

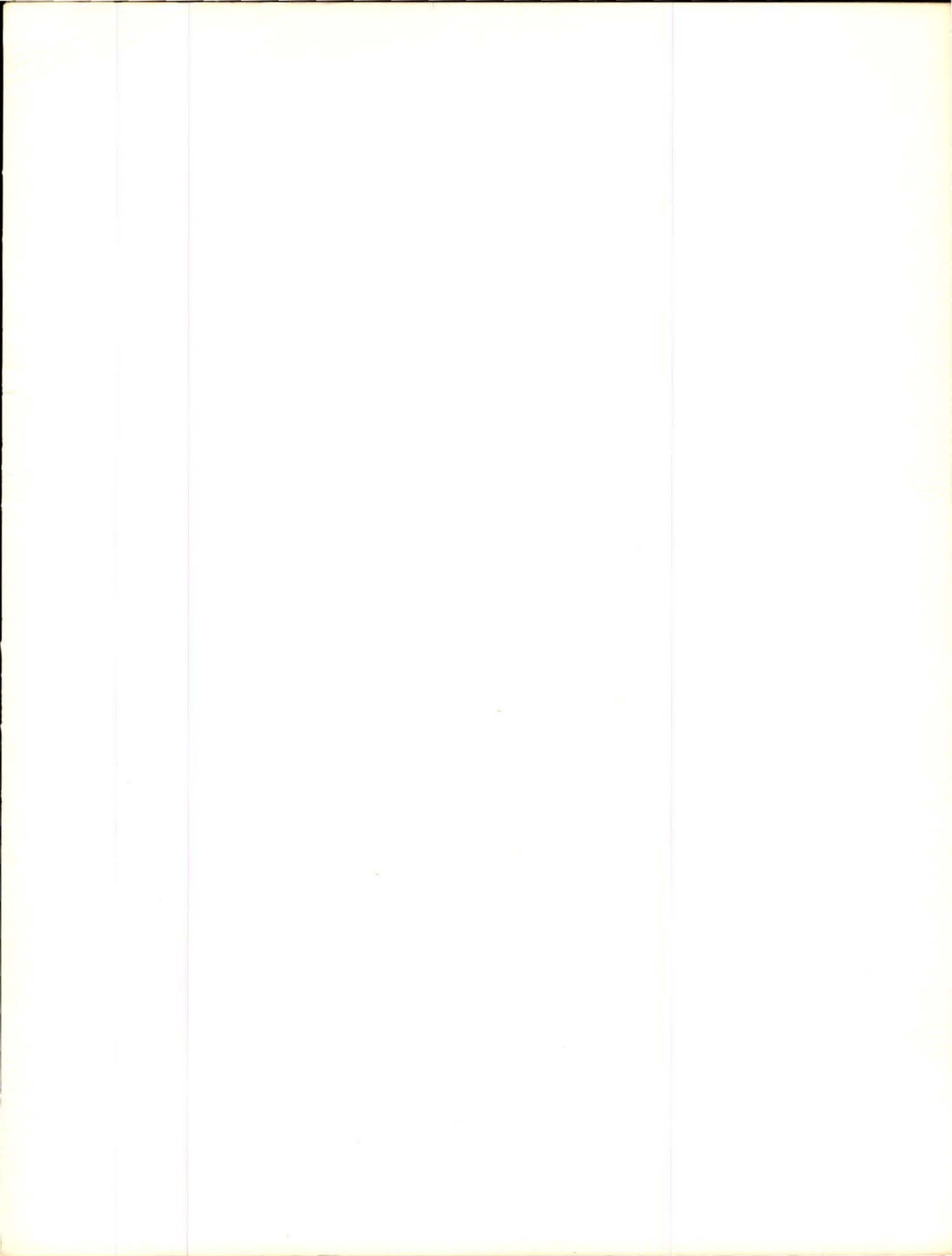
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Interim Report
**OVERVIEW AND POLICY ALTERNATIVES
ON
TRANSPORTATION IN NEW JERSEY**

WILBUR SMITH AND ASSOCIATES/FORD, BACON & DAVIS, Inc.

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INTERIM REPORT

OVERVIEW AND POLICY ALTERNATIVES
ON
TRANSPORTATION IN NEW JERSEY

PREPARED FOR

THE NEW JERSEY DEPARTMENT OF TRANSPORTATION

The preparation of this report has been financed in part through a grant from the United States Department of Transportation, Urban Mass Transportation Administration, under the Urban Mass Transportation Act of 1964, as amended.

The contents do not necessarily reflect the official views or policies of the U.S. Department of Transportation. This report does not constitute a standard, specification, or regulation.

By

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FORD, BACON & DAVIS Inc.

January, 1973

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January 4, 1973

Policy Committee
New Jersey Transportation Study
Department of Transportation
State of New Jersey
1035 Parkway Avenue
Trenton, New Jersey 08625

Attention: Commissioner John C. Kohl

Re: Contract TS 7351 IT-09-0023

Gentlemen:

We are pleased to submit this interim report, "Overview and Policy Alternatives on Transportation in New Jersey".

The overall status of transportation in the State is identified and principal deficiencies in the present system are noted. The report further sets forth a number of alternative policy options in response to the identified deficiencies.

We hope it will be of assistance to the State in its efforts to preserve and extend public transportation service.

It has been a pleasure to assist you in this important study task. Special thanks are extended to all members of your organization who provided valuable data, background and status information for use in this study.

Respectfully submitted,

WILBUR SMITH AND ASSOCIATES

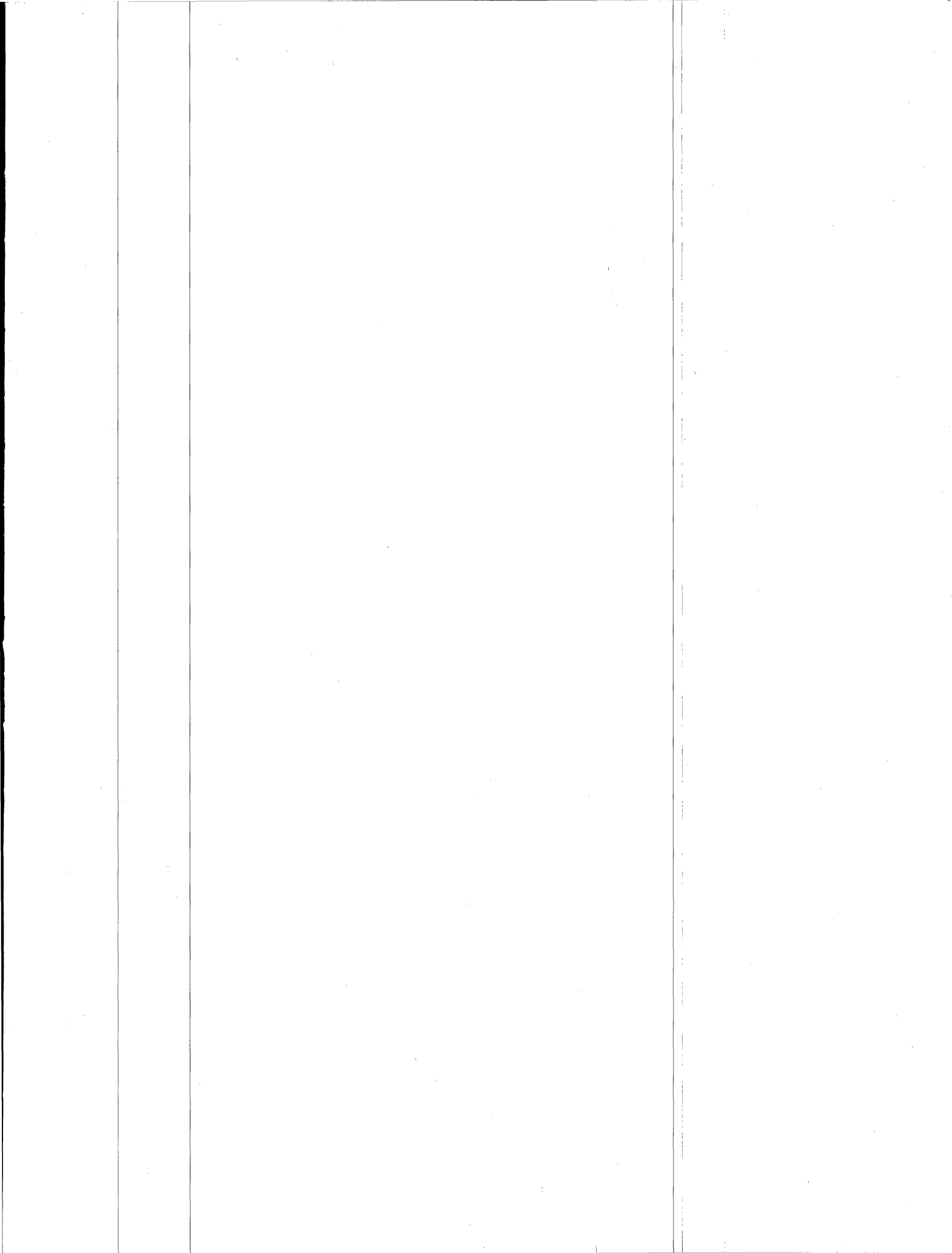
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Exhibit A	Scope of Work
Table A	Comparison of Highway Systems
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Table C	Population by Age Group
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SECTION I

OVERVIEW OF TRANSPORTATION IN NEW JERSEY

TRANSPORTATION IN NEW JERSEY

For more than two decades, public transportation throughout the United States has experienced a constant decline in patronage. In spite of the fact that it is the most densely populated State in the nation, New Jersey shares this dilemma with all other states.

Transportation in New Jersey is a critical problem as a result of financial failure of railroads and bus companies and the increasing density of automobile traffic over the State's street and highway network.

Combined State and Federal funds of almost \$28 million annually are being spent on public transit systems in order to assure continuance of operations on the five railroads (all bankrupt) and many bus companies. It is now quite apparent the policies of preserving marginal rail and bus services can no longer continue without change in view of the poor economic posture of the public transport system of the State.

PURPOSE AND SCOPE OF STUDY

To set the framework, identify existing conditions, and outline available governmental policy options, the Department of Transportation (NJDOT) authorized a comprehensive study under provisions of P.L. 1972, c.73. It will examine public transport operations with the goals of preserving and extending bus services in response to public requirements; considering the needs

of persons who are totally dependent on public transportation; achieving better coordination, regulation and operation of needed services; and optimization of State and Federal fiscal assistance programs.

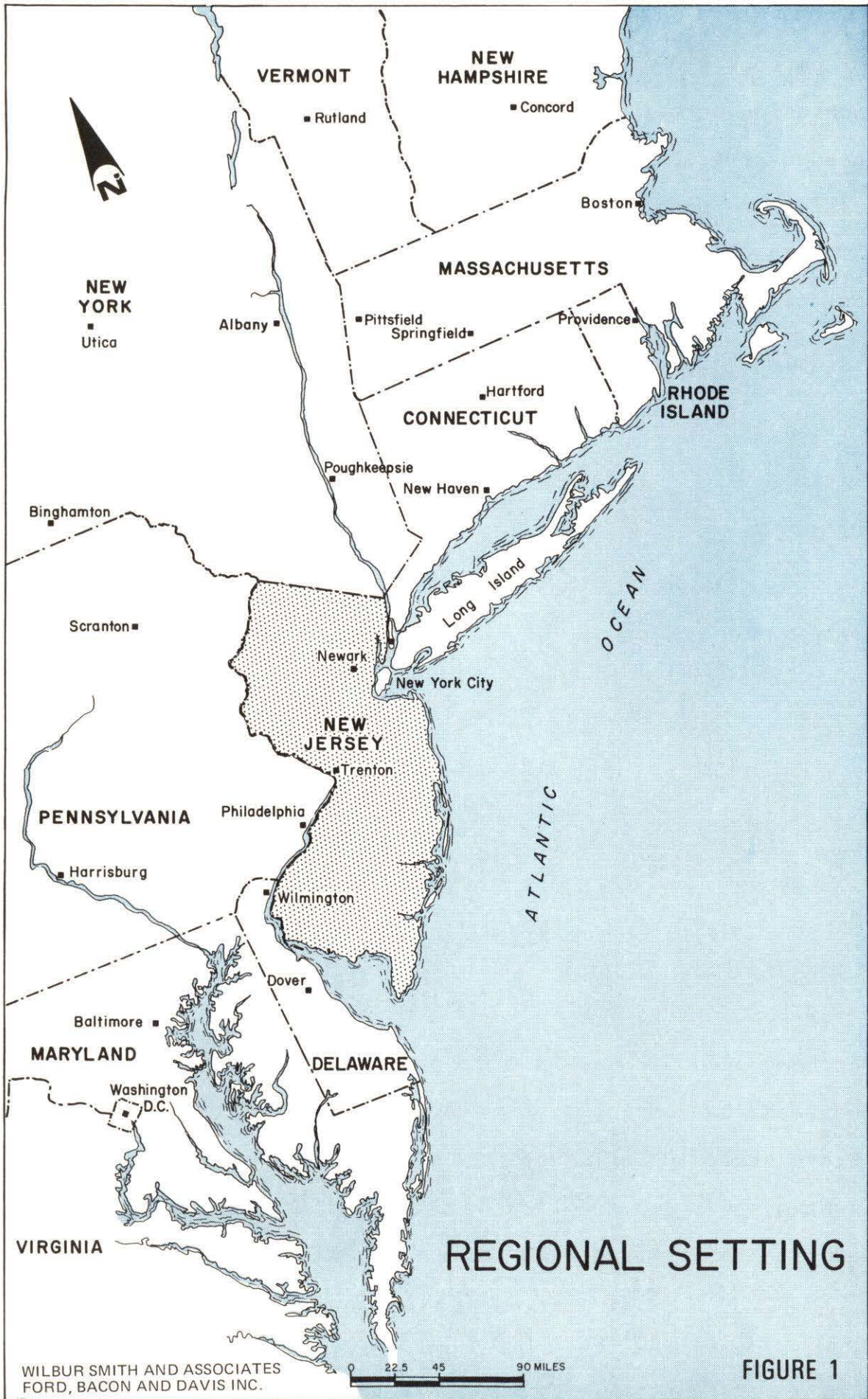
The first study objective, the subject of this statement, is to:

1. Provide an overview of the total transportation situation; and,
2. Provide a statement of practical governmental policy alternatives with respect to all public transport modes in the State.

GEOGRAPHY

New Jersey is situated about midway between Washington and Boston in the northeast travel corridor and is the State of residence for many workers and visitors to two of the nation's largest cities -- New York and Philadelphia (Figure 1). Its location has contributed to the fact that it leads as a State of manufacturing, industry, and economic growth.

