-private partnership: Squirrel Hill Tunnel Bypass section of Mon Fayette Expressway:**

The Squirrel Hill Tunnel Bypass section of the Mon Fayette Expressway has many attributes that could make a P3 advantageous. These attributes can fall into three categories:

- 1) potential public matching dollars
- 2) revenue potential
- 3) private development potential

Potential public matching dollars could come from several sources for this Mon Fayette section. One source is the Pennsylvania Turnpike Commission. The PTC is currently completing final design for the project. Other sources include federal transit discretionary funding for capital projects. This would not be a traditional source for a toll road. However, if the potential for increased transit service and efficiency was explored and documented (for example, utilizing the facility to, in essence, expand the East Busway to Monroeville), this funding avenue may be possible. Other possible sources could include Homeland Security funding, and Commonwealth Economic Development grants.

The potential revenue generated by the tolling of this PTC facility could have private sector interest if the facility is viewed as a possible private leasing project. The private operator generally makes its money through the collection

of tolls. These transactions involve a private operator assuming control of the asset-including responsibility for maintenance and operations and collection of toll revenues for a fixed period of time in exchange for a concession fee provided to the public sector. The concession fee could be in the form of an up-front payment at the start of the concession, or an agreement for all or part of the construction cost, or could be provided over time through a revenue sharing arrangement, or a combination of all three. The key to this arrangement would be the potential revenue generated, the construction and maintenance costs and matching public sector funding.

Economic development potential comes from the number of potentially redeveloped brownfield sites and other economic development activity potential that could be spurred along this corridor. This could include, but not be limited to, the Carrie Furnace site, future development plans at the former LTV site in Hazelwood (ALMONO), the Pittsburgh Technology Center, and other development opportunities in the Oakland area and South Side. Possible development near the Hays/Glenwood Bridge area and expansions of Kennywood and Sandcastle entertainment venues, located along the Monongahela River, could also be generators. These developments could take advantages of programs like the Commonwealth Keystone Opportunity Zone legislation, Tax Increment Financing, or other similar programs.

PUBLIC TRANSIT

■ TODAY'S CONDITIONS

Despite slow population growth and increasing suburbanization, mass transit remains a vital public service to residents and businesses in Allegheny County. We have higher percentage of people who commute to work in downtown by transit than most other places. About 50% of the workers commuting to Downtown Pittsburgh use public transit, a greater percentage than most other urban areas.

PORT AUTHORITY

The Port Authority of Allegheny County provides public transportation services throughout the County, plus minor portions of Armstrong, Beaver, Butler, Washington, and Westmoreland Counties – a 775 square-mile service area. In Fiscal Year 2006, the Port Authority provided 70,036,244 passenger trips (see Table 4I.10).

The following is a summary of Port Authority operations as of December 2007:

- Utilizing a fleet of nearly 900 transit buses, the Port Authority operates more than 183 local and express fixed bus routes; service is provided seven days a week with many routes operating between 6am and 1pm.
- An extensive network of local buses serving nearly all City of Pittsburgh neighborhoods and municipalities of Allegheny County. While service connects these communities to downtown Pittsburgh, several routes

also provide direct access to Oakland. Some routes provide circulator service within communities with linkages to mainline routes to Pittsburgh. Other routes provide crosstown service, the most notable of which is 54C route linking the South Side, Oakland, Strip District and North Side without passing through downtown Pittsburgh.

- The Martin Luther, King Jr. East Busway is a 9.1-mile bus rapid transit guideway linking downtown Pittsburgh and Oakland and the City of Pittsburgh's East End neighborhoods as well as many of Allegheny County's eastern suburbs. Most of its nine stations interface with local bus routes and many of the East Busway routes provide convenient transfers to Port Authority's light rail transit (LRT) system in downtown Pittsburgh. At Penn Station, riders can transfer to other regional operators serving Pittsburgh as well as to Amtrak and Greyhound.



Photo credit: McCormick Taylor

TABLE 4I.10 – Public Transit Ridership, 2006

TRANSIT MODE	PASSENGERS
BUS	60,115,303
LRT	7,466,749
MONONGAHELA INCLINE	699,375
ACCESS	1,754,817
TOTAL	70,036,244



PUBLIC TRANSIT

- The West Busway is a five-mile fixed-guideway facility for buses that connects communities in western Allegheny County with downtown Pittsburgh. Routes operating on the West Busway also link these areas with the Pittsburgh International Airport and Oakland. It has great potential for a large park and ride, intercept garage at Carnegie utilizing existing busway ramps to ease congestion on Parkway West.
- The South Busway is a 4.3-mile bus facility that connects downtown Pittsburgh and the South Hills; it interfaces with the South Hills and Library 'T' lines.
- The 25-mile South Hills LRT system, also known as the 'T', links downtown Pittsburgh with Station Square and southern communities in the City of Pittsburgh and Allegheny County. The downtown portion of the system is a subway. In addition to several park-and-ride lots in the South Hills, it provides intermodal connectivity to the South Busway, South Side Trail south of downtown Pittsburgh and to East Busway and West Busway routes in downtown Pittsburgh. Intermodal connections to a parking garage and the Eliza Furnace Trail are possible at the First Avenue Station. An extension to the North Shore is currently under construction.
- A 1.1-mile High Occupancy Vehicle facility through the Wabash Tunnel connects Route 51 (at Woodruff Street) and West Carson Street (at Station Square). It is intended as a reliever for Route 51 and Parkway West traffic to South Side and Downtown.
- The Monongahela Incline linking Station Square with Mount Washington provides connections to the LRT system and the South Busway. The privately-operated Duquesne Incline also serves Mt. Washington and connects to bus routes, some of which operate on the West Busway.
- ACCESS is a shared ride transportation service for senior citizens and persons with disabilities.
- The Port Authority owns or leases 14,747 park-and-ride spaces at 63 locations in Allegheny County (plus one location in Beaver County). The locations of the park-and-ride facilities are shown on Map 4I.4.

RIDERSHIP TRENDS

Each weekday, transit provides approximately 235,000 passenger trips. While the share of workers that use public transportation to commute, as a percentage of all workers in the County, has decreased from 24% in 1960 to 10% in 2000 overall (based upon US Census journey to work estimates), the percentage of workers that commute to the County's urban core is between 25% (Oakland) and 50% (downtown) of all commuting trips. This high rate of transit commuting has been facilitated by major capital improvements such as the East Busway, the South Busway, the West Busway, and the rehabilitation of the South Hills light rail system as well as an extensive network of local buses linking most parts of Allegheny County with downtown Pittsburgh.

Figure 4I.4 shows that use of transit is highly dependent on what area is being traveled to. The Central Business District (CBD) captures 49% of the trips via transit, whereas in the County as a whole, only 13% of the trips are made via transit (based upon SPC's 24-hour trip estimates).

50% of commuters coming to downtown Pittsburgh to work everyday use transit.

Changes to service levels occurred in 2007 due to funding constraints. In June 2007, Port Authority implemented a 15% reduction in service that resulted in an approximate 3% reduction in ridership. In July 2007, the state passed Act 44, which established additional future operational funding mechanisms for the state's transit agencies. Act 44 also required Allegheny County to establish local dedicated funding. This will affect future service levels. This type of measure will help to ensure that the Port Authority will be able to maintain existing levels of service. Aspects of Act 44 are still in a period of adjustment. Final regulations and outcomes will become evident over time.

In Allegheny County, there is a greater diversity of income groups using transit than in other similarly-sized metropolitan areas due to the reasons listed below.

PUBLIC TRANSIT

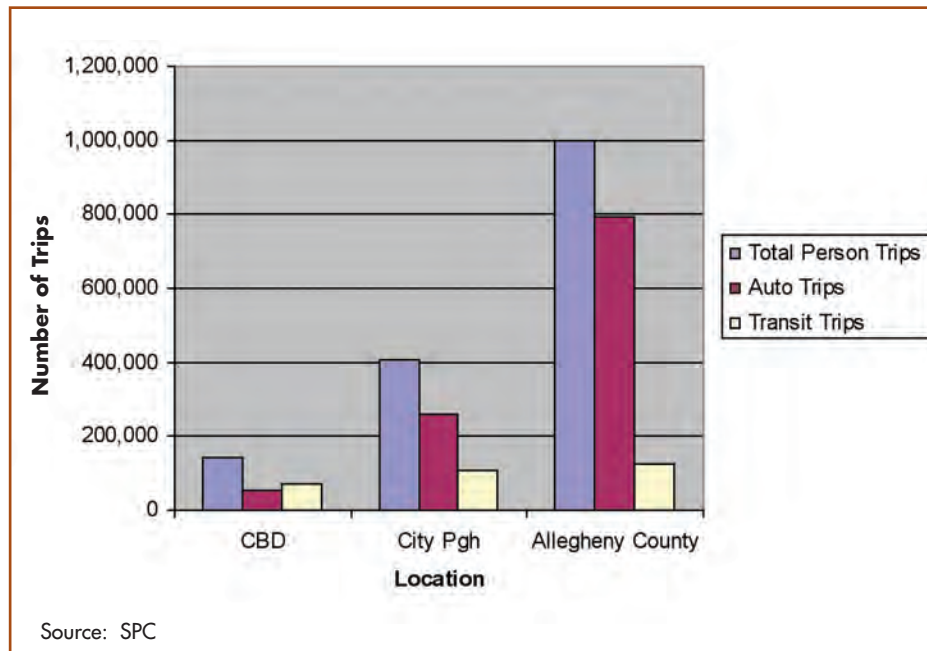


Figure 4I.4 – Transit Ridership by Area

- Port Authority’s LRT and busway systems provide service which is time competitive with automobile travel
- The relatively high cost of parking in Downtown and Oakland makes transit, even with its current fares, an economic alternative to automobiles
- The relatively limited highway network results in severe congestion on key arterials leading to Downtown and Oakland, thus reducing the convenience of commuting by automobiles
- The continued prominence of Oakland and Downtown as a share of regional employment makes them also the locations where transit is most effective
- The many universities and colleges generate significant ridership from students and staff associated with these institutions

Nevertheless, there are a high number of transit dependents in Allegheny County. According to the 2000 Census, there were 87,279 households (16.2%) in Allegheny County who did not have vehicles. In 2000, Allegheny County accounted for 11.2% of the households in the Commonwealth. This and the following data indicate that Allegheny County’s residents are more dependent on transit than the region as a whole,

the state, the nation and most metro areas.

