1963

TOWN OF BROOKHAVEN

SUFFOLK COUNTY, NEW YORK

MASTER PLAN

SUMMARY REPORT

Land Use · Population · Playfields
Codes and Ordinances · Marinas
Economics · Community Facilities
Subdivision Regulation · Schools
Parking · Industry · Urban Renewal
Public Utilities · Redevelopment
Urbanization · Housing · Railroads
Employment · Traffic Circulation
Relationships · Markets · Research
Natural Resources · Condominium
Transportation · Commerce · Zoning
Migration · Capital Improvements
Semi-Public · Highways · Financing
Commercial Centers · Residential
Conservation · Density · Inventory
Parks and Recreation · Wholesale
Expenditures · Public · Communities
Shopping Centers · Neighborhood
Playgrounds · Water · Forecasting
Historical Sites · Retail Trends
Land Use · Population · Playfields
Codes and Ordinances · Marinas
Economics · Community Facilities
Subdivision Regulation · Schools
Parking · Industry · Urban Renewal
Public Utilities · Redevelopment
Urbanization · Housing · Railroads
Employment · Traffic Circulation
Relationships · Markets · Research
Natural Resources · Condominiums

EDWIN S. VOORHIS & SON, INC. *Consulting Engineers and City Planners* ESTABLISHED 1907

CHESTER E. VOORHIS, P. E.
President

4190 SUNRISE HIGHWAY
MASSAPEQUA, N. Y. 11758
PYramid 8-1610

Charles R. Dominy, Supervisor
Town of Brookhaven
Town Hall
Patchogue, New York

Gentlemen:

It is with considerable pleasure that we transmit to you this composite summary report of the Master Plan for the Town of Brookhaven. The preparation of a Master Plan is a major undertaking which could not have been possible without the continuous assistance of the Planning Board and its staff. The many sessions with the Board proved to be of valuable assistance to us in this work.

In order for the Master Plan to fulfill its objective of being the goal toward which the total community can focus its efforts in harmony, there must be an understanding and acceptance of the Plan by all. We hope that there will be thorough public discussion of each element of the Plan.

Although the Plan in its present form is flexible, it must also be stable if it is to provide a consistent goal for the efforts in building the Town that the opportunities permit.

After adoption, the community should not let its Plan become outdated. This will require continuing review and amendments. Amendments, however, should be made only after thorough, thoughtful study, consistent with the overall objectives established for the community. In order to attain a Plan that is constantly current, we suggest a program be initiated to review the Plan at regular annual intervals. Such regular review will assure the community that its Master Plan remains an ever-reliable, reasonable and realistic guide to a better future.

Respectfully submitted,

EDWIN S. VOORHIS & SON, INC.

Chester E. Voorhis

Chester E. Voorhis, P. E.
President.

CONSULTANT'S PARTICIPATING TECHNICAL STAFF

Brookhaven's Master Plan Program is under the General Supervision of Chester E. Voorhis, P.E., President, assisted by the following Staff:

Fred W. LaBastille*, Director of Planning

Norman Gerber, Assistant Director of Planning

John Sheridan, Chief Traffic and Utilities Planner

Gustave Rappold, Senior Planner

Robert Bornholdt, Junior Planner

*Project Planner for the Brookhaven Master Plan Program.

TOWN OF BROOKHAVEN
SUFFOLK COUNTY
NEW YORK

Charles R. Dominy, Supervisor

COUNCILMEN

George J. Fuchs
Clarence L. Hough
Robert Hughs
John Foley
Robert E. Reid
William H. Rogers

PLANNING BOARD

John F. Luchsinger, Chairman
Joseph J. Connelly, Jr., Secretary
Leslie R. Marchant
John A. Evans
Harold S. Meinhardt
Salvatore J. Romeo
Lewis W. Davis

Edwin A. Arnzen, Town Clerk
Charles W. Barraud, Superintendent of Highways
Emil Lange, Building Inspector
H. Russell Haase, Assessor
Alex G. Proios, Receiver of Taxes

PREFACE

This report has been prepared to provide interested citizens with the basic information contained in the Town of Brookhaven's Master Plan. It is believed that through an informed public, aware of the facts, the recommendations of the Master Plan can be achieved.

The Master Plan is only the beginning. Constant updating and revision will be required to keep the Plan abreast of the many changes which occur in the Town. To achieve the goals set forth in the Master Plan requires the participation of every individual, group, and committee, both private and public. Cooperation will provide the support needed for implementation of the Plan through subdivision control, zoning, and capital improvement programming which could bring the Plan to reality.

The following pages set forth in summary form the various studies and reports which individually comprise the major components of the Master Plan. Included herein are excerpts from each of these reports together with maps, charts, and other supplementary material. The reader is referred to the individual reports for a more complete and detailed account of the findings and recommendations.

What is Planning ?

Planning in its simplest terms can be defined as intelligent forethought applied to the development of the community. A plan for a community is a presentation in words, maps, and charts of a land use guide for public officials and private citizens. Through planning, desirable social and economic goals can be attained which, in general, make the community a better, more healthful, safe, and convenient place in which to live, work, and play.

Planning is necessarily a municipal endeavor which operates under the general objectives established by State legislation. It is regulated by the voters of a community through their elected officials. In placing planning into effect, the legislative body is paramount, for it is here that most Planning Board recommendations are channeled. The Planning Board can only recommend but does so on the basis of facts and analysis. A governing body not only acts on land acquisition, bond issues, and controls the public works program, but is also the final authority on zoning and other legislation to regulate land uses and population density which are the basic elements of planning. Finally, a governing body controls the public purse, and can either implement a project by allocating adequate funds, or reject it by withholding funds. Therefore, a governing body sympathetic to planning is essential to the success of planning, just as effective planning is essential to modern government.