It is densely settled in the nine counties adjacent to New York, the four counties near Philadelphia, and in Mercer County in the vicinity of Trenton. In other parts of the State where urban activity has not yet developed, an agricultural economy predominates in the rural area. The marked contrast between the characteristics of the urban and rural areas in the State strongly influences travel habits and the transportation system needs and complicates the development, acceptance and adoption of a State-wide policy on public transportation.



TRAVEL IN NEW JERSEY

The importance of travel in New Jersey can best be measured by reference to total daily person trips. Order-of-magnitude estimates have been made of daily person trips by both drivers and passengers in private vehicles and passengers in the various public transportation services available. The following trips represent 1970 average daily travel in New Jersey:

ESTIMATED DAILY PERSON TRIPS

MODE	INTERNAL		THROUGH		TOTAL	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Automobile	12,365,000	83.5	50,000	61.0	12,415,000	83.2
Trucks	925,000	6.2	10,000	12.1	935,000	6.2
Bus	1,192,000	8.0	8,000	9.8	1,200,000	8.0
Rail	344,000	2.3	14,000	17.1	358,000	2.6
TOTAL	14,826,000 (1)	100.0	82,000	100.0	14,908,000	100.0
Per Cent of Total		99.4		0.6		100.0

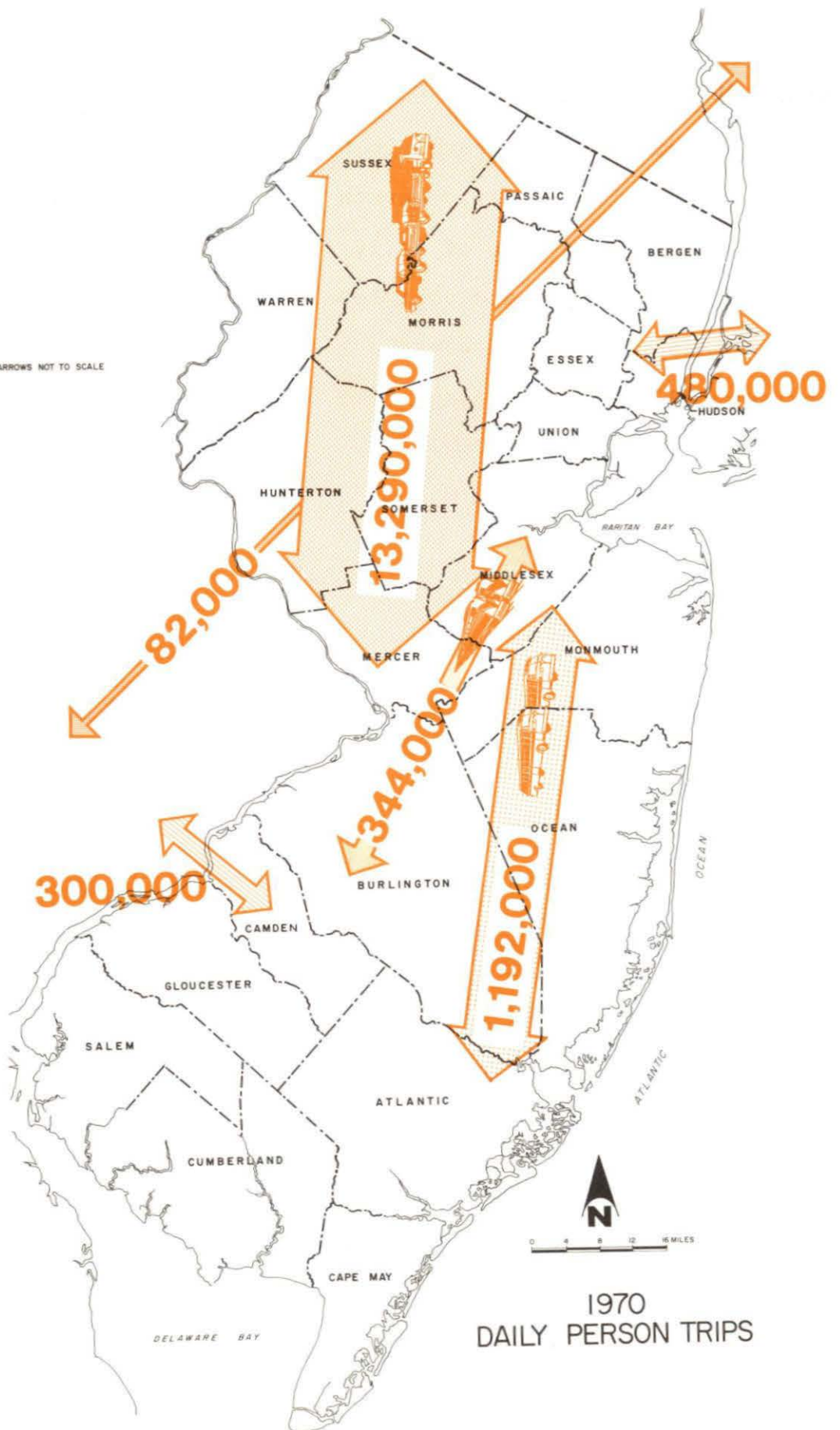
(1) Does not include 480,000 N.Y.-N.J. and 300,000 N.Y.-Pa. trips.

Source: NJDOT and estimates by Wilbur Smith and Associates/Ford, Bacon & Davis, Inc. (Figure 2).

Auto/truck trips predominate and represent 89 per cent of total person trips. Buses account for only 8.0 per cent and rail passengers only 2.6 per cent of the total person trips.

Corridor or through trips, with both origins and destinations outside the State, account for only 0.6 per cent of the total movement. This is a typical situation, the principal travel patterns in a State, metropolitan area, county or town being intra-area.

NOTE: ARROWS NOT TO SCALE



WILBUR SMITH AND ASSOCIATES
FORD, BACON AND DAVIS INC.

FIGURE 2

Travel Growth - Projections made by NJDOT indicate that by 1990, motor vehicle travel will increase by 73 per cent and rail patronage will increase by 75 per cent (Figure 3). Assumptions anticipate improved rail systems and some new highways. More congestion is forecast for State highways as lane-mile densities should rise from about 5,200 vehicles at present to over 6,000 vehicles by 1990.

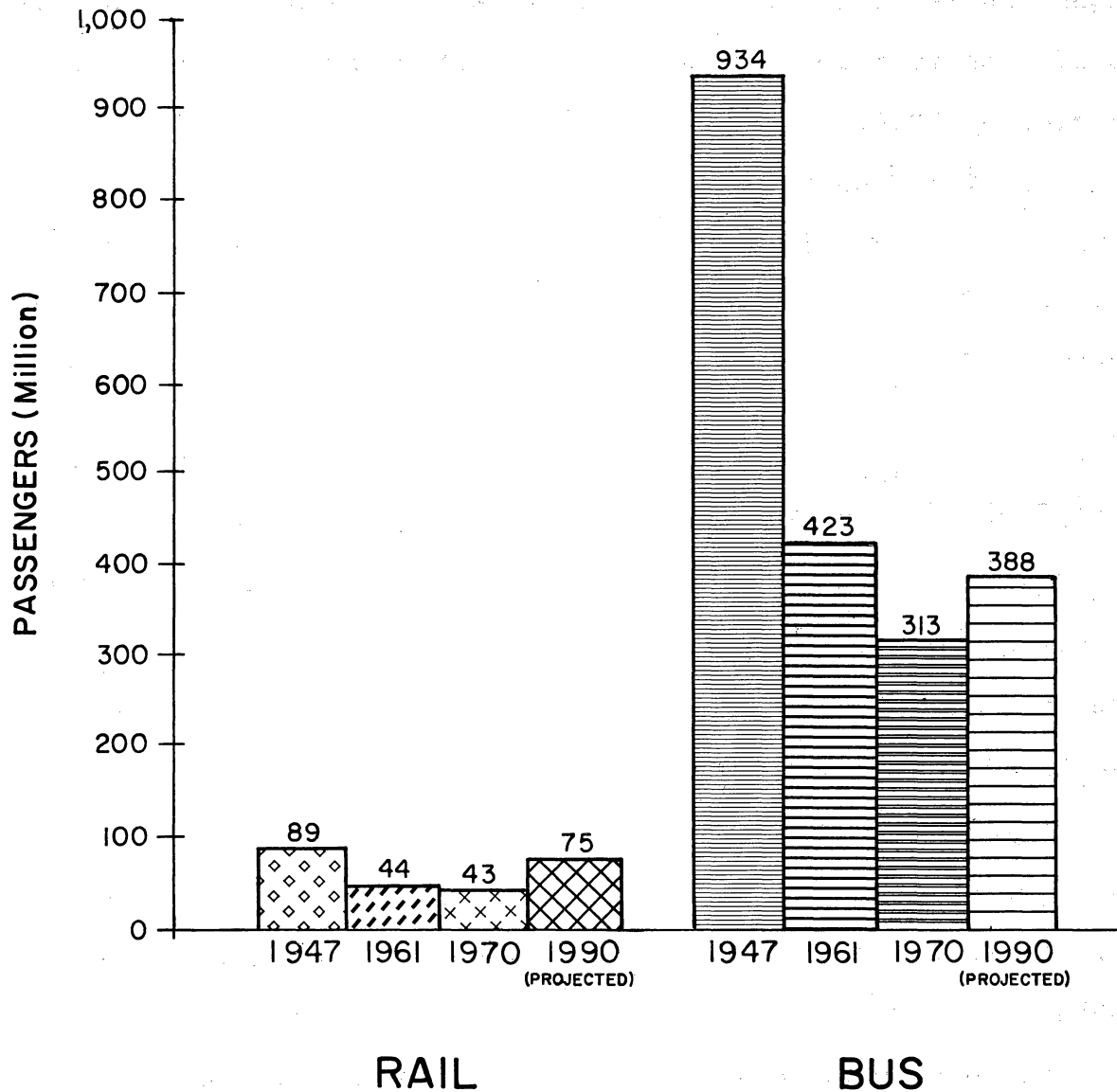
Travel by bus would increase 24 per cent as a result of anticipated innovative operating techniques. Air operations are forecast to rise about 215 per cent. This assumes an increase in general aviation activity throughout the State and operation of a new Newark Airport.

POPULATION AND GROWTH INDICATORS

The 1970 census found over 7,168,000 people in New Jersey, an increase of 18 per cent from approximately 6,070,000 in 1960. Forecasts recently prepared by NJDOT as a part of the "Master Plan for Transportation, '72", and accepted by the U. S. Department of Transportation, indicate that by 1990, 9,457,000 residents can be expected in the State. Estimates of 1990 population prepared by the New Jersey Department of Labor and Industry, Division of Planning and Research suggest a 1990 population of 9,098,010.

The density of population based on the NJDOT figures, would increase from a nation-leading 950 per square mile in 1970 to 1,260 persons per square mile in 1990. These figures are given in Table 1.

Vehicle registration has grown at a rate in excess of population, increasing by almost 50 per cent in the 1960-70 period and



ANNUAL PATRONAGE TRENDS

SOURCE: NEW JERSEY DEPARTMENT
OF TRANSPORTATION

Table 1

NEW JERSEY GROWTH TRENDS AND PROJECTIONS

	<u>1960</u>	<u>1970</u>		<u>1990</u>	
	<u>Number</u>	<u>Number</u>	<u>Per Cent Change</u>	<u>Number</u>	<u>Per Cent Change</u>
Population (Millions)	6.07	7.168	+18	9.457	+32
Development Density (Persons Per Square Mile)	-	950	--	1,260	+33
Vehicle Registration (Millions)	2.401	3.794	+58	5.384	+42
Employment (Millions)	-	2.791 ⁽¹⁾	--	3.704 ⁽²⁾	+33
Motor Vehicle Travel (Vehicle-Miles Millions)	-	39.8	--	68.9	+73
Rail Patronage (Daily Trips, Thousands)	-	358.0	--	626.5	+75
Bus Patronage (Daily Trips Millions)	-	1.2	--	1.6	+24
Aircraft Operation (Annual Flights Millions)	-			7.924	+216

(1) 1966 data.

(2) 1986 projection.

SOURCE: NJDOT "Master Plan for Transportation '72".

is forecast to grow an additional 42 per cent by 1990 to reach 5,384,000 vehicles.

Employment in the State is forecast to grow by 33 per cent over the 20 years covering 1966 to 1986. A total of 3,704,000 jobs in the State are projected for 1986.

These projections have been based on assumption that past growth trends would continue but may have to be revised downward in keeping with the national trend. This projection approach could be questioned, however, in view of environmental-ecological implications of building new transportation facilities, availability of funds, opposition to capital improvements, new community developments, an expected shortage of fuel in this country and other factors. In the latter context, with expected escalation in costs of fuel, travel patterns and modal choice may be affected quite substantially.

THE TRANSPORTATION SYSTEM

New Jersey has an extensive, complex system of highways, rail and bus routes, air facilities and seaports. Its population density, industrial activity and service functions to adjacent large metropolitan areas place great importance and demand on all transport modes. The economy of the State, therefore, is closely linked to the tempo of its transportation system.

Highways - It has been estimated that 97.4 per cent of all person trips within New Jersey, are made on the State's roads and streets (Figure 4), with an average of 0.009 lane-miles (Table A) per New Jersey resident. This ratio is only one half to one

quarter of the lane-miles per capita available to highway users in many other states. The density of daily highway travel per lane-mile in the State has risen nearly 60 per cent in the last 20 years.

In short, New Jersey has the most intensively utilized highway system (Table B) in the nation and its congestion has increased each year because funds available for highway improvements have not kept pace with growth in automobile and truck traffic volumes.

Air and Water Transportation - A total of 84 airports serve some 3,400 aircraft registered in the State. Airports at Newark, Trenton, and Atlantic City also afford service to interstate commercial airlines. A major impact of these airports is in the form of ground transportation demands by passengers and visitors, freight, and employees.

Passenger ferry service is provided, under a subsidized operation between Bridgeport, New Jersey and Chester, Pennsylvania; and by the Delaware Bay and Bridge Authority from Cape May, New Jersey to Lewes, Delaware.

