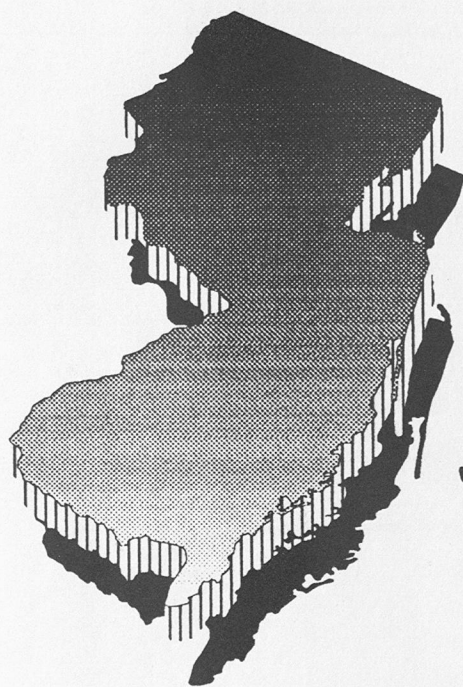


# State Transportation Plan



## *Urban Transportation Supplement*

**Elizabeth**

**New Jersey Department of Transportation**

**NJ TRANSIT**

**June 1993**

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ELIZABETH

URBAN TRANSPORTATION  
SUPPLEMENT

PUBLIC TRANSPORTATION REQUIREMENTS  
EMPLOYMENT GROWTH CENTERS, AND  
FUTURE ECONOMIC CONDITIONS

ELIZABETH

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## I. INTRODUCTION

### ELIZABETH

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## I. INTRODUCTION

State legislation (P.L. 1991 Chapter 481) approved January 18, 1992, mandates that the New Jersey Department of Transportation (NJDOT), in conjunction with NJ TRANSIT (NJT), prepare and submit to the Legislature an Urban Transportation Supplement to the State Transportation Plan. In order to improve access into and out of New Jersey's major urban centers, the Plan is to identify and address transportation needs and issues of each of seven cities. In particular, the legislation places emphasis on "the transportation problems of the state's inner-city residents who are employed by or who are seeking employment with employers located in suburban areas of the state." The seven cities included in the legislation are Atlantic City, Camden, Elizabeth, Jersey City, Newark, Paterson, and Trenton. The Urban Transportation Supplement is to be updated every five years.

Information on Elizabeth for this report has been gathered from the U.S. Census, the New Jersey Transportation Plan, the NJ TRANSIT Capital Plan, county and local master and transportation plans, population and employment projections from the New Jersey Department of Labor, the State Development and Redevelopment Plan, numerous other forms of published data, and from personal interviews with Elizabeth and Union County professionals working in planning, transportation, economic development, and job placement or training.

The city of Elizabeth is an old industrial city. It has weathered the post World War II industrial decline better than other New Jersey industrial cities, such as Newark and Camden, and its downtown retailing continues to be a strong local draw.

Elizabeth has been a transportation center from its beginning. Its transportation network supported industrial development in the nineteenth century; work attracted waves of immigrants. Each form of transportation left its mark. The original roads connected the central hamlet with the coast and with the surrounding farms; these provided the basis of the radial pattern of major city roads today. The Lenape Indian paths provided the earliest network of longer routes. As new communities developed, for example Newark and Rahway, roads were built to connect these towns. In this century, the state's first major highways followed the same corridors: Route 27, built at the time of World War I, and then Route 25 (now US Route 1&9), and finally the New Jersey Turnpike in the 1950s, wended their way through Elizabeth. These corridors form the regional north-south roadway system through Elizabeth at its northern, central, and southern portions, respectively.

As new modes of transportation developed—steam ships, railroads, airlines—long-distance transportation of passengers and goods continued to be a major component of the

city's economic life. Elizabeth's harbor has long been an important feature. In the seventeenth century, a ferry carried passengers and agricultural products across the Arthur Kill to Staten Island and New York City. In the early nineteenth century, regular steamer service was established. In 1956, containerized shipping was introduced, transforming the port. The Port Elizabeth/Port Newark marine terminal now handles a greater volume of containers than any other port in the United States.

Starting in the 1830s, Elizabeth's location attracted major railroads. The New Jersey Railroad (now Amtrak's Northeast Corridor Line) between New Brunswick and Newark provided Elizabeth with a large passenger station. The Central Railroad of New Jersey (Jersey Central) added a freight and repair yard, as well as a complex of coal docks.

Aviation developed in the early twentieth century. Built in 1928, a year later Newark Airport had commercial and scheduled passenger service, and served as the terminus for air mail service. As the air industry grew, so did the airport. Newark International Airport now straddles the Newark-Elizabeth border. By 1991, it served thirty-five million passengers; The Port Authority of New York and New Jersey (PANYNJ) expects it to serve forty-five million passengers by the end of the century.

As we approach the end of the twentieth century, Elizabeth's transportation system shows the effects of its past. Streets within the city are built along the routes marked by old roads to farms; the regional road network follows the corridor from New York and Newark, through Elizabeth, and on to Rahway, Trenton, and Philadelphia. Although railroads no longer play the major role they did a century ago, two NJ TRANSIT stations serve passengers with trains from both the Northeast Corridor and the North Jersey Coast Line, while two Conrail terminals handle freight. Elizabeth continues to be a major port and transportation hub; as railroads have declined, containerized road and air freight at Newark International Airport and Port Elizabeth/Port Newark have increased.

## II. DEMOGRAPHIC PROFILE OF THE CITY'S POPULATION

Population in Elizabeth peaked in the 1930 Census at nearly 115,000; although it fluctuated in the decades that followed, it has not dropped sharply as in many other older cities. During the 1980s, Elizabeth's population increased slightly from 106,000 to 110,000. The number and proportion of working-age adults and very young children grew. The number of households in Elizabeth increased while the number of people living in each household also increased. Both household and per capita income rose over the decade, although not as rapidly as for New Jersey as a whole; at the same time, the proportion of residents living in poverty also increased. These changes, which for the most part can be viewed as positive signs, are described in more detail in this section.

From 1980 to 1990, the population of New Jersey as a whole increased by five percent; much of this growth took place in the suburbs. The "inner ring" of New Jersey counties surrounding New York City—Bergen, Hudson, Essex, and Union—lost population. In contrast, Elizabeth gained 3.6 percent, increasing from 106,201 to 110,002, as shown in Table 1.

The number of households in Elizabeth increased only a slight 0.5 percent from 38,878 in 1980 to 39,072 in 1990, while the average household size increased from 2.69 in 1980 to 2.76 in 1990 (Table 1). This slightly larger average household size in Elizabeth contrasts markedly with the national trend toward smaller households.

During the decade, the median age in Elizabeth remained at 32.2 years; however, the age profile changed, as shown in Table 2. The proportion of residents under five years increased by 7.1 percent, while the proportion between 20 and 64 increased by 4.8 percent. At the same time, those 5-19 decreased by 10.0 percent, and those over 65 decreased by 9.1 percent. Thus in 1990, the proportion in the prime working ages was greater than it was in 1980; however, the proportion of very young children, those who require the most care by potentially employable adults, also was larger.

These changes in the age profile generally mirror the national trends. Members of the baby boom generation are now young and middle-aged adults. They have moved into the labor force and are forming households. The youngest residents are primarily their children. However, the smaller number of those 65 and older in Elizabeth is contrary to the national pattern in which the elderly are an increasingly large proportion of the population.

The racial and ethnic composition of Elizabeth also changed during the decade of the 1980s. In 1980, nearly three-quarters of Elizabeth residents were white; by 1990, less than two-thirds were. While the proportion of the population who are black or Asian increased slightly, those classified as 'other' increased to more than ten percent. Over the decade the biggest change in ethnic composition is the Hispanic residents' increase from one-quarter to two-fifths of Elizabeth's population.

Despite the recessions at the beginning and end of the decade, the 1980s were prosperous times for New Jersey. The state median household income rose from \$19,800 to \$40,972. Elizabeth benefited, albeit not as much as suburban areas, as shown in Table 3. Elizabeth's median household income rose 79.2 percent, from \$15,423 in 1979 to \$27,631 in 1989. Elizabeth's per capita income rose at a rate of 80.5 percent, from \$6,712 in 1979 to \$12,112 in 1989. Therefore, the income of residents in Elizabeth increased by about 80 percent while the income of those in the state as a whole increased by more than 100 percent. During this period, Elizabeth residents' income fell from 78 to 67 percent of the state average.

TABLE 1  
POPULATION AND HOUSEHOLD  
IN ELIZABETH 1980-1990

Population Indices	1980	1990	Change	
			Number	Percent
Population	106,201	110,002	3,801	3.6
Household	38,878	39,072	194	0.5
Average Household Size	2.69	2.76	.01	2.6

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 2  
AGE PROFILE OF THE POPULATION  
IN ELIZABETH 1980-1990

Age Cohorts	1980	1990	Change
	Percent	Percent	Percent
<5 years	7.0	7.5	7.1
5 years to 19 years	22.1	19.9	(10.0)
20-64 years	57.8	60.6	4.8
Over 65 years	13.2	12.0	(9.1)
Median Age (years)	32.2	32.2	0.0

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 3  
INCOME AND POVERTY  
IN ELIZABETH 1979-1989

Income Indices	1979	1989	Change	
			Number	Percent
Household Income	\$15,423	\$27,631	\$12,208	79.2
Per Capita Income	\$6,712	\$12,112	\$5,400	80.5
Percent Population Below Poverty Level	15.8	16.1	—	1.9

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

Within the city of Elizabeth, despite the rise in average income, more than one-seventh of the residents were below the poverty line. Between 1980 and 1990, the proportion of residents in poverty increased slightly from 15.8 percent to 16.1 percent (Table 3). This poverty is also reflected in deteriorated housing and overcrowding.

### III. LABOR FORCE PROFILE

During the 1980s, the working-age population in Elizabeth increased. By 1990, a higher proportion of residents were employed, and the proportion of households receiving wage or salary income had increased. However, at the same time a higher proportion of Elizabeth residents were unemployed.

Historically, Elizabeth residents have depended on industrial jobs; however, these job opportunities have been decreasing over the past half-century. During the 1980s the role of manufacturing in Elizabeth, as in virtually every traditional industrial city, lessened. Thus by 1990, the industrial sectors in which Elizabeth residents worked, and their occupations, showed this impact. The proportion of residents working in the manufacturing sector decreased sharply, as did those in public sector employment; meanwhile, employment in the services, retail, transportation, and construction sectors increased. Elizabeth residents' worked more in services, sales, technical, and management occupations; jobs as operators, laborers, and precision production or craft workers decreased. Thus, while Elizabeth's residents moved with the national and statewide trends to a service economy, they also moved into jobs reflective of this new industrial sector, which has on average 10-20 percent lower starting salaries and employment salary caps that are as much as 20 percent lower.

In 1990 as in 1980, three-quarters of Elizabeth households owned a car; and nearly half those working did so within the city itself.

The remainder of this section describes the specifics of Elizabeth residents' participation in the labor force. Section IV describes the employment available within the city of Elizabeth itself and in the surrounding area and whether the jobs are held by city residents or not.

#### A. Total Employed

The resident employment of Elizabeth increased from 48,490 in 1980 to 50,977 in 1990, for a gain of 5.1 percent (Table 4). More Elizabeth residents, and also a higher proportion of them, were in the labor force in 1990 than in 1980. This increase is due, in part, to the larger proportion of Elizabeth's population that was of working age during these two monitoring periods.

TABLE 4  
RESIDENT EMPLOYMENT AND EMPLOYMENT CHANGE  
BY SIC IN ELIZABETH 1980-1990

<i>Resident Employment</i>	1980	1990	<i>Change</i>	
			<i>Number</i>	<i>Percent</i>
TOTAL EMPLOYMENT	48,490	50,977	2,487	5.1
	<i>1980 Percent</i>	<i>1990 Percent</i>		<i>Change Percent</i>
STANDARD INDUSTRIAL CLASSIFICATION (SIC)				
Manufacturing	38.6	26.4		(31.6)
Wholesale Trade	5.7	5.8		1.8
Retail Trade	11.5	14.3		24.3
Transportation	5.8	8.8		51.7
Communications and Utilities	2.1	2.0		(4.8)
Services	22.6	26.6		17.7
Finance, Insurance, and Real Estate	5.2	5.9		13.5
Construction	3.7	5.7		54.1
Agriculture	0.0	0.0		0.0
Public Sector	4.6	3.9		(15.2)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 5  
RESIDENT EMPLOYMENT BY OCCUPATION AND  
CHANGE IN ELIZABETH 1980-1990

<i>Resident Employment</i>	1980	1990	<i>Change</i>	
			<i>Number</i>	<i>Percent</i>
TOTAL EMPLOYMENT	48,490	50,977	2,487	5.1
	<i>1980 Percent</i>	<i>1990 Percent</i>		<i>Change Percent</i>
OCCUPATIONAL CATEGORY				
Managerial/Executive	14.7	15.7		6.8
Technical/Sales	27.0	29.5		9.3
Services	11.3	13.5		19.5
Farming	0.0	0.0		0.0
Precision Production/Crafts	12.3	11.5		(6.5)
Operators/Laborers	34.3	29.2		(14.9)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

## **B. Employment by Industry**

Historically, Elizabeth residents have worked in manufacturing industries. In 1980, 38.6 percent of Elizabeth residents held manufacturing jobs; by 1990, only 26.4 percent did (see Table 4). While manufacturing declined during the 1980s, Elizabeth residents found more employment in companies providing services; these jobs increased from 22.6 percent in 1980 to 26.6 percent in 1990. Thus by 1990, slightly more Elizabeth residents were employed in services than in manufacturing. The number and proportion of jobs in retail trade also increased during the 1980s, growing from 11.5 percent to 14.3 percent of the total. Together manufacturing, services, and retail trade account for over two-thirds of Elizabeth residents' jobs.

The remaining one-third of residents' jobs are spread over half a dozen sectors, some of which show dramatic growth. During the 1980s, jobs in transportation and in construction increased by half. Jobs in finance, insurance, and real estate increased more modestly. Wholesale trade increased slightly, while communications and utilities decreased slightly. Public-sector employment, accounting for only a small proportion of the total number of jobs held by residents, decreased by 15.2 percent between 1980 and 1990.

## **C. Employment by Occupation**

Between 1980 and 1990, the occupations held by Elizabeth residents show less dramatic changes than do the industrial sectors, as displayed in Table 5. Predictably, the largest increase is services employment, which grew by 19.5 percent. Sales and technical jobs increased from 27.0 percent to 29.5 percent, while management and executive employment rose from 14.7 percent to 15.7 percent.

Employment as operators and laborers declined from 34.3 percent in 1980 to 29.2 percent in 1990. Employment in precision production and crafts decreased from 12.3 percent to 11.5 percent. Both of these reflect the decline in the manufacturing sector noted in Section III B.

## **D. Unemployment Levels**

While the 1980s were, overall, a prosperous time for New Jersey, the recessions at the beginning and end of the decade took their toll. Unemployment in Elizabeth in 1980 was 8.4 percent; by 1990, it had increased to 9.9 percent (Table 6). These contrasting patterns are shown in 1990 by a higher proportion of Elizabeth residents who were employed, while simultaneously a larger proportion were unemployed. Although the professionals interviewed for this report do not have precise statistics, their sense is that unemployment has risen even more during the past two years.

TABLE 6  
RESIDENT UNEMPLOYMENT AND  
CHANGE IN ELIZABETH 1980-1990

City	Unemployment Level		Change Percent
	1980 Percent	1990 Percent	
ELIZABETH	8.4	9.9	17.9

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 7  
PERCENT OF HOUSEHOLDS HAVING  
WAGE AND SALARY INCOME AND  
CHANGE IN ELIZABETH 1979-1989

Local Government	Households With Wage or Salary Income		Change Percent
	1979 Percent	1989 Percent	
ELIZABETH	76.6	77.5	1.2
UNION COUNTY	80.1	79.5	(0.1)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 8  
AUTOMOBILE OWNERSHIP AND  
CHANGE IN ELIZABETH 1980-1990

City	Percent of Households Having at Least One Automobile		Change Percent
	1980 Percent	1990 Percent	
ELIZABETH	75.6	75.5	(0.1)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

### E. Households with Wage and Salary Income

In 1979, 76.6 percent of Elizabeth households received wage or salary income, whereas 80.1 percent of those in Union County did (Table 7). During the next decade, the proportion of households in Elizabeth receiving income increased to 77.5 percent while those in Union County decreased slightly to 79.5 percent. Therefore, by 1989 the gap had narrowed, although the proportion of Elizabeth households that received wage or salary income was still lower than those in all of Union County.

### F. Household Automobile Ownership

The level of automobile ownership by residents of Elizabeth showed no change during the last decade. In 1980, 75.6 percent of Elizabeth households had at least one automobile; in 1990, 75.5 percent did (Table 8). This is a higher rate of car ownership than is found in any of the other major New Jersey cities considered in the Urban Transportation Supplement, which range from 47 percent in Atlantic City to 73 percent in Paterson.

## IV. "AT-PLACE" EMPLOYMENT PROFILE

At-place employment refers to the jobs located within a specific geographic area—city, county, labor area.<sup>1</sup> At-place employment is measured by covered employment, which contains all the jobs that are covered by New Jersey's unemployment insurance program. Covered employment includes most private-sector and public-sector employment in the jurisdiction.

During the 1980s, Elizabeth lost one-sixth of the private-sector covered employment jobs located within the city. Most of the lost jobs were in manufacturing. Although other industrial sectors, especially services, transportation, and retail trade grew, their growth did not offset the loss in manufacturing. Contrasting the city of Elizabeth with its labor area, more jobs within the city are in transportation and wholesale trade, while jobs in the region are concentrated more in services and retail trade. This pattern for Elizabeth reflects its history as an industrial city and transportation center but also the declining role of manufacturing in the city itself as in virtually all such cities over the past decades.

<sup>1</sup> Labor area or labor market area (LMA) is a geographic area consisting of a central community and contiguous areas that are economically integrated into that community. Within a labor market area, workers can generally change jobs without relocating which makes jobs of a similar type mutually competitive. This is the definition of a labor market. The Bureau of Labor Statistics defines LMAs in terms of entire counties, except in New England where cities and towns are used. LMAs are categorized as either major, which are usually coterminous with a Metropolitan Statistical Area (MSA), or as small.

The information from Section IV, combined with that from Section III above, shows the differences between the jobs that city residents hold versus jobs actually available within the city of Elizabeth. More Elizabeth residents work in manufacturing, retail trade, services, finance/insurance/real estate, and construction than there are jobs located in the city. Since not all jobs in the city are held by city residents, some 33,700 residents worked outside Elizabeth during 1990.

#### A. In the City

Covered employment in Elizabeth decreased by 17.5 percent over the 1980s, falling from 54,658 in 1980 to 45,104 in 1990. Table 9 shows the total number of jobs included in covered employment and the proportion of these jobs in each industrial sector. Only services, retail trade, and construction actually gained jobs, although several sectors increased their proportional shares. Manufacturing, the dominant industry in Elizabeth through 1980, lost more than one-third of its jobs during the decade; its share of decreased total employment fell from 26.7 percent in 1980 to 17.4 percent in 1990. The proportion in two other industrial categories also declined sharply: communications and utilities decreased from 3.1 to 2.4 percent of Elizabeth's covered employment, for a 26.6 percent loss in share; while finance, insurance and real estate (FIRE) decreased from 4.0 to 3.5 percent, for a 12.5 percent loss. In addition, public-sector employment declined slightly, from 13.8 in 1980 to 13.3 percent in 1990, for a 3.6 percent loss.

No other industrial category grew at a sufficient rate to offset the decline in manufacturing. However, service industries' share increased from 15.5 percent in 1980 to 20.8 percent in 1990. Retail trade and construction also grew in actual jobs as well as increasing proportionately, although their shares of the jobs are much smaller than services. Although the transportation sector lost jobs, its share of covered employment in Elizabeth increased from 16.8 percent in 1980 to 19.2 percent in 1990. Wholesale trade also increased their relative share of employment in Elizabeth, although the number of jobs in both sectors fell.

The difference between employment of the Elizabeth work force and the jobs available in the city may be seen by viewing Table 10. In 1990, a total of 50,977 Elizabeth residents were employed. That year there were 45,104 covered employment jobs within the city of Elizabeth. Therefore, even if residents' skills perfectly paralleled available jobs, 10 percent of Elizabeth residents would have to find employment outside the city.

If public-sector and private-sector jobs are considered separately, the difference is even more significant: 1,980 Elizabeth residents work in public-sector jobs, whereas 5,983 public sector jobs exist in Elizabeth; on the other hand, 48,997 residents work in private

TABLE 9  
"AT-PLACE"<sup>1</sup> EMPLOYMENT AND EMPLOYMENT  
CHANGE IN ELIZABETH 1980-1990

Employment By Industry	Total		Change	
	1980	1990	Number	Percent
<b>TOTAL</b>	54,658	45,104	(9,554)	(17.5)
	<i>1980</i>	<i>1990</i>	<i>Change</i>	<i>Percent</i>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
<b>STANDARD INDUSTRIAL CLASSIFICATION (SIC)</b>				
Manufacturing	26.7	17.4	(34.8)	
Wholesale Trade	9.6	10.6	10.4	
Retail Trade	8.1	9.8	21.0	
Transportation	16.8	19.2	14.3	
Communications and Utilities	3.1	2.4	(26.6)	
Services	15.5	20.8	34.2	
Finance, Insurance, and Real Estate	4.0	3.5	(12.5)	
Construction	2.1	3.0	42.9	
Agriculture	0.2	0.0 <sup>2</sup>	(80.4)	
Public Sector	13.8	13.3	(3.6)	

**Note:** 1. "At-place" employment statistics include private-sector covered employment and city and federal government covered employment recorded in September 1990.  
2. Less than 0.05 per cent.

