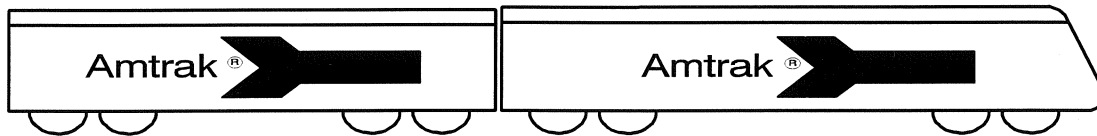
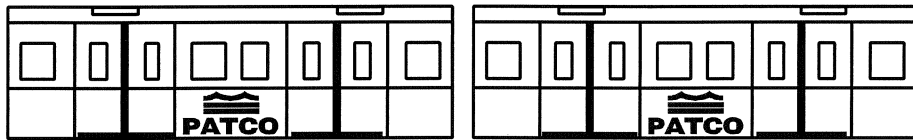
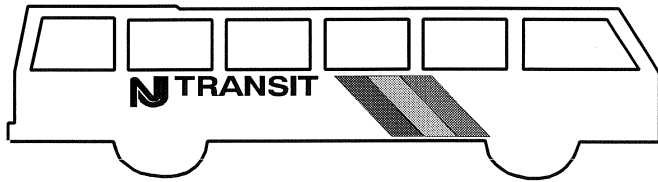


# CAMDEN COUNTY PUBLIC TRANSPORTATION PLAN

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CAMDEN COUNTY  
PUBLIC TRANSPORTATION PLAN

Final Document



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
The Bourse Building  
21 South 5th Street, Philadelphia, PA 19106

DECEMBER 1997

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# DELAWARE VALLEY REGIONAL PLANNING COMMISSION

## PUBLICATION ABSTRACT

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<b>Title</b>  <b>CAMDEN COUNTY PUBLIC TRANSPORTATION PLAN</b>	<b>Date Published:</b> December 1997 Adopted on March 23, 1995 by the Camden County Board of Chosen Freeholders  <b>Publication No.</b> 97020
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master plan, population, employment, growth, socio-economic characteristics, auto ownership, means of travel to work, traffic congestion, land use, air quality, multi-use development, park and ride lots, transportation centers, public transportation, ridership, transit routes, non-traditional transit services, bus, truck, train, bike, car, pedestrian, ride-share, community-based transit, transportation management associations, travel demand management, transportation improvements

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### ABSTRACT

The Camden County Public Transportation Plan examines operations and planning issues surrounding public transit services provided by NJ TRANSIT, Amtrak and PATCO. As a complement to these larger operators, non-traditional services such as the Echelon Shuttle Bus and the Cross County Connection TMA were also explored.

In preparing this analysis, emphasis was given to the mandates of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA). Specific measures which have been advanced to conform with the intents of the legislation include: improving existing carrier performance; identifying potential future markets; promoting concentrated, mixed use developments; focussing future development at multi-modal transportation centers; constructing park and ride lots; establishing community-based transit systems, and; imposing traffic demand management strategies.

This report, together with the Camden County Highway Circulation Plan (DVRPC, Draft July 1993, Final Report # 97019) is intended to serve as the transportation element of the County Comprehensive Plan.

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*Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties as well as the City of Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions among the Office of the Executive Director, the Office of Public Affairs, and four line Divisions: Transportation Planning, Regional Information Services Center, Strategic Planning, and Finance and Administration. DVRPC's mission for the 1990s is to emphasize technical assistance and services and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.*



*The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.*

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## **EXECUTIVE SUMMARY**

The Camden County Public Transportation Plan examines operations and planning issues surrounding public transit services provided by NJ TRANSIT, Amtrak and PATCO (the Port Authority Transit Corporation of Pennsylvania and New Jersey). As a complement to these larger operators, non-traditional services such as the Echelon Shuttle Bus and the Cross County Connection TMA were also explored. Recommendations emanating from this study, along with those from several independent highway transportation studies prepared by DVRPC, will ultimately serve as the transportation element of an update to the Camden County Comprehensive Plan.

In preparing this analysis, emphasis was given to the mandates of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA). Specific measures which have been advanced to conform with the intents of the legislation include: improving existing carrier performance; identifying potential future markets; promoting concentrated, mixed-use developments; focussing future development at multi-modal transportation centers; constructing park and ride lots; establishing community-based transit systems, and; imposing traffic demand management strategies.

As a general trend of the socio-economic conditions within Camden County, the number of travellers and travel destinations are increasing and becoming more dispersed -- typically to areas not well served by public transportation. During the 1980's, Camden County's total population increased about seven percent. In the suburban growth areas of the County, population increase was about 20 percent. Even with these changes in population levels, population densities throughout the growth areas are typically lower than thresholds generally considered "serviceable" by conventional, fixed route transit service. The levels of employment and employed residents experienced greater percentage gains than population. Census information from 1990 also indicates that employment location is decentralizing and that a larger share of commuters are driving to work alone.

In addition to characteristics of the population -- land-based factors influence the viability of public transportation facilities. Multi-use developments reduce overall trip making; foster pedestrian and bicycle travel as alternatives to motorized travel, and; (if of sufficient scale) provide a focus to transit route planning and operations. Efforts to recreate the community atmosphere of these types of developments are ongoing within the County and include Echelon, Main Street and Wilton's Corner. Longer term opportunities include the center of Berlin and the Atco station area along the Atlantic City Rail Line.

Another example of the interface between land development and transportation networks are transportation centers. At these hubs, interconnection with and between transportation modes is primary, but support/attraction is also offered by surrounding development(s). The Camden Transportation Center is the best example within the County. Others within the influence of the study area are: the Cherry Hill Mall; the Echelon Mall; the Haddonfield PATCO station; the Lindenwold PATCO Station; the Moorestown Mall, and; the Deptford Mall.

Lacking the supportive land development component, park and ride lots still afford trip reduction benefits by providing convenient locations for carpool staging or travel mode changing. Formal park and ride facilities, include the suburban PATCO High Speed Line stations, the Avandale Park and Ride Lot and the Atco station on the Atlantic City Rail Line. The DRPA is pursuing a 1,375 space parking expansion program to include the Ferry Avenue, Woodcrest and Ashland stations. Combined actions to institute fare-transfer agreements between NJ TRANSIT and PATCO and increase parking charges in PATCO parking lots are cited to reduce the demand of single occupant vehicles at the stations and free-up more parking spaces. On a longer term basis, the "Burlington-Gloucester Initiative", if proven feasible, will provide complementary corridor transit service within South Jersey which will yield parking relief at some of the existing PATCO stations. On a wider basis, 13 park and ride "market areas" have been identified which would provide long term benefits to commuters in Camden County.

Virtually all of the County's 37 municipalities are traversed by at least one public transportation route. Exceptions include Berlin Township, Pine Valley and Tavistock.

NJ TRANSIT operates 31 fixed route bus lines within the County. NJ TRANSIT's commuter bus routes (14 routes) travel into Center City Philadelphia serving approximately 22,300 riders per weekday. Nine local bus routes serve Camden, Burlington and Gloucester counties carrying about 5,000 passengers per weekday. Most of these routes terminate at the Camden Transportation Center. Seashore buses (6 year-round and 2 seasonal routes) operate between Center City Philadelphia and destinations along New Jersey's coast. The set of routes which operate year-round, carry 4,300 passengers on an average non-summer weekday.

NJ TRANSIT's Atlantic City Rail Line (ACRL), provides regional rail services between Lindenwold and Atlantic City. Present summertime ridership levels are 47,000 passengers per month. NJ TRANSIT is seeking to extend operation to 30th Street Station in Philadelphia in order to strengthen its draw of riders to and from the shore. With the extension, a new station will be constructed on the Garden State Park Race Track grounds. Service along the extension is to begin in May 1993, while the new station is anticipated to be operational by late 1993/early 1994.

Amtrak's intercity Atlantic City Express (ACX) operates through Philadelphia and Trenton and shares the NJ TRANSIT track. Intra-County service is provided only at Lindenwold station. Ridership counts performed over the summer of 1992 indicated an average of 25,400 monthly passengers on the line. Once NJ TRANSIT establishes its new Garden State Park station, Amtrak will relocate its South Jersey service from Lindenwold to the new station.

The PATCO system extends 14.2 miles, connecting Lindenwold and suburban Camden County with downtown Camden and Center City Philadelphia. There a total of 13 stations along the line. PATCO serves approximately 40,300 riders per weekday.



A series of guidelines derived from national practices were used to assess the adequacy of commuter and local bus services operating within the study area. Short term recommendations emanated from this analysis which emphasized enhancing bus service frequency and/or extending bus service hours to significant trip generators along the routes.

The focus of the intermediate range future analyses is upon major upcoming land developments and/or land areas within the County which can support and benefit from improved public transportation services. Prototype areas which were examined included: the Camden City Waterfront; the University of Medicine and Dentistry of New Jersey (UMDNJ)/Kennedy Memorial Hospital campus in Stratford Borough; the Collingswood, Haddon Township and Haddonfield business districts along Haddon Avenue (the "Haddon Connection"), and; Wilton's Corner in Winslow Township. Common themes to each discussion are that non-traditional, community-based public transit routes/systems should be considered and that public-private partnerships (TMAs) are valuable in initiating those services.

The long term scenario addressed mobility conditions projected for 11 to 20 years into the future. By the year 2010 overall population increases of 13 percent (over 1990 levels) are expected, with a 30 percent surcharge in the County's growth areas. Population densities will continue to be too low to support conventional, fixed route transit service within the growth areas. A further increase of 11 percent is anticipated in employment by the year 2010. The major centers for employment will continue to be the City of Camden, Pennsauken, Cherry Hill, Gloucester and Voorhees. In summary, areas now exhibiting substantial population and employment concentrations will continue to do so in the foreseeable future. These same areas will also continue to be the areas most capable of supporting conventional bus service.

On the frontiers of these areas, concentrated land developments will provide the most feasible opportunity to extend existing fixed route bus services. Identifiable land concentrations can also act as the hub for community-based transit networks extending into the low density hinterlands. The areas within the County that best satisfy these conditions are the US 30 corridor within the Borough of Berlin, the Atco rail station area and the Sicklerville area in Winslow.

In those areas where employment levels are high but the distribution of that activity is widespread -- such as along the NJ 73 corridor (Pennsauken, Cherry Hill, Evesham, Moorestown, Mount Laurel and Medford) -- it is recommended to pursue travel demand management strategies (employment based rideshare, flexible work arrangements and trip reduction programs) as well as park and ride lot construction as a means of improving mobility.

Improvement programs were formulated from the analyses encompassing: ongoing actions (required to initiate, continue and/or monitor the overall plan); the short term future (0 to 2 years); the intermediate range future (3 to 10 years), and; the long term future scenario (11 to 20 years). Each improvement program is summarized on tables and figures found in the main body of the report. Project sponsors are identified with each improvement/concept. The sponsors are the entities/jurisdictions necessary to initiate, implement and ideally share in financing the various improvements.



## **INTRODUCTION**

This report represents the public transportation plan component of an overall comprehensive, County-wide transportation study being conducted for the Camden County Office of County and Regional Planning. When complete the overall study's Final Report will serve as the transportation element of the updated County Comprehensive Plan.

Preceding this effort, DVRPC prepared several related investigations, including: an inventory of existing transportation facilities and conditions within the County (1989); examinations into important travel corridors serving developed areas (1990) and burgeoning growth areas (1991); and a detailed study of six intersections within high growth corridors in Gloucester and Winslow Townships (1992). Those preceding efforts combined with national policy perspectives, as evidenced in the Clean Air Act Amendments (CAAA) of 1990 and the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, have provided the direction for this study.

Camden County is served by an extensive freeway, arterial and collector highway network and a variety of public transportation systems, including: local and express bus; high speed heavy rail, regional rail and intercity rail passenger services. Transit's coverage is largely focussed upon the populated areas of the County. Even with the support of the public transportation systems, levels of traffic congestion in urban areas continue to worsen. Current national transportation policies are more clearly directed toward improving person mobility, reducing traffic congestion, limiting energy consumption and improving ambient air quality. Major new highway facilities will no longer be capable of receiving federal financial assistance if they do not consider/accommodate preferential treatment for high occupancy vehicles. Therefore, identifying opportunities to increase the occupancy of private auto trips, as well as overall transit use, is an objective of this study. Other major measures emanating from the CAAA and ISTEA regulations include traffic demand management strategies to reduce vehicle miles of travel and improve multi-modal connections to yield seamless journey on the public transportation network. This study adopts those philosophies and broadly applies them to the Camden County setting.

The work program completed for this study includes the following elements.

1. Review related background studies.
2. Examine socio-economic and travel indicators.
3. Identify and evaluate the current network of public transportation providers and systems within the County.
4. Define major transportation and land use activity centers.
5. Examine future travel conditions within, to and from the County.
6. Identify recommendations to improve transit services and foster high occupancy vehicle travel within Camden County in the near term and the long range future.



## **SOCIO-ECONOMIC OVERVIEW**

Camden County consists of 37 municipalities situated in southern New Jersey. The County is surrounded by the Delaware River and the City of Philadelphia to the north, Burlington County to the east, Atlantic County to the south and Gloucester County to the west. Figures 1 and 2 show the County from a regional and local perspective.

The County is quite diverse in its variety and intensity of land activity (see Figure 2). The northern municipalities, including those closest to the Delaware River waterfront are mature industrial, urban centers where concentrations of residences, employees and jobs are high and in relatively close proximity with one another. Urban fringe areas radiate from the core along major highway arteries like: NJ 38, NJ 70, US 30 and NJ 168. Primarily residential in character, with moderate to high density, the fringe extends southward to about the New Jersey Turnpike. US 30 (the White Horse Pike) extends the unique characteristics of the fringe area into the center of the County.

The traditional suburban areas of the County begin south of the Turnpike. The area is characterized by widely dispersed and low density housing. Shopping and employment centers are removed from the urban core, accessible most efficiently by private automobile.

The southern boundary of suburban Camden County is the Pinelands boundary. Occupying much of Winslow Township and most of Waterford Township, the Pinelands Preserve represents a development restricted area where the principal use of the land is devoted to forestry and agriculture.

Examination of selected socio-economic data, available from the US Census and from DVRPC's data bank, are valuable in obtaining background into the nature of the County and its resident population's propensity to use transit. Those indicators include population density, auto ownership, income, age, employment and means of travel to work characteristics.

### **Population Levels**

Table 1 lists municipal population levels for 1980 and 1990 (per the Census), and projected year 2010 (per DVRPC's forecasts). The County's total population increased marginally in the decade between 1980 and 1990 (+6.6 percent). The more mature communities held steady or lost people while population growth centered within the suburban portions of the County. Key growth areas included Gloucester Township, Pine Hill Borough, Voorhees Township, Waterford Township and Winslow Township. Modest population gain is projected for the county by the year 2010 (+12.8 percent). Strong growth is projected to continue within the same municipalities as the most recent decade has witnessed and also is projected in Brooklawn Borough, Berlin Borough and Chesilhurst Borough.

Figure 1  
REGIONAL SETTING

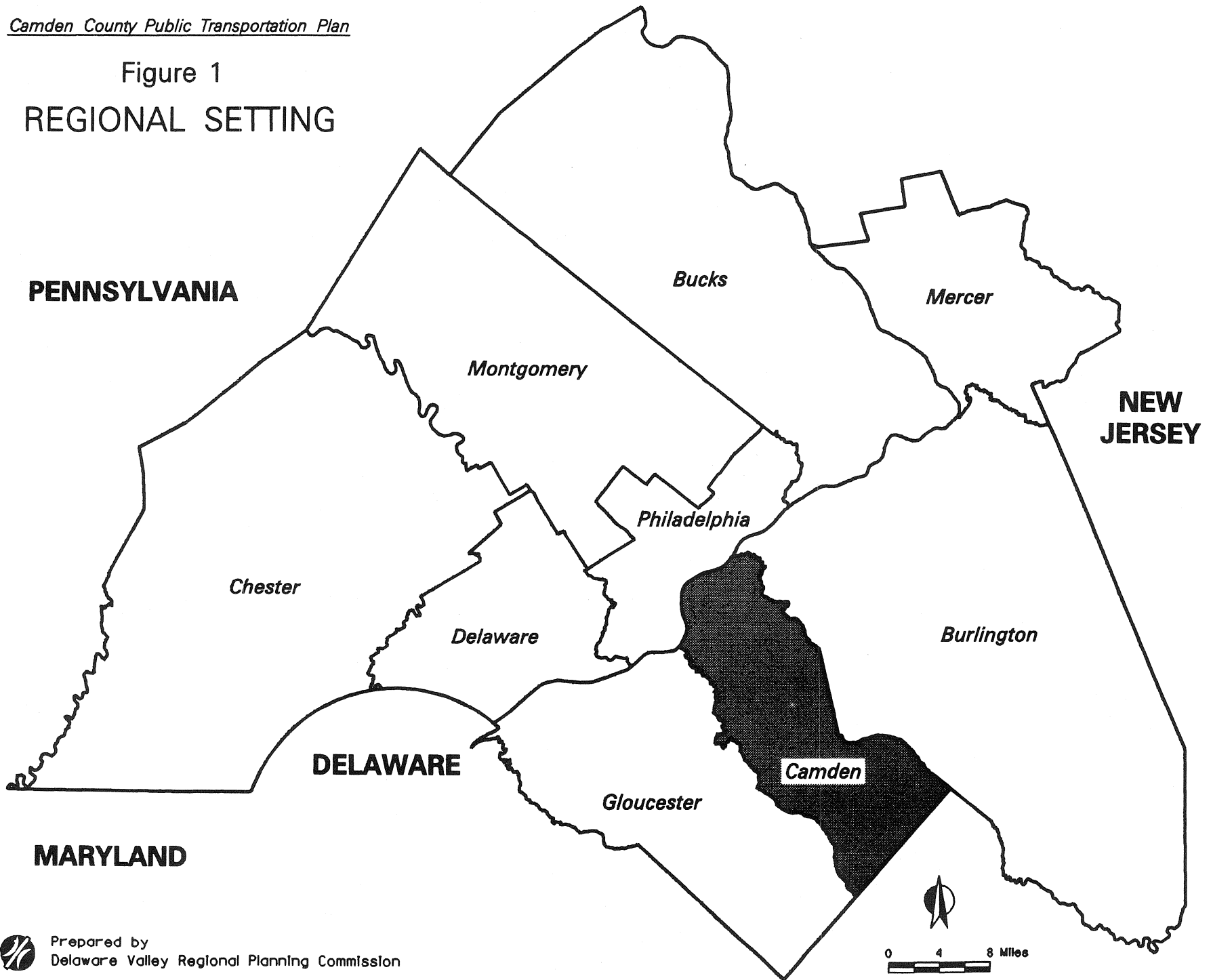


Figure 2  
CAMDEN  
COUNTY'S  
MUNICIPALITIES

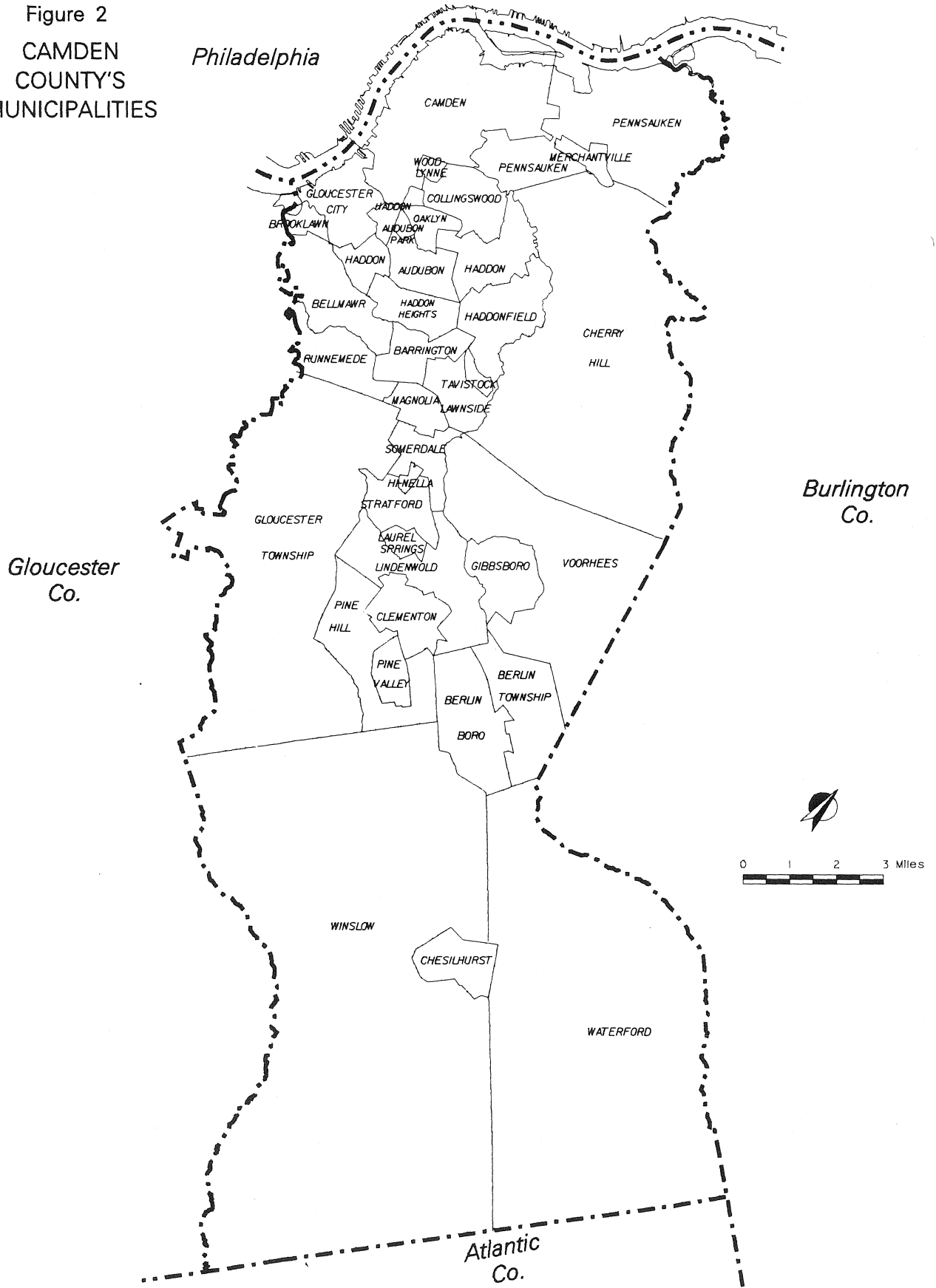


TABLE 1  
1980, 1990 AND 2010 POPULATION STATISTICS

<u>Municipality</u>	<u>1980</u>	<u>1990</u>	<u>Projected 2010</u>	<u>% Change 1980-1990</u>	<u>% Change 1990-2010</u>
Audubon	9,533	9,205	9,422	-3.4	2.4
Audubon Park	1,274	1,150	1,018	-9.7	-11.5
Barrington	7,418	6,774	6,102	-8.7	-9.9
Bellmawr	13,721	12,603	12,001	-8.1	-4.8
Berlin Boro	5,786	5,672	8,179	-2.0	44.2
Berlin Twp	5,348	5,466	5,992	2.2	9.6
Brooklawn	2,133	1,805	2,297	-15.4	27.3
Camden	84,910	87,492	89,730	3.0	2.6
Cherry Hill	68,785	69,348	72,681	0.8	4.8
Chesilhurst	1,590	1,526	2,692	-4.0	76.4
Clementon	5,764	5,601	6,102	-2.8	8.9
Collingswood	15,838	15,289	15,447	-3.5	1.0
Gibbsboro	2,510	2,383	2,331	-5.1	-2.2
Gloucester City	13,121	12,649	12,930	-3.6	2.2
Gloucester Twp	45,156	53,797	70,070	19.1	30.2
Haddon	15,875	14,837	13,908	-6.5	-6.3
Haddonfield	12,337	11,628	11,454	-5.7	-1.5
Haddon Heights	8,361	7,860	7,806	-6.0	-0.7
Hi-Nella	1,250	1,045	942	-16.4	-9.9
Laurel Springs	2,249	2,341	2,390	4.1	2.1
Lawnside	3,042	2,841	2,647	-6.6	-6.8
Lindenwold	18,196	18,734	21,086	3.0	12.6
Magnolia	4,881	4,861	5,049	-0.4	3.9
Merchantville	3,972	4,095	4,217	3.1	3.0
Mount Ephraim	4,863	4,517	4,083	-7.1	-9.6
Oaklyn	4,223	4,430	4,486	4.9	1.3
Pennsauken	33,775	34,738	35,887	2.9	3.3
Pine Hill	8,684	9,854	10,983	13.5	11.5
Pine Valley	23	19	21	-17.4	10.5
Runnemede	9,461	9,042	8,991	-4.4	-0.6
Somerdale	5,900	5,440	5,382	-7.8	-1.1
Stratford	8,005	7,614	8,373	-4.9	10.0
Tavistock	9	35	30	288.9	-14.3
Voorhees	12,919	24,559	36,805	90.1	49.9
Waterford	8,126	10,940	18,843	34.6	72.2
Winslow	20,034	30,087	44,385	50.2	47.5
Woodlynne	2,578	2,547	2,333	-1.2	-8.4
Total	471,650	502,824	567,095	6.6	12.8



**Population Characteristics**

Table 2 displays selected characteristics of the County's population according to the 1990 Census. Population density is a gross indicator of an area's ability to successfully support fixed route public transportation service. Population density is generally light over the County with only about 2,300 persons per square mile. While densities are very high in the waterfront areas (9,000 to 10,000 persons per square mile), the vast undeveloped areas in Winslow and Waterford results in densities of only about 1,200 persons per square mile within the suburban growth communities. Age distribution of the resident population may suggest a reliance on public transportation, for example school age children and/or retirees who can't or don't drive. The distribution of school aged children is fairly consistent throughout the County at about one-quarter of the total population. The population at or beyond retirement age tends to be concentrated within fringe area municipalities. The City of Camden and the growth municipalities have typically fewer retirees per capita than the County as a whole.

**Housing, Income and Auto Ownership**

Table 3 presents selected housing and income data as they might reflect auto ownership or reliance on public transit. Auto ownership has steadily increased throughout Camden County -- indications of its prosperity and its population's work travel habits. In 1970 on average there were 1.25 autos per household, in 1980 that figure had risen to 1.36 autos per household and now, according to the 1990 Census, the average is 1.57 autos per household. Currently, about twelve municipalities have household auto ownership rates below the County average. Typically they are found within the more mature areas of the County and/or those areas which are presently served by public transit.

**Employment**

Table 4 presents the number of jobs found within the County and its municipalities in 1980 and 1990. Projected year 2010 employment levels are also shown on the table. There are currently about one-quarter million jobs within Camden County. The main concentrations of jobs are found within Cherry Hill (21 percent), Camden (20 percent), Pennsauken (15 percent), Gloucester Township (6 percent) and Voorhees (5 percent). Comparison with historical employment data from 1970 and 1980, indicates that Camden, Pennsauken and Cherry Hill have consistently been high employment centers. Voorhees and Gloucester Townships experienced significant gains in the 1980's. Employment is expected to increase by about eleven percent by 2010. Emerging job centers for the future include: Berlin Borough, Collingswood, Haddonfield, Lindenwold, Waterford and Winslow.

**Means of Travel to Work**

In the decade between 1980 and 1990 the number of employed County residents increased by 22 percent. Now, according to 1990 Census information, approximately 47 percent of the County's residents are working. Table 5 details the current means of travel to work for the County's employed residents. Commuting trends during 1990 indicated that almost 72 percent of the working population drove alone to their worksite, 13 percent carpooled and about nine percent used public transportation. In comparison to 1990, according to the 1980 Census, about 65 percent of resident workers drove to work alone, 19 percent car or vanpooled and 11 percent took public transit. So as the number of employed residents has increased so has their propensity to use single occupancy vehicles. The changing distribution of work location may help to explain some of this trend.

