SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

VOLUME II

IMPROVEMENT PROGRAM 1978-1995

suffolk county department of transportation

Errata Sheet

Suffolk County Comprehensive

Transportation Plan

Volume II

Improvement Program 1978 - 1985

Substitute the following table for that shown at the bottom of page III-19.

42 Standard Transit vehicles	$3,100,000
40 Small vehicles (buses or vans)	1,000,000
90 Fare boxes	180,000
Radio and related equipment	250,000
80 Shelters	160,000
Street signs/furniture	450,000
Total Cost	$5,140,000
Federal Assistance	4,112,000
State Assistance	514,000
Cost to County	514,000

Nov. 1979

A COMPREHENSIVE TRANSPORTATION PLAN FOR SUFFOLK COUNTY

VOLUME II

IMPROVEMENT PROGRAM 1978-1995

JOHN V. N. KLEIN
COUNTY EXECUTIVE

SUFFOLK COUNTY DEPARTMENT OF TRANSPORTATION

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LIST OF MAPS

SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

I-INTRODUCTION

INTRODUCTION

Volume I - Inventory and Analysis - of the Department's Transportation Plan reported upon and evaluated the current status of the transportation system in Suffolk County including its extent, usage, characteristics, impacts and related factors.

Following the release of the inventory section of the plan, the Department made public presentations in both Riverhead and Hauppauge at a number of monthly meetings. The purpose of the meetings was to elaborate on each of the elements of the transportation system and to elicit comments from officials and the public at large. Information obtained from these meetings served as further input to final plan development. Additionally, each municipal plan, where available, was reviewed and incorporated as appropriate.

Planning Process

Transportation Planning has been an ongoing process in Suffolk County for well over a decade receiving its most recent impetus as a result of contractual agreements between the Tri-State Regional Planning Commission (Tri-State) and the subregions (Counties or Planning Regions) within its jurisdiction. Tri-State is the Metropolitan Planning Organization (MPO) designated by the Governors (of New York, New Jersey, and Connecticut) as being responsible, together with the States for carrying out the provisions of Section 134, Title 23 United States Code (23USC 134) and as being capable of meeting

the requirements of certain sections of the Urban Mass Transportation (UMT) Act of 1964 as amended. As such, the MPO is the forum for cooperative decision-making by principal elected officials of local government. In addition, the MPO is the recipient of transportation planning funds available to the States from the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA). The subregions (Counties) develop an annual work program subject to the approval of the MPO, State, and FHWA/UMTA. In New York State, the transportation planning process within the Tri-State area has been further divided into Subregional Transportation Coordinating Committees (TCC) comprised of representatives of the Counties, Tri-State, the State and the Metropolitan Transportation Authority (MTA). Locally, this committee is known as the Nassau/Suffolk TCC, which currently conducts formal, public meetings twice a year and several staff level meetings throughout the year. Representatives of local municipalities are participants in this planning process.

Joint FHWA/UMTA regulations for urbanized areas which became effective in October, 1975, require the development of a transportation plan. This consists of a transportation systems management element (TSME) and a long-range element. The TSME is essentially the development of management strategies for obtaining more effective use of existing transportation facilities through generally low cost capital and/or operational

improvements. Examples include intersection improvements, signal upgrading, preferential treatment for transit and other high-occupancy vehicles, control and management of parking, etc. The long-range plan element provides for the long-range transportation needs of the urbanized area, and identifies new transportation policies and facilities or major changes in existing facilities by location and modes to be implemented.

The transportation plan is to be consistent with the area's comprehensive long-range land use plan, urban development objectives and the area's overall social, economic, environmental system performance and energy conservation goals and objectives.

These regulations further require the development of a transportation improvement program (TIP) covering a period of not less than three to five or more years including an annual element (A/E). This program is a staged multi-year program of transportation improvement projects which are consistent with the transportation plan.

Suffolk County has elected to develop its Comprehensive Plan to encompass a 20-year horizon. The earlier transportation plan developed by the Nassau-Suffolk Regional Planning Board spanned the period 1966-1985. Much of the recent effort expended by the County updates and modifies the earlier plan and reflects anticipated development and related transportation requirements through 1995.

Future Development

Suffolk County will experience continued population growth through the end of the 20th century. The Long Island Regional Planning Board (LIRPB) estimates that by 1995, the population of Suffolk County will be 1,752,000, an increase of 36% from 1975.

Numerically, the greatest increase in population will occur in Brookhaven Town - from 317,000 persons in 1975 to 546,000 in 1995. The four western towns will experience lesser growth, but by 1995 it is expected that they, collectively, will have reached nearly 98% of their saturation population. In the five eastern towns, the population is expected to increase by 73,700 persons, an increase of 77% over 1975 population. See Figures IA and IB.

The future land use plan, which is a composite of town, village, and LIRPB plans, depicts residential development, with exceptions, as a continuation of the low densities which now exist. For example, Brookhaven Town which has a population density of about 1,200 persons per square mile will have a density of only 2,100 persons per square mile by 1995. On the other hand, although the population of Shelter Island will double by 1995, its density will be about 330 persons per square mile. County-wide, Suffolk is expected to have a population density in 1995 of less than 2,000 persons per square mile. By comparison, Nassau County has a density of

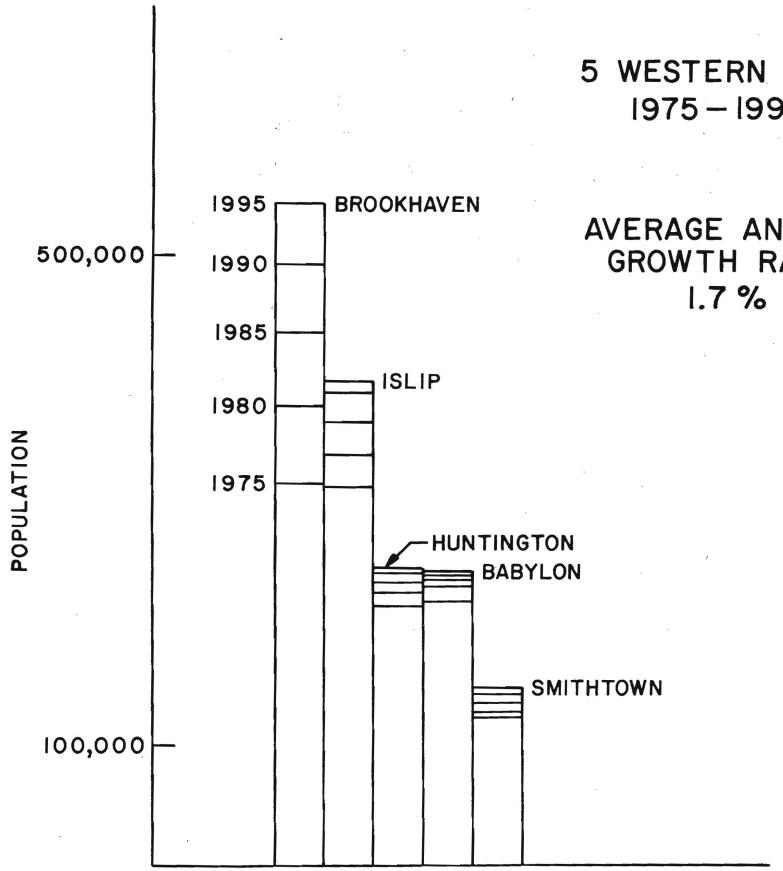


FIGURE 1A

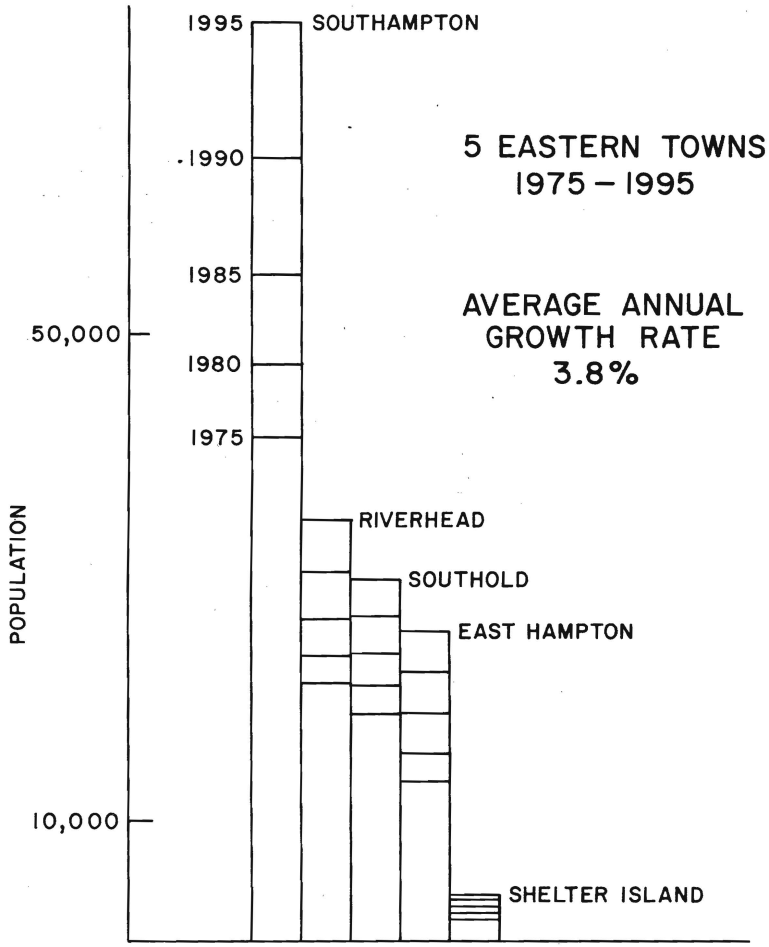


FIGURE 1B

SOURCE: NASSAU SUFFOLK REGIONAL PLANNING BOARD

SUFFOLK COUNTY
POPULATION GROWTH
1975 – 1995

nearly 5,000 persons per square mile and Queens County has a density of more than 18,000 persons per square mile.

Generally, the lands of the east end of Suffolk will remain in agricultural, recreational and very low (less than two dwelling units per acre) residential-type uses. With the exception of beaches and parks, the major activities will be concentrated in the "downtown" communities.

In the western towns, medium (3-7 dwelling units per acre) density residential development will predominate and industrial and commercial activity centers will be widely disbursed throughout. The central business districts (CBD's) of the older communities such as Babylon, Bay Shore, Patchogue, Huntington, Smithtown and Port Jefferson will continue as activity centers.

By 1995, the size of the County work force will probably increase to 600,000[1] and private industry and government will provide employment opportunities for approximately 440,000 persons. Automobile registrations exceeded 650,000 in 1975 and are expected to increase to more than 950,000 by 1995.

The primary goal, then, of the Department's comprehensive plan is to provide the necessary transportation facilities which this future anticipated growth will require. This is the long-range objective. However, as reported in Volume I - Inventory and Analysis, the Department identified existing deficiencies in the transportation system for which solutions

[1]Estimated at 1/3 the population.

are also recommended. These encompass, in general, the short-range plan objectives, primarily in the area of TSM-type projects.

Surface Transportation

a) Movement of People

Transportation is only a means to an end, it is not an end in itself. People make trips for specific purposes, namely, to work, to shop, for school, and for social and recreational reasons. Classically, transportation systems have been developed for the fast, efficient and economic movement of people and goods. Each era saw a new, better, faster or cheaper way to move people and goods. Consequently, animal-powered modes gave way to the railroads, which in turn gave way to the self-propelled free wheeling vehicle, the air age and to the present supersonic air transport era. Each of these events resulted from the discovery of a newer and faster way to move people and goods. The development of the steam engine, the discovery of oil, electricity, and the development of the internal combustion engine, among other things, were responsible for these changes.

Each of these changes exacted a toll, however, in terms of resource depletion, environmental problems and spread growth; from the inner cities to the "suburbs". These changes have given us the greatest personal mobility in the world. However, the Tri-State Regional Planning Commission has posed

the question[2] of how much more mobility can we expect and how much more can we pay for it in terms of money and earthly resources.

Suffolk County grew largely as a result of the availability of the automobile. Prior to World War II, its population was less than 200,000. By 1950, it was nearly 300,000 and that figure more than doubled by 1960. The extensive Long Island Railroad system existed during all of the period, but population growth developed outside of its area of influence. Instead, the parkway system was extended and improved, the Long Island Expressway was built, Sunrise Highway was extended and other major road improvements were made during this period of major growth in Suffolk County. Bus service was primarily a local community operation serving the older developed CBD's.

Approaching the last quarter of this century in Suffolk County, the County faces a continuously overloaded highway system, an under-utilized rail system and a virtually non-existent bus system to serve the transportation needs of the people. Additionally, more and more trucks crowd the highway

[2]Maintaining Mobility - The Plan and Program for Regional Transportation through 2000 (p. 1) - Tri-State Regional Planning Commission

system while the Long Island Railroad freight operations continue to decline.

Clearly, a better balance needs to be made between the use of the private auto, rail and bus for various trip purposes.

The work trip constitutes approximately 20% of the total number of person-trips on a typical weekday. It has a most significant impact on the transportation system because it occurs over a relatively short period of time in the morning and afternoon - the "rush hours". Two thirds of the Suffolk County work force lives and works within the County[3]. A study[4] of the journey to work trip made by the LIRPB and using 1970 Census data, selected the major employment centers in both Nassau and Suffolk Counties for analysis. For the ten major employment centers located in Suffolk, between 43% and 69% of the work trips to these areas originated within 5 miles of the work site. However, of the total 104,000 work trips made to these ten sites, slightly over 90% were made by automobile.

Of the more than 48,000 residents of Suffolk who worked in the Manhattan CBD and Queens County at the time of the 1970 U.S. Census, more than 50% used the private automobile, which constituted 90% of trips to New York City, for the work trip. If the work trips to Queens County were isolated from

[3]Source: 1970 U.S. Census
[4]The Pattern of Worktrips to Major Employment Centers (NSR PB 1975)

the trips to the Manhattan, CBD, the percentage by automobile increases greatly, to nearly 89%.

A comparison of data from the 1960 and 1970 U.S. Census suggests that, as Suffolk further develops, work trips to New York City will continue to decline as a percentage of the work force and those remaining within Suffolk will increase. Work trips by bus and Long Island Railroad within Suffolk amounted to less than 2% of the total according to the 1970 U.S. Census.

An additional thirty percent of all daily trips are made for shopping or social/recreational purposes. Although these types of trips do not normally coincide with the peak hour period for work trips, they impose heavy loadings on much of the arterial street system during the day.

These three-trip purpose categories constitute a major share of the daily trips and more than 90% of them are made by private automobile. The average number of persons per vehicle for these trip purposes is less than 1.5. In other words, every two automobiles are carrying about three people.

Two courses of action are evident from this analysis - encourage more group tripmaking (i.e., carpools) and provide a viable public transit alternative. The Department's plan attempts to address these issues.

Barring extreme changes in our current living standards and tripmaking habits - which cannot now be determined with certainty - the private automobile will continue to be the

predominant mode for transportation in Suffolk County. This will occur in spite of even significant changes in the development and use of public transportation because of the enormous imbalance between the two modes which has evolved over the last three decades.

Given the overwhelming use of the automobile in Suffolk, the significance of developing and expanding a public transit system cannot be underestimated. Large segments of the population have no access to an automobile or are unable to drive one. These segments include the aged, the poor, the handicapped and the teenagers. Further, a reduction in the necessity for multiple-automobile-hcuseholds is warranted as a means of decreasing continuing highway congestion. The previously cited study of the major employment centers in Suffolk shows that eight of the ten areas are accessible from the Long Island Railroad. The present unavailability of public transit access at both the home and job ends of the trip contributes to the dominance of the automobile as the usual transportation mode for these work trips.

Needless to say, upgrading of Long Island Railroad service and developing a bus system must be done on a coordinated basis to integrate both modes for both inter-County and intra- County trip purposes. At the present time, the existing bus system operates at, or in proximity to, the major rail stations but there is little or no coordination

between schedules. In effect, both modes operate independently of each other.

Another potential benefit to be derived from improved public transportation involves the myriad County, town and local social service programs which require transportation from residences to health, nutritional and recreational facilities. Currently, these transportation requirements are being met primarily by individual organizations contracting with private operators (usually taxi operators). On the County level alone, this method has proven very costly. An effective, improved public transportation system could serve to satisfy many of these trip demands at substantially lower cost.

b) Movement of Freight

Thus far, the report has described some aspects of the transportation of people. Another major impact on surface transportation occurs from the movement of freight.

Of the two major surface freight transportation modes, trucks predominate over rail by a margin of 8 to 1 in Suffolk County in terms of tonnage carried. Local, internal freight movements, which constitute 40% of the truck freight operations, will continue of necessity. However, future growth will generate an additional 11 million tons of freight annually by 1995. Based upon present shipping patterns, this could require 800,000 truck movements a year more than currently occur. Since the energy requirements to ship freight by rail are

about 75% less per ton-mile than by truck, the importance of maximizing rail freight operations is evident.

Waterborne Transportation

In terms of passenger movement, waterborne transportation in Suffolk County encompasses three general categories; namely, access to the recreational facilities of Fire Island; year-round access to Shelter Island which has no land access routes; and finally, interstate transportation between the north shore of Suffolk County and Connecticut.

Fire Island

Proposals for limiting the intensity of development on Fire Island because of its environmental fragility will preclude the necessity for additional large-scale ferry operations from the mainland. Hence, it would appear that adequate service will be available for the foreseeable future with some slight modifications to the current private operations.

Shelter Island

Within the planning time frame under consideration, the population of Shelter Island is projected to increase from 2,000 to 4,000 people. Again, the nature of the area coupled with the forecasted population would not warrant the provision for access to the island via a bridge. Consequently, the ferry service presently provided should experience no difficulty in accommodating the future growth anticipated.

Cross Sound Ferry Service

Two routes provide service between Suffolk and Connecticut. The one operating out of Port Jefferson Harbor operates seasonally for primarily recreational trips. The service from Orient Point is year-round. In terms of a viable year-round transportation link for relieving Suffolk County's "dead-end" status, it is questionable whether suitable large-scale ferry operations can meet the need. Potential sites, identified by Tri-State in its recent report as suitable for large-scale ferry service, were either too far removed from the population center (Orient) or would have severe land access problems (Port Jefferson). All-year ferry service is also subjected to the vagaries of the weather which prevail on Long Island Sound. From a solely transportation view, it is doubtful that ferry service could sustain a large demand for traffic between the two regions. In addition, there are strong economic factors that warrant consideration of the construction of a bridge.

Freight transportation by water requires the least amount of energy per ton-mile of all other freight modes. Very large, bulky materials are most efficiently handled by water transport. Sand and gravel and crushed rock are examples. However, these commodities have declined in recent years largely because of the decline in major highway construction. Suffolk was an exporter of sand and gravel by barge,

but in the future this will decline as Suffolk mining operations are further reduced to a level of supplying local needs only. Local pressure also exists for the reduction in water-related freight activities at the major harbors as a means of restoring the aesthetic, environmental and recreational uses of the shoreline. Petroleum products, however, will continue to be transported to Suffolk County by barge and thence to inland pipelines.