**Source:** New Jersey Department of Labor, *Covered Employment Trends*. 1980, 1990.

TABLE 10  
RESIDENT AND "AT-PLACE"<sup>1</sup>  
EMPLOYMENT—TOTAL AND BY SIC—1990  
ELIZABETH

Employment By Industry	1990	1990	Ratio of
	Resident Employment	"At-Place" Employment	"At-Place" Employment to Resident Employment
<b>TOTAL</b>	50,977	45,104	88.5
<b>STANDARD INDUSTRIAL CLASSIFICATION (SIC)</b>			
Manufacturing	13,446	7,854	58.4
Wholesale Trade	2,957	4,778	161.6
Retail Trade	7,308	4,417	60.4
Transportation	4,500	8,641	192.0
Communications and Utilities	1,031	1,095	106.2
Services	13,563	9,377	69.1
Finance, Insurance, and Real Estate	2,992	1,589	53.1
Construction	2,905	1,348	46.4
Agriculture	295	22	7.5
Public Sector	1,980	5,983	302.2

**Note:** 1. "At-place" employment statistics include private-sector covered employment and city and federal government covered employment recorded in September 1990.

**Source:** New Jersey Department of Labor, *Covered Employment Trends*. 1990. U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990*.

sector jobs but only 39,117 private sector jobs are available in the city. If all residents working in public sector jobs did so within the city, and all private sector jobs in the city were held by residents, nearly 10,000 residents—one-fifth—still would have to find work outside the city.

Comparing the Standard Industrial Classification (SIC) categories in which Elizabeth residents are employed with those of the jobs available within the city shows the degree of difference by industrial sector. More Elizabeth residents work in manufacturing, retail trade, services, finance/insurance/real estate, construction, and agriculture than there are jobs located in the city<sup>1</sup>. Therefore, at least some of the residents working in these industries must find employment outside the city.

In fact, of course, all jobs located in the city are not filled by Elizabeth residents. Figure 1 in Section VI, Present and Future Work Locations, shows that 34 percent of the residents did work in the city. Thus, in 1990, about 33,700 residents found their work outside Elizabeth.

#### **B. In the Labor Area**

The covered employment in the Elizabeth labor area in 1990 is not directly comparable to 1980 data, since, as was discussed in the commuting patterns section, Elizabeth's labor area changed between 1980 and 1990. In 1990 covered employment in the former labor area of Union, Essex, Morris, and Somerset counties increased by 12 percent to 995,727. However, the 1990 covered employment in the newly constituted labor area of Union, Essex, Morris, and Sussex counties was 892,076. To allow direct comparison before 1980 and 1990, Table 11 presents at place employment for the four counties that constituted the Elizabeth labor area in 1990.

Between 1980 and 1990, the Elizabeth labor area gained 66,158 jobs, or 8.0 percent. Among the industrial sectors, only manufacturing lost jobs, but it lost 64,500 jobs; as a result, manufacturing declined from 26.6 percent of the jobs in 1980 to 17.4 percent in 1990. Services increased from 20.5 percent to 27.4 percent; thus by 1990, services was by far the dominant sector in the labor area. Although the number of jobs was smaller, the proportion of jobs in agriculture, construction, and transportation grew substantially; FIRE

<sup>1</sup> "Resident employment" in the tables above is not identical to "working residents" in the figures in Section VI below. In counting resident employment, the Census includes those with a job who were not at work during the reference week, but excludes members of the Armed Forces. Conversely, in counting working residents, the Census includes members of the Armed Forces, but excludes people who had a job but did not work during the Census reference week. For more complete descriptions, see the Census definitions of "Employment Status" and "Journey to Work."

TABLE 11  
 "AT-PLACE" EMPLOYMENT AND EMPLOYMENT  
 CHANGE BY SIC IN THE ELIZABETH LABOR AREA<sup>1</sup> 1980-1990

	Total		Change Percent
	1980	1990	
ELIZABETH LABOR AREA	825,918	892,076	8.0
	1980 Percent	1990 Percent	Change Percent
STANDARD INDUSTRIAL CLASSIFICATION (SIC)			
Manufacturing	26.6	17.4	(34.5)
Wholesale Trade	6.4	6.7	5.6
Retail Trade	13.1	13.5	2.7
Transportation	4.5	5.1	12.8
Communications and Utilities <sup>2</sup>	3.1	3.1	(2.6)
Services	20.5	27.4	33.7
Finance, Insurance, and Real Estate	7.4	7.9	7.0
Construction	3.4	3.8	13.1
Agriculture	0.4	0.6	32.9
Public Sector <sup>2</sup>	14.6	14.6	(0.3)

- Note:** 1. The four counties that make up the Elizabeth labor area in 1990 (Essex, Morris, Sussex and Union) are used for both 1980 and 1990 columns; see text for full explanation.  
 2. Due to rounding the SIC percentages for Communications and Utilities and Public Sector appear the same for both 1980 and 1990 despite the decline in these two indicators in the 1980-1990 period.

**Source:** New Jersey Department of Labor. *Covered Employment Trends*. 1980, 1990.

TABLE 12  
 ANNUAL SALARIES FOR DEMAND OCCUPATIONS  
 ELIZABETH-NEWARK PMSA

Type of Employment	Annual Wage (\$)
MANUFACTURING OCCUPATIONS—EXAMPLES	
Drafter	32,110
Maintenance Worker	25,272
Material Handler	21,299
Truck Driver, Heavy	21,817
Warehouse Worker	26,790
SERVICE OCCUPATIONS—EXAMPLES	
Accounting Clerk	22,386
Receptionist	17,316
Computer Operator	26,468
Secretary	27,222
Word Processor	21,164

**Note:** These data do not take into account overtime, premium pay, or shift differential.

**Source:** Trenton, New Jersey, NJDOL. *Regional Labor Market Review-Northern New Jersey Region*, July 1992.

and wholesale trade increased, but at a slower rate. Public-sector employment, retail trade, and communications and utilities remained almost constant.

Comparing the city of Elizabeth and the labor area in 1990 shows that the city has a higher proportion of jobs in transportation and wholesale trade. In contrast, the labor area has a much higher proportion of services, retail trade, and FIRE jobs. The proportion of jobs in manufacturing, communications and utilities, construction and the public sector is only slightly higher in the labor area.

### **C. The Shift to the Services Sector—Implications for Income**

While Elizabeth and one or two of the other cities studied in the Urban Transportation Supplement have gained almost as many jobs in services as they have lost in manufacturing, this replacement of jobs results in an overall loss of income. Table 12 shows annual wages for approximately equivalent and less-skilled manufacturing and services jobs; the wages in manufacturing average 10-20 percent higher. Therefore, replacing manufacturing jobs with services positions usually results in a net loss of income in the jurisdiction in which this is taking place.

## **V. EMPLOYMENT BASE AND EMPLOYMENT PROJECTIONS FOR THE CITY, COUNTY, AND LABOR AREA**

The previous sections have described the population of Elizabeth, residents' participation in the labor force, and the jobs located in the city of Elizabeth and in the surrounding labor area. This section provides projections of future jobs for the Elizabeth labor area, Union County, the city of Elizabeth, and for the other municipalities within the labor area.

Employment, especially in manufacturing, is projected to decrease in the city, county, and labor area during the next decade. Services and retail employment will increase somewhat in the labor area, although not in Elizabeth and only very slightly in Union County. The details of these changes are described in subsections A, B, and C below. The last subsection identifies the places within the labor area where employment opportunities in new and in existing jobs are projected. Most of the municipalities where Elizabeth residents currently work will lose jobs over the next decade. However, because people currently holding jobs in these municipalities will leave the labor force because of pregnancy, other family reasons, retirement, or death, these are also the places where employment opportunities will exist for central city residents.

The New Jersey State Development and Redevelopment Plan (State Plan) emphasizes concentrating growth in already existing urban centers to decrease suburban sprawl. The Center for Urban Policy Research (CUPR) has devised projections for at-place

employment based on the assumption that the rate of future growth reflects recent rates of growth as well as the State Plan mandate. Tables 13, 14, and 15 display the CUPR at-place employment projections for the city of Elizabeth, Union County, and the Elizabeth labor area, respectively. It should be noted that at-place employment and employment projections of Tables 13-15 include uncovered as well as covered employment, whereas Tables 9-11 include only covered employment.

In Tables 13-15, the employment projections are discussed in terms of three categories. Basic employment includes the SIC categories for manufacturing, construction, transportation, mining, communications, and wholesale trade. Services employment includes finance, insurance, and real estate; professional services, business and repair services; personal services, entertainment, and public administration. Retail trade covers only retail trade.

#### **A. City**

Total employment in Elizabeth in 1990 was 48,131: one-half in basic employment, 40 percent in service, and the remaining 10 percent in retail jobs (Table 13). Since Elizabeth is highly urbanized, it will benefit more than the county as a whole from the New Jersey State Plan's emphasis on concentrating future development in urban centers that already exist. Nevertheless, Elizabeth's total employment is projected to drop to 45,772 by 2000, for a 4.9 percent loss. Basic employment will decline by 2,269 jobs, or 9.2 percent. The services and retail sectors will remain stable, as both experience job losses of less than one-half percent.

#### **B. County**

Total employment in Union County is projected to decrease by 15,109, or 5.7 percent, between 1990 and 2000 (Table 14). Basic employment in Union County will decrease at an even more rapid rate than in the the city of Elizabeth, losing 16,266 jobs, or 13.8 percent, during the next decade. While the services and retail sectors will increase, the projected increases are quite small: 984 jobs, or 0.9 percent, in services; 173 jobs, or 0.5 percent, in retail employment.

#### **C. Labor Area**

Total employment in the Elizabeth labor area for the period 1990-2000 is projected to decrease by 1.4 percent, from 3,500 to 924,100 (Table 15). The changes at the sectoral level will not be uniform, however. Basic employment is projected to decrease by 38,554,

**TABLE 13**  
**"AT-PLACE" EMPLOYMENT AND PROJECTIONS**  
**IN ELIZABETH 1990-2000**  
 (New Jersey State Development and Redevelopment Plan)

	<i>Total Employment</i>	<i>Basic Employment</i>	<i>Services Employment</i>	<i>Retail Employment</i>
1990	48,131	24,589	18,885	4,657
1995	46,105	22,850	18,655	4,600
2000	45,772	22,320	18,813	4,639
<b>CHANGE 1990-2000</b>				
NUMBER	(2,359)	(2,269)	(72)	(18)
PERCENT	(4.9)	(9.2)	(0.4)	(0.4)

*Source:* CUPR Projections: 1990-2000.

**TABLE 14**  
**"AT-PLACE" EMPLOYMENT AND PROJECTIONS**  
**IN UNION COUNTY 1990-2000**  
 (New Jersey State Development and Redevelopment Plan)

	<i>Total Employment</i>	<i>Basic Employment</i>	<i>Services Employment</i>	<i>Retail Employment</i>
1990	266,626	117,881	113,031	35,714
1995	255,601	106,684	113,188	35,729
2000	251,517	101,615	114,015	35,887
<b>CHANGE 1990-2000</b>				
NUMBER	(15,109)	(16,266)	984	173
PERCENT	(5.7)	(13.8)	0.9	0.5

*Source:* CUPR Projections: 1990-2000.

TABLE 15  
 "AT-PLACE" EMPLOYMENT AND PROJECTIONS  
 IN THE ELIZABETH LABOR AREA 1990-2000  
 (New Jersey State Development and Redevelopment Plan)

	<i>Total Employment</i>	<i>Basic Employment</i>	<i>Services Employment</i>	<i>Retail Employment</i>
1990	937,600	343,943	461,286	132,371
1995	920,600	316,239	469,034	135,327
2000	924,100	305,390	480,028	138,685
<b>CHANGE 1990-2000</b>				
<b>NUMBER</b>	(13,500)	(38,554)	18,741	6,315
<b>PERCENT</b>	(1.4)	(11.2)	4.1	4.8

Source: CUPR Projections: 1990-2000.

or 11.2 percent, over this decade. Services employment will increase by 18,741, or 4.1 percent, while retail jobs will grow by 6,315, or 4.8 percent.

**D. Job Growth and Employment Separations in the Elizabeth Labor Area by Municipality—1993–2000**

Another gauge of potential employment for Elizabeth residents may be obtained by combining statewide projections by occupational categories with projections of job growth by municipality. The New Jersey Department of Labor (DOL), Division of Labor Market and Demographic Research, makes projections of job growth and "separations" by occupational category. Growth refers to newly created jobs. Separations are openings created when people leave the labor force for reasons such as death, retirement, pregnancy, or other family reasons; separations do not include movement from one job to another. Because the DOL data are organized by occupational category, they can be used to project employment growth for less-skilled occupations, that is, job growth related to non-professional services, clericals, sales, operators, and laborers.

For each municipality in the labor area, this information is combined with other data sets. For the job-growth portion, the DOL data are combined with data on job growth. For the job-separation portion, the DOL data are combined with job-location information. This allows the projection of less-skilled new jobs distinct from job separations for municipalities in the labor area. The municipalities are shown in Table 16; the methodology is described in a note at the end of the chapter.

Elizabeth is within the Newark labor area. Between 1990 and 2000, the labor area as a whole is projected to lose 13,500 jobs; of these, it is projected to lose 7,700 less-skilled jobs between 1993 and 2000. These job losses will not be uniform across the different industrial sectors, or in the individual counties and municipalities. Among the industrial sectors, the basic sector will lose 19,000 less-skilled jobs, while the services and retail sectors together will gain 11,300 between 1993 and 2000. Jobs in Essex and Union counties will decline, Essex by 8,000 and Union by 7,200, while Morris and Sussex will grow by 6,200 and 1,300 respectively. By municipality, Newark will lose 5,000 less-skilled jobs, Linden will lose 2,700, Elizabeth, Union, East Orange and Bloomfield will lose 1,100-1,400 each, while Nutley, New Providence, Clark and Hillside will each lose 500-800 jobs. A few municipalities will evidence less-skilled job growth: Parsippany-Troy Hills will gain 1,800; Millburn, Roseland, East Hanover and Summit 500 each.

Precisely those municipalities in which many Elizabeth residents currently work are those projected to experience less-skilled employment loss between 1993 and 2000: Elizabeth, Newark, Linden, and Union. Few Elizabeth residents work in the communities

of the labor area that are projected to gain jobs. Summit and Millburn are the nearest; to reach them from downtown Elizabeth by public transit takes an hour and requires a transfer (transit from most residential neighborhoods requires another bus). Therefore, job growth will provide only limited opportunities for Elizabeth residents.

Although few new jobs are projected in the Elizabeth labor area, job separations will provide opportunities in those municipalities where Elizabeth residents currently do work, especially Elizabeth, Newark, Union Township, Springfield, Linden, and Clark. Far more less-skilled separations are projected than are new jobs; these will provide substantial opportunities for Elizabeth residents. During the period from 1993-2000, some 109,000 job separations are projected. By industrial sector, these separations will be primarily in the retail and industrial sectors, with only 9,000 job opportunities in manufacturing. Essex County will experience 47,000 separations during the seven-year period, Morris 30,000, Union 28,000, and Sussex 4,000. Among municipalities, those that have the most employment now will have the largest number of separations from 1993 to 2000: Newark will have 16,000 separations; Morristown, Parsippany-Troy Hills, Elizabeth, Livingston, and Union 4,000-6,000 each; and West Orange, Millburn, Bloomfield, East Orange, Fairfield, Montclair, Cranford, Linden, Hanover, and Florham Park 1,750-3,000.

Table 16 lists the number of less-skilled job opportunities by municipality within the Elizabeth labor area. From a transportation point of view, the density of these opportunities is important. Therefore, Map A displays the less-skilled employment growth in terms of jobs per square mile, while Map B displays the less-skilled employment separations in the same terms. Rather than showing all municipalities in the labor area, these maps show just the area within about 15 miles of Elizabeth.

Map A displays the density of projected new less-skilled jobs. Elizabeth is projected to lose less-skilled jobs between 1993 and 2000, as are most of the communities surrounding it, especially to the north and west. However, slightly more distant communities to the northwest along I-78—Maplewood, Millburn, Summit, Mountainside, Watchung, and Warren, and further northwest in Morris County—are projected to gain up to 100 jobs per square mile. A few communities to the north and west—nearby Roselle Park and more distant Roseland and North Plainfield—are projected to gain more than 100 jobs per square mile. Communities to the southwest and northeast of Elizabeth are also projected to gain jobs. Jersey City, Secaucus, and Weehawken will gain more than 100 jobs per square mile, while Bayonne and Hoboken will gain less than 100 less-skilled jobs per square mile. To the southwest, Woodbridge, Metuchen, and Highland Park are projected to gain the most jobs per square mile, while Carteret, Rahway, Perth Amboy,

TABLE 16  
LESS-SKILLED JOB GROWTH AND JOB OPPORTUNITIES THROUGH SEPARATIONS— 1993-2000  
ELIZABETH LABOR AREA <sup>1</sup>

COUNTY	New Less-Skilled Jobs 1993-2000			Less-Skilled Separations <sup>2</sup> 1993-2000			Total Less-Skilled Jobs and Separations <sup>2</sup> 1993-2000			
	Basic	Retail	Services	Basic	Retail	Services	Basic	Retail	Services	Total <sup>3</sup>
<b>ESSEX COUNTY</b>										
Belleville township	-376	-74	-131	122	448	889	-254	374	758	879
Bloomfield township	-771	-278	-280	203	872	982	-568	594	701	727
Caldwell borough	-32	42	83	17	159	356	-15	201	439	625
Cedar Grove township	-142	5	10	58	145	362	-84	150	373	438
City of Orange township	-147	23	59	100	300	851	-47	323	910	1,185
East Orange city	-448	-122	-730	87	268	1,795	-361	146	1,064	850
Essex Fells township	-6	-1	-3	1	5	25	-4	4	22	22
Fairfield township	-217	167	242	588	731	1,183	370	898	1,425	2,693
Glen Ridge borough	-7	1	18	11	5	115	4	6	133	144
Irvington township	-360	-42	-83	135	388	858	-225	346	775	897
Livingston township	-375	181	258	71	1,574	2,505	-304	1,755	2,763	4,214
Maplewood township	-14	63	112	147	269	538	133	331	650	1,114
Millburn township	-206	377	302	64	1,549	1,385	-142	1,926	1,687	3,471
Montclair township	-210	60	163	43	566	1,715	-167	626	1,879	2,338
Newark city	-3,922	-212	-828	1,863	2,620	11,417	-2,059	2,408	10,588	10,938
North Caldwell	-13	-2	-32	2	5	71	-11	2	39	30
Nutley township	-784	30	45	285	325	549	-499	355	595	452
Roseland borough	-98	51	529	80	130	1,498	-18	181	2,027	2,190
South Orange city	-86	-25	-57	12	239	609	-74	215	552	693
Verona township	-28	83	119	39	246	396	11	329	515	855
West Caldwell township	-213	58	48	203	479	442	-10	538	490	1,017
West Orange township	-266	184	327	128	1,033	2,054	-138	1,218	2,382	3,461
<b>TOTAL FOR ESSEX</b>	-8,721	569	172	4,259	12,357	30,596	-4,462	12,926	30,768	39,232
<b>MORRIS COUNTY</b>										
Boonton town	-137	-17	-25	34	108	153	-103	91	128	116
Boonton township	-109	0	0	24	8	105	-85	8	104	27
Butler borough	-33	22	35	25	93	137	-8	115	172	279
Chatham borough	-67	18	40	28	131	284	-39	148	324	433
Chatham township	-25	15	22	7	92	124	-18	107	146	235
Chester borough	-21	83	82	7	202	189	-14	285	271	541
Chester township	-16	4	11	6	40	91	-10	44	101	136



TABLE 16 (continued)  
 LESS-SKILLED JOB GROWTH AND JOB OPPORTUNITIES THROUGH SEPARATIONS—1993-2000  
 ELIZABETH LABOR AREA <sup>1</sup>

COUNTY	New Less-Skilled Jobs 1993-2000			Less-Skilled Separations <sup>2</sup> 1993-2000			Total Less-Skilled Jobs and Separations <sup>2</sup> 1993-2000			
	Basic	Retail	Services	Basic	Retail	Services	Basic	Retail	Services	Total <sup>3</sup>
<b>SUSSEX COUNTY</b>										
Andover borough	-13	16	62	7	41	150	-6	57	212	263
Andover township	-9	5	18	4	22	76	-5	26	94	115
Branchville borough	-19	12	92	5	32	235	-14	44	327	357
Byram township	-6	10	17	2	26	43	-3	37	60	94
Frankford township	-2	27	37	3	41	53	1	68	90	159
Franklin borough	-13	54	37	17	124	82	4	178	119	301
Fredon township	-2	3	6	2	6	11	0	9	17	26
Green township	-5	-1	-4	1	3	11	-4	2	8	6
Hamberg borough	-51	0	1	13	29	53	-38	29	54	45
Hampton township	-2	-2	-3	0	14	17	2	11	15	24
Hardyston township	2	20	15	5	37	26	7	57	41	105
Hopatcong borough	-4	22	34	6	54	78	2	76	112	190
Lafayette township	46	36	70	17	49	91	63	85	161	309
Montague township	-8	38	11	2	100	28	-6	138	40	172
Newton town	-54	133	239	27	362	614	-26	496	853	1,323
Ogdensburg borough	-5	3	3	2	17	15	-2	20	18	35
Sandyston township	-5	-3	-7	1	3	7	-4	0	0	-4
Sparta township	21	85	200	30	157	348	51	242	548	841
Stanhope borough	-9	10	19	7	40	75	-2	49	94	141
Stillwater township	2	1	12	2	3	21	4	4	32	41
Sussex borough	-18	54	57	15	141	139	-2	195	196	389
Vernon township	-43	5	22	10	75	289	-33	80	311	359
Walpack township	0	-2	0	0	8	0	0	6	0	6
Wantage township	-1	14	22	8	37	53	6	51	74	132
<b>TOTAL FOR SUSSEX</b>	<b>-198</b>	<b>541</b>	<b>961</b>	<b>186</b>	<b>1,419</b>	<b>2,516</b>	<b>-12</b>	<b>1,961</b>	<b>3,478</b>	<b>5,427</b>