Here are some other percentages of 0-vehicle households:

City of Pittsburgh	29.4%
10-County SPC Region	12.5%
Philadelphia County	35.6%
5-County SEPTA Service Area	18.6%
Pennsylvania	12.8%
United States	3.0%

Other Benchmark Metro Area Counties:

Atlanta (Fulton County)	15.2%
Cleveland (Cuyahoga County)	13.7%
Denver County	13.9%
Detroit (Wayne County)	13.8%
Houston (Harris County)	8.7%
Milwaukee County	16.3%
Minneapolis (Hennepin County)	10.7%
St. Louis	6.4%
Seattle (King County)	9.3%

OTHER PUBLIC TRANSIT PROVIDERS

Public transportation providers in six surrounding counties offer routes that serve destinations in Allegheny County, primarily downtown Pittsburgh. These operators have routes converging at Penn Station on the Martin Luther King, Jr. East Busway, facilitating transfers with the Port Authority’s routes



PUBLIC TRANSIT

and with other regional services. Mountain Line Transit, taking over a route discontinued by Greyhound in 2005, operates a route between Morgantown and Pittsburgh. Additionally, there are numerous other agencies, organizations and schools that directly or indirectly provide transportation for their clients and customers.

SPC, through the Regional Strategic Vision for Public Transportation Serving Southwestern Pennsylvania, has provided several recommendations for improving the regional transit operation. These include a seamless fare box collection system, which would allow passengers to travel between modes and operators, Transit-Oriented Developments, and Intelligent Transportation Systems, which improve management and operations of transportation systems through the use of computers and communication technology.

Downtown Pittsburgh is an intermodal hub where County residents can access both rail and bus intercity transportation services as well as Port Authority transit vehicles at Penn Station on the East Busway.



Source: City of Pittsburgh

Greyhound

A new intermodal facility includes access to Greyhound buses, parking, transit and the Amtrak train station and is adjacent to the PAAC East Busway. The Greyhound Terminal is in the new Grant Street Transportation Center

located between Liberty and Penn Avenues at 11th Street in downtown Pittsburgh. Greyhound's routes serving Pittsburgh include direct service to New York City, Philadelphia, Washington, D.C., Harrisburg, State College, Wheeling, Erie, Indianapolis, Columbus, St. Louis, Cleveland and Chicago.

Amtrak

From its station at Liberty and Grant Avenues in downtown Pittsburgh, Amtrak serves Allegheny County with two intercity train routes. The Pennsylvanian Route provides daily service between Pittsburgh and Harrisburg, and onward to Philadelphia and New York City. The Capitol Limited provides daily service linking Chicago, Toledo, Cleveland, Pittsburgh, and Washington, D.C. The Amtrak station is adjacent to the Penn Station of the East Busway where intermodal connections can be made to transit service provided by the Port Authority and the region's other transit operators. Across Liberty Avenue from the Amtrak station is the Grant Street Transportation Center.

Other Private Bus Companies

Several other private carriers operate scheduled bus service to and within Allegheny County. Fullington Trailways provides service between Pittsburgh and central Pennsylvania. Myers Coach Lines operates commuter service from Butler County to downtown Pittsburgh. The Pittsburgh Transportation Group's Express Shuttle provides service from the Pittsburgh International Airport to hotels in downtown Pittsburgh and other locations in the City of Pittsburgh. Numerous shuttles are operated by the University of Pittsburgh, UPMC, Station Square and others.

CURRENT TRANSIT FUNDING

The Pennsylvania legislature passed Act 44 of 2007, which is intended to address some shortfalls in the state transportation budget. It authorizes a fifty-year partnership between the PA Turnpike Commission and PennDOT which will provide \$83.3 billion for investment in transportation. A majority of this funding will be used statewide to repair roads and bridges; in addition, all of the state's urban and rural transit agencies will receive increased, stable and performance-driven

PUBLIC TRANSIT

funding annually. Table 4I.11 shows the funding over the next four years and beyond.

Act 44 also authorized second class counties (Allegheny) to implement two separate taxes to generate the County’s local match for the State funding. The taxes, in effect now, include a tax on poured drinks and a tax on rental vehicles.

The operating budget of the Port Authority transit system is funded by passenger fares, marketing revenues, Allegheny County, the Commonwealth of Pennsylvania and the Federal government (use of Federal funds for operating expenses is limited to a few very specific types of expenses). For the past several years, these funding sources have become inadequate to cover the agency’s operating expenses due to a wide variety of factors. Stopgap measures have been taken to address the deficits.

Escalating operating costs coupled with revenue shortfalls remain a challenge for the Port Authority. Plans are currently being developed to adjust to conditions. The new Act 44 Funds are helpful but there are pending legal challenges to the Act. And County matching funds and other aid to PAAC are conditioned on new agreements with represented employees.

One reason that funding does not cover operating expenses is that the Port Authority has been facing increasing costs. Costs for fuel, health care, and retirement benefits have grown rapidly in recent years. In addition, the agency has been not been as agile as necessary to be able to respond to changes in the transit market (population shifts and

suburbanization) by modifying the level of services that it provides. And, while costs have been escalating, revenues have not kept pace with inflation. Substantial changes need to be made to maintain a high level of public transportation in the county. The county and region have flexed over \$100 million in highway funds to transit in the past decade.

Transit is a large portion of the County’s budget and provision of additional matching funds is not easy to achieve. The City, as is the case with all local municipalities in Allegheny County, does not contribute to transit or the transit match. Most transit agencies of similar size do receive a higher percentage of needed funding from local governments, which is why new taxes were enacted.

The Port Authority, under new leadership, is responding to these challenges by curtailing underutilized services, eliminating staff (sharply reducing retirement obligations) and requiring employee health care contributions. In addition to these immediate actions, the agency is currently undertaking a comprehensive service development plan. The plan results will further improve the efficiency and effectiveness of the transit network within a two-to-five year timeframe.

FUNDING SOURCES

SPC, as the designated MPO for the Pittsburgh Transportation Management Area, works with member counties to develop and maintain a Transportation Improvement Program (TIP). In addition to highway funding, transit funding involving federal grant programs (such as Title III Programs) and state, county and local match are also included on SPC’s TIP. On the

TABLE 4I.11 – Transit Funding

Year	Total	Transit	Highway/Bridges
FY 2008	\$750M	\$300M	\$450M
FY 2009	\$850M	\$350M	\$500M
FY 2010	\$900M	\$400M	\$500M
FY 2011 and beyond	Increase by 2.5% per year		



PUBLIC TRANSIT

current 2007-2010 TIP, the Port Authority is budgeted for \$489.2 million total Title III Program funds (average annual funding = \$122.3 M). This amount is not typical because of the inclusion of funds specifically designated for the North Shore Connector project, which is currently under construction.

Funding for transit improvements in Pennsylvania is a combination of federal, state and local monies. Federal funding is provided through SAFETEA-LU Title III. State funding is provided through formulas established in Act 26 of 1991 and amended in Act 3 of 1997. In addition, state capital budget funding is released annually for capital improvements.

Major capital transportation projects are a part of the programs developed by the member counties of SPC. The TIP identifies the region's highest priority transportation projects, develops a multi-year program of implementation, and identifies available federal and non-federal funding for the identified projects. The TIP covers a four-year period of investment and is updated every two years by designated planning partners in a collaborative effort of county, local, state and federal agencies, including participation by the general public.

Federal transit funding for the planning, construction and operation of transit projects is primarily accessed through two major Federal Transit Administration (FTA) Programs. Brief descriptions of these two programs follow.

Section 5309 - Federal Capital Program

A portion of the funding authorized through this program is provided on a formula basis to individual urbanized areas to modernize and rehabilitate public transportation fixed-guideway facilities (Fixed-Guideway Modernization Program). The remainder of the Capital Program funding is distributed on a discretionary basis to provide capital assistance for:

1. Fixed guideway systems
2. Introduction of new technology
3. Projects that enhance the effectiveness of mass transportation
4. Acquisition, construction and improvement of bus and rail facilities and equipment

The source of all federal Capital Program funding is the Mass Transit Account of the Highway Trust Fund. Historically, federal funding for new busway and rail transit systems has been provided at 80%, but the FTA's current policy is to limit the federal share to the 50-60% range due to the great number of projects and limited amount of "New Starts" funding. The "New Starts Program" now requires a 50% match as the norm. SAFETEA-LU specifies a new category of projects to be funded separately out of the Section 5309 New Starts program. This new category encompasses smaller scale projects, referred to as "Small Starts", beginning in FY 2007. Projects requesting less than \$75 million in Section 5309 New Starts funds with a total project cost less than \$250 million will be eligible to receive funds under the new Small Starts provision. Other areas have increased their state and local share through specific taxes. Unless FTA changes its policy, Pennsylvania and/or the Southwestern Pennsylvania region will have to do the same, in order to submit projects which are competitive with other New Starts projects.

Section 5307 - Urbanized Area Formula Program

This program provides funds for planning, acquisition, construction, preventive maintenance, improvement, operating costs and associated capital maintenance items. Distribution of Urbanized Area Formula funds is by statutory formula to individual urbanized areas. A portion of the Urbanized Area Formula funding is derived from the Federal General Fund. The remainder is from the Mass Transit Account of the Highway Trust Fund. Urbanized Area Formula funds apportioned to urbanized areas with populations of 200,000 and over cannot be used for operating assistance.