According to the 1990 Census, about 56 percent of the residents worked within Camden County, 16 percent worked in Philadelphia, 11 percent worked in Burlington County, almost six percent worked in Gloucester County and almost three percent are working within Atlantic County. In 1980, 60 percent of Camden County residents worked within Camden County, 20 percent within Philadelphia, seven percent within Burlington County, five percent within Gloucester County and one percent in Atlantic County. As can be seen, work travel has increased to areas which are not particularly well connected by public transit service with Camden County at the expense of those areas which are.

TABLE 2  
SELECTED 1990 POPULATION CHARACTERISTICS

<u>Municipality</u>	<u>Area (sq. mi)</u>	<u>1990 Pop.</u>	<u>Density (pers/sqmi)</u>	<u>Pop &lt; 16 Yrs of Age</u>	<u>Pop ≥ 65 Yrs of Age</u>
Audubon	1.5	9,205	6,137	1,974	1,650
Audubon Park	0.1	1,150	11,500	152	298
Barrington	1.6	6,774	4,234	1,342	966
Bellmawr	3.0	12,603	4,201	2,362	1,844
Berlin Boro	3.6	5,672	1,576	1,248	688
Berlin Twp	3.2	5,466	1,708	1,337	507
Brooklawn	0.5	1,805	3,610	363	362
Camden	8.8	87,492	9,942	28,195	7,352
Cherry Hill	24.3	69,348	2,854	13,586	9,797
Chesilhurst	1.7	1,526	898	356	205
Clementon	1.9	5,601	2,948	1,219	736
Collingswood	1.8	15,289	8,494	3,011	2,477
Gibbsboro	2.2	2,383	1,083	551	256
Gloucester City	2.2	12,649	5,750	2,900	1,929
Gloucester Twp	23.2	53,797	2,319	13,478	4,510
Haddon	2.7	14,837	5,495	2,611	3,267
Haddonfield	2.8	11,628	4,153	2,298	1,994
Haddon Heights	1.6	7,860	4,913	1,591	1,544
Hi-Nella	0.2	1,045	5,225	213	112
Laurel Springs	0.5	2,341	4,682	559	283
Lawnside	1.4	2,841	2,029	565	448
Lindenwold	3.9	18,734	4,804	3,958	1,542
Magnolia	1.0	4,861	4,861	1,041	568
Merchantville	0.6	4,095	6,825	902	625
Mount Ephraim	0.9	4,517	5,019	838	919
Oaklyn	0.6	4,430	7,383	873	842
Pennsauken	10.5	34,738	3,308	7,677	5,505
Pine Hill	3.9	9,854	2,527	2,384	1,038
Pine Valley	1.0	19	19	1	7
Runnemede	2.1	9,042	4,306	1,826	1,300
Somerdale	1.4	5,440	3,886	1,016	766
Stratford	1.6	7,614	4,759	1,582	1,038
Tavistock	0.3	35	117	9	2
Voorhees	11.6	24,559	2,117	5,573	2,340
Waterford	36.2	10,940	302	2,990	753
Winslow	57.7	30,087	521	8,109	2,382
Woodlynne	0.2	2,547	12,735	658	339
Total	222.3	502,824	2,262	119,348	61,191

Source: US Census

TABLE 3  
1990 INCOME, HOUSING AND AUTO OWNERSHIP  
CHARACTERISTICS

<u>Municipality</u>	<u>Households</u>	<u>Autos/HH</u>	<u>% Zero- Car HH</u>	<u>% Families &lt; Poverty Level</u>
Audubon	3,622	1.61	8.9	3.3
Audubon Park	512	1.38	16.6	7.7
Barrington	2,688	1.70	7.1	2.0
Bellmawr	4,679	1.63	9.9	2.7
Berlin Boro	1,950	1.80	8.5	3.4
Berlin Twp	1,777	1.85	9.1	4.6
Brooklawn	702	1.46	10.4	2.0
Camden	26,626	0.81	43.6	34.1
Cherry Hill	24,531	1.92	5.1	1.5
Chesilhurst	476	1.67	5.5	4.6
Clementon	2,260	1.48	13.2	8.3
Collingswood	6,396	1.39	14.0	3.6
Gibbsboro	749	2.13	4.3	3.6
Gloucester City	4,601	1.38	17.6	7.2
Gloucester Twp	18,527	1.77	5.2	2.5
Haddon	6,242	1.53	11.7	2.5
Haddonfield	4,491	1.75	5.6	1.7
Haddon Heights	3,042	1.72	9.7	1.5
Hi-Nella	470	1.32	14.5	14.1
Laurel Springs	821	1.71	8.4	7.8
Lawnside	1,032	1.57	13.9	8.0
Lindenwold	7,942	1.44	9.7	5.5
Magnolia	1,775	1.67	8.2	6.1
Merchantville	1,582	1.54	11.3	5.4
Mount Ephraim	1,788	1.56	9.0	3.5
Oaklyn	1,846	1.64	6.0	1.9
Pennsauken	12,404	1.64	10.4	4.1
Pine Hill	3,808	1.59	8.9	4.9
Pine Valley	9	2.00	0.0	0.0
Runnemede	3,420	1.64	9.7	5.9
Somerdale	2,069	1.71	7.0	3.7
Stratford	2,714	1.72	8.9	2.4
Tavistock	10	2.00	0.0	0.0
Voorhees	9,107	1.79	5.4	2.0
Waterford	3,451	1.99	2.1	1.6
Winslow	9,736	1.79	4.9	5.8
Woodlynne	903	1.39	12.3	11.1
Total	178,758	1.57	13.3	8.0

Source: US Census

TABLE 4  
1980, 1990 AND 2010 EMPLOYMENT STATISTICS

<u>Municipality</u>	<u>1980</u>	<u>1990</u>	<u>Projected 2010</u>	<u>% Change 1980-1990</u>	<u>% Change 1990-2010</u>
Audubon	2,340	2,793	2,982	19.4	6.8
Audubon Park	850	1,010	1,076	18.8	6.5
Barrington	2,853	3,652	4,033	28.0	10.4
Bellmawr	4,478	4,995	5,173	11.5	3.6
Berlin Boro	4,577	6,102	7,074	33.3	15.9
Berlin Twp	453	516	539	13.9	4.5
Brooklawn	730	945	1,050	29.5	11.1
Camden	47,282	51,982	53,787	9.9	3.5
Cherry Hill	42,211	53,379	58,777	26.5	10.1
Chesilhurst	369	494	558	33.9	13.0
Clementon	1,971	2,557	2,841	29.7	11.1
Collingswood	4,901	6,359	7,067	29.8	11.1
Gibbsboro	1,082	1,536	1,787	42.0	16.3
Gloucester City	4,938	5,941	6,366	20.3	7.2
Gloucester Twp	9,668	14,857	18,050	53.7	21.5
Haddon	3,651	4,351	4,642	19.2	6.7
Haddonfield	4,534	7,401	8,609	63.2	16.3
Haddon Heights	1,675	2,277	2,591	35.9	13.8
Hi-Nella	73	97	109	32.9	12.4
Laurel Springs	448	591	662	31.9	12.0
Lawnside	930	1,128	1,213	21.3	7.5
Lindenwold	2,874	4,544	5,611	58.1	23.5
Magnolia	996	1,332	1,503	33.7	12.8
Merchantville	1,499	1,880	2,055	25.4	9.3
Mount Ephraim	1,090	1,289	1,371	18.3	6.4
Oaklyn	1,065	1,332	1,454	25.1	9.2
Pennsauken	33,125	38,162	40,092	15.2	5.1
Pine Hill	717	988	1,133	37.8	14.7
Pine Valley	0	0	0	0.0	0.0
Runnemede	2,383	3,051	3,368	28.0	10.4
Somerdale	1,908	2,524	2,833	32.3	12.2
Stratford	2,744	3,792	4,351	38.2	14.7
Tavistock	0	0	0	0.0	0.0
Voorhees	6,843	12,193	16,166	78.2	32.6
Waterford	2,730	4,705	6,112	72.3	29.9
Winslow	3,606	5,930	7,490	64.4	26.3
Woodlynne	401	548	625	36.7	14.1
Total	201,995	255,233	283,150	26.4	10.9

TABLE 5

1990 MEANS OF TRANSPORTATION TO WORK  
CHARACTERISTICS

<u>Municipality</u>	<u>Employed Residents</u>	<u>% Drive Alone</u>	<u>% In Carpools</u>	<u>% Using Public Trans</u>
Audubon	4,744	73.7	13.6	7.8
Audubon Park	518	71.2	20.7	2.0
Barrington	3,511	78.2	12.8	5.1
Bellmawr	6,496	75.6	13.6	4.5
Berlin Boro	2,761	76.3	14.0	4.6
Berlin Twp	2,660	74.3	14.8	4.6
Brooklawn	879	69.2	15.7	8.5
Camden	27,306	47.6	21.8	18.1
Cherry Hill	35,817	77.3	9.6	6.7
Chesilhurst	604	65.0	19.1	13.1
Clementon	2,818	70.0	14.1	6.7
Collingswood	8,072	66.4	13.4	14.2
Gibbsboro	1,323	74.3	14.0	4.6
Gloucester City	5,792	71.0	15.3	3.1
Gloucester Twp	27,622	78.2	12.1	6.2
Haddon	7,493	72.2	9.8	11.7
Haddonfield	5,794	71.0	8.6	12.9
Haddon Heights	3,878	76.2	9.6	7.6
Hi-Nella	548	69.6	16.1	8.2
Laurel Springs	1,094	74.3	13.5	6.1
Lawnside	1,223	67.2	13.1	13.0
Lindenwold	10,754	68.6	13.4	12.9
Magnolia	2,706	67.5	15.1	8.4
Merchantville	2,013	69.1	13.8	7.2
Mount Ephraim	2,220	77.8	13.6	3.9
Oaklyn	2,175	78.4	10.5	6.6
Pennsauken	16,707	75.0	15.0	5.3
Pine Hill	5,033	78.7	13.8	5.1
Pine Valley	10	80.0	0.0	0.0
Runnemede	4,463	77.4	11.1	4.5
Somerdale	2,764	73.1	17.2	6.0
Stratford	3,963	73.9	13.7	9.5
Tavistock	23	78.3	0.0	0.0
Voorhees	13,487	75.3	9.1	11.1
Waterford	5,687	81.7	8.3	5.1
Winslow	14,419	76.0	14.1	5.9
Woodlynne	1,194	63.3	16.1	13.2
Total	238,771	71.8	13.3	8.7

Sources: US Census

## TRANSPORTATION OVERVIEW

Living and working characteristics of the County's residents are important indicators in the use of transit systems. Similarly, land-based factors play a major role in trip making and the viability of public transportation serving those trips. Examples of these factors include: the location and extent of traffic congestion; large and comprehensive land developments; activity centers focused on transportation terminals, and; park and ride lots.

### Traffic Congestion

A major share of all the trips made on an average weekday within an urbanized area are those involving commuting to and from work (about 20 to 25 percent of total trips). The inclination to use public transit in completing work trips is higher than for any other trip purpose. Whether due to availability and frequency of the service, traffic congestion, limited parking availability and/or charges at the employment end of the trip -- roughly 50 to 60 percent of daily transit ridership is related to the journey to and from work. Typically work trips are compressed into just two to three hours in the morning and two to three hours in the evening on any given workday. As a result, travel to and from work creates the highest temporal demand on highway and transit facilities and causes the greatest levels of congestion and delay on those same facilities.

Congestion contributes to travel time losses which reduces the attractiveness of surface transit routes operating in mixed traffic. As a consequence, traffic congestion results in greater attractiveness for systems operating on their own right of way, such as the PATCO High Speed Line. Conversely, traffic congestion presents opportunities for locating improvements to expedite transit operations, in turn offering the potential to increase ridership and reduce congestion. Facilities of this sort include high occupancy vehicle (HOV) lanes and park and ride lots.

Congestion along arterial highways within the region was addressed by county and regional planners within: Arterial Highway Deficiency Analysis for the Delaware Valley Region, DVRPC, April, 1987. The network which was identified in that undertaking is summarized in Table 6 and illustrated in Figure 3.

TABLE 6

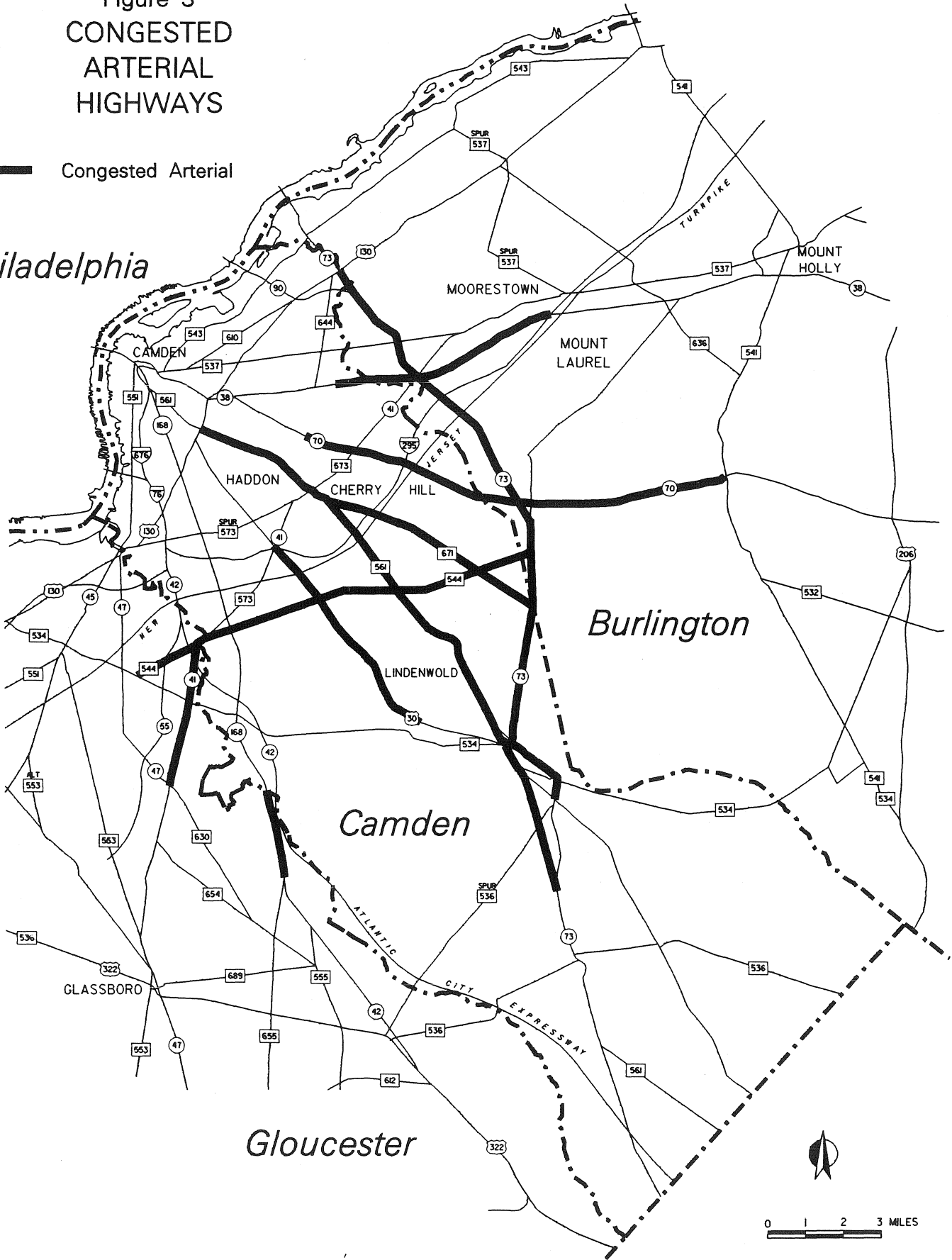
### CONGESTED ARTERIAL HIGHWAYS

<u>Facility</u>	<u>Limits</u>
NJ 73	US 130, in Burlington County, to US 30
NJ 38	I-295, in Burlington County, to Camden County Routes 616/627
NJ 70	Burlington County Route 541 to Camden County Route 644
CR 671	NJ 73 to Camden County Route 561
CR 561	NJ 73 to US 130
US 30	Camden County Route 686 to I-295
CR 544	NJ 73, in Burlington County, to Gloucester County Route 534
NJ 42	Gloucester County Route 655 to the Atlantic City Expressway interchange
NJ 41	NJ 47, in Gloucester County, to the North-South Freeway (NJ 42) at the Camden County boundary

Figure 3  
CONGESTED  
ARTERIAL  
HIGHWAYS

— Congested Arterial

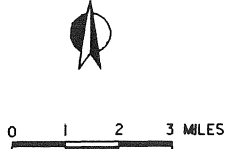
Philadelphia



Burlington

Camden

Gloucester





With the exception of NJ 73 and CR 544, all the highways are radially oriented toward the central business districts of Camden and Philadelphia. Each of the radial corridors contain a public bus route and the US 30 and CR 561 corridors are closely paralleled by PATCO's Lindenwold High Speed Line.

Clearly, congestion is not confined to arterial highways. Freeways and often local roads experience bottlenecks on a day to day basis impeding peak hour flow. On the other hand, considering travel distance, trip purpose and the volume of travellers served, the urban freeway and arterial systems offer the best opportunities for bettering highway corridor person movement. Several initiatives have recently been completed which reduce traffic congestion occurring on some of the freeways and arterials in the County. For example, one-way (northbound) tolls were implemented at the Delaware River bridge crossings in October 1992. Traffic circles at the US 130 and NJ 38 junction (Airport Circle), and at the NJ 70 and Kings Highway intersection (Ellisburg Circle) have been reconfigured recently to improve safety and flow. Each of these has improved local traffic conditions and to some degree transit operations by reducing delays encountered by bus riders. However, they are not considered major initiatives to benefit transit nor are they improvements which are designed exclusively to foster ridership on the public transportation system.

A comprehensive evaluation of the NJ 70 corridor to accommodate a designated HOV lane to accompany widening between NJ 73 and NJ 38 is being performed by NJDOT. Park and ride lots supporting the facility are also being considered in the evaluation. Additionally, a major study to investigate the causes and possible cures for traffic congestion is being initiated by NJDOT as part of ISTEAs mandated Congestion Management Systems (CMS) Plan. Actions to reduce congestion must be brought into the implementation process by October 1994.

### **Multi-Use Development**

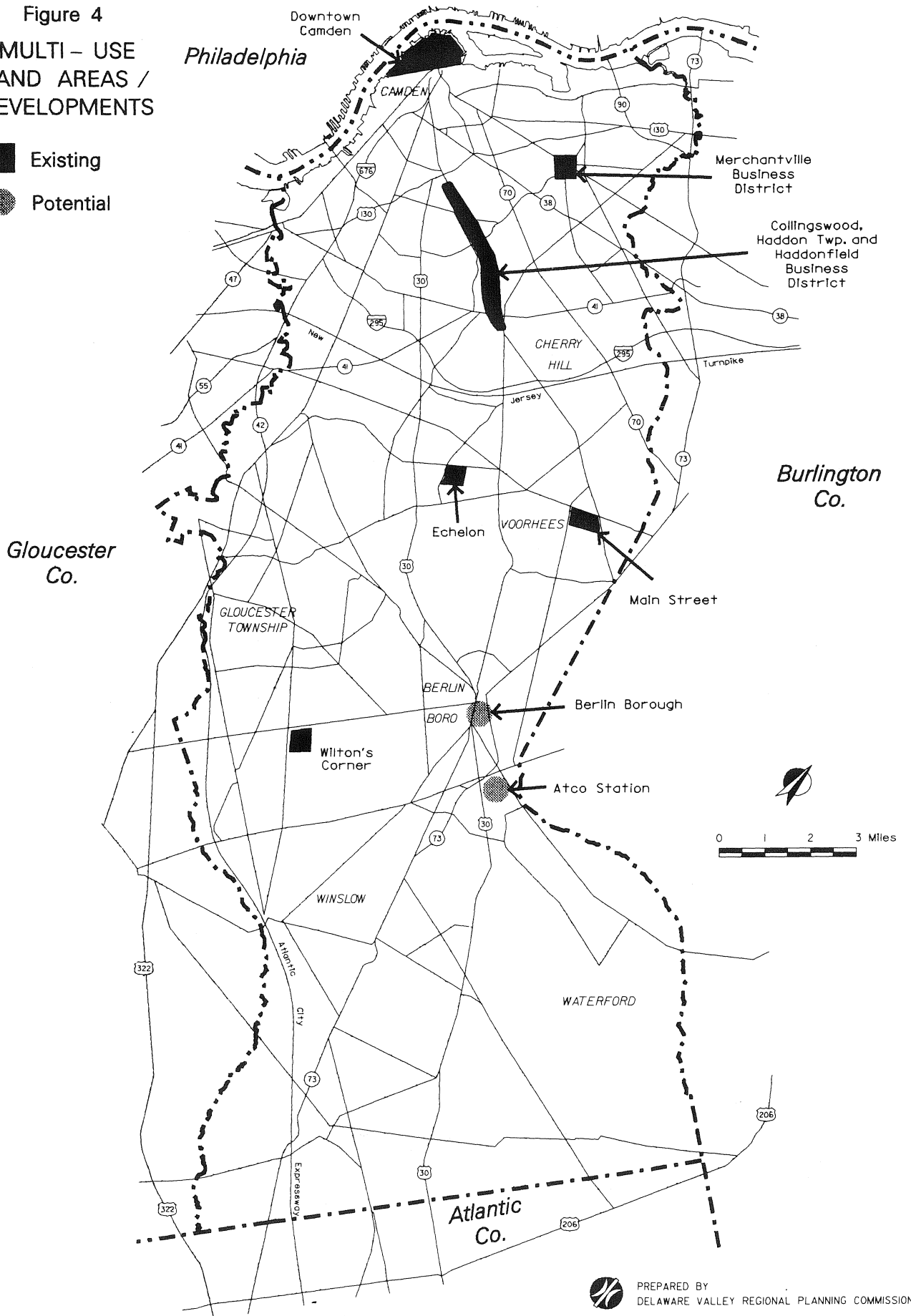
The existence and proximity of complementary land uses within a close area or within the boundaries of a development increases the potential for trip making to be internalized. That is, many trip interchanges (home to work, shopping to school, recreation to entertainment, etc.) can take place entirely within a given localized area. Accordingly -- high density, multi-use development can result in fewer trips generated beyond the boundaries of the land area. Actual trip savings from such conglomerations will vary depending upon the size and diversity of the area/project. However, the Institute of Transportation Engineers suggests that mixed use developments can reduce off-site trips by as much as one-quarter throughout the course of a typical weekday. Concentrating residential, employment and shopping activities into single, high density, multi-use development fosters pedestrian and bicycle travel as alternatives to motorized travel. Large, identifiable land centers such as these also provide improved opportunities for transit service, adding to an area's infrastructure.

Examples of mixed use centers within the influence area of the County are the central business districts of Philadelphia and Camden. Outlying business districts such as Merchantville's and the Collingswood/Haddon/Haddonfield corridor perform in much the same manner albeit on a much smaller scale. Recent and ongoing efforts to replicate the community atmosphere of mixed use developments within the County include Echelon and Main Street, in Voorhees, and Wilton's Corner, in Winslow. Longer term opportunities are possible within the center of Berlin and in the lands surrounding the Atco station along the Atlantic City Rail Line. Figure 4 illustrates the County's existing and emerging multi-use land areas.

Figure 4

MULTI-USE  
LAND AREAS /  
DEVELOPMENTS

- Existing
- Potential



Local action is currently being directed to improving the attractiveness of the downtown Camden waterfront area (Waterfront Circulator Bus) and the Collingswood/Haddon/Haddonfield corridor (the "Haddon Connection"). Both areas seek to support their respective commercial districts with more fully integrated land use and transportation systems.

**Transportation Centers**

Transportation centers are examples of the planned, physical interface between development and transportation networks. Formal or informal, small or large, transportation centers promote system linkage and convenient transfer between modes. Transportation centers are also integrated or rely to some degree on surrounding development. Ideally, transportation centers should be located within close proximity to regional highways and should be supported with parking lots (in suburban locales), customer services and comforts (waiting areas, ticketing facilities, information displays, restrooms, concessions, etc.).

In many instances surrounding land development informally may provide these same services. As such, there may be very little or no difference between a transportation center and a multi-use, multi-modal development as described above. DVRPC is currently in the process of preparing -- Transportation Centers: Concept and Evaluation (draft-March 1993) which more fully describes the issues and sites identified in this section.

At the heart of central Camden is the Camden Transportation Center providing interface between 27 NJ TRANSIT bus routes (serving Camden County and suburban southern New Jersey, Philadelphia and South Jersey's seashore markets), the PATCO High Speed Line (operating between Lindenwold and Center City Philadelphia) and central Camden's business district.

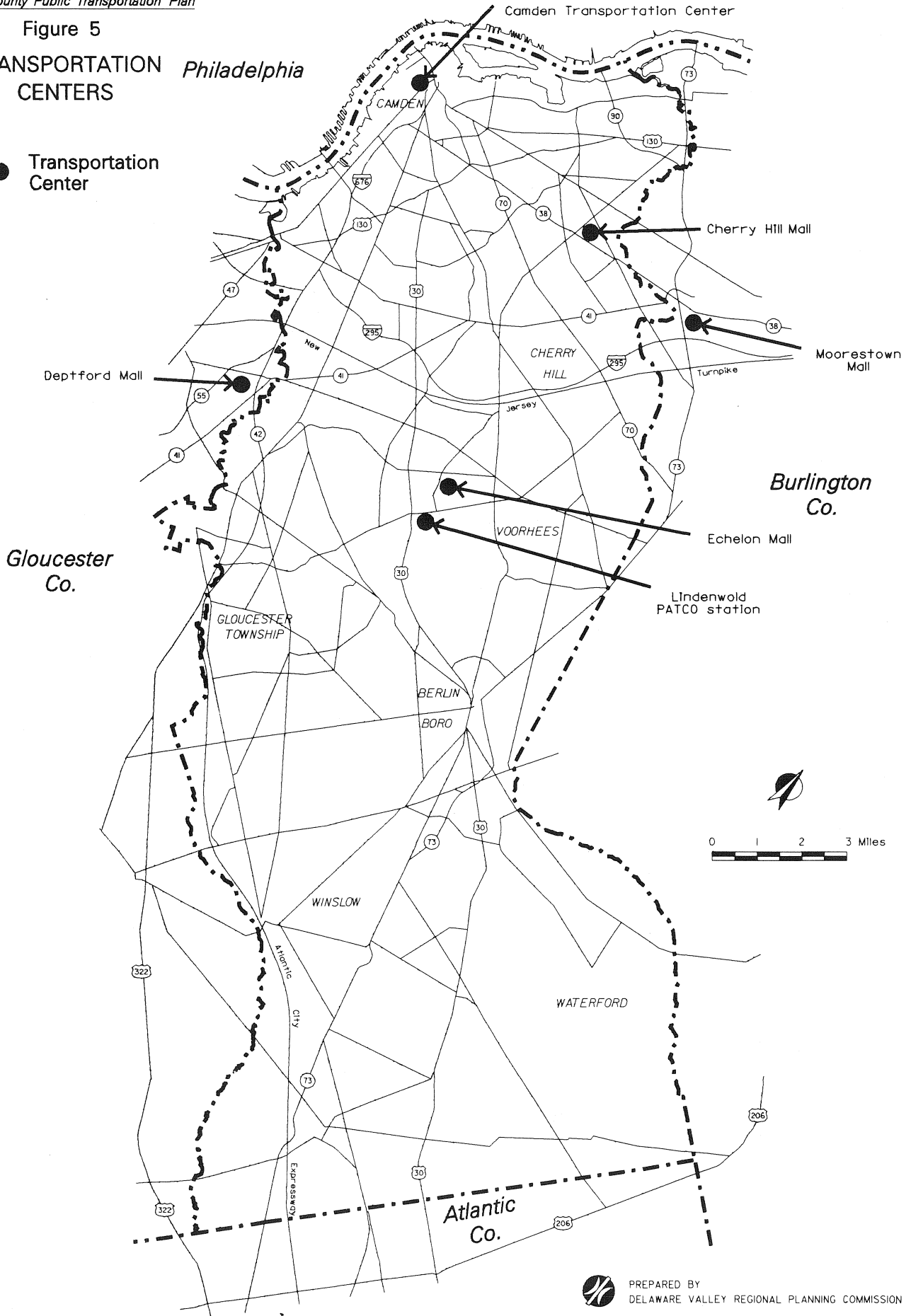
Outlying transportation centers within the County include: the Cherry Hill Mall, the Lindenwold PATCO station, the Echelon Mall and the Haddonfield PATCO station. At the Cherry Hill Mall, the interface is between a regional shopping mall, its surrounding parking, three major arterial highways, including I-295, and four NJ TRANSIT bus routes. NJDOT surveyed the mall's parking lot in 1988 and noted that approximately 148 autos were using the site as a mode change location. The Lindenwold PATCO station, at the terminus of the PATCO High Speed Line, is the focus of high speed rail transit to Camden and Philadelphia and passenger railroad services to Atlantic City (provided by NJ TRANSIT and Amtrak). Four NJ TRANSIT bus routes and the White Horse Pike also serve the center. At the Echelon Mall, a regional shopping center, three NJ TRANSIT buses, and a community transit system (linking Echelon's retail/office/residential components with the Ashland PATCO station) converge. Highway access is focused on cross-county movement (CR 544). Haddonfield's PATCO station is a focal point within the Borough's commercial core located at the crossroads of the Kings Highway and Haddon Avenue. Four NJ TRANSIT bus routes serve the station.

