

## II. TRANSPORTATION

This section describes the County's transportation system, including tables, graphs, and maps for transportation facilities and services. These data and mapping will provide the basis for proposing improvements to create an integrated multi-modal transportation system that increases mobility, access, and choice for residents and workers in the County. This system will complement proposed targets for future residential and non-residential development, while providing for preservation of priority environmental areas.

The summary provides information on roadways, public transit, walking and bicycling, aviation, and goods movement. Among the important findings is that increasing travel demand and limited roadway expansions have led to increasing traffic volumes and roadway congestion. These conditions lead to increasing travel times, accidents, and air pollution, among other impacts, which are a detriment to the County's quality of life, as well as a possible constraint to future development. At the same, the availability and usage of travel options such as public transit, walking, and bicycling are limited.

The summary contains a draft proposal for improvements for a multi-modal transportation system, (especially strategic transportation corridors emphasizing enhanced public transit service). These improvements will help to accommodate future development and travel demand, while minimizing increases in congestion and pollution and preserving greater areas of priority open space.

DRAFT

## Summary of Trends and Issues

- A significant effect of the shifting jobs-to-housing ratio is upon commuting patterns. Between 1990 and 2000, the County had an increasing number of resident workers working outside the County and increasing numbers of employees who live outside the County.
- The automobile continues to be the predominant form of personal transportation. 73% of resident workers report using a single-occupancy vehicle as their primary commute mode. 88% of households own at least one motor vehicle, and 55% own two or more vehicles.
- Increasing traffic volumes and roadway congestion are major concerns. Recent studies have identified roadway “hot spots” at various locations. Congestion is due to increasing travel and limited increases in roadway capacity. The increase in roadway mileage between 1992 and 2002 was due almost entirely to local roads, and no major roadway capacity expansions are anticipated.
- The availability and use of public transit is limited. Regular local bus service focuses upon Trenton and the inner suburbs with some limited service to outer suburbs. Bus ridership increased only 3% between 1995 and 2003. Only 7% of the County’s resident workers report using public transit as their primary commute mode.
- NJ TRANSIT’s Transit Score Index indicates that some outlying areas in the County are not well-suited for fixed-route service, but some other areas that may be suitable for transit service are not served, e.g., the CR 571 corridor between Princeton and Hightstown.
- The number of weekday commuter rail passengers boarding at the County’s stations on the Northeast Corridor line increased one-third between 1990 and 2003. Further increases in commuter rail use may be constrained, however, by train capacity and parking capacity at the stations. Trenton, Hamilton, and West Windsor are all exploring opportunities for transit-oriented development around their stations.
- Walking and bicycling currently are not significant travel modes. Numerous trail and greenway initiatives, however, may help to increase the feasibility of walking and bicycling, as well as providing links to public transit services.
- The volume of truck traffic continues to be a concern, especially along Routes 29, 31, and 206. Certain truck size restrictions and enforcement activities have helped somewhat. Rail freight provides the possibility of reducing truck traffic on roadways, but it also generates some negative impacts, and it may conflict with efforts to enhance public transit service, particularly commuter rail.

Travel Demand

Mercer County has over 1.1 million trip origins on an average weekday. The average daily trips per person are 3.6, and the average weekday trips per household are 9.2. On a regional basis, work trips account for only about 30% of all trips – most trips are for other purposes such as shopping, personal business, social, and recreational activities. Different factors, including age, household type, employment status, and income affect trip-making. (source: NJTPA)

Journey-to-Work

Journey-to-work data from the 2000 U.S. Census show the origin and destination for work trips by municipality. In Mercer County, early 70% of resident workers (aged 16 and over) work in the County, and 56% of employees live in the County. (see Figure 1). (source: US Census)

Between 1990 and 2000, a significant trend occurred in the form of increasing numbers of resident workers working outside the County and increasing numbers of employees who live outside the County. While the number of resident workers increased very slightly, the number of workers who work in the County decreased by over 12,000. Meanwhile, even though these data show that the number of employees in the County decreased by over 4,500, the number of persons who work in the County and live outside the County increased by over 7,700. (source: US Census)

County	Number	%
Mercer	<b>112,449</b>	<b>69%</b>
Middlesex	16,597	10%
New York, NY	5,654	4%
Somerset	5,364	3%
Bucks, PA	3,865	2%
Burlington	3,765	2%
other NJ	10,685	7%
other	4,878	3%
Total	<b>163,257</b>	

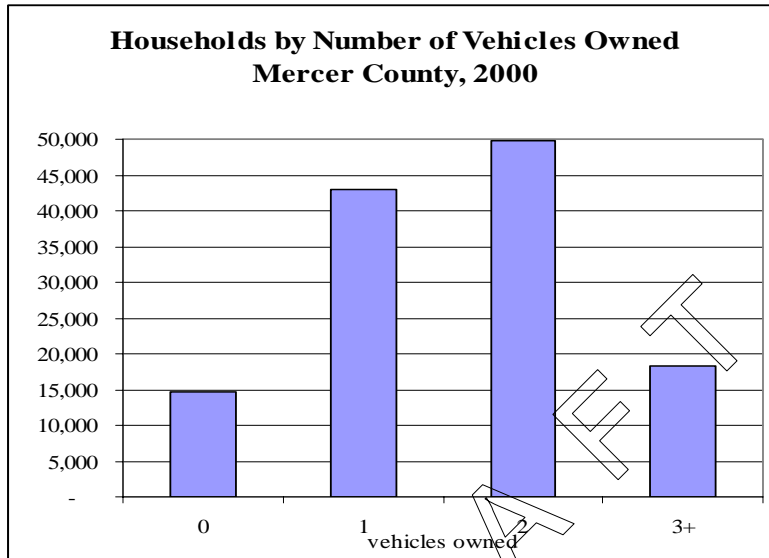
Figure 1. Mercer County Resident Workers by County of Work  
Source: US Census Bureau, Census 2000, County-to-County Worker Flow Files.