Air Transportation

At the present time, all of the County's airports, with the exception of Long Island MacArthur, operate as general aviation (GA) facilities. As such, these facilities form a relatively small portion of an integrated transportation system for Suffolk County. Projected future increases in GA activities in Suffolk County will, however, require capacity expansion at many of the airports to meet this demand. The current Tri-State airport study is revealing that future passenger activities at the three major airports (Kennedy, LaGuardia, and Newark) may be limited by decreasing access capacity rather than the potential capacity increases necessary at the airports themselves. This limitation could result in spillover to other airports such as Long Island Islip-MacArthur.

As envisioned in the earlier Bi-County Transportation Plan, Long Island Islip-MacArthur Airport, together with Republic Airport, were to become major transportation centers combining rail,

bus, auto and air interchanges. The access limitations at the major airports mentioned above, with attendant potential increased activities in Suffolk should focus on the need to begin implementation of the transportation center proposals.

While only 10% of the County's air freight is handled in Suffolk County, the proposed development of a duty-free trade zone at Long Island MacArthur Airport could result in a significant increase in air cargo within Suffolk in coming years.

Energy and Environmental Concerns

Changes during the coming 20-year period will no doubt occur with regard to automobile travel. However, it is difficult to speculate on the net impact resulting from potential decreasing availability of fossil fuels, conservation programs, new energy sources and the development of more energy-efficient and less polluting automobiles. Because population increases will perpetuate Suffolk's low density residential development, the automobile will nevertheless continue to be the predominant transportation mode.

A number of actions could serve to offset some increased auto use. These include:

- Implementation of the Department's recommended improvements in bus and rail operations as described herein.
- Expansion of park-and-ride facilities along the major highway networks as well as an increase in the number of parking spaces at railroad stations.
- Location of future municipal facilities only in those areas which have access by public transit as well as by automobile.

The recommended highway improvements would not appreciably increase the level of service for the projected design year. Rather, they are intended to accommodate future growth without causing greater congestion than presently exists. While there are environmental trade-offs to be gotten from providing a higher level of service (e.g., better flow, fewer stops, less idling) it is not believed that the economic and aesthetic costs to achieve these are warranted.

Consequently, the thrust of the recommended highway plan is to increase the safety and maintenance of the existing highway network and to limit new highway facilities to those developing areas determined to be critical. In the latter case, only the future right-of-way would be acquired initially, with construction to follow as necessary.

In terms of environmental assessments, it should be mentioned that the highway plan recommendations frequently suggest general solutions to arterial problems. Thus, a proposal to increase the capacity of a highway could result in widening its entire length, making intersectional improvements or combinations thereof. Each, of course, would have differing environmental consequences. Therefore, proper environmental assessments can be made only subsequent to the development of site-specific proposals.

Long Island Sound Bridge

The long discussed proposals for constructing a bridge

or bridges across Long Island Sound are proper issues to include in addressing the overall transportation system requirements for Suffolk County. Energy, environmental, economic and social concerns are the ingredients which must be evaluated regarding the pros and cons of such proposals. The implementation of such a project would require the cooperation and approval of the States of New York and Connecticut and the Federal Government as well as local officials. The Department therefore recommends that a study group should be established composed of the previously cited agencies to explore fully the issues surrounding these various bridge proposals.

Conclusion

The Department has examined conditions as they exist and has attempted to assess the impact of developmental proposals on the future of Suffolk County. It has initiated and participated in public forums on transportation issues and from these has developed, and presents for consideration, this plan to meet the County's transportation requirements for the present and toward the end of this century. It should be understood, however, that this plan is merely a document and cannot be implemented without the support of the citizens of this County together with its elected officials. Because external conditions are constantly changing, a plan has to be sufficiently flexible to accommodate these changes. Consequently, while it is hoped that the basic philosophy of this plan will be adopted, it is recognized that specific proposals may change with time.

SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

II - HIGHWAY

HIGHWAY TRANSPORTATION

Introduction

The significance of the highway system to Suffolk County in meeting its transportation needs is well documented. As pointed out in the Inventory and Analysis, Volume I of the Transportation Plan, about 90% of all trips and 65% of all freight movement in Suffolk County take place on the road systems.

Nor is the predominance of the motor vehicle likely to change significantly during the period encompassed by this Plan. It is projected that there will be a general continuation of the County's growth pattern. Population will increase by 36% by 1995 and automobile registration will increase by 52% during this same period. The ratio of persons per car will decrease from 2.0 to 1.8, according to a Tri-State Regional Planning Commission projection.

The development of a public transportation system, while it will serve to provide an alternative to the private automobile, will still require the use of an effective and efficient highway system.

This is not to suggest that a program of limitless highway construction must be undertaken in order to meet the projected needs. Obviously, there are economic, social, and ecological factors which enter into the consideration of just how much of the County's resources can be committed to the support of personal mobility.

Future Energy Availabilities

The future availability of petroleum to support the projected demand is also a matter of critical concern. However, the data available to date appears to be somewhat speculative and at times conflicting, at least with respect to the time frame within which the plan is intended to respond. The section of this report on Waterborne Transportation quotes one source indicating that domestic oil production will be heavily constrained by 1985 and will decline rapidly thereafter. On the other hand, EPA mandated performance standards for gasoline consumption, and various other fuel conservation measures, along with the possible development of alternate fuels, could serve to offset in whole or in part the dampening effect that the diminishing petroleum supply may have on transportation services during the next eighteen years.

Goals of the Highway Program

The highway system, as one element of the total transportation system, should be designed to assist in, and provide support for, the attainment of land use objectives. As the major element of Suffolk County's transportation system, the judicious application of sound Transportation System Management (TSM) principles will be essential to assure adequate and appropriate response to developmental objectives as articulated in the land use planning recommendations which form the basis of this Transportation Plan.

In this context, the challenge for the coming years will be to maintain and to improve the mobility of the public within the fiscal, environmental, and energy conservation constraints that will be imposed.

Improved service levels and system reliability, greater accommodation of pedestrian and bicycle activity within the traffic environment, and traffic safety improvements aimed at the reduction of traffic accidents, injuries and deaths are reasonably achievable goals.

With respect to environmental concerns and the preservation of community values and continuity, it is desirable to minimize, to the extent possible, the negative impacts of major new construction and/or reconstruction. Yet it must also be understood that there remain considerable areas within the County that are still relatively undeveloped but which will undergo development within the planning period. Existing transportation facilities, including highways, will be inadequate to support the planned growth objectives in these areas and more extensive improvements will be required.

In general, however, the recommendations of the Plan should be accomplished with a minimum of negative impact on the environment or community disruption through the diligent maintenance of existing facilities and relatively minor reconstruction where possible.

Attainment of the goal of improving mobility will con-

tribute to the reduction of energy consumption and reduce costs of personal travel and goods movement.

Methodology

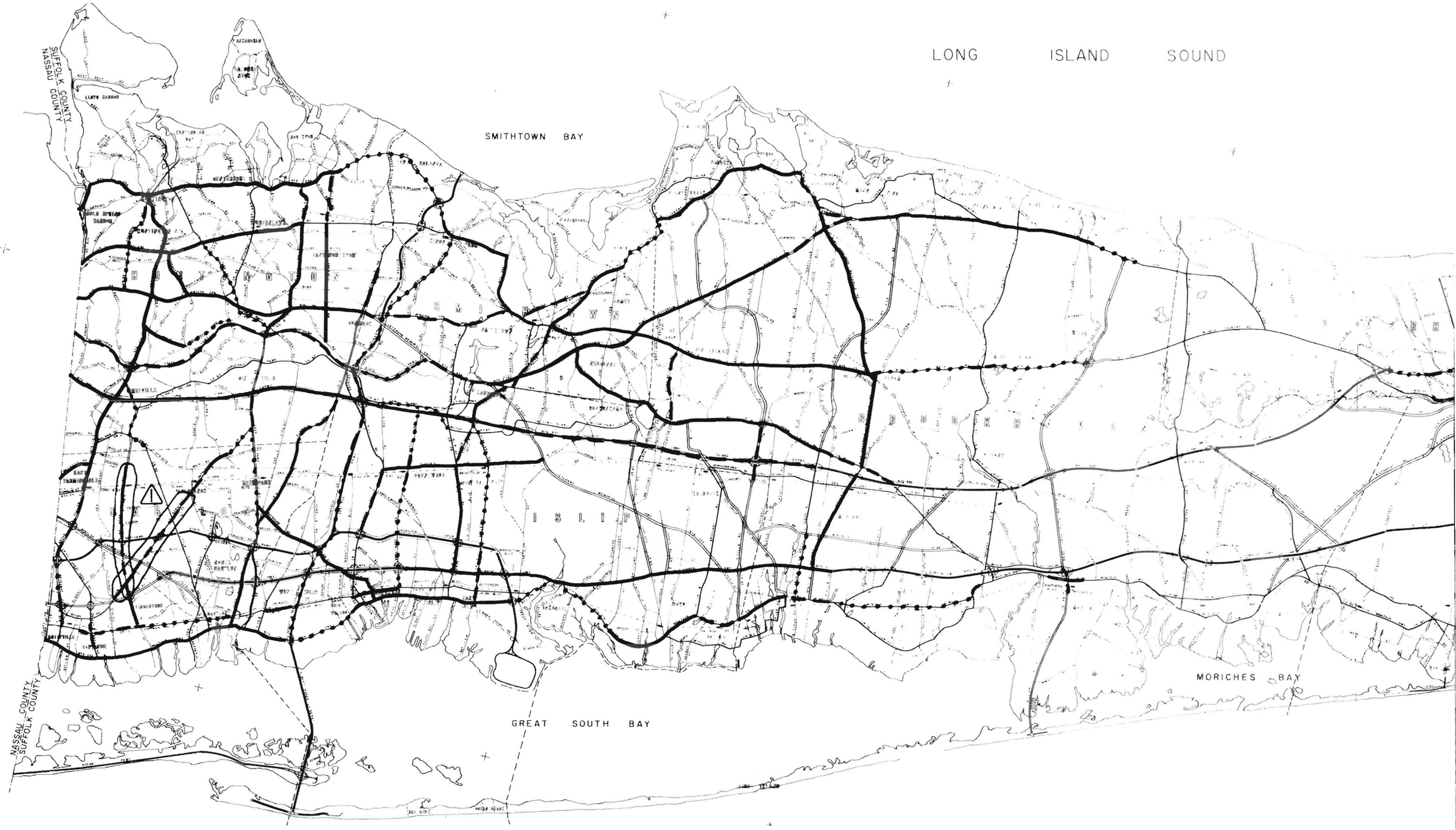
Future traffic volumes were determined by using an updated and modified version of the gravity model used for the 1968 Nassau-Suffolk Regional Planning Board's Transportation Plan. The projected 1995 traffic volumes on individual roads when compared with their existing maximum capacity (Level of Service E) indicated whether or not a deficiency would exist.

The gravity model (actually a series of models) is based upon the fact that movements or interactions in a transportation system, for the most part, result from the social and economic activities of the people living in the area and the spatial separation of the activities with which they have interactions. The set of transportation models utilized in this study constitute a series of mathematical procedures which simulate the main characteristics of the relationships between people and activities which generate these movements. Estimates of population characteristics and measures of land use, therefore, are essential components of the model. A more complete description of the model can be found in the Transportation segment of the Comprehensive Plan Series of the Nassau-Suffolk Regional Planning Board.

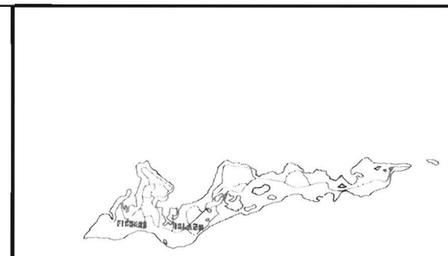
Recommended Highway Improvement Program

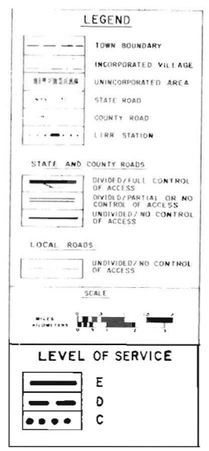
Map No. 1 depicts the levels of service determined as a

HIGHWA


LONG ISLAND SOUND
SMITHTOWN BAY
SUFFOLK COUNTY
NASSAU COUNTY
HUNTINGTON
SMITHTOWN
BROOKHAVEN
ISLIP
NASSAU COUNTY
SUFFOLK COUNTY
GREAT SOUTH BAY
MORICHES BAY

AY LEVEL OF SERVICE
1975





⚠ IMPROVEMENTS MADE AFTER 1975

MAP NO. I

NO.	DATE	DESCRIPTION
REVISIONS		

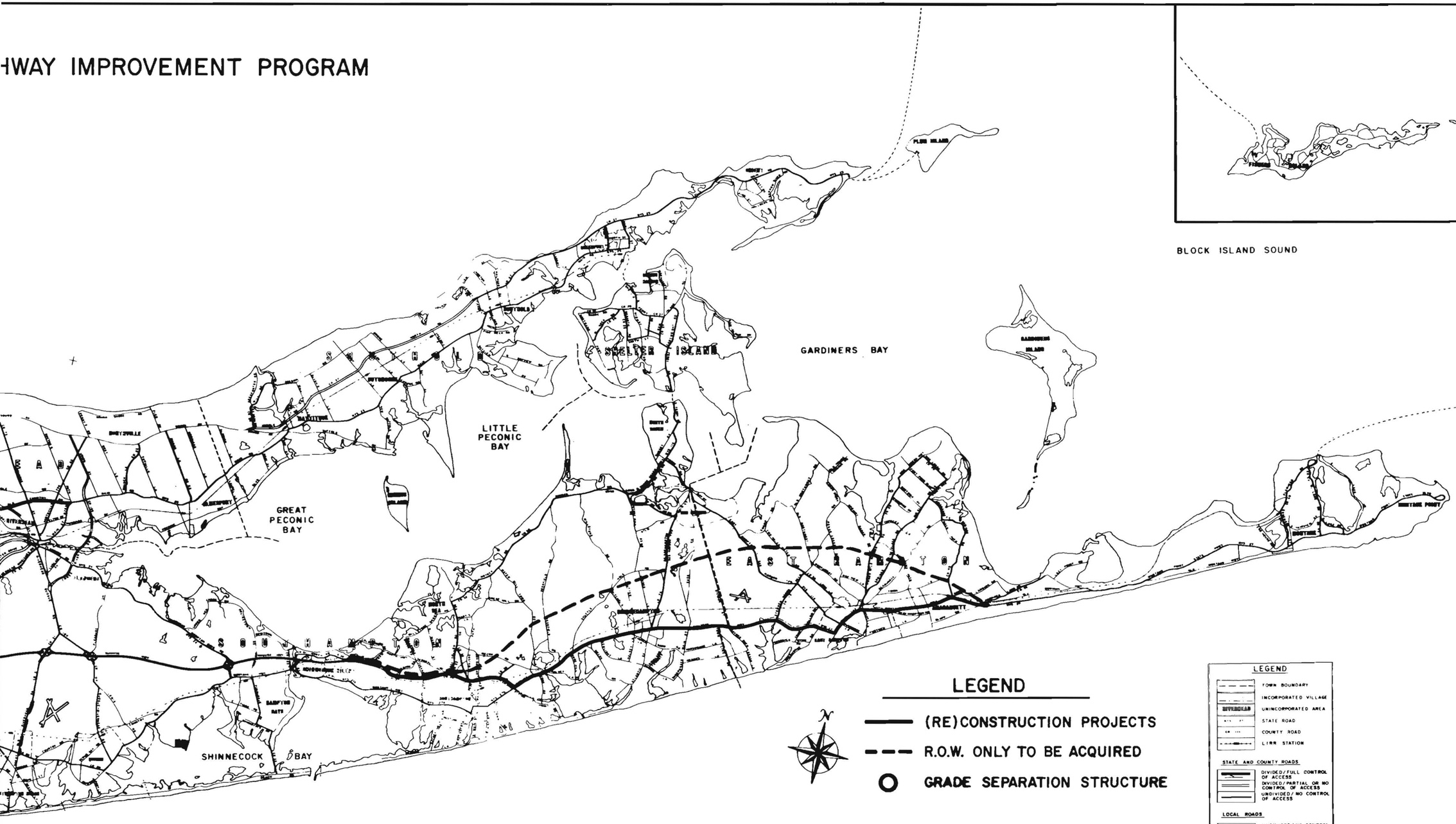
SUFFOLK COUNTY
TRANSPORTATION DEPARTMENT

TITLE
HIGHWAY LEVEL OF SERVICE

ORIG.	DRN	DWG NO.
3-78	J.T.W.	3-021

1978 – 1985 HIGH

HWAY IMPROVEMENT PROGRAM



LEGEND

- (RE)CONSTRUCTION PROJECTS
- R.O.W. ONLY TO BE ACQUIRED
- GRADE SEPARATION STRUCTURE

LEGEND
- TOWN BOUNDARY
- INCORPORATED VILLAGE
- UNINCORPORATED AREA
- STATE ROAD
- COUNTY ROAD
- L.I.R.R. STATION

STATE AND COUNTY ROADS
- DIVIDED/FULL CONTROL OF ACCESS
- DIVIDED/PARTIAL OR NO CONTROL OF ACCESS
- UNDIVIDED/NO CONTROL OF ACCESS