Two centers just beyond Camden County's border are also of importance: the Moorestown Mall, in Burlington County, and the Deptford Mall, in Gloucester County. The Moorestown Mall and its supporting parking lot is easily accessed via NJ 38, I-295 and the NJ Turnpike; it is also served by four NJ TRANSIT bus routes. The Deptford Mall is served by three NJ TRANSIT bus routes, and is conveniently served by NJ 55 and NJ 42. Figure 5 illustrates the County's major transportation centers.

Figure 5

TRANSPORTATION CENTERS

● Transportation Center



**Park and Ride Lots**

Park and ride lots also vary in formality and primacy. Often they are designated, signed facilities where a change between private automobiles and/or public transportation routes take place. However, and perhaps more frequently, they informally exist as parking in interchange infields/shoulder areas where carpool staging takes place, or in remote portions of shopping center parking areas -- closest to the arterial with the bus service. In any event, the travel benefits of park and ride lots are similar to transportation centers but they lack the complementary land development connections. Within Camden County there are examples of formal and informal park and ride lots.

All suburban PATCO High Speed Line stations are park and ride locations, with the most notable stations being Ferry Avenue, Woodcrest and Lindenwold. With the exception of the most convenient parking spaces surrounding the station buildings, most of the PATCO station area parking is free. Other formal park and ride lots in the County include: the Avandale Park and Ride Lot, in the Sicklerville section of Winslow Township, and the Atco station of NJ TRANSIT's Atlantic City Rail Line, located at US 30 and NJ 73. Parking is free at both of these facilities.

PATCO's Ferry Avenue station serves the US 130 corridor. The high surrounding residential density supports three NJ TRANSIT bus routes which also provide for passenger distribution to/from the station. The Woodcrest station is situated as an intercept to Camden/Philadelphia via I-295. Local bus service to/from the station is not provided. The Lindenwold station is key as a result of its location as the end of the line station and its proximity to US 30. It collects from the remotest southern and western portions of the County and offers the greatest supply of parking. Lindenwold is also served by Amtrak and NJ TRANSIT trains and three NJ TRANSIT bus routes. PATCO station parking supply/demand relationships are covered in detail in a subsequent section of this report.

The Avandale parking lot is conveniently situated at the Atlantic City Expressway's interchange with CR 536 Spur (Interchange #38). The facility is designed as a remote intercept and mode change point for trips oriented to Philadelphia, Camden and Atlantic City. There are three regularly scheduled NJ TRANSIT bus routes which service the lot (four in the summer). There are 400 parking spaces provided at the facility. Parking demand at the lot was 160 vehicles according to a February 1993 survey by DVRPC.

The Atco station offers access to the Atlantic City Rail Line from US 30 and NJ 73. Due to very controlled access conditions along both highways, vehicular ingress and egress is accomplished circuitously. Left-turns into the lot must traverse the Routes 73/30 interchange to approach the lot as a right turn (left-turns from NJ 73 southbound must traverse the interchange twice). NJ TRANSIT's Bus Route 554 operating along US 30 does not directly serve the station. There are 216 parking spaces at the Atco station, with room for expansion. Demand at the lot was 60 vehicles according to a February 1993 survey conducted by DVRPC.

Informal park and ride arrangements are evident along the major radial arterial highways in the study area. Locations inventoried by NJDOT (in 1988) which are relevant to this study are listed below.

CAMDEN COUNTY:

1. K-Mart/Berlin Shopping Center - at US 30 and Pine Road in Berlin Township (23 parked cars);
2. Bradlees Shopping Center - at US 30 and Barrington Road in Stratford Borough (6 parked cars);
3. Mr. Goodbuys Shopping Center - at US 30 and Mouldy Road in Lawnside Borough (31 parked cars);
4. Cherry Hill Mall - at NJ 38 and Haddonfield Road in Cherry Hill Township (148 parked cars).

BURLINGTON COUNTY:

5. Bradlees Shopping Center - at the NJ 70/NJ 73 (Marlton) circle (28 parked cars);
6. Moorestown Mall - at NJ 73 and NJ 38 (42 parked cars);
7. K-Mart/Tri-Town Plaza - at NJ 70 and NJ 73 (11 parked cars);

GLOUCESTER COUNTY:

8. Deptford Mall - NJ 42 and County Route 544 (9 parked cars);
9. Bradlees Shopping Center - at NJ 42 and Greentree Road (80 parked cars);
10. MacDonald's - at NJ 42 and Greentree Road (78 parked cars).

DVRPC has prepared the Regional Park and Ride Lot Assessment (January 1993) report. The analysis used in that effort identified general areas along arterial highways or freeway facilities which contain supportive conditions for park and ride lots. Conditions such as: work trip travel demand, downstream traffic congestion (as a deterrent to driving); available public transit service or other rideshare mode (as an alternate to single occupancy vehicle travel), and; land availability and suitability (that is: nonconflicting land use surrounding the potential site) were used as indicators of initial feasibility. Table 7 identifies the market areas cited in that study which are within the influence of Camden County travellers. The Office of County and Regional Planning for Camden County supplemented that data with an initial analysis of potential sites and potential parking capacity. That information has also been incorporated into Table 7. Figure 6 illustrates the County's park and ride lot geography.

NJDOT is advancing feasibility studies of all but the US 130 and NJ 47 location (Area #8 in Table 7). In that process: estimates of parking demand will be developed; site environmental analysis will be addressed, and; conceptual plans will be prepared.

TABLE 7  
MARKET AREAS FOR POTENTIAL  
PARK AND RIDE LOTS

	<u>Area</u>	<u>Municipality</u>	<u>Potential Demand</u>	<u>Locations of Parking Lots</u>	<u>Potential Spaces (Observations)</u>
CAMDEN COUNTY					
1.	NJ 42 & NJ 168	Gloucester Twp	402		
2.	NJ 73 & A.C. Expressway	Winslow Twp	34		
3.	NJ 73 & CR 561	Berlin Boro Berlin Twp	204		
4.	NJ 42 & NJ Turnpike	Runnemede Boro	66	- Creek Rd & I-295 - Creek Rd & I-295 - End of Delsea Dr & Cedar Av - Almonesson Av & Cedar Av	1,500+ (open/private?) 300+ (open/public?) 20+ (open/farm) 3,700+ ** (open/farm)
5.	I-295 & NJ 168	Bellmawr Boro	74	- Bellmawr Industrial Park, several sites - NJ Turnpike & NJ 168 Interchange	600+ (paved/private) 700+ ** (infield of interchange)
6.	NJ 70 & NJ 41	Cherry Hill Twp	334	- NW of Ellisburg Circle intersection - NJ 70, east of circle intersection, adjacent to jughandle - NE corner of Kresson & Brace Rds intersection - Kresson & Evans Mill Rds intersection	100-200 (paved/2 underutilized parking areas of Ellisburg Shopping Center) 50-100 (public?/private?) 600-800 (open/public) 300 (open/public)
7.	US 130 & NJ 73	Pennsauken Twp	186		
8.	US 130 & NJ 47	Brooklawn Boro	212		

TABLE 7  
MARKET AREAS FOR POTENTIAL  
PARK AND RIDE LOTS

	<u>Area</u>	<u>Municipality</u>	<u>Potential Demand</u>	<u>Locations of Parking Lots</u>	<u>Potential Spaces (Observations)</u>
9.	I-295 & NJ 70	Cherry Hill Twp	309	- Old Cuthbert Rd, N of Rt 70 between Turnpike & I-295 - Triangle: NJ 73, Church Rd & Turnpike - S of Triangle (above) - N side of Rt 70, E of Birchwood	2,000 (open/farm, private) 500 ** (open) 1,200 ** 1,400 (undeveloped/private)
10.	NJ 70 & CR 644	Cherry Hill Twp	95	- NJ 70, W of Race Track (both sides of railroad) - CR 644, just S of Race Track Circle intersection)	1,000 (paved/private, underutilized parking areas) 300 (open/partially paved, public)
BURLINGTON COUNTY					
11.	NJ 73 & CR 537	Maple Shade Twp	227		
12.	NJ 73 & NJ 70	Evesham Twp	275		
GLOUCESTER COUNTY					
13.	NJ 42 & NJ 55	Deptford Twp	349		

Sources:

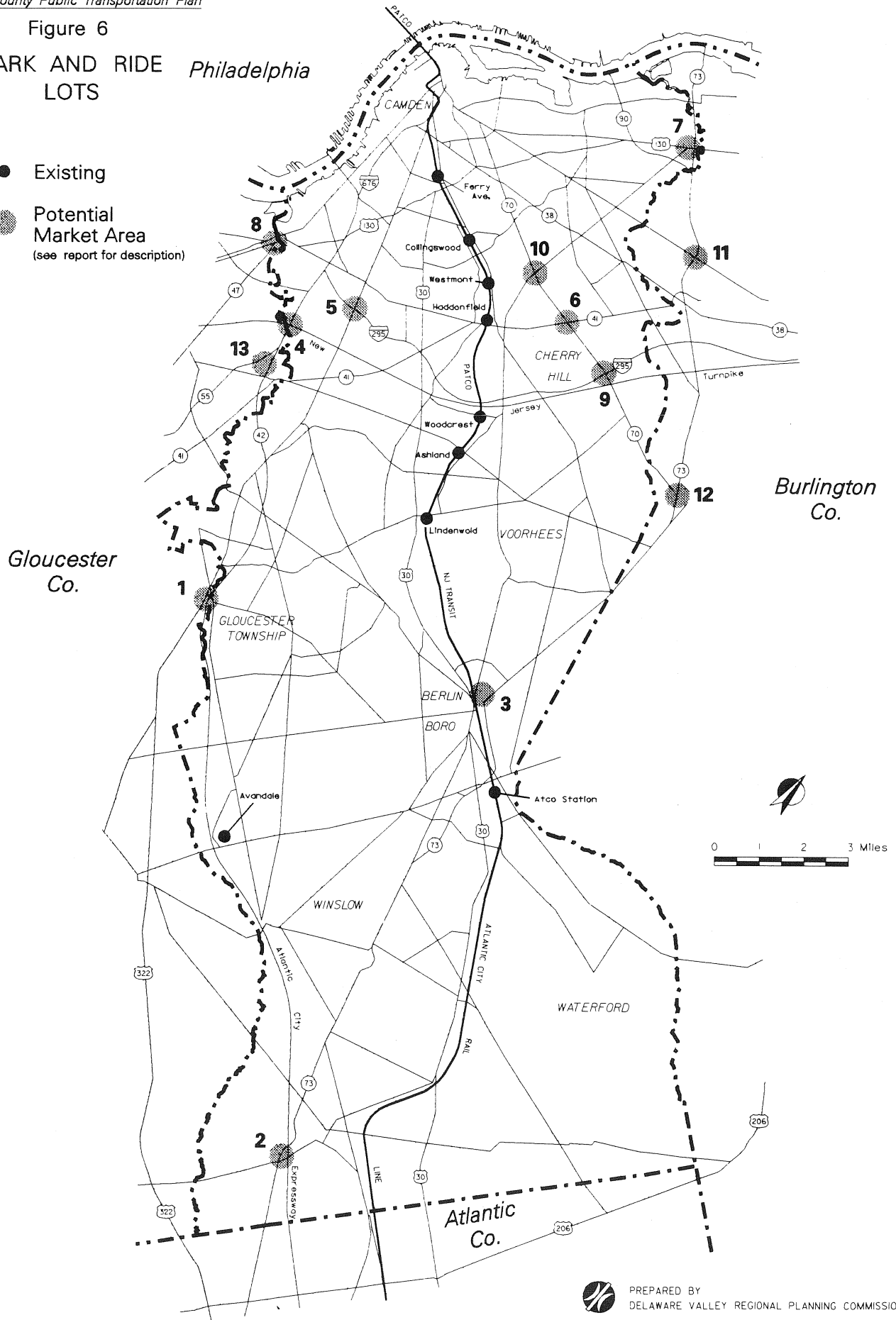
Market areas, municipalities and estimates of potential parking demand: DVRPC Regional Park and Ride Lot Assessment, January 1993.

Locations of parking lots, estimates of potential parking spaces and observations: 1991 calculations by Camden County Office of County and Regional Planning (\*\* - site area provided by Camden County, parking space estimates by DVRPC assuming 350 square feet per parking stall, accounting for access, circulation and landscaping space requirements).



Figure 6  
PARK AND RIDE  
LOTS

- Existing
- 1 ● Potential Market Area (see report for description)





## **EXISTING PUBLIC TRANSPORTATION SYSTEMS**

Virtually all of Camden County's 37 municipalities are traversed by at least one public transportation mode. Exceptions include Berlin Township, Pine Valley and Tavistock Borough.

Providers of the vast majority of the County's public transportation services include NJ TRANSIT, PATCO and Amtrak. Table 8 is a guide to the major operators and routes within the County. NJ TRANSIT operates both bus and regional rail service (the Atlantic City Rail Line -- ACRL). PATCO operates the high speed, heavy rail line between Lindenwold and Philadelphia. Amtrak operates the "Atlantic City Express" (ACX), running between Atlantic City and Philadelphia (and points south and west) or Trenton (and points north). The Echelon Shuttle Bus -- a private shuttle bus system operating between the homes, offices and shopping mall within the Echelon mixed-use community and the Ashland PATCO High Speed Line station -- is also noteworthy within this assessment.

In addition to the service providers mentioned above, a variety of special needs public transportation services are provided by County social service agencies. The limited availability of these latter systems to the general public precludes evaluation in this study. On the other hand, the general success of the Echelon shuttle operation lends itself as a model in private initiative which may have broader application within the County. Another initiative which is of significance to the transportation scene in Camden County is the Cross County Connection (CCC) transportation management association (TMA).

### **NJ TRANSIT**

NJ TRANSIT operates 31 fixed route bus lines which have termini within or travel through Camden County. These routes have been broadly classified by the markets they serve. Commuter bus routes (14) are those which travel into the City of Camden and then onto central Philadelphia. Local bus routes (9) do not cross the river and are contained within Camden, Burlington and Gloucester Counties. Typically these routes have one terminal point at the Camden Transportation Center. Seashore bus route services (8), generally operate between Center City Philadelphia and recreational destinations along New Jersey's coastline.

Services provided by the bus routes may overlap, regardless of their market area. For example, nine of NJ TRANSIT's bus routes also provide feeder service to outlying PATCO stations and all but four of the routes stop at the Camden Transportation Center. If the buses are not travelling along a freeway and are in less developed areas, the driver will respond to a flag stop. Therefore, one bus route can serve a variety of markets.

The fare structure for using the bus is based upon zones and whether interstate travel is involved. Multiple trip discounts are available through the purchase of ten-trip tickets and monthly passes. As of the summer of 1992, the one-way base fare on an NJ TRANSIT bus was \$1.00 for intrastate travel and \$1.10 for a one zone trip with either a beginning or end within Philadelphia. Transfers can be purchased onboard the bus for \$0.40. At present there is no shared fare arrangement between NJ TRANSIT and PATCO or SEPTA (the Southeastern Pennsylvania Transportation Authority), which limits the effective integration of these transportation resources.

TABLE 8  
 ROUTE GUIDE  
 EXISTING PUBLIC TRANSPORTATION SYSTEM

<u>Commuter Buses</u>		<u>Local Buses</u>		<u>Seashore Buses</u>		<u>Rail Transit</u>	
400	Phila. & Sicklerville	450	Camden, Audubon & Cherry Hill Mall	313	Phila. & Cape May (via Vineland)	<b>PATCO</b>	Phila. & Lindenwold
401	Phila. & Salem	451	Camden & Echelon Mall	315	Phila. & Cape May (via Mays Landing)	<b>NJT</b> <b>ACRL</b>	Lindenwold, Atco & Atlantic City
402	Phila. & Pennsville	452	Camden & Pennsauken	316	Phila., Wildwood & Cape May (Express)	<b>AMTRAK</b> <b>ACX</b>	Phila./Trenton, Lindenwold & Atlantic City
403	Phila., Lindenwold & Turnersville	453	Camden & Woodlynne	317	Phila. & Asbury Park		
404	Phila. & Cherry Hill Mall	454	Lindenwold & Haddonfield	318	Phila. & Great Adventure		
405	Phila. & Cherry Hill Mall	455	Cherry Hill Mall & Deptford Mall	551	Phila. & Atlantic City		
406	Phila. & Medford Lakes	457	Camden & Moorestown Mall	554	Lindenwold & Atlantic City		
407	Phila. & Moorestown Mall	459	Echelon Mall & Camden County College	555	Phila. & Ocean City		
408	Phila. & Millville	461	Camden Trans. Center & NJ State Aquarium				
409	Phila., Willingboro & Trenton						
410	Phila. & Bridgeton						
412	Phila. & Glassboro						
413	Phila. & Mount Holly						
419	Phila. & Burlington						

The network of bus routes that form the commuter system are illustrated on Figure 7. Profiles of existing commuter bus operations and services are detailed on Tables 9 and 10, respectively. The commuter bus system carries about 22,300 passengers per weekday of which about 5,100 trips are served during the A.M. peak period. More detailed commuter bus route ridership information is provided in the Appendix (see Table A-1 through Table A-14).

Most commuter routes offer a trunk line with extensions or branches to special generators along the line. During the peak periods, some routes divert to the freeways, bypassing downtown Camden. This is done to expedite travel to Center City Philadelphia. Usually service along the trunkline is provided seven days per week with a span of service extending from 5:00 A.M. to 1:00 A.M. on weekdays and weekend service spanning 7:00 A.M. to 11:00 P.M.. Peak period headways are typically 30 minutes or less on the main trunk (and frequently are less in the predominant direction of travel versus the reverse flow direction). Less patronized branches receive less service. One to two hour headways are not uncommon for operations along certain branches during weekday peak operations. Furthermore, on branch routes, service may be limited to peak periods and/or weekday operations only.

As can be seen on Table 10, the Route 400 bus (operating between Sicklerville, Williamstown and Philadelphia) is the most heavily patronized commuter bus line (with almost 4,100 passengers per weekday). The route enjoys frequent service to major activity and growth centers. The Route 402 is the least patronized line, its limited operation reflects a market area characterized by low population density, a portion of which is shared with three other routes (Routes 401, 410 and 412).

Figure 8 illustrates the system of local buses operating within Camden County. Tables 11 and 12 detail the operations and services provided by existing local bus routes. The local bus network carries about 5,000 passengers per average weekday with 1,300 or so riding during the A.M. peak period. More detailed local bus route ridership information is also provided in the Appendix (see Table A-15 through Table A-22).

The route structure of the local bus system is "tighter" than the commuter lines. That is, there are fewer branches from the trunk line. Local service is generally provided on weekdays and Saturdays only, with hours of operation lasting from 6:00 A.M. to 7:00 P.M. or 11:00 P.M. when evening service is provided. (The Route 461 bus, AquaLink -- a downtown shuttle between the Transportation Center and the Aquarium, offers Saturday, Sunday and holiday service spanning the midday and early evening periods.) Peak headways provided by local bus routes are at best 30 minutes without variation for travel pattern. Midday and Saturday frequency is about one hour between buses. Sunday operations typically afford two hour intervals between buses. Weekday ridership levels along the routes are much lower than the commuter routes. The highest patronized route is the Route 452 bus, operating within the waterfront communities, carrying approximately 1,750 passengers per weekday. The Route 454 bus, providing peak period shuttle services between the Haddonfield and Lindenwold PATCO stations, serves only 60 trips per weekday.

Figure 7  
EXISTING  
COMMUTER  
BUS SERVICE

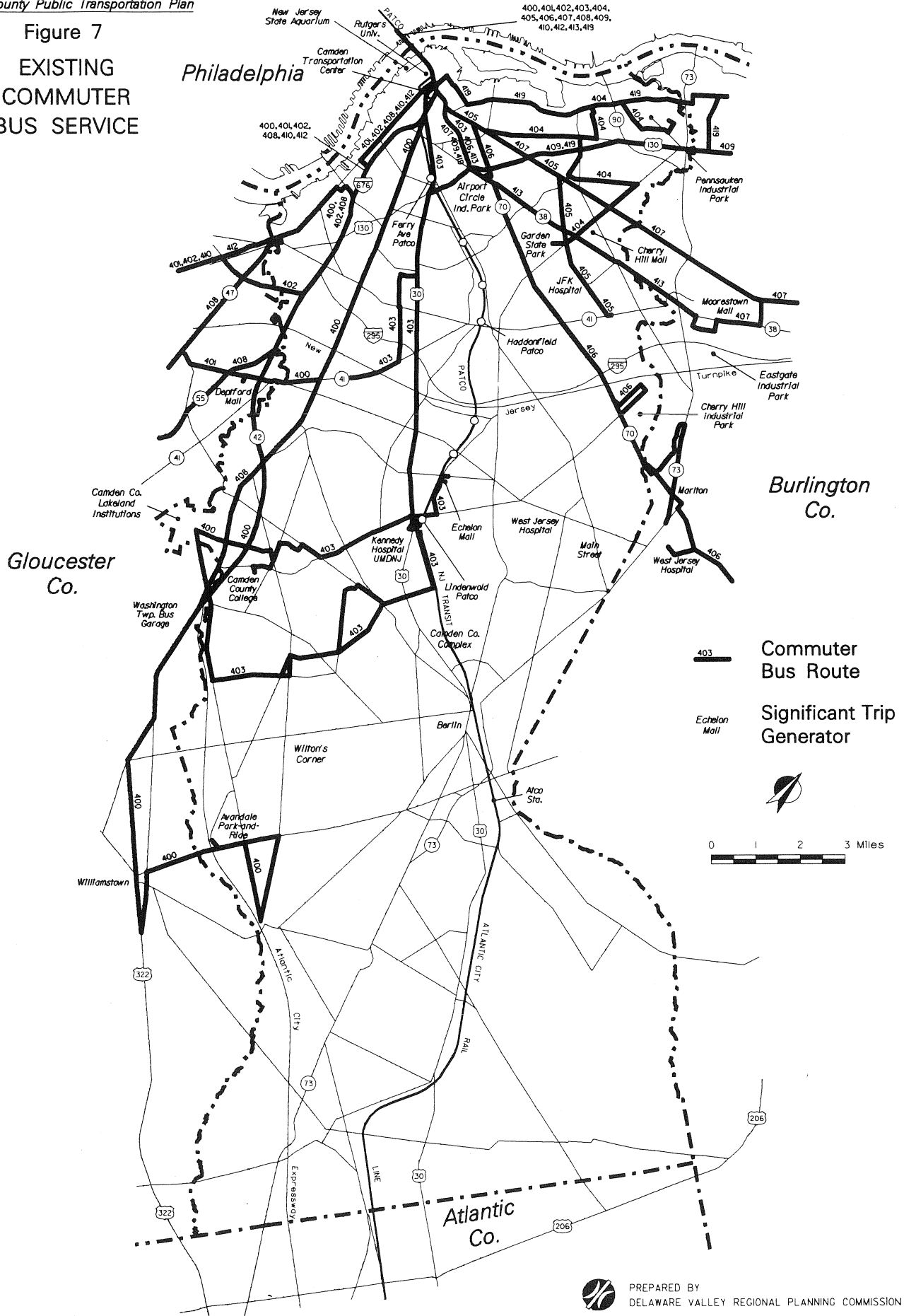


TABLE 9  
OPERATING CHARACTERISTICS  
COMMUTER BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>								
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl			
400	Phila. & Sickler-ville	125	Turners-ville (trunk)	Mon-Fri	5AM-3AM	10 <sup>2)</sup> - 20	30	10 <sup>2)</sup> - 20	60	--			
				Saturday	"	20	20	20	60	--			
				Sunday	"	60	60	60	60	--			
			Camden Co. Coll.	Mon-Fri	7AM-5PM	60	60	60	--	--			
				Saturday	--	--	--	--	--	--			
				Sunday	--	--	--	--	--	--			
			Sickler-ville, Wmstwn	Mon-Fri	4AM-2AM	20 <sup>2,3)</sup> -30	60	20 <sup>2,3)</sup> -60	60	--			
				Saturday	"	60	60	60	60	--			
				Sunday	"	60	60	60	60	--			
			401	Phila., Deptford Mall & Salem	44	Woodbury (trunk)	Mon-Fri	5AM-1AM	30 <sup>2)</sup> - 60	80	30 <sup>2)</sup> - 60	60 <sup>4)</sup>	--
							Saturday	5AM-11PM	80	80	60	--	
							Sunday	6AM-12AM	120	60	60	180 <sup>4)</sup>	--
Deptford Mall	Mon-Fri	7AM-10PM				120	120	120	120	--			
	Saturday	"				120	120	120	120	--			
	Sunday	11AM-5PM				--	60	60	--	--			
Salem	Mon-Fri	5AM-10PM				120	120	120	120	--			
	Saturday	7AM-9PM				120	120	120	120	--			
	Sunday	8AM-7PM				1 rnd trp	--	1 rnd trp	--	--			
402	Phila. & Pennsville	16				Gibbstwn (trunk)	Mon-Fri	5AM-12AM	30 <sup>3)</sup> - 60	--	30 <sup>3)</sup> - 60	1 rnd trp	--
							Saturday	5AM-11PM	60	--	1 rnd trp	120 <sup>4)</sup>	--
							Sunday	8AM-10PM	1 rnd trp	--	--	1 rnd trp	--
			Pennsville	Mon-Fri	6AM-10PM	60	--	1 rnd trp	1 rnd trp	--			
				Saturday	8AM-9PM	60	--	1 rnd trp	120 <sup>4)</sup>	--			
				Sunday	8AM-10PM	1 rnd trp	--	--	1 rnd trp	--			

See last page of this TABLE for explanation of footnotes.

TABLE 9  
OPERATING CHARACTERISTICS  
COMMUTER BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>						
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl	
403	Phila., Lndnwld PATCO & Turners- ville	90	Lndnwld PATCO (trunk)	Mon-Fri	5AM-2AM	20	30	20	60	--	
				Saturday	9AM-2AM	--	80	80	--	--	
				Sunday	7AM-2AM	60	60	60	60	--	
			Runne- mede	Mon-Fri	6AM-6PM	2 in trps	--	2 out trp	--	--	--
				Saturday	--	--	--	--	--	--	
				Sunday	--	--	--	--	--	--	
			Echelon Mall	Mon-Fri	8AM-10PM	--	60	60	60	60	--
				Saturday	8AM-11PM	60	60	60	60	60	--
				Sunday	10AM-7PM	--	60	60	--	--	
			Erial	Mon-Fri	5AM-2AM	30 <sup>2)</sup> - 60	60	30 <sup>2)</sup> - 60	60	80	--
				Saturday	5AM-2AM	60	80	80	80	80	--
				Sunday	6AM-2AM	60	60	60	80	80	--
			Turners- ville	Mon-Fri	4AM-2AM	30 <sup>2)</sup> - 60	120	30 <sup>4)</sup> - 60	120 <sup>4)</sup>	120 <sup>4)</sup>	--
				Saturday	5AM-2AM	80	80	80	120 <sup>4)</sup>	120 <sup>4)</sup>	--
				Sunday	"	3 in trps	2 rnd trp	1 rnd trp	2 out trp	--	
Camden Co. Coll.	Mon-Fri	--	--	--	--	--	--	--			
	Saturday	9AM-6PM	--	80	80	--	--				
	Sunday	--	--	--	--	--	--				
404	Phila., Pennsaukn & Cherry Hill Mall	76	Cherry Hill Mall (trunk)	Mon-Fri	5AM-12AM	20	40	20	60	--	
				Saturday	6AM-12AM	40	40	40	60	--	
				Sunday	8AM-11PM	60	60	60	120	--	
			Pennsaukn Ind. Park (orig. & term. in Camden)	Mon-Fri	6AM-4PM	2 rnd trp	--	2 rnd trp	--	--	
				Saturday	--	--	--	--	--	--	
				Sunday	--	--	--	--	--	--	

See last page of this TABLE for explanation of footnotes.