TABLE 16 (continued)

**LESS-SKILLED JOB GROWTH AND JOB OPPORTUNITIES THROUGH SEPARATIONS—1993-2000**  
**ELIZABETH LABOR AREA<sup>1</sup>**

COUNTY	New Less-Skilled Jobs 1993-2000			Less-Skilled Separations <sup>2</sup> 1993-2000			Total Less-Skilled Jobs and Separations <sup>2</sup> 1993-2000			
	Basic	Retail	Services	Basic	Retail	Services	Basic	Retail	Services	Total <sup>3</sup>
<b>UNION COUNTY</b>										
Berkeley Heights town	-82	6	31	28	100	441	-55	106	472	524
Clark township	-362	-57	-88	70	357	457	-293	300	369	376
Cranford township	-323	-18	-43	85	574	1,149	-238	556	1,106	1,424
Elizabeth city	-1,078	-10	-31	469	1,095	2,842	-609	1,085	2,812	3,288
Fanwood borough	-15	28	48	10	90	132	5	118	180	294
Garwood borough	-79	28	12	31	203	74	-48	231	87	270
Hillside township	-408	-58	-91	84	301	392	-324	243	301	219
Kenilworth borough	-364	72	101	176	224	261	-188	296	363	471
Linden city	-2,032	-258	-416	287	689	919	-1,745	431	503	-812
Mountainside borough	-94	27	118	53	155	565	-41	182	683	824
New Providence borough	-393	-50	-344	54	171	978	-339	121	634	416
Plainfield city	-270	14	46	84	376	1,063	-186	389	1,109	1,312
Rahway city	-287	129	315	202	392	793	-85	521	1,108	1,544
Roselle borough	-247	-11	-24	53	153	285	-194	142	261	209
Roselle Park borough	5	63	97	26	166	211	31	229	308	568
Scotch Plains township	-61	7	17	16	191	388	-45	198	405	557
Springfield township	-186	65	109	81	679	942	-105	744	1,051	1,691
Summit city	-248	142	602	110	502	1,757	-139	645	2,359	2,865
Union township	-1,089	-96	-195	266	1,468	2,464	-823	1,372	2,269	2,819
Westfield town	-116	71	154	33	534	958	-83	605	1,112	1,635
Winfield township	0	0	-4	0	0	3	0	0	-1	-1
<b>TOTAL FOR UNION</b>	<b>-7,730</b>	<b>94</b>	<b>416</b>	<b>2,217</b>	<b>8,421</b>	<b>17,074</b>	<b>-5,513</b>	<b>8,515</b>	<b>17,490</b>	<b>20,493</b>
<b>LABOR AREA TOTAL</b>	<b>-19,093</b>	<b>3,497</b>	<b>7,851</b>	<b>9,053</b>	<b>30,477</b>	<b>69,418</b>	<b>-10,040</b>	<b>33,974</b>	<b>77,269</b>	<b>101,203</b>

**Note:** 1. Labor area is a geographic area consisting of a central community and contiguous areas that are economically integrated into that community. Within a labor area, workers can generally change jobs without relocating. See discussion in text.

2. Separations are openings created when people leave the labor force for reasons such as death, retirement, pregnancy, or other family reasons. Separations do not include movement from one job to another. See discussion in text.

3. Numbers may not total exactly due to rounding.

**Source:** CUPR Projections: 1993-2000.





Edison, South Plainfield, Piscataway, and Middlesex are projected to gain at a more modest rate.

Map B shows density of opportunities created by separations from less-skilled jobs. The communities with the highest density of separations—more than 400 per square mile—are those to the north of Elizabeth: Jersey City, Hoboken, Weehawken, Secaucus, Newark, Belleville, East Orange, Orange, Irvington, Union, and Garwood. Elizabeth itself, and the ring of communities father to the northwest and west, are projected to have 200–400 separations per square mile; these include Nutley, Bloomfield, Montclair, West Orange, South Orange Village, Maplewood, Livingston, Millburn, Summit, Springfield, Kenilworth, Roselle Park, Cranford, Westfield. Rahway, Woodbridge, Edison, Metuchen, and the Plainfields are also projected to have 200–400 separations. However, some of the nearest communities—Bayonne, Linden, Carteret, Roselle, Winfield, and Clark—are projected to have fewer than 200 less-skilled separations per square mile during this period.

## VI. PRESENT AND FUTURE WORK LOCATIONS—A MICRO VIEW

In 1989, NJDOT collected data on the work locations of 25,071 Elizabeth residents. Municipalities outside the city of Elizabeth that provide employment for 100 or more Elizabeth city residents are shown in Table 17. The following zip codes define the city of Elizabeth for the purposes of this study: 07201, 07202, 07206, 07207, and 07208. Total reverse commute work trips, as reported in the 1990 Census, are 30,379, out of a total city resident work force of 49,832. Table 17 represents a sample—16,123—which is 53% of the 1990 Census Origin/Destination Employment Data. The NJDOT survey data includes covered employment only.

The overwhelming majority work within a five-mile radius of the city. Nearly one-quarter work within the city itself. Another one-third work in Newark, Linden, and Union Township. Woodbridge, Cranford, Kenilworth, and Edison account for another 20 percent.

### A. City-to-Suburb and In-City Trips in Perspective

Resident workers of the city of Elizabeth have the greatest percentage of reverse commuting among the 7 cities in this study. This 61 percent amounts to 30,000 reverse commute trips, a significant volume. (See Figure 1.) However, a large portion of these trips are destined to the adjacent city of Newark; the actual number of trips to suburban New Jersey locations is lower. Only 34 percent of Elizabeth's resident workforce remains in the city of Elizabeth, while 5 percent commute to New York.

TABLE 17  
 WORK LOCATIONS OF ELIZABETH RESIDENTS  
 IN CITY AND REVERSE COMMUTES  
 1989

County/ Zip Code	Community	Percent Reverse Commute to Community	Percent Reverse Commute to County
<b>ATLANTIC</b>			0.0 <sup>1</sup>
<b>BERGEN</b>			5.2
07407	Elmwood Park	1.3	
07026	Garfield	1.3	
<b>BURLINGTON</b>			0.1
<b>CAMDEN</b>			0.0 <sup>1</sup>
<b>CAPE MAY</b>			0.0 <sup>1</sup>
<b>CUMBERLAND</b>			0.0 <sup>1</sup>
<b>ESSEX</b>			16.1
07111	Irvington	0.8	
07039	Livingston	0.8	
07102, 03, 04, 05, 06, 07, 08, 12, 14	Newark	10.5	
07052	West Orange	0.7	
<b>GLOUCESTER</b>			0.0 <sup>1</sup>
<b>HUDSON</b>			2.7
07302, 03, 04, 05, 06, 07, 08, 10, 11	Jersey City	1.0	
<b>HUDSON-BERGEN</b>			0.8
07032	Kearny-North Arlington <sup>2</sup>		
<b>HUNTERDON</b>			0.1
<b>MERCER</b>			0.2
<b>MIDDLESEX</b>			16.8
07008,	Carteret	1.2	
08817, 20, 37	Edison Township	3.6	
08854	Piscataway	1.3	
07080	South Plainfield	0.7	
07001, 64, 67, 77, 95, 08830, 32, 63	Woodbridge	7.6	
<b>MORRIS</b>			2.6
<b>MONMOUTH</b>			0.6

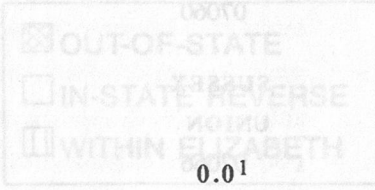


TABLE 17 (continued)

**WORK LOCATIONS OF ELIZABETH RESIDENTS  
IN CITY AND REVERSE COMMUTES  
1989**

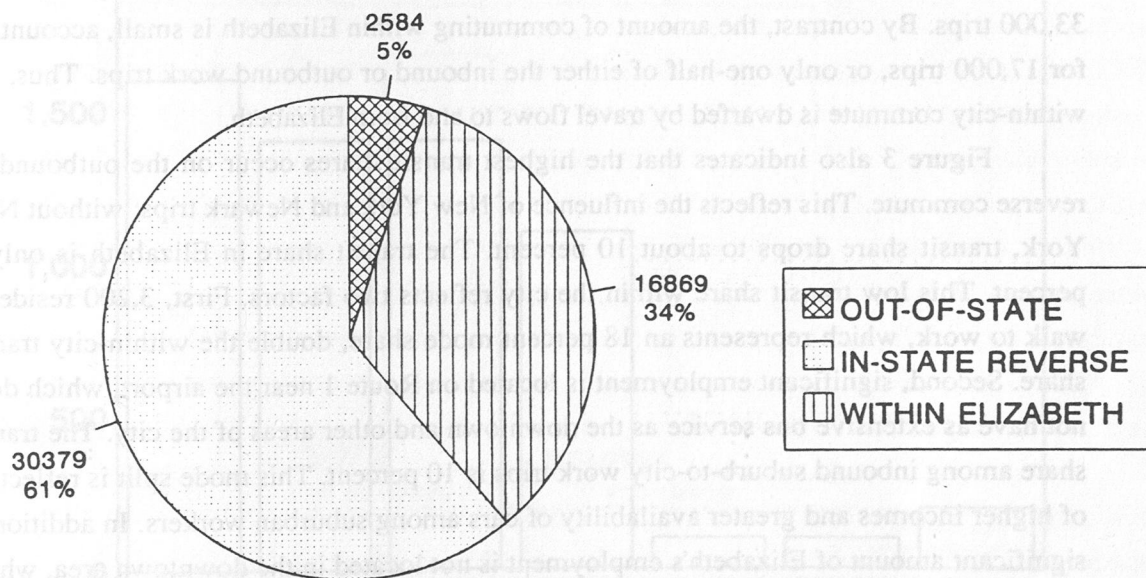
<i>County/ Zip Code</i>	<i>Community</i>	<i>Percent Reverse Commute to Community</i>	<i>Percent Reverse Commute to County</i>
<b>MONMOUTH-MIDDLESEX</b>			
07747	Matawan-Old Bridge <sup>2</sup>		0.1
<b>OCEAN</b>			
08701	Lakewood	1.0	1.1
<b>PASSAIC</b>			
1.2			
<b>SOMERSET</b>			
07417	Franklin	0.7	1.5
<b>SOMERSET-UNION</b>			
07063	Warren-Watchung- North Plainfield-Plainfield <sup>2</sup>		1.0
07060	Warren-Watchung- North Plainfield <sup>2</sup>	0.8	
<b>SUSSEX</b>			
0.0 <sup>1</sup>			
<b>UNION</b>			
07066	Clark	1.0	49.7
07016	Cranford	5.2	
07027	Garwood	1.0	
07205	Hillside	2.0	
07033	Kenilworth	4.8	
07036	Linden	12.4	
07092	Mountainside	0.8	
07065	Rahway	2.8	
07203	Roselle	3.0	
07204	Roselle Park	1.3	
07076	Scotch Plains	0.8	
07081	Springfield	1.6	
07901	Summit	0.6	
07083	Union	10.7	
07090	Westfield	0.8	
<b>WARREN</b>			
0.1			

1. 0.0 Reported reverse commute is less than 0.1%.

2. These jurisdictions, or portions of these jurisdictions, are included within this zip code.

Source: NJDOT 1989 ZIP Code Origin/Destination Data.

**FIGURE 1**  
**WORKSITE DESTINATIONS OF ELIZABETH RESIDENTS**  
 (Total Elizabeth Working Residents—49,832)



Source: 1990 U.S. Census Data STF-3.

Transit ridership among Elizabeth workers is split relatively evenly among four primary destinations, as shown in Figure 2. The city of Elizabeth, Essex County, and New York each account for 1,400 to 1,600 work trips from city residents. The high Essex County figure reflects the proximity of Elizabeth to Newark with its extensive transit service. The large New York ridership reflects the influence of the Northeast Corridor rail line and interstate bus service. Nearby areas of Union County are next in importance, with 1,100 work transit trips. A small portion of transit ridership also has destinations in Middlesex County.

Figure 3 illustrates that both the outbound or reverse commute, and inbound suburb-to-city work trip, are significant travel flows, each with approximately 31,000 to 33,000 trips. By contrast, the amount of commuting within Elizabeth is small, accounting for 17,000 trips, or only one-half of either the inbound or outbound work trips. Thus, the within-city commute is dwarfed by travel flows to and from Elizabeth.

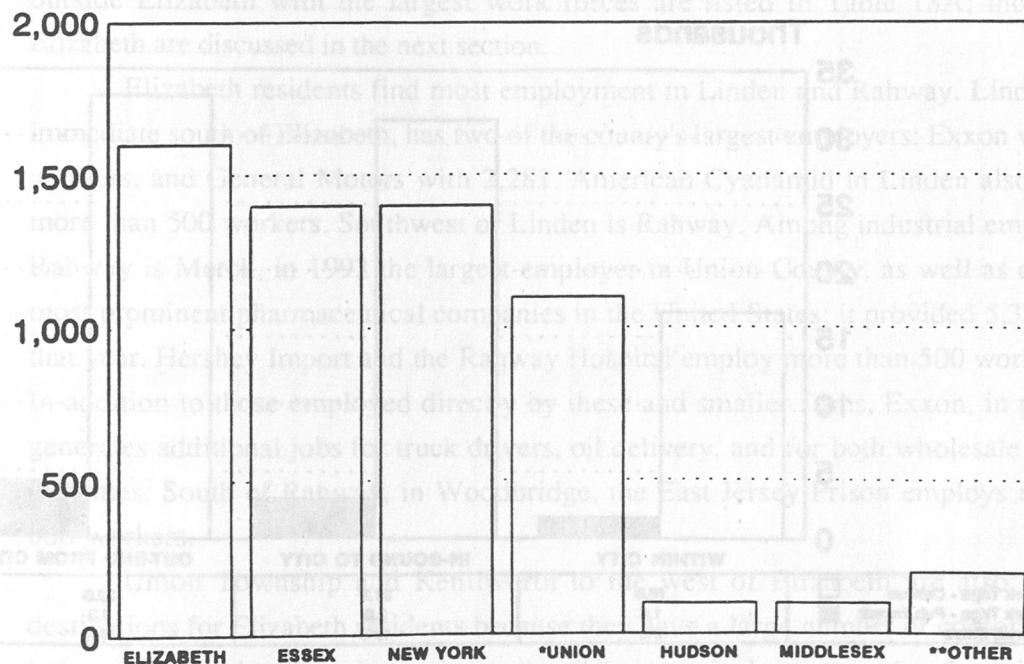
Figure 3 also indicates that the highest transit shares occur on the outbound or reverse commute. This reflects the influence of New York and Newark trips; without New York, transit share drops to about 10 percent. The transit share in Elizabeth is only 9 percent. This low transit share within the city reflects two factors. First, 3,200 residents walk to work, which represents an 18 percent mode share, double the within-city transit share. Second, significant employment is located on Route 1 near the airport, which does not have as extensive bus service as the downtown and other areas of the city. The transit share among inbound suburb-to-city work trips is 10 percent. This mode split is reflective of higher incomes and greater availability of cars among suburban workers. In addition, a significant amount of Elizabeth's employment is not located in the downtown area, which has the most transit service, but instead is on Route 1 near the airport, or in the Elizabethport area. Thus, there is a large component of auto trips both for the suburb-to-city and reverse commute trips.

#### **B. Suburban Job Locations**

The discussion in the sections above is based on aggregate data. To supplement these aggregate level data, interviews with professionals in planning, transportation, economic development, job training and employment placement agencies provided expert judgments about specific areas within the city and in the surrounding area where inner-city residents currently work and where future job opportunities are likely to occur. These professionals identified locations in which residents were most likely to obtain less-skilled employment, although less-skilled positions increasingly require basic knowledge of computers and other advanced technologies. The information in this section is based primarily

**FIGURE 2**  
**WORK TRIP DESTINATIONS OF ELIZABETH RESIDENTS**  
**USING PUBLIC TRANSIT**

(Total Volume of Transit Commutes by Elizabeth Residents—5,900)

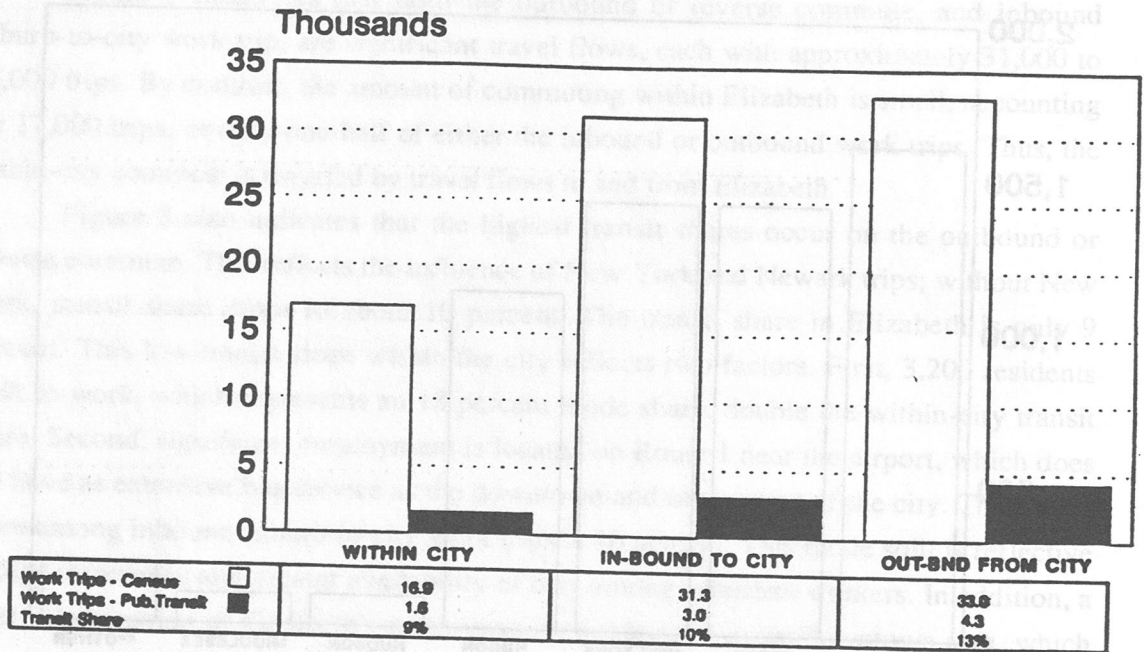


**Notes:** \* Excludes Elizabeth.  
 \*\* Includes Morris, Ocean, Passaic, and Somerset counties.

**Source:** 1990 NJ TRANSIT Rail, Bus, and PATH Ridership Surveys

**FIGURE 3**

**TRANSIT SHARE OF WORK TRIPS  
ELIZABETH METROPOLITAN AREA  
(1990 Census Data and Public Transit Surveys)**



*Notes:* All figures are thousands of riders, except transit share, which is percent share.

*Source:* 1990 U.S. Census STF 3 Data; 1990 NJ TRANSIT Ridership Surveys.

on these interviews, supplemented by data from the Union County Economic Development Corporation and individual companies.

More than 13,000 firms existed in Union County as of May 1991. The Union County Economic Development Corporation lists 393 major employers with more than 100 workers; twenty of these employers have more than 1,000 workers. The largest employers in the county are those in the pharmaceutical and petrochemical industries. While such firms require a high level of skill for many of the jobs, they also require less-skilled workers for production, maintenance, distribution, and clerical tasks. Union County firms outside Elizabeth with the largest work forces are listed in Table 18A; those within Elizabeth are discussed in the next section.

Elizabeth residents find most employment in Linden and Rahway. Linden, to the immediate south of Elizabeth, has two of the county's largest employers: Exxon with 2,397 workers, and General Motors with 2,281. American Cyanamid in Linden also employs more than 500 workers. Southwest of Linden is Rahway. Among industrial employers in Rahway is Merck, in 1992 the largest employer in Union County, as well as one of the most prominent pharmaceutical companies in the United States; it provided 5,325 jobs in that year. Hershey Import and the Rahway Hospital employ more than 500 workers each. In addition to those employed directly by these and smaller firms, Exxon, in particular, generates additional jobs for truck drivers, oil delivery, and for both wholesale and retail activities. South of Rahway, in Woodbridge, the East Jersey Prison employs more than 800 workers.

Union Township and Kenilworth to the west of Elizabeth are also important destinations for Elizabeth residents because they have a large number of corporations and industries. Schering Plough, another major pharmaceutical company, has facilities in both communities; as with Merck, its production jobs are a source of employment for less-skilled workers. Quality Temps in Union employs more than 1,000 workers; other firms in Union and Kenilworth that employ at least 500 workers include Elastic Nut Shop, Elizabethtown Gas, Harvard Industries, New Jersey Bell, Supermarkets General, and Union Hospital.

Newark has many jobs for which Elizabeth residents would be qualified and to which they could commute. Due to the decreasing economic fortunes of Newark, more Elizabeth residents worked in Newark in 1980 than worked there in 1990.

Elizabeth residents commute to other communities for work. Some jobs are available in parts of Hillside, Irvington, and Perth Amboy, but not as many as in Linden, Rahway, or Union Township. Some residents find retail work at Woodbridge Mall.