County	Number	%
Mercer	<b>112,449</b>	<b>56%</b>
Bucks	20,812	10%
Burlington	17,158	9%
Middlesex	12,952	6%
Monmouth	6,393	3%
Ocean	5,865	3%
Somerset	5,575	3%
other NJ	12,533	6%
other	6,488	3%
Total	<b>200,225</b>	

Employees in Mercer County by County of Residence  
Source: US Census Bureau, Census 2000, County-to-County Worker Flow Files.

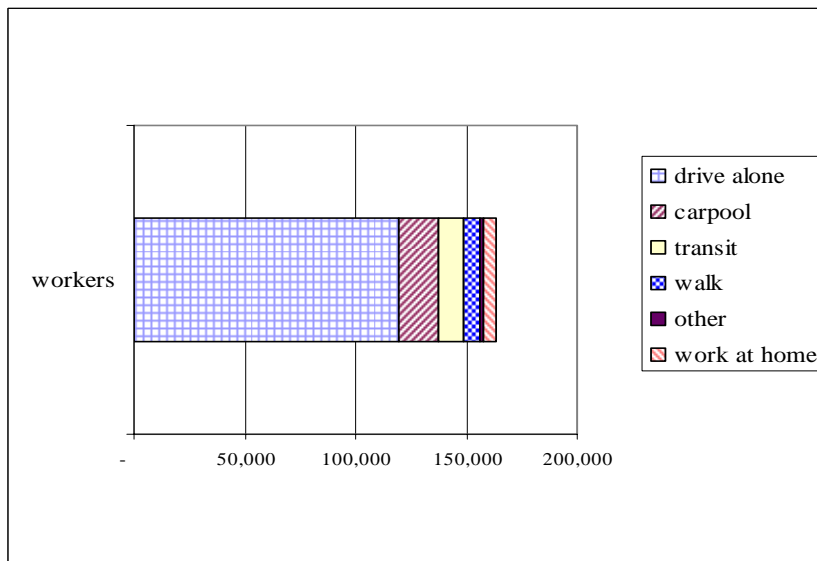
### Vehicle Ownership

The automobile remains the predominant mode of passenger transportation in the County, and the rate of vehicle ownership is increasing. 88% of households own at least one vehicle, and over 50% of households in the County have two or more vehicles (see Figure 2). The vehicle ownership rate is highest in the Hopewell Valley sub-area, where over 75% of the households have two or more vehicles and lowest in Trenton where only 28% of households have two or more vehicles. (source: US Census)



### Commute Mode

2000 Census data show that 73% of Mercer County resident workers (aged 16 and over) drive alone as their primary commute mode. In addition to those who drive alone to work, 11 percent report carpooling as their primary commute mode. (see Figure 3) The Census found that the average commute time increased from 22 minutes in 1990 to 27 minutes in 2000. (source: US Census).



### Roadways

The County's public roadway network, including state, county, and municipal roads, covers over 1,600 miles. NJDOT has jurisdiction over interstate, federal, and state highways. Interstate Highways are I-95, I-195 and I-295, and the Federal highways are US Routes 1, 130, and 206. The state highways are Routes 29, 31, 33, 129, 133, 156, and 175. The County has jurisdiction for 180 miles of County roads.

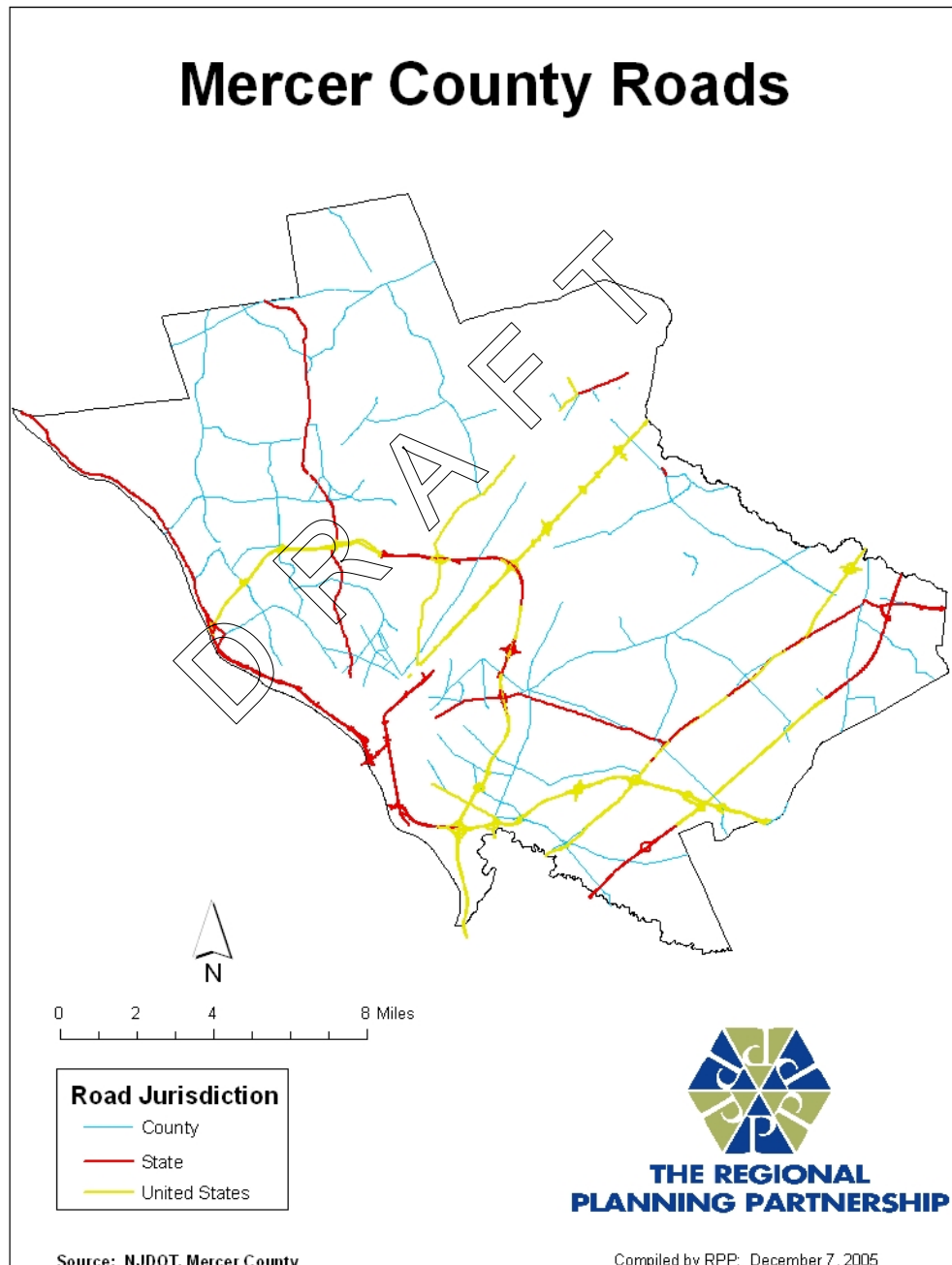
The roadway network comprises several types of roads, based upon their functional classification. Functional classifications describe the function of a road – different types include interstates, arterials, collectors, and local. The increase in road mileage in the County between 1992-2002 (323 miles) was due almost entirely to local roads, most of which are under municipal jurisdiction (see Figure 4).