There is no short cut or easy road to effective planning. There is a need for patience, since there is usually a considerable lapse of time between planning and actual realization of proposals. The greatest need is for public understanding, acceptance, and support for community planning.

What Can Planning Accomplish ?

First, planning is <u>not</u> a method of finding ways of spending more tax dollars, but rather a process of

obtaining the greatest efficiency and most lasting benefit for each dollar spent in physical development, both private and public, and creating a better physical environment within the limits of the municipal pocketbook.

Planning can accomplish the coordination of various physical elements which make up a community. Guided by a Master Plan, duplication of effort among the administrative departments of government can be prevented, and the competition for lands and funds can be avoided. It can also resolve the lack of direction and difference of objectives which often arise between governmental departments having overlapping fields of interest.

In the early days of Brookhaven, the Town Council had firsthand knowledge of all community affairs. With the growth of population, life has become increasingly complex, and now by necessity, the Town has assumed many additional functions with the result that administering the Town's governmental affairs is no longer a simple procedure.

It is necessary to coordinate the acts and needs of the various functions of Town government. This is often accomplished by long-range, professional municipal planning. There are examples where planning has saved many municipalities large sums of money. Even more important than the savings of public funds is the stabilization, conservation, and enhancing of private property resources, and furthering in general, the welfare of the people. This is the real and major benefit from urban planning which defies a dollars and cents estimate. It is one of the many tangible results of sound planning. The safeguarding of property values through sound zoning, for example, is now so firmly established and accepted that many special interests which fought zoning years ago are now among its most ardent supporters.

Another tangible result of sound planning can be the saving of time and money by shortening the daily journey to work; and it is certainly worth a great deal to industry to be free of complaining neighbors because factories are located in a planned industrial area where residences are prohibited. It is also worth something to the retailer to be more accessible to his customers. What any community needs then, is not a set of specific plans, but rather planning as a continuing process; for only through continuative effort can projects ever reach a successful conclusion.

It should certainly be clear that planning is a joint effort. It is not the exclusive task of any single individual or a single profession, a single board, or a special interest group. It is a widespread and basic fallacy to assume that a community can employ a planner who will prepare a plan on paper that will be followed to completion thereafter. Maps and plans on paper are useful only insofar as they summarize facts and project ideas. They are indispensable, yes, but community planning to be fully effective and alive is the common task of the entire community. It requires the concerted action of all who would like to make the community a better place.

PART I
RESEARCH and INVENTORY

Physical Characteristics

Land Use Inventory

Population

Economic Aspects

Traffic Circulation & Parking

Public Utilities

Community Facilities

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF PLATES

LIST OF PLATES (continued)

LIST OF TABLES

PHYSICAL CHARACTERISTICS

TOPOGRAPHY

Topography is an important factor in land development. Plate No. 1 indicates the major topographic features of the Town of Brookhaven. These features conform in general to those of the remainder of Suffolk County. The central section consists of a morainal ridge which runs in an east-west direction. North of this ridge the topography is hilly and irregular, dropping off abruptly to the Long Island Sound. This somewhat rugged terrain results in high concentrations of storm water and rapid rates of runoff with attendant problems of erosion and deposition of sands and silts along the drainage courses. The highest point in the Town is in the Selden-Farmingville area with an elevation of 334 feet above sea level.

A large watershed which includes Selden, Coram, Port Jefferson Station, and a number of adjoining communities, has no surface outlet. East of this area the Peconic River serves as a natural drainage outlet for much of the central portion of the Town. Its outlet is in Flanders Bay.

South of the ridge the land slopes gently to the south. Drainage from this area is carried by a series of streams which serve as natural water courses. Patchogue Creek, Swan River, and Carmans River are three of the major streams in Brookhaven which carry the southerly flow.

SOILS

Much of the surface cover of Brookhaven is comprised of loams and sandy loams which extend in depths to four feet. In the central portion of the Town there are extensive areas with surface covers of fine to medium sand intermixed with small traces of loam. See Plate No. 2.

Subsoils in the northern portions of Brookhaven are composed of clay, hardpan, and sandy clay, with overlaying sand and gravel, all layers varying in depth. In the flatter areas north of the morainal ridge there are large deposits of medium and coarse sand and gravel at depths of about four feet extending to approximately 50 feet.