TABLE 13A  
 SPECIFIC SUBURBAN SITES OF EMPLOYMENT  
 AND EMPLOYMENT GROWTH FOR THE REVERSE COMMUTE  
 ELIZABETH

	A Existing Employment or Growth Node	B Site of Primarily Skilled or Less-skilled Employment	C Potential for Jobs at Site	D Potential for Center City Residents at Site
<i>Corridors and Specific Locations</i>				
<b>Linden</b>				
Exxon	Existing	Less-skilled	Moderate	High
GM	Existing	Less-skilled	Moderate	High
American Cyanamid	Both	Both	High	Moderate
<b>Rahway</b>				
East Jersey State Prison	Growth	Less-skilled	Moderate	High
Merck	Both	Both	Moderate	Moderate
Hershey Import	Both	Both	High	Moderate
Rahway Hospital	Existing	Both	High	High
<b>Union and Kenilworth</b>				
Schering Plough	Both	Both	High	Moderate
Quality Temps	Existing	Both	Moderate	High
Elastic Stop Nut	Existing	Both	Moderate	High
Elizabethtown Gas	Existing	Both	Moderate	Moderate
Supermarkets General	Existing	Less-skilled	Moderate	High
Union Hospital	Existing	Both	High	High
New Jersey Bell	Existing	Both	Moderate	Moderate
Kean College	Existing	Skilled	Moderate	Low
<b>Woodbridge Mall</b>	Existing	Less-skilled	Moderate	Moderate
<b>Mountainside, Westfield, Cranford</b>				
Hanco Business Forms	Existing	Less-skilled	Moderate	High
Meridian Nursing Centers	Existing	Less-skilled	High	High
United Counties Trust	Existing	Skilled	Moderate	Low
Macy's Data and Credit Service	Both	Skilled	Moderate	Low

**TABLE 18A (continued)**  
**SPECIFIC SUBURBAN SITES OF EMPLOYMENT**  
**AND EMPLOYMENT GROWTH FOR THE REVERSE COMMUTE**  
**ELIZABETH**

A Existing Employment or Growth Node	B Site of Primarily Skilled or Less-skilled Employment	C Potential for Jobs at Site	D Potential for Center City Residents at Site
<i>Corridors and Specific Locations</i>			
Millburn, Summit, New Providence,	Existing, Growth, or Both	High, Moderate, or Low	High, Moderate, or Low
Berkeley Heights, Murray Hill	Both	High	Low
AT&T Bell Labs	Both	High	Low
Ciba-Geigy	Both	High	High
Overlook Hospital	Both	High	Low
Prudential Life Insurance	Both	High	Low
The Boc Group	Both	High	Moderate
Aircro Gases	Both	High	High
Fair Oaks Hospital	Both	High	High
John E. Runnels Hospital	Both	High	High
Lumbermen's Mutual Casualty Co.	Both	High	Low

**Source:** Union County Economic Development Corporation, *Union County Major Employers List*, May 1992. CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

Other

Route 1 hotels, services

Moderate

High

*Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.*

Residents do domestic work in Westfield, Cranford, Fanwood, Springfield, and Staten Island (New York). State workers go by train to Trenton.

In the western part of the county, communities such as Summit, New Providence, Murray Hill, and Berkeley Heights have office parks as well as industry. Although many of the jobs require a high level of skills, others would provide good job opportunities for Elizabeth residents. Employers with more than 1,000 workers include AT&T-Bell Laboratories, Ciba-Geigy, Overlook Hospital, Prudential Life Insurance, and The Boc Group; those with more than 500 workers include Airco Gases, Fair Oaks Hospital, the John E. Runnels Hospital, Lumbermen's Mutual Casualty Co., and Celanese Research and Hoechst Celanese. However, this western part of the county and adjacent Morris County are relatively inaccessible by public transit.

### C. In-City Job Locations

Within the city of Elizabeth, there are nearly 2,000 business firms. The Union County Economic Development Corporation lists seven employers in the city that have more than 1,000 workers, and another four have at least 500. The areas of the city where most employment is located, and specific sites offering most employment, are listed in Table 18B. Employment within the city is primarily in health-related fields, retail establishments, government offices, and industrial settings. Each is discussed in turn below.

Elizabeth has three major hospitals; they are among the largest employers in the city. St. Elizabeth employs 1,243, while Elizabeth General West and Elizabeth General East have a combined total of 2,500 workers. All three have expanded in recent years and have continued to take on new hires even during the recession; they provide stable employment. Workers with a high school education qualify for about 35 percent of hospital jobs, primarily in the areas of security, housekeeping, food service, clerical, and nurse's aides.

Elizabeth's retail shopping district has weathered the recession reasonably well. It caters primarily to inner-city residents and less to suburban residents since the major stores have left. New employment positions are rare; many of the jobs that do exist are minimum-wage positions. However, the midtown retail area will remain an important source of replacement jobs for less-skilled city residents. Two other shopping districts in Elizabeth—along Bayway and Elizabeth Avenues—have both benefited enormously from recent Hispanic immigration. The influx of Cubans into the Bayway area in particular has revitalized local retail opportunities. Both neighborhoods will remain a valuable source of jobs for less-skilled immigrants.

TABLE 18B  
 SPECIFIC CITY SITES OF EMPLOYMENT  
 AND EMPLOYMENT GROWTH FOR THE IN-CITY JOURNEY TO WORK  
 ELIZABETH

	A Existing Employment or Growth Node	B Site of Primarily Skilled or Less-skilled Employment	C Potential for Jobs at Site	D Potential for Center City Residents at Site
<i>Corridors and Specific Locations</i>	Existing, Growth, or Both	Skilled, Growth, Less-skilled, or Both	High, Moderate, or Low	High, Moderate, or Low
<b>Downtown</b>	Existing	Less-skilled	Low	Moderate
Midtown retail district	Existing	Less-skilled	Low	Moderate
Elizabeth Avenue retail district	Existing	Less-skilled	Moderate	High
Bay Way Avenue shopping district	Existing	Less-skilled	Moderate	High
<b>Hospitals</b>	Both	Both	High	Moderate
St. Elizabeth's	Both	Both	High	Moderate
Elizabeth General East	Both	Both	High	Moderate
Elizabeth General West				
<b>County/City/State/Federal Government</b>	Existing	Both	Low	Low
Union County Offices	Existing	Both	Low	Low
Elizabeth City Hall				
<b>Colleges/Schools</b>	Both	Skilled	Moderate	Low
Union County College				
<b>Industrial Parks</b>	Both	Less-skilled	High	High
Port Authority Industrial Park (IKEA)	Both	Less-skilled	Moderate	Moderate
Seaport Industrial Center	Both	Less-skilled	High	High
Dowd & Division (Wakefern Foods)	Both	Less-skilled	High	High
Elizabeth Industrial Park	Both	Less-skilled		
<b>Ports/Airports</b>	Both	Both	High	High
Newark International Airport	Both	Both	Moderate	Moderate
Port Elizabeth				
<b>Other</b>	Both	Less-skilled	Moderate	High
Route 1 hotels, services				

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

Elizabeth is the county seat of Union County; as such it is the site of both the city and county offices. Although the city and county are major employers, both have been reducing their work forces. Therefore, few new jobs have been available recently, and few openings are anticipated within the foreseeable future.

Elizabeth has considerable industrial employment, primarily in distribution, especially food distribution. There is still some small manufacturing, but not as much as formerly. Many Elizabeth neighborhoods contain a mix of uses, including industrial. However, the major locations for industrial employment lie in a semicircle on the east and south sides of the city. Going clockwise around Elizabeth, they are the Dowd-Division area, Newark Airport, Port Elizabeth, Elizabeth Industrial Park, Seaport Industrial Center, and Elizabethport.

The Dowd-Division area historically has had industry but has declined over the past few years. It contains scattered small firms, some of which serve the airport less than two miles away. Shop-Rite (Wakefern Foods), on York Avenue, is the largest employer in Elizabeth, with 3,100 employees.

About one-third of Newark Airport lies within Elizabeth. The airport is a major employer of both Elizabeth and Union County residents. The jobs include both skilled and less-skilled labor; many are service jobs; many are low-paying. In addition, many of the jobs require working odd hours, particularly at night. The main growth at the airport has been in international passenger traffic and cargo. If there is further growth, Elizabeth will benefit since it is in a good position to provide warehousing: the firms in the Division-Dowd area are readily accessible.

Within Port Elizabeth the main facility is the Elizabeth Port Authority Marine Terminal. It contains two large terminal operators, Sea-Land Services and Maher Terminals, and about thirty other tenants, primarily warehouses and automobile distributors. About 2,300 people work at Port Elizabeth (as well as another 1,850 in Port Newark). The Port Elizabeth area also includes the Port Authority Industrial Park. Thus far, the only company actually operating in the industrial park is IKEA, a Swedish home furnishings store, with both retail and warehousing; it employs about 250 workers. IKEA has done well in this location and hopes to serve as an anchor for other discount retail firms in this industrial park; the city supports the idea. Currently, this is a good area for jobs, although most are less-skilled and low-paying. If more discount retail firms do come to the area, they will provide still more job opportunities for inner-city Elizabeth residents.

The Elizabeth Industrial Park is a private development that includes more than 50 small companies, mostly manufacturing, distribution, and warehousing. Together, these companies employ about 1,000 workers.

Adjacent to the Elizabeth Industrial Park is the Seaport Industrial Park, built on the old site of the Singer complex. The nine companies currently leasing there include those involved in importing, warehousing, distribution, and mail order production. Together these companies provide more than 500 jobs.

The Elizabethport neighborhood is a mixed residential and industrial area, with some retail. It used to have small manufacturing companies, but these have all left. The city hopes to bring in some marine-related development since a marina already exists there.

## VII. THE EXISTING TRANSPORTATION NETWORK

The sections above have described Elizabeth's population, labor force, and the job opportunities in the city, county, and labor area. This section describes the existing transportation network of major roads, rail transit, bus routes, and alternatives to rail and bus. The next two sections identify specific work-related problems in the network as it currently exists.

Due to Elizabeth's location and history as a hub for both goods and people, the city is connected to the regional road network. Historically, travel was primarily north and south. As a result, it is easier to go north to Newark or south to Linden, Rahway, and Middlesex County than to go to the western part of Union County. The subsections below describe, for the region and then for the city, the major roads, rail, transit bus service, and alternatives to rail and bus.

### A. Roadways—City to Suburb

#### 1. Major Arterials

Table 19A lists the major interstate, state, and county roads around Elizabeth. The network is displayed in Map C. The major interstate roads in the Elizabeth area are I-78, I-278, and I-95 (the New Jersey Turnpike).

I-78 runs east to west north of Elizabeth. It connects with the New Jersey Turnpike to Jersey City and New York. To the west, it passes through Union, Springfield, Summit, and Berkeley Heights, and continues west through Somerset and Hunterdon counties to Pennsylvania.

I-278 runs east-west at the southern end of Elizabeth. It links US Route 1&9 to the New Jersey Turnpike before crossing over the Arthur Kill to Staten Island.

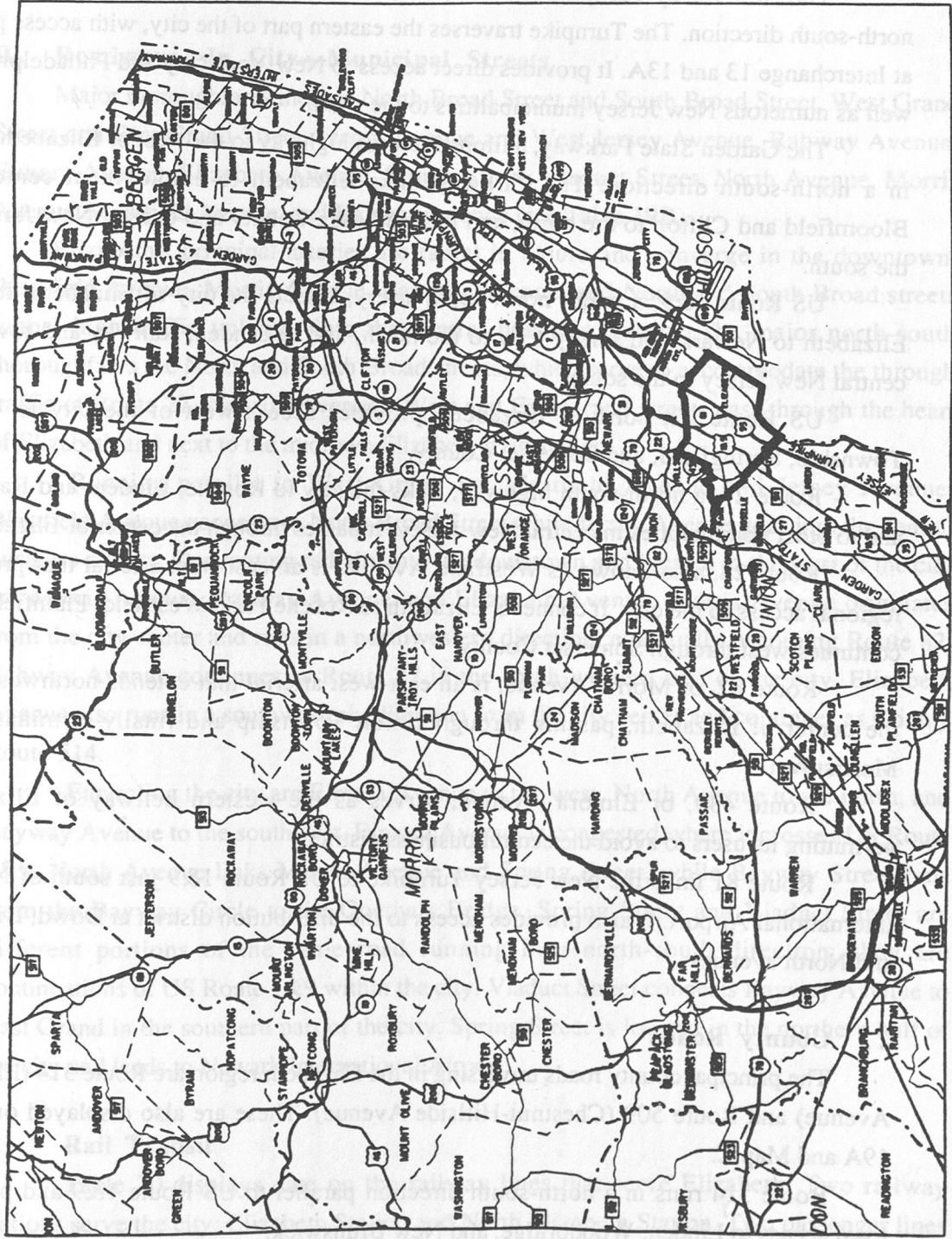
Table 19A also lists the major regional highways and roads around Elizabeth. Along with the New Jersey Turnpike and the Garden State Parkway, Elizabeth is served by

TABLE 19A  
THE EXISTING TRANSPORTATION NETWORK—ROADWAYS  
CITY TO SUBURB  
ELIZABETH

	<i>Location Relative to City</i>	<i>How City is Served</i>
<b>STATE HIGHWAYS</b>		
I-78	E-W (N of city)	Links to New Jersey Turnpike and communities in Union County, western New Jersey, and Pennsylvania
I-278	E-W (S of city)	Links US Route 1&9 to the New Jersey Turnpike, and then continues east to Staten Island, NY
New Jersey Turnpike (I-95)	N-S (E of city)	Major corridor to NYC, Philadelphia, and New Jersey communities in-between
Garden State Parkway	N-S (W of city)	Major north-south corridor within New Jersey
US Route 1&9	N-S (through city)	Major north-south corridor: US Route 1 to Trenton, Philadelphia and south; US Route 9 to Cape May
Route 22	E-W (N of city)	Major east-west corridor through central Union County, western New Jersey and Pennsylvania
Route 27 (Rahway Ave.)	N-S (through city)	North-south corridor connecting Elizabeth to communities in central New Jersey
Route 28 (Westfield Ave.)	E-W (W and through center)	Connects Elizabeth to central Union County and Somerset County communities
Route 82 (Morris Ave.)	E-W (NW from city)	Links Elizabeth to Union Township and Morristown
Route 439 (Elmora, Bayway, and North avenues)	Circles W of city	Outer ring road for western half of city
Route 81	N-S (E of city)	Links New Jersey Turnpike to US Route 1&9
<b>COUNTY ROADS</b>		
Route 514 (Elizabeth Ave.)	N-S (SW of city)	Links city to central and western New Jersey
Route 509	N-S (NW of city)	Connects Route 28 to northern New Jersey

Source: CUPR, 1992.

MAP C  
REGIONAL ROAD SYSTEM IN THE VICINITY OF ELIZABETH



Source: New Jersey Department of Transportation

COMPUTER ROUTE 28 TO ROUTE 111 NEW JERSEY

the following state highways: US Route 1&9, US Route 22, Route 27, Route 28 (Westfield Avenue), Route 82 (Morris Avenue), and Route 81.

The New Jersey Turnpike (I-95 in parts) is a limited-access highway running in a north-south direction. The Turnpike traverses the eastern part of the city, with access points at Interchange 13 and 13A. It provides direct access to New York City and Philadelphia, as well as numerous New Jersey municipalities to the south.

The Garden State Parkway, a limited-access highway to the west of Elizabeth, runs in a north-south direction. The Parkway links Elizabeth to employment centers in Bloomfield and Clifton to the north, and to Middlesex County and coastal New Jersey in the south.

US Route 1&9, a major north-south artery, bisects the city of Elizabeth. It links Elizabeth to Newark and Jersey City to the north, and to Linden, Rahway and towns of central New Jersey to the south.

US Route 22, north of Elizabeth, provides access west of the city to Union Township, Springfield, and Somerset County.

Route 27, a north-south highway, links the city to Roselle, Linden, and Rahway, and to other communities in central New Jersey. It passes through the center of Elizabeth.

Route 28, also known as Westfield Avenue, is an east-west arterial that provides regional access to the city. It connects Elizabeth to Roselle Park, Westfield, Plainfield, and continues west through Somerset County.

Route 82, or Morris Avenue, is an east-west arterial that extends northwest from the center of Elizabeth, passing through Union Township and finally terminating in Morristown.

Route 439, or Elmora Avenue, serves as the western beltway of Elizabeth, permitting its users to avoid the central business district.

Route 81 links the New Jersey Turnpike to US Route 1&9 just south of Newark International Airport. It also provides access to the distribution district at Dowd, Division, and North avenues.

## 2. County Roads

The principal county roads traversing in the Elizabeth region are Route 514 (Elizabeth Avenue) and Route 509 (Chestnut-Hillside Avenue). These are also displayed on Table 19A and Map C.

Route 514 runs in a north-south direction parallel to US Route 1&9 and provides local access to Linden, Woodbridge, and New Brunswick.

Route 509, a north-south arterial, is located to the northwest of Elizabeth. It runs parallel to the Garden State Parkway, connecting Route 28 to destinations in North Jersey. Employment centers served by Route 509 include Hillside and Irvington.

### **B. Roadways—In City—Municipal Streets**

Major thoroughfares include North Broad Street and South Broad Street, West Grand Street and East Grand Street, Jersey Avenue and West Jersey Avenue, Rahway Avenue, Elmora Avenue, Elizabeth Avenue, Spring Street, Viaduct Street, North Avenue, Morris Avenue, Westfield Avenue, and Bayway Avenue (see Table 19B).

Elizabeth's principal arteries are radial in nature and converge in the downtown. Westfield Avenue, Morris Avenue, Rahway Avenue, and North and South Broad streets funnel high traffic volumes into the central business district. The major north-south thoroughfares are North and South Broad streets, which serve to accommodate the through traffic of Route 27 (Newark Avenue). West and East Grand streets pass through the heart of Elizabeth and next to the midtown Elizabeth train station.

Running parallel to West Grand are Westfield Avenue and Jersey Avenue. Westfield Avenue connects to North Broad Street while Jersey Avenue goes into the central business district. Converging radially into the downtown and located to the west of the city are Morris Avenue, Rahway Avenue, and Elizabeth Avenue. Morris Avenue originates from the city center and runs in a northwestern direction, eventually becoming Route 82. Rahway Avenue continues as Route 27 in the south-western part of the city. Elizabeth Avenue also runs in a southwesterly direction from the city center and continues as County Route 514.

Encircling the city are Elmora Avenue to the west, North Avenue to the north, and Bayway Avenue to the southwest. Elmora Avenue is congested where it crosses US Route 1&9. North Avenue links Morris Avenue and Spring Street, while Bayway Street runs from the Bayway Circle to the Goethals Bridge. Spring Street and Viaduct Street are different portions of the same road running in a north-south direction; they are continuations of US Route 1&9 within the city. Viaduct Street connects Bayway Avenue to East Grand in the southern part of the city. Spring Street is located in the northern half of the city and leads to Newark International Airport.

### **C. Rail Transit**

Table 20 displays data on the railway lines that serve Elizabeth. Two railway stations serve the city: Elizabeth Station and North Elizabeth Station. Two passenger lines

TABLE 19B  
THE EXISTING TRANSPORTATION NETWORK—ROADWAYS  
IN CITY  
ELIZABETH

	<i>Location Relative to City</i>	<i>How City is Served</i>
<b>MUNICIPAL STREETS</b>		
Jersey Avenue, West Jersey Avenue	E-W (W of city)	Runs from city center to western suburbs
North Broad Street, South Broad Street	N-S (through city)	Major NS in-city thoroughfare
Rahway Avenue	E-W (SW of city)	Links city center to SW part of city, becomes Route 27
Elmora Avenue	N-S (W of city loops west of city)	Circumferential artery, links city to SW part of city
West Grand Street, East Grand Street	W-E (through CBD)	Major EW thoroughfare going to Elizabeth Station
Elizabeth Avenue	E-W (city center and SE of city)	Links city center to SW part of city
Spring Street	N-S (N of city)	Links between East Grand and Newark Airport
Viaduct Street	N-S (S of city)	Connects Bayway Avenue to East Grand
North Avenue	E-W (loops N of city)	Links Morris and Spring Streets
Morris Avenue	E-W (NW of city)	Runs radially from city center to North Broad Street
Westfield Avenue	E-W (W and city center)	Major road from North Broad Street west to Roselle and Roselle Park
Bayway Avenue	N-S (SW of city)	Links Bayway Circle to Goethals Bridge

Source: CUPR, 1992.