	<u>1992</u>	<u>2002</u>	<u>increase</u>
Interstate	36	39	3
Freeway	11	14	3
Principal Arterial	90	107	17
Minor Arterial	182	177	-5
Collector	155	159	4
Local	810	1111	301
Total	1284	1607	323

Roadway Mileage by Functional Classification  
Mercer County, 1992-2002  
Source: NJDOT

The County has a few roads with “scenic” designation, which is important because this status involves a certain level of preservation with regard to potential roadway improvements and surrounding land uses. The scenic roads in Mercer County include the following:

- Route 29 between Trenton and Hunterdon County is a state scenic byway, designated by NJDOT.
- US 206 in Lawrence and the Princetons is part of the Kings Highway Historic District, which is listed on the National Historic Register.



### Traffic Volumes and Congestion

Traffic volumes and congestion have been increasing on roads in the County. Between 1980 and 2000, the average daily volumes at *thirteen* selected counting stations more than doubled. Figure \_ shows the traffic increases on selected roads. (source: DVRPC)

An important factor contributing to traffic volumes and congestion along major roads is the combination of regional through traffic and local traffic. This combination of traffic is evident along roads such as US 1, US 130, and US 206. Furthermore, due to increasing traffic volumes and congestion on the major roads, traffic is increasing on local roads as regional traffic “cuts through” to avoid congestion on the major roads. The following is a summary of key areas of peak hour congestion in the County:

Trenton: Many city streets are congested due to its role as major employment, residential, and activity center.

Princeton: Similarly, several streets are congested in downtown Princeton. In addition, all major roads leading to and from Princeton are congested.

Hightstown: Downtown is congested due to a combination of through traffic and local traffic, but the new Route 133 has alleviated this congestion.

I-95: This road experiences congestion due to many factors including a reduction of lanes from six to four at the Scudders Falls Bridge, heavy truck volumes, inadequate interchanges, and a mix of through and local trips.

US 1: The US 1 corridor also suffers from a combination of through and local traffic. Several roads in the area are congested due to the location business parks and retail centers, notably the Quakerbridge and Mercer Malls.

Rt 33 / US 130: Congestion along these roads is due largely to commercial development, turning movements, and intersection design. Congestion along 33/130 due to commercial development/median openings.

Route 31: Congestion attributed to truck traffic and commercial development in Pennington area.

Traffic congestion has several negative impacts, including lost time, operating costs, and fuel consumption. A 2000 study by the New Jersey Institute of Technology (NJIT) assessed and quantified the impacts of traffic congestion by county in New Jersey. This study found that a “Roadway Congestion Index” for major roads in Mercer County of 1.01 (what is norm?). The average annual delay per licensed driver is over 28.5 hours, and the average annual costs are over \$776.02, with a total annual cost of congestion of \$178 million. The study also noted that since many roadways are currently operating at or near capacity, future increases in traffic will generate significant increases in congestion costs.

### Traffic Accidents

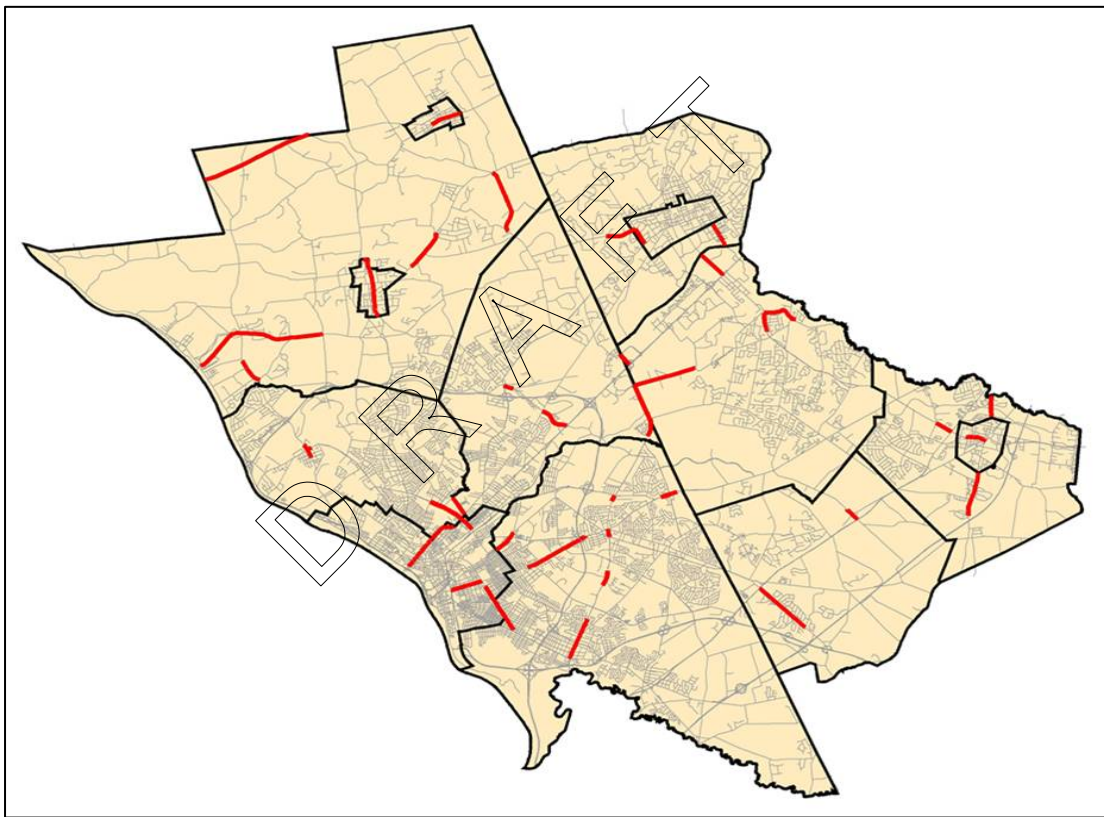
As traffic volumes and congestion have increased, so have traffic accidents. The number of accidents on roads in the County increased from 12,741 in 1998 to 14,835 in 2002, an annual increase of 4%, compared with a statewide increase of 2%.