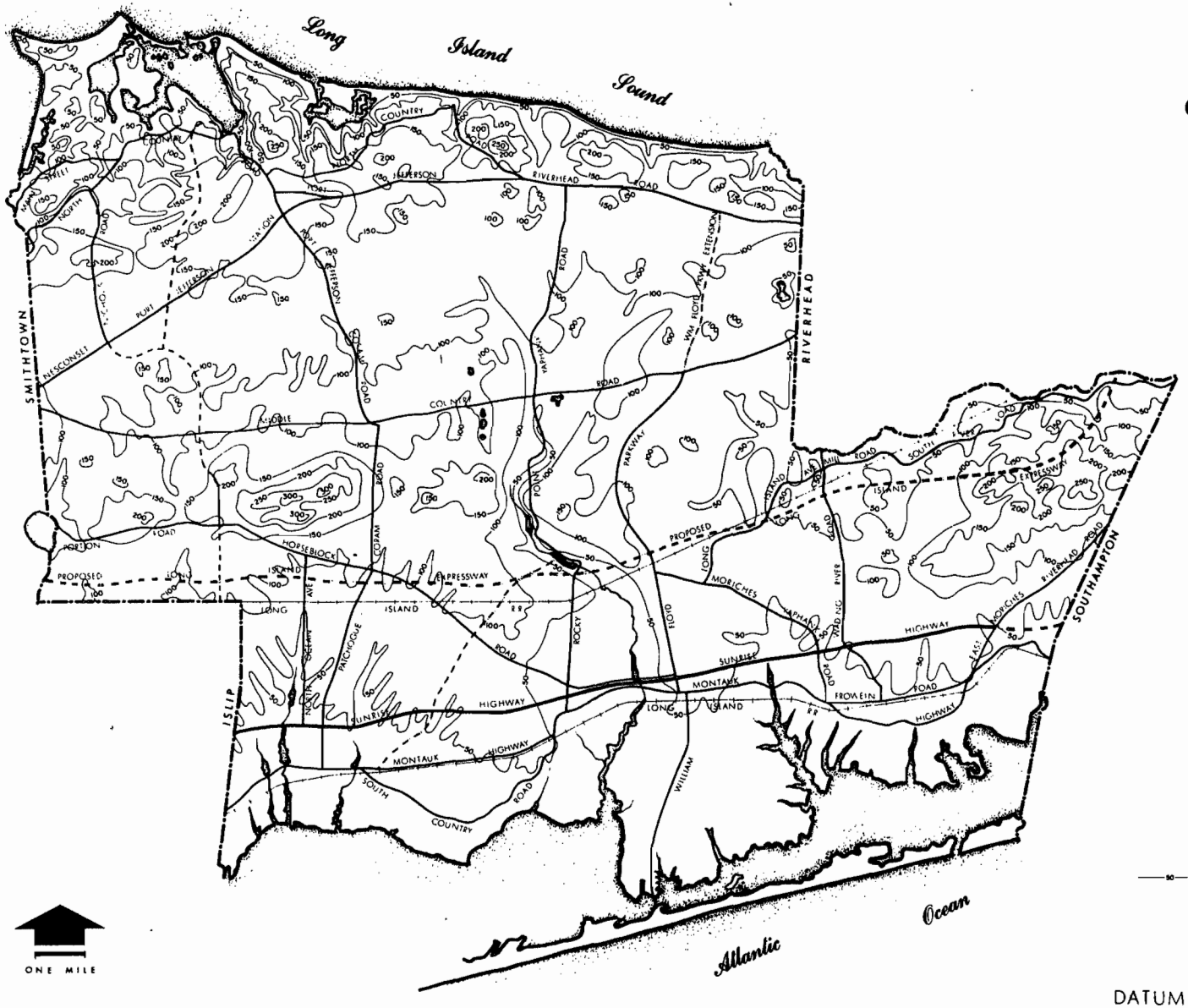
In the central sections, loosely compacted layers of fine to medium sand-clay mixtures are found. South of the ridge the subsoils are generally medium to coarse sands and gravels. The southerly wetland areas consist of silts, clays, meadow bog, and mud varying in depth below which lies sand and gravel. In recent years some of these areas have been overlayed with hydraulic fills.

CLIMATE AND PREVAILING WINDS

The climate of Brookhaven is moderate with a mean annual temperature of about 52 degrees. The growing season lasts about 200 days and the area is generally frost-free between April 6th and November 15th.