**TABLE 20**  
**THE EXISTING TRANSPORTATION NETWORK: RAIL TRANSIT**  
**CITY TO SUBURB**  
**ELIZABETH**

<b>Rail Lines</b>	<b>Destination Relative to City</b>	<b>No. of City Passengers Carried Daily (Reverse)</b>	<b>Major Employment Markets Served by This Line</b>	<b>Times of Service</b>	<b>Headway</b>	<b>Peak/Off-Peak</b>
<b>Northeast Corridor</b>	NE-SW spoke to NYC and Newark; SW spoke to Linden, Rahway, Metropark, Edison, New Brunswick, Princeton Junction, and Trenton	35	Linden, Rahway, Metropark, Middlesex County	Wkdy 5:03AM-11:40PM Sat 5:32AM-11:43PM Sun 5:32AM-11:43PM	20/40 min 20/40 min 20/40 min	
<b>North Jersey Coast Line</b>	NE spoke to NYC and Newark; S spoke to Linden, Rahway, Woodbridge, Red Bank, Asbury Park, and Bay Head	47	Linden, Rahway, Woodbridge, Perth Amboy, Red Bank	Wkdy 6:23AM-11:28PM Sat 7:11AM-11:28PM Sun 7:11AM-11:28PM	50/60 min 60 min 60 min	
<b>Raritan Valley Line</b>	WSW spoke from city center (New York City to the east and Roselle Park, Plainfield, and Raritan to the WSW)	10	Roselle Park Plainfield	Wkdy 6:17AM-11:54PM <sup>1</sup> Sat 7:59AM-10:55PM Sun 7:59AM-10:55PM	30/60 min 60 min 60 min	

**Note:** 1. The first train is from Newark Penn Station to Raritan, the last train is from Raritan to Newark Penn Station.  
**Source:** New Jersey Transit.

Source: NJ TRANSIT

serve the city (i.e., the Northeast Corridor and the North Jersey Coast Line), both of which are operated by NJ TRANSIT. The rail routes are shown on Map D.

NJ TRANSIT's Northeast Corridor operates daily between Penn Station in Manhattan and Trenton, serving 13 intermediate stations.

The principal function of the Northeast Corridor Line in New Jersey is to transport commuters from Mercer, Middlesex, and Union counties to Newark and New York. A subset of this obligation is to transport people from these counties to Elizabeth. It also serves a secondary function in transporting persons from Elizabeth to reverse-commute locations such as Linden, Metropark, Metuchen, Edison, Princeton Junction, and Trenton. On weekdays 58 inbound trains (towards Manhattan) and 54 outbound trains stop at the Elizabeth (midtown) station, while 13 inbound trains and 16 outbound trains stop at the North Elizabeth Station. On weekends and major holidays, 38 inbound trains and 43 outbound trains stop at the Elizabeth station, while two inbound and two outbound trains stop at North Elizabeth. On the Northeast Corridor Line, NJ TRANSIT trains run for 20 hours per day at 20-40 minute headways for both in-commuters and reverse commuters during peak, midday, and evening time periods through the Elizabeth Rail Station. On weekends, this service also operates for 20 hours at 20-40 minute headways through Elizabeth Rail Station for both in-commute and reverse-commute purposes. Trains also stop at North Elizabeth Rail Station at 20-40 minute headways during peak times, in both in-commute and reverse-commute directions. The North Elizabeth Station is closed during weekends.

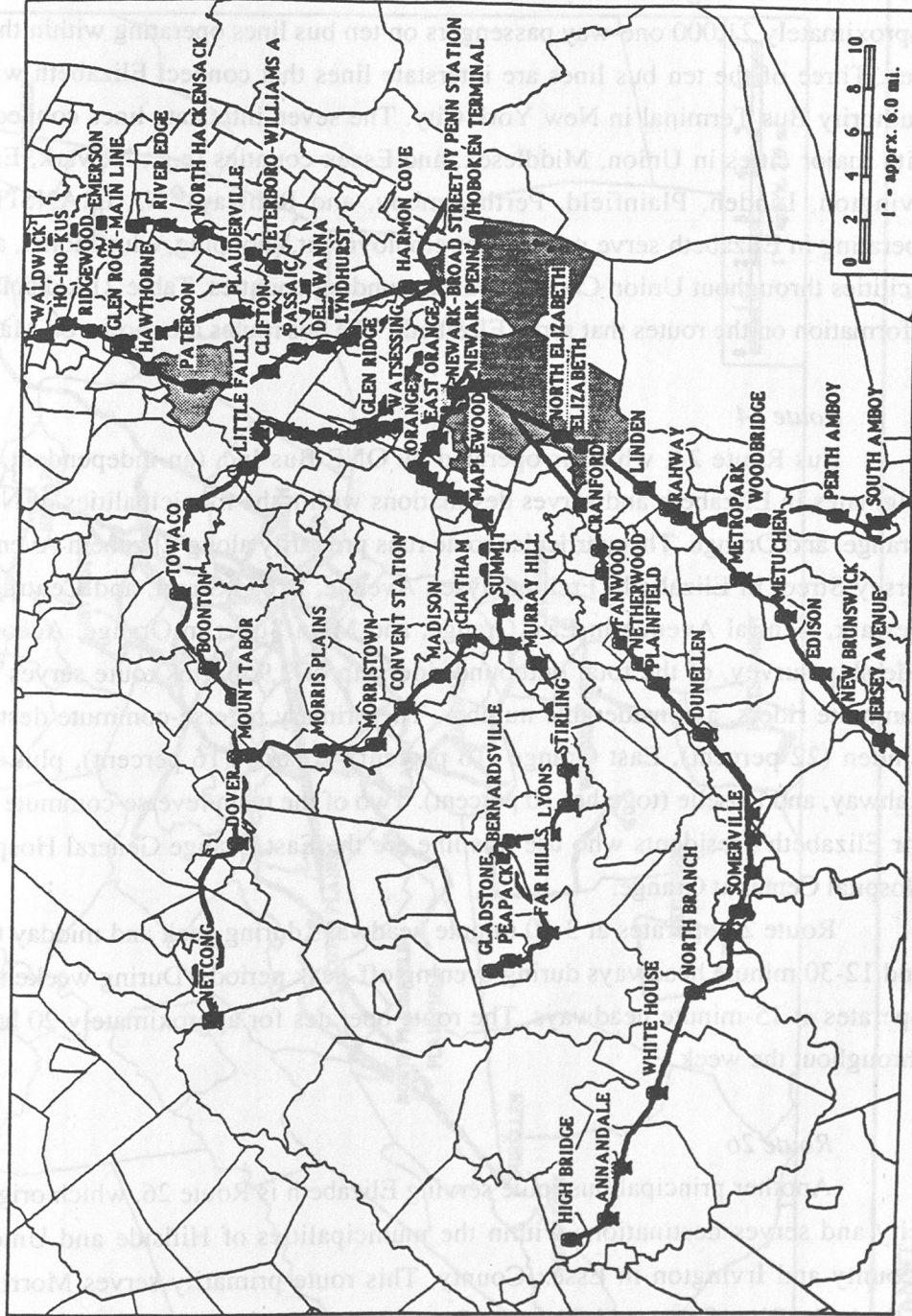
The North Jersey Coast Line serves Jersey shore communities from the center of Elizabeth. Its main function is to transport commuters from coastal towns such as Bay Head, Asbury Park, Red Bank, and other towns in Monmouth County to points north (i.e., suburban employment areas in Middlesex and Union counties, in addition to Newark and New York City). Trains run at approximately 50-60 minute headways through the Elizabeth Rail Station on the North Jersey Coast Line during peak, midday, and evening periods. Reverse commuters travel along this line to destinations as far as Long Branch. The North Jersey Coast Line operates for 17 hours each weekday. On weekends this service offers 60-minute headways through Elizabeth Station for 16 hours each day.

According to a ridership survey in 1990, there were approximately 92 passenger trips that served reverse-commuting workers from Elizabeth during the afternoon and evening hours. More than half of these trips (51 percent) take place on the North Jersey Coast Line, while another 38 percent of the trips occur on the Northeast Corridor.

The Raritan Valley Line does not serve Elizabeth directly. However, 11 percent of Elizabeth residents who reverse commute by train use the Raritan Valley Line. This trip

# NJ TRANSIT COMMUTER RAIL LINES IN THE ELIZABETH METROPOLITAN AREA

## MAP D



Source: NJ TRANSIT

involves a bus transfer.

#### **D. Bus Service—City to Suburb**

On an average weekday, NJ TRANSIT and its contract carriers provide service for approximately 21,000 one-way passengers on ten bus lines operating within the Elizabeth area. Three of the ten bus lines are interstate lines that connect Elizabeth with the Port Authority Bus Terminal in New York City. The seven intrastate lines connect Elizabeth with major cities in Union, Middlesex, and Essex counties (e.g., Newark, East Orange, Irvington, Linden, Plainfield, Perth Amboy, and Rahway). NJ TRANSIT bus lines operating in Elizabeth serve most major employment, shopping, educational, and medical facilities throughout Union County and surrounding counties. Table 21A displays detailed information on the routes that serve Elizabeth. The bus routes are shown on Map E.

##### *Route 24*

Bus Route 24, which is operated by ONE Bus Inc. (an independent contractor), originates in Elizabeth and serves destinations within the municipalities of Newark, East Orange, and Orange. This particular route runs primarily along Elizabeth Avenue and East Jersey Street in Elizabeth, Frelinghuysen Avenue, Broad Street, and Central Avenue in Newark, Central Avenue in East Orange, and Main Street in Orange. According to the ridership survey, of the total outbound ridership of 2,956, this route serves 345 reverse commute riders, a considerable number. The primary reverse-commute destinations are Linden (22 percent), East Orange (16 percent), Kearny (16 percent), plus Kenilworth, Rahway, and Roselle (together 10 percent). Two of the main reverse-commute destinations for Elizabeth's residents who use this line are the East Orange General Hospital and the Hospital Center at Orange.

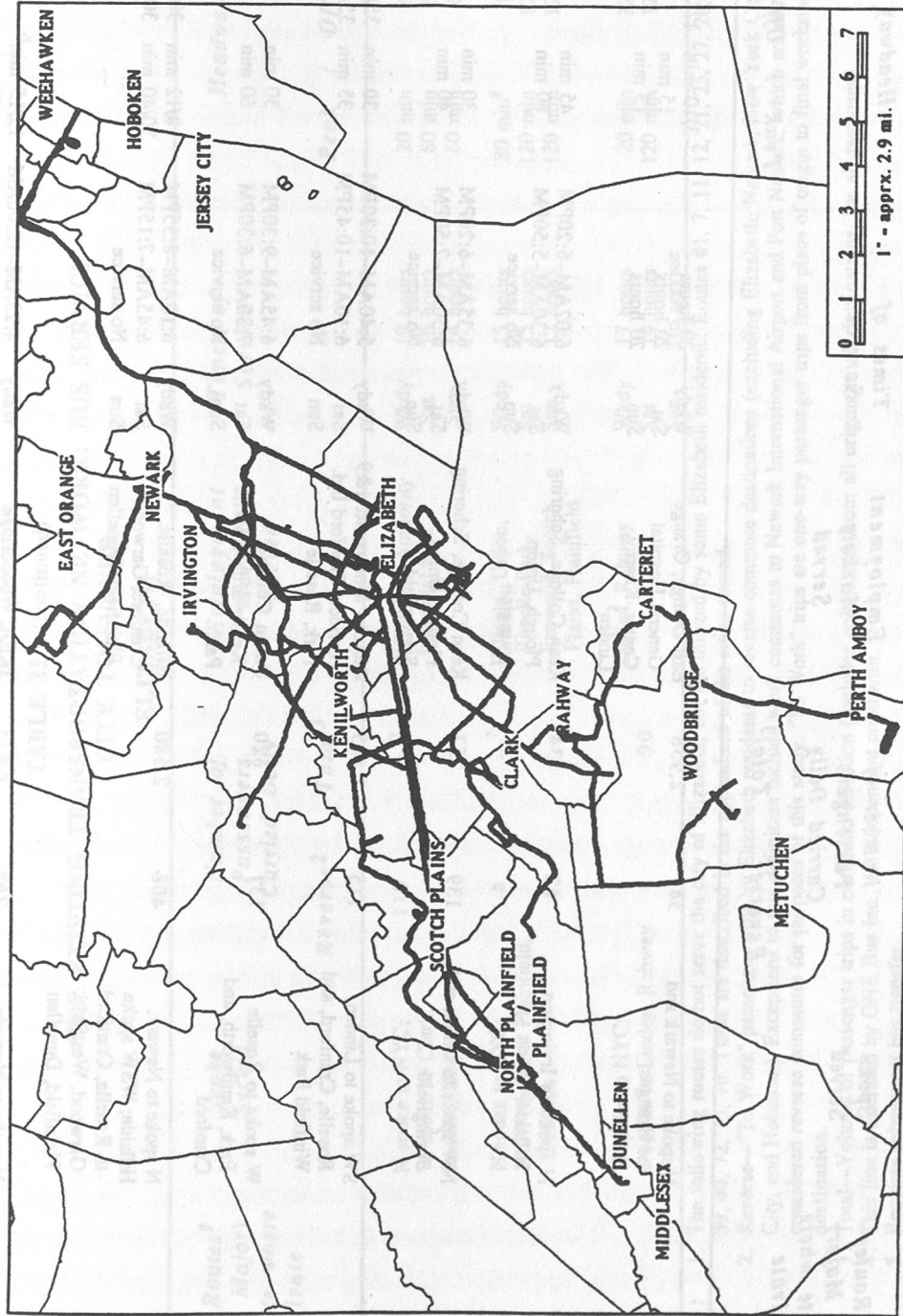
Route 24 operates at 3-10 minute headways during peak and midday time periods and 12-30 minute headways during evening off-peak periods. During weekends this route operates at 15-minute headways. The route operates for approximately 20 hours per day throughout the week.

##### *Route 26*

Another principal bus route serving Elizabeth is Route 26, which originates in the city and serves destinations within the municipalities of Hillside and Union in Union County and Irvington in Essex County. This route primarily serves Morris Avenue in Elizabeth, Bloy Street and Chestnut Street in Hillside, and Union Avenue in Irvington.

MAP E

NJ TRANSIT BUS ROUTES IN THE ELIZABETH METROPOLITAN AREA



Source: NJ TRANSIT

TABLE 21A  
 THE EXISTING TRANSPORTATION NETWORK: BUS SERVICE  
 CITY TO SUBURB  
 ELIZABETH

Bus Routes <sup>1</sup> (List Major) Indicate where Private	Spoke Served	Number of Passengers Carried Daily		Employment Markets Served	Times of Service	Headway	
		Reverse <sup>2</sup>	Total <sup>3</sup>			Peak	Off-Peak
244	N spoke to Newark and the Oranges	345	2,956	East Orange, Orange General Hospital Center, Kearny, Linden <sup>5</sup>	Wkdy Sat Sun 20 hours 20 hours 20 hours	3/10 min 15 min 15 min	12/30 min 15 min 15 min
26	N spoke to Irvington, Hillside, Union	82	234	Kean College, Schering Plough, Union, Irvington	Wkdy Sat Sun 6:02AM-6:20PM 6:30AM-5:50PM No service	45 min 80 min	45 min 80 min
52	NW spoke to Union and Springfield	139	257	Kean College, Schering Plough, Union, Springfield	Wkdy Sat Sun 6:35AM-6:20PM 6:50AM-7:50PM No service	30 min 40 min	45 min 40 min
56	SW spoke to Linden, Roselle, Cranford, and Winfield Park	115	2,485	General Motors, Rt 1&9 corridor, Cranford Ind. Park, Roselle	Wkdy Sat Sun 5:40AM-10:30PM 6:10AM-10:45PM No service	30 min 35 min	35/60 min 35/60 min
58	W spoke to Roselle Park, Kenilworth, and Cranford	131	620	Union College, Kenilworth, Roselle Park	Wkdy Sat Sun 6:45AM-9:30PM 7:30AM-6:30PM No service	30 min 60 min	35 min 60 min
59	N spoke to Newark, Hillside; WSW spoke to Roselle, Cranford, Garwood, Westfield, Plainfield, Dunellen	408	2,680	Hillside, Roselle, Cranford, Garwood Plainfield, Dunellen	Wkdy Sat Sun 6:10AM-8:55PM 6:45AM-7:15PM No service	8/12 min 30/40 min	30/60 min 30/40 min
62	N spoke to Newark; S spoke to Linden, Rahway, Woodbridge, Carteret, Perth Amboy	268	2,433	IKEA, Woodbridge Shopping Center, Newark Airport, Merck, Linden, Rahway	Wkdy Sat Sun 4:23AM-12:00AM 4:30AM-12:25AM 4:30AM-11:00PM	12/15 min <sup>6</sup> 30 min 75/90 min	30 min 30 min 75/90 min

TABLE 21A (continued)  
 THE EXISTING TRANSPORTATION NETWORK: BUS SERVICE  
 CITY TO SUBURB  
 ELIZABETH

Bus Routes <sup>1</sup> (List Major) Indicate where Private	Spoke Served	Number of Passengers Carried Daily		Employment Markets Served	Times of Service	Headway	
		Reverse <sup>2</sup>	Total <sup>3</sup>			Peak	Off-Peak
112	N spoke to NYC; W spoke to Clark, Roselle, Linden	110	— <sup>7</sup>	IKEA, Port Authority Industrial Park	Wkdy 19 hours Sat. 16 hours Sun. 14 hours	20 min 60 min 60 min	60 min 60 min 60 min
113	N spoke to NYC; WSW spoke to Plainfield, Dunellen	#	— <sup>7</sup>	Hillside, Union, Roselle Park, Fanwood, Scotch Plains, Plainfield	Wkdy 15 hours Sat 15 hours Sun 12 hours	80 min <sup>8</sup> 120 min 120 min	80 min <sup>8</sup> 120 min 120 min
115	N spoke to NYC; S spoke to Linden, Rahway	#	90	Linden, Rahway	Wkdy 17 hours Sat 14 hours Sun. No service	20 min 120 min 120 min	120 min 120 min 120 min

- Notes:**
- The following routes do not serve the city of Elizabeth, but are utilized by some Elizabeth residents: Routes #1, 7, 11, 12, 21, 25, 27, 28, 31, 34, 39, 40, 72, 75, 76. These are described in the appendices of the cities served.
  - Reverse—"To Work" passenger trips by Elizabeth residents to reverse-commute destinations (excluding Elizabeth, Newark, New York City, Jersey City, and Hoboken). Exceptions to this definition include work commuters to Newark International Airport and Port Newark, which are also considered reverse commuters for purposes of this study. "To Work" trips are one-way passenger trips from place of origin to final worksite destination.
  - Total—Volume of passenger trips in outbound direction (includes commuters from all origins to all destinations, for all purposes).
  - This line is operated by ONE Bus Inc., an independent contractor.
  - Requires subsequent bus transfer.
  - Route 62 also provides 20-minute headways during peak hours to Port Elizabeth.
  - Total trips for the interstate routes are not available.
  - 10/60 minute headway to New York City.
  - # Minimal reverse commute

Source: New Jersey Transit.

Only 87 "to work" commuters use this route, of whom 82 are reverse commuters. Most of them go to Irvington (48 percent), Union (14 percent), and Hillside (38 percent). Major employment centers served by this route include Schering Plough on Route 82 in Union, which has more than 3,000 employees, and Kean College, also in Union.

This route operates at 45-minute headways throughout peak and midday time periods, whereas during weekends it runs at 80-minute headways. It operates approximately 12 hours per day during the weekdays and 11 hours per day on Saturday. The route does not operate on Sunday.

#### *Route 52*

Bus Route 52 originates in Elizabeth and serves destinations in both Union and Springfield. This route serves Broad Street and Morris Avenue in Elizabeth, and Morris Avenue in Union and Springfield. The ridership survey indicates total outbound ridership of 257 on an average weekday. A fair proportion of the 139 reverse commutes are towards Union (86 percent). Important employment centers served by this route include Schering Plough on Route 82 and Kean College. The remaining reverse-commute ridership is towards Springfield.

Route 52 operates at 30-minute headways during peak periods and 45-minute headways during midday. It operates for 12 hours during the day from Monday to Friday, while on Saturday it operates for 13 hours with 40-minute headways. No service is available on Sunday.

#### *Route 56*

Another important transportation link is Bus Route 56, which originates in Elizabeth and serves destinations in Linden, Roselle, Cranford, and Winfield. It runs along Adams and Monroe Avenues in North Elizabeth, Broad Street in Elizabeth, Edgar Road and Wood Avenue in Linden, and Wavecrest Avenue in Winfield. It runs along streets that abut the city lines of both Cranford and Roselle. It also provides limited service to Cranford Industrial Park. One of the main employment centers served by this line includes General Motors Corporation on US Route 1&9 in Linden. The reverse-commute ridership from Elizabeth amounts to 115. Most reverse commuters (39 percent) go to Cranford, while an additional 23 percent and 12 percent, respectively, head towards Linden and Winfield. This route operates at approximately 30-minute headways during peak periods, 35-minute headways during midday, and 60-minute headways during the evening hours. On Saturday the route operates at 35-minute headways during the day and 60-minute headways during

evening hours. During weekdays and Saturdays the route operates for 17 hours daily. There is no service on Sunday.