Rail Passenger Transportation - Rail transportation facilities in the State today are largely the residue of historical routes established early in the century. Most commuter rail lines follow the routes established to move freight from the West to the Hudson River waterfront for trans-shipment to Manhattan, Long Island or other northern reaches. Some lines, such as the Greenwood Lake and Gladstone branches of the Erie-Lackawanna and the New York and Long Branch Railroad, were built to provide service to outlying

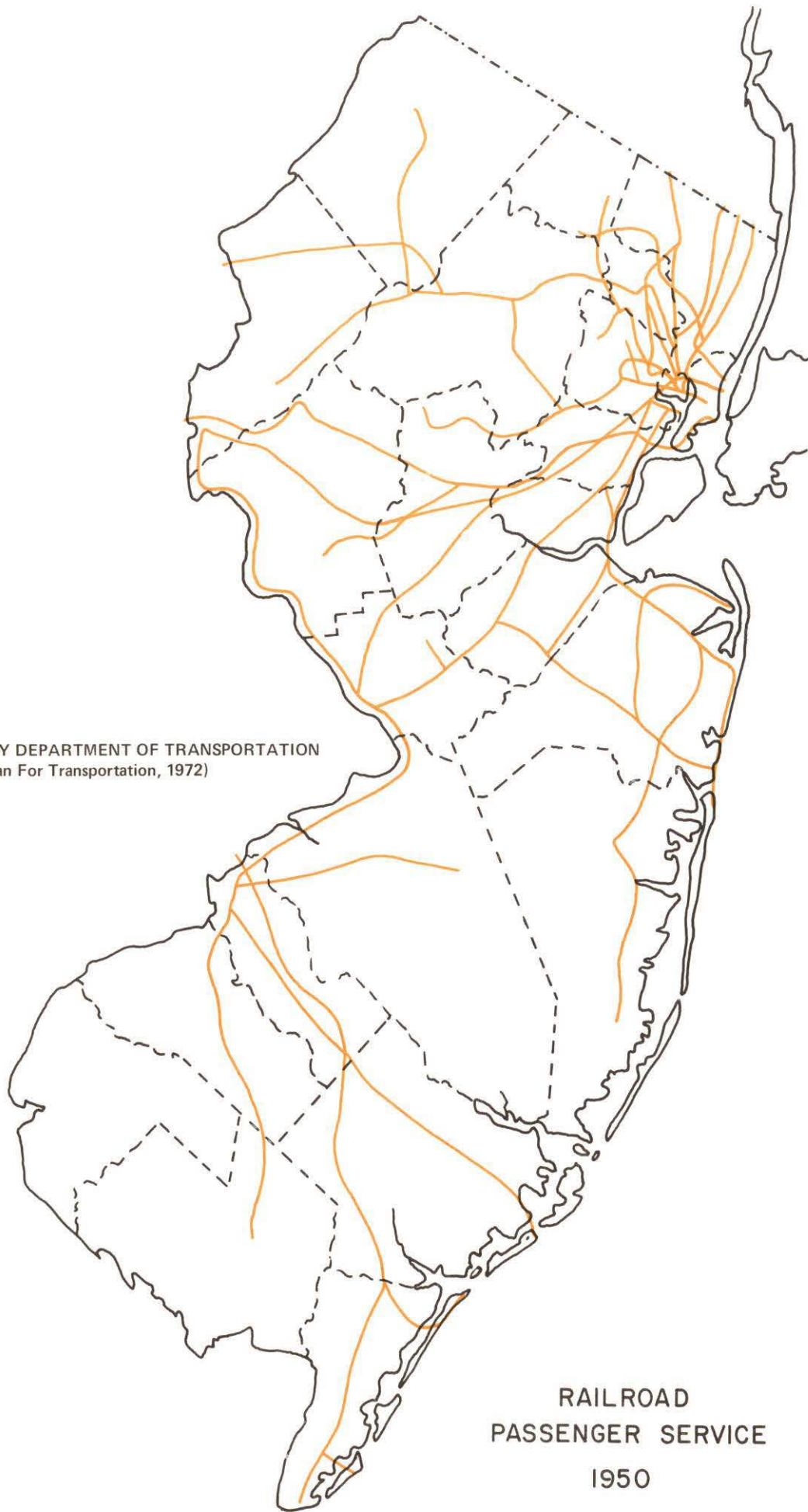
residential areas, and hill and seashore resorts. Except for the Penn Central's line to Penn Station, New York, all other rail lines focused on New Jersey terminals with short-run ferry access to Manhattan, which remains the predominant destination of rail commuters.

Five companies presently operate rail commuter services over 467 route-miles and generate an average of 166,000 weekday person trips. These are the Penn Central Transportation Company, the Central of New Jersey, the Erie-Lackawanna, the Pennsylvania Reading Seashore Line and the Reading Railroad. Rapid transit rail service (PATH, Newark Subway, and the Lindenwold line) is provided over 26 route-miles, generating 192,000 weekday person trips.

The rail systems serve 15 of the State's 21 Counties. Total rail-passenger route-miles in operation have declined nearly 60 per cent since 1950 (from 1,100 to 467 route-miles) (Figures 5 and 6). All five commuter railroad companies are now in bankruptcy, and two are facing almost immediate financial crises. The Newark Subway is also in financial difficulty.

Bus Transportation - Today's bus routes are generally the carry-over of street car and jitney alignments established after World War I. The Transport of New Jersey (TNJ) system reflects the acquisition, amalgamation and some coordination of many of these early street car and bus routes.

A large number of other small private bus companies emerged and have continued operations throughout the State. A major change to some of these routes has been to substitute Manhattan



SOURCE:

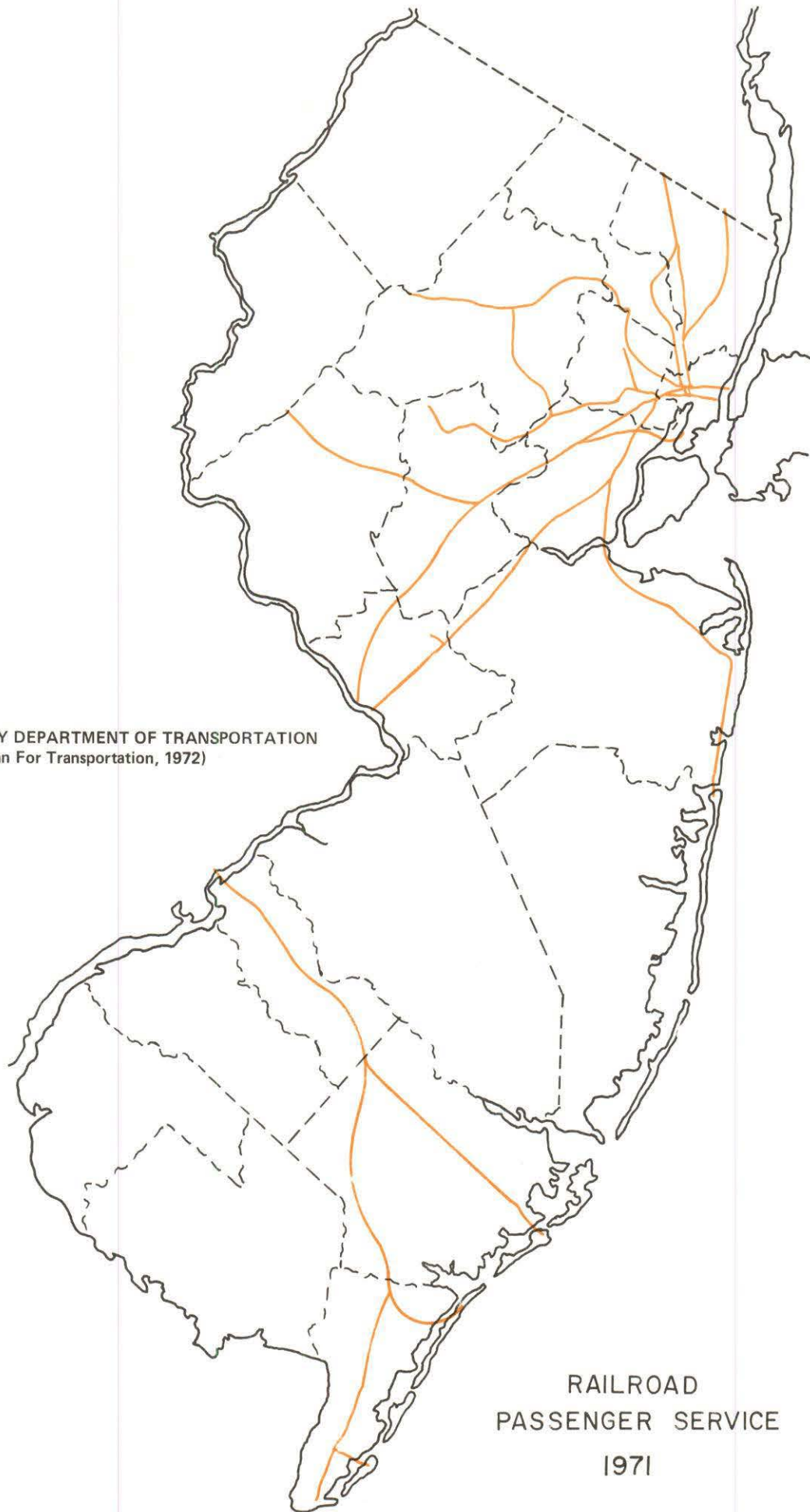
NEW JERSEY DEPARTMENT OF TRANSPORTATION
(A Master Plan For Transportation, 1972)

RAILROAD
PASSENGER SERVICE

1950

FIGURE 5

SOURCE:
NEW JERSEY DEPARTMENT OF TRANSPORTATION
(A Master Plan For Transportation, 1972)



RAILROAD
PASSENGER SERVICE
1971

FIGURE 6

terminals for original ferry terminals in Weehawken, Hoboken, and Jersey City. Bus routes terminating in Paterson, Passaic, Newark, Elizabeth, and New Brunswick, still terminate in the central business districts of these cities, even though the cities, as focal points for industry and commerce, have lost much of their earlier importance. Traffic on interstate bus routes has remained fairly stable, except on those routes affected by the inauguration of the Lindenwold rapid transit line serving Philadelphia.

Many intrastate routes are sustaining substantial operating deficits due to loss of patronage.

In sharp contrast to the continuing growth in automobile travel, bus transportation in New Jersey has declined.

An estimated 1.2 million daily passenger-trips -- 8.0 per cent of all person trips -- are carried by approximately 289 bus transit companies, which operate more than 4,700 vehicles. One bus company, TNJ, serves more than half of all bus passengers in the State. However, the current bus passenger volume is only one third that attained in 1947 immediately after World War II. In the last decade alone, bus ridership has declined about 25 per cent.

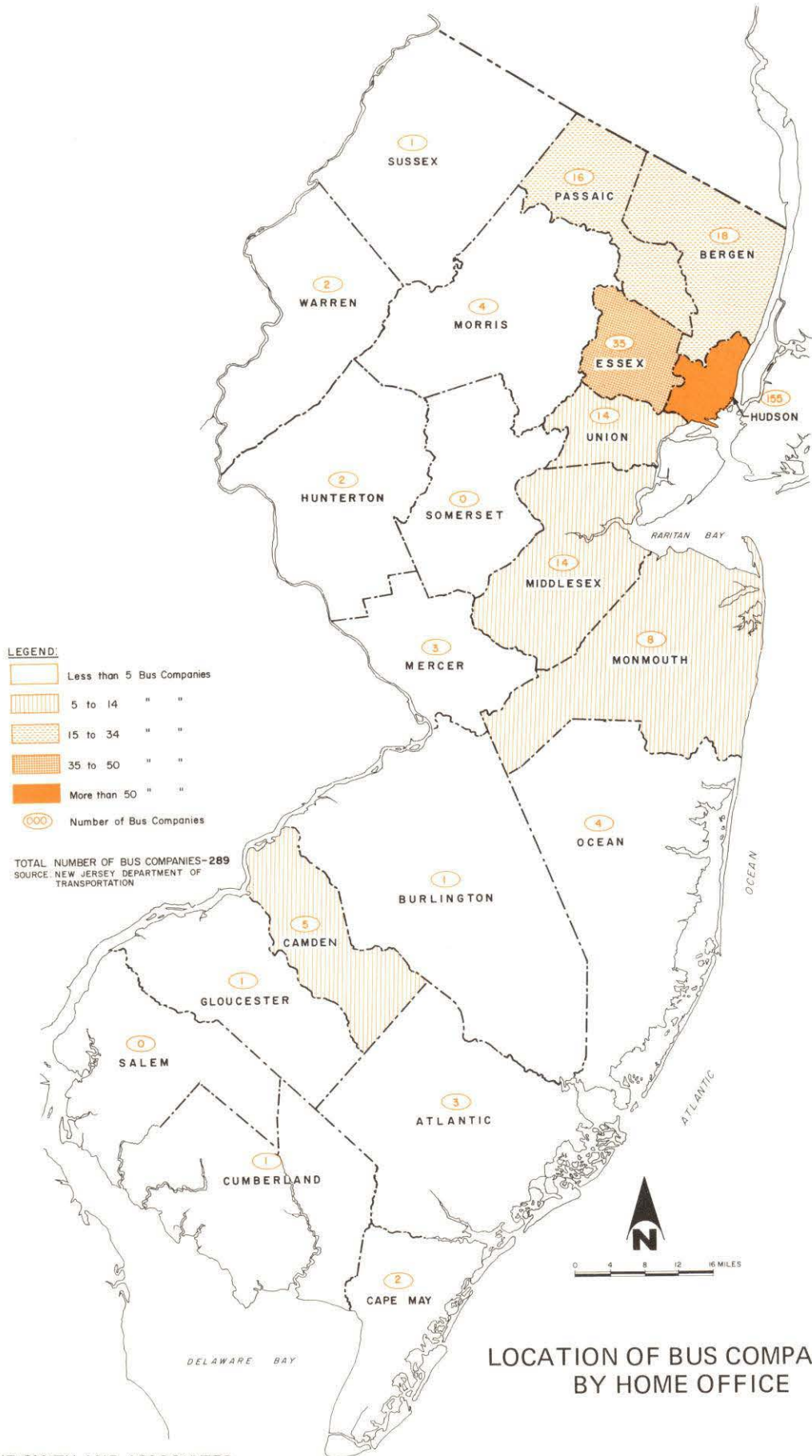
As ridership has receded, so has the fiscal status of the bus companies. In order to meet operating costs, financial assistance from outside sources has become essential in many cases. In the 1971 calendar year, 17 bus companies received a total of \$1,304,000 in operating subsidies to support intrastate services. The State contributed \$980,000, the balance was contributed by

county and other local governments. With 19 companies receiving subsidies in 1972, the total payment exceeded \$2 million, of which the State's share amounted to \$1,558,000.

Location of Bus Companies - The myriad of independent bus companies in New Jersey is a paramount consideration in the development and administration of any overall policy designed to preserve, improve, coordinate and extend public transportation. Hudson County has 155 bus companies listed as based within its boundaries (Figure 7). Other Counties with large numbers of registered companies are Essex (35), Bergen (18), Passaic (16), Union (14), and Middlesex (14).