LOCAL ROADS
- UNDIVIDED/NO CONTROL OF ACCESS

SCALE

- AIRPORTS
- FERRIES

MAP NO. 2

NO.	DATE	DESCRIPTION
REVISIONS		

SUFFOLK COUNTY
TRANSPORTATION DEPARTMENT

TITLE
SUFFOLK COUNTY, N.Y.
TRANSPORTATION SYSTEM

ORIG.	DRN	DWG NO.
3-78	J.T.W.	3-022

1986 – 1995 HIGH

LONG ISLAND SOUND

SMITHTOWN BAY

SUFFOLK COUNTY
NASSAU COUNTY

HUNTINGTON

SMITHTOWN

BROOKHAVEN

ALTERNATE

ISLIP

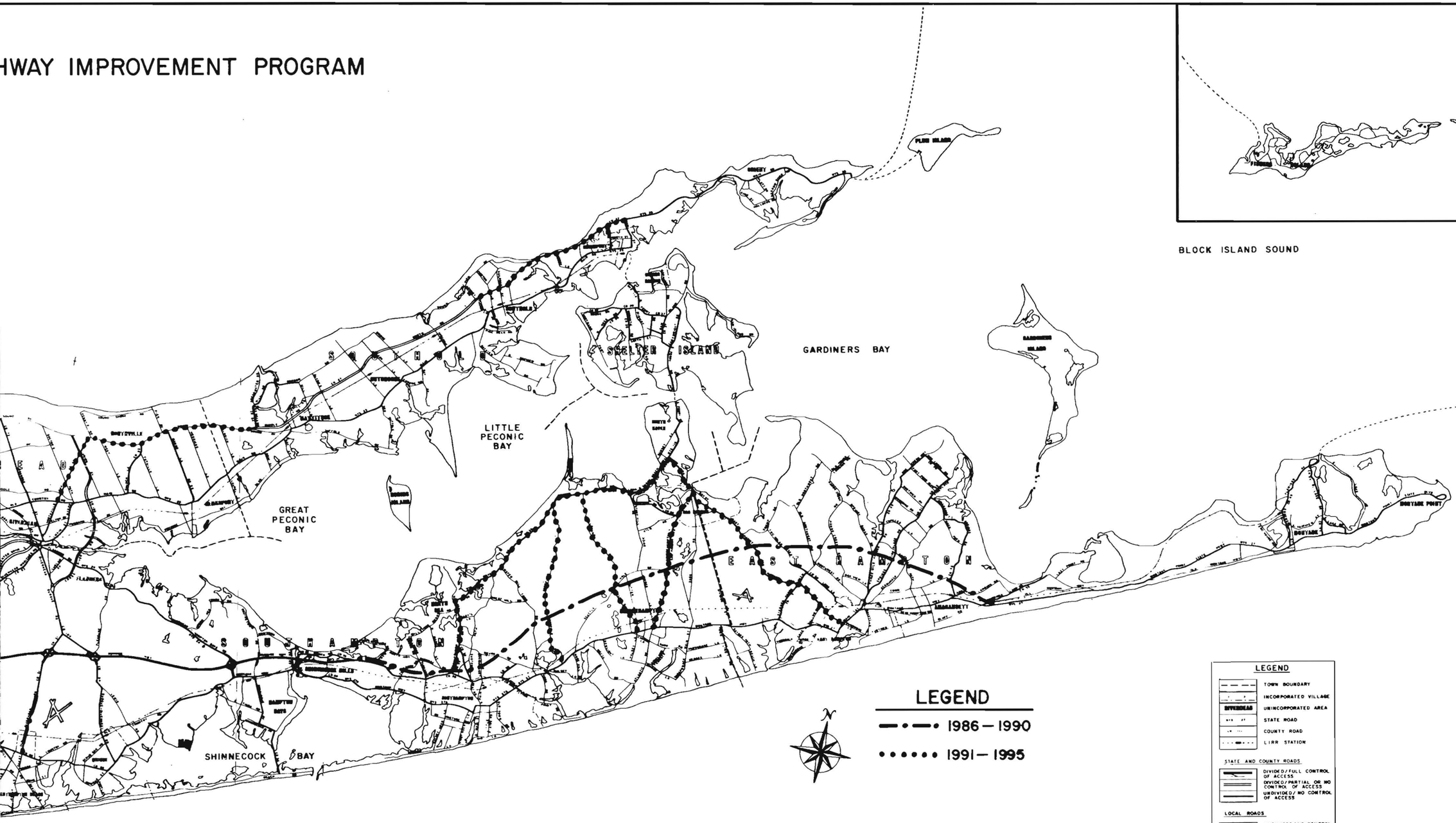
BABYLON

GREAT SOUTH BAY

MORICHES BAY

NASSAU COUNTY
SUFFOLK COUNTY

HWAY IMPROVEMENT PROGRAM



BLOCK ISLAND SOUND

LEGEND

1986 – 1990

1991 – 1995

LEGEND

TOWN BOUNDARY
INCORPORATED VILLAGE
UNINCORPORATED AREA
STATE ROAD
COUNTY ROAD
LIRR STATION

STATE AND COUNTY ROADS

DIVIDED / FULL CONTROL OF ACCESS
DIVIDED / PARTIAL OR NO CONTROL OF ACCESS
UNDIVIDED / NO CONTROL OF ACCESS

LOCAL ROADS

UNDIVIDED / NO CONTROL OF ACCESS

SCALE

AIRPORTS
FERRIES

MAP NO. 3

NO.	DATE	DESCRIPTION
REVISIONS		

SUFFOLK COUNTY
TRANSPORTATION DEPARTMENT

TITLE
SUFFOLK COUNTY, N.Y.
TRANSPORTATION SYSTEM

ORIG. 3-78	DRN J.T.W.	DWG NO. 3-023

result of the 1975 inventory of the highway system. As can be seen, substantial portions of the highway system were operating at or below design capacity (level C) at that time.

Map No. 2, the recommended 1978-85 Improvement Program, shows those streets and highways which are currently in need of improvement or will require improvement within the indicated time period. Also shown are proposed right-of-way acquisitions which will be needed for post-1985 construction projects.

The basic criterion for determining whether or not a street or highway was to be included in the 1978-85 program was attainment of Level of Service E during peak traffic periods within this time frame. Comparison of Maps 1 and 2 clearly shows that many of these routes had already reached this level in 1975.

Map No. 3 is the recommended Improvement Program covering the period from 1986 to 1995. This map depicts projected highway improvement needs in terms of two five-year program periods and reflects the additional deficiencies which will occur if land use development and population growth proceed as currently projected. Since many factors can influence the rate at which growth and development take place, it will be necessary to periodically refine the Plan and make such adjustments as may be necessary.

For the period from 1978 to 1985, however, most of the deficiencies requiring improvement currently exist and the

remainder are reasonably predictable within this program period.

Most of the projects designated for the 1978-85 Improvement Program are included in the Transportation Improvement Program (T.I.P.) developed by the Subregional Transportation Coordinating Committee for Nassau and Suffolk Counties as part of the Tri-State Regional Planning Commission's Transportation Planning Program. Those projects included in this plan which are not currently listed in the T.I.P. should be considered for inclusion.

A complete listing of major highway projects and the time periods in which they are recommended for implementation is included in Appendix 1, 2, and 3 to this section. For the most part, the listing includes State, County and major town roads. Relatively minor local streets are not included. It is recognized that specific improvements and adjustments to local street networks may be necessary to accomplish the objectives of the specific local development plans. Since these local plans are considered within the overall County plan, there is an implied inclusion of such recommendations.

Major Highway Recommendations to 1985

The following projects which have been included within the 1978-85 time period are described in some detail, since they represent major components of the Highway Plan.

Central Long Island Corridor - Conklin Street Extension

It is recommended that a continuous arterial highway be constructed between NYS 110 and the Long Island Expressway approximately along the right-of-ways of Conklin Street, Long Island Avenue, Pine Aire Drive, Suffolk Avenue and Old Nichols Road. A route survey would be necessary to determine the precise alignment so that railroad crossings would be minimized. The proposed road would serve Republic Airport, the NYS 110 Industrial Corridor as well as local residential and commercial needs. It is anticipated that the proposed road would divert a significant amount of local commercial and industrial traffic from the Long Island Expressway and thus relieve some congestion.

Grade Crossing Eliminations

Projects are proposed for Park Avenue, William Floyd Parkway and Lakeland Ocean Avenue. The train frequency, together with the heavy volumes on these roads, warrants the elimination of at-grade crossings in order to facilitate traffic movement.

New Highway

Consideration should be given to the improvement of New Highway between Sunrise Highway and the Long Island Expressway to alleviate some of the deficiencies in the Route 110 Corridor if significant capacity increases cannot be achieved on Route 110 itself.

New York State Route 110

The Route 110 Corridor has experienced tremendous commercial and industrial growth between NYS Route 25 and Southern State Parkway, and this highway is currently unable to adequately accommodate the traffic volumes that are imposed upon it. As a minimum, two additional lanes (one in each direction) should be constructed. Since this corridor, in addition to serving local land development, is also critical to the provision of adequate north-south linkage to the major highway network and the western Suffolk activity areas served by it, a reconstruction of Route 110 to limited access standards would be more desirable, if achievable.

New York State Route 111

Veterans Memorial Highway between Northern State Parkway and NYS Route 347 is severely overloaded during peak traffic periods. This section of highway consists of six lanes and further widening is not practical. Aside from some improvement in signalization, little can be done to further accommodate existing demand.

The construction of the proposed Hauppauge Spur could serve to alleviate the traffic on Veterans Memorial Highway by providing an alternate route. However, continued development in the proposed construction area appears to obviate the completion of the Spur.

As an alternative, it is recommended that NYS Route 111

be widened to four lanes from the Long Island Expressway northerly to Maple Avenue. This widening, coupled with the recommended improvement to NYS Route 347, the construction of grade separations at Route 347 and Veterans Memorial Highway and at Route 347 and NYS 111 should serve to facilitate flow from the Long Island Expressway as an alternate to the Spur.

Northern Brookhaven Corridor - NYS Route 25A

The Town of Brookhaven will experience the major portion of the growth projected for Suffolk County by 1995. Some effects of this growth are already evident in the northerly part of the Town where traffic volumes far exceed the design capacity of NYS Route 25A. The ability to expand the capacity of this route sufficiently to accommodate existing traffic and future volumes is highly questionable without incurring substantial and self-defeating damage to the existing abutting land uses which are served by it.

It is recommended, therefore, that an east-west bypass route be constructed between Nesconset Highway and William Floyd Parkway and the formerly proposed realignment of Route 25A between CR 97 and Routes 25A and 112 should be reevaluated.

In addition, there will be a further need for an east-west highway facility, roughly midway between NYS Route 25A and NYS Route 25, to provide for local access and through movement in the four to four and one-half mile corridor

included within the State routes. Proposed County Road 111 could serve this purpose.

The recent donation of the RCA property in this area to NYS for conservation purposes requires reevaluation of the future highway improvements previously recommended. A significant part of this property would have been used for residential purposes.

Northport-Babylon Expressway

This expressway was originally proposed for construction in the 1960's and sections of the right-of-way were acquired. The project has stagnated and is not included in current, relatively short-term NYS Department of Transportation proposals. Nevertheless, in the absence of an adequate north-south facility to serve this corridor, substantial overloading of the local system is occurring. Public opposition to widening of these local roads and the anticipated increase in demand for traffic service through this corridor from the Long Island Expressway north to NYS Route 25A indicates a need to reactivate this project within the indicated limits. Plans for construction of the portion of the proposed Babylon-Northport Expressway south of the Long Island Expressway should be reevaluated.

Smithtown Avenue

An improved Smithtown Avenue is required as part of the development of a transportation center at Ronkonkoma/Long

Island MacArthur Airport. In particular, a new bridge is required where Smithtown Avenue crosses the L.I.R.R. tracks. The existing facility is structurally unsound, narrow and dangerous. Ultimately, all of Smithtown Avenue should be improved between the Expressway and Lakeland-Ocean Avenue.

Sunrise Highway - Bay Shore to Patchogue

Reconstruction to limited-access status is recommended.

Sunrise Highway - South Fork Extension

During the summer months, traffic volumes currently serving the South Fork substantially exceed the capacity of the two major east-west roads serving the area. By 1995, if the projected growth in population and land use development occurs, locally generated traffic on CR 39 and Montauk Highway will in itself be more than these roads can accommodate, and the influx of summer residents and tourists will create an unmanageable situation. The possible development of alternative transportation modes to accommodate this growth, i.e., rail and bus, in lieu of highway construction or reconstruction, and in the absence of a major change in public acceptance and use of mass transportation facilities, has been considered. While a local public transportation system, incorporating local feeder services, some fixed routes, and the Long Island Railroad is recommended for development in this Plan, it is unlikely that sufficient diversion of motor vehicle traffic will occur to obviate the need for

increased capacity on the highway system.

The alternatives are therefore either to widen Montauk Highway sufficiently to accommodate growth or to develop a new facility to reduce the burden on the existing route.

It is the opinion of the Department that a widening of Montauk Highway would be extremely destructive to existing land uses and self-defeating. The more reasonable solution is the extension of Sunrise Highway from CR 39 to Amagansett as a parkway-type, limited access facility to accommodate both automobile and truck traffic. The State should begin to acquire right-of-way for this purpose within the 1978-85 Capital Program period.

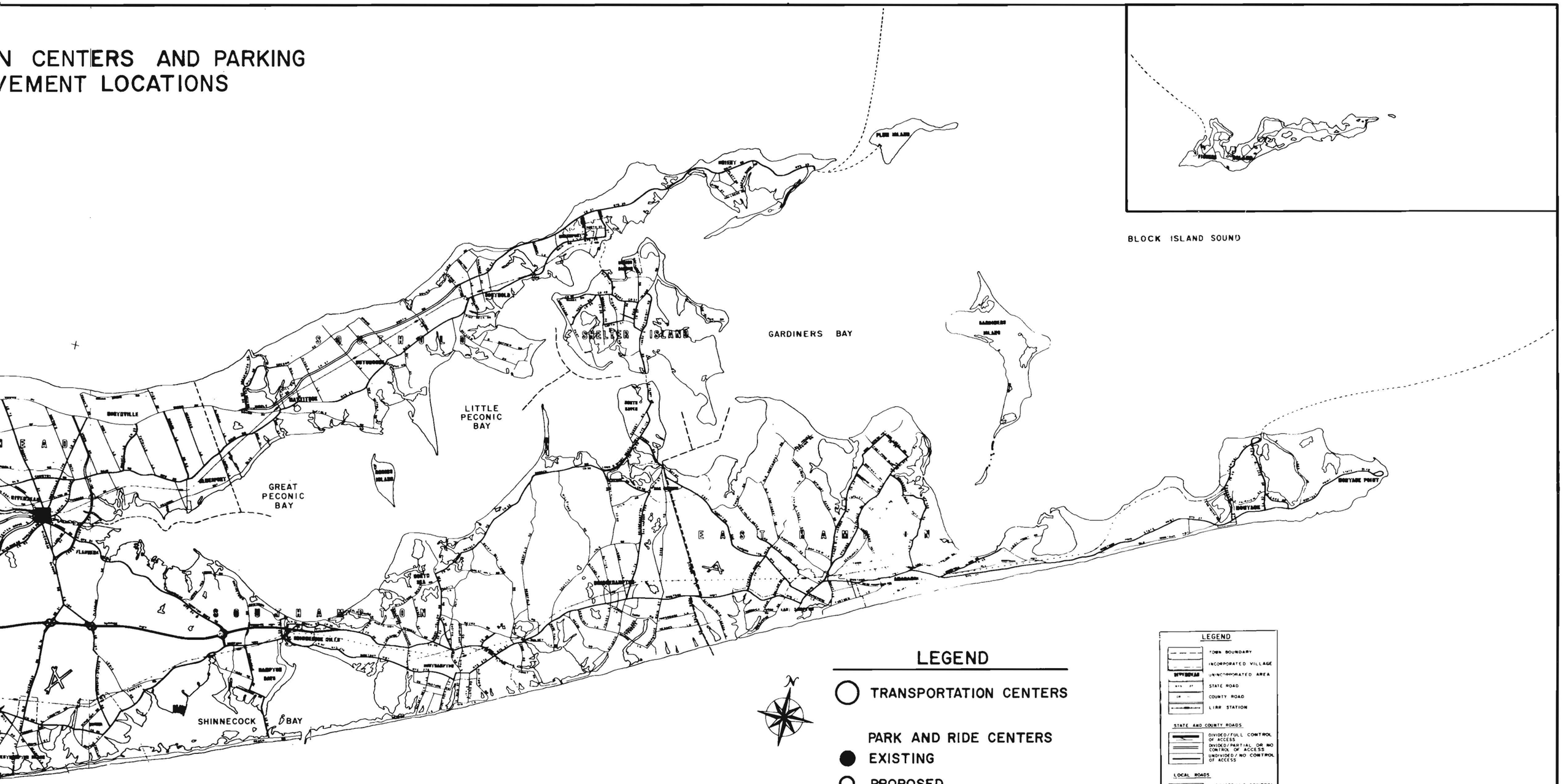
TOPICS Improvements

Initially, TOPICS type improvements on a large number of County and State roads will be undertaken during the 1978-85 period as part of the TSM element of the Plan. TOPICS is an acronym for Traffic Operations Program to Improve Capacity and Safety and usually consists of relative minor traffic engineering improvements such as traffic signal installation or modification, intersection approach widening, installation of turning lanes, etc., usually, but not necessarily within existing right-of-way.

A major TOPICS improvement program is proposed for Pulaski Road during the 1978-1985 period. The Department estimates that these improvements could be expected to accom-

TRANSPORTATIO
FACILITY IMPROV

N CENTERS AND PARKING
VEMENT LOCATIONS



LEGEND

- TRANSPORTATION CENTERS
- PARK AND RIDE CENTERS
- EXISTING
- PROPOSED
- CBD OFF-STREET PARKING IMPROVEMENTS
- RAILROAD STATION PARKING IMPROVEMENTS

MAP NO. 4

NO.	DATE	DESCRIPTION
REVISIONS		

SUFFOLK COUNTY
TRANSPORTATION DEPARTMENT

TITLE
SUFFOLK COUNTY, N.Y.
TRANSPORTATION SYSTEM

ORIG. 3-78	DRN J.T.W.	DWG NO. 3-024

modate traffic demand for about five years. However, adequate east-west capacity is required through the northern corridor of the Town of Huntington due to the projected growth in traffic and the unfeasibility of making substantial capacity improvements on NYS Route 25A. Therefore, a widening of Pulaski Road to four lanes will be required in the 1986-90 period.

Central Business District (CBD) Parking

An inventory of existing parking facilities within the major CBD's serving Suffolk County was undertaken as part of this study. Seven such areas were reviewed, including Babylon, Huntington, Smithtown, Bay Shore, Port Jefferson, Patchogue and Riverhead.

Since each of these CBD's is served by at least one major highway and curb parking is generally practiced within these areas, one purpose of the investigation was to determine whether additional highway capacity could be obtained by banning on-street parking. Table II-1 shows the number of off-street spaces that exist in these areas.

TABLE II-1

	Number of Spaces		
CBD	Off-Street	On-Street	Total
Babylon	1954	304	2258
Huntington	1267	560	1827
Smithtown	2524	338	2862
Bay Shore	1583	447	2030
Patchogue	2711	543	3254
Riverhead	1575	229	1804
Port Jefferson	1089	232	1321

An examination of the results of prior space occupancy and turnover studies at these locations indicate that a possibility exists for the removal of at least some on-street parking spaces. Detailed staff studies are being initiated to verify this fact and to develop specific recommendations.

Transportation Systems Management (TSM)

Conceptually, TSM as part of the planning process requires that in the face of declining natural resources, environmental constraints, and recognized fiscal limitations, maximum utilization of existing transportation facilities be achieved either in lieu of, or prior to considering the undertaking of more costly and extensive improvement projects.

Applied to the highway system, it suggests that the application of traffic engineering techniques in place of major reconstruction projects, the construction of facilities to encourage ride sharing, such as carpooling and van pooling, and the improvement or development of alternate transportation facilities can serve to reduce the necessity for more extensive and perhaps unacceptable undertakings. The adequate maintenance of existing facilities is, of course, implicit in the TSM concept.

TSM - County Application of Concept

Tacit acceptance of the TSM approach is evident in the discussion of methodology wherein it is indicated that the evaluation of need for improvement is predicated upon achieving

Level of Service E during peak traffic periods, which by definition, is the maximum volume that a street or highway can carry. A number of highway improvement projects that further the objectives of TSM have been included in the Transportation Improvement Program (TIP). Among these are restoration and preservation projects, TOPICS-type spot improvements at various locations, maintenance projects, traffic signal maintenance and repair programs, improvement of high accident locations, signing projects, the construction of commuter parking facilities at Long Island Railroad stations and park-and-ride projects along the Long Island Expressway. The continuation and expansion of projects such as these will be pursued in the coming years. Map No. 4 shows existing and proposed commuter parking facilities, park-and-ride facilities, and transportation centers, both existing and recommended.