The highest accident locations along state roads in the County are at the Scudders Falls Bridge (I-95), Brunswick Circle (US 1 Business and US 206), Yardville Five Points (Route 156 intersections with three county roads), Nassau Street in Princeton Borough (Route 27), and the Pennington Circle (Route 31).

The impacts of accidents include fatalities, injuries, and property damage, as well as the same impacts related to congestion. Accidents along the interstates may cause lengthy traffic delays.

#### County Road “Hot Spots”

Work on the county roadway access management project has identified 40+ “hot spots” (based on traffic volumes, congestion, and safety concerns) along the County roadway network. Below is a map of these locations.



#### Roadway and Bridge Conditions

Poor roadway pavement and bridge conditions also have negative impacts, including accidents, vehicle damage, and travel delays.

#### Proposed Road Improvements

Future roadway projects will focus mainly on rehabilitation, reconstruction, and re-alignment. The Mercer County projects currently on NJDOT's FY 2005 capital program mostly involve bridge replacement and roadway rehabilitation. The program does not include any major expansion projects, although a few major projects are under study.

NJDOT has identified a 7-mile segment of US 1 in Lawrence and West Windsor for “comprehensive anti-congestion approaches,” and several improvement projects are under study including the intersection with Franklin Corner / Bakers Basin Road, the area near the Quaker Bridge Mall, and the Penns Neck area.

The following is a list of projects currently on the DVRPC TIP:

- Replace Alexander Road bridge across Northeast Corridor in West Windsor
- Expand the Route 31 & CR 518 intersection in Hopewell Township
- Redesign the Rt 33 and US 130 intersection in Washington Township
- Replace traffic signals along US 1 at Washington Road and Harrison Street with a package of improvements as recommended by the Penn’s Neck EIS.

In addition, the Delaware River Joint Toll Bridge Commission (DRJTBC) has conducted the Southerly Crossings study to examine the potential need for improvements at the four crossings of the Delaware River between Mercer County and Pennsylvania. This work has found that the Scudders Falls Bridge (I-95) currently has a peak hour LOS of F, and therefore, the bridge capacity should expand from four to six lanes. DRJTBC is now conducting a study for this expansion project. In addition, DRJTBC is planning to expand the US 1 toll bridge by adding one northbound lane.

Another project that will be significant to Mercer County is the planned interchange for I-95 and the Pennsylvania Turnpike in Bucks County, Pennsylvania. This project is important because it will lead to re-directing I-95 onto the Pennsylvania Turnpike and New Jersey Turnpike, thereby reducing traffic on US 1 in Mercer County.

Also, the County and towns have programmed numerous improvement projects such as the following:

The County’s public transit system includes several types of services including intercity rail and bus service, regional bus lines, commuter rail service, and local bus service, described as follows:

#### Intercity rail and bus service

- AMTRAK serves Trenton with \_\_ stops daily. An estimated 1,650 passengers daily use the Trenton station.
- Greyhound bus makes three stops daily at the Trenton station.

#### Commuter rail service

- NJ TRANSIT’s Northeast Corridor (NEC) Line provides service east from Trenton, Hamilton, and Princeton Junction to New Brunswick, Newark, and New York City. In addition, the “Dinky” line provides connecting service between Princeton and Princeton Junction. Currently, 112 trains per weekday operate on the NEC.
- SEPTA’s R-7 Regional Rail Line provides service from Trenton to Philadelphia.
- SEPTA’s R-3 Regional Rail Line provides service from West Trenton to Philadelphia.
- NJ TRANSIT’s River Line light rail system runs between Trenton and Camden. As of June 2004, average daily ridership was about 4,200.

#### Regional bus lines

- Suburban Transit operates service from Princeton to New York via Route 27.
- Suburban Transit also operates service from Princeton and New York, serving West Windsor, East Windsor, and Hightstown, via Route 571.

- NJ TRANSIT's 409 runs between Trenton and Philadelphia

#### Local bus services

- NJT 601 runs between Hamilton Marketplace, downtown Trenton, and the College of New Jersey
- NJT 602 runs between East Trenton, downtown Trenton, and Pennington
- NJT 603 runs between Hamilton Marketplace, downtown Trenton, and US 1 malls
- NJT 604 runs between East Trenton and downtown Trenton
- NJT 605 runs between Quaker Bridge Mall in Lawrence, Princeton, and Montgomery in Somerset Co.
- NJT 606 runs between Hamilton Marketplace, downtown Trenton, and Princeton
- NJT 607 runs between Hamilton, downtown Trenton, and Ewing (including Trenton Mercer Airport)
- NJT 608 runs between Hamilton rail station, downtown Trenton, and Lambertville in Hunterdon Co.
- NJT 609 runs between Mercer Co. Community College, downtown Trenton, and Ewing
- NJT 611 (Perry Street shuttle) runs between park-ride lot on Perry St and downtown Trenton
- SEPTA 127 runs between downtown Trenton and Neshaminy Mall in Bucks County, PA Shuttles
- New Jersey Transit Wheels service (976) connects residential areas of Lawrence and West Windsor with the Princeton Junction station
- Train Link private service operated by GMTMA serves employees in the US 1 corridor, taking them to and from the Princeton Junction rail station
- US 130 Connector operated by Mercer County, runs between the Hamilton train station and the Exit 8A area. Serves Hamilton, Washington, East Windsor, and Hightstown in Mercer County.
- Merrill Lynch Hopewell Shuttle operated by GMTMA runs between Hamilton Station and Merrill Lynch site in Hopewell Township.
- Hamilton Community Shuttle operated by township provides service for township residents to and from the Hamilton station
- Princeton Junction Shuttle (East Windsor / Hightstown) serves local residents who commute from the Princeton Jct. station
- P-Rides service operated by GMTMA provides weekday service for Princeton University community
- Plainsboro park and shuttle also serves residents who use Princeton Junction
- Airporter provides service from Trenton and Princeton to the Newark Airport

Sources: NJ Transit, GMTMA.