CONTOUR MAP

PLATE NO.1



LEGEND

—50— CONTOUR LINE

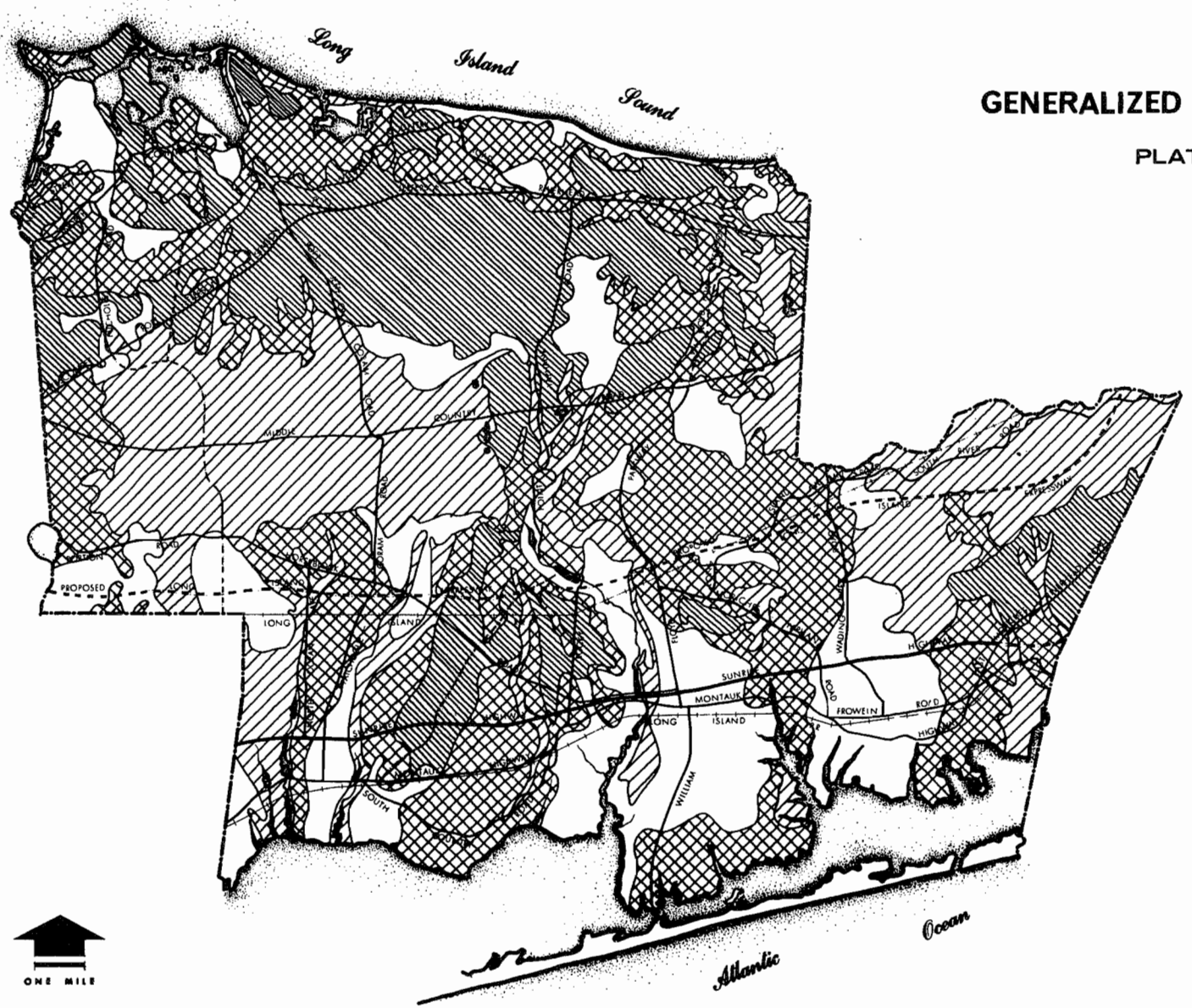
DATUM: MEAN SEA LEVEL

CONTOUR INTERVAL - 50 FEET

EDWIN S. VOORHIS & SON, INC., 1964

GENERALIZED SURFACE SOILS

PLATE NO.2



EDWIN S. VOORHIS & SON, INC., 1964

LEGEND

- SAND
- LOAM
- LOAMY SAND
- SANDY LOAM

Precipitation averages 42 inches per year and is the sole source of replenishment for the ground water reservoir which supplies the Town's water requirements.

The prevailing winds are westerly in the winter changing to southerly and southwesterly in the summer.

EXISTING LAND USE INVENTORY

Introduction

One of the most important factors in the preparation of a comprehensive master plan is a knowledge and understanding of the degree, type, and location of existing development.

Existing land use data was shown on newly prepared base maps, the land uses and total area of each planning district were planimetered and computed to determine the distribution and percentage of land use in each category.

In this study, the Town was divided into the following land use categories:

Residential
Commercial
Industrial
Semi-Public
Public
Agricultural
Streets
Railroad
Vacant

Where required for greater clarity, these categories were further subdivided.

Agriculture is essentially an "open space" use. However, in the Town as a whole and in some planning districts, farming is the major use. There is no doubt that present farm land is being sold for more intensive suburban development. For the purposes of this survey, it was deemed proper not to show farms as vacant land, but to include them in the developed area.

The graphic documentary of the land use pattern highlights some of the trends which are changing the physical features of the Town of Brookhaven and, when analyzed together with the related statistics, aids in the preparation of preliminary recommendations for land use objectives and development policies.

GENERAL LAND USE

The 270 square miles of land area currently within the unincorporated area (excluding Fire Island), of the Town of Brookhaven make it one of the largest in New York State and certainly the largest in the New York Metropolitan Region. In fact, Brookhaven is only some 30 square miles smaller than the entire County of Nassau.

According to the study of existing land use in 1962, only 86 square miles, or 35 percent of the Town's unincorporated area was developed.* Of the 54,935 acres then developed, agricultural uses and residential uses together accounted for 47 percent of the total.

---

*In 1963, Port Jefferson, in School District #6, became an incorporated village.

Streets, semi-public, and other public uses accounted for an additional 40 percent of the total, while industrial, railroad, and commercial uses accounted for the remaining 13 percent of developed land.

For the most part, residential development has taken place along the shores of the Long Island Sound and the various inlets of the Great South Bay. Residential structures in communities such as Rocky Point, Sound Beach, Mount Sinai, and Miller Place, which originally were summer resorts, have been converted to year-round dwelling units. Areas such as Stony Brook and Port Jefferson can trace their founding back more than 150-200 years.

Another belt of residential communities exists from Blue Point on the west to Eastport on the east, along the southern tier of the Town. These communities, which include Brookhaven, Mastic, Mastic Beach, Shirley, Moriches, and others were, in the main, resort type, summer home areas. Here too, conversion to year-round occupancy has taken place.

Resort uses are prevalent in the Lake Ronkonkoma area, although the attraction of the comparatively large inland lake has transformed this section to a year-round residential community. Residential subdivision activity is rapidly urbanizing the western half of Brookhaven. Agricultural uses are generally found in the more rural central and eastern sections of the Town.

Public uses are comprised for the most part of the Brookhaven National Laboratory, the Navy Industrial Aircraft Facility, the State University College at Stony Brook, the Suffolk County Home, The Suffolk County Community College, the Brookhaven Airport, and the Middle Island Game Farm. These extensive facilities, while having been considered as developed, add to the feeling of openness in the Town because of the low percentage of building coverage found on their sites.

The same low percentage of site coverage is found in the major industrial uses in Brookhaven. Both the Radio Corporation of America facility and the Centereach Transmission Plant of Press Wireless have very few buildings. These sites are dotted with radio antennas and wires rather than enclosed structures.

Most of the older commercial uses are located on important traffic routes in ribbon type development. There are however, some new planned shopping centers in the Town. These facilities include adequate off-street parking and loading areas and are much more desirable types of commercial centers. These new centers are generally located near the more populated areas

Major State routes which serve the Town of Brookhaven include 25-A (North Country Road), 27 (Sunrise Highway), 27-A (South Country Road or Montauk Highway), and 112 (Patchogue-Port Jefferson Highway). Other important roads include the Nesconset-Port Jefferson Station Road, William Floyd Parkway, Nichols Road, and Horse Block Road. The proposed right-of-way of the Long Island Expressway will carry it between and more or less parallel with Sunrise Highway and Middle Country Road.