From a financial standpoint, bus transit operations show a mixed picture. Many companies, including TNJ, report a profitable commuter service, but show losses at the local level. However, even TNJ follows the universal trend, and a \$12 million net loss is projected for 1972. This could result in substantial curtailments in services or possible bankruptcy unless substantial increases in financial assistance are forthcoming.

Vehicle Ownership - The function of bus service varies across the State. In the Metropolitan Areas around New York and Philadelphia, interstate service is a very important element, while in communities removed from the major metropolitan areas, such as Trenton, Atlantic City, Asbury Park, and others, the movement of local residents on local trips remains the key function. To assist in the assessment of functional requirements in the various counties of the State, 1970 data on population distributed by age



LEGEND:

- Less than 5 Bus Companies
- 5 to 14 " "
- 15 to 34 " "
- 35 to 50 " "
- More than 50 " "
- Number of Bus Companies

TOTAL NUMBER OF BUS COMPANIES-289
 SOURCE: NEW JERSEY DEPARTMENT OF TRANSPORTATION



LOCATION OF BUS COMPANIES BY HOME OFFICE

and on car ownership by family groups have been assembled.

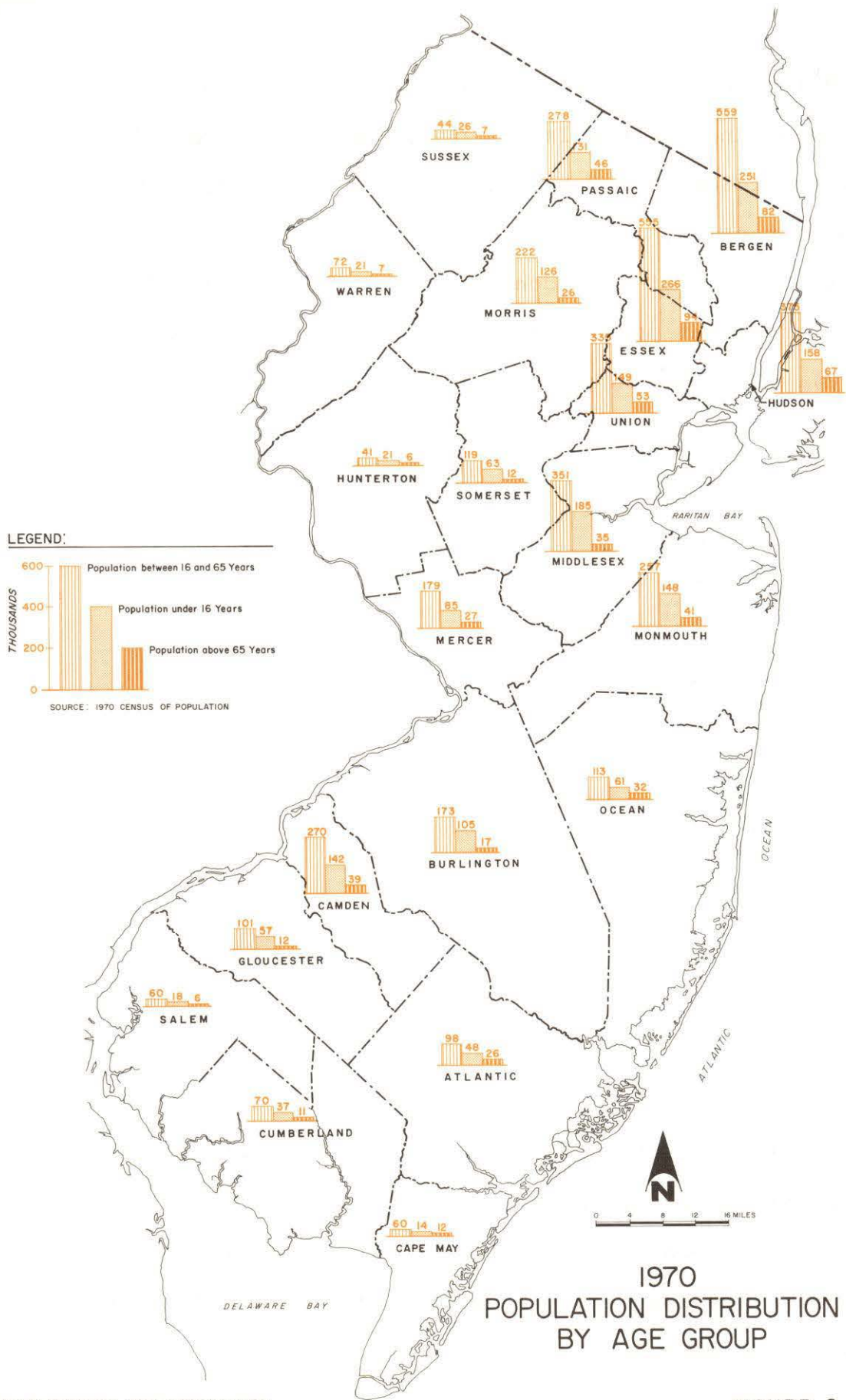
Subdividing the population by age groups defines segments of the potential demand for transit service since the young and the old, in most cases, are captive transit riders. Those under 16 and over 65 years of age, constitute between 37 and 45 per cent of the total resident population in the State when listed by County (Table C). Cape May County has the largest percentage of young and old people. Of the total 86,000 residents, about 14,000 are under 16 years and about 12,000 are over 65 years of age (Figure 8). Essex County has the largest absolute number of potential transit riders in these age groupings with 266,000 young people and 94,000 over 65 years old.

The number of families owning no cars is also an indicator of potential transit riders. From regional planning agencies, numbers of families in the Tri-State and DVRPC regions without vehicles range from six per cent in Morris County to about 41 per cent in Hudson County (Table D). The potential for local bus service appears to be greatest in the New Jersey portion of the Tri-State Region where almost 20 per cent of the families have no cars (Figure 9).

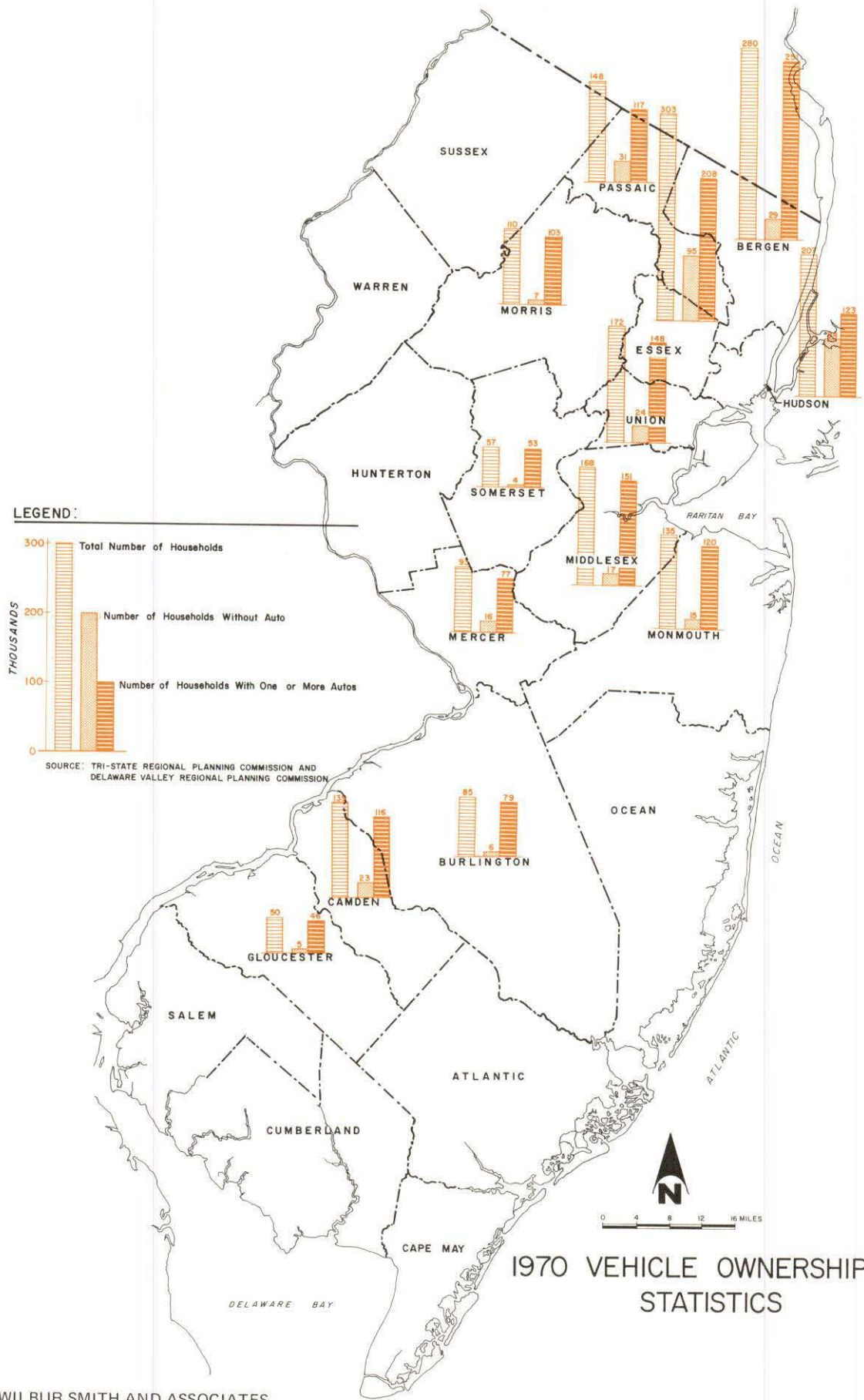
INNOVATIVE NEW SERVICES

Three innovative public transportation services are presently in operation in New Jersey:

The Lindenwold Line, (Port Authority Transit Corporation of Pennsylvania and New Jersey - PATCO), Haddonfield Dial-a-Ride, and I-495 Exclusive Bus Lane.



1970
POPULATION DISTRIBUTION
BY AGE GROUP



1970 VEHICLE OWNERSHIP STATISTICS

WILBUR SMITH AND ASSOCIATES
 FORD, BACON AND DAVIS INC.

FIGURE 9

Lindenwold Line - The Lindenwold Line was constructed new by PATCO on former rail rights-of-way connecting Lindenwold, New Jersey, and downtown Philadelphia, a distance of 14.5 miles. In the six years of its operation patronage has tripled to a figure in excess of 40,000 weekday person trips. Its parking lots have had to be enlarged, and it has had a favorable economic impact on the area it serves. Recently the State contracted with TNJ to provide coordinated feeder-bus services over an enlarged service area.

Haddonfield Dial-a-Ride - This demonstration project has been operating on a seven-day week basis since May, 1972. It is a personalized demand-responsive service utilizing a fleet of 12 mini-buses which serve an area of about five and one-half square miles in which live 25,000 people. The buses are radio-controlled and operate on a 24-hour basis providing a basic feeder service to the Lindenwold high-speed line but responding to origin-destination demands of the riders.

Fares for this service are based on a regular cash fare of \$0.60 and include a 40-ride discount rate (\$0.50), a ten-ride family or group discount (\$0.40), good only during certain off-peak hours, and a senior citizen discount (\$0.40).

Patronage has been increasing steadily as passengers familiarize themselves with the services. From an initial level of 300 passengers per day, volume has increased to 750 per day. While manual dispatching has been used to date, computerized control of the buses is expected to be initiated in the near future.

I-495 Exclusive Bus Lane - The New Jersey Department of Transportation cooperated with the Port Authority of New York and New Jersey and the New Jersey Turnpike Authority under the sponsorship of the Tri-State Regional Planning Commission to place a 2.5 mile exclusive bus lane on the I-495 approach to the Lincoln Tunnel in service in December, 1970. This facility carries 44,000 commuters into the Port Authority Bus Terminal in New York each weekday between the hours of 7:30 and 9:30 A.M. The project reduces travel time for these commuters by 10 to 25 minutes and as a result of a successful operating record and favorable public response this innovation has been made permanent.

THE DEPARTMENT OF TRANSPORTATION

During the year following World War II, railroad commuter patronage declined and carriers reported significant losses. Failing to obtain any relief from this burden, and unable to obtain permission from the New Jersey Public Utilities Commission to discontinue the service, one of the carriers sought and obtained permission from the Federal Interstate Commerce Commission to discontinue interstate commuter services which were shown as an undue burden on interstate commerce.

Faced with the possibility of progressively losing the balance of its rail passenger commuter services, the Legislature created the Division of Railroad Transportation within the Highway Department (P.L. 1959, c.14), which was approved on March 12, 1959. This Division was empowered to administer a program to preserve these commuter services. The Commissioner of the State Highway Department negotiated contracts with all major commuter lines assuring continuation of essential commuter passenger services in the State.

The early service contracts were innovative and were on a per-car-mile basis. Subsequently, assistance payments approached coverage of the financial losses which could have been avoided if the carriers were not required to furnish the specified services. The payments the first few years were less than \$6 million annually. From 1961 to 1971 the total payments appropriated by the

Legislature for this purpose amounted to more than \$80 million.

TRANSPORTATION ACT OF 1966 (P.L. 1966, c.301)

The passage of this Act centralized the transportation functions of State Government under a Commissioner, in a single Department of Transportation, with overall objectives of administering and coordinating all transport modes. Initial emphasis was placed on improving and preserving the commuter railroads. This transformed the predecessor Highway Department into the first State Department of Transportation other than Hawaii. Its stated objectives were to:

- . Provide a transportation network equitable to all segments of the State populace;
- . Reduce adverse impacts on the natural environment;
- . Increase comfort and convenience of travel;
- . Promote desired pattern of land development;
- . Increase safety;
- . Reduce travel time and cost per trip;
- . Provide a choice of travel modes; and,
- . Be realistic in terms of physical, social, financial, and environmental restraints.

Commuter Operating Agency - The 1966 Act provided for a Commuter Operating Agency (COA) consisting of the Commissioner of Transportation, the State Treasurer, the Deputy Commissioner of Public Transportation, and the Public Utilities Commissioner. The COA was given broad powers to administer financial aid to public transportation.

The Agency was empowered to investigate and determine action required for each rail carrier to offset all or part of any loss indicated by the carrier. Agency actions were to be based on a majority vote of at least three, subject to veto by the Governor.

The COA continues to function within the framework initially established. It relies upon NJDOT for staff assistance, which is limited. Funds are provided by the Legislature by appropriation.