#### Park-and-Rides

The County's public transit system also includes park and ride facilities, which provide connections to commuter rail, buses, or carpools / vanpools.

- Commuter rail stations -- Trenton, Hamilton, Princeton Junction, West Trenton
- Perry Street in Trenton serves persons who work in downtown Trenton
- Along River Road at I-95 exit in Lower Makefield, Pennsylvania

In addition, paratransit service is available from various providers.

- Access Link operated by NJ TRANSIT
- TRADE The County Department of Transportation provides van service to elderly persons (60+), persons with disabilities, and economically-needy individuals.
- Some townships provide paratransit service to their residents.

Also, numerous employers in the County sponsor vanpool service for their employees. Based upon information reported by the Greater Mercer Transportation Management Association (GMTMA) in April 2002, 13 employers provide 26 vanpools. The County has experienced a slight decrease in vanpool activity in recent years, but a smaller decrease than in other areas of the state. The TMA supports vanpool operations in the County with its “vanwise” program, which subsidizes empty seats. The TMA also provides local ridesharing information and other commuting assistance services, for example, a “guaranteed ride home” program that provides rides in emergencies for persons who carpool or vanpool.

### Transit Usage

According to the 2000 Census data, only 7% of resident workers in Mercer County use public transit as their primary commute mode – the statewide average is 10%. This rate is highest in the Princeton (13%) and Trenton (12%) sub-areas, and lowest in the inner suburbs (3%). Average daily passenger trips on the 600 series bus lines, centering on Trenton, increased by only 3% between 1995 and 2003. On the other hand, weekday commuter rail passenger boardings at the County’s stations increased one third between 1990 and 2003 (see below table).

	1990 (1)	1995 (1)	2000 (2)	2003 (2)
Trenton*	4,943	4,898	4,412	4,722
Hamilton	0	0	1,350	2,614
Princeton	**	**	833	856
Princeton Jct*	5,585	4,960	5,871	5,865
Sum	10,528	9,858	12,466	14,057

(1) Based on passenger counts

(2) Based on annual ticket sales

\* Includes riders using NJT tickets on Amtrak Clocker trains

\*\* Princeton included in Princeton Jct counts

Weekday Rail Passenger Boardings

Source: NJ Transit

### Parking at Rail Stations

An important factor in commuter rail ridership is the availability of station area parking.

The following is a brief summary of available parking at the main stations:

Trenton -- A private garage provides monthly and daily parking

Hamilton -- NJ Transit manages over 1600 spaces for monthly and daily parking

Princeton Junction -- The West Windsor Parking Authority owns and operates two lots that provide over 900 spaces for township residents only.

NJ Transit owns and operates one lot with 1,800 spaces for monthly parking and another two lots that provide daily parking

Princeton (Dinky) -- a mix of monthly and daily parking is available

West Trenton -- the station has free parking for about 175 vehicles. An estimated 224 passengers use this station each weekday.

### Transit Needs

In general, inadequate transit service may present mobility problems for population segments without access to automobiles, including low-income households, young, and the elderly. Transit service should provide linkages between residential areas and key employment and service centers. Existing public transit service may not be serving the market in the most effective or efficient manner. General issues include the following:

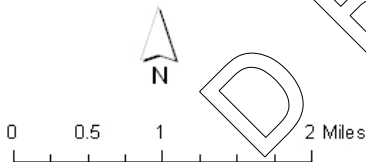
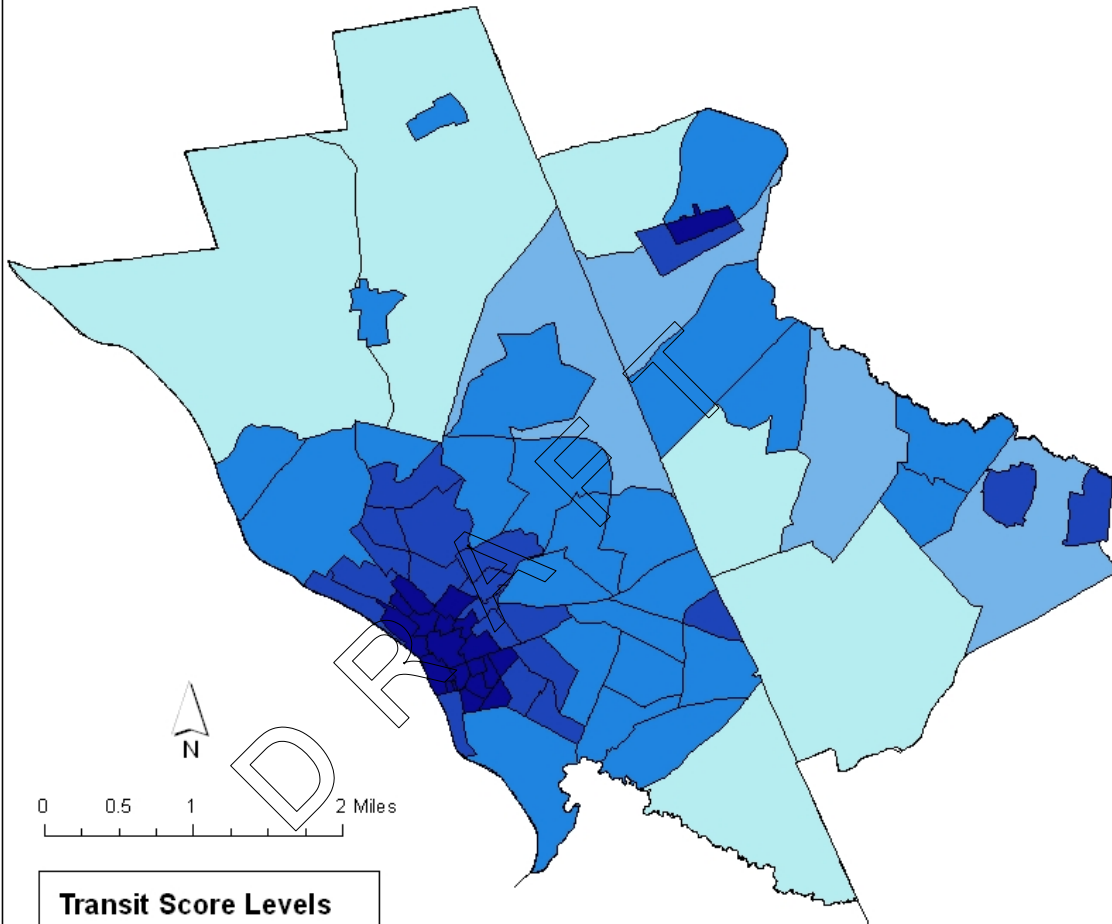
- Service frequency is limited
- Stations and stops provide limited passenger amenities, e.g., signage, shelters, sidewalks, passenger information, and ticket sales.
- The design of suburban employment centers is inconvenient for bus service -- most destinations are separated from each other and set back from roadways.