Integrated Motorist Information System

A highly significant proposed program for facilitating the movement of traffic on the Long Island Expressway and Northern State Parkway has been developed for the New York State Department of Transportation entitled, the Integrated Motorist Information System (IMIS). Utilizing sophisticated electronic equipment, the system will endeavor to relieve traffic congestion on these facilities by providing information to motorists, metering and controlling traffic flow and diverting traffic to other facilities when predetermined

levels of congestion are reached or exceeded. Funds for this project have also been included in the T.I.P.

Van Pooling

The concept of van pooling has its most practical application when a number of employees having a common place of employment and relatively proximate origins can be matched and are willing to utilize a single vehicle, the van, to effectuate their trips to and from work. A substantial savings in transportation cost for the individual can be realized, parking facility requirements at the place of employment are reduced, highway loading is diminished, and energy saving and environmental benefits accrue.

The concept has met with success in some areas in the past, generally among firms employing fairly large numbers of people, and usually at the initiative of the employer.

Federal funds are available for loans to obtain the vehicles, and operational costs distributed among the users can significantly reduce individual expenditures for transportation purposes.

The applicability of van pooling to Suffolk County and the possible development of programs will be the subject of a staff study.

Highway Funding

Funding for the various recommended highway improvement projects is available from four general sources, namely:

Federal
State
County
Local

Within the federal funding category, monies are available for various systems of federal-aid highways (e.g., primary, urban, secondary, etc.). The amounts available under these categories are apportioned by various formulae.

To date, New York State has not provided the non-federal share for highway projects off the State highway system. However, recent legislation permits the State to pay between 80% to 100% of the non-federal share for local highway improvements.

Annual funding of highway projects by Suffolk County varies. However, the annual average is approximately $8 to $10 million.

The annual expenditure of highway funds by the towns and villages is not presently known.

In dollar terms, the annual amount of federal primary and FAUS funds available in the Nassau/Suffolk region has been slightly less than $20 million in each category. Thus, approximately $36 million (including the non-federal share) has been available annually for State and non-State highway and transit (FAUS-transfer) projects in the bi-County area.

In Suffolk County, the amount available for non-State projects is approximately $5 million per year. Combined with the previously stated expenditures by Suffolk County, the Federal and County monies would create a funding source of approximately $15 million annually for County highway projects.

The Federal Highway Act of 1978 increases the Federal share of primary, secondary and FAUS funds from 70% to 75%. It is not presently known whether this increase combined with a proposed increase in Federal appropriations will result in additional funds being made available to Suffolk County.

APPENDIX 1

1978-1985 HIGHWAY IMPROVEMENT PROGRAM
To Increase Capacity

State Roads	Limits
NYS 110	NYS 25A - NYS 27
NYS 111	CR 15/Maple Avenue - L.I.E.
NYS 112	NYS 27 - CR 16 Horse Block Rd.
NYS 25A	CR 11 Old Dock Rd. - NYS 25 (Bull)
NYS 25	NYS 25A (Bull) - Mt. Sinai/Coram Rd.
NYS 25	N/S Line - NYS 454 Veterans Highway
NYS 495	N/S Line - NYS 454 Veterans Highway
NYS 27A	N/S Line - Robert Moses Causeway
NYS 27A	CR 13A - Ocean Avenue
NYS 27 Sunrise Hwy.	Brentwood Rd. - Phyllis Dr.
Southern State Pkwy.	N/S Line - NYS 109 Babylon Farmingdale Rd.
NYS 347	NYS 454 Veterans Highway - NYS 25A
NYS 27 Montauk	CR 39A - CR 33 Promised Land Rd. (Intersection Improvements)
Robert Moses Pkwy.	Ocean Pkwy. - Robert Moses State Park (Bridge)
County Roads	
CR 2 Straight Path	(Approx. Mount Avenue) - NY 231
CR 3 Wellwood	NYS 27 - CR 12 Hoffman
CR 34 Deer Park	NYS 27A - Southern State Pkwy.
CR 4 Commack Road	NYS 231 - L.I.E.
CR 4 Town Line	North of NYS 25 - Clay Pitts Road

County Roads	Limits
CR 57 Bay Shore	NYS 231 - NYS 27A
CR 50 Union	Higbie Lane - NYS 111
CR 39/CR 39A	NYS 27/CR 39 - NYS 27A/NYS 27
CR 11 Suffolk	CR 13 Fifth Ave./ Crooked Hill - NYS 454
CR 87 Edgewood	NYS 25 (Main Street) - NYS 25A
CR 16 Smithtown Blvd.	NYS 347 - CR 83
CR 83 No. Ocean Ave.	NYS 27 - CR 16 Horseblock Rd.
CR 58 Old Country	L.I.E. - NYS 25
CR 10 Elwood	NYS 25 - NYS 25A
CR 77 Deer Park E.	Northern State Pkwy - NYS 25
CR 46 William Floyd	CR 80 (Montauk) - Northern Blvd.
Bergen Ave.	Bay to Montauk Highway

Town Roads	
Depot Road	CR 11 Pulaski - NYS 25
Wolf Hill	NYS 110 - Northern State Pkwy

1978-1985 Highway Improvement Program
Right-of-Way Only

Location	Limits
Northport, Babylon Expressway	NYS 25A - L.I.E.
Long Island/Suffolk Ave.	NYS 110 - CR 13 Fifth Avenue
Old Nichols Road	NYS 454 - NYS 495
Horseblock Rd. CR 16	CR 83 Patchogue/Mt. Sinai - CR 99 Woodside
Wicks Road CR 7	CR 13 Crooked Hill - Northern State
CR 21 Yaphank/Middle Is.	CR 101 Patchogue/Yaphank - NYS 25
CR 8 Yaphank By-Pass	CR 101 Sills Road - NYS 25
CR 25 Wading River Rd.	NYS 25 - NYS 27
CR 27 (NYS 25) By-Pass	NYS 347/NYS 25A - CR 46/NYS 25A
CR 31 Old Riverhead Rd.	CR 80 Wide Section of CR 31
Sunrise Hwy. Extension	NYS 27/CR 39 - NYS 27 (Amagansett)

Grade Separation

Location
NYS 347 & NYS 111
NYS 25 & NYS 347
NYS 347 & CR 97
NYS 25A & NYS 347
NYS 25 & CR 97
CR 80 & R.R. & CR 46
CR 35 & L.I.R.R.
CR 93 & L.I.R.R.

1978-1985 HIGHWAY IMPROVEMENT PROGRAM
Safety and Maintenance

State System	Project	Limits
NYS 114	R & P* & Bikeway	
NYS 112	R & P*	CR 16 Horseblock Rd. - Greenpoint Ave.
NYS 112	R & P*	Greenpoint Ave. - NYS 27
NYS 25	R & P*	N/S Line - NYS 454
Sunken Meadow Pkwy. Northbound	Safety (Pkwy Exit Relocation)	NYS 25 @ Indian Head Road
NYS 27	Safety	Shinnecock - Amagansett
NYS 25	R & P*	NYS 454 - E. of Meadow Lane
NYS 25	R & P*	Nissequogue River - NYS 111
NYS 25	Signal	NYS 25A - Greenpoint
NYS 25	Paving & Shoulders	Huntington
NYS 27	Safety (Gore)	Various Locations
NYS 110		NYS 25 - North of NYS 25A
NYS 110	R & P*	Yarmouth - New York Ave.
NYS 27A	R & P*	NYS 231 - Robert Moses Causeway
NYS 27A	R & P*	Robert Moses Causeway - Bayway
NYS 27A	R & P*	N/S Line - NYS 231
NYS 495	Lighting	N/S Line - CR 97 Nicolls Road
NYS 25A	Drainage	Centerport Rd. - Laurel
NYS 25A	Signal	Berry Hill - Indian Head Road

*Recondition and Preservation

State System	Project	Limits
L.I.E.	Safety	N/S Line - Nicolls Rd.
NYS Routes	IMIS	Northern Corridor
NYS Routes	Recharge Basin Rehab	
	TOPICS - High Accident Locations (Signals)	Islip Spot Improvements
	TOPICS - Signals	Islip: Brentwood - C.I.
	TOPICS - Signals	Islip: Bay Shore - Islip
	TOPICS - Signals	Miscellaneous Intersections
Sagtikos, Southern State, Northern State Parkways	Pavement Repair	
NYS 111	Drainage/Shoulders	
NYS 27 & NYS 109	Paving/Rep./Drainage	
NYS 25A/ St. James	Curve/Intersection Improv.	
NYS 25A/NYS 25		Rocky Point
Parkways	Guide Rail	
NYS Routes 3 Separate Projects	Guide Rail	
NYS Routes 3 Separate Projects	Clean Drains	
NYS Routes/ Pkwys. 3 Separate Projects	Fencing	
NYS Routes 3 Separate Projects	Signal Repair	

State System	Project	Limits
NYS Routes 2 Separate Projects	Tree Removal, Paving/Shoulders	
NYS Routes	Signing	
L.I.E.	Signing	Riverhead
L.I.R.R.	Eliminate Grade Crossing	New HIghway Republic
Sagtikos/ Sunken Meadow Parkway	Misc. Safety	
Parkways 4 Separate Projects	Lighting	
Parkways	Signing	

County & Town Systems	Project	Limits
CR 11 Pulaski Rd.	TOPICS	
	TOPICS	Babylon
Var. Roads	Signing/ Signals	
Var. Roads	Lighting	
	TOPICS	Islip - Spot Improvement
	TOPICS	Huntington - Spot Improve.
High Accident Locations 3 Projects	Safety	
	Safety: Lane Marking/ Striping	
	TOPICS:Safety	Islip: Brentwood - C.I.
	TOPICS:Safety	Oakdale - Sayville
		Misc. Intersections
CR 80 Montauk Highway	Drainage	Bellport Sta. Rd.-Hewlett Av.
	Intersection	
Otter Pond Bridge		Sag Harbor
Bridges	Inventory & Inspection	County-wide
Elwood/Cuba Hill	Intersection	
	Pedestrian Underpass	Deer Park W. 7th St./L.I.R.R.
Various Roads	Resurfacing	

County & State System	Project	Limits
	Crossing Protection	L.I.R.R.
	L.I.R.R. Approaches	
	Signals	
	Intersection Improve	
	Signals & Improve	
	Impact Devices	Brentwood - Islip Ave.
NYS 454	Signal Improvement	No. State Pkwy-NYS 347
NYS 25A	Safety	Main St. (Stony Brook) Main St (Pt. Jefferson)
NYS 25A	Safety	NYS 347 - CR 46 Wm. Floyd Pkwy
NYS 25A	Safety	CR 46-Wm Floyd Pkwy NYS 25
	High Accident Locations	
Major Town Roads		
Depot Road	Drainage, Signing, Misc.	NYS 25 - NYS 110
Maplewood Rd.	Drainage, Signing, Misc.	Depot Rd. - Park Ave.
	Safety:Guide Rail/ Median Barrier	Various Locations

APPENDIX 2

1986-1990 HIGHWAY IMPROVEMENT PROGRAM
To Increase Capacity

State Roads	Limits
Northern State Pkwy	Nassau/Suffolk Line-NYS 110
Southern State Pkwy	NYS 109 - CR 2 Straight Path
NYS 27A	NYS 111 - Hecksher Spur
Long Island Expressway	NYS 454-CR 83 N. Ocean Ave.
NYS 111	L.I.E.-NYS 27
NYS 25	Mt. Sinai/Coram Rd.-Improved NYS 25 Section W of CR 46
Sunrise Extension	NYS 27/CR 39 - CR 33 Promised Land Rd (Note:Initial construction of 2 lanes only)
NYS 25	Improved NYS 25 Section E of CR46-CR25
Northport Babylon Expressway	NYS 25A-L.I.E.
Sagtikos Parkway	Northern State-Long Island Ave.
County Roads	
CR6 Kings Hwy	CR 108 Old Willets Path Rd - CR 111 Wheeler Rd.
CR 21 Yaphank/Middle Is.	NYS 25-CR101-Patchogue Yaphank Av.
CR 26 Bypass of 25A	NYS 347 - NYS 25A/CR 46
CR111 Canal/Whiskey Rd.	CR83 Pathcouge/Mt. Sinai-CR46 Wm. Floyd
CR 31 Old Riverhead Rd.	CR 80 - Wide Section of CR 31
CR 11 Pulaski Rd.	Larkfield/Vernon Valley-Sunken Meadow Pkwy.
CR 7 Wicks Rd.	Motor Pkwy. - Northern State Pkwy.

County Roads	Limits
Long Island Ave CR 100	NYS 110 - CR 4 Commack Rd.
CR 8 Yaphank Bypass	CR 101 Sills Rd. - NYS 25
CR 11 Pulaski Rd.	N/S Line - Sunken Meadow Pkwy
Major Town Roads	
Washington Ave./Brentwood	NYS 27 - Motor Pkwy
Stony Brook Rd.	NYS 25A - CR 93 Lakeland
Vernon Valley Rd.	NYS 25A - CR 11
Hawkins Ave.	Ronkonkoma Ave. - Railroad Station
Sound Ave.	CR 43 Northville Tpke-CR27 Middle Rd.
Deerfield Rd.	NYS 27A Montauk-CR38 Noyack Rd.
Millstone Rd.	NYS 27A Montauk-CR38 Noyack Rd.

APPENDIX 3

1991-1995 HIGHWAY IMPROVEMENT PROGRAM
To Increase Capacity

State Roads	Limits
NYS 25	NYS 454 Veterans Hwy-NYS 25A (Bull)
NYS 111	Maple Ave. - NYS 25
NYS 27A Montauk	Robert Moses Causeway-CR13A
NYS 109	N/S Line-Southern State Pkwy
Southern State Pkwy	CR2 Straight Path-Robert Moses Causeway
Sagtikos Pkwy	Hecksher Spur - Long Island Ave.
NYS 114	CR60 Long & Short Beach Rd. - NYS 27A Montauk
Northern State Pkwy	NYS 110 - NYS 231 Deer Park
County Roads	
CR86 B'way/Greenlawn	NYS 25A-NYS 25
CR14 Indian Head Rd.	NYS 25-Improved Portion of the Road
CR16 Terry Rd.	NYS 25 - NYS 347 Nesconset
CR17 Wheeler Rd/Carleton	L.I.E. - NYS 27A
CR7 Wicks Rd	Motor Pkwy - CR 13 Crooked Hill
CR16 Horseblock Rd	NYS 112-CR21 Yaphank
CR25 Wading River Rd.	NYS 25A-NYS 27
CR43 Northville Tpke.	CR58 - Sound Ave.
CR27	Tucker Lane-Main St (Greenpoint)
CR38 North Sea/Noyack	CR39-CR60 Long & Short Beach Hwy.
CR79 Bridgehampton/ Sag Harbor	NYS 27A-NYS 114 (Ferry Rd.)
CR100 Long Island Ave.	CR4 Commack Rd.-CR13 Crooked Hill Rd.
CR95 Little East Neck Rd.	NYS 109 - Long Island Ave.

SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

III - BUS

BUS TRANSPORTATION

Introduction

Volume I, the Inventory-Analysis section of the Transportation Plan, clearly defined those factors which have influenced the development of the bus transportation services as they currently exist in Suffolk County.

Low population densities, incapable of generating ridership levels sufficient to support the existing, fragmented, fixed route bus services, have led to continued deterioration of these services and, in some cases, abandonment of certain routes.

Revenues from fares are barely adequate to cover out-of-pocket costs and, in general, account for about one-half the total cost of operation. Predictably, there is an inclination on the part of transit operators to provide only such minimal franchised route service as may be necessary to retain their more profitable charter rights.

Nevertheless, there is, as the inventory report indicated, a sizeable portion of the County's population who are transit dependent but are without adequate service to meet even their minimum needs. These groups include the elderly, the handicapped, the young, and those with low income levels.

Aside from the population density factor, part of the difficulty in providing service for these groups lies in the geography of Suffolk County. Given that a fixed route attracts ridership from a corridor one-half mile in width, or one-quarter

of a mile on either side of the route, it would require an enormous system of fixed bus routes, at prohibitive cost, to serve the County. Clearly, such an approach is not the answer.

Yet, it is necessary that the County address the needs of these groups. Highly specialized, single purpose, transportation projects, designed to meet a specific need, contribute little to the development of a system that can improve the overall mobility of the transit dependent and provide an alternative to the private automobile.

It is recognized that the solution to Suffolk County's immediate and long-term transit needs involve the consideration of a number of complex factors. Aside from the desire to improve public mobility, energy conservation, the preservation and improvement of the environment and the County's economy also must be considered.

It is the Department's view that the development of a comprehensive and balanced transportation network requires an effective local public transit component. This section of the Comprehensive Transportation Plan is concerned with the formulation of a plan for local public transit which will fulfill that requirement.

In developing this plan, special attention has been given to coordinating services with the recently inaugurated Town of Huntington local public transit system, and the Nassau County bus system. In addition, the Town of Islip recently issued a townwide public transportation study. The Countywide plan, as it relates to Islip, is basically reflective of the findings and recommendations

found in that town plan.

Transit Goals

Since local public transit is part of an integrated transportation system, the Department's transit plan reflects the following goals:

Short Range

- Stabilization of transit operations
- Increase of public mobility by provision of accessible and usable transit service, particularly for the elderly, the handicapped, and other autoless individuals.

Long Range

- Creation of public transit as a viable alternative for some automobile trips
- Encouragement of land use development which is served by and accessible to public transit.

Service Identification

Trip Origins

Planning for short term and long range transit improvements requires a knowledge of present and future trip origins and destinations. Because most trips begin or end at the home, one end is normally associated with residential areas. The shaded areas depicted on Map 5, are residential areas which currently exhibit higher concentrations of transit user characteristics and contain approximately 520,000 people.

Suffolk's current ridership consists of those who must depend on transit or friends to satisfy their transportation needs. Those user characteristics which commonly reflect transit dependency and

which were examined in detail include:[1]

- relatively high concentration of elderly (and/or handicapped)
- relatively high concentration of teenagers
- households having moderate to low incomes
- households having one or no automobile available

The Department's analysis of transit operations indicates that the existing system is largely inaccessible to many of the transit dependent.