Urbanized Area Formula assistance is available on an 80% federal/20% local matching ratio. Projects that address requirements of the Clean Air Act Amendments of 1990 (CAAA 90) or of the Americans with Disabilities Act (ADA) may be funded at a 90% federal/10% local (or, in some instances, 95% federal/5% local) matching ratio. Elements defined under the Urbanized Area Formula Program as "transit enhancements" may be funded 80/20 match. Currently, in 2008, the enhancements program is on hold until the backlog of projects in progress are completed.

PUBLIC TRANSIT

Flexed Funding

As part of an agreement between the Commonwealth and the transit community during the enactment of Act 3 of 1997, a total of \$25 million per year in federal highway funding was flexed to transit agencies for their projects. During the last five years, the state and SPC counties transferred or “flexed” an additional \$100M to transit projects from traditional federal highway funding grant programs. Highway and bridge funds are also fiscally constrained and stretched to their limits, so moving funds between modes has not been a satisfactory solution.

■ ISSUES AND ANALYSIS

This section examines ways to provide more efficient and effective public transit service in Allegheny County.

KEY CHALLENGES

In developing the Transportation Plan, the Transportation Resource Panel helped to identify these key challenges:

- Difficult circulation in and around Oakland
- Lack of direct fixed guideway connection between Downtown and Oakland
- Lack of direct fixed guideway transit connection between Downtown Pittsburgh and the Airport
- Insufficient transit funding
- Critical need for transit expansion and maintenance in the urban core
- Public attitude toward transit
- Missing intermodal connections
- Lack of efficient system to meet current county needs and population levels
- Transit farebox doesn't pay for operating expenses

The following provides an understanding of these issues.

DIFFICULT CIRCULATION IN AND AROUND OAKLAND

Oakland is the economic wellspring for future growth of the region due to its concentration of research facilities, universities, hospitals and the potential and current realization of related spin-off companies. Circulation in and around Oakland does not meet the needs of current travelers. This is in spite of the fact that PAAC's transit routes serving Oakland are among the most heavily used in the system with a 25% mode share. There is a very high level of bus service on Fifth and Forbes Avenues which are the two key travel arteries through Oakland. Bus service is available in other areas of Oakland, too. There are also effective connections between Oakland and Downtown, Shadyside, East Liberty and other East End and South Side communities. Improvements to these services are needed for existing and future Oakland transit users. Transit plays a key role in connecting development to the institutions that are driving the growth in Oakland, but an expansion of the transit system is needed to help solve the circulation issues. There are internal mobility problems within the Oakland area that can be addressed by construction of an area circulator system which connects Oakland to Southside, Second Avenue, Bloomfield, Lawrenceville, Shadyside and CMU, bringing together greater Oakland's many assets and allowing the parts to function as a whole. Attracting new technology development, and retaining graduating students to enter the workforce here, is highly dependent on public transportation that is readily available, and easy to navigate. Transit development efforts should be coordinated with the plans of the major institutions in and near Oakland. For more information see the Transit Action Team Report and Oakland Investment Committee Transit Report in the Supporting Documents.

LACK OF DIRECT FIXED GUIDEWAY CONNECTION BETWEEN DOWNTOWN AND OAKLAND

Transit from Downtown to Oakland will connect the two largest economic generation centers in the region – Pittsburgh and Oakland. A frequent, rapid and efficient fixed guideway rapid transit connection between the two centers is critical as the County grows the education, medical and technology sectors at the core of regional prosperity. The corridor between town and Oakland is congested, and heavily served by bus transit. Facilitating growth downtown, in Oakland and in between, with excellent infrastructure, is



PUBLIC TRANSIT

a key component needed to assure future prosperity. The Oakland Design Advisory Team worked extensively on this issue. The final DAT Transit Coordination Recommendations report is located in the Supporting Documents.

LACK OF DIRECT FIXED GUIDEWAY TRANSIT CONNECTION BETWEEN DOWNTOWN PITTSBURGH AND THE AIRPORT

Congestion along Parkway West makes travel to the airport difficult. Planned and recently completed infrastructure improvements offer the promise of a brighter future for the airport corridor. The proposed Southern Beltway will improve access and east-west mobility between the mid-Mon Valley and the Airport, and will assist in transforming the area around the Airport into a major warehouse and distribution center that will create thousands of jobs. The recently completed Findlay Connector, a new highway linking the Airport to Route 22, is spurring the development of more than 1,500 acres of nearby land. This additional development, and the jobs that will result, will better support conditions conducive the provision of direct transit service to the airport. The West Busway/28X serves this route, but not frequently and not holistically. Some 28X service was reduced in June, but there should be consideration of the extent to which improvements in existing bus service would address the needs of the Airport Corridor in the short term. A new fixed guideway investment is likely years away in this case.

Several studies have investigated various alternatives for providing improved transit service from Downtown to Pittsburgh International Airport. Light Rail Transit from Downtown to the Airport utilizing a "Parkway" alignment, or a more direct new route, and establishing a major intermodal hub at a midway point for the West area will provide the best alternative for these reasons:

- Provides opportunities for travelers to our area to rapidly connect to Oakland and other essential corridors
- Directly serves Pittsburgh International Airport hub, and a midpoint "western" intermodal hub that will distribute commuters to employment centers, educational facilities and other points of interest in West Allegheny County

- Supports economic development, land use priorities and redevelopment opportunities along the corridor
- Connections from the intermodal hub to Robert Morris University, CCAC West, and many other higher education facilities should be accommodated
- Provides most direct and fastest route to Pittsburgh International Airport
- Provides a link connecting the downtown subway, North Shore and South Hills LRT and the East Busway

Bus Rapid Transit could be an alternative and serve some of the purposes in the interim before an LRT system is funded.

A fixed guideway transit connection would provide improved access to the region for travelers, support economic development and land use priorities along the corridor, and provide access to other transit facilities. Furthermore, without convenient and frequent transit, lower-wage workers will continue to face difficulty accessing jobs along the airport corridor. To serve concentrations of jobs in the sprawling environment in the airport corridor, a feeder system of buses connecting to a multi-modal transit hub is needed.

INSUFFICIENT TRANSIT FUNDING

Mass transit ridership in Allegheny County and across the nation has been declining for the last 40 years. Generally, this occurred due to the decline of cities and rapid suburbanization. The share of commuters using public transportation, as a percentage of all workers in the County, has decreased from 24% in 1960 to just 10% in 2000 (data from U.S. Census). This happened despite construction of a light rail system and busways that were might have reversed this long term decrease in usage. Investments in those facilities did help the Port Authority to maintain its market share in these corridors. In other areas several factors have contributed to the decrease in Port Authority ridership:

- Increased dispersion of residences and employment centers
- Increasing affluence
- The 1992 transit strike
- Service reductions and fare increases
- Economic and population decline in some areas which previously had high levels of transit service (i.e. Mon Valley)

PUBLIC TRANSIT

- Relatively low gasoline prices until 2005, which had not significantly increased for over a decade, especially when inflation is considered.

For the past several years, Port Authority funding sources have become inadequate to cover the agency's operating expenses. Recently Act 44 of 2007 has provided significant but not enough funds for PAAC transit.

As a result, Port Authority operations continue to have revenue shortfalls, increased operating costs and insufficient government funding. This is true for all transit operators around the country. Substantial changes are being made to preserve public transportation in our County through Act 44 but additional funds are still needed.

CRITICAL NEED FOR TRANSIT EXPANSION AND MAINTENANCE IN THE URBAN CORE

A large number of commuters to the urban core use public transit on a regular basis. Therefore, it is vital to extend and maintain transit service to Downtown Pittsburgh and to Oakland. The routes that serve the urban core are the heart of the transit system and the revenues from these routes support services in other parts of the County.

PUBLIC ATTITUDE TOWARD TRANSIT

It is a common misconception among non-transit users, and the public in general, that transit is viewed as an expense rather than an investment in the local economy and a key to Allegheny County's livability. Transit provides vital service to employment centers, shopping, education and medical destinations among others. Port Authority investments in light rail and busways have helped generate new residential and commercial development, such as the Mellon Client Service Center at the Steel Plaza 'T' Station in Downtown Pittsburgh, PNC service center at the First Avenue 'T' station condominiums above Giant Eagle and Central Medical Commons in Shadyside, and the Eastside development in East Liberty. Additionally, Allegheny County is conducting the South Hills TRID planning study for Transit Revitalization Investment Districts in Dormont and Mount Lebanon, to create the conditions for development and redevelopment at and near Port Authority's 'T' stations in those communities (see Supporting Documents for the full TRID study).

Another dimension of the attitude issue is the pressure to re-route buses in downtown and other locations in response to a negative perception of buses and bus riders. This increases transit operating costs and reduces convenience for transit patrons. PAAC's Transit Development Plan will evaluate the existing network of downtown bus routes and determine if there are changes which can result in operational efficiencies, improve service to riders and enhance the downtown environment. It is anticipated that this evaluation, just underway, will assess whether existing stops are optimally located.

MISSING INTERMODAL CONNECTIONS

The Port Authority's network of park-and-ride facilities supports connections with automobiles. Many of these lots are located on or near major thoroughfares, or adjacent to limited-access highways. Transit's connection with bicycles is incomplete and in suburban areas direct pedestrian connections are often difficult. In order for the multi-modal connections to work, they need to be seamless to the user. Since 2000 the Port Authority has undertaken several initiatives to improve the interface for bicycles and transit. The First Avenue Station provides convenient access to the Eliza Furnace Trail and a bike and blade rental facility. Port Authority's Rack 'n Roll program of racks mounted on buses, and permitting, during off-peak periods, bicycles on the 'T' and Mon Incline, lets bicyclists use transit for part of their journeys. Bike racks have been installed at some transit stations. A map has been developed showing the relationship of bus routes to trails. The Port Authority will continue to pursue other opportunities for enhancing bike/transit linkages within available financial resources.