Determination of the need for financial aid for an operating facility, subject to public hearings, can lead to negotiation of new contracts between the COA and the carrier. Contracts which the COA may enter into with bus companies are limited to those which the Agency shall determine essential to provide or encourage adequate commuter or intercity bus service. Profit to a bus company in such cases is limited to six per cent on its investment.

The Agency is somewhat limited and could accomplish more if expanded, given additional authority or different responsibilities. The Act recognized a need for planning and coordination between modes, but restricted the responsibility of the Department of Transportation to assisting only those carriers which were in financial difficulty.

The 1966 Transportation Act required State funds to be matched by Federal funds for the capital improvement of motor bus operators, although no such restriction was placed on funding for rail commuter operations.

1969 Amendment (P.L. 1969, c.134) - The 1969 amendment initiated the requirement that the county or counties requesting preservation of essential bus services shall reimburse the Department for 25 per cent of the cost of providing such passenger service.

1971 Amendment (P.L. 1971, c.216) - This amendment, approved

June 17, 1971, removed the necessity for obtaining matching Federal funds to assist motor bus carriers. The State can now act alone through the COA in providing financial aid for capital programs.

1972 Amendment (P.L. 1972, c.164) - On October 25, 1972, this amendment to the Transportation Act of 1966 was passed. It places more emphasis on the formulation of an overall plan involving coordination of all modes of transportation, with special focus on public transportation and commuter railroads. In addition, duties of several offices outlined in the law have been formally changed, consistent with their present duties.

Limitations of Present Law - The present law appears designed to promote private enterprise operation where possible. NJDOT, through the COA, is authorized to encourage the type of service its overall plans require through negotiated contracts, consistent with the availability of funds.

In actual practice, however, COA's activity with respect to coordinating essential services is restricted primarily to those carriers which are in financial distress.

Presently, profitable bus operations directly competing with State subsidized rail commuter services, do not come under control of the NJDOT, but are regulated by the State Public Utilities Commission (PUC). Therefore, while services such as bus feeder services to rail lines can be added, there is no provision for fully coordinating parallel competing routes until all are in financial difficulty.

PROPOSED LEGISLATION

There were some 206 bills awaiting action by either the Senate or Assembly at the end of 1972 which relate to transportation problems. Some of these bills would have a major impact on the administration of transportation in the State and relate to major policy alternatives posed in this report. Another group of bills deals with vital but more specific subjects, the resolution of which appears to be dependent upon the outcome of major policy decisions above, or further study and evaluation.

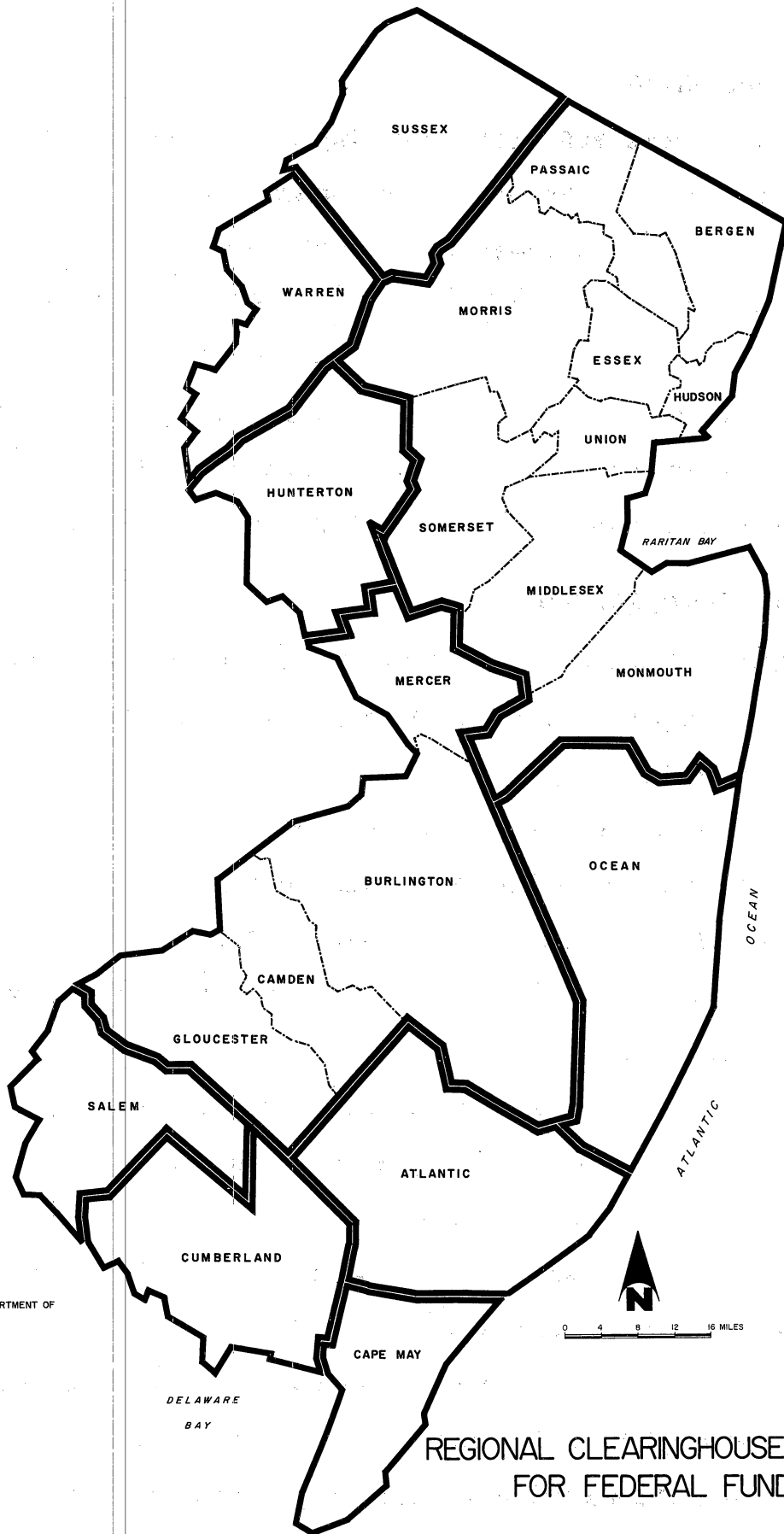
REGIONAL PLANNING AGENCIES

The State of New Jersey has been assigned ten areal subdivisions for comprehensive planning and clearance of federal programs (Figure 10).

The Tri-State Regional Planning Commission comprises nine northeastern counties in New Jersey including Bergen, Passaic, Morris, Essex, Hudson, Union, Somerset, Middlesex, and Monmouth, as well as portions of the New York Metropolitan area in New York and Connecticut.

The Delaware Valley Regional Planning Commission is responsible for four counties including Mercer, Camden, Burlington and Gloucester, suburban to Philadelphia.

Salem County is under the jurisdiction of Wilmington Metropolitan Area Planning Commission (WILMAPCO) covering the Wilmington, Delaware, area. The seven remaining counties of Sussex, Warren, Hunterdon, Ocean, Atlantic, Cape May and Cumberland have individual identity as regional planning agencies and utilize



SOURCE:
NEW JERSEY DEPARTMENT OF
TRANSPORTATION

REGIONAL CLEARINGHOUSE AREAS
FOR FEDERAL FUNDS

their individual planning commissions to serve that purpose.

One of the major functions of each of these planning agencies is to review all programs involving Federal financial participation in accordance with the A-95 review process.

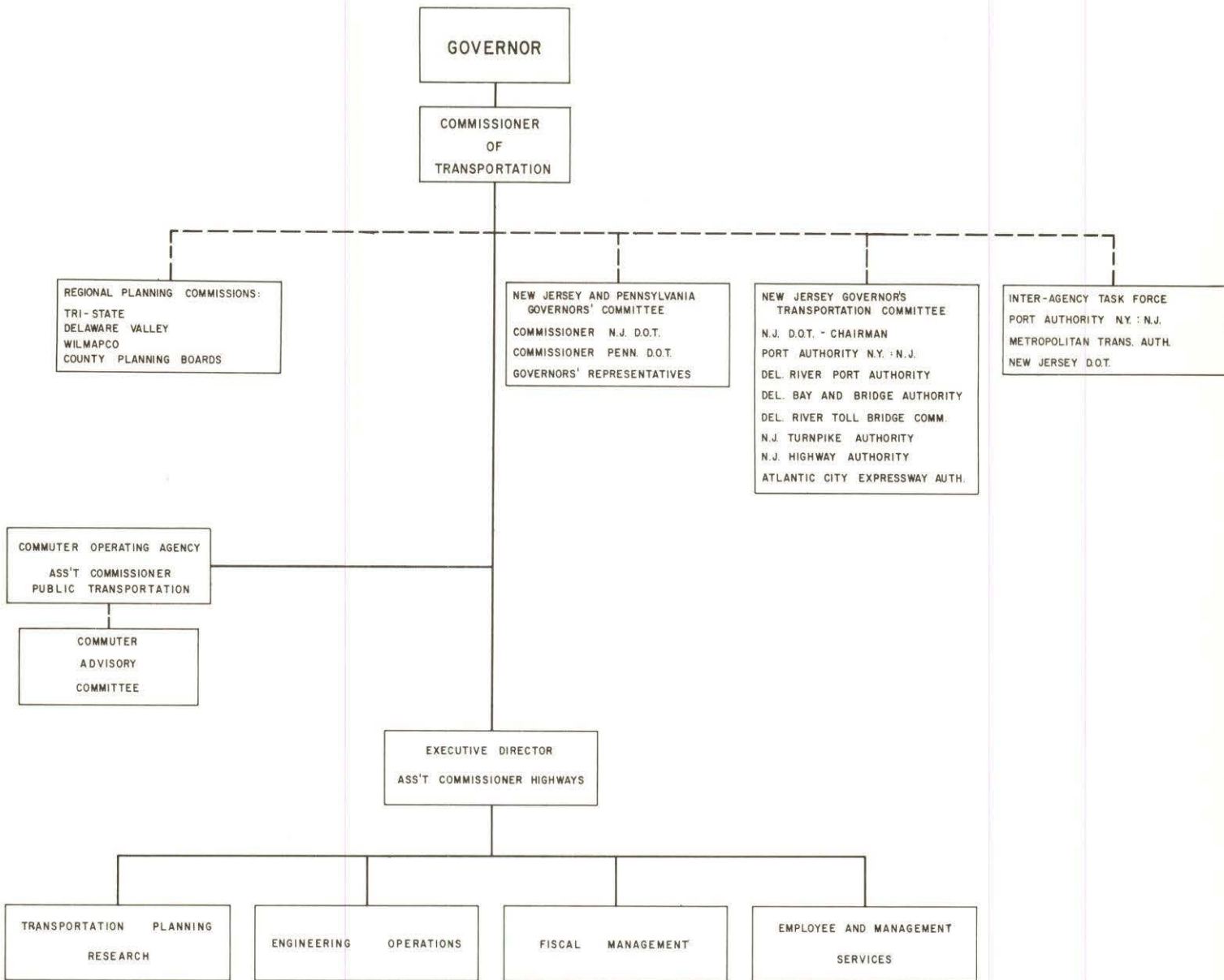
SUPPORTING COMMITTEES

In the administration of transportation in New Jersey, the Department of Transportation is supported by a number of public and quasi-public agencies, which have either planning or review responsibilities over transportation matters (Figure 11). At the State level, four committees are organized to ensure coordination between the various operating agencies and the establishment of mutually acceptable goals. These agencies include:

New Jersey-Pennsylvania Governors' Committee - The Governors of New Jersey and Pennsylvania, together with the Transportation Commissioner and Director of each State constitute a Committee for the resolution of interstate transportation conflicts involving jurisdictions in either State.

Inter-Agency Task Force - This group includes senior administrative staff from the Metropolitan Transportation Authority (MTA) in New York, Port Authority of New York and New Jersey, and NJDOT. Technical support for the activities of the Task Force is provided by the Port Authority staff.

Governor's Transportation Committee - This is a loosely structured group of representatives of inter-state transportation agencies and representatives of the New Jersey Turnpike Authority, New Jersey Highway Authority, Atlantic City Expressway Authority,



ORGANIZATION FOR TRANSPORTATION
STATE OF NEW JERSEY

Delaware River Port Authority, and Delaware Bay and Bridge Authority. This Committee meets on call of its Chairman, the New Jersey Commissioner of Transportation, to discuss specific problems of mutual interest.

Commuter Advisory Committee - This Committee, comprised of 10 members appointed by the Governor with equal representation from local government, railroad unions, transport management, commuters and the general public, meets at the call of the Commissioner with respect to the affairs and problems of commuter railroads.

FUNDING NEW JERSEY TRANSPORTATION

In general, New Jersey's public transportation funding is accomplished by Legislative Appropriation, General Obligation Bonds, Federal Aid, and/or a combination of these. Other levels of government (State, County and Local) can, and in some cases do, participate in planning and funding public transportation.

NEW JERSEY TRANSPORTATION SUBSIDY PROGRAMS

Financial subsidy for New Jersey's public transportation system is available in the form of capital grants, operating grants, equipment and facility grants and purchase of service contracts. During the past three years, these dollar amounts have aggregated over \$3 million for buses from State and local sources and over \$33 million on rail systems from rail assistance program contract payments (Table F). The amounts of subsidy given are based upon public need as demonstrated at the time an application is made to the State. In the case of rail subsidies, the avoidable cost for the preceding year is the determining factor for amount of subsidy to be granted the following year. Bus operation subsidies are based on actual cost less revenue as set forth in P.L. 1969, Chapter 134, an amendment to P.L. 1966, Chapter 301. A 1972 amendment to Chapter 301, however, provides for the financial support of bus companies without receiving the 25 per cent county participation.

For the most part, subsidy policy in the State for

public transportation has evolved from crisis, mandating that public officials devote their energy reacting to crisis. Under this type of response, no true definitive action programs can effectively be developed. Preplanning transportation needs and developing programs and strategies to maximize the cost-effective modes for each service corridor is mandatory.

TRANSPORTATION BOND ISSUE

The \$640 million Transportation Bond Issue of 1968, supported by public referendum, was a strong endorsement of the willingness of the residents to invest in improved transportation facilities. Of this issue, \$440 million was allocated for highway improvements and \$200 million for rail improvements by Act of Legislature; approximately \$100 million of rail funds are yet to be committed (Table F).

In 1972, a Bond Issue of similar magnitude was narrowly defeated. Many think that most of the "for" votes were endorsing public transportation expenditures. This defeat has resulted in a need for establishing new priorities based on reduced available funds.