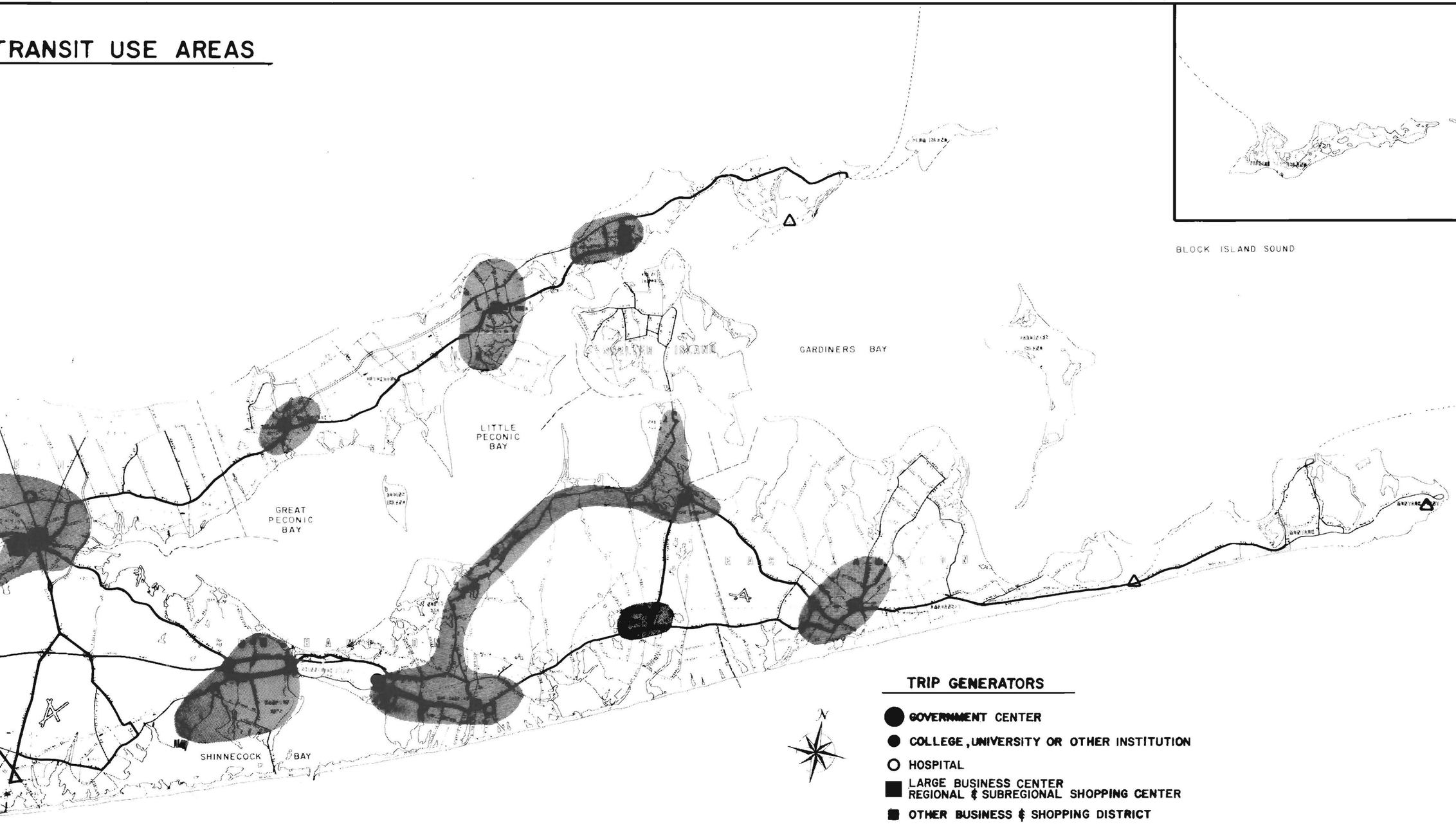
Where bus service presently exists in the areas on Map 5, the quality of services were analyzed. Service quality was measured in terms of residential coverage, frequency, and hours of service. This latter evaluation revealed that fully 50% of the population in these areas lacks service within a reasonable walking distance (1/4 mile), and 15% or nearly 80,000 people within walking distance have infrequent service and, as such, are considered underserved. In effect, about 2/3 of the people within these areas are either not served or underserved by public transit. It is further estimated that 100,000 to 120,000 of the residents in those areas are candidates for public transit service principally because of the unavailability of an automobile or inability to use one.

The projected 20 years population growth in Suffolk will further increase this need for public transit. This will be so in spite of the continuation of low residential population densities which act as a constraint on intensity of demand.

[1] 1970 U.S. Census Data

TRIP GENERATORS AND T

TRANSIT USE AREAS



TRIP GENERATORS

- GOVERNMENT CENTER
- COLLEGE, UNIVERSITY OR OTHER INSTITUTION
- HOSPITAL
- LARGE BUSINESS CENTER REGIONAL & SUBREGIONAL SHOPPING CENTER
- OTHER BUSINESS & SHOPPING DISTRICT
- INDUSTRIAL AREA
- RECREATION FACILITY

— EXISTING BUS ROUTE

MAP NO. 5

NO.	DATE	DESCRIPTION
REVISIONS		

SUFFOLK COUNTY TRANSPORTATION DEPARTMENT

TITLE

ORIG. 3-78	DRN J.T.W.	DWG NO. 3-026

Future transit ridership will continue to be generated predominately by people lacking the availability of an automobile. It is at these persons that the trust for planning improved local transit service must be directed. However, continually increasing costs of operating a private automobile, primarily for insurance and fuel, could potentially create a much larger transit dependent segment of the population. Energy conservation measures currently being formulated and the probability of diminishing petroleum supplies at some time in the future will further increase the need for a viable transportation alternative.

Trip Destinations

Recent surveys[2] showed that more than half of the bus trips by Suffolk riders were for work and shopping. The balance of trips were evenly divided among school, personal business, medical, and social-recreational trip purposes. The County's largest and most concentrated attractors of these types of trips are shown on Map 5. These include business districts and shopping areas, colleges and universities, rail stations, government centers and hospitals, and office and industrial complexes.

Employment centers in Suffolk exhibit low job densities similar to the residential population patterns. For example, in 1970, the largest employment center contained between 1,000 and 2,000 jobs per square mile. By contrast, the Nassau County job densities ranged between 2000-4400 per square mile. Ninety percent of the

[2] "A Transit Development Program for Huntington, Long Island," Alan M. Voorhees Associates, Inc. 1974
"Town of Islip Mass Transportation Study," Barton-Aschman Associates, Inc. 1975

jobs in Suffolk County during 1970 were concentrated in the five western towns. Two thirds of all work trips originating in Suffolk remained here and half of the trips to major employment centers had trip origins within five miles of the work site.[3]

Transit Potential

The majority of future local transit trips in Suffolk are expected to continue to be made for work and shopping purposes. These trips represent a considerable potential for increased transit riders which will result from anticipated job growth and service extensions to presently unserved autoless individuals. The size of the County's work force is expected to grow to nearly 600,000 by 1995 and an increasing proportion of the added work trips will remain within the County. Although the low density characteristics of worksites in the County are likely to continue in the future, the number of work trips which are relatively short in time as well as distance will greatly increase, thereby providing a substantial source from which added transit riders can be drawn.

One of the major difficulties facing the transit dependent citizen is the need to make shopping trips on a fairly regular basis. Increased rider potential for this major transit trip category will primarily be achieved by extending service accessibility to this large population segment. In addition, there are a great number of autoless County residents who, in order to participate in

[3] The Pattern of Worktrips to Major Employment Centers Nassau-Suffolk Regional Planning Board - 1975

public or community sponsored program, must regularly utilize special transportation services to and from program centers. For the most part, the program transportation services are tax supported, frequently at a high per trip cost, and exist because of the lack of public transit. Overall savings to the public could occur through economies of scale by incorporating as many of these trips as possible into a public transit system.

Further increases in public transit usage can be obtained by providing service to those activity centers which exhibit strong growth potential in the near future. Examples of these include SUNY at Stony Brook, industrial and office development along the Veterans Memorial Highway corridor and the Long Island Railroad Station at Ronkonkoma. Planned centers, such as at Manorville also represent future possible destinations for local transit trips.

System Development

The most logical and efficient linking of trip origins and destinations will define a usable system to be developed. Not only is it important for transit service to be more accessible to the public, but it is also essential to maximize the usefulness of the system by servicing as many activity centers as possible.

Several approaches to system development were evaluated for possible implementation. These include:

1. a moderately expanded and modified version of the existing transit network
2. an extensive fixed-route system

3. the use of para-transit feeder services (dial-a-ride, subscription and alternating loop types of operations)

4. combination thereof

Modification of existing transit network

This Department's analysis of the existing transit network has indicated many of that system's deficiencies as well as basic causes for its continuing decline. It is apparent that added route coverage as well as system reorganization is warranted. Although it is essential to cease the decline of the present service operation, something other than a moderate expansion or revisions of existing services is necessary, if the transit needs of Suffolk County residents are to be satisfied.

Extensive fixed-route system

This type of system resembles those found in most cities, and represents a network designed principally to service the County's residential population through bus routes which:

1. facilitate countywide travel through well-defined corridors

2. extend route coverage to presently unserved residential areas

The desirability of developing an extensive fixed-route only system for Suffolk is, however, questionable. Constraints on transit use imposed by low residential, employment and shopping densities all combine to reduce the utility of implementing such a system. In order to compensate for the existing patterns of land use, a conventional bus sytem in Suffolk would have to be complicated and highly intensive in terms of capital and labor costs.

Feeder Services

Types of public transit service, such as para-transit, which

bridge the private automobile and conventional fixed-route transit operations represent a potentially effective way of extending the coverage of other more conventional forms of transit. They typically include dial-a-ride, subscription, local loop or alternating route services. As feeders to intercommunity bus routes and rail lines, para-transit and other intra-community transit operations can link local areas to more regional transit services.

As an exclusive transit mode, para-transit services could not effectively accommodate transit needs on a County-wide basis. On a County-wide scale, particularly in view of the size of the apparent existing unmet needs for transit services, both the dial-a-ride and subscription types of feeder services represent costly modes in terms of manpower, capital equipment and complexity of operation. To bring these services to a manageable scale, the availability of services would, in all likelihood, have to be confined to a few local areas or to specific population segments, such as the elderly or the handicapped. By reducing the complexity of operation, it would be possible to effectively provide feeder services to a greater portion of the public. Vehicles operating on a regular basis through local areas eliminate the need for advanced telephone reservations and special vehicle dispatching. Route deviations could be permitted, however, in order to serve the handicapped. A single vehicle can alternate service along more than one short route (which may loop through a community) returning each time to a transfer point with other

transit services. This type of service is currently being operated with a reasonable degree of success in the Village of Patchogue.

Combination of fixed route network and feeder services

Because of the geographic extent of Suffolk, even a County-wide, highly-intensive fixed route operation would not be fully accessible to the majority of potential users. On the other hand, feeder services would limit mobility to relatively local areas. Hence, combining fixed-route operations and feeder services thereto, accessibility would be greatly increased together with the ability to accommodate inter-community or long distance travel.

Recommended Plan

It is recommended that the transit system development plan be implemented in stages. Map 6 depicts the first phase of proposed transit service extensions to be developed in Suffolk County, and Map 7 depicts the recommended ultimate fixed-route system to be developed during Phase II. The approach to system development incorporates the use of conventional fixed route bus operations augmented by localized feeder services.

Service Staging

Because the costs of providing public transportation are substantial and the County's demographic and geographic characteristics impose a series of constraints on service viability, the Plan recommended is one in which improvements would be provided in phases over a period of time.

A two-phase approach to system development has been selected.

Phase I will provide needed service to a large number of transit dependent citizens at relatively low cost, and it can be implemented within a comparatively short period of time. Feeder services initiated under Phase I will provide additional passengers and revenues to the existing fixed route system, and together with proposed capital projects, will improve the economic vitality of these existing operations.

Phase I emphasizes providing service accessibility to the transit dependent. Part of this phase would include some expansion of fixed route services. These new fixed routes will serve to close major gaps in the County's intercommunity line-haul bus operations. Only selected service improvements to existing routes are included in Phase I. Services proposed under this phase would not, in general, increase service levels over those which currently exist. As shown on Map 6, this phase also includes the startup of feeder services.

It is the Department's belief that the most effective feeder service would be achieved by the alternating-loop, fixed route type of service. However, the specific type and frequency of services are to be determined after detailed study of the area. This will allow for the flexibility needed to determine whether the desired travel requirements are best obtained through time of day or day of week adjustments.

Each area is served by planned or existing conventional bus routes so that, through schedule coordination, passengers can transfer at designated locations from local feeder services to countywide routes and, where appropriate, rail services.

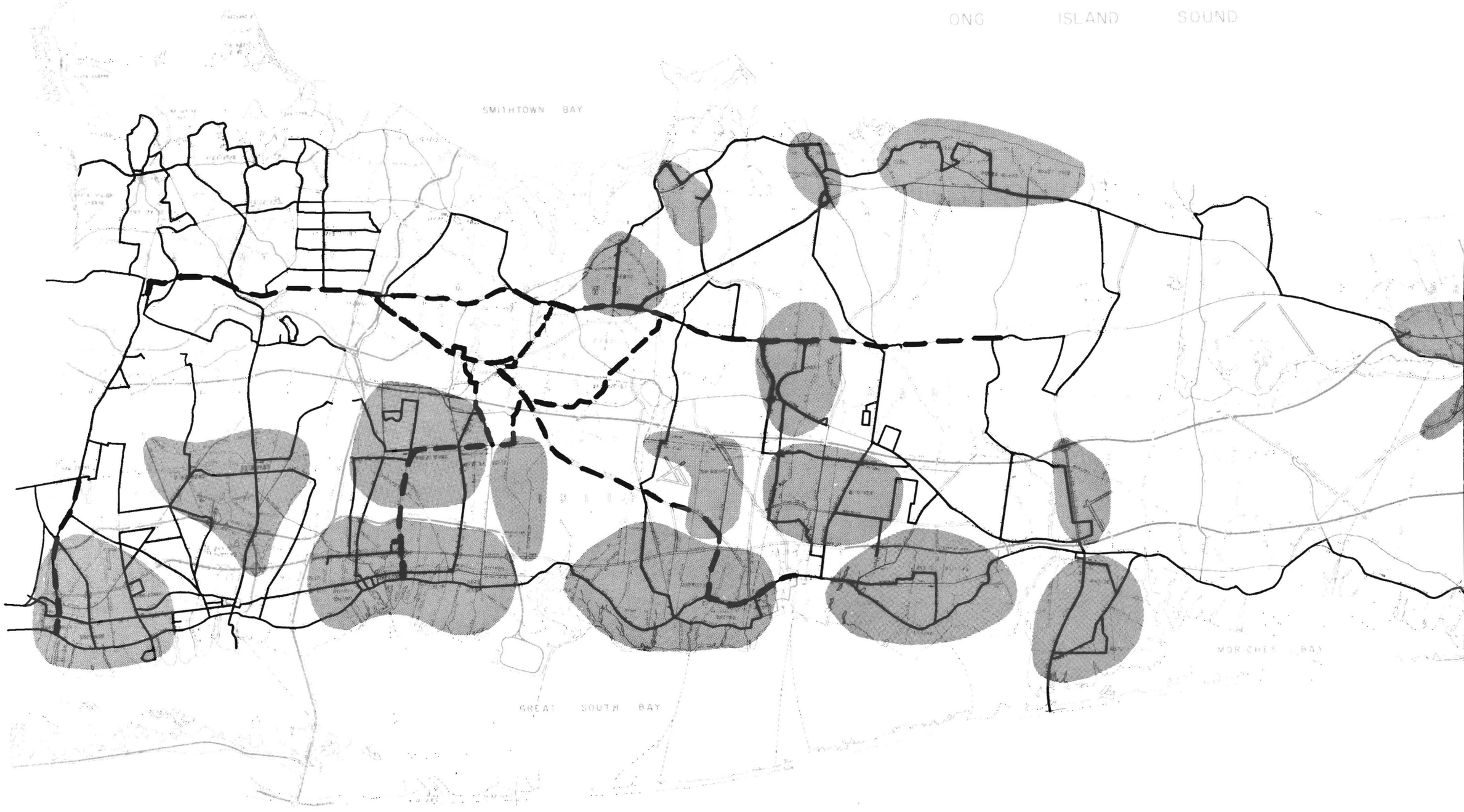
As mentioned, Phase I will provide a basis upon which the improvements proposed in Phase II can be developed. The staging process will allow for monitoring the ability of the initial feeder and fixed-route extensions to increase transit use. Experience resulting from Phase I will more clearly define the desirability and levels of support necessary for implementation of Phase II. The initial phase will permit adjustments in detailed planning, service development and evaluation to occur as operating experience is gained. For reasons previously described, the recommended improvements will require financial support.

The rate of Phase II implementation will depend to a great degree on the results of Phase I. The Phase II fixed-route network represents a minimal system required to facilitate general intercommunity travel via public transit. These routes reflect:

- service to more than one community
- orientation toward activity centers and/or travel corridors
- minimal duplication of service areas or route lengths
- service to residential areas characterized by at least moderate residential densities, and
- service to local areas having significant portions of the population exhibiting transit dependency

The majority of the Phase II fixed routes are north-south and east-west oriented. They serve more than one major activity center and are aligned along major travel routes characterized by substantial commercial and/or residential development. Route termini and crossover points have been concentrated in various activity centers in order to provide multiple opportunities for passenger transfers.

PHASE I SERVICE E



XTENSIONS

MAP NO. 6

NO.	DATE	DESCRIPTION
REVISIONS		

SUFFOLK COUNTY
TRANSPORTATION DEPARTMENT

TITLE
PHASE I
SERVICE EXTENSIONS

ORIG.	DRN	DWG NO.
3-78	J.T.W.	3-028

PHASE II FIXED-ROU

TE BUS SYSTEM

MAP NO. 7

NO.	DATE	DESCRIPTION
REVISIONS		

SUFFOLK COUNTY
TRANSPORTATION
DEPARTMENT

TITLE

ORIG. 3-78 | DRN J.T.W. | DWG NO. 3-029

A substantial portion of the existing system is incorporated within the Phase II network. Revisions to present routes are moderate so as not to disrupt established travel patterns. The overall delineation of the network, however, is intended to be both general and flexible to accommodate routing changes as plan implementation proceeds.

Service Standards

These standards are recommended for local transit services. They should be phased into operation as an integral part of system development because they represent identifiable and achievable service levels which are required for convenient and usable transit service. While actual service characteristics must be suited to specific routes, the follcwing standards should serve as guidelines for transit services:

To be achieved under Phase I

- new transit vehicles on fixed-routes for reliability, passenger comfort and system visibility
- Vehicular accessibility for the transit dependent via regularly scheduled feeder services
- vehicular accessibility for the handicapped

To be achieved under Phase II

- service frequencies of one hour or one-half hour depending upon the area served
- sixteen hour a day service on the majority of the system during weekdays if warranted by demand
- twelve hour a day service on Saturdays if warranted by demand

- nine hour a day service on Sundays if warranted by demand
- schedule coordination at transfer points utilizing timed-transfer scheduling to facilitate multiple transfer opportunities, including coordination at rail stations
- uniform fare structure with passenger transfer provisions
- comprehensive marketing and information systems
- uniform color scheme and logo for vehicles and other system facilities

Service Operation

The proposed transit system operation was examined in terms of the various courses of action which the County could take to actually operate the system, namely:

- County owned and operated
- County owned and contract operated by a public authority (e.g. the Metropolitan Suburban Bus Authority subsidiary of the MTA)
- County owned and contract operated by private companies

In the latter two cases, County owned would refer to capital equipment and not necessarily the franchised rights. The relative advantages and disadvantages of each type of service operation are summarized below in Table I.