Three divisions of the Long Island Railroad serve the Town. Near the north shore is the Port Jefferson Branch, in the center is the Main Line, and near the south shore is the Montauk Division. The two latter lines traverse the entire Town, while the first runs

eastward only as far as Port Jefferson Station.

A detailed statistical breakdown and discussion of land use characteristics by School Districts is contained in Volume I of the set of individually prepared Master Plan reports. Table No. 1, herein, summarizes these findings.

Plate No. 3 shows existing commercial and industrial land uses in the Town, while Plate No. 4 shows how these same properties are zoned on a recent zoning map.

TABLE NO. 1

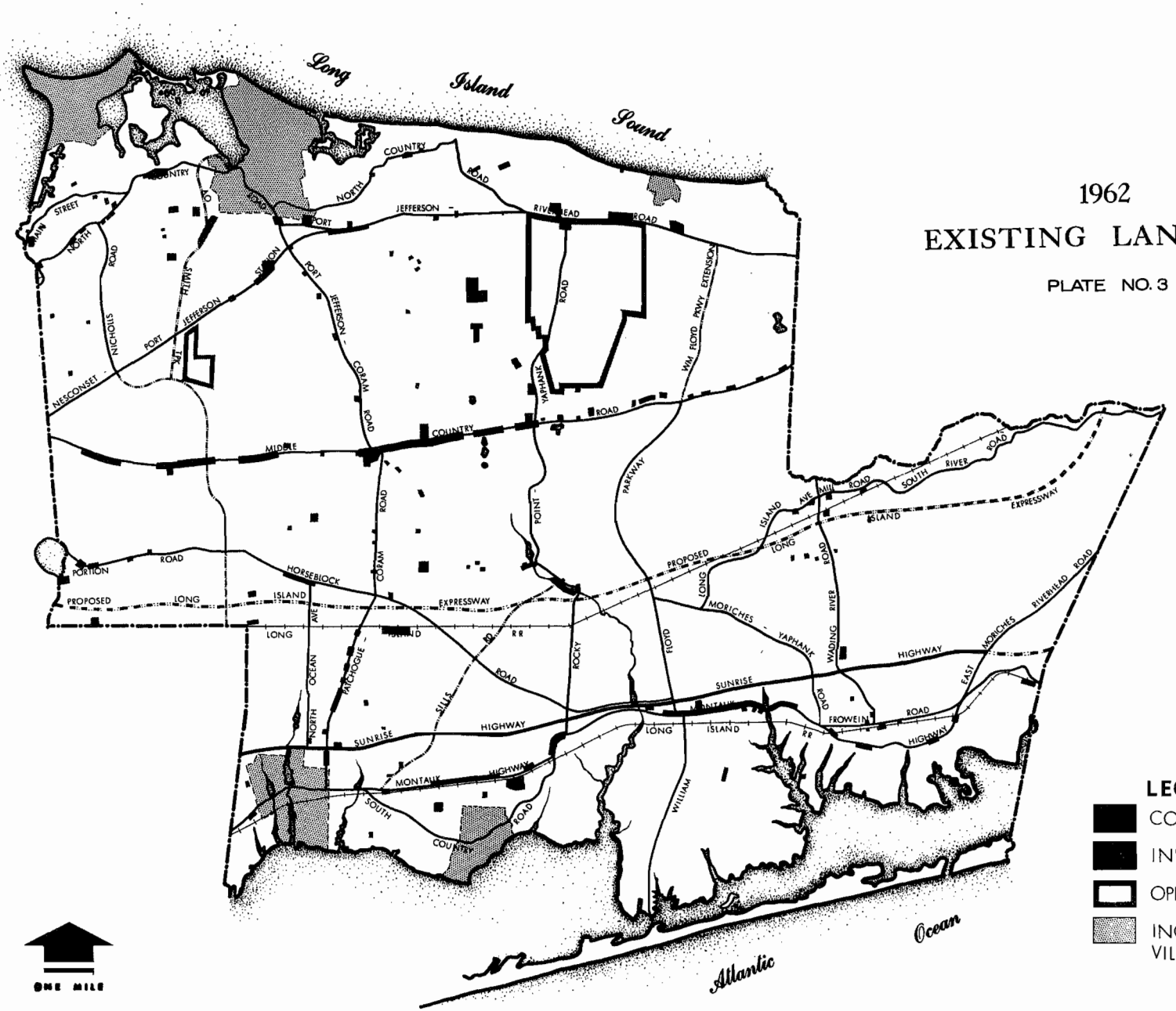
EXISTING LAND USE
UNINCORPORATED PORTION OF TOWN OF BROOKHAVEN
BY PLANNING DISTRICTS
1962