#### *Route 58*

Route 58 originates in Elizabeth and serves destinations in Union County including Roselle Park, Kenilworth, and Cranford. It serves Broad Street and Westfield Avenue in Elizabeth, Westfield Avenue in Roselle Park, and Michigan Avenue and Kenilworth Boulevard in Kenilworth. The route terminates at Union College in Cranford. It also provides limited service to the Exxon refinery on Bayway Avenue in Elizabeth. Route 58 serves 620 outbound riders of whom 131 comprise the reverse-commute ridership from Elizabeth. Almost 40 percent of all reverse commute riders go to Kenilworth. The route runs at 30-minute headways during peak hours and 35-minute headways off-peak during week; it has 60-minute headways on Saturday. The route operates for 15 hours weekdays and 12 hours on Saturday. No service is provided on Sunday.

#### *Route 59*

Route 59, which originates in Newark, traverses Elizabeth and serves municipalities in Union County including Hillside, Roselle, Cranford, Garwood, Westfield, Scotch Plains, and Plainfield before terminating in Dunellen in Middlesex County. It runs along Broad Street, Clinton Avenue, and Elizabeth Avenue in Newark, North Broad Street in Hillside, Broad Street and West Jersey Avenue in Elizabeth, Second Avenue in Roselle, South Avenue in Cranford, Westfield Avenue in Westfield, and Route 28 in Plainfield and Dunellen. Of the 2,680 outbound trips from Elizabeth using this route, a substantial number (408) are reverse commuters, destined mostly for Union County. The major destinations in Union County are Garwood, Hillside, and Westfield.

Headways on this route occur every 8-12 minutes during peak times, every 30 minutes during midday, and irregularly (15 to 60 minutes) during evening hours. The route operates for approximately 16 hours per day during weekdays. On Saturday the route runs every 30 to 40 minutes for 13 hours per day. On Sunday there is no service.

#### *Route 62*

Another important bus route that serves Elizabeth is Route 62, which originates in Newark, passes through Elizabeth, and provides links to Linden and Rahway within Union County, and Woodbridge—including the shopping center—Carteret, and Perth Amboy in Middlesex County. According to the ridership survey, 268 reverse commuters use this route, most going to destinations within Union County (50 percent). A major employment

center that is served by this route is Newark International Airport; the bus serves 6 major outlying buildings and worksites: the United States Postal Service, United Parcel Services, Chelsea, Federal Express, Tank Farms, and Flying Tiger. This route also serves Merck & Co., Inc. in Rahway.

The bus draws 35 percent of all reverse commuters from Elizabeth. This route operates at 12-15 minute headways in Elizabeth itself and at 20-minute headways to destinations in Port Elizabeth during peak times. Off-peak headways are every 30 minutes, while. No evening service or weekend service is provided to the Port Elizabeth area. The route operates for 18 hours daily through Elizabeth to all points west and 19 hours daily to Newark Airport. On Saturday the route operates at 30-minute headways for 20 hours, while on Sunday it runs at 75-90 minute headways for 18 hours.

#### *Additional Routes*

In addition to the above routes, there are a number of bus services that do not serve the city of Elizabeth directly but that are utilized by a small proportion of Elizabeth's residents for reverse-commute purposes, through a series of one or more bus transfers. These routes are Route 11 with destinations to Little Falls in Passaic, Routes 70 and 73 which run to Livingston, as well as Routes 25, 28, 31, 34, 39, 40, 72, 75, and 76.

#### *Route 112*

Beyond the above-mentioned bus routes, three interstate bus routes serve Elizabeth, namely Routes 112, 113, and 115. Only Route 112 serves a definable number of reverse commuters. This line originates at the Port Authority Bus Terminal in New York City and serves destinations in Union County including the municipalities of Elizabeth, Roselle, Linden, and Clark. It also provides limited service to the Union County Technical School in Scotch Plains and to IKEA in the Port Authority Industrial Park. Approximately 110 reverse commuters from Elizabeth use this service daily. The service operates at 20-minute headways during peak periods and 60-minute headways during off-peak. On Saturday and Sundays this service offers 60-minute headways. Route 112 runs for 19 hours during weekdays and for 16 hours on Saturday and 14 hours on Sunday. Service to IKEA and the Port Authority Industrial Park is offered 6 hours per day with 60-minute headways during midday time periods.

#### *Route 113*

This route originates at the Port Authority Bus Terminal in New York City and primarily serves destinations in Union County including the municipalities of Elizabeth, Hillside, Union, Roselle Park, and Plainfield. Only minimal ridership was reported by

Elizabeth residents to points west of the city. This line operates at approximately 80-minute headways to points west and 10-60 minute headways to New York City. The route operates through Elizabeth for approximately 15 hours per day.

#### *Route 115*

This route also originates in New York City and serves municipalities in Union County, including Rahway and Linden. This route serves very few Elizabeth residents.

### **E. Bus Service—In City**

Table 21B indicates the major bus routes that operate within the city of Elizabeth. Almost all of these routes have already been described in the previous section as they serve a larger area than the city. Important routes serving Elizabeth include Routes 24, 26, 52, 56, 58, 59, 62, and 112. Headways and hours of operation for these routes are identical to the ones already described.

#### *Route 24*

Within Elizabeth, Route 24 serves a number of employment centers that include the retail and light industrial areas within Elizabethport, Elizabeth General Medical Center East, Elizabeth General Medical Center, City Hall, the Union County Courthouse, the downtown retail area on Broad Street, and the Elizabeth Railroad Station, as well as the North Elizabeth Railroad Station.

#### *Route 26*

Route 26 serves St. Elizabeth Hospital, the downtown retail area along Broad Street, the Union County Administration Building, Union County Courthouse, and the Elizabeth Rail Station.

#### *Route 52*

Route 52 serves St. Elizabeth Hospital, the downtown retail area, the Elizabeth Rail Station, and Kean College in Union (located at the city's limits).

#### *Route 56*

Route 56 also serves the Union County Courthouse, the Elizabeth Rail Station, and the North Elizabeth Rail Station.

TABLE 21B  
THE EXISTING TRANSPORTATION NETWORK: BUS SERVICE (WITHIN CITY ROUTES)  
IN CITY  
ELIZABETH

Bus Routes <sup>1</sup> (List Major) Indicate where Private	Avenue or Street Served	Number of Passengers Carried Daily In City <sup>2</sup> Total <sup>3</sup>	Employment Markets Served	Times of Service	Headway
24	Elizabeth Avenue E. Jersey Street	960	3,098	Elizabethport, Elizabeth General Medical Center, CBD and downtown retail, Union County Administration Building and County Courthouse, Elizabeth and North Elizabeth Rail Stations	SEE TABLE 21A
26	Broad and Jersey Streets	0	42	St. Elizabeth Hospital, CBD and downtown retail, Union County Administration Building, County Courthouse, Elizabeth Rail Station	SEE TABLE 21A
52	Green Lane, Magic Avenue Morris Avenue, Broad Street	41	104	St. Elizabeth Hospital, CBD and downtown retail, Elizabeth Rail Station, Kean College	SEE TABLE 21A
56	Broad and Pearl Streets, Jersey Street	124	456	CBD and downtown retail, Union County Courthouse, Elizabeth and North Elizabeth Rail Stations	SEE TABLE 21A
58	Broad Street, Jersey Street, Bayway, Amboy Avenue	132	410	Exxon Refinery, County Offices, CBD and downtown retail, St. Elizabeth Hospital, Elizabeth Rail Station	SEE TABLE 21A
59	Jersey Street, Elmora Avenue, Broad Street	182	452	Elizabeth General Medical Center, CBD and downtown retail, Elizabeth Rail Station	SEE TABLE 21A
62	Broad and Jersey Streets, Division Street	132	295	CBD, County Courthouse, Elizabeth General Medical Center, IKEA, Port Elizabeth, Elizabeth General Medical Center, Elizabeth Rail Station	SEE TABLE 21A
112	Jersey Avenue	NA	NA	Elizabeth General Medical Center, CBD and downtown retail, St. Elizabeth Hospital, Port Authority Industrial Park <sup>4</sup>	SEE TABLE 21A

Notes: 1. Trip counts referenced from NJ TRANSIT Local Bus Ridership Survey—1990. Quantities are approximate and do not necessarily reflect current ridership counts in 1992. Table shows only major routes with ridership survey data available. This is not a complete listing of all bus routes serving Elizabeth residents.

2. "In-City"—One way "to work" passenger trips by Elizabeth residents to destinations within Elizabeth.

3. "Total"—Total volume of passenger trips boarding and deboarding within city limits (includes commuters from all origins to all destinations, for all purposes).

4. Serves Port Authority Industrial Park on weekends.  
NA = not available  
New Jersey Transit.

*Route 58*

Another important route operating within Elizabeth is Route 58. This serves major employment and transit areas including the downtown retail strip along Broad Street, St. Elizabeth Hospital, the Union County Courthouse, the Union County Administration Building, the Exxon Refinery, and the Elizabeth Rail Station.

*Route 59*

Route 59 serves the Elizabeth General Medical Center, the downtown retail strip, and the Elizabeth Rail Station.

*Route 62*

Bus Route 62 serves major employment centers located within Elizabeth's city limits, including the Port Elizabeth area—especially IKEA, the downtown retail strip on Broad Street, Union County Courthouse, Elizabeth General Medical Center, and the Elizabeth Rail Station.

*Route 112*

Bus Route 112 serves Broad and Jersey Streets and the Elizabeth and North Elizabeth rail stations in Elizabeth, goes to Roselle and points southwest (Linden, Clark) in Union County.

#### **F. Alternatives to Bus and Rail—City to Suburb**

Table 22A indicates transit alternatives to bus and rail in the Elizabeth labor area that are provided by the Union County Department of Social Services and various major private employers.

Union County Department of Social Services provides a useful alternative to NJ TRANSIT services in the form of a para-transit service that is used by the elderly, disabled, and low-income persons. This service is used primarily for social and medical purposes and does not provide service on a regular basis for employment, although disabled people use this service to get to and from their jobs. This service transports approximately 80-85 persons per day. It operates between 7:00 AM and 10:00 PM during weekdays and between 10:00 AM and 10:00 PM on weekends. Service is demand-responsive, requiring one- to two-days' advance notice.

Presently a number of major employers in Union County, including Schering Plough, Merck, and AT&T, have established van pools to serve their employees. However, these services primarily target persons who live outside Union County in suburban communities rather than Elizabeth's neighborhood residents.

TABLE 22A  
THE EXISTING TRANSPORTATION NETWORK—ALTERNATIVES TO PUBLIC RAIL AND BUS  
CITY TO SUBURB  
ELIZABETH

Who is Served	Approximate Number	Employment Markets Served	Times of Service	Frequency of Service
DIAL-A-RIDE, JTPA, etc. Union County Dept. of Social Services	80/85	Not applicable	Wkdy 7AM-10PM Wkend 10AM-10PM	Demand response Demand response
VAN POOLS AT&T, Ciba Geigy, County of Union, Bristol Myers, Merck, Schering Plough	NA	Specific companies	NA	NA

Note: NA=Not available

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

TABLE 22B  
THE EXISTING TRANSPORTATION NETWORK—ALTERNATIVES TO PUBLIC RAIL AND BUS  
IN CITY  
ELIZABETH

Who is Served	Approximate Number	Employment Markets Served	Times of Service	Frequency of Service
JITNEYS, CABS, ELDERLY PICK-UP, etc. Union County Dept. of Social Services	NA	Not applicable	Wkdy 7AM-10PM Wkend 10AM-10PM	Demand response Demand response
Taxi Cabs	NA	Not applicable	Wkdy 24 hours Wkend 24 hours	Demand response Demand response

Note: NA = Not available

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

### G. Alternatives to Rail and Bus—In City

The alternatives to bus and rail available within the city are shown in Table 22B. Unlike some other major New Jersey cities, Elizabeth has no jitney or unlicensed cab service. In addition, no private van services operate within the city. The para-transit service that Union County operates for the elderly, the disabled, and low-income persons is available to residents of the city—though it is not expressly designed to serve the needs of Elizabeth's residents who work in the city.

Another alternative to public rail and bus services is provided by taxi cabs. Obviously taxis offer flexible routes and frequency of service, which would enable persons to access their job sites during early or late shifts. However, it is highly unlikely that many of Elizabeth's reverse commuters would use this service on a regular basis due to its high cost.

## VIII. SYNTHESIS OF JOB GROWTH DATA AND EXISTING PUBLIC TRANSIT NETWORK.

Before turning to the challenges that confront NJ TRANSIT and NJDOT, it is helpful to merge the job opportunities data with the existing bus route network to better coordinate the information collected. Generally, a reasonable commute can be defined as anywhere in the vicinity of a city that can be reached in an hour. Using the job growth data contained in Section VI, municipalities with the greatest job growth potential within the 'reasonable commute' distance were mapped. These locations were then overlaid upon the existing bus route network detailed in Section VII. The criterion used to assess the existence of transit service is whether there is direct service. Table 23 and Map F illustrate where service appears to be rich and point out places where service opportunities exist. This illustration is a useful tool to help visualize the public transit route networks and locations where job growth is projected, helping to define an agenda for further study.

While these are locations where job growth is expected, the true potential for transit demand requires detailed study of specific employment locations, availability of existing services, and the potential for new services.

In addition to the job growth data, the interview data collected generally corroborate that these locations are identified as key for growth. The connection between economic projections and perceptions gathered through interviews allows NJ TRANSIT and NJDOT to work on an agenda for further study that will prove responsive to the specific transportation challenges discussed in the next section.

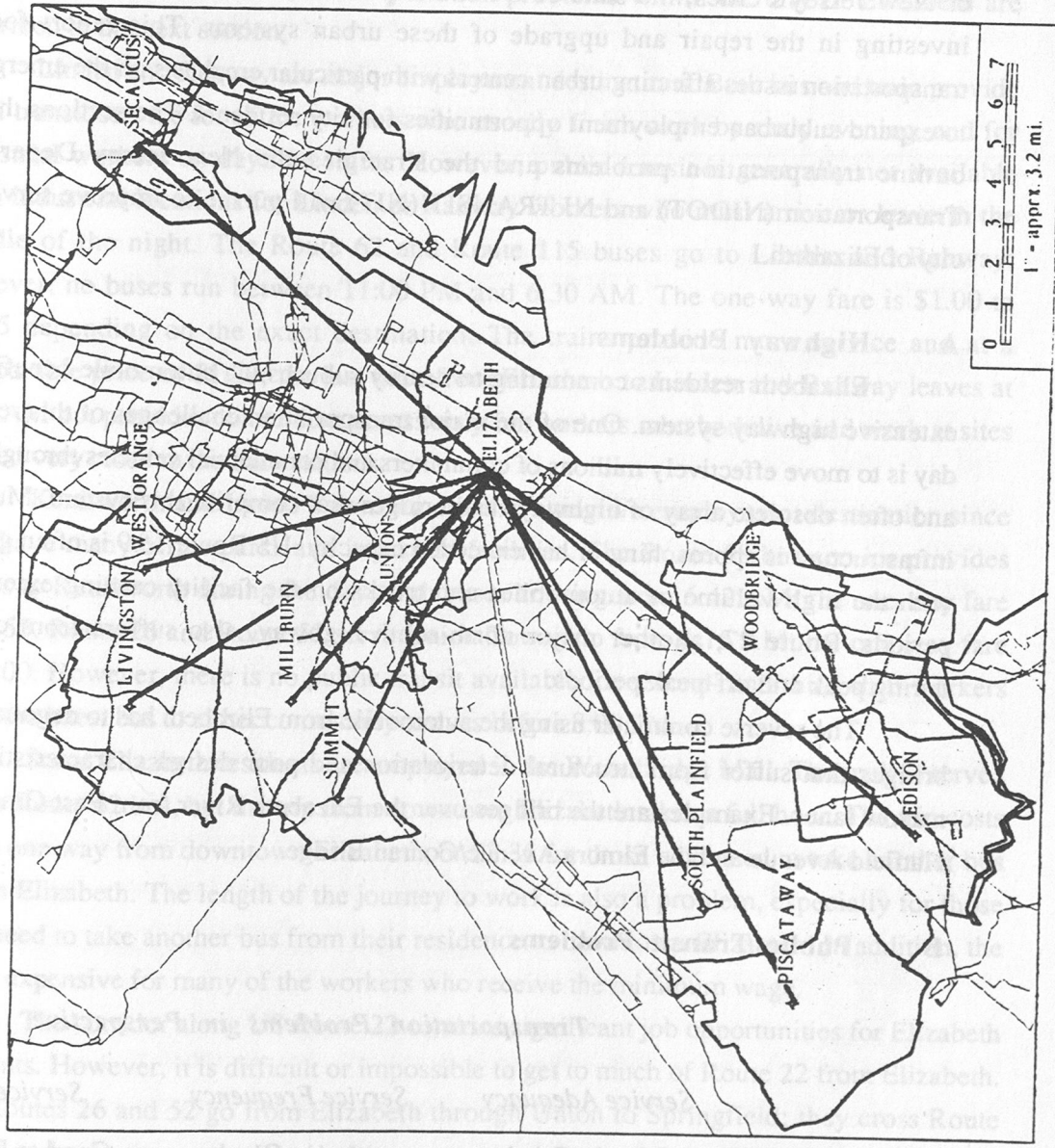
TABLE 23  
MUNICIPALITIES WITH  
GREATEST JOB GROWTH POTENTIAL  
IN THE ELIZABETH AREA

<i>Location</i>	<i>New Jobs</i>	<i>Job Separations</i>	<i>Total</i>	<i>Transit Service Yes/No</i>
Woodbridge	7,350	7,269	14,619	Yes, Limited
Secaucus	7,312	5,686	12,998	Yes
Edison	3,042	7,733	10,775	Yes, Limited
Livingston	64	4,149	4,214	No
Piscataway	691	2,972	3,663	Yes
Millburn	473	2,998	3,471	No
South Plainfield	836	2,514	3,350	Yes
Summit	496	2,369	2,865	No
West Orange	245	3,216	3,461	Yes
Union Township	(1,380)	4,198	2,819	Yes, Limited

*Note:* Rows may not total exactly due to rounding.

*Source:* CUPR and NJ TRANSIT.

**MAP F**  
**EMPLOYMENT DESTINATION DESIRE LINES FOR CENTRAL CITY RESIDENTS**  
**IN THE VICINITY OF ELIZABETH**  
 (Overlaid on Existing Bus Routes)



Source: Projections of Less-Skilled Job Growth 1993-2000 by the Center for Urban Policy Research, Rutgers University, Spring 1993

## IX. TRANSPORTATION PROBLEMS—CITY TO SUBURB

Whether reverse commuters from the city of Elizabeth use the automobile, bus, or train for their daily commute, they travel on one of the most extensive, and—within the city—oldest transportation networks in the nation. In order to ensure the economic vitality of New Jersey's cities, the state of New Jersey will continue to put a high priority on investing in the repair and upgrade of these urban systems. This report focuses on transportation issues affecting urban centers with particular emphasis on the emerging need to expand suburban employment opportunities for city residents. The sections that follow outline transportation problems and the strategies the New Jersey Department of Transportation (NJDOT) and NJ TRANSIT (NJT) will pursue to improve service to the city of Elizabeth.

### A. Highway Problems

Elizabeth residents commuting to nearby suburbs via automobile benefit from an extensive highway system. One of the major transportation challenges of this region each day is to move effectively millions of commuters and commercial vehicles through an aging and often obsolete array of highways and bridges that comprise this system. Much of this infrastructure is approaching or has exceeded capacity. US Route 1&9 is often gridlocked, with the high volume of automobiles and trucks on the facility causing extended peak periods. Route 27, another major north-south highway, also suffers from congestion during peak and off-peak periods.

The reverse commuter using the automobile from Elizabeth has to negotiate through bridges that suffer from structural deterioration and poor design characteristics such as narrow lanes. Examples are the bridges over the Elizabeth River from East Grant Street to Hatfield Avenue and the Elmora Avenue/Conrail Bridge.

### B. Public Transit Problems

#### *Transportation Problems in Perspective*

	<i>Service Adequacy</i>	<i>Service Frequency</i>	<i>Service Cost</i>
<i>City to Suburb</i>	Mostly Good	Mostly Good	Good to Excellent

Generally, transportation from Elizabeth to work locations is quite adequate. It is especially good for travel north or south from the city and during the day from early morning to evening. However, transit for Elizabeth residents working outside the city has

two major limitations. First, public transit is much more limited for those who must go to work or return late at night. Second, in contrast to north-south travel, it is more difficult to travel west from Elizabeth to the Route 22 corridor or to the communities in western Union County and adjacent Morris County. Both these reverse-commute issues are discussed in this section (see Table 24A). Transportation problems within the city of Elizabeth are described in the next section.

Linden and Rahway are major employment destinations. Both bus and train provide good transit service for office workers who usually finish work by early evening, and for industrial workers on daytime shifts. However, public transit is generally not available from industrial locations for Linden or Rahway workers who must arrive or leave in the middle of the night. The Route 62 and Route 115 buses go to Linden and Rahway; however, no buses run between 11:00 PM and 6:30 AM. The one-way fare is \$1.00 to \$1.55 depending on the exact destination. The trains provide more service and at a comparable price of \$1.20; the last train from Elizabeth to Linden and Rahway leaves at 2:00 AM but provides convenient access only for workers who both live and work at sites located very close to the train stations.