TABLE I

	County Operated	Contract Public Auth.	Contract Private Carrier
Purchase of Private Co. likely	X	X	
Need for periodic renegotiation of service contract		X	X
High(er) per unit cost of operation	X	X	
Increased number of Gov't. employees	X		
Minimal County involvement		X	X
Single Management Organization	X	X	
Direct Public monitoring of service	X	X	
Greater incentive for efficient operation through private ownership			X

It is the Department's belief that the County should implement system operation by contract with private companies. A large portion of the recommended fixed route system is currently operated by private companies. While much of their equipment is overaged and needs replacement, the recommended plan can be phased into operation relatively quickly without awaiting federal funds for new equipment or purchase of the existing equipment by the County. The necessary franchise rights are held by the various companies which again facilitates rapid system start-up time. The ability to offer financial incentives in return for holding the line on escalating operating costs is yet another reason for contracting with private

companies. In many cases, operating costs have been shown to be considerably less when system operation is provided by private companies rather than by public or quasi-public agencies.

Program Financing

Public transit costs are reflected in capital acquisitions and operations and maintenance. The former represent about 25 percent and the latter 75 percent of total costs.

Capital Costs

The Department recommends that, to the greatest extent possible, federal and state funds should be utilized for capital purchases and operating subsidies.

However, under Phase I of the program, it is recommended that the necessary vehicles be provided under contract with potential operators. This course of action is recommended because of the relatively long duration between grant application and receipt of vehicles which would preclude early implementation of Phase I development. These contracted vehicles could be replaced as vehicles are obtained under the grant programs. The estimated costs for Phase I operation include the provision of vehicles by the contractor.

As part of the overall system upgrading, the Department initiated a vehicle replacement program in 1975 under the provisions of the Federal Aid Highway Act of 1973 and the Urban Mass Transportation Act of 1964, as amended. Under these programs, federal funds are available for 80% of capital costs. The balance is divided between the state and county under various formulas.

Through the close of State fiscal year 1978, the County has applied for 25 standard size transit vehicles, 5 small buses and 35 fare boxes. The vehicles would remain the property of the County and would be leased to the operators for a nominal sum. They are intended to replace the old equipment now in transit service and should result in reduced maintenance costs and higher rider comfort.

Operating Subsidies

Federal and State programs have been established to provide operating subsidies for public transit operations. They must be matched, dollar for dollar, with local funds. Currently, the total from both sources would generate, on an annual basis, less than one-half million dollars to Suffolk County. Consequently, the bulk of the operating subsidies for the recommended improvements would have to come from local funds.

It should be pointed out here that under current formulas for appropriating Statewide Mass Transportation Operating Assistance and Urban Mass Transportation Assistance, Section 5 funds, allocations are made on the basis of passengers carried and vehicle miles travelled. Hence, available funds are directed toward sustaining operating authorities and existing systems leaving very little for expansion of existing services or the development of new systems.

The net effect on Suffolk is that out of $104,500,000 in available Statewide Operating Assistance, Suffolk County was entitled to approximately $231,000 in 1976.

Similarly, out of a total of $110,000,000 in UMTA, Section 5 funds for New York State, Suffolk County was allocated only $258,000. A concerted effort should be made by the County's State Legislators to obtain a change in the method of allocation so that the County's share of these funds more reasonably reflects the needs of its 1.3 million citizens.

Program Costs and Revenues

Phase I (Minor improvements on fixed-routes and initiation of feeder service).

Phase I operating costs are estimated at $18/hr. for fixed route and $12/hr. for feeder service. An average fare of 50 cents has been used to estimate fare box revenue. It is estimated that annual ridership on fixed-route extensions would be 707,300 passengers. Feeder services are estimated at attracting 1,160,500 passengers per year.

Phase I Summary

Operating Costs	$2,650,000
Revenues	933,900
Deficit	$1,716,100
Federal and State Subsidy	798,600*
Net Cost to County	$ 917,500

Capital costs to the County for Phase I would essentially be limited to acquisition of 16 transit vehicles for improvements to fixed-route operations.

* First year only (1978). This figure represents net funds available as of 12/31/77 for Phase I improvements and is approximately $340,000 higher than the normal annual formula appropriated money to Suffolk County due to the existence of unused Federal funds from previous years.

Phase II

The second phase of the development program includes upgrading of services, including frequency of service and extended hours and days of operation on a County-wide basis. Consequently, operating subsidies would be required for all transit operations.

Under the service standards section of this report, it was recommended that a uniform fare structure should be established. Fare zones, which currently range from one to twenty-nine, should be reduced to not more than two or three zones and a uniform fare established for all initial zones. While the County-wide fare of 10 cents for senior citizens and SSI recipients has resulted in increased bus use by these groups, we believe that this rate is exceedingly low. Accordingly, we recommend that the 10 cent fare be increased to a half fare, with a maximum fare of 25 to 35 cents.

Capital Improvements for Phase II

The recommended improvements require additional standard size transit vehicles as well as vehicles for use in continuing feeder services as outlined under Phase I (i.e., replacement of leased and/or contracted vehicles). In addition to vehicles, other capital equipment will include fare boxes, radios and street furniture.

The estimated costs, in 1977 dollars, for the remaining capital equipment purchases are as follows:

14 Standard transit vehicles	$4,300,000
40 Small vehicles (buses or vans)	1,000,000
54 Fare boxes	180,000
Radio and related equipment	250,000
11 Shelters	160,000
360 Street signs	450,000
Total Cost	$6,340,000
Federal assistance	5,072,000
State assistance	634,000
Cost to County	634,000

Annual Operating Costs and Revenues (1977 dollars)

Costs

Fixed route operations @ $18/hr.	=	$6,707,000
Feeder route operations @ $12/hr.	=	2,133,000
Total operating costs	=	$8,840,000

Revenues (fares estimated at 50 cents per regular fare passenger)

Fixed route passengers @ 50¢	=	$2,795,000
Feeder service passengers @ 50¢	=	800,000
Total revenues	=	$3,595,000

Summary

Operating Costs	$8,840,000
Revenues	3,595,000
Deficit	$5,245,000
Federal and State subsidy	$1,141,700
Net cost to County	$4,103,300

Conclusion

It is the belief of the Department that the preceeding plan is responsive to the need for development of a systematic solution to the County's public transportation problems. While the primary thrust of the plan is to provide improved mobility to the transit dependent segment of the County's population, the plan, if adopted, will provide the basis for expanded service, as the need develops.

The estimated costs for the program are comparatively low when considering expenditures for this purpose in other areas of the region. There is no way that a public transportation system can be developed without the financial support of government. The plan, as detailed in this report, however, will provide a reasonable level of public transportation service to those who require it, while minimizing these costs.

SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

IV - RAIL

RAIL PLAN

Introduction

The LIRR is and will continue to be an important element in the transportation system of Suffolk County. Consequently, the primary goal of the County's comprehensive plan is to obtain more effective and efficient use of this facility within Suffolk County. While freight operations will be influenced by events outside the geographical Long Island corridor, passenger operations and their impact are confined within this corridor.

Passenger Operations

Although the primary function of the LIRR will remain as a passenger service to the New York City-oriented commuter, the role of the railroad for local trips should be expanded. With the exception of service to and from the Babylon and Huntington stations (which are the termini for electric service in Suffolk) and the New York City terminals, the remainder of passenger operations in Suffolk are minimal, particularly during off-peak periods. To encourage more local use of the railroad, however, will require both a change in the fare structure and an expansion of local service, the latter through the extension of electrification or more effective use of diesel runs. Presently diesel service is generally a shuttle operation during most of the day between Patchogue and Babylon, between Ronkonkoma and Hicksville and between Port Jefferson and Huntington.

The transportation plan inventory report released in January,

1977 commented upon the decline in railroad passengers since 1967. Actually, while there has been an overall system-wide decline in railroad passengers during the period 1967-1974, ridership by Suffolk County residents increased slightly during this same period. U.S. Census data indicated that between 1960 and 1970 work trips by railroad increased by nearly 6000 Suffolk residents; however, the work force increased by 80% in the 10 year period and rail trips represented 6.9% of the total in 1970 compared to 9.6% in 1960.

The Tri-State Regional Planning Commission forecasts that between 1975 and 1995 the number of Suffolk residents using rail for their journey to work will increase to nearly 40,000 - which would be about 6-7% of the projected County work force in 1995. This represents the approximate percentage of the present County work force that are rail users. Thus, the forecasted increase in Suffolk rail commuters would keep pace with the projected growth in the County work force. The increase in rail users will likely occur primarily in Brookhaven Town where the population is expected to increase by 72% between 1975 and 1995.

A study referred to in the Introduction which evaluated 1970 journey to work patterns, by mode, in the Bi-County area, discussed the general difficulties in reaching local work sites by public transportation. However, a review of that report reveals that of the ten largest employment centers in Suffolk in 1970, eight of them were along or adjacent to lines of the LIRR. It is recognized that from many areas, access to the railroad by bus transit is

lacking and uncoordinated. This lack of access is discussed further in the bus transit section of the comprehensive plan. Consequently, through a joint effort, namely more bus accessibility and coordination with rail service together with service and schedule revisions in the present non-electric territory, the possibility exists for improving local work trip use of the railroad by Suffolk residents. As mentioned previously, this potential increased use would require a revision of the present fare structure which results in relatively high fares for trips of one or two zones.

Facilities Improvements

Increased rail use, however, will require plant and rolling stock improvements. Many of these (road bed and rail, signals and communications) projects have been completed or are to be under construction in the near future. Consequently, the upgrading in the physical plant, short of electrification, as far east as Port Jefferson/Medford/Patchogue should be completed in the near future. Further east on the Montauk branch, track improvements between Speonk and Montauk are either underway or are to begin soon. Upgrading of equipment in diesel service territory has included conversion of MU cars and the acquisition of new diesel locomotives. There are no active plans for the purchase of additional rolling stock during the period 1977-81; however, further conversions and up-grading of existing equipment are planned for during the same period.

Ideally, the greatest potential for service improvements would

result from extension of electrification. The MTA, however, has no funds programmed for further work on extensions in electrification until beyond 1982. Its previously planned extensions included 23 miles on the Port Jefferson branch, 24 miles on the Main Line and 24 miles on the Montauk branch including the Central branch.

Currently, the estimated costs for this entire right-of-way work exceed $200 million and together with the required rolling stock additions, the total costs exceed $300 million. The result of this curtailment has been greatly expanded use of the Huntington and Babylon stations. Parking facilities at both stations are at and beyond capacity with overflows on nearby streets. A 600 car parking garage is proposed by the town at the Huntington Station and the State has proposed a 250 car parking garage at the Babylon Station. The Huntington Public Transit Program includes the provision of bus feeder services to the Huntington rail station to discourage further auto use and consequently reduce the necessity for additional parking requirements. It should be noted, however, that vehicular access to both stations is poor. Parking for the Huntington Station is located off the congested State 110 corridor and access to the Babylon Station parking facilities is primarily along marginal local streets. As a minimum, immediate consideration should be given to limited electrification extensions to reduce further congestion at these locations e.g. to Bay Shore and to Northport, a total distance of less than ten miles. However, further study of this proposal may be necessary to assess potential access problems at either location. The M.T.A. should review its capital

improvement priorities to consider advancing the scheduling of the total electrification program.

On the other hand, rapid population growth in the central Brookhaven area has resulted in a tripling of rail commuters at the Ronkonkoma Station since the late 1960's. The County currently has plans in preparation to add 500 parking spaces at this location. The Department has identified parking deficiencies at many of the 25 most heavily used stations throughout the County. (See Table 1) and recommends that these improvements be implemented shortly. These include the Babylon and Huntington Station improvements and would add 3,000 more parking spaces to the approximately 11,000 now available throughout the County. As the plan is refined, additional rail station parking improvements will be identified.

TABLE 1

Port Jefferson Branch	Main Line	Montauk Branch
Cold Spring Harbor	Deer Park	Amityville
Huntington	Wyandanch	Copiague
Northport	Brentwood	Lindenhurst
Smithtown	Central Islip	Babylon
Stony Brook	Ronkonkoma	Bay Shore
Port Jefferson		Islip
		Great River
		Oakdale
		Mastic-Shirley

It is the Deparment's belief that improvements should be made to the parking facilities at rail stations while at the same time the use of recommended bus transit access to these same facilities should be encouraged in order to acheive the goal of a more effective utilization of all transportation modes. As part of the development of a coordinated rail/bus system, it is recommended that

informational displays should be erected at the main rail stations in the County. These would provide train and bus schedules together with bus routes and their destinations, as appropriate. Provision should also be made for bus loading areas at the stations to facilitate passenger movements.

Station Maintenance

There are 52 rail stations throughout Suffolk County. Since 1966 the County has been obligated for the operating and maintenance cost of these stations. Presently, these costs exceed $2 1/2M annually. The Department recommends that the County evaluate the potential cost savings by County takeover of the station operation and maintenance functions. A change in the Public Authorities Law, which mandates these charges, would be required to effectuate a County takeover.

Alternatives to Extended Electrification

There has been discussion in recent years of the possible use of light rail vehicles (LRV) in the diesel territory operations in lieu of extended electrification. A number of inherent problems would have to be overcome. From an operational standpoint, use of both heavy rail and LR vehicles within the same system (i.e. LIRR) would require duplication of facilities and maintenance manpower requirements because the two modes are different. A comparison could be made to operating a subway and trolleycar in the same system. Further, through-train operation in Nassau County or New York City would not be achieved since passenger transfers would be required between the heavy and light rail sections.

Additionally, the use of LRV's would not reduce the need for heavy rail roadbeds unless freight service was precluded from the LRV territory. For these various reasons, further consideration of this alternative is not warranted.

Another suggested alternative to the extension of electrification in the present diesel territory has been the use of a dual mode (rail/bus) vehicle particularly at the more easterly sections of the rail lines. The under-carriage construction requirements for operation on steel rail and highways are mutually exclusive. A vehicle of this type was developed in the late 1960's but test runs concluded that among other problems it produced a very uncomfortable ride when used as a rail vehicle. Unless further technological advances can develop a vehicle compatible with both mode requirements, it would appear that rail/bus is not a feasible alternative.

A third alternative under consideration is the gas turbine-electric (GT/E) rail car which could operate in both the electrified and non-electrified territories. Delivery of eight of these cars (four each produced by the General Electric Company and the Garrett Corporation) was completed in 1976 for service testing on the LIRR and other rail properties under MTA jurisdiction. A one year test program was devised to determine operating costs and reliability and the economic feasibility of these cars compared to diesel-electric locomotives and self-propelled electric cars. Initial testing has indicated that the GT/E consumes large amounts of fuel when not operating in the higher speed ranges and also

frequent breakdowns have occurred. However, it is too early to draw definitive conclusions on the effectiveness of these cars.

All bus service to the north and south forks has also been proposed as a substitute for rail service to these areas. This idea has been advanced primarily for the purpose of reducing service costs. However, after some period of providing bus service between the Babylon Station and the south fork, the railroad determined there was no substantial cost savings realized because of fluctuations in demand and it has subsequently reinstituted all rail services. Bus service to the north fork is still provided from the Babylon Station with supplemental train service via the Main Line largely because the demand from that area is relatively stable and adequately provided for by bus.

It is recommended that the County assist the LIRR and the MTA in reviewing present plans for electrification so that priorities may be set and improvements made as funds become available.

Financial Considerations

Capital

During the period 1978-1982, the MTA proposes an expenditure of nearly $200 million on capital improvements for the LIRR system and an additional $900 million beyond 1982. The bulk of these funds ($600M) are allocated for the East Midtown Line and Terminal. The remainder are to be used primarily for upgrading and improvements to existing facilities with approximately $120 million earmarked for electrification extension.

Operating Costs and Revenue

During 1976, passenger and freight operations combined generated nearly $131M in revenues; however, expenses in 1976 were more than $226M, resulting in a deficit of $95M. It would appear that system-wide passenger volumes have leveled off although some growth has been exhibited in Suffolk ridership during the 1970's. One of the primary ways to decrease this deficit is to attract more riders to the system - local riders. Initially, this might be done by further fare reductions for reverse commuters during peak periods and all users during off-peak periods. The reductions would have to be greater than the current 25% reductions in off-peak round trip fares coupled with a large promotional effort to encourage more use of the railroad for local (including bi-County) trips.

Freight Operations

Long Island Railroad freight operations represent a small but significant portion of the overall company operations and account for about 8% of the total County freight movement. Revenues derived from freight service amounted to nearly 15% of gross passenger and freight revenues in 1976; however, the deficits resulting from freight operations are nearly $20M annually.

Although the inventory section of the Transportation Plan attributed the decline in rail freight to earlier internal operational and management problems as well as to the suitability of trucks for many short distance hauls, much of the decline

also resulted from a decrease in home building (construction products e.g. lumber) and conversions from coal to oil and gas, commodities which are particularly suited to rail transport. This has been particularly the situation for the past several years as a result of economic conditions.

Further hampering rail freight operations had been the previous freight delivery system, i.e. the system whereby freight cars are delivered to the Long Island Railroad. The Long Island Railroad owns no freight cars but simply forwards cars to and from other rail properties. Until 1971, 85% of the freight handled was delivered to the Long Island Railroad system by rail car float from New Jersey with the balance delivered via Hell Gate Bridge for those shipments destined to and from New England and Canada. Subsequently, Lehigh Valley (LV) and Erie Lackawanna (EL) were the only lines involved in the rail car float operations so that by early 1976, only 20% of all freight traffic was barged to Long Island City with the remainder being delivered via an all land route. In April 1976, Conrail took over operation of the LV and EL lines and ceased all car float operations. All traffic from the south and west is now routed through Selkirk thence via Hell Gate Bridge. The Long Island Railroad believes that this routing settles the issue of the need for the Maybrook connection across the Poughkeepsie Bridge. It should be pointed out that Selkirk is about 50 miles north of the Poughkeepsie crossing which must add time and cost to the Long Island rail freight shipments.

Nevertheless, rail freight operations should continue and should

be expanded to benefit all of Long Island. On the basis of no increase in the per capita[2] freight volumes, the anticipated 1995 Suffolk County population would generate approximately 11 million additional tons of freight annually compared to the present. If the current freight patterns were to remain, an estimated 800,000 trucks annually would be required to move this freight into and out of the County adding further congestion to the highway network. In terms of energy consumption, rail freight requires about 75% less fuel per ton-mile compared to truck shipments. Consequently, the Department supports the continuance of industrial development primarily along the main line of the Long Island Railroad as envisioned in the bi-County Comprehensive Land Use Plan.

Rail freight service on the Long Island Railroad terminates on the north fork at Southold and on the south fork at Bridgehampton. According to railroad spokesmen, only 7% of the total rail freight is handled beyond Ronkonkoma. The Long Island Railroad should examine the cost-benefits of rail versus substitute trucking for freight shipments beyond Yaphank and Mastic-Shirley as a means of reducing operating costs. The added traffic impact of more trucks should be minimal. The impact of the New York City - Long Island intermodal freight study as it relates to Long Island Railroad freight operations will have to be evaluated by MTA, Long Island Railroad, and the County when that study is concluded, as will the results of the current MTA Management Study.

[2] Estimated at 23 tons/capita

Summary of Recommendations

The Long Island Railroad system encompasses a large geographical area in Suffolk County. Its utilization outside of the peak commuter periods is minimal. Upgrading off-peak operations combined with new and improved throughout the day bus transit services could form the east-west and north-south matrix necessary for instituting public transportation in Suffolk. Economic, environmental and energy constraints will probably seriously limit large scale highway improvements including new highway locations in the near future. The potential may now exist to create a viable transit alternative for some auto users in Suffolk County.