The multi-modal connections mentioned above with transit, bicycles, automobiles, pedestrians, etc. are very important to implementing the Places identified in the Future Land Use Plan (see Map 4A.1). These Places were envisioned to be mixed use and utilize a variety of transportation modes.

LACK OF EFFICIENT SYSTEM TO MEET CURRENT COUNTY NEEDS AND POPULATION LEVELS

Over the past few decades, the County has experienced population decreases in many of transit's traditional markets. Consequently, the Port Authority has had to modify its route



PUBLIC TRANSIT

structure or level of service to match the changing markets. However, some of the areas with the greatest population decline are also the communities with the greatest reliance on public transportation (i.e. the Mon Valley). The Port Authority has reduced service to the Mon Valley communities over the past 15 years even though it is considered a depressed area. Conversely, since 1997, the Port Authority has added service in the Airport Corridor, Waterfront (MV), South Side Works and other areas of new development.

There are three challenges to providing transit routes to changing markets:

- 1) Many of the new growth areas are characterized by low-density development and are more costly to serve than older densely developed communities in the City of Pittsburgh and older suburbs.
- 2) Port Authority's financial crisis limits its ability to add service to new areas while maintaining service to older (although declining) communities.
- 3) While there are some developments which prefer not to accommodate Port Authority buses, service and patrons, other developments are very interested in new or increased transit service.

The PAAC Transit Development Plan, a part of Connect 09, will evaluate the Port Authority's existing route structure to determine how best to serve existing and new markets within available financial resources. At the same time, PAAC will also be exploring a new fare system.

TRANSIT FAREBOX DOESN'T PAY FOR OPERATING EXPENSES

As with all transit systems, fare revenues do not pay for operating the transit system. Operating expenses are primarily subsidized with state and local funds. Lottery revenues enable senior citizens to ride public transit for free. This is true of every transit system, and by the way, it is not unique to transit. The road and highway network, airlines, railroads etc., are all heavily subsidized. All modes require subsidy, especially the private automobile!

One reason that fares do not cover operating expenses is that Port Authority has been facing increasing costs. Expenditures

for fuel, health care, and retirement benefits have grown rapidly in recent years. At the same time costs have been escalating, revenues have not kept pace with inflation.

RECOMMENDATIONS

GOAL OF THE PLAN

An excellent multi-modal transportation network – integrated with the Future Land Use Plan – that:

- Connects people to jobs
- Supports mobility of existing communities
- Provides efficient access to proposed development, and
- Facilitates the movement of goods and freight.

OBJECTIVES OF THE PLAN

The objectives of the Public Transit portion of the Transportation Plan are to:

- A. Target transportation investments to support job and housing growth as shown on the Future Land Use map.
- B. Prioritize the maintenance of existing transportation infrastructure within and across all modes.
- C. Provide integrated transportation alternatives and coordinated transportation systems to increase mobility.
- D. Promote transit-oriented development sites at key transit stations and along major transit corridors.
- E. Connect Pittsburgh International Airport to Downtown, Oakland and major population centers via a rapid transit system.
- F. Improve transit into and around Oakland.
- G. Use efficient and creative funding strategies such as public/private partnerships, privatization, and leveraging current and future assets.

PUBLIC TRANSIT

The following provides an understanding of the objectives.

A. Target Transportation Investments to Support Job and Housing Growth

Transit is critical to the economic health of the region and the well-being of the public. It is a sustainable mode of transportation that will help to reduce traffic congestion. Transit is clearly a focus of future investment, and while funds are now tight, plans should be made to prioritize and accommodate future transit improvements.

Transit service to appropriate Places designated in the Future Land Use Plan would be by way of either a rapid transit mode (light rail or busway) or bus service. Transit circulation within Places can be by transit, but must be carefully planned. Smaller shuttle vehicles operated by a consortium of business owners or a public-private transportation management entity may be viable as these Places establish themselves as true mixed-use centers of housing, shopping and employment, and as a market for very localized and/or demand-responsive transit emerges.

Transit will play a significant role in Allegheny County's future.

B. Prioritize the Maintenance of Existing Transportation Infrastructure Within and Across All Modes

Upgrading our existing, aging transit infrastructure, along with the importance of regular maintenance of newer transit facilities, is key to ensuring a dependable, attractive and efficient system. Fixing our valuable investments first is a top priority for transit. This is especially important during a time when increasing numbers of commuters are likely to be attracted to the transit option to save money, help the environment and to be more physically active in their daily lives. We cannot afford to waste the valuable assets we currently have, but need to preserve them and maximize their use.



Photo credit: Port Authority of Allegheny County

C. Provide Integrated Transportation Alternatives to Increase Mobility

Multi-modal transportation alternatives consider the full range of approaches to solving the transportation problems plaguing Allegheny County's roadways. Solutions can range from new rail lines, automated fixed-guideway transit and more bus routes to those that reduce demand by integrating modes and making it easier to use the system. Integrating park-and-ride facilities with transit stops, developing HOV lanes and ridesharing opportunities, providing sidewalks and bikeways to transit stops are all ways that can increase mobility. Designing and building 'Complete Streets' can also assist greatly in increased mobility and transit accessibility.

There are several studies such as the Eastern Corridor Transit Study and the Allegheny Valley Railroad Feasibility Study that have suggested using existing rail corridors for future rapid transit, since the infrastructure and right-of-way costs can be lower when compared to a new alignment. Additional alignments will be developed and assessed. Upgrades to track systems as well as agreements with railroad companies will be needed to allow commuter use of these lines, since freight and commuter operations are not necessarily compatible with each other. Freight trains and



PUBLIC TRANSIT

commuter rail equipment co-existed in Pittsburgh up to 1989 when the PATrain was discontinued and continue to co-exist in Baltimore, Washington, Chicago, Seattle and Los Angeles, among other cities. Nearly all commuter rail operations in the United States use Federal Railroad Administration compliant vehicles. Agreements are needed with railroad companies in order to gain access to rail lines, make track and signal improvements and ensure that commuter rail and freight operations do not interfere with each other. Exploration of feasibility of creative rail use like the “Colorado Rail Car” could be utilized for passenger rail service in Allegheny County. Future conflicts in rail use will increase along with the trend of vastly increased volumes of freight moving by rail. There has been an increase in rail traffic in recent years and it is expected to continue to rise exponentially as highways become more congested and moving freight via the highway system becomes less feasible and far more costly than by rail.

The Westmoreland County Transit Authority has initiated an interim study of commuter rail on the Allegheny Valley Railroad between Arnold/New Kensington and Pittsburgh and on the Norfolk Southern rail line between Greensburg and Pittsburgh. This effort will build upon previous studies of these corridors. This analysis includes an assessment of integrating passenger trains into lines with increasing freight train operations.

The Port Authority identified proposed alignments for new rapid transit lines through a public process, in the Airport Multi-modal Corridor, Eastern Corridor and Regional Transit Visioning studies. These studies have been conducted in partnership with SPC, Allegheny County and all the region’s transit providers. An important next step is selection of priority corridor(s) in consultation with the public, elected officials, local governments, Allegheny County, SPC and the Commonwealth of Pennsylvania. Private funding can help, but major transit capital investments will still require significant local and/or state public funding. Las Vegas is the only place in the United States where a new transit project was implemented with major private funding. More typical are Charlotte, Denver, Portland, Salt Lake City, San Francisco and Seattle which fund transit projects with significant local and state funding to match federal funding, and then,

complete appropriate engineering studies for selected alignments, secure rights-of-way and construct new rapid transit lines. While the funds for these types of projects are limited, additional and creative funding mechanisms need to be explored. Public-private partnerships are one option that can help fund public improvement projects once the enabling legislation is put in place.

D. Promote Transit-Oriented Development Sites at Key Transit Stations

Transit-oriented development (TOD) is an important national land development trend. TOD can be accomplished by targeting mixed-use development around existing and proposed transit stations. The existing ‘T’ line and busways and the new rapid transit lines envisioned for Allegheny County represent an ideal opportunity for TOD such as Eastside in the City of Pittsburgh’s East Liberty and Shadyside neighborhoods and Dormont, Castle Shannon and Mt. Lebanon. TOD is consistent with the principles of the Future Land Use Plan and can provide significant additional ridership for the Port Authority’s transit lines.



Photo credit: Port Authority of Allegheny County

A new grant, Transit Revitalization Investment District (TRID), has been established to study the feasibility of developing a TOD in certain areas. Allegheny County is currently completing TRID studies for areas adjacent to the light rail stations in the South Hills (see Supporting Documents for the full TRID study).

PUBLIC TRANSIT

The Port Authority should conduct TOD market, planning and urban design studies for key transit stations, publicize the findings and solicit developers to build on TOD sites. Many of the PAAC stations along the 'T' line have functioned as TODs for the past century and could be enhanced by future development on PAAC-owned property or on adjacent or nearby privately-owned sites. Private developers are increasingly interested in development opportunities near transit stations. Public-Private Partnerships are an option to assist with site development.

E. Connect Pittsburgh International Airport to Downtown, Oakland and Major Population Centers via a Rapid Transit System

The main recommended transportation feature for *Allegheny Places* is transit from downtown Pittsburgh "to and around the Oakland Area", including a major intermodal hub in central Oakland and transit from Downtown Pittsburgh, via the new transit connection on the North Shore, to Pittsburgh International Airport. There have been several studies completed to date (mentioned in the integrated multi-modal section above) that suggest alternatives to complete the rapid transit connection between the Airport, Downtown and Oakland.