FEDERAL TRANSPORTATION GRANT PROGRAMS

In the normal course of events, Federal monies allocated to all states by the U. S. Department of Transportation originate from either the Federal-Aid Highway Program; the Airports and Airways Development Act (ADAP); or the Public Transportation Assistance Act.

Federal Aid Highway Program - The highway program is the most definitive in terms of dollars available to the State of New Jersey. It also is the most restrictive with regard to method of allocation.

New Jersey receives an annual allocation of funds from the Federal Highway apportionment equal to approximately 2.5 per cent of total funds available. The definitive nature of the allocation makes possible detailed planning for use of these funds and allows the State Legislature to annually appropriate the required State matching funds. Historically, the State has done, and continues to do, an outstanding job in utilizing available Federal Aid Highway Funds. The Federal Aid Highway Funds available annually to the State average approximately \$132 million, as follows:

Federal Aid Highway Funds Apportioned to New Jersey
for the 1972 Fiscal Year

Excludes 1.5 per cent Highway Planning and Research Funds "HPR"

<u>DESIGNATION</u>	<u>AMOUNT</u>
Interstate	\$100,700,100
Primary	6,831,100
Secondary	2,221,700
Urban	11,579,900
Rural Roads - Primary	1,042,200
- Secondary	338,300
TOPICS	4,210,900
Urban System	<u>4,768,000</u>
TOTAL	\$131,692,200

Federal Airport and Airway Development Program - The method of allocation of funds under the ADAP does not produce a finite dollar amount which can be considered for purposes of State planning and Legislative appropriation.

Planning and discussion of a fourth regional jetport to serve Metropolitan New York has had a dampening effect on airport planning and the resultant application for Federal funds for aviation in the State.

The State of New Jersey has received ADAP grants averaging over \$6.5 million annually for the past two years from this source as follows:

Federal Airport and Airway Development Grants
to State of New Jersey

<u>FISCAL YEAR</u>	<u>AMOUNT</u>
1969	\$ 3,287,400
1970	1,174,800
1971	8,661,000
1972	<u>4,417,700</u>
TOTAL	\$17,540,900
4-Year Average	\$4,385,200
Average 1971-72	\$ 6,534,800

As in the case of highways, the State is taking full advantage of available Federal Aid Funds for Airport and Airways development.

Public Transportation Assistance Programs - The maximum annual amount that the State can receive in Federal grants under the Urban Mass Transportation Program is 12.5 per cent of the total amount appropriated by Congress in that year. New Jersey has received a total of approximately \$83million in Federal grants, but might have received, theoretically, in excess of \$136 million in the period 1966 through 1971, had the State been able to develop qualifying projects.

Many factors are present which make it difficult, if not impossible, for the State to take advantage of these funds. One of the principal road blocks is Section 13 (labor standards) of the Public Transportation Assistance Act. The fragmented character of public transportation, the numerous labor unions, the financial condition of many of the transportation companies, and the general lack of trust between labor and management make compliance with the provisions of Section 13(c) all but impossible.

Despite the difficulties of compliance with the Federal requirements, the State has received directly and indirectly Federal funds under all UMTA grants totaling approximately \$83.5 million (Table G).

PENDING FEDERAL GRANTS

The State has made application for Federal funds, not yet received, in two instances. Each totals \$1.7 million and is expected to be used to purchase new and used bus rolling stock. An additional \$0.8 million, in each instance, of State matching funds are pledged. Total funds anticipated for the capital improvements so noted amount to \$5.0 million.

FEDERAL PUBLIC TRANSPORTATION LEGISLATION

During the last decade the Federal Government has recognized the importance of preserving, extending and improving all modes of public transportation in the nation's urbanized areas. The need for financing transit improvement beyond revenues obtained from users was recognized in the Mass Transportation Act of 1964.

This Act provides Federal financial assistance to State and local governments for developing mass transportation systems. It authorizes the use of Federal funds for financing two thirds of net project capital costs with State and local governmental agencies financing the balance.

The appropriated funds for capital improvements and for demonstration projects have been continuously increased in the last several years and have been administered by the Urban Mass Transportation Administration. While the Act provides for aid for new systems and improving, extending or acquiring existing systems, the Act does not allow for operating subsidies. This must come from local and State sources.

To qualify for Federal financial aid a number of minimum prescribed standards must be met. Among the most important of these are protection of private transportation companies, labor practices, and environmental considerations, as follows:

PROTECTION OF PRIVATE TRANSPORTATION COMPANIES

"Projects which involve (1) the acquisition, directly or

indirectly, by a public agency, of the property of a privately-owned urban mass transportation company, or (2) the construction, reconstruction or improvement of property acquired from a privately-owned urban mass transportation company after July 9, 1964, or (3) the provision of capital improvements for use in competition with, or supplementary to, service being provided by an existing privately-owned urban mass transportation company, are eligible only if all the following requirements are met:"

"The urban mass transportation program provides, to the maximum extent feasible, for the participation of privately-owned urban mass transportation companies."

"Where acquisition of the franchise or property of a privately-owned urban mass transportation company is involved, just and adequate compensation will be paid to the extent required by State or local law."

LABOR

Section 13(c) of the U. S. Urban Mass Transportation Act is intended to protect employees of transit systems affected by Federal grant assistance (Exhibit B). It stipulates that fair and equitable arrangements be made, as determined by the Secretary of Labor, to protect the interest of transit employees, and that the grant contract specify the terms and conditions of the agreements.

In practice, where transit employees are members of labor unions, the unions usually draft a "13(c) Agreement" for review and management approval. And, as in the case in most any labor-management negotiations involving wages, working conditions, pensions, seniority, job relocation, or consolidation of operations which may imply some elimination of employment, many controversial

issues are raised.

Unlike New York with a single Authority (MTA), New Jersey, with many agencies, experiences legal problems which prohibit a single negotiation of a "13(c) Agreement". This condition is further aggravated by a "fragmented" transit system with so many entities, as well as such a large number of labor unions.

ENVIRONMENTAL ISSUES

Environmental considerations today have become a popular issue and have introduced new and complex problems that sometimes completely override the original program objectives. Man-made facilities, such as the vehicles to transport people and goods, give off certain negative impacts to the natural environmental quality. The Federal Government has recognized the importance of assessing these positive or negative impacts in the planning review process for all major capital improvement projects.

The declaration of national environmental policy is outlined on PL91-190 83 Stat 852 (S1075) termed, "The National Environmental Policy Act of 1969". The Act creates in the Executive office of the President, a Council on Environmental Quality, one of whose duties is to review Federal Programs to ensure they are in compliance with the policy set forth in this Act. It requires all agencies of the Federal Government to review their present statutory authority, administrative regulations and current policies and procedures, to see that they comply with the policy of the Act.

In April 1970, the Environmental Quality Improvement Act of

1970, Sec. 201 of PL91-224 was passed. It created the Office of Environmental Quality, which will support the Council of Environmental Quality with men and money in its effort to improve the environment.

In compliance with these acts not only the departments of the U. S. Department of Transportation (DOT), Urban Mass Transportation Administration (UMTA), Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), Coast Guard, Federal Aviation Administration (FAA), and the Department of Housing and Urban Development (HUD), have each set down their individual specific requirements for preparation of environmental impact statements on all projects under their jurisdiction seeking Federal participation. These impact statements involve a complete investigation of all direct and indirect benefits and losses to the parties affected by the project.

As an example, from a standpoint of evaluating environmental impacts of transit use versus private vehicles, UMTA requires that investigations address at least the following issues:

1. Land-use implications;
2. Available land being dedicated to transportation facilities;
3. Effect upon traffic congestion;
4. Alteration of established travel patterns;
5. Potential need to displace people;
6. Effect upon aesthetic values;
7. Ambient noise levels;
8. Air pollution implications;

9. Impact upon natural resources; and,
10. Ecological implications.

Wherever essential transit services can be expected to reduce the use of private vehicles, the environmental impact statement usually results in positive response.

The departments mentioned above, each have similar but different lists of items including other specifications which the Federal law requires in their particular areas. Each dictates full disclosure of the facts to all interested or affected parties, groups, and other governmental departments, including public hearings on the subject to permit airing of objections.

From these Federal requirements NJDOT had developed its own instructions, Inst. No. 1-128 in order that its applications might be properly prepared by its own people for environmental impact statements. The magnitude of these instructions does not permit a full analysis in this report, but they appear to follow Federal guide lines, and are satisfactory.

As important as the specific wording of the law, however, is the trend of public awareness and involvement in environmental, sociological and economic programs, which indicates that consideration of these subjects will become intensified, rather than diminished in the ensuing years.

Obtaining Federal grant approval, however, for new highway rights-of-way, transit systems, property for airports, inter-modal terminals, or parking facilities poses serious problems environmentally. The sheer enormity of the undertaking today, before condemning property for a right-of-way or any major capital

undertaking, with the required analyses, impact statements, public hearings, and demands of special interest groups, almost makes consideration of projects requiring new rights-of-way impossible. This is especially true if any public land or park area is involved for conversion.

For these reasons, present rights-of-way represent perhaps the only available corridors obtainable in urban locations. Under the present situation, as the courts permit railroad abandonments to take place, if the State or cities fail to obtain control of these corridors, they may be lost forever.

Implicit in this context is the fact that transportation planning is not an end in itself because of its service and impact on land uses and variables of personal and business-industrial activity. Quite clearly, land adjacent to a highway or rail facility mutually supports commercial, industrial or recreational land uses. For example, a quiet, modern rapid rail facility, such as the Lindenwold line can be more harmonious to residential development than the older, noisier, and dirtier Penn Central rail system.

SECTION II
GOVERNMENTAL TRANSPORTATION
POLICY ALTERNATIVES

GOVERNMENTAL TRANSPORTATION POLICY ALTERNATIVES

This overview of the transportation situation in New Jersey was designed to provide a basis for discussion of practical governmental policy alternatives which may contribute to the preservation and extension of bus services in the State. Several factors outlined before are regarded to be of paramount importance to the discussion of governmental policy alternatives. These factors are stated briefly below.

KEY FACTORS IN NEW JERSEY'S TRANSPORTATION SITUATION

Highway vehicular traffic has grown at a rate in excess of of the rate at which funds were made available to construct new facilities. Highway congestion has increased and this trend is likely to continue.

Even with adequate funding, development of new or expanded rights-of-way for major highways under constraints of environmental protection regulations would be extremely difficult. Furthermore, assembly of a major highway right-of-way through a highly urbanized area would be a lengthy, time-consuming process involving many legal proceedings.

All five commuter railroads are now in bankruptcy, and over 20 private bus companies are presently receiving subsidies to preserve essential operations. Transport of New Jersey, accounting for about 50 per cent of the State's bus services, is in financial distress, and many smaller bus companies are on the verge of financial collapse.

The bus industry is severely fragmented and comprises some 289 companies which operate independently and without overall coordination. Simplification of the total bus system is a practical necessity and prerequisite to the development of a bus transportation system which could provide needed services at optimum costs. Coordination of bus operation with other modes of travel, and administration by modern, efficient, management techniques

are also essential elements of improvement.

Bus and railroad subsidy programs, although administered on different bases, have been aimed at preserving existing services. These have not been well-coordinated and neither service improvements nor the optimization of costs have been achieved. Specifically, continuation of the present basis for determination and payment of bus operation subsidies may be expected to bring most private bus companies under the subsidy program in the near future. This would make the Commuter Operating Agency responsible for the regulation of routes, levels of service, and fares for most of New Jersey's bus system.

In short, transportation in New Jersey is now in a state of crisis.

Social and political institutions in metropolitan areas are organized and structured so that no one organization or group has overall responsibility for making basic decisions affecting transportation. Consequently, there are no overall coordinated policies that cover planning decisions for the total transportation system. Present transportation decisions and investments represent an almost "accidental" aggregation of many individual decisions made to cope with past crises. This problem has had a profound impact on transportation decision making in New Jersey, often producing less than optimum results.

Identified deficiencies in the present transportation system administration, planning and operation include the following:

1. The lack of coordination of transportation planning with land-use planning by all public and quasi-public bodies having jurisdiction throughout New Jersey, including regional and interstate agencies. The large regional planning organizations, such as the Tri-State Regional Planning Commission and the Delaware Valley Regional Planning Commission obviously function at a much higher level of comprehensive planning activity covering in greater depth administrative, review and coordinative functions than do the individual county planning units now designated as regional agencies in the seven

northwestern and southern counties.

The technical planning at each appropriate governmental level should interrelate all transportation modes, give consideration to comprehensive land-use planning and environmental concerns, be evolutionary in character and be coordinated at the State government level:

2. The lack of a plan for integrated bus and rail operations to respond to the varying travel requirements of different regions within the State. Such a plan might:
 - a. Coordinate services at transfer points and establish new and improve existing terminals, provide adequate parking facilities to enhance the attractiveness of the public transport system;
 - b. Restructure services provided by the many independent operators to better respond to changing development patterns and travel desires;
 - c. Coordinate rail and bus services in established corridors to develop a cost-effective system;
 - d. Plan bus operations of a charter-type in off peak periods to serve schools, shopping centers, hospitals, employment centers, and other major traffic generators; and
 - e. Incorporate organized planning procedures in connection with decisions affecting implementation, operation, and funding of public transportation.
3. The lack of an educated community response to transportation issues involving the operational and financial transportation dilemma now confronting the State;
4. The lack of resolution of labor-related issues with reference to public transportation services as reflected in the difficulties in negotiations under Section 13(c).
5. The widespread misunderstanding concerning the division of responsibility between the Public Utilities Commission and NJDOT;
6. The deferred maintenance of both rail and bus facilities which reduces safety factors and impairs reliability of the transit systems; and,
7. The lack of criteria for effective allocation of local, county, State, and Federal funds in support of transit operators.

Deficiencies in the existing system of public transportation for New Jersey suggest a variety of immediate and longer-range treatments supported by governmental policy. The options are not simple nor easily accomplished, particularly in view of the complexity of jurisdiction involved in New Jersey's decision-making. Furthermore, they intricately relate to levels of transit service, management-ownership agreements, and public funding.

Policy alternatives which follow are broad and offer a wide range of choice in future transport policy. They have consequences in terms of cost, extent of local involvement, required changes in government, local, State, and Federal legislation, and funding mechanisms.

The principal alternatives for public transportation policy for immediate consideration by the State administration and Legislature are:

1. Maintain present activities and funding procedures with regard to planning, operations, and management of public transportation systems. This could be characterized as the status-quo approach, requiring increasing amounts of subsidy without commensurate improvement in services.
2. Strengthen and expand the functions of the Commuter Operating Agency to achieve better coordination between planning, operation, and administration of public transportation. This could include establishment of criteria for abandonment or extension of existing services and creation of new services in response to operating experience and shifting population demands.
3. Redefine responsibilities of the Public Utilities Commission and the State Department of Transportation in respect of administrative and regulatory functions for public transportation, including routes, schedules, fares and public information.
4. Explore labor-related impacts of changes in the public transportation system, and conclude agreements that can

be completed without adverse effects on labor and UMTA funding regulations, including the requirements of Section 13(c).