TABLE 9  
OPERATING CHARACTERISTICS  
COMMUTER BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>					
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl
405	Phila., Mrchntvllle & Cherry Hill Mall	47	Cherry Hill Mall (trunk)	Mon-Fri	8AM-12AM	40	40	40	40	--
				Saturday	9AM-12AM	40	40	40	60	--
				Sunday	11AM-7PM	60	60	60	--	--
			Kingston Estates	Mon-Fri	6AM-5PM	40	2 rnd trp	1 rnd trp	--	--
				Saturday	--	--	--	--	--	--
				Sunday	--	--	--	--	--	--
406	Phila.& Medford Lakes	82	Cherry Hill (trunk)	Mon-Fri	6AM-1AM	20	35	20	60	--
				Saturday	"	60	60	60	60	--
				Sunday	6AM-11PM	120	120	120	120	--
			Cherry Hill Ind. Park	Mon-Fri	8AM-12AM	30 <sup>5)</sup> - 60	--	30 <sup>5)</sup> - 60	1 rnd trp	--
				Saturday	--	--	--	--	--	--
				Sunday	--	--	--	--	--	--
			Marlton Circle	Mon-Fri	6AM-1AM	30	30	30	60	--
				Saturday	"	60	60	60	60	--
				Sunday	6AM-10PM	120	120	120	120	--
			Marlton Crossing Shopping Ctr	Mon-Fri	6AM-9PM	60	70	60	1 rnd trp	--
				Saturday	--	--	--	--	--	--
				Sunday	--	--	--	--	--	--
			West Jersey Hospital	Mon-Fri	6AM-1AM	60	70	60	60	--
				Saturday	"	60	2 rnd trp	60	60	--
				Sunday	6AM-11PM	1 rnd trp	2 rnd trp	1 rnd trp	--	--
			Medford Lakes	Mon-Fri	6AM-8PM	2 rndtrp <sup>3)</sup>	--	30 <sup>3,6)</sup> -60	1 rnd trp	--
				Saturday	6AM-7PM	1 rnd trp	--	1 rnd trp	--	--
				Sunday	--	--	--	--	--	--

See last page of this TABLE for explanation of footnotes.

TABLE 9  
OPERATING CHARACTERISTICS  
COMMUTER BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>					
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl
407	Phila.& Moorstwn Mall	65	Moorstwn (trunk)	Mon-Fri	5AM-12AM	20 <sup>2,3)</sup> -30	40	20 <sup>2,3)</sup> -30	60	--
				Saturday	6AM-12AM	40	40	40	60	--
				Sunday	7AM-9PM	60	60	60	60	--
			Moorstwn Mall	Mon-Fri	9AM-11PM	1 out trp	40	40	60	--
				Saturday	6AM-12AM	40	40	60	--	
				Sunday	7AM-9PM	60	60	60	--	
			RCA	Mon-Fri	5AM-12PM	20 <sup>2)</sup> - 30	1 rnd trp	2 rnd trp	120 <sup>4)</sup>	--
				Saturday	--	--	--	--	--	--
				Sunday	7AM-8PM	--	--	--	--	--
408	Phila.& Millville	46	Glassboro (trunk)	Mon-Fri	6AM-11PM	20 <sup>2,3)</sup> -60	60	20 <sup>2,3)</sup> -60	90	--
				Saturday	"	90	90	90	90	--
				Sunday	7AM-11PM	1 rnd trp	120	120	1 rnd trp	--
			Millville	Mon-Fri	6AM-7PM	30 <sup>2,3)</sup> -60	120	30 <sup>2,3)</sup> -60	90	--
				Saturday	8AM-8PM	90	90	90	90	--
				Sunday	6AM-12AM	1 rnd trp	120	120	1 rnd trp	--
409	Phila., Willingboro & Trenton	93	Willingboro (trunk)	Mon-Fri	5AM-1AM	15 <sup>2,3)</sup> -30	30	15 <sup>2,3)</sup> -30	30	--
				Saturday	6AM-1AM	60	60	60	60	--
				Sunday	6AM-12AM	90	90	90	90	--
			Trenton	Mon-Fri	6AM-12AM	30 <sup>3,7)</sup> -60	60	30 <sup>3,7)</sup> -60	60 <sup>4)</sup>	--
				Saturday	"	120	120	120	120	--
				Sunday	"	90	90	90	90	--

See last page of this TABLE for explanation of footnotes.

TABLE 9  
OPERATING CHARACTERISTICS  
COMMUTER BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>					
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl
410	Phila.& Bridgeton	35	Mantua (trunk)	Mon-Fri	5AM-1AM	30 <sup>2,3)</sup> -80	80	30 <sup>2,3)</sup> -80	120	--
				Saturday	5AM-11PM	80	80	80	3 rnd trp	--
				Sunday	6AM-11PM	90	90	120	1 rnd trp	--
			Bridgeton	Mon-Fri	5AM-11PM	60 <sup>2,3)</sup> -120	120	60 <sup>2,3)</sup> -120	120	--
				Saturday	5AM-11PM	120	120	120	2 rnd trp	--
				Sunday	6AM-11PM	120	120	120	1 rnd trp	--
412	Phila.& Glassboro	33	Glassboro, Elsmere	Mon-Fri	5AM-8PM	30 <sup>2,3)</sup> -60	60	30 <sup>2,3)</sup> -60	60 <sup>4)</sup>	--
				Saturday	6AM-8PM	180	180	180 <sup>4)</sup>	--	
				Sunday	--	--	--	--	--	
413	Phila., Mt Holly & Burlington	55	Mt Holly (trunk)	Mon-Fri	6AM-1AM	30	60	30	90	--
				Saturday	7AM-11PM	90 <sup>4)</sup>	90	90	120 <sup>4)</sup>	--
				Sunday	--	--	--	--	--	
			Burlington	Mon-Fri	7AM-11PM	60	60	60	90	--
				Saturday	"	90 <sup>4)</sup>	90	90	120 <sup>4)</sup>	--
				Sunday	--	--	--	--	--	--
419	Phila., Riverside & Burlington	54	Burlington (trunk)	Mon-Fri	4AM-2AM	20 <sup>2,3)</sup> -30	60	20 <sup>2,3)</sup> -30	60	--
				Saturday	"	60	60	60	60	--
				Sunday	5AM-12AM	90	90	90	90	--

NOTES for Table 9:

- 1) Schedules per Summer/Fall 1992, except Routes: 404, 405 & 407 per January 1993
- 2) Predominant direction service -- inbound to Phila. in the AM, outbound from Phila. in the PM
- 3) Limited or no predominant direction service to Camden
- 4) Limited service
- 5) Outbound to Ind. Park in the AM, inbound from the Ind. Park in the PM
- 6) Outbound to Medford Lakes
- 7) Outbound to Trenton in the AM, inbound from Trenton in the PM

TABLE 10  
SERVICE CHARACTERISTICS  
COMMUTER BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
400	Phila.& Sickler- ville	Camden Trans Ctr, Deptford Mall, Camden Co. Coll., Lakeland, Williamstown, Avandale Park and Ride	401, 403, 450, 451, 452, 453, 455, 457, 459, 551, 555	4,060 per weekday
401	Phila., Deptford Mall & Salem	Camden Trans Ctr, Deptford Mall, Woodbury	400, 402, 408, 410, 412, 450, 455, 457	845 per weekday
402	Phila.& Pennsville	Camden Trans Ctr, Woodbury, Beckett, Pureland Industrial Park	401, 410, 412, 450, 457	405 per weekday
403	Phila., Ldnwld PATCO & Turners- ville	Camden Trans Ctr, Ferry Ave. PATCO, Lindenwold PATCO, Echelon Mall, JFK Hospital, Univ. of Medicine & Dentistry of NJ, Camden Co. Coll.	400, 450, 451, 452, 453, 454, 455, 457, 459, 554, PATCO, ACRL, ACX	2,205 per weekday
404	Phila., Pennsaukn & Cherry Hill Mall	Camden Trans Ctr, Pennsauken Ind. Park, Cherry Hill Mall	405, 407, 409, 450, 452, 455,	2,190 per weekday
405	Phila., Merchntvll & Cherry Hill Mall	Camden Trans Ctr, Garden State Park, Kingston Estates	404, 407, 413, 450, 452, 455, 457	870 <sup>3)</sup> per weekday

See last page of this TABLE for explanation of footnotes.

TABLE 10  
SERVICE CHARACTERISTICS  
COMMUTER BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
406	Phila. & Medford Lakes	Camden Trans Ctr, Garden State Park, Cherry Hill Ind. Park, West Jersey Hospital (Evesham)	407, 409, 452, 455, 457	1,835 per weekday
407	Phila. & Moorestown Mall	Camden Trans Ctr, Merchantville, Moorestown Mall, RCA	404, 405, 406, 409, 413, 452, 457	1,740 per weekday
408	Phila. & Millville	Camden Trans Ctr, Glassboro, Vineland, Vineland Bus Terminal	313, 401, 402, 410, 412, 553	1,010 per weekday
409	Phila., Willingboro & Trenton	Camden Trans Ctr, Pennsaukn Ind. Park, Rancocas Valley Hospital, Burlington Center Mall, Roebling, Trenton Rail Station, Quaker Bridge Mall	404, 406, 419, 458, NJT rail to NY, AMTRAK SEPTA rail to Phila.	3,185 per weekday
410	Phila. & Bridgeton	Camden Trans Ctr, Woodbury, Mullica Hill	401, 402, 408, 412, 450, 452, 453, 457, 553	785 per weekday
412	Phila. & Glassboro	Camden Trans Ctr, Woodbury, Rowan Coll., Elsmere	401, 402, 410, 450, 452, 453, 457	760 per weekday

TABLE 10

SERVICE CHARACTERISTICS  
COMMUTER BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
413	Phila., Mt Holly & Burlington	Camden Trans Ctr, Airport Ind. Park, Cherry Hill Mall, Moorestown Mall, Burlington Memorial Hosp. Burlington Center Mall	317, 407, 409, 419, 457	1,175 per weekday
419	Phila., Riverside & Burlington	Camden Trans Ctr, Palmyra, Edgewater Park	404, 409, 452	1,270 per weekday

## NOTES for Table 10:

1) Excludes Camden Transportation Center connections

2) Ridership figures for Spring/ Summer 1992, source: NJ TRANSIT

3) Route 456 ridership statistics were used to approximate new Route 405. Route 456 was extended to Philadelphia and redesignated: Route 405



TABLE 11  
OPERATING CHARACTERISTICS  
LOCAL BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>						
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl	
450	Camden & Cherry Hill Mall	40	Cherry Hill Mall (trunk)	Mon-Fri	5AM-11PM	30	45	45	60	--	
				Saturday	7AM-11PM	60	60	60	60	--	
				Sunday	"	120	120	120	120	--	
451	Camden & Echelon Mall	29	Echelon Mall (trunk)	Mon-Fri	6AM-7PM	30	60	30	--	--	
				Saturday	--	--	--	--	--	--	
				Sunday	--	--	--	--	--	--	
			West Jersey Hosp/ St. Mary's Home	Mon-Fri	9AM-3PM	--	60	--	--	--	--
				Saturday	--	--	--	--	--	--	--
				Sunday	--	--	--	--	--	--	--
452	Camden & Pennsaukn	50	Pennsaukn	Mon-Fri	6AM-7PM	30	30	30	--	--	
				Saturday	"	60	60	60	--	--	
				Sunday	9AM-7PM	--	90	90	--	--	
453	Camden & Woodlynne	47	Woodlynne	Mon-Fri	6AM-7PM	30	30	30	--	--	
				Saturday	"	60	60	60	--	--	
				Sunday	--	--	--	--	--	--	
454	Haddonfield PATCO & Lndnwold PATCO	15	Lndnwold PATCO	Mon-Fri	6AM-7PM	60	--	60	--	--	
				Saturday	--	--	--	--	--	--	
				Sunday	--	--	--	--	--	--	

See last page of this TABLE for explanation of footnotes.



TABLE 11  
OPERATING CHARACTERISTICS  
LOCAL BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Branch	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>					
					Span of Service	AM Rush	Midday	PM Rush	Evening	Owl
455	Deptford Mall & Cherry Hill Mall	33	Cherry Hill Mall	Mon-Fri	6AM-11PM	60	60	60	60 <sup>2)</sup>	--
				Saturday	"	60	60	60	60 <sup>2)</sup>	--
				Sunday	--	--	--	--	--	
457	Camden & Moorestown Mall	38	Moorestown Mall	Mon-Fri	6AM-11PM	30	60	30	60 <sup>2)</sup>	--
				Saturday	"	60	60	60	60 <sup>2)</sup>	--
				Sunday	--	--	--	--	--	
459	Echelon Mall & Camden Co. Coll.	33	Echelon Mall (trunk)	Mon-Fri	6AM-9PM	60	60	60	60 <sup>2)</sup>	--
				Saturday	--	--	--	--	--	
				Sunday	--	--	--	--	--	
			Gibbsboro	Mon-Fri	7AM-6PM	2 rnd trp	--	2 rnd trp	--	--
				Saturday	--	--	--	--	--	
				Sunday	--	--	--	--	--	
461	Camden Trans Ctr, NJ State Aquarium <i>AquaLink</i>	66		Mon-Fri	--	--	--	--	--	--
				Saturday	9AM-6PM	--	15	15	--	--
				Sunday	"	--	15	15	--	--

NOTES for Table 11:  
1) Schedules per Summer/Fall 1992  
2) Limited service

TABLE 12  
SERVICE CHARACTERISTICS  
LOCAL BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
450	Camden & Cherry Hill Mall	Camden Trans Ctr, Yorkshire Square, Blackhorse Center, Westmont PATCO,	400, 401, 402, 403, 404, 405, 406, 408, 410, 412, 413, 451, 455, 457, PATCO	975 per weekday
451	Camden & Echelon Mall	Camden Trans Ctr, Ferry Ave. PATCO, Collingswood PATCO, Westmont PATCO, Haddonfield PATCO, St. Mary's Nursing Home, West Jersey Hospital (Voorhees)	403, 450, 452, 454, 455, 457, 459, PATCO	325 per weekday
452	Camden & Pennsaukn	Pennsauken, North Camden, Camden Trans Ctr, NJ State Aquarium	400, 403, 404, 405, 406, 407, 409, 451,	1,755 per weekday
453	Camden & Woodlynne	Camden Trans Ctr, Ferry Ave. PATCO	401, 402, 408, 410, 412, 450, 451, 452, 457	545 per weekday

TABLE 12  
SERVICE CHARACTERISTICS  
LOCAL BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
454	Haddonfield PATCO & Ldnwold PATCO	JFK Hospital, Univ. of Medicine & Dentistry of NJ	403, 451, 455, 457, 459, 554, PATCO, ACRL, ACX	60 per weekday
455	Deptford Mall & Cherry Hill Mall	JFK Hospital, Haddonfield PATCO, Haddon Heights	400, 401, 403, 404, 405, 406, 450, 451, 454, 457, PATCO	375 per weekday
457	Camden & Moores- town Mall	Camden Trans Ctr, Gloucester City, Haddonfield PATCO, Eastgate Ind. Park	400, 401, 402, 403, 405, 406, 407, 408, 410, 412, 413, 450, 454, 455, PATCO	600 per weekday
459	Echelon Mall & Camden Co. Coll.	JFK Hospital, Univ. of Medicine & Dentistry of NJ, Lindenwold PATCO, Gibbsboro	400, 403, 451, 454, 554, PATCO, ACRL, ACX	370 per weekday

TABLE 12  
SERVICE CHARACTERISTICS  
LOCAL BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
461	Camden Trans Ctr, NJ State Aquarium <i>AquaLink</i>			N.A.

NOTES for Table 12:

- 1) Excludes Camden Transportation Center connections
- 2) Ridership figures for Spring/ Summer 1992, source: NJ TRANSIT

Seashore bus routes operate on freeways as expresses and along arterials where they are available for local pickup and discharge. Figure 9 illustrates NJ TRANSIT's seashore bus services as they traverse Camden County (Routes 316 and 318 operate during the summer months only). On a typical (non-summertime) weekday, the set of seashore routes serve approximately 4,300 passengers.

A summary of existing seashore bus routes' operations and services are provided on Tables 13 and 14. All seashore routes, except Route 318, operate seven days a week. Round-the-clock service is provided along Routes 551 and 554, these routes also provide 30 minute headways during the rush hours. The remaining routes generally provide limited service throughout the day and cease operations by midnight. Route patronage data is shown on Table 14. The Route 551 and Route 554 bus lines are the most heavily patronized with 1,700 to 1,800 trips per weekday registered for each route. Not surprisingly, each route provides a local service which is not matched by the other seashore routes. For example the Route 554 bus, operating along the White Horse Pike between Lindenwold and Atlantic City, serves as a local bus to those residing nearby who otherwise do not have bus service. Route 551 services the Avandale Park and Ride Lot (on CR 536 Spur adjacent to interchange #38 of the Atlantic City Expressway) and then completes its run in an express fashion to Philadelphia and/or Atlantic City. In effect, these routes are providing local and commuter services in addition to their intercity, recreational function.

NJ TRANSIT also operates the Atlantic City Rail Line (ACRL). Figure 10 displays the rail passenger services in the County. This rail line currently operates between the Lindenwold PATCO station and the Atlantic City Rail Terminal. Local service, within the County, is also offered at the Atco station. Three intervening stations within Atlantic County are also available for local connection to the line. Tables 15 and 16 detail existing operations and services of the passenger rail lines. Operation on the ACRL is daily with rush hour headways of 60 minutes and off-peak headways of two hours. Owl service is supplemented by the Route 554 bus, but local stops at the Atco station are sacrificed as a result of the changed operation. The rail line carries about 47,000 riders a month during the summertime.

Currently, NJ TRANSIT is seeking, through negotiations with Amtrak and DRPA, to extend its operation to 30th Street Station in Philadelphia. En route, NJ TRANSIT will establish a new station at the Garden State Park Race Track. With the extension, NJ TRANSIT is expanding its market for trips oriented to Atlantic City. The extension will provide an alternative for highway travellers in the South Jersey and Philadelphia metropolitan area. Conversely, it is not expected that the extension will be relied upon by large numbers of commuters to Philadelphia. Travel to Center City Philadelphia from the new station's market area is considerably cheaper and faster via PATCO and the commuter bus routes. Furthermore, the extension will not penetrate the core of Center City. Although it should be pointed out that a cooperative fare-transfer arrangement between NJ TRANSIT and SEPTA could help close the gap in this portion of the city. It is anticipated that rail service along the extension will be initiated in May 1993 and that the new station will be operational by the late 1993/early 1994.

To solidify the line's attractiveness, NJ TRANSIT is planning the addition and extension of passing sidings along the line and improved track connections at Frankford Junction to increase the capacity of the single track line. This improvement is scheduled for implementation in 1994 and 1995.

Figure 9  
EXISTING  
SEASHORE  
BUS SERVICE

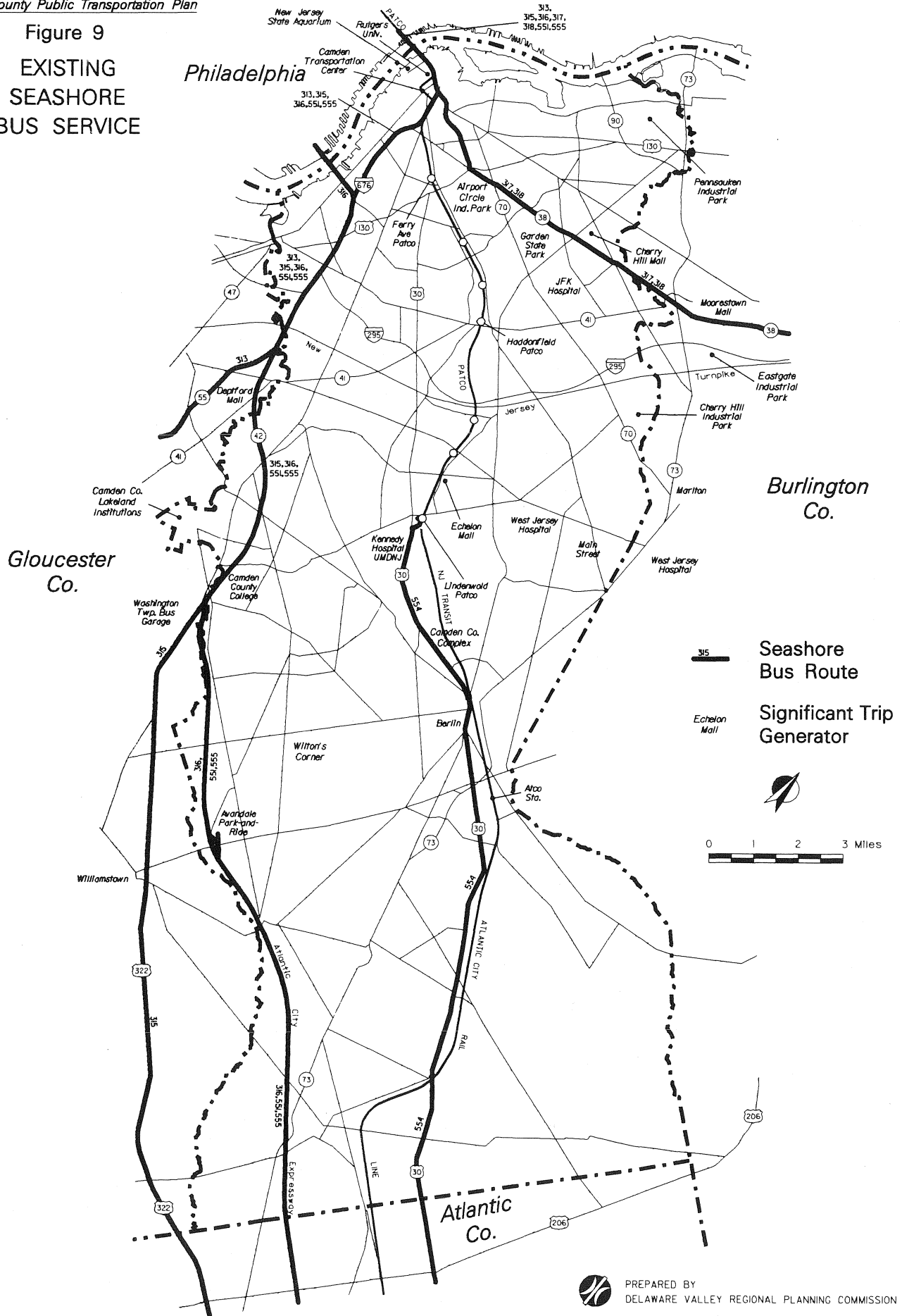


TABLE 13  
OPERATING CHARACTERISTICS  
SEASHORE BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Day	Approximate Frequency of Service (in minutes) <sup>1)</sup>					
				Span of Service	AM Rush	Midday	PM Rush	Evening	Owl
313/315	Phila., Wild-wood & Cape May <sup>2)</sup>	12	Mon-Fri	6AM-1AM	1 rnd trp	3 rnd trp	1 rnd trp	1 rnd trp	--
			Saturday	"	1 rnd trp	3 rnd trp	1 rnd trp	1 rnd trp	--
			Sunday	"	1 rnd trp	3 rnd trp	1 rnd trp	1 rnd trp	--
316	Phila., Camden, Wild-wood & Cape May <sup>3,4)</sup>	31	Mon-Fri	6AM-1AM	60	60	60	60	--
			Saturday	"	60	60	60	60	--
			Sunday	"	60	60	60	60	--
317	Phila., Ft. Dix & Asbury Park	16	Mon-Fri	5AM-11PM	1 rnd trp	3 rnd trp	1 rnd trp	1 rnd trp	--
			Saturday	"	1 rnd trp	3 rnd trp	1 rnd trp	1 rnd trp	--
			Sunday	"	1 rnd trp	3 rnd trp	1 rnd trp	1 rnd trp	--
318	Phila. & Great Adventure <sup>3)</sup>	3	Mon-Fri	--	--	--	--	--	--
			Saturday	9AM-11PM	1 out trp <sup>5)</sup>	1 out trp <sup>5)</sup>	--	1 in trp <sup>5)</sup>	--
			Sunday	"	1 out trp <sup>5)</sup>	1 out trp <sup>5)</sup>	--	1 in trp <sup>5)</sup>	--
551	Phila. & Atlantic City	74	Mon-Fri	24 hours	30	30	30	30	60
			Saturday	"	30	30	30	30	60
			Sunday	"	30	30	30	30	60

See last page of this TABLE for explanation of footnotes.

TABLE 13  
OPERATING CHARACTERISTICS  
SEASHORE BUS ROUTES

Route Number	Route Termini	Trips Per Weekday	Approximate Frequency of Service (in minutes) <sup>1)</sup>						
			Day	Span of Service	AM Rush	Midday	PM Rush	Evening	Owl
554	Lndnwld PATCO & Atlantic City	55	Mon-Fri	24 hours	30	60	30	60	60
			Saturday	"	30	60	30	60	60
			Sunday	"	30	60	30	60	60
555	Phila., & Ocean City	4	Mon-Fri	6AM-7PM	2 in trps <sup>5)</sup>	--	2 out trp <sup>5)</sup>	--	--
			Saturday	8AM-9PM	1 out trp <sup>5)</sup>	2 out/1 in <sup>5)</sup>	1 in trp <sup>5)</sup>	1 in trp <sup>5)</sup>	--
			Sunday	"	1 out trp <sup>5)</sup>	2 out/1 in <sup>5)</sup>	1 in trp <sup>5)</sup>	1 in trp <sup>5)</sup>	--

NOTES for Table 13:

- 1) Schedules per Spring 1992
- 2) Alternating service via Route 322 and Route 47
- 3) Summertime only
- 4) No local service between Phila. & Avandale Park and Ride
- 5) Outbound: from Phila., inbound: to Phila.



TABLE 14  
SERVICE CHARACTERISTICS  
SEASHORE BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
313/315	Phila., Wild- wood & Cape May			240 per weekday
316	Phila., Camden, Wild- wood & Cape May <sup>3,4)</sup>	Avandale Park and Ride	400, 551, 555	N.A.
317	Phila., Ft. Dix & Asbury Park			520 per weekday
318	Phila., & Great Adventure <sup>3)</sup>			N.A.
551	Phila., & Atlantic City	Avandale Park and Ride	316, 400, 555	1,690 per weekday

See last page of this TABLE for explanation of footnotes.