NJ TRANSIT has developed a “Transit Score” index, which assesses the potential for different types of transit service in an area based upon the following factors: household density, population density, employment density, and zero and one-car household density.

Applying this methodology to 2000 data for Mercer County finds that the highest scores are in Trenton and the inner suburbs, along with the boroughs (Pennington, Hopewell, Princeton, and Hightstown) and areas along US 1 and CR 571. see Figure \_\_\_\_ Existing local bus lines serve a large part of this area, except for Hopewell Borough, Hightstown, and CR 571.

Large portions of the Hopewell Valley and Route 130 sub-areas have marginal to low transit scores, which means that the areas are not well-suited for regular local bus service, and these areas in fact have little or no regular transit service.

# Mercer County Transit Score Existing Conditions



Transit Score Levels	
	Low 0.00 - 0.50
	Marginal 0.51 - 1.00
	Medium 1.01 - 3.00
	Medium High 3.01 - 9.00
	High 9.01 and Above

Source: New Jersey Transit



Compiled by RPP: November 30, 2005

### Walking and Bicycling

Walking and bicycling are potential travel modes for short trips, if adequate safe facilities are available. Pedestrian and bicycle facilities may be especially effective in providing links to public transit facilities and services.

Census data show that less than 5% of commuters report that walking is their primary commute mode, but this figure is higher than statewide average of 3%. (Source: US Census)

Pedestrian facilities include sidewalks, crosswalks, and trails. Bicycle facilities include on-road facilities such as bike lanes and off-road facilities such as trails. For on-road facilities, methods are available to assess the bicycle compatibility of roadways. NJDOT has used a “bicycle compatibility index” (BCI) to assess the compatibility of state roads in the County.

In addition, GMTMA prepared an assessment of the bicycle compatibility of all county and selected municipal roads. Factors considered in the rating scale included traffic volume and speed, width and condition of shoulders, sight distance, number of curb cuts, and other potential obstacles to cyclists.

### Existing and Proposed Facilities

The County currently has several trails, paths, greenways, and other facilities for non-motorized travel. Perhaps the main facility is the towpath of the old Delaware & Raritan Canal, which, as part of the state park system, provides approximately 23 miles of multi-use trails in Hopewell Township, Ewing, Trenton, Lawrence, and Princeton Township. A recently-completed pedestrian bridge carries the towpath trail across US 1 in Lawrence. The planned East Coast Greenway would follow the path of the Delaware & Raritan Canal through the County between Trenton and Princeton Township.

Numerous initiatives are underway to expand the County’s system of trails and paths. Previous work by RPP and the County produced a Green Links plan / map, and the D&R Greenway has identified as many as nine greenway corridors in the County.

Trails and greenways currently under development include the following:

- A Delaware River path extending from Stacy Park in Trenton to the Assunpink Creek. (on CIP)
- The Hutchinson Trail in Washington will link two residential developments, the middle school, and new high school. This trail is part of a larger township trail plan, which will connect to other developments including the new Town Center. (on CIP)
- The Lawrence – Hopewell trail is a planned 20-mile loop

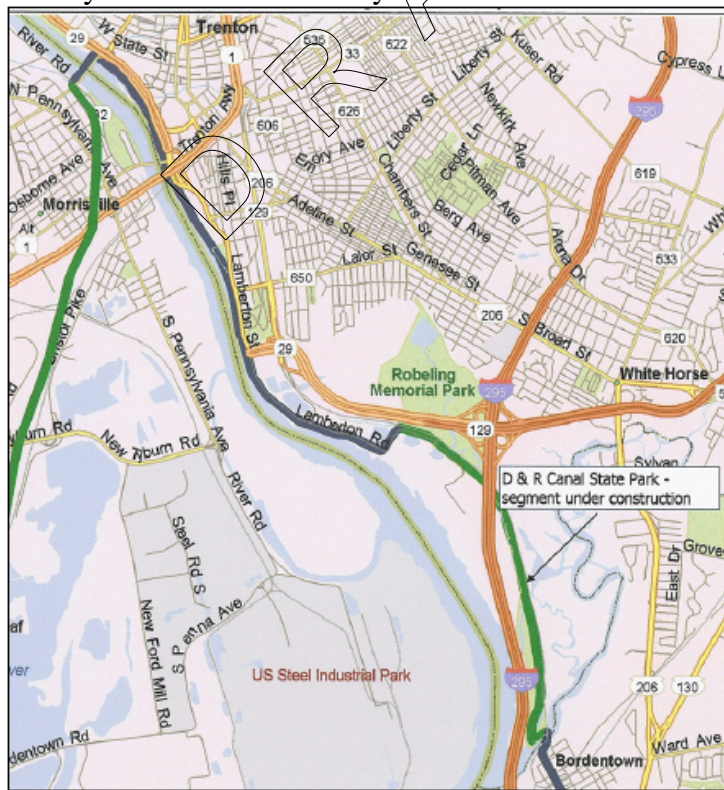
Other proposed facilities and related initiatives include the following:

- Assunpink Greenway would link Mercer County Park with D&R Canal
- Bear Brook Greenway would run through Washington, West Windsor, and East Windsor
- Crossroads of Revolution would link Washington Crossing with the Princeton Battlefield
- Camden – Amboy trail would follow the path of the old rail line along the US 130 corridor

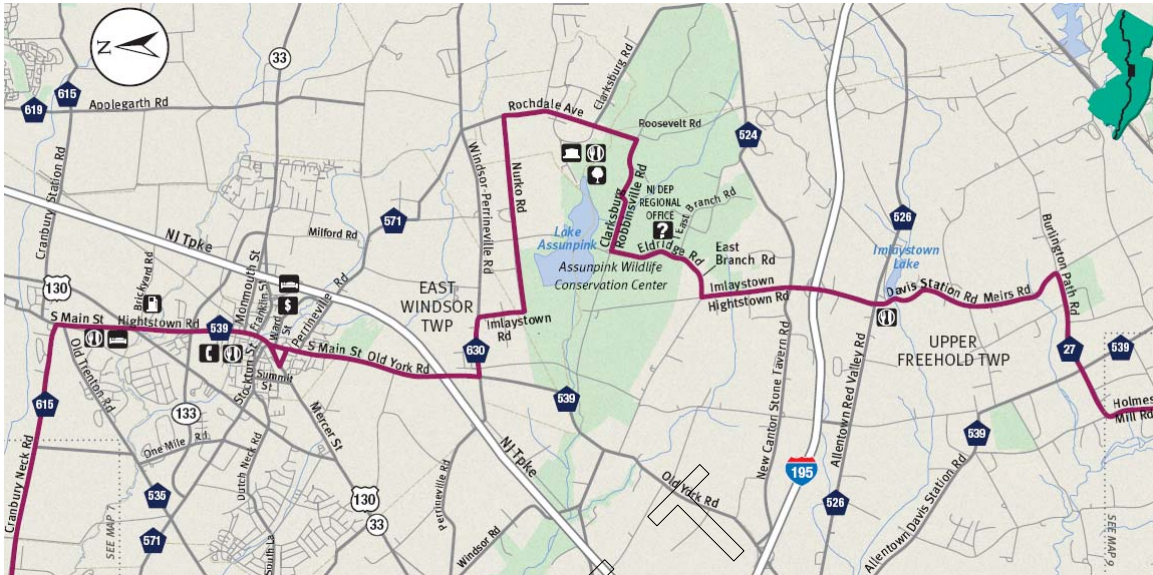
In addition, NJDOT is overseeing studies of bicycle / pedestrian needs along both the US 1 and US 206 corridors.

The following major regional trail projects could help to provide additional bicycle and pedestrian facilities in the County.

- The Delaware River Heritage Trail would run along the Delaware River in Pennsylvania and New Jersey and serve Trenton and Hamilton in Mercer County.



- The planned High Point – Cape May bicycle route would follow a north-south path through the far eastern portion of the County, including 10 miles of County roads in East Windsor and Hightstown.



### Aviation

The main aviation facility in the County is the County-operated Trenton Mercer Airport, located in Ewing (part of the property extends into Hopewell Township). The airport has two runways, a control tower, terminal, corporate hangars, and various storage buildings. The operations include those of one commercial carrier, two flight schools, corporate tenants, charter services, NJ State Police, NJ National Guard, and US Marines, and 162 aircraft are based at the airport. In 1999, the airport handled 154,489 operations (arrivals and departures), and 64,695 passengers enplaned at the airport. 124831 in 2001

The County has proposed a major project which includes replacing the functionally-obsolete terminal, improving the taxiways, and expanding parking and re-aligning road access to the airport. The County has completed an environmental impact statement (EIS), but the project has generated considerable opposition, particularly from nearby residents who fear the project will have a negative impact on their quality of life because of increased noise.

In addition, the County has the following privately-owned general aviation airports

- The Trenton - Robbinsville Airport, located in Washington Township, has one paved runway. About 60 aircraft are based there, and annual operations are about 30,000.
- The Twin Pines Airport, located in Hopewell Township, has one grass runway. 24 aircraft are based there, and annual operations are about 12,000.

In addition, the Princeton Airport is located just north of Princeton Township in Montgomery, Somerset County.

General service airports support operations by smaller twin-engine aircraft, and various uses including business, pleasure, and training. The County's airports play an important

role in the state's aviation system by providing the general aviation user an alternative to using larger scheduled airports, which reduces congestion and delay at the larger facilities. In addition, the airports contribute to the local economy.

A key trend facing aviation facilities is the encroachment of incompatible land uses, particularly residential development. (The towns in which the airports are located are among the fastest-growing residential towns in the County.) As new development occurs, more residents may be affected by the impacts of airport operations, including noise and air pollution.

### Goods Movement

Another important function of the County's transportation system is goods movement. Several factors have contributed to increasing goods movement in recent years, including the General Agreement on Trades and Tariffs (GATT), the North America Free Trade Agreement (NAFTA), the Conrail sale, and expansion of North Jersey port facilities.

Efficient goods movement is essential to economic development, but freight shippers may cause impacts / conflict upon other system users or the community at large. On the other hand, trucking interests themselves are concerned with roadway congestion and substandard road and bridge conditions.

Virtually all goods are transported in Mercer County by truck. Many persons are concerned about the impacts of trucks on traffic flow and safety. Trucks are getting bigger – the standard length has increased from 40 to 53 feet, and there is greater use of 102-inch-wide trailers.

The roads in the County on the National Network for large trucks are the New Jersey Turnpike, I-95, I-295, and I-195. Beginning in 1999, the state restricted large trucks (102-inch wide or double trailers) to the National Network. In 2004, however, a federal court ruling found this restriction unconstitutional.