5. Utilize wherever possible Federal revenue sharing funds to the end that the State can obtain additional UMTA Federal funds for system improvements.
6. Establish a regional cost-sharing policy by which State and local governments would obligate payment of portions of net operating deficits and possibly capital improvement costs, as demonstrated in the case of the Mercer Metro operation.

This study is designed to provide a better understanding of the role of bus services in public transportation and to develop factual bases for decisions in management, operating, and fiscal areas as may be required in the implementation of governmental policies outlined above.

Longer-range options of governmental transportation policy include plans to:

1. Establish a State Transportation Authority with broad powers to coordinate, plan, finance, and implement public transportation programs.
2. Establish regional and/or local transit districts to aid in recognition of unique requirements of areal planning. These districts could also be given local taxing powers.
3. Establish and seek agreement on a basic policy calling for priority consideration of rail transport in the key long-haul corridors of the State, with buses to serve as rail feeders and intra-state carriers, with the objective of securing coordination between modes in major corridors.
4. Establish a policy to favor bus operations in long-haul corridors where a preference for bus service is clearly indicated.
5. Establish liaison with those agencies responsible for special service for minority, senior citizens, or underprivileged groups and determine a basis in which funds can be made available through these agencies.

6. Afford NJDOT the review authority of all land-use proposals to local governments to determine need for and function of existing and proposed transport facilities.
7. Create alternative sources of additional fiscal support to the public transit system through:
 - a. Increased fare box revenues;
 - b. Additional General Fund revenue through:
 - (1) Sales tax on gasoline;
 - (2) Increased vehicle registration fees;
 - (3) Business tax;
 - (4) Mortgage tax; and/or
 - (5) Payroll tax.
 - c. Elimination of all special use taxes and tolls charged to transit operations; and,
 - d. Statewide bond referendums specifically oriented to public transportation projects.

This study is expected to include recommendations covering all the above options and be specifically related to determination and allocation of subsidy funds.

IMPLEMENTATION

The policy alternatives outlined above revolve around basic administrative options with reference to bus operations:

Short-Range

Maintain present division of administration and regulatory functions of COA and PUC, or

Re-allocate and expand COA and PUC facilities.

Long-Range

Establish a public transportation system based upon private enterprise operations, or

Establish a government-owned and operated public transportation system.

Evaluation of administrative options requires a statement or itemization of goals and objectives. Present policy in support of private operation has, as an implicit goal, the maintenance of a viable private operation of public transit similar to the classical concept of a public utility.

Looking ahead, based on current trends in experience of the private bus operators, it appears likely that, as more private operators run into financial difficulty, State-takeover of the total bus system could be expected. A State Transportation Authority may be the ultimate form of public administration of the bus system.

Comparison of the administrative structures which might be anticipated suggests that the regulatory agencies, PUC and ICC, could be retained with private or public operation of the bus system. A State-level agency, responsible for overall administration, long-range planning and funding could be implemented under either private or public operation of the bus system. In short range, this agency could be the strengthened COA; longer-range a Transportation Authority could be the agency.

SELECTION OF ALTERNATIVE POLICIES

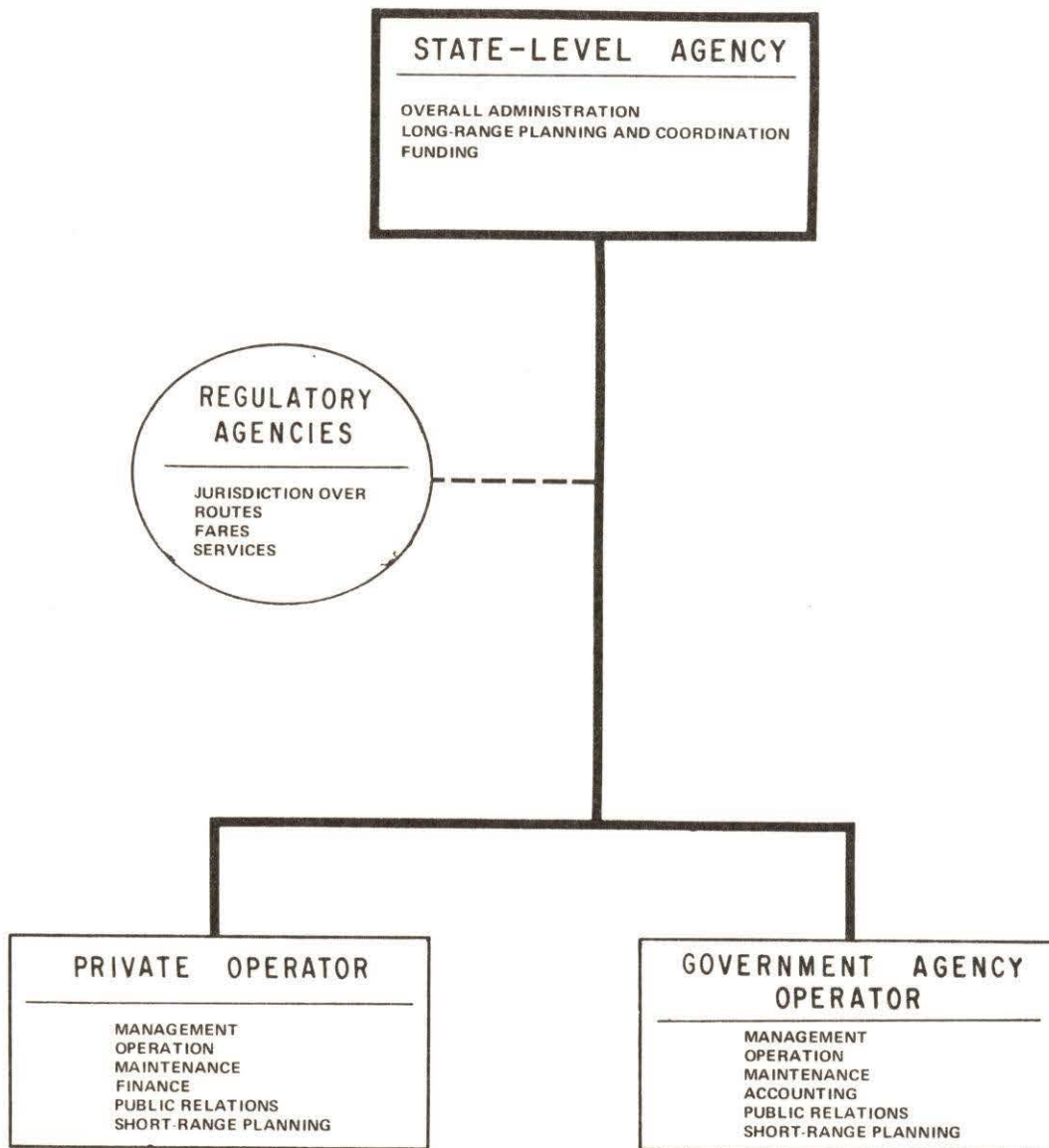
The accompanying diagram depicts two possible alternative organizational structures, together with possible assignments of

principal functions, with respect to public bus services.

A prerequisite of adopting either of the two arrangements would be a simplification of the present structure of the industry from some 289 individual operating entities to a manageable group. For optimum results, a policy of one operator (public or private) for one area (or region) might be adopted. This would eliminate destructive competition and make possible the assignment of area responsibility to a single operating unit, provide flexibility in the assignment of buses and manpower, and enable use of centralized maintenance facilities. Additionally, fixed costs for administration, management, and service functions could be minimized by spreading them over a larger operating base.

Private Operation - Operation under private enterprise could range between the extremes of a service contract with a private operator using government-owned facilities and equipment, and an arrangement wherein a private operator receives only modest financial assistance from governmental sources and provided the desired services employing his own equipment. Various arrangements would be possible, including both operating and capital subsidies, within these limits. Regulatory functions would be maintained by existing agencies, while overall direction, planning, coordination, and funding functions could be vested in a State-level body (Figure 12).

Government Operation - Bus service could be provided by government on a single agency basis covering the whole State, or by several agencies organized on a regional basis.



ALTERNATIVE TRANSIT ADMINISTRATIVE ORGANIZATIONS

FIGURE 12

As with private enterprise operation, a government agency operator could be assigned responsibility for management, operation, maintenance, and short-range planning. The level of activity in the financial area, however, might be limited to general accounting and payroll bookkeeping. Other financial functions would be delegated to the State-level body.

Private versus Public Agency Operation - The principal differences between private and public operations would probably relate to degrees of administrative control over operations and the responsiveness to public needs. Labor/management relationships, in the instance of government operation, would probably be on a State-wide basis, while, with private enterprise operation, traditional relationships might be preserved, depending on the extent of public financial assistance. It appears that the alternatives of private or government operations have many characteristics in common, and that optimum bus services could be developed under either alternative. A fundamental development which is a prerequisite for either alternative, is the establishment of integrated operations which may be subjected to modern, efficient, managerial controls.

APPENDIX TABLES AND EXHIBITS

EXHIBIT A
SCOPE OF WORK
NEW JERSEY BUS STUDY

The preparation of this Overview Statement is a part of a transportation technical study of all bus and rail carriers in New Jersey, recently initiated. The study is to be performed in two phases, and the significant aspects of the work scope are briefly summarized below.

"Phase A

Tasks:

1. Prepare and submit an Overview Statement, including policy alternatives;
2. Inventory all bus carriers in the State to develop information and data relative to:
 - a. Routes and areas served;
 - b. Corporate structure and ownership;
 - c. Complete financial and operating data;
 - d. Operating rights;
 - e. Schedules and fares;
 - f. Rolling stock; and,
 - g. Type, kind and location of all physical facilities.

All of this information to be put in a form that may be readily updated and retrievable through electronic data processing procedures.

3. Prepare recommendations for immediate-action program which would make optimum use of available buses and

supporting facilities, including:

- a. Public information;
- b. Routes;
- c. Schedules; and,
- d. Transfer points.

Additional recommendations would be made, where applicable, for the use of:

1. Preferential bus lanes;
2. Park-Ride facilities;
3. New charter services;
4. Changes in fares; and,
5. Changes in routes.

Also identify those corridors and/or areas where further study is required for the development of a long-range coordinated transportation plan.

Phase B

The work program for Phase B would be detailed, based in part on the findings of Phase A, taking into consideration consultant recommendations and subject to the direction and approval of the Policy Committee. Phase B would be undertaken subsequent to completion of Phase A, subject to the availability of funds and the concurrence of UMTA in a Supplemental Agreement.

It is anticipated that in the work program for Phase B, several travel corridors and/or urban centers would be selected for in-depth study. The selection of situations for such study would take into account the character of results expected and the application of study findings, concepts, and recommendations to other similar

problem areas.

For the selected situations, deficiencies in planning data would be identified and the required supplemental data would be developed. Such data might include, but not be limited to:

Characteristics of present and potential bus riders based upon the findings of on-board and home interview surveys;

Route inventories including bus stop identification, shelters, special bus lanes, terminals, and parking facilities at transfer points;

Quality of available bus service based on travel speed and delay studies; counts of passengers boarding, leaving, and riding buses; coordination of schedules to facilitate transfers within the public transportation system; time and distance studies for bus travel and principal alternative modes including the private automobile;

In the performance of this work, full use would be made of existing available data from prior and current transportation-related studies and information and data which may be available from the 1970 Census.

A final report would be prepared covering the study methodology, operation and findings, identifying areas for further study, and including recommendations for the development of a public transportation program.

The report would contain the following material with respect to each selected study situation:

Evaluation of existing conditions, giving special consideration to persons totally dependent on public transportation and describing past and present financial assistance rendered by governmental or other agencies.

Recommended improvements in management, operations, facilities, and coordination of services.

Justification of all recommendations based upon analysis of impacts on ridership and estimates of future revenues, costs and benefits, and capital requirements for a minimum period of five years.

Sources of funding for anticipated capital financing and operating subsidies.

Assignment of responsibilities for implementing the program.

Recommendations related to bus services and traffic congestion including provision and regulation of parking facilities, work hour staggering in business and/or industrial areas, exclusive bus lanes, and improvements which might involve combined funding through UMTA and the FHWA TOPICS program.

Application of study results to other similar transportation situations.

It is anticipated that the findings of Phase A, pertinent to the structure of the bus industry and the inventory of its operating factors -- routes, schedules, and fares, supplemented by the findings of the in-depth studies of the selected transportation situations in Phase B, would provide additional bases for discussion, analysis, and recommendations with respect to future planning, coordination, and development of an optimum network of bus services in the State. In this area, particular emphasis would be placed on identification and discussion of problems attendant to creating an administrative structure which could deal in an effective manner with the preservation and extension of bus service in response to future public needs."

Table A
 COMPARISON OF HIGHWAY SYSTEMS
 Selected States
 1970

STATE	LANE MILES		TOTAL	LANE MILES/ CAPITA
	Urban	Rural		
Florida	53,750	115,200	168,950	.0415
Illinois	42,120	217,250	259,370	.0236
Michigan	47,100	194,130	241,230	.0278
South Carolina	14,830	98,500	113,330	.0425
New Jersey	35,800	27,640	63,440	.0091
Arizona	12,000	72,700	84,700	.0508

Source: Highway Statistics, 1970, prepared by USDOT, FHWA.

Table B
 COMPARISON OF USE OF HIGHWAY SYSTEMS
 Selected States
 1970

STATE	<u>ANNUAL VEHICLE-MILES TRAVELED PER CAPITA ON:</u>			
	<u>Arterials</u>	<u>Collectors</u>	<u>Local Streets</u>	<u>Total</u>
Florida	3,961	901	760	5,622
Illinois	3,115	516	1,142	4,773
Michigan	3,882	1,003	655	5,540
South Carolina	3,681	884	752	5,317
New Jersey	3,436	722	1,177	5,335
Arizona	4,914	691	419	6,024

Source: Highway Statistics, 1970, prepared by USDOT, FHWA.