TABLE 14  
 SERVICE CHARACTERISTICS  
 SEASHORE BUS ROUTES

<u>Route Number</u>	<u>Route Termini</u>	<u>Generators</u>	<u>Connect. Service<sup>1)</sup></u>	<u>1992 Ridership<sup>2)</sup></u>
554	Lndnwld PATCO & Atlantic City		403, 454, 459, PATCO	1,775 per weekday
555	Phila., & Ocean City	Avandale Park and Ride	316, 400, 551	65 per weekday

**NOTES for Table 14:**

- 1) Excludes Camden Transportation Center connections
- 2) Ridership figures for Spring/ Summer 1992, source: NJ TRANSIT
- 3) Summertime only
- 4) No local service between Phila. & Avandale Park and Ride

Figure 10  
EXISTING  
PASSENGER  
RAIL SERVICE

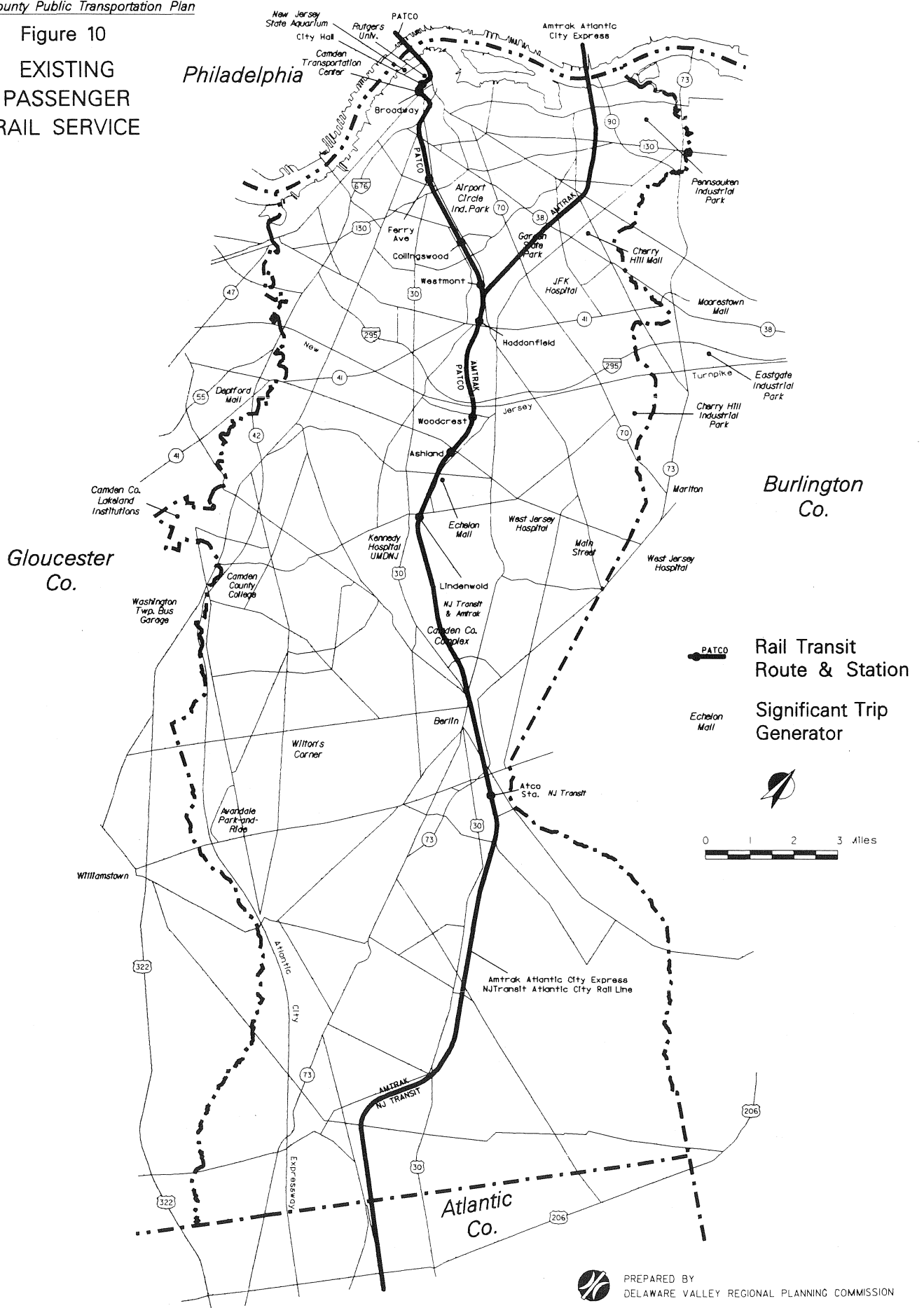


TABLE 15

OPERATING CHARACTERISTICS  
PASSENGER RAIL ROUTES

Route	Route Termini	Trains Per Weekday	Day	Span of Service	Approximate Frequency of Service (in minutes) <sup>1)</sup>				
					AM Rush	Midday	PM Rush	Evening	Owl
PATCO High Speed Line	Phila. & Lindenwold <sup>2)</sup>	247	Mon-Fri	24 hours	5 <sup>3)</sup> - 10	10	5 <sup>3)</sup> - 10	10 - 15	40
			Saturday	"	10 <sup>3)</sup> - 15	10	10	10	40
			Sunday	"	20	20	10 - 15	20	40
NJT Atlantic City Rail Line (ACRL)	Lindenwold & Atlantic City	22	Mon-Fri	5AM-1AM	60	120	60	120	--
			Saturday	"	60	120	60	120	--
			Sunday	"	60	120	60	120	--
AMTRAK Atlantic City Express (ACX)	Phila. & Atlantic City	4	Mon-Fri	11AM-7AM	--	1 rnd trp	1 out	1 in	--
			Saturday	10AM-11PM	--	3out/1in <sup>4)</sup>	1 out	3 in <sup>4)</sup>	--
			Sunday	10AM-7PM	--	2out/1in	1 out	2 in	--
	Trenton & Atlantic City	2	Mon-Fri	11AM-9PM	--	1 out	--	1 in	--
			Saturday	"	--	1 out	--	1 in	--
			Sunday	"	--	1 out	--	1 in	--

## NOTES for Table 15:

1) Schedules per Spring 1992

2) Limited express and short turn operation during the peak hours in the predominant direction only allows for alternate route terminus at Woodcrest

3) Predominant direction service -- inbound to Phila. in the AM, outbound from Phila. in the PM

4) Includes Saturday and Sunday service from/to Harrisburg -- 1 Midday trip out, 1 Evening trip in

TABLE 16  
 SERVICE CHARACTERISTICS  
 PASSENGER RAIL ROUTES

<u>Route</u>	<u>Route Terminii</u>	<u>Inter. Stations</u>	<u>1992 Ridership<sup>1)</sup></u>
PATCO High Speed Line	Phila. & Lindenwold	City Hall, Camden Trans Ctr, Ferry Ave. Collingswood Westmont Haddonfield Woodcrest Ashland	40,300 per weekday
NJT Atlantic City Rail Line (ACRL)	Phila. & Atlantic City	Lindenwold Atco	47,000 per month
AMTRAK Atlantic City Express (ACX)	Phila. or Trenton & Atlantic City	Lindenwold	25,400 per month

NOTES for Table 16:

1)Ridership figures for Spring/ Summer 1992, source: PATCO, NJ TRANSIT, AMTRAK

### **Amtrak**

Amtrak's Atlantic City express trains (ACX), operating through Philadelphia and Trenton to Atlantic City (ACX), travel the same track as NJ TRANSIT (Figure 10). The service is designed to attract long-distance, intercity traffic to Atlantic City, but is limited to 3 round trips per weekday as shown on Table 15. Ridership during the spring/summer of 1992 was about 25,400 monthly passengers (Table 16). These ridership levels represent a 40 percent decline in patronage from the preceding summer resulting from the elimination of three round trips.

Once NJ TRANSIT establishes operation at the Garden State Park Race Track station, Amtrak will relocate its South Jersey service stop from Lindenwold to the new station.

### **PATCO**

The Port Authority Transit Corporation of Pennsylvania and New Jersey (PATCO) is the transit operating division of the Delaware River Port Authority (DRPA). PATCO operates and maintains the rolling stock owned by DRPA. The PATCO system is a premium heavy rail service extending 14.2 miles connecting Lindenwold, in suburban Camden County, with downtown Camden and Center City Philadelphia (see Figure 10). There are a total of 13 stations along the line. Four are in Philadelphia -- 15th/16th & Locust, 12th/13th & Locust, 9th/10th & Locust and 8th & Market. Two stations are in downtown Camden City -- City Hall and Broadway/Camden Transportation Center. The remaining stations are variably integrated into suburban settings, and function largely as park and ride facilities. For example the Ferry Avenue station is on the fringe of Camden City. Collingswood, Westmont and Haddonfield stations are surrounded by moderate density residential areas and mature community based business districts. The Woodcrest station is adjacent to and served directly by an interchange with I-295. The Ashland station is surrounded by apartments and is functionally related to the Echelon multi-use development by the Echelon community based shuttle bus. The end of the line station, Lindenwold, is surrounded by high intensity strip commercial development. As a consequence of its location, Lindenwold attracts riders from the southern and western reaches of the County. Despite its multi-modal connectivity with NJ TRANSIT bus/rail and Amtrak, the Lindenwold station provides the largest supply of parking spaces of any station along the line.

The line's schedule adherence is very nearly 100 percent, no small achievement when one considers the level of service along the line. PATCO's frequency is unparalleled by any of the other transit operations in the County (see Table 15). Limited peak hour express and short turn operations (operating trains to high volume stations and reversing direction before reaching the end of the line) are practiced between downtown terminals and the Ferry Avenue, Woodcrest and the Lindenwold stations (in the predominant direction of passenger flow) to increase line capacity. Even so, the least served stations receive service from as many as twelve trains per hour in the peak travel direction. The entire system carries about 40,300 trips per weekday. Table 17 details the individual station boardings according to 1992 statistics provided by PATCO.

TABLE 17

## PATCO BOARDINGS BY STATION

<u>Station</u>	<u>Weekday Boardings</u>
Lindenwold	5,300
Ashland	2,350
Woodcrest	3,150
Haddonfield	2,100
Westmont	1,750
Collingswood	1,700
Ferry Avenue	3,150
Broadway	2,000
City Hall	1,100
NJ Subtotal	22,600
8th & Market	6,250
9th/10th & Locust	1,500
12th/13th & Locust	1,650
15th/16th & Locust	8,300
PA Subtotal	17,700
TOTAL	40,300

The current one-way fare structure on the PATCO line is as follows:

- \$1.60 between Philadelphia and Lindenwold, Ashland or Woodcrest;
- \$1.40 between Philadelphia and Haddonfield, Westmont or Collingswood;
- \$1.20 between Philadelphia and Ferry Avenue;
- \$0.75 between Philadelphia Patco stations and/or Philadelphia and the City Hall or Broadway PATCO stations in Camden, and;
- \$0.85 between all stations in New Jersey.

PATCO and SEPTA have a reduced price-transfer agreement to facilitate intermodal and interstate travel.

Often the limitation of intermodal performance is based upon the quantity of support facilities within the system. Parking availability at transit stations/terminals and park and ride lots is one such case. Table 18 provides an inventory of PATCO's parking resources. It is quite clear that PATCO's parking supply is one factor constraining the line's ability to foster increased public transit ridership. From a practical standpoint, parking supply is fully used. DRPA is currently seeking funding to expand station parking as follows: Ashland, plus 400 spaces; Woodcrest, plus 700 spaces, and; Ferry Avenue, plus 275 spaces. This expansion, which is programmed to occur by mid-1995, will increase system-wide parking supply about twelve percent over current levels of demand. To more comfortably accommodate long term parking demand, a greater volume of PATCO patrons should be delivered to the station via public transportation modes or ridesharing. Actions which may be taken to encourage this

outcome, include: instituting reduced price fare-transfer arrangements between NJ TRANSIT and PATCO, and; increasing parking charges at the PATCO parking lots. Providing the capability for inter-vehicle communication between trains and buses would also lend support to increased transit useage for delivery to/from the station. For example, in situations involving long bus headways, passengers often schedule their outbound train trip based upon the scheduled departure time of the bus from the station. A missed bus may result in significant unplanned waiting and delay at the station. Through communication, the train if subject to delay could radio the bus or a dispatcher to hold the bus until the bus arrives.

TABLE 18  
PARKING SUPPLY AND DEMAND AT  
PATCO STATIONS

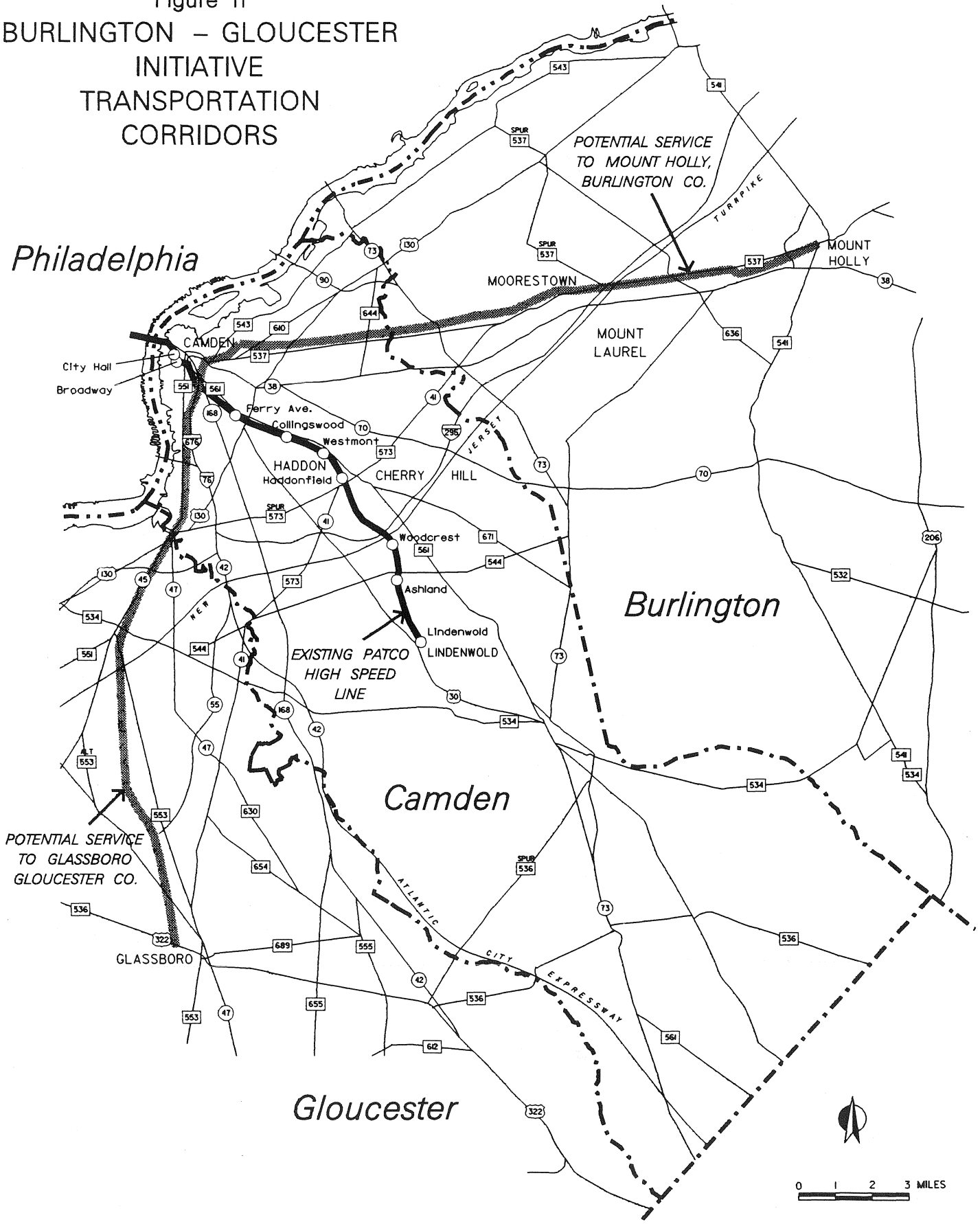
<u>Facility</u>	<u>Supply</u>	<u>Average Weekday Demand</u>	<u>% of Capacity</u>
PATCO STATION:			
Lindenwold	3,396	3,220	95%
Ashland	1,514	1,514	100%
Woodcrest	2,666	2,671	100%
Haddonfield	1,033	1,009	98%
Westmont	1,144	1,136	99%
Collingswood	710	711	100%
Ferry Avenue	<u>1,928</u>	<u>1,790</u>	<u>93%</u>
TOTAL	12,391	12,049	97%

Source: PATCO Counts - April, 1992

NJ TRANSIT and DVRPC are in the process of addressing long term growth and mobility needs within Burlington and Gloucester Counties. The study analysis, referred to as the "Burlington-Gloucester Initiative", focuses on using two freight railroad rights of way for corridor transit service. Each corridor radiates from downtown Camden. From Camden, the northern alignment reaches to Mount Holly, in Burlington County. The southern alignment extends to Glassboro, in Gloucester County. Figure 11 illustrates the project. Within downtown Camden, depending upon the vehicle type chosen to provide the service, interchange with the PATCO line (directly or by transfer) at the Transportation Center, will deliver passengers into Center City Philadelphia. Each branch has the potential for ten or eleven new stations.



Figure 11  
BURLINGTON – GLOUCESTER  
INITIATIVE  
TRANSPORTATION  
CORRIDORS



In addition to improved corridor mobility for the residents of neighboring Burlington and Gloucester Counties, it is anticipated that the Camden County waterfront communities will also enjoy improved access, since several of the stations are contemplated within Camden City, Pennsauken, Merchantville and Gloucester City. Parking relief may occur at existing PATCO station parking lots if one or both of the "Initiatives" are pursued. To determine the viability of one or both of the extensions, funding for systemwide alternatives analyses and improvement designs have been programmed for use through mid-1997.

### Echelon Shuttle Bus

The Echelon shuttle bus provides mini-bus service between the Echelon community (shopping mall, office complex and residences) and PATCO's Ashland station. One 13 person capacity bus provides the service which includes 17 stops over its four mile long course through Echelon. The van cycles every 30 minutes between 7:00 A.M. to 12:00 Noon and between 3:00 P.M. to 8:00 P.M. on weekdays. Weekday service is also provided to the Voorhees Corporate Center (at White Horse Road and Laurel Oak Road) adding six additional stops along the route. On Saturdays, service is provided continuously between 9:00 A.M. and 8:00 P.M.. Service is confined to Echelon on Saturdays. Accordingly, the frequency of service is adjusted to 20 minute headways to reflect the shorter route. There is no Sunday service.

As of the summer/fall of 1992 the shuttle transported 120 to 150 passengers on an average weekday, the majority of whom are Echelon residents commuting to work via the PATCO line. On Saturday approximately 140 to 150 trips are satisfied by the service. Passengers pay \$1.00 per ride or they can buy four tokens for \$3.00. Further discounts are available to senior citizens (\$0.40) and children (\$0.60).

The Echelon Shuttle is a very low overhead system operated by the Echelon community's management group, the Echelon Common Facilities Association on behalf of the Shuttle's sponsors. Office space, garage facilities, and other support are donated to the operator. The vehicle size requires the lowest class commercial drivers license/skill level and as a consequence driver compensation is very affordable. Approximately 40 to 50 percent of the shuttle's expenses are covered by fare box receipts. The remaining share is subsidized by seven sponsoring groups within the Echelon community who benefit from the shuttle's services: including the mall's anchor stores; the merchant's association; the residential complexes, and; a group of employers whose offices are along the shuttle's route. No public subsidies are used to support the service. Benefits which have been cited by the sponsors in continuing their financial support are noted below.

1. Expanded market for Mall's stores.
2. Strong selling point for potential residents.
3. Additional means of transportation for employees at the Echelon businesses.

Annual operating expenses for the Echelon shuttle bus during 1991 were approximately \$78,100. The deficit is divided equally among the seven sponsors. The Voorhees Corporate Center subsidizes only that portion of service it receives.

### **Cross County Connection TMA**

Transportation Management Associations (TMAs) are public-private partnerships with jurisdiction over a specified area to manage the transportation system more efficiently and improve mobility for current and future employees. Typically, members include local governments, employers and developers -- the groups which have the most impact on employee commuting patterns. A TMA can be thought of as a membership organization, wherein the members pay dues in exchange for customized services. The range of professional services offered by TMAs include but are not limited to: education and information dissemination; transit marketing/promotion; rideshare arrangement, and; transportation improvement coordination/advocacy.

TMAs represent some of the latest evolutions in the transportation scene. They have arisen in acknowledgement of several key trends:

- That highway building is no longer practical in certain areas or necessarily a panacea for lasting, satisfactory traffic operations.
- That public improvement investment is no longer readily attainable without shared private responsibility.
- That travel demand management strategies (ridesharing, alternate work schedules, etcetera) during critical peak traffic durations are a means of reducing traffic volume. Improved mobility and extended highway serviceability can result through the widespread application of such programs.
- That enhanced transit systems can increase the available labor/customer market.

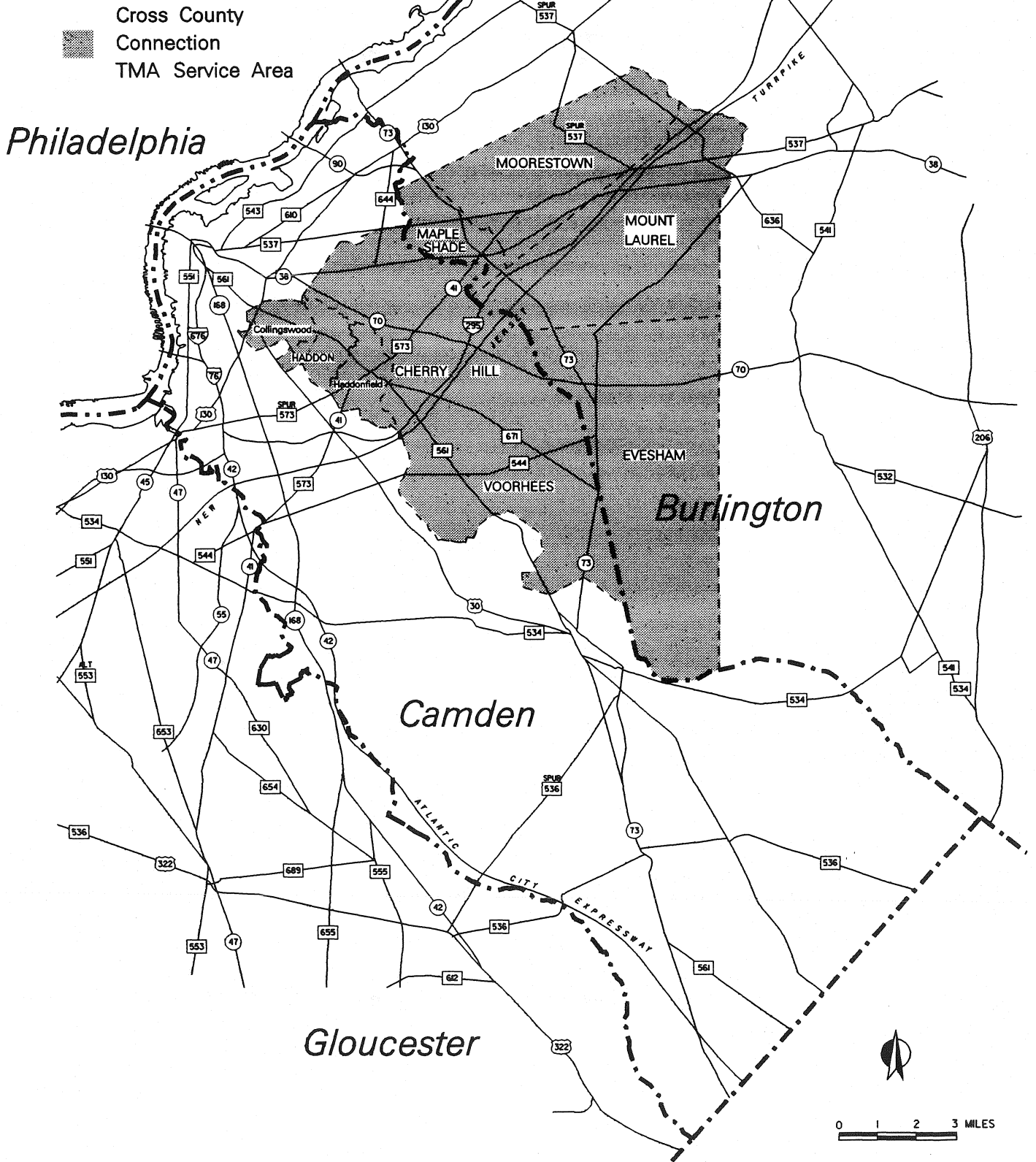
The Cross County Connection (CCC) was formed in 1989 with concern for traffic congestion affecting NJ 38, NJ 70 and NJ 73 within Cherry Hill and Voorhees, in Camden County, and Evesham, Maple Shade, Moorestown and Mount Laurel, in Burlington County. Recently, in 1992, the Camden County municipalities of Collingswood, Haddon and Haddonfield (the "Haddon Connection") joined the TMA with shared traffic congestion concerns and concerns about access to their communities' commercial areas and parking shortages at the PATCO stations. Figure 12 illustrates the service area of the Cross County Connection TMA.

To date the CCC has principally been involved in organization and issues identification in addition to its general mission's objectives. Ongoing and anticipated causes/projects which the CCC will champion are explained below.

1. Expanding transit services within Voorhees, Evesham and Mount Laurel. Currently in development is the potential contracting with a private operator, New Jersey Southern Coachways, to operate a bus between the Ashland PATCO station and Main Street, serving the West Jersey Hospital enroute. It is anticipated that both Voorhees and private businesses will subsidize the service.
2. Participating in studies to reduce traffic congestion due to employer generated single occupant vehicles in Cherry Hill (along Kings Highway between NJ 70 and in Evesham (at Marlton Crossing).

3. Addressing the needs of the "Haddon Connection" via shuttle bus service operating through the business districts.
4. Expanding transit service to the Eastgate Industrial Complex, in Mount Laurel, including guaranteed-ride-home during the midday.
5. Mitigating traffic congestion during the NJ Route 70 widening and traffic circle "cut-through" project.

# Figure 12 CROSS COUNTY CONNECTION TMA SERVICE AREA





## EXISTING BUS OPERATING CONDITIONS

A series of measures obtained from the publication: National Cooperative Highway Research Program, Synthesis of Highway Practice - Report No. 69, "Bus Route and Schedule Planning Guidelines" (Transportation Research Board, National Research Council, Washington, D.C., May 1980) have been used to assess the adequacy of existing commuter and local bus services. Additionally, the guidelines will be used in identifying recommendations for fixed route bus service (new routes, modifications or enhancements to existing routes) which emanate from these analyses. Seashore services have not been included in this process. The service guidelines are more germane to intracity or suburban bus services versus the seashore lines, which provide for intercity mobility.

### Guidelines

Derived from national practices, the guidelines offer desirable values which can reasonably be expected to yield efficient and reliable bus service for customers of the system at a reasonable cost to providers of the service. The guidelines are as follows.

1. Service Criteria - As an initial warrant, consider providing bus service where:
  - a) population densities exceed 2,000 persons per square mile;
  - b) ridership exceeds 20 to 25 passengers per bus hour on weekdays, 15 on Saturdays and 10 on Sundays.
  
2. Service Area - To effectively attract and serve customers there are suggested relationships between the density of population and its proximity to a bus route. Where population density exceeds 4,000 persons/square mile, 90 percent of the residences should be within one-quarter mile of a bus line. In situations where the population density ranges from 2,000 to 4,000 persons per square mile, 50 to 75 percent of the population should be within one-half mile of a bus line.

Furthermore, bus routes should also serve major employment, shopping and institutional complexes.

3. Route Structure and Spacing - So that routes are easily found and identified, bus routes should follow major street patterns.

Bus routes should be spaced at approximately one-half mile in urban areas (ie. the urban population is within one-quarter mile of a bus route) and one mile in low density suburban areas (i.e., the majority of the suburban population is within a one-half mile trip to the nearest bus line).

- 4. Route Directness and Length - To remain a viable alternative to an auto, a bus route should not be more than 20 percent longer than the comparable trip by car. So that trips are not circuitous and the route's structure is easily understood by the traveller, there should be no more than two branches per trunk-line bus route and never more than four.

Routes should be as short as possible and generally not exceed a round trip distance of 25 miles or a round trip travel time of two hours.