Planning Districts *	(1960) Total Population	(1960) Total Number of Households	Total Acreage	Residential	Commercial	Industrial and Railroad	Agricultural	Public Semi-Public and Streets	Vacant
1	2,400	750	2,900	575	10	15	650	(4) 350	1,300
2	4,200	1,275	9,850	850	15	(1) 400	650	(5) 935	7,000
3	4,750	1,285	4,350	430	50	110	380	340	3,040
4	8,300	2,245	9,750	800	30	120	580	900	7,320
5	13,450	3,735	10,300	1,450	105	35	185	1,090	7,435
7	900	280	3,850	250	30	10	1,400	200	1,960
8	2,450	790	4,350	500	20	85	890	350	2,505
9	2,900	965	6,300	850	60	(2) 2,700	265	495	1,930
10	850	225	3,550	130	----	10	500	(6) 825	2,085
11	15,550	4,090	10,600	1,300	80	30	290	(7) 1,000	7,900
12	7,600	2,170	32,300	1,500	90	(3) 2,300	2,500	(8) 7,300	18,610
21	850	260	6,600	130	----	10	780	210	5,470
22	150	45	8,800	50	----	15	500	(9) 1,125	7,110
24	12,250	3,710	9,300	1,400	100	100	230	950	6,520
30	400	120	4,000	40	----	15	220	870	2,855
31	250	75	4,400	30	----	30	200	(10) 1,845	2,295
32	8,350	2,530	10,300	1,700	100	70	280	(11) 1,750	6,400
33	3,100	970	3,300	400	45	40	165	275	2,375
34	1,450	485	4,400	300	10	30	775	400	2,885
IS 5	3,350	985	1,300	275	20	30	30	190	755
SH 11	450	130	2,450	50	5	15	800	60	1,520
RH 1	50	15	850	30	----	----	200	25	595
RH 2	250	75	2,550	200	20	20	10	(12) 750	1,550
TOTALS	94,200	27,210	156,350	13,240	790	6,190	12,480	22,235	101,415

* DISTRICT #6 is excluded because almost entire area is incorporated.

---- Estimated at less than 5 acres in use.

(1) Includes Press Wireless (350 Acres)
(2) Includes RCA (2,700 Acres)
(3) Includes RCA (2,300 Acres)
(4) Includes State University (240 Acres)
(5) Includes State University (240 Acres)
(6) Includes Brookhaven National Laboratory (300 Acres)
(7) Includes Suffolk County Community College (415 Acres)
(8) Includes Brookhaven National Laboratory (4,560 Acres) ; Suffolk County Home (260 Acres) ; Brookhaven Airport (115 Acres)
(9) Includes U.S. Naval Research site (1,075 Acres)
(10) Includes Brookhaven National Laboratory (1,200 Acres)
(11) Includes Brookhaven Airport (265 Acres)
(12) Includes U.S. Naval Research site (725 Acres)