Along the entire route there will be opportunities for revitalized or new transit-oriented developments, intermodal hubs and other connection points, including intercept parking garages and park-and-ride facilities, trail interconnectivity, pedestrian-friendly improvements, feeder bus lines, bus-rapid-transit (BRT) connections (with potential to connect to hubs via shared high-speed right-of-ways) and many other-related and focused development and redevelopment opportunities. There is vast potential for additional transit connections to this suggested route.

The key connection is envisioned to take advantage of major transit-oriented development potential along the West Busway, between Pittsburgh and Oakland, on the North Shore and at other identified Places along the route.

New rail transit facilities are very costly and take time. Creative financing must be a component of all future rail transit construction, but there will be opportunities for interim measures as Allegheny County proceeds to implement this plan; for instance, the potential of proceeding with Bus Rapid Transit initially for service between Pittsburgh via the West Busway and Parkway West to the proposed Robinson Town Centre "mixed-use development/intermodal hub", and on to the Airport. This BRT route would eventually be replaced with LRT.

In the of Fall 2007, The Chief Executive's Transportation Action Team made recommendations for priority transit projects. He appointed a Transportation Action Partnership to implement those recommendations.

F. Improve Transit Into and Around Oakland

The County has had several objectives with respect to transit. A priority has been to connect Downtown Pittsburgh with Oakland via rapid transit. Additional transit within the Oakland area is also a priority, since the hospitals and universities in Oakland comprise one of the largest employment and educational centers in the region and, while a number of students and employees live in the vicinity, many more commute.

In the Fall of 2007, The Chief Executive's Transportation Action Team made recommendations for priority transit projects into and around Oakland. He appointed a Transportation Action Partnership to implement those and other recommendations.

G. Use Efficient and Creative Funding Strategies such as Public/Private Partnerships, Privatization, and Leveraging Current and Future Assets

The new State Transportation Funding Act 44 2007, which was signed into law in 2007, should help to alleviate some of the current operations funding burden in public transit, but the required match will remain a challenge. The Act will provide a dedicated source of funds for transit, highways and bridges but it still is insufficient. *Allegheny Places* recognizes that transit is a critical service on which many residents rely. In order



PUBLIC TRANSIT

to construct and operate many of the proposed transit projects, new funding mechanisms, such as public-private partnerships, need to be pursued.

The Port Authority, in partnership with SPC, Allegheny County and local governments, should explore options to address funding shortfalls and generate new revenues, including transportation to serve areas of new economic development (e.g. the North Shore, Eastside, South Side Works, Dormont and Mt. Lebanon TOD, etc). This may include, for example, TOD, TRID or public-private partnerships.

Furthermore, the Port Authority should identify Public-Private Partnerships which use creative financing strategies, such as permitting commercial use of Busways*.

The Commonwealth of Pennsylvania must enact P3 enabling legislation, since there is no current legislation which allows for the formation of P3s and for the funds collected to be used to fund public improvements.

* While introduction of private vehicles on the busways can generate new revenues for the Port Authority, a number of issues would need to be, and should be, resolved including:

- Regulation of operations
- Operational impacts on peak period bus operations
- Capacity impacts
- Federal planning and environmental regulations
- Community acceptance
- Liability and insurance

BICYCLE AND PEDESTRIAN

■ TODAY'S CONDITIONS

In Allegheny County, roadway-based amenities for bicycles and pedestrians consist primarily of sidewalks for pedestrians, and for bicyclists, bike lanes, on-street bike routes, bicycle parking, and bike racks on transit buses. Most of these are located in Pittsburgh and the older suburbs. (For information on Bike Trails see the Parks, Open Space and Greenways Plan – Chapter 4, Section E.)

BICYCLE LANES

There are currently bike lanes along six roads in the City of Pittsburgh. These roads include Beechwood Boulevard, Schenley Drive, the Riverview Park Loop, the Highland Park Reservoir Loop, Birmingham Bridge and Liberty Avenue in the Bloomfield area. In addition, the City is identifying and evaluating other roadways that would be candidates for bike lanes and on-street bike routes. Bike trails such as the Eliza Furnace Trail and the South Side Trail are used by residents to travel to places of employment, thereby providing alternative ways to travel.



Photo credit: Kevin Smay

BicyclePA ROUTES

BicyclePA routes were designed by experienced bicyclists to provide bicycling members of the traveling public who wish to traverse the state with a guide to some of the Commonwealth's highways and rail-trails. Few of these routes contain bike lanes or other facilities designed specifically for bicyclists traveling within the four corners of the Commonwealth. Pennsylvania Bicycle Route 'A' passes through the western portion of Allegheny County as it extends from Erie to West Virginia. Pennsylvania Bike Route 'S' passes through the southern portion of Allegheny County along Route 136.

BICYCLE RACKS

The Pittsburgh Downtown Partnership and Bike-Pittsburgh joined forces to install 130 artistic bike racks throughout the City. Through its "Rack 'n Roll" program, the Port Authority provides bike racks on buses on 12 of its bus routes. In addition, transit passengers are allowed to take their bicycles on the light rail system and the Monongahela Incline during off-peak hours.

FUNDING

Bicycle and pedestrian improvement projects are typically funded by three programs administered by the Southwestern Pennsylvania Commission (SPC):

- Transportation Enhancements
- Hometown Streets
- Safe Routes to School

Transportation Enhancements funds projects that aim to integrate the transportation system with the surrounding community. Transportation Enhancements projects can include trails, bike parking and bike racks on buses. Safe Routes to School and Hometown Streets are offshoots of the Transportation Enhancements program. The latter two programs provide assistance for projects that enable the safe passage for children to walk or bicycle to school. This includes constructing new facilities or improving existing facilities to make them more usable for pedestrians and bicyclists.



BICYCLE AND PEDESTRIAN

Between 2007 and 2010, more than \$19 million of funding from these three funding sources is programmed for projects in Allegheny County (\$8.9 million) and the City of Pittsburgh (\$9.7 million). Bicycle and pedestrian projects such as sidewalks and paved shoulders can also sometimes be programmed into roadway projects.

■ ISSUES AND ANALYSIS

This section examines ways to facilitate increased bicycle and pedestrian travel in Allegheny County.

KEY CHALLENGES

In developing the Transportation Plan, the Transportation Resource Panel helped to identify these key challenges:

- Lack of comprehensive and predictable “Rack and Roll” system
- Unsafe and unattractive places to wait for transit
- Lack of available, safe bicycle parking facilities
- Lack of a bicycle route signage program
- Lack of continuous sidewalk network in new developments
- Consistently incorporating bicycle and pedestrian facilities into roadway projects

The following provides an understanding of these issues.

LACK OF COMPREHENSIVE AND PREDICTABLE “RACK AND ROLL” SYSTEM

Only 12 Port Authority bus routes offer bike racks, leaving vast portions of the County unserved. At the time of this plan, approximately 170 transit routes do not have dedicated bike rack transit vehicles. An increase in dedicated “Rack and Roll” bus routes would be desirable. Predictability on the routes with racks is the most critical issue for there must be a guaranteed way back.

UNSAFE AND UNATTRACTIVE PLACES TO WAIT FOR TRANSIT

There are approximately 16,174 transit stops in Allegheny County. The majority of passengers access transit by walking to a stop. The conditions at transit stops vary throughout the County. Providing amenities such as good lighting at transit stops and stations increases passenger comfort and safety and can increase transit ridership. Other amenities such as landscaping improve the visibility of the transit stop and enhance transit’s appeal to the community. Bus shelters are key to comfort and encourage ridership in inclement weather. Pre-college students use PAAC to get to schools, and safety and dependability are critical for those children.

LACK OF AVAILABLE, SAFE BICYCLE PARKING FACILITIES

In order to encourage higher levels of bicycle usage in the County, bicyclists need a safe place to secure their bicycles when they reach their destination. With the exception of bike parking available at public parking garages and other strategic locations in Downtown Pittsburgh, PAAC stations as well as at numerous locations in Pittsburgh neighborhoods, bike racks are not available in most areas of the County. Bike racks/facilities can encourage multi-modal activity.

LACK OF A BICYCLE ROUTE SIGNAGE PROGRAM

Many residents of the County do not bicycle using the local roadway system due to real or perceived threats to bicycling such as traffic volumes, roadway width and traffic speed. While many roadways in the County are suitable for bicycling, residents do not have information that would help them decide which roads to use.

LACK OF CONTINUOUS SIDEWALK NETWORK IN NEW DEVELOPMENTS

In Allegheny County, different patterns of land use development affect pedestrian access to transit, employment, education, and shopping, among other destinations. The County’s older communities often have a well-established sidewalk network that allows residents to easily walk to many destinations. Newer residential and employment centers

BICYCLE AND PEDESTRIAN

often present difficulties for pedestrians due to the scale of development or because the construction of sidewalks was not required by local municipal ordinances. Even when there are requirements, they are frequently waived. Frequently developers ask for exemptions because their sidewalks will not connect to a system of existing sidewalks. Sidewalks in the suburbs will only occur when all developments must install sidewalks and eventually there will be connectivity.

CONSISTENTLY INCORPORATING BICYCLE AND PEDESTRIAN FACILITIES INTO ROADWAY PROJECTS

An efficient and cost-effective means of improving bicycle and pedestrian conditions is to integrate these facilities into the planning, design and construction of roadway projects. Bicycle and pedestrian needs should be considered at the earliest stages of transportation project development to ensure the appropriate accommodation of those needs. This modal integration requires coordination among several entities including PennDOT, Allegheny County, SPC and local communities.

■ RECOMMENDATIONS

GOAL OF THE PLAN

An excellent multi-modal transportation network – integrated with the Future Land Use Plan – that:

- Connects people to jobs and schools
- Supports mobility of existing communities
- Provides efficient access to proposed development, and
- Encourages multi-modal connectivity.