- 5. Route Duplication - There should be one route per arterial except upon approach to the CBD or a major transit terminal.
- 6. Service Period - Regular bus service should be provided at times when travel activity is highest. Therefore, at a minimum routes should operate on weekdays from about 6:00 AM to 11:00 PM. Suburban feeder service should be provided on weekdays from 6:00 AM to 7:00 PM or only during the morning and evening peak periods. Saturday and Sunday service should be provided on principal routes.
- 7. Service Frequency - One, if not the most important variable from a user's and provider's perspective is frequency of service. Desirable minimum bus service frequencies are as follows:

	<u>Frequency in Minutes (policy)</u>	
	<u>Urban</u>	<u>Suburban</u>
Peak Period	20	20-30
Midday	20	30
Evening	30	60
Owl	60 (if provided)	

- 8. Loading Standards - Loading standards are the key indicator in the balance of demand and supply of bus services. Desirable maximum load factor:

	<u># Bus Passengers/Available Seats</u> <u>(percent)</u>
Peak 30 Minutes	150
Peak Hour	125-150
Transition	100-125
Midday/Evening	75-100
Express	100



9. Bus Stops - Spacing between stops is variable dependent upon area type and type of bus operation:

	<u>Bus Stops Per Mile</u>		
	<u>CBD</u>	<u>Urban</u>	<u>Suburban</u>
Local Service	10-12	6-8	2-5
Express Service			2-4

10. Service Reliability - A very important characteristic to the rider, especially the choice rider.
  - a) peak hours, 80 percent of buses within 0 to 3 minutes late;
  - b) off-peak hours, 90 to 95 percent of buses 0 to 3 minutes late.

Buses should never arrive and depart a bus stop earlier than scheduled.

**Assessment of Existing Bus Operations**

It should be stressed that the above set of criteria are guidelines only. Public bus routes are a resource and a fringe benefit of metropolitan location which are seldom financially profitable. In the assessment of bus route service and productivity, judgement must be applied in many ways and for a variety of reasons. For instance a 40 to 50 percent recovery of the bus route’s direct operating costs, from the fare box, is deemed to be an acceptable range within the transit industry. Often service area is defined by legislation and service frequencies are maintained as a matter of government or operator policy. Transfer volumes/patterns and bus route continuity are two other considerations which come into the evaluation process of whether certain routings are appropriate.

Still the above set of measures will be used to qualitatively assess commuter and local bus service. The key findings of this analyses serve as improvements to be implemented on a short term basis. Weekday ridership and schedule statistics were obtained from NJ TRANSIT to support this analysis (note: data shown for Bus Route 405 is based upon the former Route 456 which was extended into Philadelphia and re-numbered in January 1993).

1. Service Criteria - The County has an overall population density of 2,262 persons per square mile, using 1990 US Census data. Theoretically then the entire County should receive transit service. And as earlier pointed out, all but three municipalities are traversed by regularly scheduled, fixed route public transit. However, while most of the County’s municipalities exceed the population density threshold, ten do not. Most notable of those are the municipalities south of the PATCO high speed line’s terminus at Lindenwold (Gibbsboro, Berlin Borough, Berlin Township, Chesilhurst, Waterford and Winslow). Similarly, while those municipalities are traversed, they do not receive regular trunk line service by commuter or local bus routes. Projected population growth statistics indicate that Berlin Borough will surpass the density threshold by the year 2010.

Bus ridership data from July 1992, provided by NJ TRANSIT, indicates the following route productivity statistics.

TABLE 19  
WEEKDAY BUS ROUTE  
RIDERSHIP STATISTICS

<u>Route No.</u>	<u>Termini</u>	<u>Passengers Per Bus Hour</u>
COMMUTER ROUTES:		
400	Phila. & Sicklerville	25.4
401	Phila. & Salem	18.4
402	Phila. & Pennsville	12.1
403	Phila. & Turnersville	22.0
404	Phila. & Cherry Hill Mall	36.8
405	Phila., Merchantville & Cherry Hill Mall	33.9
406	Phila. & Medford Lakes	22.5
407	Phila. & Moorestown	23.3
408	Phila. & Millville	12.8
409	Phila. & Trenton	23.0
410	Phila. & Bridgeton	16.0
412	Phila. & Glassboro	16.8
413	Phila. & Mt. Holly	15.5
419	Phila. & Burlington	17.2
LOCAL ROUTES:		
450	Camden, Audubon & Cherry Hill Mall	27.3
451	Camden & Echelon Mall	13.9
452	Camden & Pennsauken	34.4
453	Camden & Woodlynne	30.0
454	Lindenwold PATCO & Haddonfield PATCO	11.0
455	Cherry Hill Mall & Deptford Mall	14.9
457	Camden & Moorestown Mall	11.5
459	Echelon Mall & Camden County College	22.4
461	AquaLink	N.A.

Eleven routes, or one-half of the County's service do not meet the prescribed weekday ridership threshold of 20 passengers per bus hour. Marginally efficient routes include: commuter routes - 401, 410, 412, 413 and 419. Deficient bus routes include: commuter routes - 402 and 408; local routes - 451, 454, 455 and 457.

All of the marginal commuter routes are exceedingly long, in excess of 25 miles one-way. Contributing to the low productivity of some of the commuter bus lines is the fact that much of the service is provided in low density areas: to the west of Camden County, for example Gloucester, Salem and Cumberland counties (402 to Pennsville, 408 to Millville), and;

to the east in Burlington County (413 to Mount Holly). These routes' predominant mileage is beyond the boundaries of Camden County. With the exception of Route 408, between one-half and three-quarters of the daily and peak period ridership occurs within fare zones contained in and/or contiguous with Camden County (see ridership tables in the Appendix). Therefore, the importance of these services to the County should not be discounted.

By comparison the local routes operate almost entirely within Camden County and are on the order of ten miles in length for a one-way trip. The low ridership local lines have either no downtown terminal (Route 454 - the PATCO feeder, Route 455 - the Mall connector) or have terminals which are also directly served by commuter bus lines (Route - 451 to Echelon Mall, Route - 457 to Moorestown Mall).

Total average weekday ridership on Bus Route 454 could load onto a single standard bus. Of the line's very low patronage, slightly more than one-half is oriented to the Lindenwold PATCO station end of the route (see Appendix). Route 455 is also a low patronage line despite the Mall terminii. Route 451 is a low ridership line, and particularly so beyond Cherry Hill. Route 451's terminii are also served by commuter Bus Route 403, which offers service into the late evening hours. Furthermore, much of the Route 451's service area is duplicated by the Lindenwold High Speed Line. Route 457 is also a local bus line which has a commuter route serving its terminal points. In this situation, commuter Bus Route 407 offers more frequent midday service than the local route. Route 457's least productive segment is the fare zone between Cherry Hill and the Moorestown Mall, this segment includes the Eastgate Industrial Complex, and accounts for only about ten percent of the line's daily and peak period ridership.

2. Service Area - Given the dispersion of the County's population, it is doubtful that this measure is quantitatively satisfied outside of the more mature communities. Still a qualitative assessment of the significant trip generators suggests that with a few exceptions the County is well covered. Main Street, in Voorhees, and the Camden County Complex, in Lindenwold, are two major generators which are not serviced by a public transit route.
3. Route Structure - Generally, Camden County's bus routes pattern the highway system in the County with major commuter routes travelling the radial highways and local routes occupying the circumferential arterials and local streets. In suburban areas, bus route density varies between one mile to eight miles between routes. In the urban area, a bus route can be found, on average, every one-half to one mile.
4. Route Directness and Length - Most local bus services satisfy the route directness and length criteria. Typically these routes do not have service branches and are able to complete a round trip within two hours. The Route

457 bus does not satisfy the last item -- taking about one hour-twenty minutes per one-way trip. The surplus travel time is encountered between Cherry Hill and the Moorestown Mall, and includes the Eastgate Industrial Complex.

Commuter bus route alignments are more diverse than the local bus network. The most deficient in terms of the route simplicity guideline are the Route 403 and Route 406 lines, each with five service branches in addition to the main trunk line routing. Excessive travel times are exhibited by many of the commuter routes. While most of the routes are providing the majority of their service beyond the boundaries of the County (for example, Routes: 401, 402, 408, 409, 410, 412, 413 and 419), one-way travel times for origins within Camden County are within allowable limits. The opportunity to short turn some of these routes at the Transportation Center during the midday appears feasible (see table B-1 in the Appendix). A minimum volume of passengers would be inconvenienced and perhaps the faster delivery time via PATCO, the lower intrastate fare structure further enhanced through inter-operator fare-transfer agreements would mollify customer concerns about changing vehicles. Vehicles made available by the saved operations into the city could be used to supplement midday operation elsewhere in the Southern Division.

Route 400's trip to Sicklerville exceeds the guideline value by about 20 minutes for express trips operating during the peak commuter periods and 30 minutes to a full hour by midday and late evening local bus trips. The availability of seashore express bus trips as an alternative for passengers embarking from the Avandale Park and Ride Lot lessens this impact. On the Route 403's run, the Lindenwold trunk and Runnemede Spur are within acceptable travel time tolerances. The Echelon Mall's extension should be about the longest outbound terminal point according to these criteria. As such, the Route's furthest extensions to Erial, Turnersville and the Camden County College (on Saturdays only) should be reassessed. On the Route 406 bus the farthest reaches of the bus line -- the extension into Medford Lakes in Burlington County -- exceed the guidelines' travel time threshold by about ten minutes.

5. Route Duplication - Generally bus lines operate individually along the highways within the suburban portions of the County. Exceptions are noted in the immediate vicinity of large generators such as the Lindenwold PATCO station; the Echelon Mall; the Haddonfield PATCO station, and; the Deptford Mall. In the mature suburbs and older waterfront communities, the radial highways converge and/or merge into freeways. As a result, multiple bus routes traverse the same links as fewer opportunities exist for entry into the Camden central business district and/or bridge crossings into Center City Philadelphia.

6. Service Period - The bus services offered within the study area generally comply with the guidelines. Trunkline commuter bus services are provided on weekdays between 5:00 A.M. to 1:00 P.M. and on Saturday and Sunday between 7:00 A.M. and 11:00 P.M.. Local bus service is normally offered between 6:00 A.M. and 7:00 P.M. (6 routes) or 11:00 P.M. (3 routes) on weekdays and Saturdays. Routes 450, 452 and 461 (AquaLink) are the only local routes which offer Sunday service.

Comparison of generator needs versus transit's hours of operation, indicate the following deficiencies.

- Route 404's branch to the Pennsauken Industrial Park offers no midday service and terminates service early at 4:00 P.M..
- Route 405's last outbound trip to Kingston Estates arrives early at 5:00 P.M..
- Route 406's branch to the Cherry Hill Industrial Park provides no midday service.
- Route 451's branch to the West Jersey Hospital operates during the midday only.
- Given the urban environment and the indication of transit dependency within their operating area, Routes 452, 453 and 461 should operate at least until 11:00 P.M..

7. Service Frequency - For the purposes of this evaluation local Bus Routes 452 and 453 are considered urban operations and the remaining routes (local and commuter) are considered suburban operations.

Routes 452 and 453 provide acceptably frequent services during the daylight hours, but cease operations at the close of the evening peak period. Most of the County's trunkline bus services (19 routes) provide acceptably frequent services in the peak period and at the very least in the peak direction of flow. Midday services along the trunklines and route branches are typically provided at 60 minute intervals at the longest. Midday and evening service along the route branches are provided at intervals of 80 to 120 minutes, for example, Bus Routes: 401 - to the Deptford Mall and Salem; 403 - to Turnersville; 408 - to Millville, and; 410 - the entire route.

There are three noteworthy examples of bus routes having inadequate frequencies of service during the peak and off-peak. These include, Routes: 454, 455 and 459. Each is a local route which is due more consideration during the peaks, at a minimum, in light of the feeder services they provide to parking shy PATCO stations (Haddonfield and Lindenwold).

8. Loading Standards - Clearly, a balance between frequency of service and load factors is sought so that reliable service is provided as cost effectively as possible. The higher the load factor the greater the demand for service. Where the load factor is consistently high it may be an indication of insufficient service for demand. Where load factors are consistently low,

it is probable that headways are bolstered according to a policy decision versus ridership demand.

The seating capacity of NJ TRANSIT's fleet of intra-city, urban/suburban buses currently operating within NJ TRANSIT's Southern Division is 48 or 49 passengers. NJ TRANSIT ridership data was reviewed for the following analyses. For each time period during the day, total ridership on the maximum loaded bus (regardless of direction) was used as a measurement surrogate in relation to the guideline. Network-wide, the peak bus trip carried 60 percent to 65 percent more passengers than average bus loadings throughout the entire A.M. or P.M. peak periods. The maximum loaded bus trip during the midday is approximately 75 percent greater than an average midday period's bus loadings. Maximum evening period bus loadings were 30 percent higher than the average bus loading over the period.

Routes which have generally appropriate load factors throughout a typical weekday are: Local Bus Routes -- 450; Commuter Bus Routes -- 402, 403, 408, 410, 413, 419. Routes which have borderline acceptability, but exhibit higher midday loadings than peak period load factors are: Commuter Bus Routes -- 404, 406, 407. Each has fairly frequent midday service, however. Routes which have consistently high load factors are: Local Bus Routes -- 452; Commuter Bus Routes -- 400, 409. Each of these routes have 30 minute or shorter headways during the midday and peak periods already. Routes which have typically low load factors are: Local Bus Routes -- 451, 453, 454, 455, 457, 459; Commuter Bus Routes -- 401, 405, 412.

9. Bus Stop Spacing - The municipality is responsible for locating bus stops within New Jersey. In urban areas the practice results in stop spacings about every block. In less dense areas NJ TRANSIT supplements the signed bus stop practice with "flag stop" service at points where riders congregate.
10. Route Reliability - Schedule reliability checks, performed on all Camden County bus lines by NJ TRANSIT in November 1992, indicate that the system is operating 84 percent on-time during the A.M. peak period, 68 percent on-time during the P.M. peak period and 93 percent on-time during the off-peak. Operations are quite reliable throughout most of the day, meeting or exceeding the guideline values. Considering the overall length of the many of the bus routes involved (most mileage being outside the County) the system appears to be well managed and maintained. None the less, shortcomings are noted during the P.M. peak. Typically, in a urban environment, there is greater traffic volume and congestion on the highways during the P.M. peak. Mandated state programs to reduce traffic congestion (CMS) should allay some of these deficiencies (project implementation processes must begin by October 1994).

## **INTERMEDIATE RANGE FUTURE**

The intermediate term study is a view into the foreseeable future of Camden County. The focus of the analysis is upon significant land areas and developments taking shape which can support and benefit from improved public transit services. The subjects of the evaluations are: the downtown waterfront area in the City of Camden; the University of Medicine and Dentistry of New Jersey (UMDNJ)/Kennedy Memorial Hospital complex in Stratford Borough; the Haddon Connection, and; Wilton's Corner in Winslow Township. The time frame of the perspective is between three and ten years, and of course is highly dependent upon the vitality of the economy and real estate market.

Common themes to each discussion are that non-traditional public transit routes/systems should be considered and that public-private partnerships are valuable in initiating and supporting the services.

Community-based transit can provide scheduled or demand responsive, fixed or flexible route public transportation services for the general public within a defined area (a municipality for example). Smaller vehicles, which usually provide these services, allow for better community penetration at lower vehicle purchase and operating costs. Competitive bid for private operator services typically provide lower labor costs, although the municipal authority certainly may operate the system with in-house forces.

So that the overall network of services is coordinated/packaged for the best possible and not duplicated service, it is suggested that the service area of the Cross County Connection TMA be extended (or a new TMA created) to cover the affected municipalities which are not now part of a TMA. Association with a TMA can be beneficial from the standpoint of seeking grant application assistance, and entering the publicly financed transportation improvement process. To those ends, the Federal Transit Agency (FTA) offers discretionary entrepreneurial grants for planning, marketing and operating such systems. Other funding opportunities are available through flexible funding programs included in ISTEA.

### **Camden's Waterfront**

Enhanced transportation connections will be warranted within downtown Camden's waterfront district. Existing trip generators include the Camden Transportation Center, the New Jersey State Aquarium, the Riverbus ferry (connecting with center city Philadelphia), Rutgers University (5,000 student full-time enrollment), Camden County College (900 full-time students), Cooper Hospital and University Medical Center Complex (3,500 employees) as well as special events held at the river's edge. Anticipated growth along the corridor within two to five years, includes: General Electric Corporation's Camden Aerospace Center (1,700 employees), on the river between Cooper Street and Market Street; The River's Edge Corporate Center (700 employees); DRPA headquarters (700 employees), and; the South Jersey Performing Arts Center (200 performance nights with possibly 1,000 attendees per performance).

In a slightly longer time frame, the north waterfront area is proposed to be the site of a major mixed use project.

At present the Route 452 bus and the AquaLink (Bus Route 461) are serving the downtown market. The Campbell Soup Corporation and the Cooper Hospital and University Medical Center Complex also operate their own shuttle services, transporting employees from the Transportation Center to their respective facilities. To effectively serve this burgeoning market, it has been suggested by the City of Camden, the County of Camden and the Cooper's Ferry Development Association that distinctively styled or painted vehicles serve the area with demand responsive schedules and routes with short headways and minimal fares.

It does not seem likely that such a wide ranging and diverse market could satisfactorily be served by a demand responsive system without duplicating services and adding to congestion. Nor is it likely that given the potential ridership within this market area that a reduced size vehicle would satisfactorily accommodate demand. It would, however, appear that some of the required service attributes are already provided by the Route 452 and AquaLink Bus Routes. The AquaLink is a distinctively painted standard NJ TRANSIT bus which operates every 15 minutes, between the Transportation Center and the Aquarium, between 9:00 A.M. and 6:00 P.M. on Saturday, Sunday and holidays. The fare is free. Bus Route 452 offers circulation services through downtown Camden on its run between Camden and Pennsauken. The route begins its service at 6:00 A.M. and operates every half-hour on weekdays, hourly on Saturdays and every 90 minutes on Sundays. Service lasts only until 7:00 P.M..

Consolidating and enhancing Bus Route 452 and the AquaLink line should be pursued, but will require shared public-private responsibility, if the route is to accomplish its desired mission. The circuitous routing of the Route 452 bus through the downtown area should be included in an expanded AquaLink's service area. AquaLink's operation should be expanded to include weekdays with service beginning at 6:00 A.M. and lasting until at least 11:00 P.M. on weeknights. Dependent upon the seasonal schedule of special events, service could last until midnight on weekends and holidays. Desirably headways, on the brightly colored standard buses, should be 15 minutes in the peak periods and 30 minutes during all other times. The cost of service should be shared between the riding public, corporate and institutional stakeholders as well as the City, County and NJ TRANSIT. It does not seem equitable that riders within the core of Camden be provided a direct fare subsidy given that the travelling public using the remainder of the NJ TRANSIT system must pay a full fare. Rather, indirect incentives are suggested to foster ridership along the waterfront as with the remainder of the system.

- The waterfront area should be maintained at one fare zone, capable of being traversed for the base fare or the cost of a transfer.
- Employers should issue "TransitCheks" to their employees as an encouragement to use the route.
- Cooperative fare arrangements should be instituted between NJ TRANSIT and PATCO to interconnect the system.



**UMDNJ/Kennedy Memorial Hospital**

Expansion of academic, research, inpatient and outpatient facilities are proposed to take form in a campus atmosphere on the University of Medicine and Dentistry's property. UMDNJ and the Kennedy Memorial Hospital are contiguous parcels located on the southeast quadrant of the Laurel Road (CR 673) and White Horse Pike (US 30) intersection. The facilities share common parking, access and circulation roadways. Currently in progress, the development plan will result in a total of nine buildings (total includes the existing hospital and medical offices buildings, etc.) for educational/medical delivery purposes. Additionally, apartment buildings for student housing will be provided on the grounds.

The campus plan also features a proposed public roadway to be constructed through the campus connecting Laurel Road, south of Central Avenue, with US Route 30 at the existing signalized, jughandle intersection of New Road (the Lindenwold PATCO station access road)/Bradlees Shopping Center driveway. When complete, the roadway will afford direct hospital and university campus access to/from US Route 30 and will serve as a bypass/traffic relief route to the congested US Route 30 and Laurel Road intersection. The new roadway will also provide an opportunity for integrating community scale, public mini-bus service between the Lindenwold station, the UMDNJ/Kennedy Hospital campus and the surrounding residential area.

Consistent with an earlier finding to downscale bus size for the bus route operating along Warwick Road (Route 454), this proposal presents an opportunity to replace the limited service hours of that route with full day service to the communities of Somerdale, Hi-Nella (which exceeds the County's average for autoless households) and Stratford. Peak service should be fixed route -- operating along the new campus roadway, Laurel Road and Warwick Road -- en route serving PATCO's Lindenwold station, the UMDNJ/Kennedy Hospital and the neighborhoods with a bus every 30 minutes. Service at other times could be offered at hourly intervals or on a demand responsive basis.

Project sponsorship is suggested to include: the riders, NJ TRANSIT, PATCO, Camden County, UMDNJ, Kennedy Memorial Hospital, the owners of the Bradlees Shopping Center, Somerdale Borough, Stratford Borough and Hi-Nella Borough.

**The "Haddon Connection"**

As a correlated improvement to the UMDNJ proposal (described above), jitneys should be provided within the commercial districts of Collingswood, Haddon and Haddonfield (the "Haddon Connection") should be extended along Warwick Road to the municipalities of Tavistock, Lawnside (which exceeds the County's average for autoless households) and Magnolia. This proposal would replace Bus Route 454's western service area with the intent to offer community-based, mini-bus service all day long. Operations could be consistent with those identified along the UMDNJ run.

Sponsors to the route are tentatively identified as: the riders, PATCO, NJ TRANSIT, Camden County, the Merchant's Association and the municipalities comprising the Haddon Connection and the municipalities of Tavistock, Lawnside and Magnolia.

**Wilton's Corner**

Wilton's Corner is a 680 acre, developing planned community located on the southeast quadrant of the Erial-Blenheim-New Brooklyn Road (CR 706) and Berlin-Cross Keys Road (CR 689) intersection. When complete it will contain a mixture of uses, including: offices (158,000 square feet); a shopping center (103,000 square feet); and 2,105 residences (580 apartments, 635 townhouses and 890 single family dwellings).

The new community will provide a focal point for extending regularly scheduled, fixed route bus service into a growth area of Camden County. Creating the new route is suggested by renumbering Bus Route 403 (outward from the Echelon Mall) and then branching the route's alignment at Branch Avenue/Erial Avenue to operate along Branch Avenue and Kearsley Road eastbound entering Wilton's Corner at Cross Keys Road from Kearsley Road. The route extension is the most direct routing, approximately two and one-half miles long (one way), and should be further supported by encouraging high density development along Kearsley Road. As an alternate, to preserve more of the existing route structure, the route could be "broken" at Erial-Blenheim-New Brooklyn Road and then extended to the Wilton's Corner community. This alignment offers less opportunity for new development to infill and help support the service, however. Headways should be kept consistent with existing service provided between Erial and the Lindenwold PATCO station/Echelon Mall.

Due to the expansion of residential development and other nearby attractions in its immediate surroundings, Wilton's Corner may, in the long term, also serve as an end point of a community-based transit system. On a preliminary basis, a mini-bus route serving Wilton's Corner, Sicklerville, the Winslow Center and Avandale Park and Ride lot (among other generators) via internal subdivision streets and Sicklerville Road is foreseeable. The cost of the service should be covered by fare receipts, and project sponsors, tentatively identified to be: Winslow Township; NJ TRANSIT and the commercial establishments served enroute.

## **LONG TERM FUTURE**

In order to outline a long term plan (approximately 11 to 20 years), DVRPC's Year 2010 socio-economic data forecasts and Year 2010 home-based work trip tables were examined. The following questions were addressed in this step.

- Where are population and employment growth anticipated in the County?
- What are the long term trip making characteristics in the study area projected to be?
- Which travel corridors will support alternative measures to increase mobility, and what should those measures be?

### **Population and Employment Growth**

The following observations have been reached based upon an examination of the population and employment projections presented earlier in this report.

Notable changes are expected in the following municipalities' population levels between 1990 and 2010.

- Berlin Borough - By about Year 2010 population density will exceed the 2,000 people/square mile threshold necessary, at a minimum, to support fixed route and regularly scheduled local bus service. The Township of Berlin will approach, but not reach the prescribed density level.
- Brooklawn Borough - A small numerical increase will occur. The Borough is already well served by NJ TRANSIT bus service.
- Chesilhurst Borough - A small numerical increase is expected and density will remain too light to support dedicated bus service.
- Gloucester Township - An existing growth area with already high population levels.
- Voorhees Township - An existing growth area with already high population levels.
- Waterford Township - Low density will continue. Focus on Atco and station area.
- Winslow Township - Low density will continue. Focus on Sicklerville and Avandale park and ride area.

Major employment growth is anticipated by the Year 2010 in Cherry Hill Township, Gloucester Township and Voorhees Township. These are the same municipalities which have experienced significant employment increases within the last decade and comprise a large proportion of the County's total employment. Other municipalities which will continue to contain the bulk of the County's jobs are the City of Camden and Pennsauken Township. Each of these municipalities is receiving public transportation bus service to some degree already. New job centers worthy of attention in the future will include: Berlin Borough and Waterford and Winslow Townships.

### Trip Making Characteristics

DVRPC's 2010 home-based-work trip tables were evaluated as a basis for the following analysis. DVRPC's trip tables are over 1,335 rows by 1,335 columns in size, representing trips between every pair of census tracts within the region (internal to internal). The trip table was compressed to 49 analysis districts for workability. To assure meaningful results, the "grain" of the analysis districts increase with distance from the study area. For example: Camden County is divided into Districts #1 to #19, while all of Montgomery County, Pennsylvania is aggregated into just one district (District #47). Figure 13 illustrates this concept and shows the districts established throughout the region for this study. Figure 14 illustrates the nineteen districts established to detail Camden County.

Table 20 summarizes selected work trip making patterns generated within this task. Work trips were selected for analysis since generally, they represent the greatest opportunity for increasing public transit ridership. Year 1990 trip levels are shown to provide perspective on the future's activity.