Accordingly, the Department recommends the following improvements and changes in Long Island Railroad operations:

Passenger Service

- Restructure fare scheduled and provide more frequent service in non-electric territory to promote local use.
- Exploit the potential for local work trip use if coordinated with recommended improvements in public transit access to rail stations.
- Maximum effectiveness would be realized through extended electrification; in absence of full funds necessary, consider selective extensions.
- Improve parking at critical locations and provide public transit loading areas within station areas.
- Install informational displays containing bus routes and schedules at major rail stations.

Freight Service

- Promote and encourage greater use of rail for shipments to and from Long Island.

- Evaluate cost-time value of freight crossing via Maybrook versus Selkirk in terms of making rail a more attractive mode.

- Evaulate cost-benefits of terminating rail freight to the north and south forks and substituting truck freight.

Other

- Establish better coordination between the County, MTA, Long Island Railroad, Freight Users Association, and Commuter groups on proposed improvements to system.

- Consider County takeover of station operation and maintenance function.

- Assess the results of the MTA Management Study and New York City-Long Island Intermodal Freight Study as related to passenger and freight operations of Long Island Railroad.

SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

V-AIR

AIR TRANSPORTATION

General

While the Inventory and Analysis section of the Transportation Plan had indicated a substantial surplus in capacity for Suffolk County airports to accommodate future general aviation growth, it also noted that much of this capacity was derived from existing airports which are privately owned. Reliance on these facilities is tenuous at best. Historically, facilities such as these have yielded to the pressures of growth in the past, and it is probable that increasing taxes and higher land values will result in the loss of at least some of these airports in the future.

In addition, the estimate of total capacity included the Grumman facility at Calverton and Zahn's Airport. Calverton, however, is not a public use airport and the future of Zahn's is still in question.

If private facilities are excluded from future capacity consideration, it would appear that the ability of the remaining airports in Suffolk County to accommodate projected general aviation demands to 1995 is questionable.

Forecasted Growth in General Aviation

A report prepared for the Federal Aviation Administration[1] projected that nationally, general aviation operations would be 22% greater in 1979 then they were in 1974, 52% greater by 1985,

[1] General Aviation Forecasts 1975-1987 State, Regional and National Operations. Prepared by System Consultants Inc., April 1976

and 77% greater by 1987. Similar increases are projected for the Eastern Region and New York State, as shown on Graph No. 1.

The FAA has further forecast a 25% increase in registered aircraft during the 1975-82 period and a similar increase in the Region over the same time period.

The Nassau-Suffolk Regional Planning Board[2] estimated that the number of Nassau-Suffolk registered general aviation aircraft would increase from 1,131 in 1972 to 1,850 by 1985, a gain of 64%.

The Bi-County estimate is in reasonable agreement with a Tri-State Regional Planning Commission forecast of 1788 Nassau-Suffolk based aircraft by 1985. Tri-State goes on to project that this number will increase to about 2,147 by 1990.

On a more localized level, the Brookhaven Airport Master Plan[3] forecast a 129% increase in based aircraft and a near doubling of operations by 1995.

The consultants for the Long Island MacArthur Airport planning program[4] have projected a 32% increase over 1975 in general aviation operations by 1995.

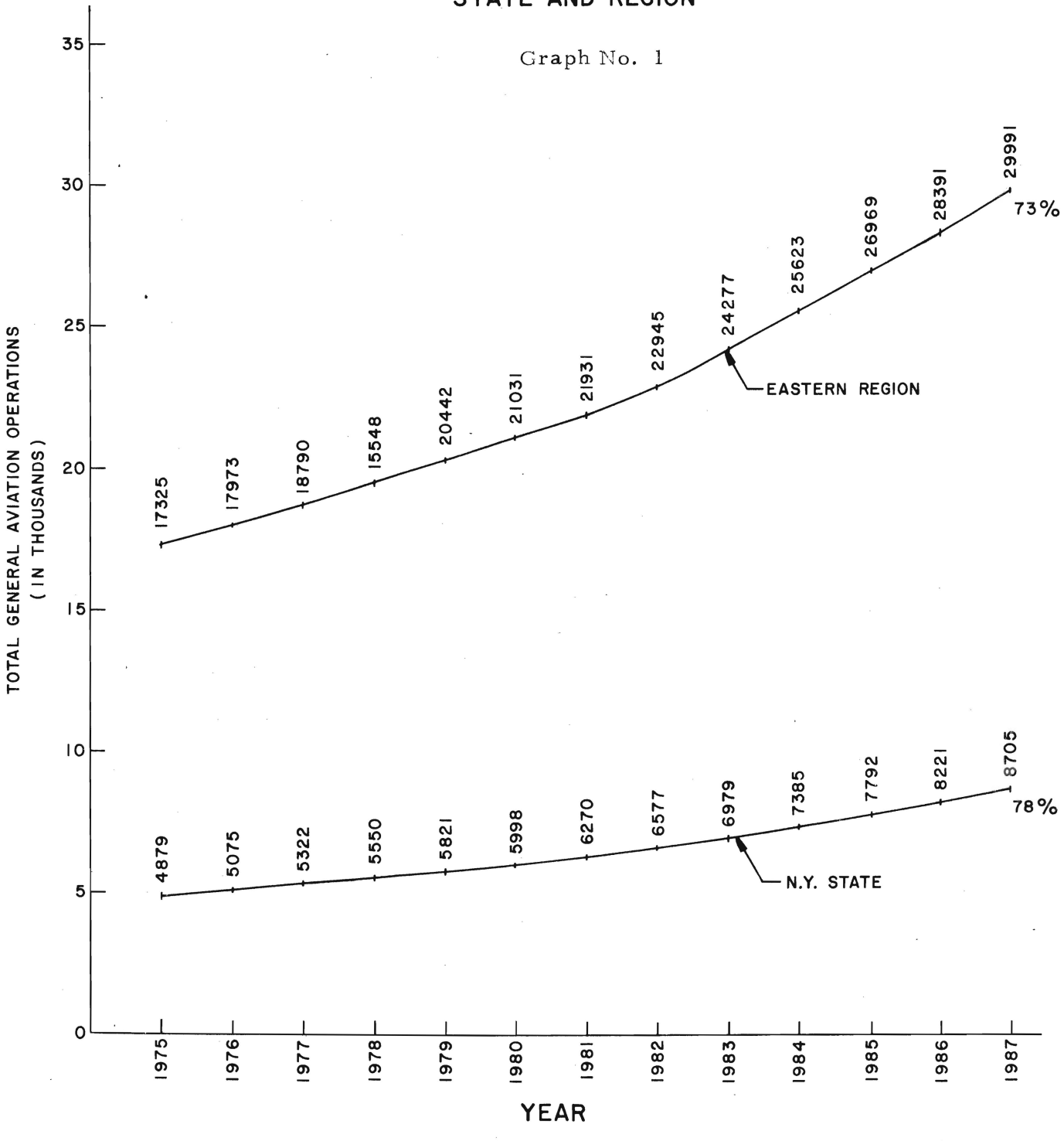
[2] A Study of Suffolk Airport and Environs, Suffolk County Planning Department

[3] Brookhaven Municipal Airport - Master Plan of Development 1975-1995 Porter and Ripa Assoc., Inc., December 1975

[4] Islip-MacArthur Airport Master Plan, Chap. 2 Forecasts, Teeter-Dobbins - Trans Plan, August 1977

GENERAL AVIATION FORECAST OPERATIONS BY STATE AND REGION

Graph No. 1



SOURCE: GENERAL AVIATION FORECASTS 1975-1987, STATE, REGIONAL AND NATIONAL OPERATIONS.
PREPARED BY: SYSTEMS CONSULTANTS INC., APRIL 1976 FOR U.S.D.O.T., F.A.A.

Airport Capacity

Listed below are the annual operations, practical annual capacities, and 1986 forecasted operations for the major airport facilities in Suffolk County.

Facility	1975 Annual Operations	Current Capacity	1986 Forecasted Operations
Republic	243,000	200,000	338,000
Zahn's	240,000	180,000	645,000
Long Island-MacArthur	346,000	490,000	699,000
Brookhaven	153,000	180,000	167,000
Suffolk	116,000	300,000	205,000*
East Hampton	25,000	300,000	45,000*
Totals	1,092,000	1,650,000	2,099,000

*Not forecasted by FAA. Operations estimated based on regional growth. Source: F.A.A. Airport Master Records - Individual Airports 1976 & 1977.

The airport at Calverton has not been included since it is not a public use facility.

It should be noted that the above listing includes Zahn's Airport, the future availability of which is in question due to its proximity to Republic Airfield. The M.T.A. has plans to increase the capacity of Republic, further magnifying the possibility of conflict with flight paths.

If Zahn's Airport were to close, the total available capacity at Suffolk's major airports would be for 1,470,000 operations. The

expansion of Republic's facilities would not make up for the loss of Zahn's.

Looking toward the future, if the regional forecast of a 77% increase in general aviation operations by 1987 is realized in Suffolk County, the current capacity of the major airport facilities will be substantially exceeded and the dependence upon private airports, which currently handle less than three percent of the annual movements taking place in Suffolk County, will be substantially increased. Public acquisition of some of these private facilities would be the only way to guarantee their availability. Should the airport at Calverton ultimately become available for public use, additional capacity would be provided.

Air Carrier Services

The only facility in Suffolk County providing air carrier service is the Long Island-MacArthur Airport. At the present time there are three certified airlines authorized to serve this facility. These are American Airlines, Alleghany Airlines and Altair to Philadelphia. American Airlines provides nonstop service to Chicago. Alleghany is authorized to provide service between Islip and 48 cities, with the principal activity occurring between Islip and Washington, Boston, Albany, Buffalo and Rochester.

The total number of passengers enplanned and deplaned in 1975 was 187,180.[5] This number is projected by the consultants to increase to 490,000 by 1995. While this represents a substantial

[5] Islip MacArthur Airport-Master Plan Summary Report - Inventory and Forecasts - Teeter-Dobbins - Trans Plan, July 1977

increase in air carrier service at Long Island MacArthur Airport, it is less than 10% of the Nassau-Suffolk generated domestic trips forecasted by the Tri-State Planning Commission for 1995.[6] Most of the remaining trips would continue to be handled by the three Port Authority airports. The Tri-State study further projected that between 629,000 and 725,000 trips might be dispersed from the Port Authority airports to Islip, depending upon the implementation of various access improvement options.

Air Cargo

By far, the bulk of air freight generated by Suffolk County is handled at Port Authority airports, particularly at Kennedy. Within the County, a total of 935 cargo tons were handled at Islip in 1973, of which 310 tons were enplanned and 625 tons were deplaned. By 1976 the enplaned tonnage declined to 218 tons.

The Consultants envision a continuing plateau of about 1,000 tons being handled annually at Long Island MacArthur Airport. Approximately one third of this total would be enplaned and two-thirds deplaned. In the opinion of the Consultants, a number of factors, however, could alter this projection, including the initiation of all-cargo services, increased scheduled flight services, improved cargo handling facilities and increased advertising of available freight services.

The development of a major air freight depot within Suffolk County could substantially change the current pattern of air cargo

[6] Regional Airport System Plan-Airport User Impact. ITRV-701 Tri-State Regional Planning Commission, June 1977

movement into the City of New York.

Airport Planning

The National Airport and Airway Development Act of 1970 directs the Secretary of Transportation to prepare, publish and thereafter, revise as necessary a National Airport System Plan. The Plan is expected to take into consideration, among other things, the relationship of each airport to the rest of the transportation system in the particular area, to the forecasted technological development in aeronautics and to developments forecasted in other modes of inter-city transportation.

Operationally, the National Airport System Plan provides the means of identifying those airport development projects of potential Federal interest and on which Federal funds may be spent under the Airport Development Aid Program.

The Tri-State Regional Planning Commission recently completed the development of a regional airport plan.

Airport master plans have been developed for Republic Airport, East Hampton Airport, and Brookhaven Municipal Airport. In addition, an airport master plan is under development for Long Island-MacArthur Airport and Suffolk County has hired a consultant to undertake a master plan for Suffolk County Airport.

The 1972 National Airport System Plan included a number of recommended development items for the purpose of improving operations at various Suffolk County airports, as follows:

- Edwards Airport - Acquire existing facility, establish clear zones, pave new runways and acquire various approach aids.

- East Hampton - Acquire land, expand existing facility, acquire various approach aids, pave new and existing runways and taxiways.
- Republic - Acquire land, expand existing facilities, clear zones, ALS, VASI, runway and identification lights and runway paving.
- Fishers Island/Elizabeth Field - Airfield area development approach aids, VASI, REIL and other airfield development.
- Long Island-MacArthur - acquire land, expand existing facilities, clear zones, ALS, airfield area development, extension and paving of existing runways and taxiways and approach aids.
- Mattituck - Acquisition of existing facilities, clear zone ALS, airfield area approach aids, paving new runway, taxiway and apron and obstruction removal.
- Montauk Sky Portel - Acquire existing facility, airfield area development approach aids, paving and lighting of existing runway, taxiway and apron and obstruction removal.
- Brookhaven - Clear zone ALS, airfield area approach aids, paving and lighting for existing runway and taxiway and obstruction removal.
- Suffolk County Airport - No development recommended in the 1972 program. Current improvement projects submitted to FAA are expected to be included in the 1977 update.

It should be particularly noted that the National Airport Plan has recommended the public acquisition of Edwards Airport, Mattituck

Airport, and Montauk Sky Portel. The preservation of these general aviation facilities, or the equivalent capacities of other facilities, in addition to the capacities of the major airport facilities, would be required to meet the projected growth in general aviation activities by 1986 in Suffolk County.

Summary and Conclusion

It is evident that the existing major general aviation airport facilities in Suffolk County do not have sufficient capacity to meet projected growth over the next ten years. If future demands are to be met, substantial reliance will have to be placed upon the minor airport facilities which are currently in private ownership. However, as noted in Volume I of this report, rising costs of maintenance and operation of these facilities, low profits and increasing property taxes, and the possibility of the land being utilized for more profitable purposes, could result in the permanent loss of these private airports. Public acquisition of some of these facilities, as recommended in the National Airport System Plan, is the only way to assure their availability for the future. The Town of Islip has already purchased Edwards Airport. Similar action by the appropriate towns should be taken with respect to Mattituck Airfield and Montauk Sky Portel.

In addition, increased capacity at the existing major airport facilities in Suffolk County, as generally advocated in those airport master plans which have been completed, will be required.

With respect to the Suffolk County Airport of Westhampton Beach, it can be anticipated that general aviation activity at this

facility will increase substantially as facilities to the west become overtaxed, or in the case of the private airports, are converted to other non-aviation uses.

The Airport Master Plan for the Suffolk County Airport should, and undoubtedly will, address these factors along with many others in developing their recommendations for future development of this important facility.

AIRPORT IMPROVE

HUNTINGTON

SMITHTOWN

R I V E R H

PECONIC/ GRUMMAN

CORAM AIRPARK

B R O O K H A V E N

TRANSPORTATION CENTER, VARIOUS IMPROVEMENTS

ISLIP MAC ARTHUR

TRANSPORTATION CENTER, LAND ACQUISITION, VARIOUS IMPROVEMENTS

REPUBLIC

B A B Y L O N

I S L I P

ZAHNS

BROOKHAVEN

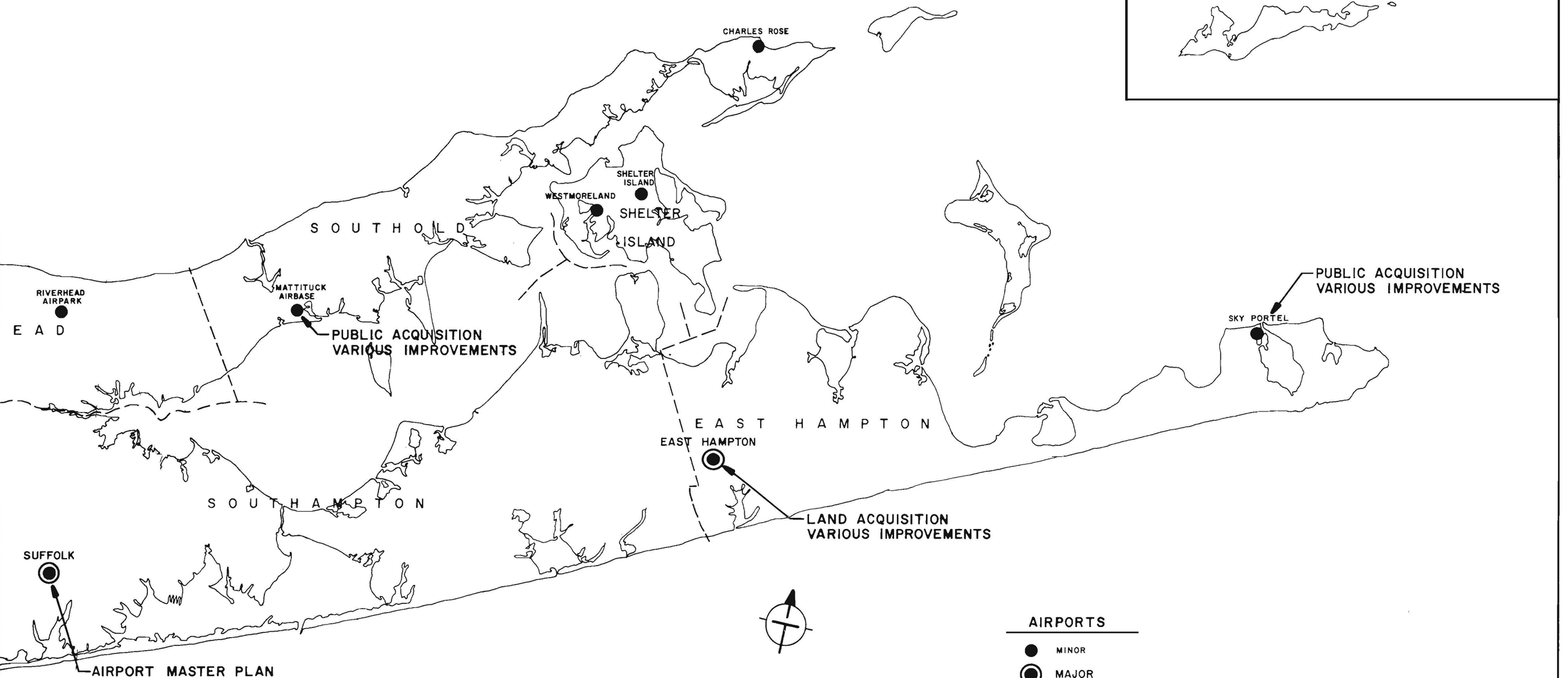
VARIOUS IMPROVEMENTS

SPADARO

EDWARDS

PUBLIC ACQUISITION

MENTS



MAP NO. 8

NOTE: RECOMMENDATIONS FROM NATIONAL AIRPORT SYSTEM PLAN

SUFFOLK COUNTY
TRANSPORTATION
DEPARTMENT

TITLE

ORIG. 3-78 DRN J.T.W.