OBJECTIVES OF THE PLAN

The objectives of the Bicycle and Pedestrian portion of the Transportation Plan are to:

- A. Provide Integrated, 'Active' Transportation Alternatives Including Bikeways, Sidewalks and Transit.
- B. Coordinate transportation systems and modes to increase mobility.

The following provides an understanding of the objectives.

A. Provide Integrated, 'Active' Transportation Alternatives Including Bikeways, Sidewalks and Transit

Bicyclists and pedestrians should be encouraged through incorporating bicycle lanes and sidewalks into both roadway and transit projects. Utilizing and expanding bike trails can also serve to connect people to jobs, schools and shopping.

The Future Land Use Plan promotes compact mixed-use development and so it is imperative that sidewalks, pathways and crosswalks are included to accommodate the safe passage of pedestrians within Places.

The Future Land Use Plan further encourages linking Places to amenities such as parks, riverfronts, and greenways. Multi-modal transportation systems designed for Places therefore need to be coordinated with the trails and greenways network in the Parks, Open Space and Greenway Plan.

Integrating bikeways and sidewalks into new roadway projects, designating bike routes on existing streets, transit, trails and greenways should ultimately create an interconnected alternative 'Active Transportation' network throughout Allegheny County.

B. Coordinate Transportation Systems and Modes to Increase Mobility

Increasingly, the need to integrate walking and bicycling with transit usage is being recognized. As transit routes are being planned or improved, there is a need to ensure that there are:



BICYCLE AND PEDESTRIAN

- Safe ways to access transit stops
- Secure and convenient places to park bicycles
- Dependable ways for a transit passenger to transport a bicycle
- Desirable places to wait for transit vehicles

Transportation provides access to many key opportunities such as jobs, quality schools, entertainment and recreation. An equitable and efficient transportation system includes multiple modes and ensures mobility for all residents.

Another need of the transportation network is to provide ways to commute by bicycle. Roadway shoulders should be paved, routes suitable for bicycling should be identified and the routes signed accordingly.

AIRPORTS

■ TODAY'S CONDITIONS

PITTSBURGH INTERNATIONAL AIRPORT

Pittsburgh International Airport (PIT) has the potential to be an economic generator for Southwestern Pennsylvania. Located 16 miles west of Pittsburgh, the airport is served by 13 air carriers and in 2006 accommodated 10 million travelers in nearly 270,000 aircraft operations. The airport encompasses almost 10,000 acres with four runways, five terminals with 100 gates, and has 13,000 parking spaces. More than 2,000 acres of PIT land are available for non-aviation and aviation-related development. This includes about 400 acres of pad-ready sites available and fully ready-to-go for users, as of 2007.

In addition to the traveling public, Pittsburgh International Airport also serves the freight community, processing about 200 million pounds of freight each year.

Pittsburgh International Airport is undergoing a period of transition in the wake of the dominant carrier, US Airways, significantly reducing its connecting hub operations at the facility. Table 4I.12 shows airport operations in recent years.

Although US Airways still maintains a significant presence at PIT, several low-cost carriers such as Southwest have entered the market, and help to make PIT more competitive in terms of lower fares. In addition to reduced fares, new carriers have increased passenger volumes and trips originating from the airport by airlines other than US Airways. The following carriers serve the Pittsburgh International Airport:

TABLE 4I.12 – Pittsburgh International Airport Operations, 1996-2006

Year	Passenger Enplanements	% Change	Cargo Volume	% Change
1996	20,533,660	2.6%	345,355,262	3.2%
1997	20,759,723	1.1%	361,395,069	4.6%
1998	20,556,075	-1.0%	346,791,556	-4.0%
1999	18,785,728	-8.6%	323,601,747	-6.7%
2000	19,816,511	5.5%	624,175,994	92.9%
2001	19,945,246	0.6%	306,625,155	-50.9%
2002	18,027,165	-9.6%	309,072,448	0.8%
2003	14,266,984	-20.9%	267,985,028	-13.3%
2004	13,271,709	-7.0%	265,750,936	-0.8%
2005	10,478,605	-21.0%	190,152,587	-28.4%
2006	9,987,310	-4.7%	186,727,316	-1.8%

Source: FAA



AIRPORTS



Photo credit: McCormick Taylor

- Air Canada
- Air Tran Airways
- American Airlines
- Continental
- Delta Airlines
- JetBlue
- Midwest Airlines
- Myrtle Beach Direct
- Northwest Airlines
- Southwest Airlines
- United Airlines
- US Airways
- USA 3000 Airlines

The following air cargo carriers serve Pittsburgh International Airport:

- Airborne Express
- DHL
- FedEx
- UPS

There are intermodal facilities at PIT that connect passengers with private vehicles, limousines, taxis and transit, as well as freight facilities to support the air cargo.

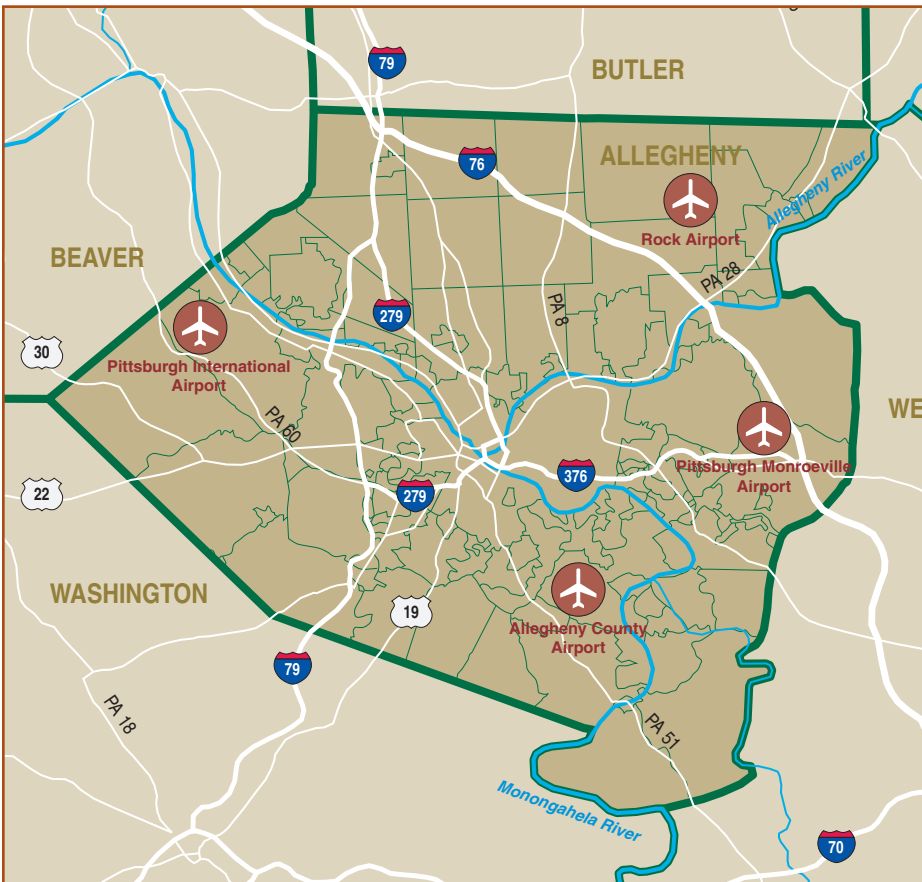


Figure 4I.5 – Airport Locations

Source: McCormick Taylor

County's airports are shown on Figure 4I.5.

ALLEGHENY COUNTY AIRPORT

The Allegheny County Airport, located in West Mifflin, is the fifth busiest airport in the state and the largest general aviation airport in western Pennsylvania. It is classified as a business service airport with 160 fixed based aircraft (FBO) and approximately 139,000 annual operations. It is served by two lighted runways. The airport has a continuously staffed air traffic control tower. It serves as the primary FAA designated reliever for Pittsburgh International Airport. In this role, the airport supports a high volume of business, corporate and pleasure-related flying activity.

PRIVATE AIRPORTS

The County has two private airports, Pittsburgh-Monroeville Airport and Rock Airport. The locations of the

AIRPORTS

■ ISSUES AND ANALYSIS

This section examines ways to support air travel in Allegheny County.

KEY CHALLENGES

In developing the Transportation Plan, the Transportation Resource Panel helped to identify these key challenges:

- Underutilized passenger and cargo facilities at Pittsburgh International Airport
- No direct fixed guideway transit connection between Pittsburgh International Airport and Downtown Pittsburgh and Oakland
- No transcontinental international flights
- Need to increase air cargo activities

Additional challenges of concern for the Allegheny County Airport Authority include:

- Increasing congestion levels and travel times between Pittsburgh International Airport, Downtown Pittsburgh, and Oakland that limit opportunities for growth at PIT and throughout the County
- The same issues apply for Allegheny County Airport in West Mifflin; it also suffers from increased congestion levels and travel times between it and Downtown Pittsburgh and Oakland.
- More than two thousand acres of PIT land available for development that can assist in providing jobs for the community and lease revenues for the airport. (This is addressed in the Economic Development Plan – Chapter 4, Section C.)

The following provides an understanding of these issues.

UNDERUTILIZED PASSENGER AND CARGO FACILITIES AT PIT

There are underutilized gates and terminals due to the removal by US Airways of their hub at PIT and the resulting reduction in flights. Efforts are underway to attract more carriers and additional flights to and from PIT.

PIT has underutilized cargo buildings and 235,000 sq. ft. of cargo buildings with a vacancy rate of 32% in late 2007. A new development area at Northfield with a national developer will help to attract users and provide more facilities.