Table C

PUBLIC TRANSIT POTENTIALS
POPULATION BY AGE GROUP - UNDER 16 AND OVER 65 YEARS

New Jersey Counties

COUNTY	POPULATION		POPULATION		COMBINED	
	UNDER 16 YEARS	PER CENT OF COUNTY	OVER 65 YEARS	PER CENT OF COUNTY	YOUNG AND OLD	PER CENT OF COUNTY
Atlantic	48,445	28.1	26,751	15.5	75,196	43.6
Bergen	251,202	28.2	82,511	9.2	333,713	37.4
Burlington	104,603	35.5	17,667	6.0	122,270	41.4
Camden	142,502	31.6	39,278	8.7	181,780	40.3
Cape May	14,577	25.5	11,511	20.2	26,088	45.7
Cumberland	37,383	31.7	11,430	9.7	48,813	41.4
Essex	266,494	29.2	94,349	10.3	360,843	39.5
Gloucester	57,495	33.8	12,552	7.6	70,347	41.4
Hudson	158,020	26.3	66,943	11.2	224,963	37.5
Hunterdon	21,533	31.7	6,742	9.9	28,275	41.6
Mercer	85,005	29.2	27,812	9.6	112,817	38.8
Middlesex	185,634	32.5	35,993	6.3	221,627	38.8
Monmouth	148,222	33.2	41,791	9.4	190,013	42.6
Morris	126,187	33.8	25,537	6.8	151,724	40.6
Ocean	61,776	30.0	32,177	15.6	93,953	45.6
Passaic	131,975	29.0	45,668	10.0	177,643	39.0
Salem	18,784	31.1	5,607	9.3	24,391	40.4
Somerset	63,985	33.0	12,976	6.7	76,961	39.7
Sussex	26,024	34.1	6,673	8.7	32,697	42.8
Union	149,046	27.7	53,082	9.9	202,128	37.5
Warren	21,944	30.2	7,990	11.0	29,934	41.3
TOTAL	2,120,836	30.2	665,340	9.5	2,786,172	34.7

Source: 1970 Census of Population.

Table D
 AUTO OWNERSHIP 1970 CENSUS
 BY HOUSEHOLDS

COUNTY	HOUSEHOLDS	^{No} NUMBER OF AUTOS	PER CENT	ONE AUTO	TWO AUTOS	THREE PLUS AUTOS
Bergen	279,610	28,701	10.3	124,126	106,001	20,782
Essex	302,582	95,489	31.6	129,464	66,003	11,626
Hudson	207,499	84,558	40.8	97,653	21,915	3,073
Middlesex	168,076	16,860	10.0	75,271	63,366	12,579
Monmouth	135,230	15,481	11.4	59,887	50,588	9,274
Morris	109,873	6,568	6.0	72,485	51,287	9,483
Passaic	147,214	30,756	20.9	62,860	44,410	9,188
Somerset	57,013	3,965	7.0	20,590	27,007	5,451
Union	171,580	24,292	14.2	76,301	58,986	12,001
Tri-State Subtotal	1,578,627	306,970	19.4	688,637	489,563	93,457
Burlington	84,788	5,999	7.1	38,555	34,432	5,802
Camden	138,408	22,592	16.3	66,301	42,461	7,054
Gloucester	49,693	4,505	9.1	24,325	17,466	3,397
Mercer	93,486	16,294	17.4	42,056	29,556	5,580
DVRPC Subtotal	366,375	49,390	13.5	171,237	123,915	21,833
TOTAL	1,945,002	356,360	18.3	859,874	613,478	115,290

Source: Tri-State Regional Planning Commission.
 Delaware Valley Regional Planning Commission.

TABLE E

OPERATING SUBSIDY PAYMENTS - BY STATE OF NEW JERSEY

CARRIER	CITY	⁽¹⁾ BUSES Expenditures By Fiscal Year - For Passengers Except as Noted				Total
		1970	1971	1972	1973	
		Amboy Coaches, Inc.	South Amboy, N.J.	--	--	
Associated Bus Company of Hawthorne	Haledon, N.J.	--	--	\$ 51,710.00	79,000.00	130,710.00
Atlantic Transportation Company	Atlantic City, N.J.	\$221,666.00	\$232,000.00	310,000.00	357,500.00	1,121,166.00
Boro Buses Company	Shrewsbury, N.J.	--	48,885.47	150,000.00	176,000.00	374,885.47
Coast Cities Coaches, Inc.	Neptune, N.J.	52,996.00	110,690.00	141,848.07	180,000.00	485,534.07
Community Coach Lines	Clifton, N.J.	--	120,000.00	129,000.00	154,000.00	403,000.00
Dover-Mt. Hope-Picatinny Bus Line (Fiscal '73 name changed to Jersey Bus, Inc.)	Dover, N.J.	11,525.14	47,477.46	42,490.51	120,000.00	221,493.11
Garden State Coachways	Bridgeton, N.J.	--	--	--	27,600.00	27,600.00
Garfield and Passaic Bus Company	Garfield, N.J.	--	16,000.00	32,000.00	37,000.00	85,000.00
Garfield and Passaic Transit Company, Inc.	Garfield, N.J.	18,545.40	35,613.60	77,590.20	88,781.00	220,530.20
Intercity System (5 companies)	Fairview, N.J.	--	(2) 200,000.00	303,883.00	(3) --	503,883.00
Marathon Bus Line, Inc.	South Amboy, N.J.	5,557.00	50,000.00	44,927.00	68,000.00	168,484.00
Mercer County Improvement Authority	Trenton, N.J.	124,999.00	100,000.00	100,000.00	100,000.00	424,999.00
Passaic - Athenia Bus Company, Inc.	Clifton, N.J.	--	--	20,200.00	75,000.00	95,200.00
Plainfield Transit Inc.	South Philadelphia, Penna.	--	23,811.00	27,641.00	36,568.00	88,020.00
Rockland Coaches, Inc.	Bergenfield, N.J.	--	--	--	6,000.00	6,000.00
Somerset Bus Company, Inc.	Westfield, N.J.	--	--	--	46,115.00	46,115.00
Summit - New Providence Bus Line (Fiscal '73 name changed to Watchung Mtn. Transit Inc.)	New Providence, N.J.	24,615.00	46,721.12	46,991.12	67,250.00	185,557.24
Transport of New Jersey (formerly Public Service) Cross County Route (B-2) Other Bergen County Routes, (B-1), (B-3), (B-4) and (B-72) Subway Service	Maplewood, N.J.	--	--	76,134.28	94,000.00	170,134.28
		--	--	--	100,000.00	100,000.00
		<u>41,666.65</u>	<u>100,000.00</u>	<u>147,511.00</u>	<u>176,000.00</u>	<u>465,177.65</u>
	Total	\$501,570.19	\$1,131,198.65	\$1,701,926.18	\$2,028,474.00	\$5,363,169.02

- (1) Includes County contribution which is paid back to State.
(2) Payment of Insurance Premium for 10 - 11/71.
(3) Taken over by Maplewood Equipment Co., a subsidiary of TNJ, operated with State owned buses.

		RAILROADS				
Central Railroad of New Jersey	Newark, N.J.	\$ 4,601,014.33	(4) \$6,314,273.56	\$4,776,796.80	\$5,115,101.00	\$20,807,185.69
Erie-Lackawanna Railway Company	Hoboken, N.J.	5,197,258.78	4,846,257.52	7,454,000.00	9,106,000.00	26,603,516.00
Pennsylvania Railroad Company (Changed in 1970 to Penn. Central Transportation Company.)	Philadelphia, Penna.	(6) 25,500.00	(6) 58,999.00	(6) 86,200.00	(6) 51,600.00	(6) 221,300.00
Pennsylvania-Reading Seashore Lines	Camden, N.J.	257,195.35	350,000.00	329,928.98	676,212.00	1,613,336.33
Port Authority Ferry Corporation	Camden, N.J.	<u>75,000.00</u>	<u>75,000.00</u>	<u>75,000.00</u>	<u>75,000.00</u>	<u>300,000.00</u>
	Total	\$10,155,968.46	\$11,643,531.08	\$12,721,925.78	\$15,023,913.00	\$49,545,338.32

- (4) Subsidy for freight service included (\$2,000,000).
(5) Figures for 1970-73 rounded.
(6) Capital Improvement Program in lieu of operating subsidy.

Source: NJDOT Bureau of Motor Bus

Table F
 1968 TRANSPORTATION BOND ISSUE
 Status of Public Transportation Funds
 November 30, 1972

	<u>\$200 MILLION PUBLIC TRANSPORTATION FUNDS</u>				Balance Not Committed
	FEDERAL GRANTS	Allocated	Transfers	Committed	
New York & Long Branch		\$ 41,960,000	\$ (402,823)	\$ 3,042,224	\$ 38,914,952
Erie Lackawanna		91,719,772	150,000	46,329,451	45,540,321
Central Railroad		29,783,342	(2,337,367)	11,184,147	16,261,828
Penn Central	<u>\$19,747,439</u>	<u>24,156,386</u>	<u>3,781,771</u>	<u>34,211,983</u>	<u>13,473,613</u>
	19,747,439	187,619,500	1,191,581	94,767,805	113,790,715
Miscellaneous:					
Operating Costs		2,700,000	(287,500)	518,500	1,894,000
Engr. & Design		<u>1,680,000</u>	<u>(1,143,604)</u>	<u>510,724</u>	<u>25,672</u>
Total Railroads	19,747,439	191,999,500	(239,523)	95,797,029	115,710,387
Bus Total	1,492,350	1,700,000	298,878	2,394,231	1,096,997
Mass Transit Planning Studies		<u>140,000</u>		<u>140,000</u>	<u>-</u>
Total	<u>\$21,239,789</u>	<u>\$193,839,500</u>	<u>\$ 59,355</u>	<u>\$ 98,331,260</u>	<u>\$116,807,384</u>
Unallocated		\$6,160,500			

Source: New Jersey Department of Transportation.

Table G
 UMTA GRANTS TO NEW JERSEY
 1965-1972

Urban Mass Transportation Act of 1964

<u>GRANTEE</u>	<u>DATE</u>	<u>FEDERAL GRANT</u>	<u>PURPOSE</u>
State of New Jersey	June, 1965	\$ 4,826,298	Rerouting of Jersey Central commuter service from Jersey City to Newark.
Port Authority Trans Hudson	June, 1965	\$ 5,100,000	Purchase 44 rapid transit cars in connection with above project.
State of New Jersey	October, 1966	\$ 6,661,250	Purchase 35 electric commuter cars for Penn Central Trenton-New York service.
Port Authority Trans Hudson	March, 1968	\$ 39,166,000	Construction of Journal Square Transportation Center in Jersey City.
Mercer County Improvement Authority	September, 1969	\$ 1,573,722	Acquisition of private bus company, purchase 20 buses, signs, and shelters.
State of New Jersey	May, 1970	\$ 18,733,333	Purchase 70 additional commuter cars for Trenton-New York City service.
Rutgers University	March, 1966	\$ 197,106	Evaluate use of airspace for transportation in urban environment.
State of New Jersey	February, 1971	\$ 3,295,700	Haddonfield Dial-A-Ride Demonstration.
Mercer County Improvement Authority	January, 1969	\$ 11,666	Short range bus study.

Table G cont'd.

Urban Mass Transportation Act of 1964

<u>GRANTEE</u>	<u>DATE</u>	<u>FEDERAL GRANT</u>	<u>PURPOSE</u>
Atlantic County Improvement Authority	June, 1969	\$ 11,666	Short range bus study.
Delaware River Port Authority	June, 1970	\$ 993,726	Study of future requirements of Lindenwold Line.
Tri-State Regional Planning Commission	May, 1971	\$ 170,000	Study of proposed extension of Newark subway system.
		\$ 20,000	Feasibility study of transportation center in Plainfield.
(NOTE: These grants are part of a larger, umbrella grant to Tri-State which also includes \$ funds for regional transportation planning of benefit to New Jersey.)		\$ 45,000	Updating of Newark mass transit plan.
		\$ 20,000	Feasibility of transportation center in Hoboken.
		\$ 60,000	Middlesex County mass transit technical study.
Newark College of Engineering	June, 1970	\$ 148,000	University Research and Training.
Newark College of Engineering	March, 1971	\$ 107,440	University Research and Training.
Princeton University	March, 1972	\$ 149,055	University Research and Training.
Tri-State Regional Planning Commission	July, 1970	\$ 98,000	Phase I - Planning I-495 Exclusive Bus Lane.
		\$ 500,000	Phase II - Implementation

Table G cont'd.

Urban Mass Transportation Act of 1964

<u>GRANTEE</u>	<u>DATE</u>	<u>FEDERAL GRANT</u>	<u>PURPOSE</u>
Tri-State Regional Plan- ning Commission	July, 1970	\$ 655,000	Phase III - I-495 and Rt. 3 Traffic surveillance, automatic bus identification program, park and ride.
State of New Jersey	February, 1971	\$ 1,014,106	Construction of a new suburban commuter station for Penn Central's North Jersey Service.
City of Philadelphia	December, 1971	\$ 944,333	Construction of a power substation for Lindenwold Line.
	Total:	\$ 83,458,735	

Exhibit B

LABOR STANDARDS

URBAN MASS TRANSPORTATION ACT

"SECTION 13.

- (a) The Administrator shall take such action as may be necessary to insure that all laborers and mechanics employed by contractors or subcontractors in the performance of construction work financed with the assistance of loans or grants under this Act shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended. The Administrator shall not approve any such loan or grant without first obtaining adequate assurance that required labor standards will be maintained upon the construction work.
- (b) The Secretary of Labor shall have, with respect to the labor standards specified in subsection (a), the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 64 Stat. 1267; 5 U.S.C. 133z-15), and section 2 of the Act of June 13, 1934, as amended (48 Stat. 948; 40 U.S.C. 276c).
- (c) It shall be a condition of any assistance under (11) section 3 of this Act that fair and equitable arrangements are made, as determined by the Secretary of Labor, to protect the interests of employees affected by such assistance. Such protective arrangements shall include, without being limited to, such provisions as may be necessary for
- (1) the preservation of rights, privileges, and benefits (including continuation of pension rights and benefits) under existing collective bargaining agreements or otherwise;
 - (2) the continuation of collective bargaining rights;
 - (3) the protection of individual employees

(11) Section 2(b) (2) of Public Law 89-562, approved September 8, 1966 80 Stat. 715, 716 substituted the words "under section 3 of this Act" for the words "under this Act."

against a worsening of their positions with respect to their employment;

- (4) assurances of employment to employees of acquired mass transportation systems and priority of reemployment of employees terminated or laid off; and
- (5) paid training or retraining programs. Such arrangements shall include provisions protecting individual employees against a worsening of their positions with respect to their employment which shall in no event provide benefits less than those established pursuant to section 5(2) (f) of the Act of February 4, 1887 (24 Stat. 379), as amended. The contract for the granting of any such assistance shall specify the terms and conditions of the protective arrangements."