SUFFOLK COUNTY COMPREHENSIVE

TRANSPORTATION PLAN

VI - WATERBORNE

WATERBORNE TRANSPORTATION

Introduction

The seaports and waterways of Suffolk County provide a significant and not readily replaceable contribution to the County's transportation system. Approximately 7 million tons of freight were transported by water into and out of Suffolk County in 1973[1] compared with 5 million tons in 1966. The principal commodities handled were petroleum, sand and gravel, and crushed and broken stone. In addition, nearly 80 percent of the fish and shellfish landings in the New York region with an estimated value of 25 million dollars, moved through Suffolk County's seaports.

Petroleum products presently account for the greatest proportion of the commodities handled at the County's ports. However, while oil consumption has been growing at the rate of about 3.5 percent a year in the northeast region, projections for the future indicate that the production of crude oil will begin to decline after 1985. According to one source, domestic oil production will be heavily constrained by 1985 and will decline rapidly thereafter.[2]

Other constraints on the consumption of petroleum products

[1]Note: This does not include quantity imported at Northville for which figures are not available and which was estimated by the Bureau of Mines at 20 million barrels (2.6M tons) in 1971 and is projected to reach 24 million barrels by 1990.

[2]Future Oil Supply to the Northeast United States, Harold Bronkeim Brookhaven National Laboratory, June 1976.

in the form of higher fuel prices, gasoline taxes, or rationing of fuel supplies could further serve to reduce the volume of this commodity moving through the County's ports and minimize or eliminate the need for expansion of port facilities to accommodate it.

To date, however, and in the absence of the above-noted constraints, the continued and expanding dependence upon those products which are particularly suitable to marine transportation has created the need for critical appraisal as to the County's ability and willingness to accommodate this growth. Further expansion must be considered in the light of environmental and/or land use objectives which may conflict with the need to meet the physical requirements of these industries.

As a practical matter, the expansion of seaport facilities within the County is hampered by the lack of available space, restrictive zoning, and public opposition which not only challenges the expansion of these industries but their current existence within the harbor areas.

Yet this waterborne commerce is, and will remain, a significant element in the economy of Suffolk County. Aside from its contribution to employment and to the tax base, the movement of these commodities by water greatly reduces their transportation costs. In addition, if they were to be brought into the County by truck, they would add appreciably to the region's and to the County's highway traffic.

Coastal Zone Management Study

The Long Island Regional Planning Board has completed its Coastal Zone Management Study which was undertaken for the purpose of identifying and protecting critical environmental areas along the shoreline. During the course of this study, efforts were made to coordinate the recommendations of the Transportation Plan in order to reflect the perceived direction and objectives of the CZM study.

Developmental Concepts and Objectives

There are several broad recommendations which can be made and which would be at once responsive to transportation needs and environmental concerns. These include the movement of non-water dependent commercial activities away from the waterfront areas and the removal of sand and gravel and crushed stone operations from the shoreline.

Petroleum storage tanks should be relocated inland with pipeline connections to off-shore loading facilities. Harbor areas could then be retrieved for recreational use and their aesthetic and environmental quality would be enhanced. Inland storage and distribution facilities would be established along the route. The system already exists in part with Northville Industry's pipeline from Port Jefferson Harbor and connecting to Setauket, Holtsville and Plainview. In addition, Northville proposes an inland facility at Wyandanch.

It is desirable that petroleum receipts be concentrated at a relatively few locations with suitable facilities to reduce

importation costs. The ability to handle large vessels eliminates the need to transfer shipments to smaller craft and reduces the cost of handling and the danger of spills.

Distribution of petroleum products via pipeline to various points in the County, as previously recommended by the Nassau-Suffolk Regional Planning Board[3] would, in addition to reducing the costs of transportation of this commodity, help to improve vehicular access to these areas for other purposes.

Sand and gravel, and crushed and broken stone are essential to the construction industry. It does not necessarily follow, however, that storage of these products must be accommodated in the harbor areas. Inland storage is possible and should be considered.

A study by the U.S. Bureau of Mines[4] estimated that by 1985 all production would be for local consumption and that present reserves of sand and gravel on Long Island would be exhausted by about 1987. This, if it occurs, would obviously result in a shift in traffic in this commodity from export to import. The demand for this product and crushed and broken stone, however, will continue to grow, and the Bureau of Mines has estimated that, for the L.I. Sound Region, it will increase by about 70% over 1970.

[3]Transportation - Nassau-Suffolk Regional Planning Board, Comprehensive Plan Series, 1970

[4]Bureau of Mines, Mineral Resources and Mining, an Interim Report July 1973

The quantities moving through Suffolk County ports, however, if they are imported solely for distribution within the County, could be expected to diminish sharply.

Specific Recommendations

Although the volume of commodities handled by the County's seaports increased by about 60 percent in the period 1966-73, this increase is almost totally accounted for by the growth in petroleum imports arriving at Port Jefferson and the Long Island Lighting Company plant in Northport. The major terminals for petroleum imports are Port Jefferson Harbor and the off-shore loading facility at Northville. Future petroleum imports should be concentrated at these locations.

Existing tanks on the east side of Port Jefferson Harbor should be removed and petroleum deliveries handled through one unloading facility, either located offshore or on the west side of the harbor. The petroleum products would then be pumped through the pipeline which now connects the tank farms in south Setauket, Holtsville and Plainview.

Future activities at Port Jefferson Harbor could be further effected by the Federal Energy Administration designation of the Long Island Lighting Company plant at Port Jefferson as one of a number of oil burning facilities which may be required to burn coal. If this should come to pass, there will be a change in the character of marine traffic in Port Jefferson Harbor and an increase in truck traffic to and from the LILCO plant.

The offshore loading facility at Northville should be connected by pipeline to the existing facility at Holtsville. Tank farms located along the pipeline would serve as distribution centers. This would permit the abandonment of most petroleum storage facilities in other seaport areas.

Petroleum storage facilities should be removed from Huntington, Cold Spring Harbor, Greenport Harbor and the harbor areas converted to recreational use.

Similarly, the importation of petroleum products through the Patchogue River should be phased out and petroleum products pumped to the existing storage facilities at Patchogue through a pipeline connection to Holtsville. Alternatively, and perhaps preferably, the storage tanks could be relocated inland.

The importation and storage of petroleum products at Mattituck Inlet and Sag Harbor should also be phased out.

Oil terminal facilities at Greenport Harbor would be desirable for supplying the needs of the North Fork. However, the existing problems of traffic circulation within the village may hamper its use for this purpose.

Ferries

Ferry operations in Suffolk County fulfill several transportation needs. Those ferries serving Fire Island and the National Seashore are primarily geared to recreational trip purposes. Thirteen of the nineteen ferry routes in Suffolk County provide seasonal service to this area.

The two ferries serving Shelter Island connect it with the

north and south forks of the County and, since there is no land access to the Island from either fork, they provide a vital transportation function on a year around basis.

The Port Jefferson-Bridgeport and the Orient Point-New London ferries serve inter-state travel demands and, until recently, operated on a seasonal schedule. Year around service has been instituted between Orient Point and New London.

The two remaining ferry services include the Orient Point-Plum Island route which serves employees of the United States Department of Agriculture and Fishers Island-New London Ferry which provides access to the mainland of Connecticut for residents of Fishers Island.

Fire Island and the National Seashore

It is anticipated that service to Fire Island and the National Seashore will have limited growth in the future because of the nature and character of the land use involved.

The draft General Management Plan for Fire Island National Seashore, produced by the National Park Service in 1976, estimated that the maximum number of daily visitors to the National Seashore would increase from 5110 in 1975 to 8470 in 1986. An upgraded ferry system to Watch Hill, Talisman and the Sunken Forest would be provided. The major ferry routes to the federal areas would eminate from a proposed ferry terminal on the Patchogue River and from the existing private ferry operation in Sayville.

Automobile access will continue to be limited to the two existing points at Robert Moses State Park and Smith Point County Park.

Other National Park Service proposals which would tend to limit growth of the non-federal areas include the promulgation of a Model Zoning Ordinance which, if adopted locally, would establish the single family residence as the basic developmental unit and limit sub-division to one-half acre or larger parcels. Down zoning of land and the ultimate removal of non-conforming uses, would further reduce the possibility of high intensity development. The identification of critical wetland areas and the establishment of wetland districts and dune preservation districts in which construction would be prohibited will provide additional constraint.

Existing and proposed ferry services should be adequate to accommodate the expected growth. Public transportation links (bus) from the Long Island Railroad to the terminal areas in Bay Shore and Sayville should be considered.

Shelter Island

The Nassau-Suffolk Regional Planning Board has estimated that the population of Shelter Island will increase from the 1,918 persons who resided there in 1975 to almost 4,000 in 1995. Private operators currently providing service should experience no difficulty in accommodating this growth.

Long Island Sound Crossings

Current Cross-Sound transportation service between Long Island and Connecticut consists of ferries operating out of Port Jefferson, seasonally, and from Orient Point, on a year-round basis.

In 1974 these two ferry services accommodated a combined total of about 68,000 vehicles and 175,000 passengers. As far back as 1969, the origin and destination study conducted in connection with the proposed Long Island Sound Bridge Crossing[5] estimated that there were 784,000 trips annually between Suffolk County and points in Connecticut and New England using the three East River Bridges (Triborough, Whitestone, and Throgs Neck). The report estimated that these trips would increase regardless of whether or not a bridge was built and projected increases of between 20 and 40 percent by 1975 and from 100 to 170 percent by the year 2000.

A subsequent study by the Tri-State Regional Planning Commission entitled "Long Island Sound Ferry Study - December 1975" projected tentative traffic volumes at each of the proposed ferry crossings, but no direct relationship was established between traffic volumes which would use a bridge versus a ferry at the same location. Instead traffic volumes were estimated for four levels of operation, including 200 thousand, 500 thousand, one million and two million vehicles per year. For the purpose of the Tri-State study, large scale ferry service was defined as that which could accommodate over 500,000 vehicles a year. In terms of existing ferry services, it would appear that the current demand for cross-Sound service is not being satisfied, if the bridge consultant's estimates are accepted. Further-more, it would require a large scale ferry service to handle this and future demand. A

[5] A Comprehensive Transportation Study for Proposed Bridge Crossings Creighton, Hamburg, Incorporated December 1971

substantial investment in terminal and access facilities in addition to subsidies for operating costs would be needed. It is apparent that development of ferry facilities of this magnitude is unlikely to be undertaken by the private sector and could only be accomplished with public financial support.

A bridge from Suffolk to Connecticut, from a transportation standpoint, offers considerable advantages. It would reduce travel time and costs for these inter-state trips, reduce congestion on existing arterial highways to the west, reduce the isolation of Suffolk County which may result from this congestion, and by ending the dead-end status of the County, possibly result in lower freight rates.

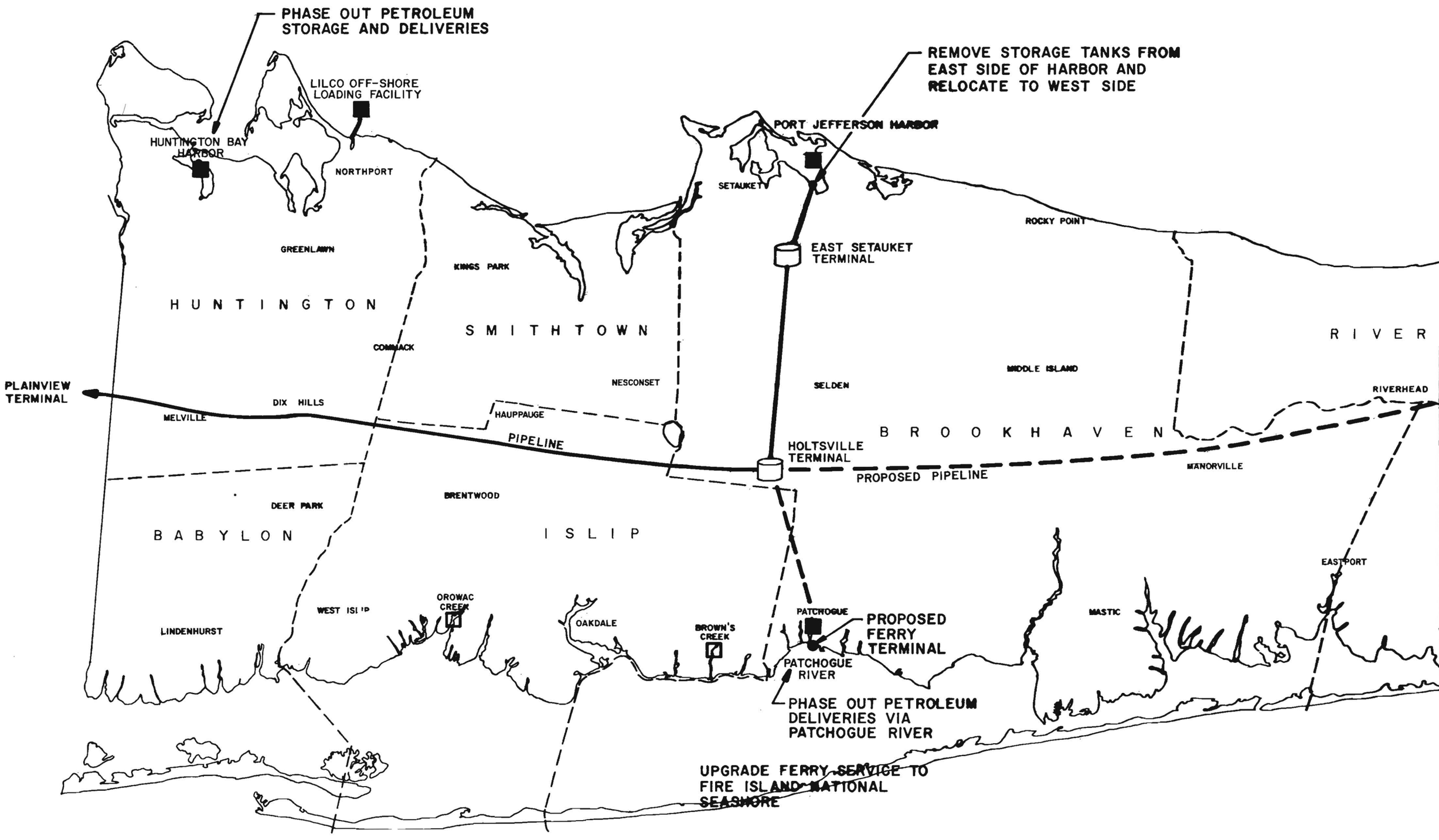
Large scale ferry service could not offer these benefits to the same degree. In addition, ferry crossings are more susceptible to the vagaries of the weather and hence cannot be considered as reliable as a bridge route would be.

It has been pointed out in recent months that the construction of a bridge would provide very considerable and badly needed stimulus to the economies of both Suffolk County and Connecticut.

Since bridge construction would require the support and approval of both the State of New York and Connecticut, it is recommended that a second look be taken and that a joint study by both States be initiated to provide a clear and current view of the transportation and economic benefits that may accrue to both areas which the bridge would serve.

In the absence of agreement on a bridge across Long Island

WATERBORNE – RELAT



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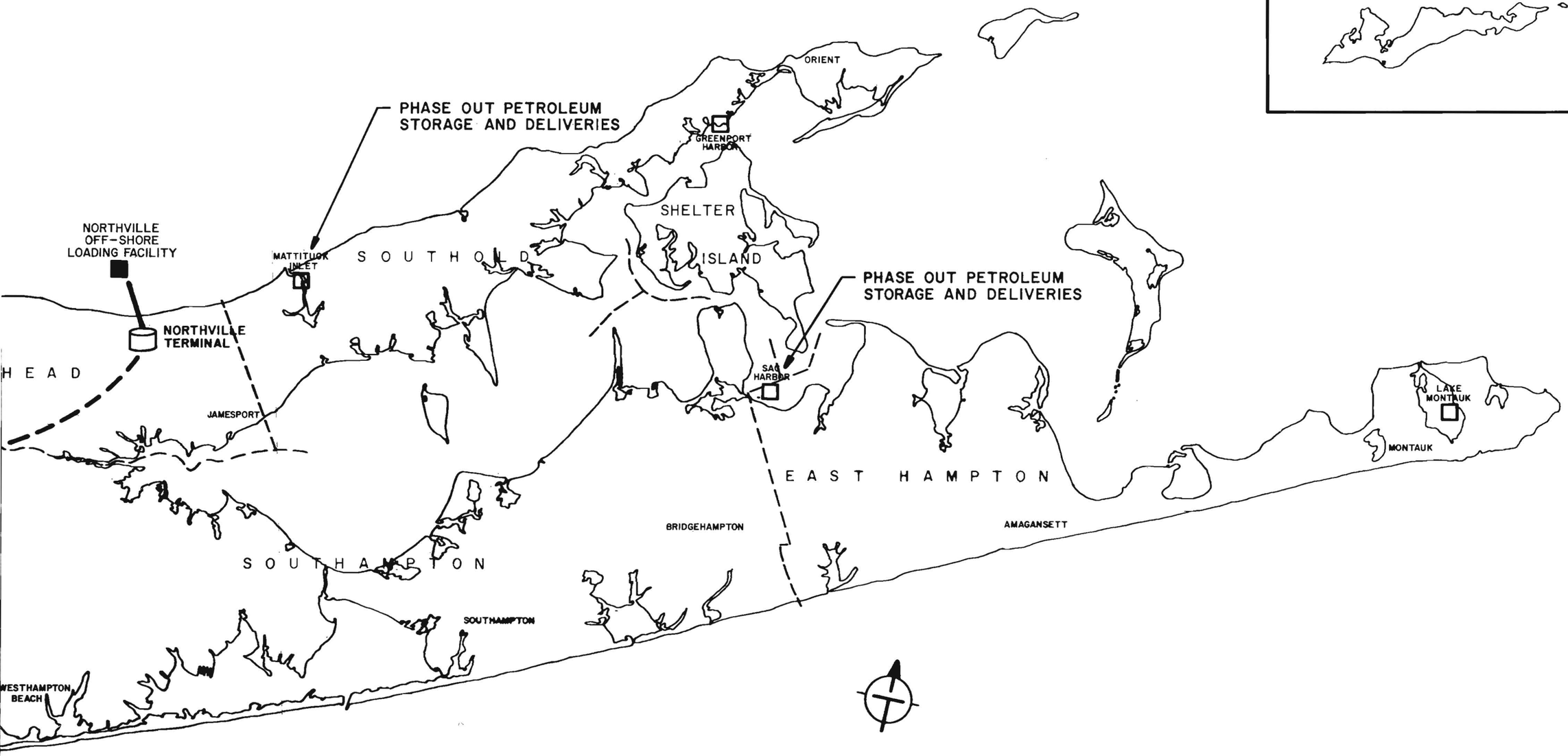

LEGEND

- MAJOR HARBOR/FACILITY
- MINOR HARBOR

MAP NO. 9

SUFFOLK COUNTY
TRANSPORTATION DEPARTMENT

TITLE

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Sound, it is recommended that efforts be undertaken to develop a high capacity ferry service to attain, at least in part, the transportation benefits previously noted.