NO DIRECT FIXED GUIDEWAY TRANSIT CONNECTION BETWEEN PIT AND DOWNTOWN PITTSBURGH AND OAKLAND

Congestion along Parkway West makes travel to PIT difficult. Planned and recently completed infrastructure improvements offer the promise of a brighter future for the airport corridor. The proposed Southern Beltway will improve access and east-west mobility between the mid-Mon Valley and the Airport, helping to transform the area around the Airport into a major warehouse and distribution center that will create thousands of jobs. The recently completed Findlay Connector, a new highway linking the Airport to Route 22, will facilitate the development of more than 1,500 acres of nearby land.

Currently, public transit is significantly underutilized in the Airport Corridor, falling far below national averages. In its 2004 study of the corridor, Carnegie Mellon University's Center for Economic Development concluded that one reason for this may be the disproportionately high commuting times via transit. Therefore, most commuters are using privately owned vehicles instead. Furthermore, public transit may not be an option available to workers working more than one job or working during 'off-hours'.

A fixed guideway transit connection would provide improved access to the region for travelers, support economic development and land use priorities along the corridor, and provide access to other transit facilities. Furthermore, without convenient transit, low-wage workers will continue to face difficulty accessing jobs in the airport corridor.



AIRPORTS

■ RECOMMENDATIONS

GOAL OF THE PLAN

An excellent multi-modal transportation network – integrated with the Future Land Use Plan – that:

- Connects people to jobs
- Supports mobility of existing communities
- Provides efficient access to proposed airport development, and
- Facilitates the movement of passengers and freight.

OBJECTIVES OF THE PLAN

The objectives of the Airports portion of the Transportation Plan are to:

- A.** Support Pittsburgh International Airport efforts to retain and increase passenger and air cargo connectivity to national and international destinations.
- B.** Support freight movements through safe and efficient air shipping practices.
- C.** Increase connectivity to and from Pittsburgh International Airport to Downtown Pittsburgh, Oakland and major population centers via a rapid transit system, and other modes and system improvements.

The following provides an understanding of the objectives.

A. Support PIT Efforts to Retain and Increase Passenger and Air Cargo Connectivity to National and International Destinations

The Airport area is very important to the County in terms of the economic development opportunities it has to offer. If Allegheny County wants to compete with other cities in attracting national and international companies to locate in our region, it is very important to have non-stop flights to Europe and West Coast destinations. This is a key selling point in getting people to come to the region for business or tourism.

Recent restructuring and the merger of US Airways with America West has resulted in fewer flights and direct connections for US Airways passengers at PIT. The reduction in US Airways activity at PIT has made the airport more attractive to other airlines, and lowered travel cost to passengers.

B. Support Freight Movements Through Safe and Efficient Air Shipping Practices

Pittsburgh International Airport is one of the County's major transportation assets. This facility has the capacity to handle over hundreds of thousands of enplanements per year. While air traffic is currently down, the Airport Authority has been marketing the airport to multiple airlines, as well as the all air cargo market. The airport's goal is to attract additional freight carriers, or combination passenger and freight carriers. The County and its planning partners should continue to support the full utilization of the airport and its facilities, including cargo, and the goal of increasing connectivity to national and international destinations.

- In an effort to expand air cargo business and to increase the region's international air service, PIT has committed to working with community leaders to support the area's cargo agencies.
- The Air Cargo Task Force meets regularly. Its message is to increase cargo commitment via PIT. The goal is to attract freight carriers offering competitive direct lift for all types of international air freight imports and exports.

AIRPORTS

C. Connectivity to and from PIT to Downtown Pittsburgh, Oakland, and Major Population Centers via a Rapid Transit System

The Airport area is very important to the County in terms of the economic development opportunities it offers. Projected development in the airport corridor requires support in terms of transportation investments for intermodal connections between the network of roadway, transit and freight facilities and other congestion reduction measures.

A future that includes rapid transit between the airport and Downtown is vital to the County. A direct connection from PIT to Downtown Pittsburgh, and on to Oakland, supports economic development plans, land use priorities and redevelopment opportunities along the corridor. The light rail transit will provide opportunities to rapidly connect to Oakland, North Shore and South Hills destinations. Please refer to the major Transit Recommendations found earlier in this section and the Future Land Use Plan (Chapter 4, Section A) for more information.

Several studies have recommended using existing rail corridors for future rapid transit, because construction and right-of-way costs can be lower when compared to a new alignment, but many other factors add into the final mix of factors for decision-making. Alternatives will be developed and assessed as the project moves forward.

One intriguing possibility, full of potential, is that Robinson Town Center can serve as a “western” intermodal and multi-modal hub to distribute commuters to employment centers, educational facilities and other destinations in western Allegheny County, at the midway point of the LRT that is envisioned to eventually serve PIT.



RAIL FREIGHT

■ TODAY'S CONDITIONS

More than 350 miles of rail lines cross Allegheny County. Historically, rail lines were built along the rivers and transported resources and finished products to and from the manufacturing facilities located there. Today, several railroads, such as the Union Railroad that serves the U.S. Steel Edgar Thompson Works in Braddock, still provide this type of service.

The major freight railroad routes in the County are owned by Norfolk Southern and CSX, which utilize the lines for their regional, national and international operations. The Norfolk Southern main line through the County is a link in its east-west line between Chicago and Baltimore, while CSX's line connects Chicago, Philadelphia and New York.

The following lists the class and name of railroads located in Allegheny County.



Photo credit: Kevin Smay

Class I Railroads

- CSX Transportation, Inc.
- Norfolk Southern

Class II Railroads

- Bessemer & Lake Erie Railroad Company (Great Lakes Transportation)
- Buffalo & Pittsburgh Railroad, Inc.
- Kiski Junction Railroad
- Mountain Laurel Railroad Company
- The Pittsburg [sic] & Shawmut Railroad
- The Wheeling & Lake Erie Railway Company

Switching Lines

- Aliquippa & Ohio Central Railroad Company
- Allegheny Valley Railroad
- McKeesport Connecting Railroad Company
- Monongahela Connecting Railway
- Pittsburgh Industrial Railroad
- Pittsburgh Allegheny & McKees Rocks Railroad Company
- Union Railroad Company

Over the past 20 years, rail activity has increased significantly in the U.S. and regionally due to the increased use of containers (COFC) and trailers (TOFC) on flat freight cars. Rail companies are feeling pressure to increase capacity on rail lines and ensure maintenance in order to meet the continuously increasing demand. In many cases, the "last mile" of roadways connecting to rail freight terminals are in disrepair or deficient in ways that make them insufficient to handle the freight traffic traveling on them to be loaded onto rail cars.

FUNDING

The Southwestern Pennsylvania Commission's Freight Forum is working with railroads in the region to plan and fund infrastructure improvements. The Commonwealth of Pennsylvania's PA Rail Freight Assistance Program provides matching grants to railroads for projects which preserve essential rail freight service and stimulate economic development through new or expanded freight service. For 2009, the Governor's proposed budget plans include increased assistance to improve rail freight infrastructure.

RAIL FREIGHT

■ ISSUES AND ANALYSIS

This section examines ways to facilitate improved rail freight operations in Allegheny County.

KEY CHALLENGES

In developing the Transportation Plan, the Transportation Resource Panel helped to identify these key challenges:

- Lack of double-stack capacity
- Port Perry Rail Bridge capacity issues
- How the increased volume of rail freight traffic impacts long-term transit expansion plans, such as potential for commuter rail on the Allegheny Valley Railroad right-of-way

The following provides an understanding of these issues.

LACK OF DOUBLE-STACK CAPACITY

Due to steadily increasing volume of rail shipping, additional double-stack rail corridors are needed.

PORT PERRY RAIL BRIDGE CAPACITY ISSUES

The Port Perry Rail Bridge is a key connection crossing the Monongahela River. It carries Norfolk Southern rail traffic into and out of the Pitcairn Intermodal Facility. The bridge connection is single track rail, which significantly impacts the volume of goods that can travel through the area and increases travel time for the railroads. Trains must wait substantial amounts of time for opposing rail traffic to clear the bridge. The bridge at Port Perry is a “pinch point” which slows traffic and negatively affects productivity.

INCREASED VOLUME OF RAIL FREIGHT TRAFFIC IMPACTS LONG-TERM TRANSIT EXPANSION PLANS

Many proposed new transit investments and plans for expansion of existing fixed guideway facilities involve the

idea of using existing railroad rights-of-way. It will be critical to coordinate with the railroads to determine where joint use may be possible and what rail expansion or reduction plans are being discussed, as transit plans progress. Railroads will want to maintain access to rail line facilities and capacity as moving freight via rail becomes an increasingly viable and cost-effective option for freight movement. In an era of exploding oil and gas prices, and with ever-decreasing highway capacity due to increased traffic, rail becomes more and more desirable.

■ RECOMMENDATIONS

GOAL OF THE PLAN

An excellent multi-modal transportation network – integrated with the Future Land Use Plan – that:

- Connects people to jobs
- Supports mobility of existing communities
- Provides efficient access to proposed development, and
- Facilitates the movement of goods and freight.

OBJECTIVES OF THE PLAN

The objectives of the Rail portion of the Transportation Plan are to:

- A. Support freight movements through safe and efficient truck and rail intermodal connectivity and systems as well as with multi-modal facilities.
- B. Increase rail safety at interfaces with people and with other transportation modes.
- C. Support increased movement of goods by rail to free road capacity, and increase road capacity by supporting rail freight initiatives.

The following provides an understanding of the objectives.



RAIL FREIGHT

A. Support Freight Movements Through Safe and Efficient Intermodal Connectivity

The preservation of existing and future rail corridors in Allegheny County is a critical need for the region. As congestion on the region's highways continues to increase, freight movement by rail can be a viable alternative to trucking. Improving existing intermodal centers and developing others in key locations are fundamental to efficient future freight movement. Road access to the Pitcairn Intermodal Center should be improved to allow efficient transfer of freight to and from the trains. In addition, the elimination of the pinch point at Port Perry should be investigated and supported.