Kenilworth and Union Township are also attractive employment destination since they have many office parks and industrial facilities. The Route 58 bus service provides access to Kenilworth during the day, with buses arriving from 6:42 AM; the one-way fare is \$1.55. Route 26 and Route 52 serve Union Township from 6:15 AM; the one-way fare is \$1.00. However, there is no public transit available for second- and third-shift workers since the latest bus to either community arrives before 8:00 PM.

Some Elizabeth residents are employed in the Woodbridge Mall. The mall is served by the Route 62 bus, but the trip from downtown Elizabeth takes a full hour. The trip costs \$1.90 one way from downtown Elizabeth, or \$2.35 for those who need to take another bus within Elizabeth. The length of the journey to work is also a problem, especially for those who need to take another bus from their residence to downtown Elizabeth. In addition, the trip is expensive for many of the workers who receive the minimum wage.

The corridor along US Route 22 contains significant job opportunities for Elizabeth residents. However, it is difficult or impossible to get to much of Route 22 from Elizabeth. Bus Routes 26 and 52 go from Elizabeth through Union to Springfield; they cross Route 22 but make no stop on it. In order to access any sites along Route 22, commuters would have to transfer in Union or Springfield to the Route 114 bus from New York or the Route 65 bus. In addition, because of the land use along Route 22, there are safety problems for pedestrians.

TABLE 24A  
 LOCATIONS OF PROBLEMATIC  
 TRANSPORTATION SERVICE—CITY TO SUBURB  
 ELIZABETH—1992

<i>Location</i>	<i>Service Problems or Times</i>	<i>Population Affected</i>
Linden, Rahway, Kenilworth, Union Township	Lack service for second and third shifts	Industrial workers
Woodbridge Mall	Length of trip; cost	Retail workers
Route 22	Lack of service	Retail and industrial workers
Western Union County, Morris County	Lack of direct service; length of trip	Industrial, service, and office workers

*Source:* CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

TABLE 24B  
 LOCATIONS OF PROBLEMATIC  
 TRANSPORTATION SERVICE—IN CITY  
 ELIZABETH—1992

<i>Location</i>	<i>Service Problems or Times</i>	<i>Population Affected</i>
Hospitals	Lack of service for second and third shifts	Hospital workers
Dowd-Division	Lack of service on Dowd Avenue and York Street	Industrial workers
Newark Airport	Lack of service for nighttime work; lack of service to work locations within the airport	Service and industrial workers
Port Elizabeth	Lack of service to specific work destinations in the port	Waterfront workers
Port Elizabeth	Conflict between traffic to port and to IKEA	Retail workers, customers, truckers
Elizabeth Industrial Park, Seaport Industrial Park	Service on Trumbull and First Streets, but not to specific work locations	Industrial workers
North Elizabeth, Peterstown, Elizabethport, Elmora, Westminster	No late evening bus service	Second- and third-shift workers

*Source:* CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

Communities in the western part of the county, especially Summit, New Providence, Murray Hill, and Berkeley Heights have office parks and industry, as do communities in adjacent Morris County, such as Millburn. They have day-shifts jobs that could provide employment opportunities for Elizabeth residents. However, there is no direct public transit from Elizabeth to these communities. It is possible to go by bus from Elizabeth through Springfield to Summit or Millburn for \$1.45. (Using a monthly bus card is less expensive than paying the daily fare; however, many low-paid workers have difficulty paying the lump sum.) By train transferring at Newark, the cost to Summit is \$2.90 one way. For those who need to take another bus to downtown Elizabeth, the trip by train or bus costs a dollar more. Either way, the trip is long and inconvenient.

## **X. TRANSPORTATION PROBLEMS—IN CITY**

### **A. Highway Problems**

Downtown Elizabeth suffers from congestion due to US Route 1&9 truck traffic. Elmora, North, and Bayway avenues serve as a beltway around the city. However, high volumes of parking are causing through traffic to avoid the beltway and traverse the central business district, adding to congestion there. Lack of adequate parking in the city leads to double-parking, which impedes traffic. Further, vehicle movement on major local roads is slowed by the presence of on-street parking.

Another problem that impedes traffic flow within the city is the presence of numerous railroad overpasses with inadequate clearance. The railroad overpasses at North Avenue and Elmora Avenue, in particular, are responsible for significantly slowing and diverting truck and bus traffic.

Significant industrial and distributional growth is projected for the area surrounding the Elizabeth waterfront. The intersection of Dowd, Division, and North avenues currently presents a bottleneck to traffic, and this problem will only expand with future growth. North Avenue East is also ill-positioned to accommodate future expansion at the waterfront.

In the Port Elizabeth area, the automobile traffic going to IKEA for retail trade or commuting conflicts with the many heavy trucks going to the seaport area. The city and IKEA would like to develop the Port Authority Industrial Park more fully, but the conflicting traffic flows are a problem.

## B. Public Transit Problems

### Transportation Problems in Perspective

	Service Adequacy	Service Frequency	Service Cost
In City	Excellent	Good to Excellent	Excellent

Within the city of Elizabeth public transit serves most locations extremely well during the day. The only major exceptions are specific locations within industrial areas; these areas are discussed below. Another problem affects those working the second or third shift: residential areas have little service during the late evening and none during the night. This is a problem within the city for residents whether they work inside the city or in the suburbs. The in-city transportation problems are displayed in Table 24B.

Within the Dowd-Division area the Route 62 bus provides service along Division Street, including Wakefern, but not elsewhere. Since the area has small firms scattered through it, this may be a problem for workers along York Street, Dowd Avenue, and the smaller streets off Dowd Avenue.

The Newark Airport is a major employer. Bus service on Route 62 to the airport during the day is good. However, it serves limited locations. Therefore, some of those who work at the airport have problems. First, the airport is quite large. Public transit serves the passenger terminals but not some of the remote work areas. Second, many of the less-skilled jobs require night work, sometimes at odd hours, when the Route 62 bus does not run. The other available public transit option to get to the airport between midnight and 2:00 AM requires taking a train to Newark and then the Airlink; however, this costs \$10.50 for the round trip (less with monthly passes) and even Airlink does not leave the airport for Elizabeth before approximately 5:30 AM.

Although the Port Elizabeth area, including IKEA, is served by two buses (the Route 62 and Route 112) neither goes through the heart of the Port Newark/Port Elizabeth area. This is a problem, especially at night, when riders are uncomfortable walking between the bus stop and their place of work.

The Elizabeth Industrial Park and the Seaport Industrial Park are served 20 hours a day by One Bus Inc., a private contractor. However, the bus route goes along Trumbull Street and First Street but not through either industrial park, which is a problem for some workers.

Several Elizabeth neighborhoods do not have bus service late in the evening: North Elizabeth, Peterstown, Elizabethport, Elmora, and Westminster. This is probably more of a

problem in the first three areas because more residents are likely to work evening and night shifts.

A related problem is that workers seldom live and work along the same transit route. If the journey to and from work requires making connections, it is difficult, costly, and time-consuming. This is especially a problem for second- and third-shift workers since some of the routes that serve Elizabeth neighborhoods stop or run less frequently after peak hours. It is also a problem for low-paid workers because of the additional fare.

## XI. PROBLEMS OTHER THAN TRANSPORTATION

While lack of transportation may be a significant obstacle for Elizabeth residents seeking employment in some areas, it is not the only problem they face in obtaining jobs within or outside the city. Professionals in Elizabeth and Union County were asked to discuss specific obstacles facing unemployed or underemployed inner-city residents. Specifically, they were asked about the relative importance of lack of skills, inadequate information about job opportunities, limitations imposed by personal history (such as a criminal record, prior drug use, a poor credit rating, or being on welfare), and need for personal support, such as child care. Further, they were asked how lack of transportation ranked relative to these other obstacles. Their rating of the problems is shown in Table 25A.

They responded that the current economic conditions were, by far, the most important obstacle. Besides the economy, they emphasized the importance of both general education and job skills, as well as personal history and the need for child care. Each of these is discussed in this section and displayed in Table 25B. (They indicated that finding out what jobs were available was only a minor problem.)

Current economic conditions are a major obstacle. During the 1980s, service jobs were being created. The Job Training Partnership Act (JTPA) program served the economically disadvantaged almost exclusively. Employers were seeking workers, so they were more willing to undertake in-house training and to consider ways in which they might help workers obtain jobs. Now, in contrast, even those service jobs are not being created and JTPA serves many more dislocated workers. A major problem for dislocated workers is channeling them from better paying manufacturing jobs into poorer paying service jobs. Employers are very selective about those they are willing to hire, and they need make no special accommodations to the needs of the disadvantaged or those who do not have automobiles.

A second major obstacle is the need for better education and skills. While Elizabeth was alone among New Jersey's "Big Six" cities in having its school system receive public

TABLE 25A  
 TRANSPORTATION IN THE  
 CONTEXT OF OTHER PROBLEMS  
 ELIZABETH—1992

<i>Type of Problem</i>	<i>Importance</i>
Current Economic Conditions	High
Inadequate Skills	High
Prior Work History	Moderate
Child Care	Moderate
Transportation Insufficiency	Moderate
Communication of Work Opportunities	Low

*Source:* CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

TABLE 25B  
 SPECIFIC PROBLEMS OTHER THAN TRANSPORTATION  
 ELIZABETH—1992

<i>Type of Problem</i>	<i>Description</i>
Current Economic Conditions	The number of jobs available is insufficient. Employers are very selective about whom they will hire and make few accommodations to workers' needs.
Skills Training	Many residents need better basic education as well as training in specific job-related skills.
Work Histories	Residents who lack prior work experience, or who have a history of criminal activity, drug use, or job-hopping have difficulty obtaining employment. Employers stereotype inner-city workers as unskilled and unreliable.
Child Care	Many residents need child care. Sufficient, affordable, reliable, conveniently located child care is not available.

*Source:* CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

certification during the most recent evaluation cycle, its high school graduates read at lower levels than the statewide average. Many of the people who come to JTPA or to the New Jersey Employment Service (NJES) need remedial education as well as specific job skills. Most jobs require basic education: some reading, writing, or arithmetic. In addition, some applicants cannot express themselves adequately when they are applying for a job, or may inadvertently present themselves negatively; for instance, if an applicant says he was fired rather than laid off, the employer is likely to assume he was fired for cause. Further, basic education provides the foundation for skills related to a specific job.

People seeking employment often lack the specific skills required for that job. For example, people want to go into clerical occupations without knowing how to type, but few such clerical positions exist; or people want to work in a machine shop without having a background of shop math or experience using machine tools. Lack of pertinent skills is also a problem among dislocated workers: while they may have been in a skilled manufacturing job, their skills may be dated or not easily transferred to another job; thus, they may be quite unprepared for a new job in a service industry.

A third obstacle for some is characteristics of their personal history. Employers are likely to count against applicants a lack of education or a history of job hopping, unreliability, criminal activity, or drug use. Being on welfare per se is not likely to prevent an applicant from finding employment. On the other hand, it was easier for JTPA to place welfare clients a few years ago when employers were seeking workers. Now employers can be very selective about those they hire. A related problem is that employers tend to perceive inner-city residents as not skilled or reliable workers and thus are more reluctant to hire them. Employer misperceptions about the JTPA program also limit employer willingness to accept JTPA clients.

A fourth problem is that not enough affordable, responsible, conveniently located day care is available. Many of the people seeking work through JTPA or NJES are women caring for young children; the professionals interviewed expect this will continue to be the case. Many of these people work at low-paying jobs. Since affordable child care is not available to many low-income workers, most have to rely on private arrangements, using a relative if possible. In order to have care available every day, they need to have a backup person available in case the child care provider is sick, and they need an arrangement to provide care when the child is sick. Although many people do work out private child care, most run into problems because few can work out this whole series of arrangements.

## XII. TRANSPORTATION STRATEGIES

Since initiation of the New Jersey Transportation Executive Council (TEC) Local Outreach Program in September 1990, Union County, the city of Elizabeth, NJDOT, and NJ TRANSIT have been working together to structure a multimodal transportation strategy for improving the movement of people and goods from, through, and within Elizabeth and the region. The strategies and planned improvements presented in this section represent achievement of the following NJDOT and NJ TRANSIT investment objectives for the city of Elizabeth and the region.

1. Improve and preserve the existing system and enhance safety.
2. Improve access to the regional transportation network.
3. Improve highway operations and alleviate congestion.
4. Encourage greater use of public and nonstandard transportation.
5. Continue the TEC Outreach Program.
6. Implement traditional transit service strategies.
7. Advance nontraditional transit service strategies.
8. Implement major new transit initiatives.

### A. Highway

By statute, the focus of this report is on reverse-commuting problems and opportunities. This relates primarily to public transportation (bus and rail) services. The Urban Transportation Supplement report is not intended to be a comprehensive detailed analysis and assessment of all cities' transportation infrastructure needs. However, Sections IX, X, and XII on existing highway problems and strategies, respectively, have been included to provide a view of the comprehensive approach being advanced to improve transportation in and around New Jersey's largest cities.

#### 1. Improve and Preserve the Existing System and Enhance Safety

Rehabilitation and replacement of deficient bridges and roadways will continue to be a top priority for state transportation investments. NJDOT will also continue to give a very high priority to resurfacing, rehabilitating, and reconstructing state highways. These improvements, which often include shoulder-widening and drainage improvements, prolong the life of the facility and provide a smoother, safer, and often quicker journey. NJDOT will invest heavily in resurfacing during the five-year plan period, continuing a trend begun in Fiscal Year 1991. NJDOT's Pavement Management System, with the aid of sophisticated new testing equipment, will be used to develop a multiyear program of

improvements for the most efficient investment of highway rehabilitation and reconstruction funding.

Examples of projects planned for implementation in the next five-year period include the replacement of several US Route 1&9 viaducts and bridges as well as the replacement of the Magnolia Avenue Bridge over US Route 1&9 with an intersection.

Long-term proposals under study and development by NJDOT include the Route 430 Elmora Avenue/Conrail bridge replacement.

## **2. Improve Access to the Regional Transportation Network**

The projects and proposals below, which are in various stages of planning or implementation, will improve the connection between major local roads and the interstate and state highways in and around the city. These projects will benefit the reverse commute by providing quicker access to the major highways that connect with suburban employment centers.

The Port Authority of New York and New Jersey (PANYNJ), New Jersey Turnpike Authority, and Garden State Parkway Commission have major transportation facilities located in and near Elizabeth. The PANYNJ and the Turnpike Authority are considering significant improvements to their facilities, which are listed below.

- Ramp modifications from I-78 to the airport and revisions to many of the connections to state and local roads as part of PANYNJ planned redevelopment of Newark International Airport.
- North Avenue improvements for better access to Port Newark/Elizabeth.
- Substantial expansion to the New Jersey Turnpike toll booth capacity at Interchanges 13A and 14 is being considered to accommodate the anticipated demand at the Newark International Airport.

## **3. Improve Highway Operations and Alleviate Congestion**

### *Highway Operational Improvements*

Highway operational investments consist of relatively low-cost, small-scale improvements made to relieve spot congestion problems. Improvements to at-grade intersections constitute the largest number of jobs in this category. Others include improvements to existing grade-separated interchanges and the addition of center turning lanes.

Projects planned for Elizabeth include the widening, grading, and paving of US Route 1&9 over the Elizabeth River from East Grand Street to Hatfield Avenue. The Magnolia Bridge replacement project, mentioned in the system preservation section above, also includes construction of at-grade intersection improvements.

#### *Traffic Management*

Traffic flow can be substantially improved with the implementation of computerized traffic signal control systems. These projects "wire" together traffic signals in a corridor so that traffic signal timing patterns can be varied according to traffic conditions. Traffic engineers have found that improving the efficiency of signal systems can stretch a road's capacity by up to 25 percent without widening, thus yielding significant congestion relief and air quality benefits for a modest cost. The NJDOT is designing a computerized traffic control system for Route 27 and Route 439 (Morris Avenue).

In recent years there have been significant advances in the application of other new technologies to ease traffic congestion. Incident management and motorist advisory/diversion systems are under evaluation for their effectiveness in easing major congestion due to accidents on key roadway segments. NJDOT is currently developing the Metropolitan Area Guidance Information Control (MAGIC) system for the highway network leading to the Hudson River crossings into Manhattan.

The Newark Global Gateway Motorist Information System is a major component of the MAGIC program, which will have an impact on the city of Elizabeth. Both goods and airport access are impacted by congestion and a lack of information about traffic conditions. The provision of information to motorists will significantly improve traffic flow in and out of the area.

#### *In-City Strategies*

A wide range of projects are being considered to relieve traffic congestion in the central business district. Foremost among these are the proposed improvements to railroad overpass clearances, particularly for overpasses located at major roadways such as Elmora Avenue, Grove Street, and Jefferson Avenue. Currently, inadequate clearance at these overpasses is forcing larger trucks to turn around or to travel slowly, thus impeding traffic flow.

The city has proposed two strategies to deal with truck traffic from the Elmora and Bayway avenues beltway. One involves the widening and/or improvement of key beltway intersections such as North and Newark avenues, Elmora and Jersey avenues, and Elmora and Rahway avenues. The other entails the widening or channelization of heavily congested

sections of the beltway, such as the Elmora Avenue section between West Grand Street and Rahway Avenue.

Also under consideration to relieve traffic congestion in the CBD are the building of parking facilities; institution of a one-way traffic system; and improvements to signage at key locations in the CBD such as Newark and North avenues, North Broad Street and North Avenue, and Westfield and Elmora avenues.

#### **4. Encourage Greater Use of Public and Nonstandard Transportation**

The New Jersey Traffic Congestion and Air Pollution Control Act—the state response to the 1990 Federal Clean Air Act Amendments (CAAA)—is lending impetus to the efforts undertaken by the city of Elizabeth to reduce automobile traffic in and through the city. A major component of these efforts is the encouragement of greater use of public transit and van and car pooling through the following strategies:

- Legislation that will mandate large employers statewide to increase ridesharing;
- Legislation that will allow employers to give employees using transit a \$60 per month rebate;
- The establishment of transportation management associations (TMAs) that will assist businesses in promoting and coordinating employee ridesharing programs. Currently, a TMA is being formed to serve Elizabeth and Union County.

#### **5. Continue the TEC Outreach Program**

NJDOT and NJ TRANSIT staff will continue the annual outreach effort to give Elizabeth officials the opportunity to submit their top transportation needs and current project priorities to the NJDOT for possible project development and state funding. The process includes face-to-face dialogue with NJDOT and other transportation agency management; it is considered a major opportunity for Union County and city of Elizabeth officials to gain direct access to the annual capital programming process.

### **B. Public Transit**

#### **Agenda Setting**

Focusing attention on one transportation market, the reverse commute, helps set an agenda that targets improvements. The transportation problems discussed in Sections IX and X were reported in interviews with city officials, social service agencies, and

practitioners in the employment search field. The interview sessions did identify some transportation problems in each of the cities; one common problem was the lack of adequate information about transit. However, it is important to note that interviewees in each city did not rate "transportation insufficiency" as the major problem relative to gaining and keeping employment for city residents. In fact, "inadequate skills" was consistently noted as more critical, along with other factors such as current economic conditions, lack of adequate child care, and communication of work opportunities.

Before detailing the strategies that can best serve Elizabeth, it is important to respond to the issue of cost and fares. The comparative costs between public transit and autos is predicated upon the cost of driving and the availability of an auto. Provided that a worker drives a car, suburban commuting rarely incurs major toll or parking costs; therefore, the perceived out-of-pocket driving costs are low. Interviews raised the issue that transit fares seem high in comparison. However, the recent Comprehensive Energy Policy Act provides tax incentives to employers who subsidize employee fares: employers can provide a tax-free benefit to their workers worth up to \$60 per month towards the purchase of a transit ticket. This benefit can significantly reduce, if not completely offset, the fare on NJ TRANSIT bus services. For example, NJ TRANSIT's one-zone and two-zone monthly bus fares in North Jersey are \$41 and \$54, respectively. Many of the major suburban employment clusters outside the urban areas examined in the Urban Transportation Supplement can be reached by a one- or two-zone bus trip.

The issue of bus stop signs and shelters was also raised. Both in urban and suburban areas, bus stop signs and shelters are controlled by the local government and NJDOT (for code conformance). Another local responsibility is parking enforcement. When bus stops are designated but parking restrictions are not enforced, buses cannot exit traffic flow and use the bus stop zone, effectively undermining one of the important purposes of bus stops as a congestion-management tool. With greater movement for buses, traffic flows more smoothly and air quality is improved. Another purpose served by bus stop signs and shelters, also reported by interviewees, is in the promotion of transit for both the regular rider as well as the non-user. This is an effective form of public communication about where routes go. Bus stops need to be designated and parking enforced so that buses can exit and enter the traffic flow, easing congestion, ensuring curbside access for passenger safety and accessibility, and providing an important promotion and visible reference for public transit, thereby improving communication about services.

Implementation of improvements to the existing service network and infrastructure described below requires that they be evaluated and subjected to rigorous review to prepare

them for inclusion in NJ TRANSIT's operating and/or capital budgets. Annually, NJ TRANSIT seeks appropriations to meet its operating budget. Although recent pressures for NJ TRANSIT to reduce expense growth and cut costs are not central to this Urban Transportation Supplement, they should be considered a limiting factor on the ability of NJ TRANSIT to implement projects.

### **Targeted Strategies**

Tables 24A and 24B note locations or corridors and transportation problems reported through the interview process. The following project descriptions are organized into either traditional or nontraditional service strategies and major new initiatives.