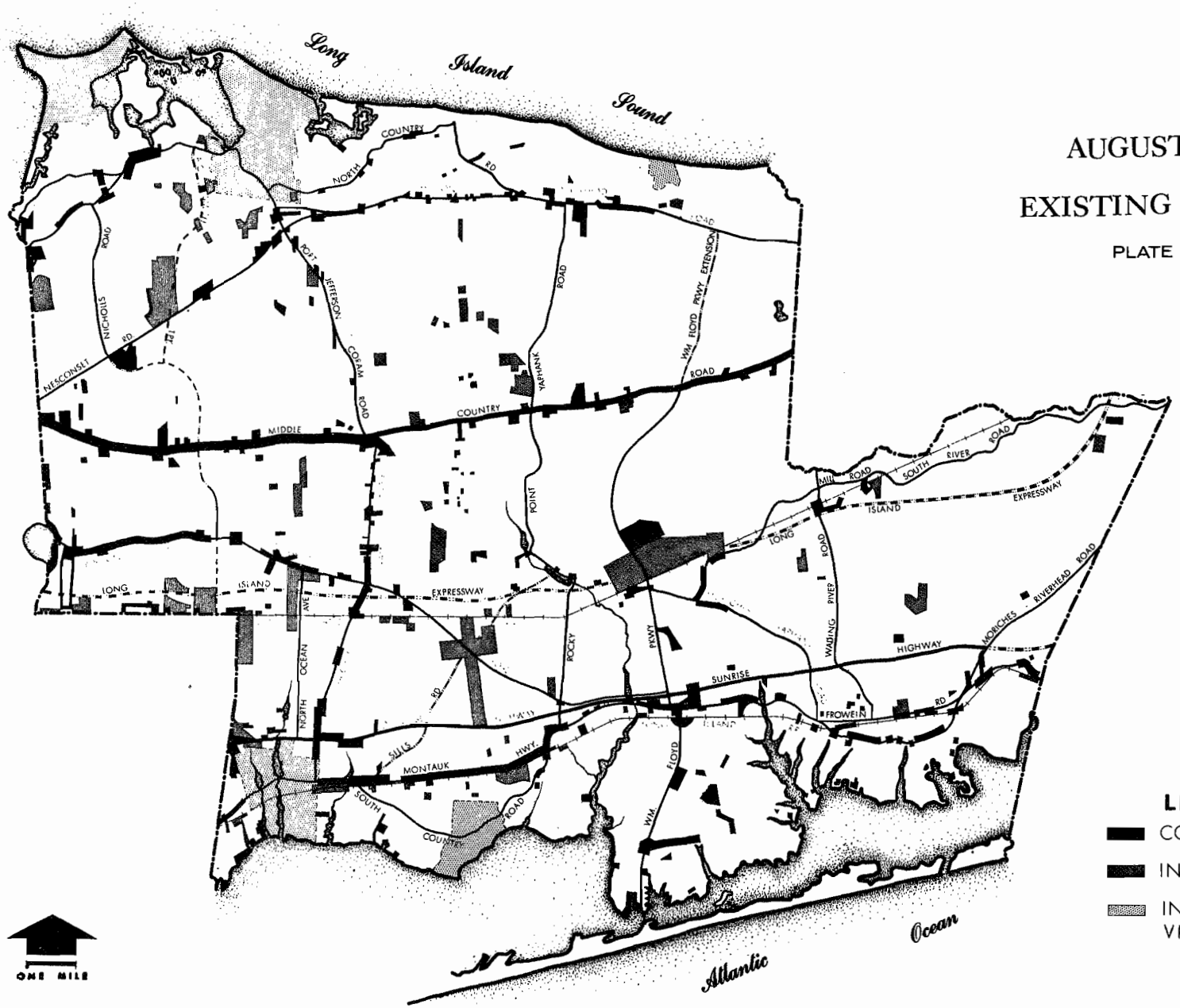
1962
EXISTING LAND USE

PLATE NO. 3

LEGEND

- COMMERCIAL
- INDUSTRIAL
- OPEN INDUSTRIAL
- INCORPORATED VILLAGE

EDWIN S. VOORHIS & SON INC., 1964



AUGUST 1964

EXISTING ZONING

PLATE NO. 4

LEGEND

- COMMERCIAL
- INDUSTRIAL
- INCORPORATED VILLAGE

EDWIN S. VOORHIS & SON INC., 1964

POPULATION

Introduction

The Town of Brookhaven is part of the New York Metropolitan Region as shown on Plate No. 5. This Region of 6,907 square miles has increased in population from one to two million people each decade since the turn of the century, and the overall density has risen from 800 persons per square mile in 1900 to 2,300 persons per square mile in 1960.

Many of the millions of people living and working in the Region are, and nearly everything that occurs in the Region is tied, in one way or another, to the heart of the area, New York City. This was true in 1900 and remains essentially true today.

Brookhaven increased in population from 15,000 persons in 1900 to 110,000 persons in 1960, while overall density rose from 60 persons per square mile in 1900 to 430 persons per square mile.

Figures of population growth barely suggest the numbers of houses, stores, manufacturing plants, or streets, utilities, and schools that are needed by this growing population. The provision of these needs now and in the future is the particular concern of the Brookhaven Town Board.

POPULATION TRENDS

Since the beginning of the century the population of the New York Metropolitan Region has experienced unrelenting growth. This growth has taken place in fairly concentric rings around New York City, spreading north into Westchester County, into New Jersey, and easterly on Long Island. See Plate No. 6.

The Intermediate Ring, which includes Brookhaven and the four western towns in Suffolk County, has developed materially since 1925, with a particularly rapid growth between 1950 and 1960. It is this Ring which will experience a great part of the Region's population expansion over the next 25 years.

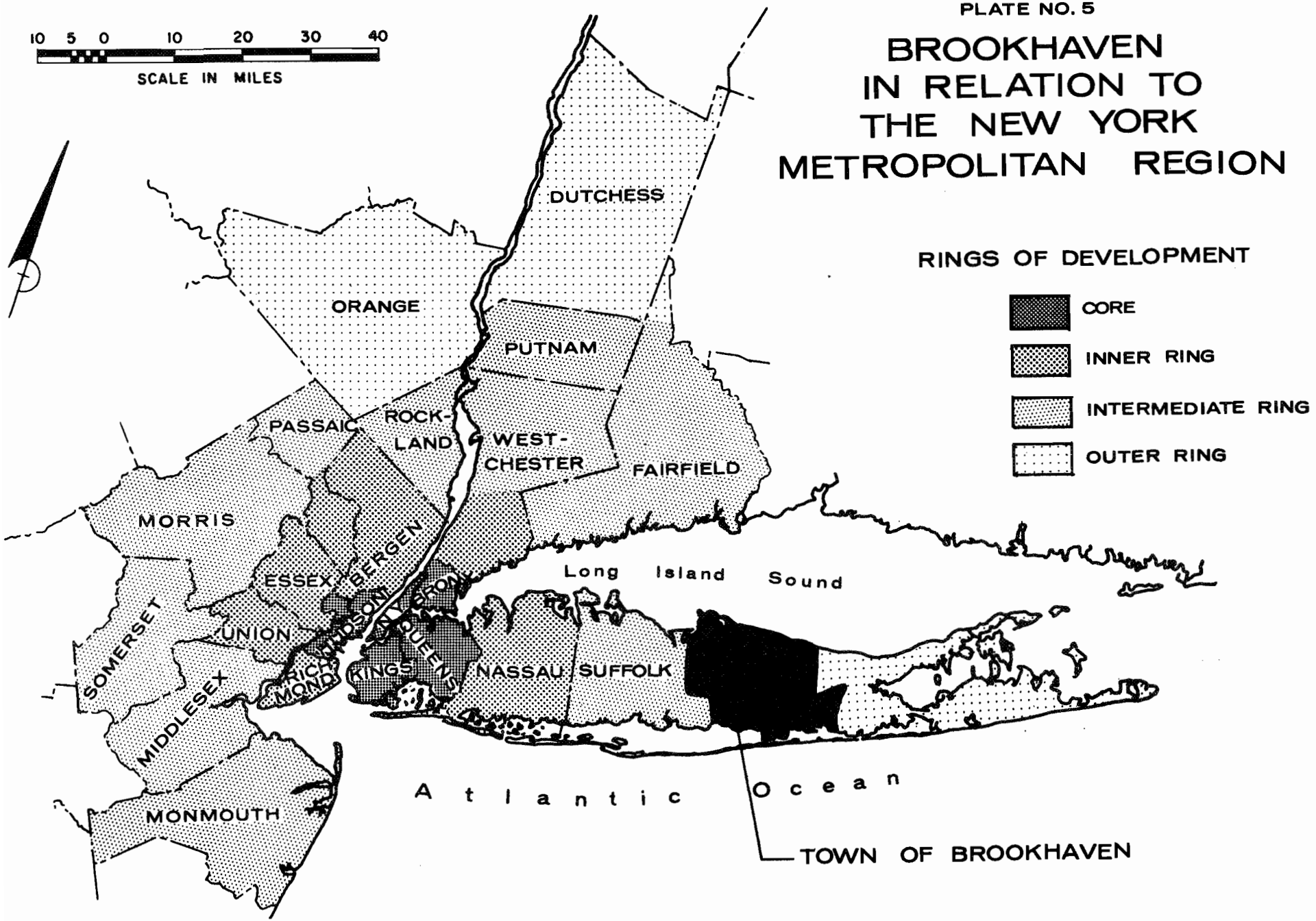
This spreading of suburban life was particularly felt in Brookhaven during the 1950's when Brookhaven's population increased from 45,000 to 110,000. The increase was largely a result of families moving into the Town rather than from an increase in the number of births.