B. Increase Rail Safety

The interface between rail and other modes of travel is a source of accidents. Elimination of at-grade crossings should be pursued by railroad companies throughout the County. Eliminating at-grade crossings will result not only in improved safety but assist with making rail movements more efficient. Increasing pedestrian safety at rail crossings is also very important.

C. Support Increased Movement of Goods by Rail

Shipping via our rail infrastructure can provide shippers with cost-effective and efficient transportation, especially for heavy and bulky commodities. In terms of cost-effective energy use, rail engines are more fuel efficient than trucks. In terms of time savings, rail can also provide a more efficient travel time for freight companies as well as the added benefit of increasing capacity on the roadways by reducing the number of trucks using the roadway network. This is of particular importance in light of the projected increase in freight traffic over the next 10-15 years.

WATERWAYS

■ TODAY'S CONDITIONS

Allegheny County has significant water transportation resources for personal, commercial and recreational travel, and for freight shipment.

PORT OF PITTSBURGH

The Port of Pittsburgh continues to be one of the busiest ports in the nation. It's a vital element in an expansive and expanding transportation network that provides Allegheny County businesses with access to regional and global markets.



Photo credit: McCormick Taylor

Each year the Port of Pittsburgh moves approximately \$8 billion worth of goods and contributes more than 34,000 jobs in southwestern Pennsylvania. The primary commodities moving through the Port include coal, sand and gravel, limestone, scrap, chemicals and primary manufactured goods (such as alloys, fabricated metal products, lime, cement and glass). The Port encompasses a number of terminals, as shown in Table 4I.13.

The Port of Pittsburgh is the second busiest inland port in the United States.

The Port of Pittsburgh website lists Pittsburgh as “The Second Largest Inland Port in the Nation.” Based on 2005 data from the US Army Corps of Engineers, “Pittsburgh is the second busiest inland port in the nation and the 19th busiest port, of any kind, in the nation. Pittsburgh handles more tonnage than Philadelphia and St. Louis. The more than 40 million tons of cargo the Port of Pittsburgh ships and receives each year equates to an annual benefit to the region of more than \$873 million.”

LOCKS AND DAMS

Within Allegheny County, there are seven locks and dams that facilitate the movement of raw materials and goods to end users and there are intermodal facilities for transfer to other modes of transportation. Table 4I.14 shows the existing system of locks and dams.

If one of the locks or dams in Allegheny County became inoperable, it would take 700 trucks per day seven days a week to move the freight that would have otherwise been carried on the rivers over the same period of time.

PASSENGER SERVICE

The Gateway Clipper is a private company offering excursion cruises on the Three Rivers, and has what is believed to be the largest inland riverboat fleet in the country. The Gateway Clipper also offers a passenger river shuttle that operates in a loop from Station Square to the North Shore's Heinz Field, PNC Park and Carnegie Science Center and back, stopping at the Point along the way.

MARINAS

Throughout the County there are numerous marinas and boat docks for private boat owners. In recent years, there has been an increase in locations for kayak rentals and launches along the rivers and on local park lakes.



WATERWAYS

TABLE 4I.13 – Location of River Terminals in Allegheny County

COMPANY NAME	RIVER	MILEPOST
Aliquippa Terminals, Inc.	Ohio	16.8 LDB
Allegheny River Dock Company (inactive)	Allegheny	21.6 RDB
Allegheny River Terminals, Inc.	Allegheny	18.6 LDB
Armstrong Terminal	Allegheny	30.8 LDB
Azcon Corporation	Allegheny	7.0 RDB
Port of Leetsdale BeeMac Transloading	Ohio	14.5 RDB
C.S.I.	Monongahela	23.5 LDB
Colona Transfer, L.P.	Ohio	23.5-23.7 LDB
Dillner Storage and Transfer Company	Monongahela	24.1 LDB
Freeport Terminals	Allegheny	29.6 RDB
General Materials Terminals	Ohio	20.7 RDB
Gordon Terminal Services (Coraopolis)	Ohio	Milepost 21.1 LDB
Gordon Terminal Services (McKees Rocks)	Ohio	3.2 LDB
Gulf Materials Dock (GTC)	Monongahela	10.2 RDB
Industry Terminal and Salvage Company	Ohio	33.2 RDB
Josh Steel	Monongahela	10.1 RDB
Kinder Morgan	Monongahela	16.1 LDB
Kinder Morgan (KM Ferro Group)	Ohio	33.5 RDB
Matt Canestrone Contracting, Inc.	Monongahela	63.5 RDB
McGrew Welding	Monongahela	38.4 LDB
McKees Rocks Industrial Enterprises, Inc.	Ohio	4.0 LDB
Mol-Dok Company, Inc.	Ohio	14.1 RDB
Mon Valley Intermodal, Inc. (closed)	Monongahela	34.5 LDB
Mon Valley Transportation Center (inactive)	Monongahela	19.5 RDB
Pittsburgh Intermodal Terminals	Ohio	16.5 RDB
S.H. Bell Company (Braddock Terminal)	Monongahela	9.9 RDB
S.H. Bell Company (East Liverpool Terminal)	Ohio	40.1 RDB
Three Rivers Aggregates, Inc.	Ohio	14.4 LDB
Three Rivers Marine & Rail Terminal	Monongahela	43.2 RDB
Transtar/Union Railroad	Monongahela	12.1 LDB

WATERWAYS

TABLE 4I.14 – Three Rivers Locks and Dams

RIVER	FACILITY	YEAR OF CONSTRUCTION/ RECONSTRUCTION
OHIO RIVER		
	Emsworth Locks and Dam	1921/1938
	Dashields Locks and Dam	1929
MONONGAHELA RIVER		
	Braddock (Locks and Dam 2)	1905/2004
	Elizabeth (Locks and Dam 3)	1907
ALLEGHENY RIVER		
	Pittsburgh (Lock and Dam 2)	1934
	CW Bill Young – Barking (Lock and Dam 3)	1934
	Natrona (Lock and Dam 4)	1927

■ ISSUES AND ANALYSIS

This section examines ways to ensure the continued viability of waterway transportation in Allegheny County.

KEY CHALLENGES

In developing the Transportation Plan, the Transportation Resource Panel helped to identify these key challenges:

- Condition of existing Lock and Dam system
- ‘Last Mile’ of local roadways in freight corridors
- Underutilized river system for water taxis and transit
- Need more marinas boat launches to facilitate access to rivers

The following provides an understanding of these issues.



Photo credit: McCormick Taylor



WATERWAYS

CONDITION OF EXISTING LOCK AND DAM SYSTEM

While freight traffic has been increasing on the Three Rivers, the condition of the lock and dam system is deteriorating quickly due to its age. A failure of any one of the locks and dams could cause severe impacts to the local and regional economy and to the regional transportation system. If a shut down of the lock and dam system occurs, it will be difficult to accommodate freight on the roadway system. To put it in perspective, if one of the locks or dams became inoperable, it would take 700 trucks a day seven days a week to move the freight that would have otherwise been carried on the rivers over the same period of time.

'LAST MILE' OF LOCAL ROADWAYS IN FREIGHT CORRIDORS

Local roadways in the freight corridors often do not have the capacity to handle the type and amount of vehicles accessing river ports, such as large trucks that have wide turning radii. 'Last mile' of roadways refers to the local roadways that connect the river ports with the interstate and arterial roadways system. These routes should be signed to assist drivers to efficiently move freight.

UNDERUTILIZED RIVER SYSTEM FOR WATER TAXIS AND TRANSIT

Due to recent riverfront developments, an opportunity exists to develop a river taxi system as an alternative to commute to Downtown Pittsburgh and to link key attractions in Station Square, North Shore, the Strip District and Downtown. An assessment should be completed to see if river transit is a viable option now that there is more of a concentration of development.

NEED MORE MARINAS AND BOAT LAUNCHES

The rivers are a wonderful resource for the residents of Allegheny County. Additional marinas and boat launches should be developed in appropriate places to provide more people the opportunity to enjoy the rivers as well as to handle more cargo loading and multi-modal connectivity.

RECOMMENDATIONS

GOAL OF THE PLAN

An excellent multi-modal transportation network – integrated with the Future Land Use Plan – that:

- Connects people to jobs
- Supports mobility of existing communities
- Provides efficient access to proposed development, and
- Facilitates the movement of goods and freight.

OBJECTIVES OF THE PLAN

The objectives of the Waterways portion of the Transportation Plan are to:

- A. Support freight movements through safe and efficient water systems.
- B. Provide access to the rivers for commercial and recreation uses.

The following provides an understanding of the objectives.

A. Support Freight Movements Through Safe and Efficient Water Systems

The Three Rivers provide a major means of freight movement. The preservation of the rivers' system of locks and dams that are managed by the Army Corps of Engineers is critical to keep freight moving. The age and condition of the system is a major maintenance concern. Funding is available at the federal level, but has not been appropriated. To alleviate concerns and to ensure freight continues to move along the rivers, local representatives need to urge Congress to appropriate sufficient funding for the maintenance and rehabilitation of southwestern Pennsylvania's system of locks and dams.

WATERWAYS

B. Access to the Rivers for Commercial and Recreational Uses

The Three Rivers and adjacent brownfields also provide a source of developable land and recreation. These areas are being opened up for uses that include mixed-use centers, office parks, retail centers, recreational centers and trails. Allegheny County and the organizations such as Riverlife Task Force and Friends of the Riverfront are using the rivers to revitalize areas of the County that have been neglected and have historically been industrial uses in the past. Homestead's Waterfront development and the City of Pittsburgh's South Side Works are two examples of developments that utilize brownfields and their proximity to the river to their advantage. Trails have been incorporated into the developments to encourage alternative modes of travel as well as recreation. Additional development of marinas and public boat launches will provide the residents of Allegheny County with access to the rivers.