A small percentage of goods move by rail. The main rail freight lines in the County are the following:

- The CSX Trenton line runs through Ewing, Hopewell Township, and Hopewell Borough. Nearly all freight is through traffic, but the line does serve one local customer in Hopewell Township.
- The Bordentown Secondary line runs between Camden and Trenton
- Northeast Corridor

Some reports have proposed improving the rail freight system, in order to move more freight by rail. One estimate is that a 100-car train carries the same amount of freight as 300-400 trucks. The NJ State Rail Plan suggests certain improvements necessary to maintain a vital rail freight system, especially due to the projected amount of freight that will move into the North Jersey region. A recent study by the I-95 Coalition also identified the need for various rail system improvements, including adding a second track to the Trenton line.

As do trucks, trains generate some negative safety and environmental impacts. The County has \_\_\_ at-grade crossings of roads and rail freight lines, which present potential safety hazards to motorists. Rail freight activity also creates noise, which may disturb adjacent property owners, and shipments of hazardous waste pose a threat in case of derailment. In addition, rail freight may conflict with efforts to expand commuter rail service. The new River Line can't run from midnight – 6 AM because of rail freight activity.

#### Summary of Potential New Transit Services

The main objectives of planning for the transportation system are to promote an integrated multi-modal transportation system that provides increased mobility, access, and transportation choice. The key components of this system are strategic transportation corridors, emphasizing enhanced public transit service.

NJ TRANSIT's 2020 *TRANSIT, Possibilities for the Future* plan (October 2000) includes information on planned and proposed projects. In Mercer County, this plan has one "committed" project, the Southern New Jersey Light Rail Line, which opened in 2004 as the River Line, and one "candidate" project -- restoring commuter rail service on the West Trenton Line. Also, the plan has one "project to be defined / studied" -- extending the River Line from the Trenton station to downtown Trenton and the State House. NJ TRANSIT has completed a preliminary study for this service.

Numerous studies over the years have assessed these and other possibilities for new or expanded public transit services in Mercer County. For example, RPP's Forum 2020 / VISION 2050 project identified potential strategic transportation corridors, which would be the framework of an intra-regional transit system. More recently, the work of the Central Jersey Transportation Forum (CJTF) identified and evaluated alternatives for new public transit service, including a Bus Transit System (BRT) for the Central US 1 corridor. Based upon the work on these projects and others, an enhanced public transit system for Mercer County could include the following corridors and links:

- Improved feeder / shuttle service for the Northeast Corridor (NEC) This service could make the NEC more attractive for intra-regional trips (e.g., Trenton-Princeton)
- Re-structured Dinky Line Previous studies have considered alternative improvements, as will the new BRT study (see below). These studies have considered multi-modal expansion options for this line. New service could relate to the feeder service noted above.
- Light rail extension to State House NJT has completed a DEIS for this service, and it is currently under study.
- Light rail extension to West Trenton / Trenton-Mercer Airport If service to the State House occurs, then the next step may be to extend the line to serve the commuter rail station and the airport. This service could help to enhance the airport's role as a regional transportation hub.
- Central US 1 BRT The CJTF suggested the possibility of a BRT, and the Greater Mercer TMA has completed an initial feasibility study for a system in the US 1 corridor between I-95 / I-295 and South Brunswick in Middlesex County. NJ TRANSIT is currently conducting a more detailed BRT Alternatives Analysis. The TMA study proposed a system serving the US 1 corridor primarily in West Windsor,

with park-ride intercept lots located in South Brunswick and Lawrence (near the I-95 / I-295 interchange)

- West Trenton line NJT is currently studying this service, which would provide a connection with the R-3 service at West Trenton and link with the Raritan Valley Line in Somerset County. Proposed stations in Mercer County would be at West Trenton, in Hopewell Township near the Merrill-Lynch site, and possibly in Hopewell Borough. This service could be supplemented by vanpool / shuttle service to the stations.
- Commuter rail extension to Bucks County, PA NJT has considered possibly extending service to Falls, in conjunction with a recent project to provide train storage at the Morrisville Yard. This project provides expanded overnight storage and light maintenance facilities for NEC trains. Phase I will provide the capacity for 120 cars, and a possible Phase II expansion would increase capacity to 240 cars. This project would provide additional capacity for increased service along the NEC, and it would likely help to reduce bridge traffic and increase parking availability in Trenton.
- Express bus service between Quaker Bridge Mall and Oxford Valley Mall in Bucks County. The DRJTBC Southerly Crossings study found that such service could reduce bridge traffic and thus merits further consideration.
- Transit service along I-95 between Scudders Falls Bridge and US 1 (to the BRT) DRJTBC had considered concepts as part of its Southerly Crossings Study
- Express bus service from Trenton along US 1 to I-95/I-295 (to the BRT) This service would improve the existing 600 local bus service, providing a realistic commute alternative both for jobs in the city and jobs along US 1.
- Enhanced bus service along Alt US 1 This service would run between Trenton, Lawrence, and I-95/I-295 (to the BRT). RPP proposed this corridor in VISION 2050, and the CJTF considered this idea.
- Bus service along Olden Avenue This service would be the first transit service along the busy commercial corridor between Princeton Avenue and Parkway Avenue. RPP also proposed this corridor in VISION 2050.
- Enhanced bus service along Princeton-Hightstown Rd (CR 571) As previously indicated, the Transit Score Index suggests the potential for this service, which would build upon the limited regional commuter and shuttle service that currently operates in this area

Other possible services include the following:

- Trenton downtown shuttle
- Extension of NJT 602 service to Hopewell
- Local service for Princeton / Plainsboro / Exit 8A area

Other general strategies and actions for improving the quality and attractiveness of transit service include more flexible shuttle / vanpool service, improved facilities (stops, shelters, and signs), better marketing, employer subsidies for transit, and parking management strategies. And, very importantly, the potential for any of the new links would be enhanced by land use planning / zoning for types of uses and densities/intensities that support and are supported by public transit service. Trenton, Hamilton, and West Windsor are all considering ideas for transit-oriented development at their stations along the Northeast Corridor. On a somewhat smaller scale, municipal planning can facilitate transit service by requiring pedestrian-friendly and transit-friendly design in development projects. The proposed growth targets for the new Master Plan will be carefully formulated in conjunction with proposals for new or enhanced public transit service.