### **6. Implement Traditional Transit Service Strategies**

Traditional service strategies refer to those projects, large or small, that are designed to enhance the existing bus, rail and light-rail transportation network. Traditional service strategies concentrate on the basic building blocks used by all public transit providers. Schedule improvements and service modifications are the result of a constant process that culminates in quarterly schedule changes. Traditional service strategies, in many cases, reflect service modifications through schedule changes—adjusting running time to meet worksite hours, extending service to meet closing hours at shopping malls, and so on.

#### *Traditional Service Project Descriptions*

*Port Newark and Elizabeth/Newark Airport.* This area is a high priority for NJ TRANSIT to investigate the potential for new or restructured bus services. While the area is large, with a problematic road network and employment centers that operate on varied work shifts, it is a critical link in the vitality of the Newark-Elizabeth urban area. NJ TRANSIT will work in concert with the regional agencies active in the area to sort out those options that make sense for bus service, as well as which services are best operated in a more nontraditional manner. Opportunities exist for mixing the two in a complementary way, thus maximizing the use of resources in the area. When the Hudson County Improvement Authority's new TMA, TRANSIT PLUS+, begins operating, this will be a prime location for its activities.

*Bus Route Revisions and Scheduling Changes.* In addition, NJ TRANSIT is examining current ridership patterns and schedules in close detail to find ways to restructure service to better meet the needs of its riders and potential riders, including reverse commuters, in locations such as the area east of Route 1 and that served by the Route 62

bus line—Linden, Rahway, Woodbridge, and Woodbridge Mall. NJ TRANSIT is also working directly with airport tenants and employees regarding existing bus service.

Significant traditional bus service to highway corridors such as Route 22, however, will be difficult if not impossible to achieve due to the barriers caused by the design of the highway and the land uses surrounding it, which effectively preclude a safe local transit operation.

#### 7. **Advance Nontraditional Transit Service Strategies**

"Nontraditional service strategies" refers to a newly developed Suburban Initiatives program that is seeking new ways for transit to serve suburban travel needs without the constraints of standard bus and rail service alternatives. With the Federal Clean Air Act Amendments (CAAA) of 1990, the Suburban Initiatives program becomes an important component of compliance. The urban centers in the state of New Jersey are all in non-attainment zones. The requirement of the CAAA that employers of more than 100 staff must reduce single-occupant vehicle trips magnifies the importance of looking for transportation solutions for the work commute—traditional or nontraditional, peak direction or reverse commute. NJ TRANSIT, as an integral part of the solution, has made a commitment to a leadership role in defining nontraditional service strategies to help the state meet these mandates. In this role, NJ TRANSIT has a working approach that in fact is pertinent to many of the issues raised in this first Urban Transportation Supplement.

- A. NJ TRANSIT is establishing a transportation management association (TMA) in the transit-rich areas of Essex and Union counties, covering the cities of Elizabeth and Newark. Since both private and public institutions employing more than 100 staff will be greatly affected by the CAAA legislation, its mission is to educate and assist the approximate 2,000 private and public employers to comply with the Employee Trip Reduction (ETR) and to promote the use of mass transit. The urban TMA, aptly titled TRANSIT PLUS+, will work to develop and promote travel in multiple-occupant vehicles, with particular emphasis on transit. This will be accomplished by identifying transportation issues, advocating and implementing associated improvements, developing and promoting transit, developing strategies for parking management, gaining cooperation in influencing commuter travel behavior, and serving as the focus for travel strategies to and within the Essex and Union county areas.

B. NJ TRANSIT's Service Development team has begun a joint partnership with NJDOT to support the suburban TMAs. This special Suburban Initiatives program is now identifying the potential for nontraditional services within the service area of the TMAs. The TMA service areas include Burlington-Camden, Greater Princeton, the Meadowlands, and Middlesex, Monmouth, Morris and Somerset counties and comprise a base of approximately 1,800 employers.

C. The Business Transit Alliance (BTA) is an outreach program to businesses throughout the state. The BTA assists companies located in areas where no TMA exists. In addition to the traditional BTA services, such as Transit Days and Resources Centers, companies will be able to conduct ridesharing programs for car and van pools. With the help of the BTA, employers will be able to develop their compliance plans and implement ETR programs. There are approximately 2,700 private-sector companies with 100 or more employees in non-TMA service areas, and equally as many local, state, and federal agencies that will require special assistance for compliance with the Clean Air Act Amendments, for a total of more than 5,000 potential clients.

#### *Nontraditional Service Project Descriptions*

*TRANSIT PLUS+—the Essex-Union Transportation Management Association.* NJ TRANSIT is now beginning to implement the Essex-Union Transportation Management Association, which will be providing TMA services to employers and employees in Essex and Union counties. The mission of the TMA is stated as follows: "We will provide services and expertise to deliver a full range of commuting alternatives with a dedicated, innovative team of professionals, responsive to the needs of Essex and Union employers."

The transportation management association will take direction from an advisory board composed of employers in the two counties. The TMA will feature transit information, personalized transit trip planning, computerized car pool ride-matching, transportation-demand management, employer transportation coordinator training, transportation fairs, Clean Air Act compliance plan assistance, educational workshops, and other activities.

*Meadowlink—EZ Rider.* The Port Authority is sponsoring the EZ Rider project to provide TMA-type services (computerized ride-matching plus transit information) to

Newark International Airport employers and tenants. Working with Meadowlink, the area TMA, NJ TRANSIT is assisting the EZ Rider organization.

#### 8. Implement Major New Transit Initiatives

Major new initiatives are capital-intensive projects designed to improve the transportation infrastructure. These projects have all undergone extensive study and conceptual planning; some have been discussed for decades. These projects will provide travel time savings, new travel pattern opportunities for all New Jerseyans, and will substantially improve the existing bus and rail network in the state. Some of the projects have the potential to open up new work sites for urban residents, improve ambient air quality by replacing vehicle trips with transit trips, and provide access to more job sites. In part, the projects are perceived as tools to support and enhance the economic development in the targeted corridors.

*Newark-Elizabeth Rail Link Options Study.* Early in the project, NJ TRANSIT established a Technical Advisory Committee (TAC) to review and advise on the progress of work. It is expected that the project will provide benefits to Elizabeth residents in the provision of more frequent service to the airport for Elizabeth residents in the North Elizabeth Station area; further, the project has the potential for some real estate development opportunities around stations. Specifically, the TAC agreed on the following six criteria to evaluate the alternatives. These criteria provide some insight into the expected benefits.

- Transportation service benefits to areas not currently served by rail transit, including portions of downtown Newark and parts of Elizabeth, measured by new transit riders;
- Service benefits to air passengers, airport employees, other airport users, and travelers to airport-related development in Airport City, Waverly Yards, and other locations around the airport, measured by new transit riders to the airport area;
- Travel time savings, reliability improvements, reduction in transfers, and increased accessibility to existing bus and rail riders in the corridor, measured by total system ridership, travel time savings, increase in reliability, and change in daily transfers/passengers;
- Inducement of new development around rail link stations and creation of additional jobs at the airport and at other sites in the corridor, measured by projected square feet of development and number of new jobs;

- The financial feasibility of building the rail link project, considering both costs and potential funding sources, measured by capital, operating, and maintenance costs; and
- The ability of the project to attract strong support from public agencies, the private sector, the public, and the media.

### **XIII. SUMMATION**

#### **A. City's Role**

Elizabeth is a long-established city with a history of manufacturing, industry, and transportation of people and goods. As industry developed over the past century, local activities have become regional ones. As manufacturing has moved from central cities, many of the jobs traditionally held by Elizabeth residents within the city have disappeared or moved to suburban locations. Meanwhile, Port Elizabeth and Newark Airport have grown in importance. Unlike most other cities considered in the Urban Transportation Supplement, Elizabeth has not lost population even as the city has lost jobs. Elizabeth has adapted to these changes and is maintaining the small-town atmosphere in the CBD and the quality of residential neighborhoods. Looking to the future, the city plans to redevelop industrial areas, particularly the Elizabethport and Dowd-Division areas, and the industrial parks. If Newark International Airport continues to grow, Elizabeth firms are well-positioned to provide important services, such as warehousing. Elizabeth is very interested in plans to increase transit to the airport and is concerned that any such plans also benefit local development. The city would also like to redevelop the downtown; to do so, it needs both jobs and more transit from the suburbs to the midtown Elizabeth area.

#### **B. Dominant Demographic Trends**

Population in the city of Elizabeth peaked in the 1930s; since then the city has not lost appreciable population as many other industrial cities have. During the past decade, the city's population increased. Among age groups, very young children and working-age adults increased as proportions of the population. The number of households and the average size increased slightly. Household and individual income increased, although not as much as for the state as a whole. By 1990 almost one-sixth of the Elizabeth population was below the poverty level.

### **C. Dominant Characteristics of the Labor Force**

In 1990 nearly one-half of Elizabeth residents were employed, while a tenth were unemployed. More than three-quarters of the households received wage or salary income. For a century, Elizabeth's residents depended on industrial jobs; however, during the 1980s the proportion employed in manufacturing declined from nearly two-fifths to one-quarter. For the first time in 1990, more residents were employed in service industries than in manufacturing. Corresponding to these changes in industry, fewer residents worked as operators, laborers, or in precision production and skilled crafts. On the other hand, more worked in services, sales, technical, managerial, or executive occupations. Three-quarters of Elizabeth households own at least one car.

### **D. Dominant Characteristics of "At-Place" Employment, and The Difference Between Employment Characteristics of Residents and "At-Place" Employment**

During the 1980s, Elizabeth lost one-sixth of the private-sector jobs located within the city, as well as a much smaller proportion of its public-sector jobs. Manufacturing accounted for most of the lost jobs. Gains in service and construction jobs did not offset the loss in manufacturing. Transportation, retail trade, and wholesale trade lost jobs at a lower rate than manufacturing, so their share of jobs in Elizabeth increased. In contrast to the city, jobs in the four-county Elizabeth labor area increased. Although the labor area, like the city, lost manufacturing jobs, gains in other sectors, especially services, more than offset the loss.

Contrasting Elizabeth residents' jobs with the available at-place employment shows that, at a minimum, 10,000 residents would have to find employment outside the city. This is a result of mismatches in both public- and private-sector employment. First, nearly 6,000 more Elizabeth residents work than there are jobs in the city. Further, another 6,000 jobs in the city are public-sector jobs, whereas only 2,000 residents hold public-sector jobs. Second, the industries in which residents hold jobs do not correspond perfectly to those in the city. More residents work in manufacturing, retail trade, services, finance/insurance/real estate, and construction than there are jobs in Elizabeth.

Since all jobs located in the city are not filled by Elizabeth residents, in reality 33,000 city residents found work outside Elizabeth in 1990.

### **E. Employment Projections**

Employment projections to the year 2000 based on the State Plan mandate indicate that the city itself, Union County, and the Elizabeth labor area will all lose jobs over the

next decade. Manufacturing and other basic industries will be hardest hit. In the labor area, growth in service and retail trade will almost offset the loss in basic industry.

Job opportunities arise from newly created jobs, and perhaps more importantly, as a result of workers leaving the labor force. Far more new opportunities for less-skilled jobs will be created during the next decade from workers leaving the labor force than from newly created jobs. Job opportunities created by people leaving the labor force are projected to occur primarily in those municipalities where the most jobs currently exist. Opportunities for Elizabeth residents are projected to be primarily in Elizabeth, Newark, Union Township, Linden, Springfield, and Clark. Some jobs also will be available in western Union County and the adjacent part of Morris County, but public transit to these areas from Elizabeth is very limited.

#### **F. Existing Transportation Network**

Elizabeth has long been a center for movement of people and goods. It is served by road, bus, and rail networks. Three interstate highways and a dozen major state roads link Elizabeth with nearby communities and with the larger network of state and national roads. Bus routes connect Elizabeth with Newark and New York to the north, Union Township and Springfield to the northwest, Roselle and Cranford to the west, and Linden, Rahway, and Woodbridge to the south. Two passenger railway lines connect Elizabeth with Newark and New York to the north; the Northeast Corridor Line goes south through central New Jersey to Trenton and connects to Philadelphia; the North Jersey Coast Line continues south through coastal towns to Bay Head. Two Conrail terminals handle freight.

#### **G. Transportation Problems**

One of the major transportation challenges of this region is to effectively move millions of commuters and commercial vehicles each day through an aging and often obsolete array of highways and bridges. Much of this infrastructure is approaching or has exceeded capacity. US Route 1&9 is congested through extended peak periods as is Route 27. Examples of deteriorating and obsolete bridges include the US Route 1&9 bridge over the Elizabeth River and the Elmora Avenue/Conrail Bridge. Locally, the Elizabeth CBD traffic flow suffers from US Route 1&9 truck traffic seeking shortcuts through the city, numerous railroad overpasses with inadequate clearances, and poor roadway access to the waterfront.

Generally, transportation from Elizabeth to suburban work locations is quite adequate as is transportation within the city. It is especially good during the day from early morning to evening, for travel within the city, and for travel outside the city going north or

south. However, the existing transit system has two major limitations for those Elizabeth residents who use it to commute. First, only limited public transit is available for those who must go to work or return late at night. Second, in contrast to north-south travel, it is more difficult to travel west from Elizabeth to the Route 22 corridor or to the communities in western Union County and adjacent Morris County.

#### **H. Problems Other Than Transportation**

Lack of transportation is not the only significant obstacle for unemployed inner-city Elizabeth residents seeking employment within or outside the city. City and county professionals identified the current economy as the most serious barrier. The next most important problem is limited general education, lack of specific job skills, or both. The lack of affordable, responsible, convenient child care prevents many people from even seeking employment. Finally, some residents have a personal history of problems at prior jobs, job hopping, or a criminal record that makes it difficult for them to obtain employment.

#### **I. Conclusion**

The preparation of this Urban Transportation Supplement marks a beginning. The road and transportation infrastructure network will be extensively overhauled during the next decade and, in consonance with the New Jersey State Development and Redevelopment Plan, central city areas will receive high priority for these capital investments. Public transit deficiencies have been clearly defined; services designed to respond to these deficiencies are in active preparation. How much of this service materializes will be financially dependent and, in any event, will evolve over time as air quality mandates become more imminent and agreements are forged between public transit service providers and employers facing these mandates.

Other deficiencies demand non-financial solutions. The designation of bus stops requires more concerted, cooperative efforts between NJ TRANSIT, municipalities, and NJDOT, since stops must be agreed to by municipalities and NJDOT, and since parking prohibitions at bus stops must be enforced by police forces having jurisdiction over these stops. Design deficiencies—including median barriers, suburban site plans with large setbacks, and the lack of pedestrian amenities—pose more daunting challenges, and suggest the need for new site planning standards and road/sidewalk design accommodations to govern future development approvals and roadway improvement efforts.

In summary, the Urban Transportation Supplement defines an ambitious agenda for transit service improvement, and the update called for by state statute in 1996 will serve as an important milestone for measuring progress.

## A METHODOLOGICAL NOTE ON LESS-SKILLED EMPLOYMENT GROWTH AND LESS-SKILLED JOB SEPARATIONS

### LESS-SKILLED EMPLOYMENT GROWTH

Less-skilled employment growth for the period 1993–2000 is estimated by using projections for the year 2000 for the twenty largest occupational growth categories in a county or group of counties (Job Training Partnership Act [JTPA] labor areas) in 1986 and sifting from these occupations those that are typically less-skilled. Less-skilled occupations *would* include salespersons, janitors, parking-lot attendants, waiters and waitresses, stock clerks, factory workers, and so on. Less-skilled occupations *would not* include registered nurses, bookkeepers, cooks, accountants, teachers, sales representatives, truck drivers, and so on. Projections were undertaken for the following JTPA labor area county groups:<sup>1</sup>

Atlantic and Cape May  
Bergen and Passaic  
Burlington and Camden  
Cumberland, Gloucester, and Salem  
Essex and Hudson  
Hunterdon and Somerset  
Mercer  
Middlesex and Union  
Monmouth and Ocean  
Morris, Sussex, and Warren

These projections of less-skilled employment growth were obtained from occupational employment projections by the New Jersey Department of Labor (NJDOLE) for each of the above geographical areas.<sup>2</sup>

In order to estimate less-skilled employment growth by individual county and ultimately by municipality within a county, the less-skilled share of all occupations was determined for a county or county group and this ratio applied to total employment projections also by county or county group undertaken by the Center for Urban Policy Research (CUPR) at Rutgers University. For instance, if CUPR determined that of the job growth of all occupations in Bergen and Passaic counties (from the NJDOLE projections), less-skilled job growth constituted 60 percent, the 1990–2000 employment projection for each of these counties would be multiplied by 60 percent to obtain a figure for less-skilled employment. These would further be multiplied by 70 percent to account for the seven-year projection period (1993–2000) used for less-skilled employment as opposed to the ten-year projection period (1990–2000) used for total employment.

Less-skilled employment projections were assigned to municipalities by the municipalities' shares of county total employment growth over the period 1970 to 1990. If, for example, Paramus in Bergen County had 40 percent of the county's total employment growth from 1970 to 1990, it would receive 40 percent of the projected less-skilled employment for the county from 1993 to 2000.

Finally, less-skilled employment growth is divided into three categories (basic, retail, and services) according to the existing local distribution of these broad classification types in 1990. Thus, less-skilled employment growth is a fractional share of CUPR's projection of total employment growth. NJDOLE's figures for less-skilled employment growth are not used directly because these projections are dated and reflect the much more generous estimates of employment growth typical of a state economy viewed in the mid- to late-1980s. Currently new projections are underway but as of April 15, 1993 are available only at the state level. CUPR's adaptation of these projections anticipates the change in magnitude of (lower) employment projections taking place in the 1993 versus the 1988 projections.

Currently, new NJDOLE projections are underway. They are available only at the state level. They show considerably less annual employment growth (–25 percent) and significantly less annual job separations (–50 percent) than prior projections. These numbers are in keeping with the lower projections employed by CUPR in this analysis.

<sup>1</sup> These labor areas are slightly different from the ones used elsewhere in this report. Those labor areas used elsewhere are the New Jersey recognized labor areas. Occupational projections by NJDOLE were already undertaken by the JTPA labor areas, thus limiting the choices available for aggregation.

<sup>2</sup> See New Jersey Department of Labor, *Employment Projections. Volume II: Occupational Outlook for New Jersey and Selected Areas 1986–2000* (Trenton, NJ: New Jersey Department of Labor, October 1988).

### LESS-SKILLED JOB SEPARATIONS

Job separations (at the time of this study)<sup>3</sup> involve departures from the labor force due to death, ill health, pregnancy, or for personal or undetermined reasons. Job separations are not those jobs that result from individuals moving up the ladder of employment and, through this, the release of jobs that other aspiring workers fill. They thus represent removal from the labor force as opposed to removal from a specific job title.

Job separations are more prevalent where the employment base is large. They are concentrated in the older central core areas of employment, the older close-in suburban areas, or the newer suburban nodes of office space, retail, or industrial development.

Less-skilled job separations are also predicted by occupation for the period 1993-2000. Job separations are determined from procedures recommended by the U. S. Department of Labor and are essentially a percentage share of existing employment at any one time. These types of occupational projections, also available from the New Jersey Department of Labor and found in the prior-listed source, are somewhat less subject to widescale variation than are the occupational employment-growth projections discussed previously.

Using a procedure similar to that discussed above, the less-skilled occupations were sifted from those occupations experiencing the most growth and their average *annual* number of separations tallied. This was multiplied by 7 for the seven-year projection period 1993-2000 and divided by two-thirds to account for all occupations, not just those experiencing the most growth.

Less-skilled employment separation projections are assigned to each municipality in a JTPA labor area according to the ratio of total employment of that municipality in 1990 to total employment in the JTPA labor area, also in 1990. Employment separations are divided among basic, retail, and services categories at the municipal level according to the existing distribution of these types of employment in the municipality in 1990. On a statewide base, the components of annual job openings, i.e., job separations and job growth, are in a ratio of about 2-3 to 1.

### WHAT IS THE EFFECT OF JOB GROWTH VERSUS JOB SEPARATIONS?

Much of the above discussion leads to an obvious question: Which is more important—job growth or job separations? The answer is that they are both important for different reasons.

Job growth is the net new addition of jobs to an area. The demand for workers does not bring with it an associated supply of workers. Job separations are losses of workers currently filling job billets in an area with an essentially similar number of workers ready to enter the labor force to take their places. In this case, job demand brings with it an almost equal amount of job supply. Thus, in a labor area, if 1,000 workers leave the labor force due to separations, and labor demand grows by an additional 250 jobs, there is a potential for 1,250 job openings in this labor area. If the community has 500 unemployed and another 900 ready to enter the labor force, the 1,250 openings theoretically could be filled immediately, yet with some workers still remaining unemployed.

For the job aspirant in the central city, both types of employment opportunity are important. Job growth provides net new employment opportunities. Job separations provide few net new employment opportunities from a macro perspective but potentially significantly more opportunities from a micro perspective. The latter is true for the following reason. If the central city of a labor area contains most of the job openings in the form of *separations*, and suburban workers will not go into the central city for employment, this provides a tremendous supply of available jobs to urban workers. On the other hand, if most of the job *growth* is in the suburbs and must be accessed by automobile, even though these are net new jobs, the urban resident, in only 50-75 percent of the cases having an automobile, could be at a significant disadvantage. Thus, each type of job creates a potential for employment with biases towards and biases against different types of workers (urban versus suburban).

### A SUBNOTE ON THE ATLANTIC CITY/CAPE MAY AND MERCER COUNTY LABOR AREAS

Both of these labor areas have low levels of less-skilled basic employment. In the Atlantic City/Cape May case, this is due to manufacturing being almost totally eclipsed by services (casino) employment. In the case of Mercer, most of the basic employment that remains is higher skilled. In both of these cases, there is a projection of zero job separations for the basic sector.

<sup>3</sup> There are slight definitional changes underway for the 1993 occupational projections.

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