TABLE 20  
YEAR 1990 AND YEAR 2010  
WORK TRIP DATA

	<u>District Nos.</u>		<u>1990</u>	<u>Work Trips</u>		<u>% Inc.</u>
	<u>From</u>	<u>To</u>		<u>2010</u>		
REGION TOTAL	1-49	1-49	3,823,042	4,287,130	12%	
CAMDEN COUNTY						
Internal	1-19	1-19	224,309	252,782	13%	
Productions	1-19	20-49	149,957	171,533	14%	
Attractions	20-49	1-19	<u>131,972</u>	<u>153,848</u>	<u>17%</u>	
Total			506,238	578,163	14%	
To Phila CBD	1-19	34-41	27,959	30,900	11%	
To Univ City	1-19	42	<u>3,722</u>	<u>4,036</u>	<u>8%</u>	
Total			31,681	34,936	10%	
CAMDEN COUNTY GROWTH AREA						
Internal	7-19	7-19	82,487	100,809	22%	
Productions	7-19	1-6, 20-49	124,193	148,437	20%	
Attractions	1-6, 20-49	7-19	<u>78,039</u>	<u>89,617</u>	<u>15%</u>	
Total			287,719	338,863	18%	

Figure 13  
REGIONAL TRANSPORTATION  
ANALYSIS DISTRICTS

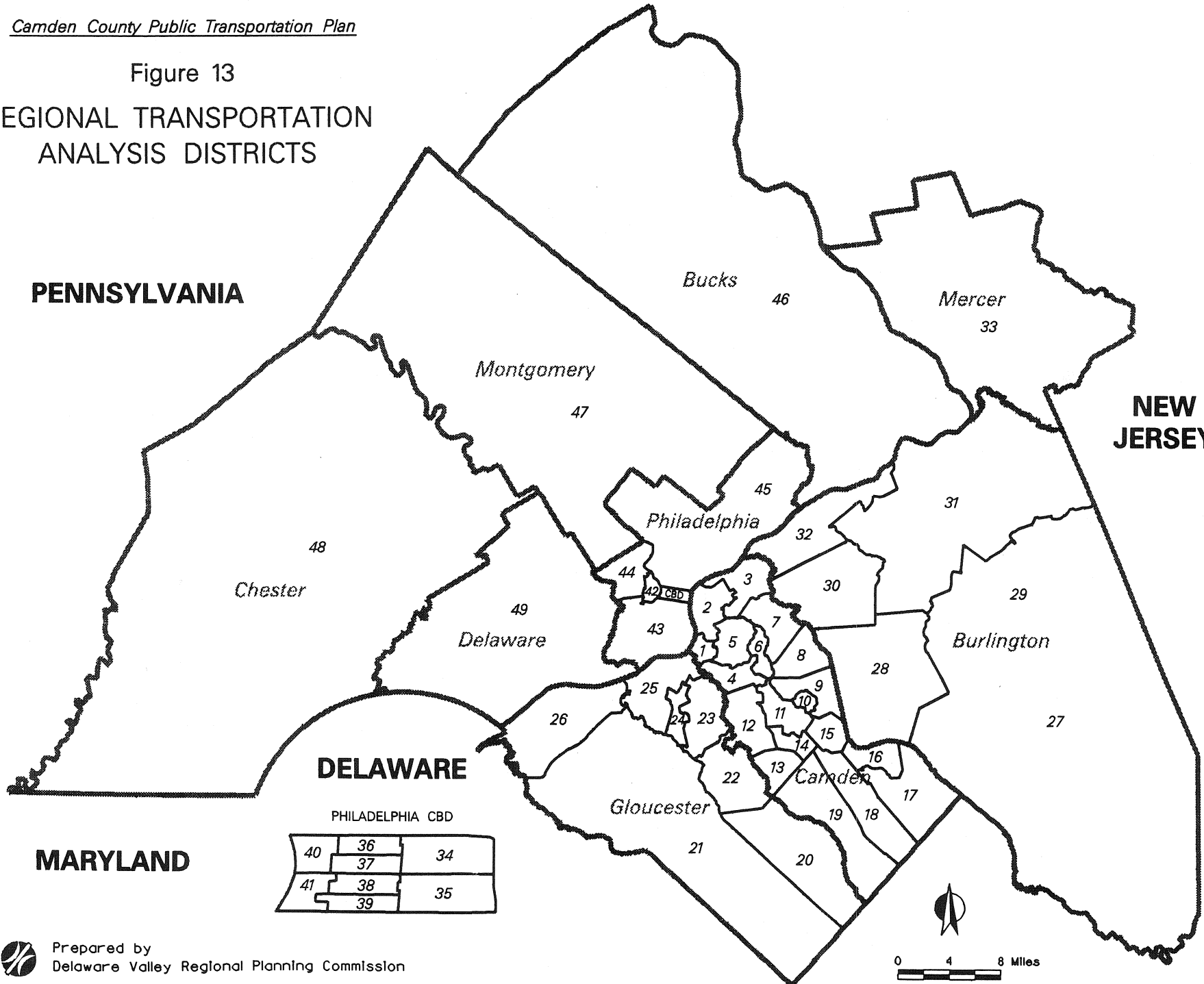
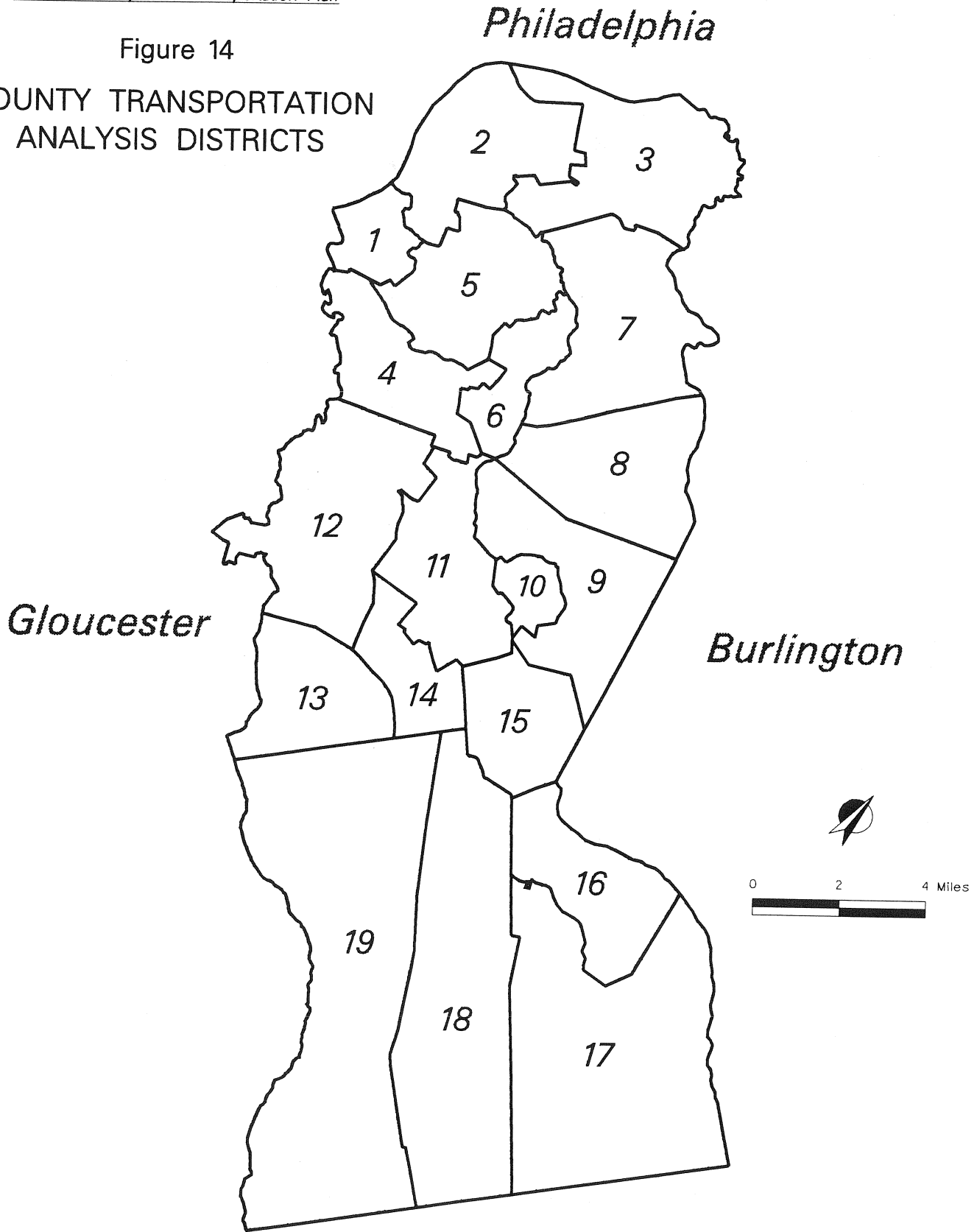


Figure 14

COUNTY TRANSPORTATION  
ANALYSIS DISTRICTS



Regionally, work trips are expected to increase by 12 percent between 1990 and 2010. That percentage increase is pretty consistent for Camden County as a whole, where a 14 percent increase in work trips is projected. Travel to central Philadelphia, is and will continue to be the highest, most concentrated flow of work trips from Camden County. Still, this demand represents only six percent of the County's work trip making. Travel within the growth communities is expected to outpace the regional and overall County rate of change. In these areas, work trips will increase by 18 percent.

By the year 2010 the most significant destinations for intra-County work trips will continue to be the City of Camden (45,800 trips), Pennsauken (32,500 trips) and Cherry Hill, north of the NJ Turnpike (33,100 trips). In all cases the majority of trips to these districts emanate from within those same municipalities plus the Borough of Collingswood. These same areas will also continue to serve as the County's most "attractive" work locations for workers not residing within the County. Each of these areas are relatively well served by public transit routes.

Significant intra-County work trip patterns within the growth areas include:

- Voorhees as an origin (23,500 trips) and destination (16,000 trips). Voorhees is currently a growth area.
- Gloucester Township, north of County Route 688, as an origin (24,500 trips) and destination (15,100 trips). Gloucester Township is currently a growth area.
- Pine Hill as an origin (to Clementon/Somerdale, 1,200 trips).
- Chesilhurst/Winslow Township north as an origin (to Atco, 1,200 trips and to Berlin, 1,100 trips).
- Winslow Township "East" as an origin (10,700 trips) and destination (8,000 trips).
- Berlin as a destination (from Clementon/Somerdale, 1,200 trips and Chesilhurst, 1,100 trips), and;
- Atco as an origin (to Berlin, 900 trips).

Substantial work trip desire lines exist along the NJ Route 73 corridor at the present time. Appreciable growth in these patterns are expected to continue to the year 2010. Table 21 illustrates that as many as 43,200 intra-corridor trips are anticipated in 2010.

Trends between the 1980 and 1990 Census have shown that gradual increases are occurring in the commuting patterns of Camden County residents to Atlantic County. The current available surplus of parking spaces at each eastern park and ride facility (Atco and Avandale) should be able to absorb a continuance of the trend. On the other hand, the utilization of these facilities should be regularly monitored.

TABLE 21  
 WORK TRIPS WITHIN THE  
 NJ ROUTE 73 CORRIDOR  
 (2010)

<u>From\To</u>	<u>Evsham/ Mdfrd</u>	<u>Moorstwn/ Mt Laurl</u>	<u>Chrry Hill West</u>	<u>Pnsauken</u>	<u>Total (excl intrnl)</u>
Evesham/ Medford	14,300	7,700	4,600	2,800	15,100
Moorestown/ Mt. Laurel	2,100	16,600	6,400	5,200	13,700
Cherry Hill West	700	3,900	7,500	4,200	8,800
Penns- auken	<u>200</u>	<u>2,200</u>	<u>3,200</u>	<u>7,100</u>	<u>5,600</u>
Total (excluding internal trips)	3,000	13,800	14,200	12,200	43,200

**Corridor Treatments**

To address the population, employment and travel trends identified above the following course is recommended. Practices which will direct future growth toward identified transportation centers, park and ride lots, and/or which will encourage multi-use developments should be pursued in all communities to provide focus and support for public transit. The growth communities, of course, offer the best opportunities to affect this policy.

NJ TRANSIT operated bus services within Voorhees Township and Gloucester Township should be enhanced over time to maintain quality of service. Voorhees is also pursuing community-based systems at the present time. These services should be monitored closely for possible application within Gloucester Township (and elsewhere) as alternate means of providing transit service.

Fixed route and regularly scheduled bus service between the Lindenwold PATCO and the Borough of Berlin is already provided on a frequent and regular basis by NJ TRANSIT's Bus Route 554 (round-the-clock service, with 30 minute peak period headways and 60 minute headways during the remaining the hours of the day, seven days per week). Future development activity should be concentrated and located closely to US 30 so that bus service can be provided conveniently and efficiently.



The remaining areas mentioned above are largely unserved by public transit. Their chances for success, in interfacing future land development with transportation, are strongly dependent upon advancing concentrated, mixed use land development practices and integrating smaller, community-based systems. Examples, include:

1. Focusing high intensity mixed-use development in the Atco station area. This development should be supported by a community-scale transit system. Service between the station area and the commercial core of Berlin Borough appears in order. Service should extend to the residential areas of Atco and Chesilhurst. The commercial developments along NJ 73 in Berlin Township also should be served by the system. Improved vehicular access to/from US Route 30 and the Atco station area is in order, especially if multi-modal connections are to be made conveniently. This would require traffic signalization at the driveway, provision for left turning vehicles (designated lane/jughandle) and approval by the NJDOT.
2. Allowing, where possible, high intensity development through Chesilhurst and northern Winslow to be adjacent to US Route 30 and providing priority treatments for Bus Route 554 service and customers alike (for example pull-out lanes, bus shelters, sidewalks and building entrances facing the highway).
3. Pursuing employer-based rideshare programs, alternate work schedules/arrangements and constructing park and ride lots within the NJ Route 73 corridor as measures to increase vehicle occupancy and reduce trip making. Because of the dispersion already observed within the corridor, it is felt that fixed route bus service cannot alone effectively or efficiently improve mobility within and beyond the corridor.



## **IMPROVEMENT PLAN**

Many observations and conclusions have been reached as a result of the analyses conducted for the Camden County Public Transportation Plan. Within this section of the report it becomes important to recap and formulate an overall improvement plan.

The plan includes four improvement programs which address mobility deficiencies which now are present or are expected to be present within the next 20 years. The improvement programs are explained below.

- Ongoing actions required to initiate, monitor and/or update the plan as may be necessary. Table 22 summarizes the ongoing improvement program.
- A near term program (0 to 2 years) which mostly addresses operational shortcomings of the existing system. Table 23 and Figure 15 address the short term improvement program.
- An intermediate range improvement program (3 to 10 years) which infills existing or imminent transit deficient areas of the County with: new fixed route, regularly scheduled bus services provided by NJ TRANSIT (or other operator), and/or; community-based transit systems (operated through the competitive bid process). Table 24 lists and Figure 16 illustrates the intermediate future's improvement program.
- A long term improvement program (11 to 20 years) which includes: improvements requiring further detailed study in advance of large capital investment, and/or; improvements requiring concerted public effort within the growth communities to contain tripmaking and to concentrate development to efficiently support public transit service. Table 25 and Figure 17 define the long term improvement program.

In each improvement, project sponsors are identified. These are the entities/jurisdictions necessary to initiate, implement and ideally share in financing of the various improvements.



TABLE 22

CAMDEN COUNTY PUBLIC TRANSPORTATION PLAN  
ONGOING IMPROVEMENT PROGRAM




1. Pursue cooperative fare-transfer agreements between NJ TRANSIT, PATCO and SEPTA -- to foster intermodal connectivity (for example, at the Camden Transportation Center and at Philadelphia's 30th Street Station), and; to reduce demand for parking at PATCO High Speed Line stations (additional support via increased parking charges at the stations). {sponsors: NJ TRANSIT, PATCO, DRPA and SEPTA}
2. Reassess the boundaries of the Cross County Connection TMA and/or consider new TMA to promote the community-based transit and employer based rideshare programs cited herein. {sponsors: Camden County, municipalities, CCC TMA and NJDOT}
3. Encourage employer based transit use promotion (TransitChek) and rideshare programs (carpool/vanpool) within high employment areas: Camden, Cherry Hill, Gloucester Township, Pennsauken and Voorhees. {sponsors: employers, municipalities, Camden County, TMAs, NJDOT}
4. Provide special needs transit services within areas with high concentrations of low income, elderly and/or handicapped resident population. Examples include Cherry Hill, Camden City, Collingswood, Gloucester Township, Haddon Township, Pennsauken Township, Hi-Nella and Woodlynne. {sponsors: municipalities, Camden County and NJ TRANSIT}
5. Integrate the potential for transit use and reduced trip making into the land development review and approval process. {sponsors: municipalities, Camden County, NJ TRANSIT, NJDOT}
  - Focus development on areas already serviced by public transportation, park and ride lots and transportation centers.
  - Promote the construction of park and ride lots and high density, mixed use developments to reduce trip making and to provide focus and support for transit routes.
  - Consider transit vehicle access (lane width, turning radii, pull-out lanes) and transit user priorities (bus stop signs, bus shelters, sidewalks) in land development design.
  - Establish trip reduction ordinances to promote ridesharing and alternative work schedules/arrangements to reduce peak period trip making.
  - Integrate internal circulation systems of adjacent developments to provide for other than vehicular trips and/or reduce traffic impact along external, public roadways.
6. Support and participate in CAAA and ISTEAs mandated programs: employer trip reduction (ETRP) and congestion management (CMS). {sponsors: Camden County, NJDOT, NJ TRANSIT, TMAs}

TABLE 23

CAMDEN COUNTY PUBLIC TRANSPORTATION PLAN  
SHORT TERM IMPROVEMENT PROGRAM  
(0 to 2 Years)

1. Extend weekday hours of service of Bus Route 404's branch from the Pennsauken Industrial Park to at least 6:00 P.M. and expand hours to include midday service. {sponsors: Camden County, NJ TRANSIT}
2. Extend weekday P.M. peak period service of Bus Route 405's branch to Kingston Estates to at least 6:00 P.M.. {sponsors: Camden County, NJ TRANSIT}
3. Construct Garden State Park Rail Station to be serviced by NJ TRANSIT's Atlantic City Rail Line and Amtrak's Atlantic City Express. Provide for interconnection with NJ TRANSIT's Bus Routes: 404, 405, 406, 413, 450, 317 (and 318 during the summer). {sponsors: NJ TRANSIT, Amtrak, Camden County}
4. Extend service hours of returning trips of Bus Route 407's branch from the (former) RCA facility to at least 6:00 P.M.. {sponsors: NJ TRANSIT, Burlington County}
5. Increase midday service frequency of Bus Route 406 to West Jersey Hospital and provide midday bus service to Cherry Hill Industrial Park en route. {sponsors: NJ TRANSIT, Burlington County, Camden County}
6. Replace NJ TRANSIT's standard size bus serving Route 454, between the Haddonfield and Lindenwold PATCO stations, with a "jitney" size vehicle. {sponsors: Camden County, NJ TRANSIT}
7. Provide A.M. and P.M. peak period Bus Route 451 service to the West Jersey Hospital. {sponsors: Camden County, NJ TRANSIT. Note: at the present time, Voorhees Township and PATCO/DRPA are negotiating with New Jersey Southern Coachways, a private operator, to provide community-based transit route serving Main Street, West Jersey Hospital and the Ashland PATCO station via Evesham and Somerdale Roads. To enhance that operation, the route should be supplemented with a park and ride facility at Main Street.}
8. Extend the hours of service provided by Bus Routes 452 and 453 from 7:00 P.M. to 11:00 P.M. {sponsors: the City of Camden, Camden County, NJ TRANSIT}
9. Design and construct passing sidings and improve track connections at Frankford Junction to increase the capacity of the single track Atlantic City Rail Line. {sponsors: NJ TRANSIT, Camden County, Atlantic County}
10. Short turn midday commuter bus trips of Bus Routes: 401, 408, 410, 412, 413, 419 at the Camden Transportation Center -- passenger transfer to PATCO to complete trip to Center City Philadelphia. Use the additional vehicles to supplement local, midday services within the Southern Division. {sponsors: PATCO, DRPA, NJ TRANSIT, Camden County, Burlington County, Gloucester County, Salem County, Cumberland County}

Figure 15  
SHORT TERM  
IMPROVEMENTS  
(0 to 2 years)

-  Enhance Existing Bus: service area / hours / frequency
-  Revise Existing Bus: route / service type
-  Rail Line Improvement
- 1** Transportation Improvement Reference Number (see report for description)

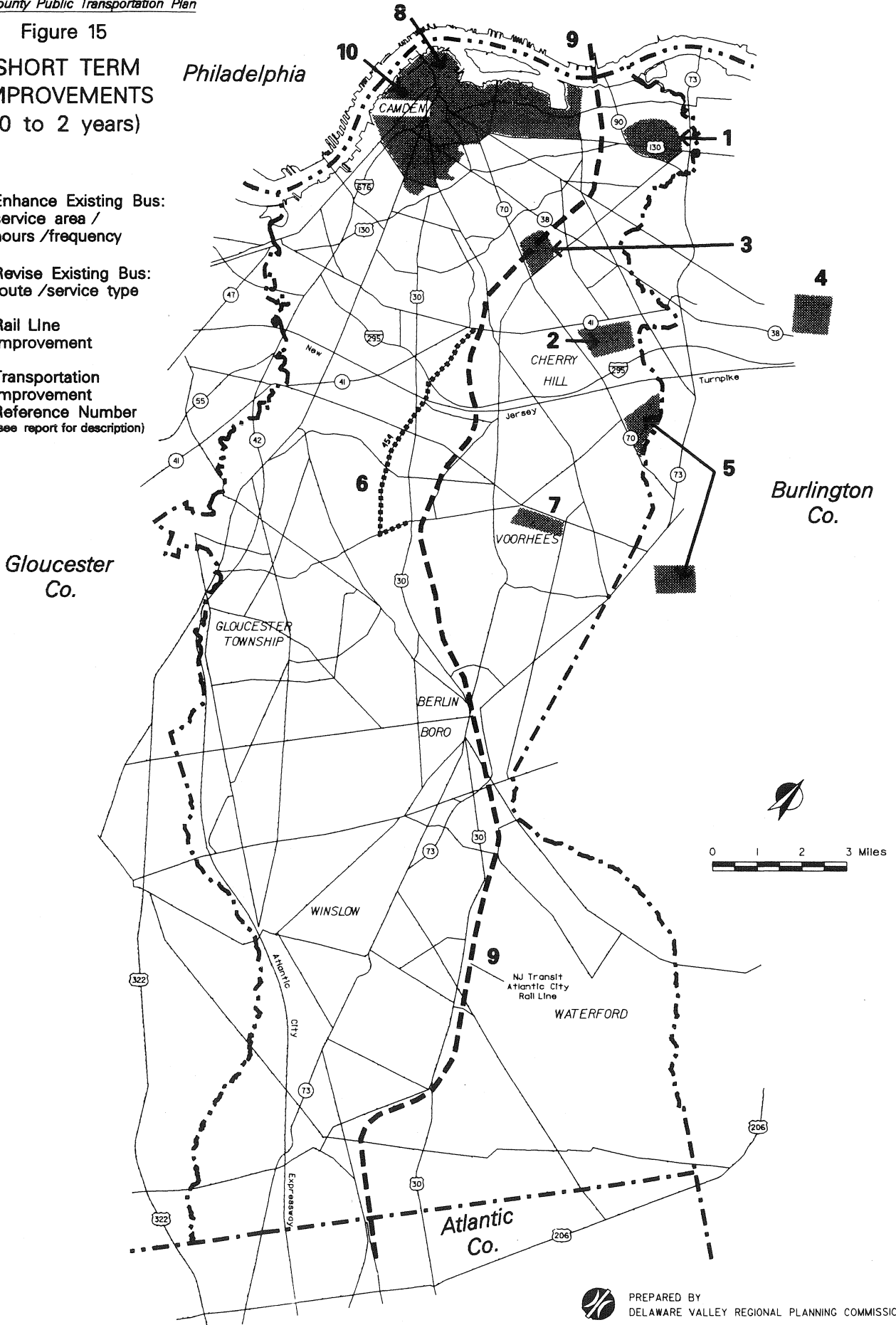





TABLE 24

CAMDEN COUNTY PUBLIC TRANSPORTATION PLAN  
INTERMEDIATE RANGE IMPROVEMENT PROGRAM  
(3 to 10 Years)

1. Expand parking at PATCO's Ashland, Woodcrest and Ferry Avenue Stations. {sponsors: PATCO, DRPA, Camden County}
2. Terminate Commuter Bus Route 403's outer limit at Echelon Mall. Designate new local bus route between the Mall and Washington Township Bus Garage in Turnersville (Route 403's current alignment). Add new service branch at Erial serving Wilton's Corner: via Kearsley Road. {sponsors: Camden County, NJ TRANSIT}
3. Create fixed route, regularly scheduled downtown waterfront circulator bus route in the City of Camden. Combine appearance and frequency attributes of Bus Routes 452 and 461 (AquaLink) to serve existing and anticipated employment, institutional, educational and recreational generators. {sponsors: Camden County, Camden City, NJ Transit, Coopers Ferry Development Association}
4. Replace NJ TRANSIT's Route 454 peak period feeder bus service between the Lindenwold and Haddonfield PATCO stations and integrate with the community-based transit system proposed by the "Haddon Connection". The following route is envisioned -- from the businesses and PATCO stations located within the commercial districts of Collingswood, Haddon and Haddonfield, via Haddon Avenue and then via Warwick Road through Tavistock, Lawnside and Magnolia. {sponsors: municipalities, Camden County, CCC TMA, PATCO, DRPA, merchants associations, institutions, employment sites and businesses served.}
5. Replace NJ TRANSIT's Route 454 peak period feeder bus service between the Lindenwold and Haddonfield PATCO stations with a community-based transit system -- operating from the Lindenwold PATCO station to the UMDNJ/Kennedy Memorial Hospital campus via New Road and the new campus/public access road and then through Stratford, Hi-Nella and Somerdale along Laurel and Warwick Roads. {sponsors: municipalities, Camden County, CCC TMA, PATCO, DRPA, merchants associations, institutions, employment sites and businesses served.}
6. Support NJDOT's park and ride program. Interface with all likely surface bus routes. Sign the lots appropriately. Initiate action to advance a park and ride lot within the US 130 and NJ 47 market area -- consider the opportunities presented by the Gloucester corridor of the Burlington-Gloucester Initiative. {sponsors: Camden County, NJDOT, NJ TRANSIT, municipalities}



Figure 16  
**INTERMEDIATE  
 RANGE  
 IMPROVEMENTS**  
 (3 to 10 years)

-  Expanded Bus: service area
-  Revised Bus: route /service type
-  Park and Ride Lots
- 1** Transportation Improvement Reference Number (see report for description)

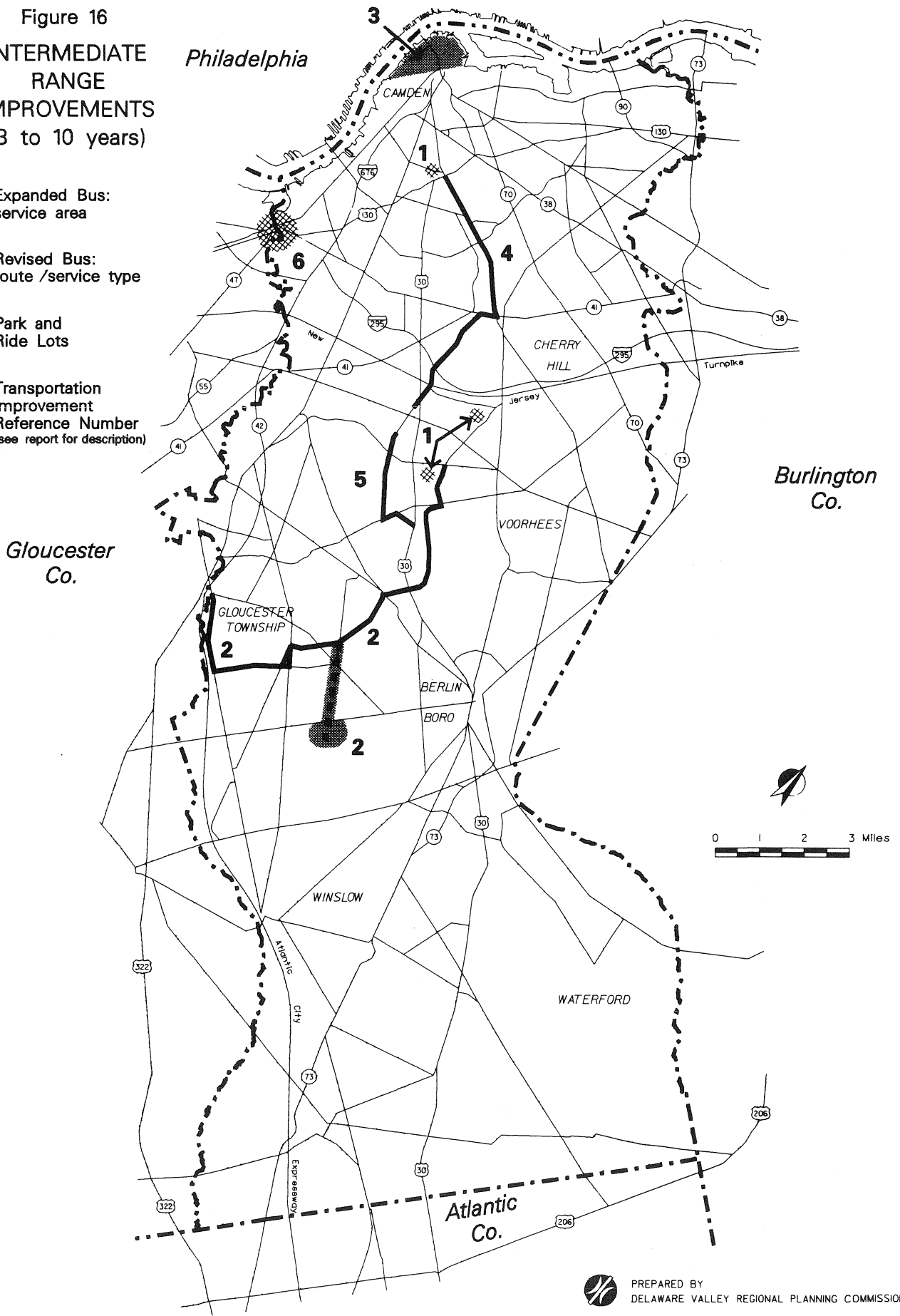







TABLE 25

CAMDEN COUNTY PUBLIC TRANSPORTATION PLAN  
LONG TERM IMPROVEMENT PROGRAM  
(11 to 20 Years)

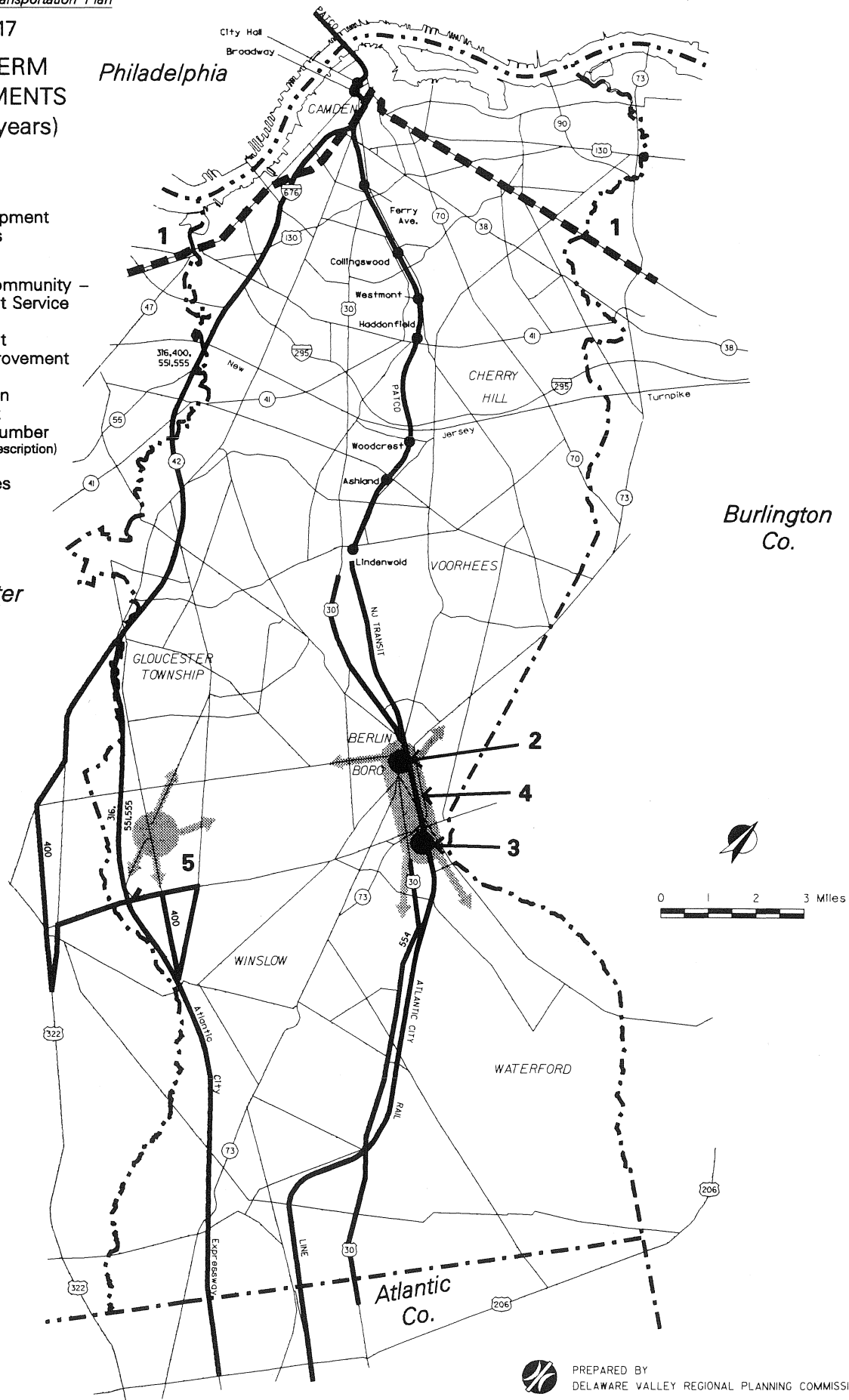
1. Should the Alternatives Analysis and D.E.I.S. indicate project feasibility, the County should support the Burlington-Gloucester Initiative {sponsor: NJ TRANSIT}. The project may act as a surrogate for the NJ 130 park and ride program, other benefits inherent to Camden County are as follows.
  - New public transportation facilities/stations within Camden County.
  - Opportunities for new station area development.
  - Traffic relief to overburdened freeways/arterials.
  - Parking relief at existing PATCO stations.
2. Encourage concentrated future development within the Borough of Berlin, conveniently focussed on and accessed from US 30, by transit vehicles and transit customers. Serve the hub directly with NJ TRANSIT's Bus Route 554. {sponsors: Berlin Borough, Camden County}
3. Promote concentrated and mixed use development within the immediate surroundings of the Atco station. Improve station area access to/from US 30 by signaling the driveway access point and providing treatments for left-turn entering traffic by means of a designated lane or a jughandle. {sponsors: Waterford Township, NJDOT, Camden County}
4. Design a community-based transit network radiating from an Atco station - Berlin trunk route {sponsors: Waterford Township, Berlin Borough, Camden County}. Alternate generators/attractions to be served by the route should include:
  - shopping opportunities along NJ 73 in Berlin Township;
  - Wilton's Corner;
  - the Borough of Chesilhurst, and;
  - the Atco community.
5. Provide a community-based transit system in the Sicklerville section of Winslow Township. Generators to be served should include:
  - Wilton's Corner and surrounding residential subdivisions;
  - commercial establishments in the area;
  - the Avandale Park and Ride, and;
  - Berlin Borough.

Figure 17

**LONG TERM IMPROVEMENTS (11 to 20 years)**

-  Land Development Opportunities
-  Proposed Community - based Transit Service
-  Capital Transit Corridor Improvement
-  Transportation Improvement Reference Number (see report for description)
-  Transit Routes Supporting Expanded Services

Gloucester Co.





APPENDICES:

NJ TRANSIT  
COMMUTER AND LOCAL  
BUS ROUTES  
RIDERSHIP TABLES

TABLE A-1

ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 400, SICKLERVILLE-WILLIAMSTOWN-PHILADELPHIA

FARE ZONES FROM	TO	1	2	3	4	5	6	7	8	9	10	TOTAL
Philadelphia 1		134 (28)	168 (9)	86 (8)	95 (3)	142 (6)						625 (54)
Camden 2		132 (51)	1,448 (360)	216 (44)	173 (42)	49 (7)						2,018 (504)
Audubon Park-Runnemedede 3		102 (47)	218 (36)	97 (29)	41 (3)	13 (2)						471 (117)
Runnemedede-Camden Co. College 4		81 (38)	143 (34)	45 (11)	74 (15)	68 (5)						411 (103)
Turnersville-Sicklerville 5		151 (69)	41 (8)	17 (3)	77 (24)	248 (49)						534 (153)
6												
7												
8												
9												
10												
TOTAL		600 (233)	2,018 (447)	461 (95)	460 (87)	520 (69)						4,059 (931)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38	- Average weekday ridership.
(12)	- AM peak period ridership.

TABLE A-2  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 401, SALEM-DEPTFORD MALL-PHILADELPHIA

FARE ZONES FROM TO	1	2	3	4	5	6	7	8	9	10	TOTAL
Philadelphia 1	38 (2)	32 (3)	63 (0)	7 (1)	5 (0)	1 (0)	1 (1)	9 (0)			156 (7)
Camden 2	26 (2)	153 (19)	73 (9)	9 (1)	3 (0)	6 (0)	0 (0)	11 (1)			281 (32)
Audubon Park-Woodbury 3	44 (7)	70 (14)	82 (10)	48 (8)	4 (0)	10 (1)	0 (0)	6 (0)			264 (40)
W Deptford-Deptford Mall 4	1 (1)	6 (0)	41 (1)	11 (1)	1 (0)	1 (0)	0 (0)	4 (0)			65 (3)
Mt. Royal-Mickleton 5	4 (0)	2 (1)	5 (1)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)			12 (2)
Swedesboro 6	1 (0)	1 (0)	13 (2)	1 (0)	4 (0)	1 (0)	1 (0)	4 (0)			26 (2)
Woodstown 7	1 (0)	2 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)	1 (0)			5 (1)
Mannington & Salem 8	7 (4)	13 (2)	6 (1)	0 (0)	0 (0)	4 (2)	1 (0)	3 (1)			34 (10)
9											
10											
TOTAL	122 (16)	279 (39)	283 (24)	76 (11)	18 (0)	23 (3)	4 (2)	38 (2)			843 (97)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.

TABLE A-3  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 402, PENNSVILLE-CAMDEN-PHILADELPHIA

FARE ZONES FROM TO	1	2	3	4	5	6	7	8	9	10	TOTAL
Philadelphia 1	14 (3)	2 (0)	53 (0)	7 (0)	18 (0)	2 (0)	1 (0)	0 (0)			97 (3)
Camden 2	9 (0)	45 (6)	13 (0)	0 (0)	13 (1)	4 (2)	2 (1)	0 (0)			86 (10)
Gloucester City-Woodbury	70 (38)	23 (7)	21 (2)	2 (0)	14 (2)	2 (0)	1 (0)	0 (0)			133 (49)
W Deptford 4	3 (1)	0 (0)	1 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)			5 (1)
Paulsboro & Gibbstown 5	12 (6)	11 (4)	21 (10)	2 (1)	1 (1)	0 (0)	6 (0)	1 (0)			54 (22)
Bridgeport 6	2 (1)	0 (0)	1 (0)	0 (0)	2 (2)	0 (0)	1 (0)	0 (0)			6 (3)
Penns Grove-Deepwater 7	2 (1)	3 (1)	3 (1)	0 (0)	6 (3)	6 (3)	0 (0)	2 (0)			22 (9)
Pennsville 8	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	1 (0)	0 (0)			2 (0)
9											
10											
TOTAL	112 (50)	84 (18)	113 (13)	12 (1)	54 (9)	15 (5)	12 (1)	3 (0)			405 (97)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

38
(12)

 - AM peak period ridership.



TABLE A-4  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 403, TURNERSVILLE-LINDENWOLD PATCO-PHILADELPHIA

FARE ZONES FROM	TO	1	2	3	4	5	6	7	8	9	10	TOTAL
Philadelphia 1		75 (16)	85 (7)	84 (4)	30 (4)	3 (1)						277 (32)
Camden 2		85 (37)	464 (129)	157 (20)	117 (21)	0 (0)						823 (207)
Collingswood-Lawnside 3		81 (43)	160 (56)	88 (25)	84 (20)	0 (0)						413 (144)
Lawnside-Erial or Echelon Mall 4		40 (12)	112 (33)	83 (21)	434 (119)	12 (2)						681 (187)
Turnersville 5		0 (0)	2 (1)	0 (0)	8 (5)	2 (1)						12 (7)
6												
7												
8												
9												
10												
TOTAL		281 (108)	823 (226)	412 (70)	673 (169)	17 (4)						2,206 (577)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.

TABLE A-5  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 404, CHERRY HILL MALL-PENNSAUKEN-PHILADELPHIA

FARE ZONES		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
Philadelphia 1		65 (10)	120 (8)	85 (21)								270 (39)
Camden 2		119 (41)	937 (203)	256 (88)								1,312 (332)
Pennsauken & Cherry Hill 3		87 (16)	245 (25)	275 (61)								607 (102)
4												
5												
6												
7												
8												
9												
10												
TOTAL		271 (67)	1,302 (236)	616 (170)								2,189 (473)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-6  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 405, CHERRY HILL MALL-MERCHANTVILLE-PHILADELPHIA

FARE ZONES		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
Philadelphia 1		N.A.	N.A.	N.A.								N.A.
Camden 2		N.A.	375 (61)	205 (35)								580 (96)
Merchantville & Cherry Hill 3		N.A.	203 (14)	85 (6)								288 (20)
4												
5												
6												
7												
8												
9												
10												
TOTAL		N.A.	578 (75)	290 (41)								868 (116)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.
- 5) Route 405 replaced Route 456 in January 1993, statistics shown reflect old Route 456's operation.

TABLE A-7  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 406, MEDFORD LAKES-MARLTON-PHILADELPHIA

FARE ZONES FROM	TO	1	2	3	4	5	6	7	8	9	10	TOTAL
Philadelphia 1		72 (16)	65 (5)	77 (12)	64 (16)	5 (0)	11 (0)					294 (49)
Camden 2		54 (21)	436 (122)	220 (80)	197 (89)	1 (0)	1 (0)					909 (312)
Pennsauken & Cherry Hill 3		60 (7)	193 (20)	66 (20)	33 (16)	4 (0)	0 (0)					356 (63)
Evesham 4		58 (15)	145 (10)	34 (4)	8 (1)	1 (0)	1 (0)					247 (30)
Medford 5		6 (5)	4 (0)	0 (0)	1 (0)	0 (0)	1 (1)					12 (6)
Medford Lakes 6		11 (5)	2 (0)	0 (0)	1 (0)	2 (0)	0 (0)					16 (5)
7												
8												
9												
10												
TOTAL		261 (69)	845 (157)	397 (116)	304 (122)	13 (0)	14 (1)					1,834 (465)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

38
(12)

 - AM peak period ridership.

TABLE A-8  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 407, MOORESTOWN MALL-PHILADELPHIA

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
Philadelphia 1		66 (16)	74 (13)	128 (10)	60 (4)							328 (43)
Camden 2		73 (18)	627 (184)	103 (30)	70 (19)							873 (251)
Merchantville-Maple Shade 3		139 (79)	70 (20)	72 (16)	55 (20)							336 (135)
Moorestown 4		42 (23)	78 (8)	39 (2)	42 (4)							201 (37)
5												
6												
7												
8												
9												
10												
TOTAL		320 (136)	849 (225)	342 (58)	227 (47)							1,738 (466)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-9  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 408, MILLVILLE-CAMDEN-PHILADELPHIA

FARE ZONES TO FROM	1	2	3	4	5	6	7	8	9	10	TOTAL
Philadelphia 1	21 (5)	1 (0)	39 (9)	11 (1)	75 (5)	12 (1)	3 (0)	7 (1)	23 (1)	6 (2)	198 (35)
Camden 2	0 (0)	2 (1)	44 (22)	14 (4)	29 (12)	5 (0)	2 (0)	3 (0)	10 (2)	1 (0)	110 (41)
Gloucester Cty-Deptford Twp. 3	48 (7)	41 (7)	58 (26)	6 (4)	19 (4)	3 (2)	3 (0)	2 (1)	1 (1)	3 (0)	184 (52)
New Sharon & Almonesson 4	11 (0)	7 (0)	4 (1)	0 (0)	11 (1)	2 (0)	0 (0)	1 (0)	0 (0)	1 (0)	37 (2)
Hurffville-Glassboro 5	74 (8)	31 (9)	19 (7)	14 (3)	25 (4)	16 (2)	12 (2)	2 (2)	15 (3)	1 (1)	209 (41)
Clayton 6	10 (3)	7 (2)	2 (0)	1 (1)	14 (2)	2 (0)	2 (0)	2 (0)	0 (0)	0 (0)	40 (8)
Franklinville & Malaga 7	3 (0)	0 (0)	2 (1)	2 (1)	11 (3)	6 (3)	1 (0)	2 (2)	3 (2)	1 (0)	31 (12)
Newfield 8	2 (0)	2 (0)	1 (0)	0 (0)	3 (0)	0 (0)	3 (0)	0 (0)	8 (2)	1 (0)	20 (2)
Nineland 9	25 (9)	12 (2)	3 (1)	1 (1)	21 (3)	0 (0)	3 (0)	9 (0)	34 (4)	25 (2)	133 (22)
Millville 10	8 (1)	3 (1)	1 (1)	0 (0)	0 (0)	0 (0)	1 (0)	2 (1)	24 (11)	10 (1)	49 (16)
TOTAL	202 (33)	106 (22)	173 (68)	49 (15)	208 (44)	46 (8)	30 (2)	30 (7)	118 (26)	49 (6)	1,011 (231)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38 (12)
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 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-10

ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 409, TRENTON-BURLINGTON-PHILADELPHIA

FARE ZONES		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
Philadelphia 1		49 (3)	58 (3)	53 (15)	132 (7)	279 (9)	8 (2)	1 (0)	1 (0)			581 (39)
Camden 2		55 (19)	76 (16)	105 (29)	81 (29)	69 (11)	17 (5)	3 (2)	34 (10)			440 (121)
Pennsauken & Cherry Hill 3		41 (12)	74 (2)	47 (11)	28 (11)	20 (1)	8 (4)	2 (2)	12 (11)			232 (54)
Palmyra-Moorestown 4		144 (58)	73 (10)	24 (3)	38 (5)	58 (7)	25 (11)	2 (1)	24 (17)			388 (112)
Delanco-Willingboro 5		314 (139)	68 (10)	43 (7)	86 (18)	44 (14)	64 (18)	13 (3)	76 (30)			708 (239)
Burlington 6		7 (2)	13 (0)	9 (0)	26 (2)	61 (4)	38 (11)	53 (6)	49 (20)			256 (45)
Florence-Bordentown 7		5 (1)	3 (0)	4 (1)	4 (3)	27 (3)	49 (17)	68 (5)	86 (32)			246 (62)
White Horse-Trenton 8		4 (0)	45 (1)	7 (0)	22 (1)	83 (3)	57 (6)	92 (7)	22 (1)			332 (19)
	9											
	10											
	TOTAL	619 (234)	410 (42)	292 (66)	417 (76)	641 (52)	266 (74)	234 (26)	304 (121)			3,183 (691)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.

TABLE A-11  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 410, BRIDGETON-CAMDEN-PHILADELPHIA

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
TO	FROM											
	Philadelphia 1	25 (6)	17 (5)	69 (5)	25 (2)	10 (0)	2 (0)	0 (0)	1 (0)	9 (1)		158 (19)
	Camden 2	16 (4)	125 (27)	64 (15)	4 (0)	1 (0)	0 (0)	0 (0)	1 (1)	6 (0)		217 (47)
	Gloucester City-Woodbury 3	73 (8)	63 (17)	84 (14)	25 (7)	8 (1)	1 (0)	0 (0)	1 (0)	0 (0)		255 (47)
	Woodbury Hts-Mantua 4	31 (3)	3 (1)	16 (1)	3 (0)	0 (0)	3 (0)	0 (0)	0 (0)	0 (0)		56 (5)
	Mullica Hill 5	9 (1)	2 (1)	8 (0)	3 (1)	1 (0)	1 (0)	0 (0)	0 (0)	1 (1)		25 (4)
	Elk & S Harrison 6	1 (0)	1 (1)	3 (2)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)		6 (3)
	Pole Tavern 7	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)		0 (0)
	Seabrook & Upper Deerfield 8	1 (0)	3 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	16 (7)		20 (7)
	Bridgeton 9	5 (0)	8 (1)	1 (0)	1 (0)	0 (0)	1 (0)	1 (0)	23 (0)	8 (0)		48 (2)
	10											
	TOTAL	161 (22)	222 (53)	245 (37)	61 (11)	21 (1)	8 (0)	1 (0)	26 (1)	40 (9)		785 (134)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38 (12)
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 - Average weekday ridership.  
 - AM peak period ridership.



TABLE A-12  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 412, GLASSBORO-WOODBURY-PHILADELPHIA

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
Philadelphia 1		23 (4)	17 (5)	52 (1)	15 (0)	10 (0)						117 (10)
Camden 2		3 (1)	124 (13)	48 (15)	14 (1)	9 (1)						198 (31)
Gloucester City-Woodbury 3		74 (44)	59 (14)	71 (16)	11 (2)	42 (3)						257 (79)
Woodbury Hts-Barnsboro 4		18 (12)	10 (4)	14 (6)	6 (0)	9 (3)						57 (25)
Pitman & Glassboro 5		14 (8)	16 (6)	36 (8)	15 (4)	48 (13)						129 (39)
6												
7												
8												
9												
10												
TOTAL		132 (69)	226 (42)	221 (46)	61 (7)	118 (20)						758 (184)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-13  
 ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 413, BURLINGTON-MOUNT HOLLY-PHILADELPHIA

FARE ZONES		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
Philadelphia 1		44 (5)	2 (1)	79 (18)	44 (11)	7 (1)	13 (3)					189 (39)
Camden 2		16 (6)	38 (3)	98 (50)	64 (33)	4 (3)	21 (12)					241 (107)
Pennsauken & Cherry Hill 3		68 (21)	63 (7)	21 (3)	20 (5)	2 (0)	8 (2)					182 (38)
Moorestown 4		51 (13)	59 (5)	26 (7)	22 (6)	5 (0)	29 (6)					192 (37)
Mt. Laurale 5		4 (0)	6 (0)	1 (1)	3 (3)	1 (1)	5 (1)					20 (6)
Hainesport-Burlington 6		14 (5)	18 (5)	3 (2)	35 (10)	6 (0)	277 (71)					353 (93)
	7											
	8											
	9											
	10											
TOTAL		197 (50)	186 (21)	228 (81)	188 (68)	25 (5)	353 (95)					1,177 (320)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-14  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 419, BURLINGTON-RIVERSIDE-PHILADELPHIA

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
TO	FROM											
	Philadelphia 1	52 (13)	71 (6)	40 (7)	73 (6)	9 (1)	6 (1)					251 (34)
	Camden 2	64 (16)	236 (48)	80 (26)	60 (23)	5 (1)	10 (2)					455 (116)
	Pennsauken & Cherry Hill 3	28 (13)	47 (10)	16 (10)	8 (3)	7 (4)	0 (0)					106 (40)
	Palmyra-Bridgeboro 4	86 (36)	51 (15)	10 (1)	71 (19)	36 (5)	22 (3)					276 (79)
	Delanco-Willingboro 5	12 (4)	8 (1)	3 (1)	29 (9)	37 (13)	27 (9)					116 (37)
	Burlington 6	3 (0)	10 (4)	2 (1)	21 (7)	27 (8)	3 (1)					66 (21)
	7											
	8											
	9											
	10											
	TOTAL	245 (82)	423 (84)	151 (46)	262 (67)	121 (32)	68 (16)					1,270 (327)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
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 - AM peak period ridership.

TABLE A-15  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 450, CHERRY HILL MALL-AUDUBON-CAMDEN

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
Camden 2			666 (219)	62 (7)	31 (12)							759 (238)
Audubon Park-Westmont 3			61 (5)	37 (6)	17 (6)							115 (17)
Cherry Hill 4			31 (0)	15 (0)	56 (10)							102 (10)
5												
6												
7												
8												
9												
10												
TOTAL			758 (224)	114 (13)	104 (28)							976 (265)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.

TABLE A-16  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 451, ECHELON MALL-HADDONFIELD-CAMDEN

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
Camden	2		116 (23)	31 (14)	31 (12)							178 (49)
Collingswood-Cherry Hill	3		32 (8)	37 (13)	13 (5)							82 (26)
Echelon Mall	4		27 (5)	14 (5)	26 (1)							67 (11)
5												
6												
7												
8												
9												
10												
TOTAL			175 (36)	82 (32)	70 (18)							327 (86)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.

TABLE A-17  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 452, CAMDEN-PENNSAUKEN

FARE ZONES		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
Camden 2			1,735 (432)	5 (0)								1,740 (432)
Pennsauken 3			10 (0)	4 (2)								14 (2)
4												
5												
6												
7												
8												
9												
10												
TOTAL			1,745 (432)	9 (2)								1,754 (434)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-18  
 ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 453, WOODLYNNE-CAMDEN

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
Camden & Woodlynne	2		545 (133)									545 (133)
3												
4												
5												
6												
7												
8												
9												
10												
TOTAL			545 (133)									545 (133)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-19  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 454, LINDENWOLD PATCO-HADDONFIELD PATCO

FARE ZONES FROM	TO	1	2	3	4	5	6	7	8	9	10	TOTAL
		1										
2												
Haddonfield-Lawnside 3				10 (6)	14 (6)							24 (12)
Lawnside-Lindenwold 4				15 (10)	21 (8)							36 (18)
5												
6												
7												
8												
9												
10												
TOTAL				25 (16)	35 (14)							60 (30)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  

(12)
------

 - AM peak period ridership.



TABLE A-20  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 455, CHERRY HILL MALL-HADDONFIELD PATCO-DEPTFORD MALL

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
Deptford Twp & Runnemede	2		50 (17)	17 (1)	10 (3)							77 (21)
Runnemede-Haddonfield	3		27 (6)	71 (23)	23 (10)							121 (39)
Haddonfield-Cherry Hill	4		11 (1)	14 (0)	150 (18)							175 (19)
5												
6												
7												
8												
9												
10												
TOTAL			88 (24)	102 (24)	183 (31)							373 (79)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE A-21  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 457, MOORESTOWN MALL-HADDONFIELD-CAMDEN

<u>FARE ZONES</u>		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
Camden	2		130 (28)	32 (4)	20 (9)	5 (2)						187 (43)
Gloucester City-Haddonfield	3		24 (24)	66 (0)	28 (18)	8 (5)						126 (47)
Haddonfield-Cherry Hill	4		21 (1)	19 (1)	169 (50)	33 (14)						242 (66)
Moorestown & Mt. Laurel	5		2 (0)	10 (0)	21 (0)	11 (3)						44 (3)
6												
7												
8												
9												
10												
TOTAL			177 (53)	127 (5)	238 (77)	57 (24)						599 (159)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38	- Average weekday ridership.
(12)	- AM peak period ridership.

TABLE A-22  
ZONE TO ZONE BUS RIDERSHIP

BUS ROUTE: 459, CAMDEN COUNTY COLLEGE-ECHELON MALL-GIBBSBORO

FARE ZONES		1	2	3	4	5	6	7	8	9	10	TOTAL
FROM	TO											
1												
2												
3												
Echelon Mall-Laurel Springs 4					268 (60)	53 (24)						321 (84)
Gloucester Twp-Camden COL 5					46 (5)	2 (0)						48 (5)
6												
7												
8												
9												
10												
TOTAL					314 (65)	55 (24)						369 (89)

Notes:

- 1) Source: NJ TRANSIT Passenger count data, Spring 1992.
- 2) Generalized geographic limits of fare zone boundary.
- 3) Shaded cells are trips occurring in zones within or contiguous to Camden County.
- 4) 

38
(12)

 - Average weekday ridership.  
 - AM peak period ridership.

TABLE B-1  
ORIENTATION OF COMMUTER BUS RIDERS

BUS ROUTE	TOTAL AVG. WEEKDAY RIDERSHIP	ZONE 1 AVG. WEEKDAY RIDERSHIP	TOTAL AM PEAK (6AM - 9AM) RIDERSHIP	ZONE 1 AM PEAK (6AM - 9AM) RIDERSHIP	TOTAL MIDDAY (9AM - 3PM) RIDERSHIP	ZONE 1 MIDDAY (9AM - 3PM) RIDERSHIP
400	4,059	1,091	931	259	1,544	261
401	843	240	97	21	296	74
402 <sup>1)</sup>	405	195	97	50		
403	2,206	483	577	124	730	130
404	2,189	476	473	96	765	141
405 <sup>2)</sup>	868		116		520	
406	1,834	483	465	102	570	107
407	1,738	582	466	163	635	155
408	1,011	379	231	63	248	53
409	3,183	1,151	691	270	911	213
410	785	294	134	35	312	66
412	758	226	184	75	334	69
413	1,177	342	320	84	399	74
419	1,270	444	327	103	254	79
TOTAL	22,326	6,386	5,109	1,445	7,518	1,422

## NOTES:

- 1) No midday bus service on Route 402.
- 2) Ridership figures shown for Route 405 are those of Route 456 prior to a January 1993 service change, at which time the route was extended into Philadelphia and re-numbered.