Families moving to Brookhaven and to other suburban towns constitute one of the great social and economic forces of the postwar period. Those who moved to the suburbs were mainly families with children, trying to escape high housing costs, spreading slums, or the congestion and, at times, depressing atmosphere of the older city.

Suffolk and Nassau Counties together accounted for over 46 percent of the total population increase from 1950 to 1960 in the Metropolitan Region. From 1930 to 1960, the two Counties accounted for 34 percent of the Region's total population increase. The population figures for Suffolk County's ten towns for

PLATE NO. 5

BROOKHAVEN IN RELATION TO THE NEW YORK METROPOLITAN REGION

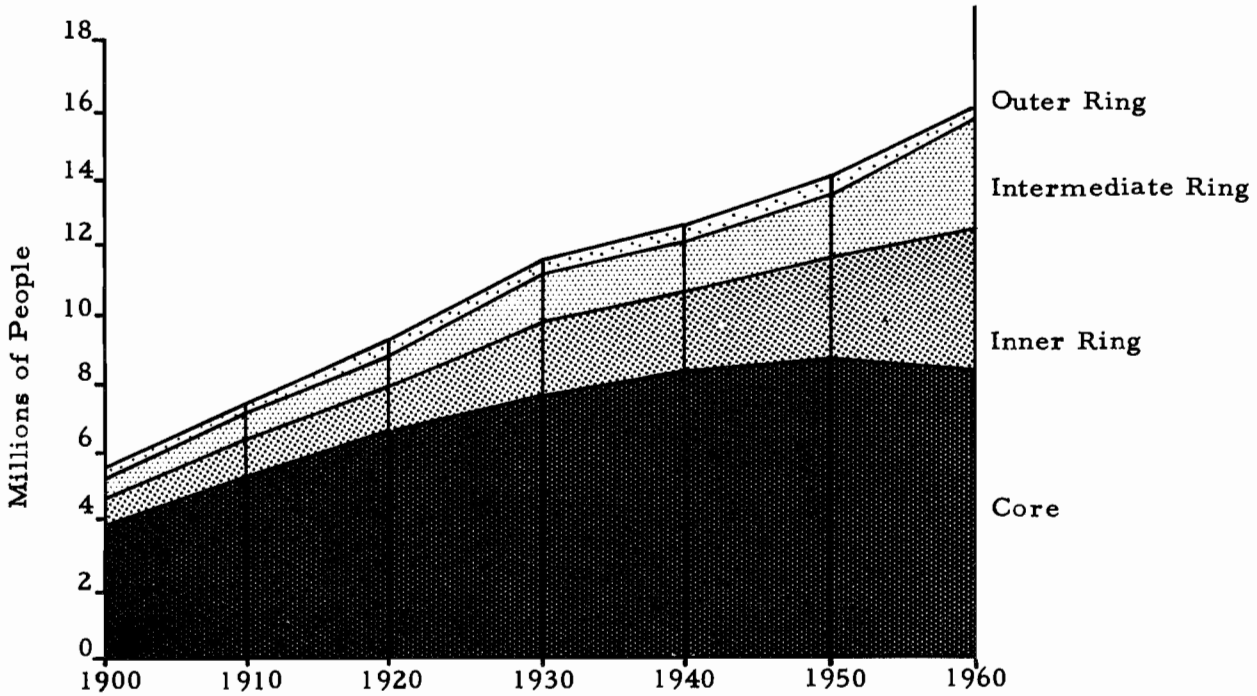


EDWIN S. VOORHIS & SON, INC., 1963
SOURCE:
REGIONAL PLAN ASSOC., INC.

PLATE NO. 6
POPULATION GROWTH BY RING (in thousands)
NEW YORK METROPOLITAN REGION

	1900	1910	1920	1930	1940	1950	1960
Core	4,002	5,566	6,547	7,905	8,362	8,787	8,576
Inner Ring	695	1,040	1,421	2,244	2,495	3,100	4,333
Intermediate Ring	604	765	926	1,216	1,355	1,730	2,805
Outer Ring	214	237	245	279	305	335	425
TOTAL	5,515	7,608	9,139	11,644	12,517	13,952	16,139

THE REGION'S POPULATION BY RING



Source: Spread City, Regional Plan Assoc., 1962.

the years 1900 to 1960 are shown in Table No. 2.

Brookhaven, in the past 30 years, increased its population at about the same pace as Suffolk County. In the past census decade, 1950-1960, Brookhaven grew by 147 percent while Suffolk County increased 142 percent. The Town's population growth for this decade accounted for 17 percent of the County's growth while in the past 30 years, the Town accounted for 16 percent of the County's growth. In the 1950's, 87 percent of the Town's population increase was attributed to in-migration; 56,800 persons out of an increase of 65,400 persons.

This will undoubtedly continue to be true for some time, but the percentage of population growth attributable to excess of births over deaths will gradually account for larger proportions of the population increase.

The Population Distribution Map indicates where the Town's population resided in 1960. The Density Map shows the intensity of residential development at that time.

As long as the wish to live in the suburbs continues as inexorably as it has in the past, this spreading suburban development will not be stopped. The future growth of Suffolk County and of the Town of Brookhaven appears a certainty. Population growth in the Town during the past 15 years is shown on the following Table.

A study of Brookhaven's population by age groups for the years 1950 and 1960 shows very clearly the changes that occurred in the Town during those ten years.

POPULATION INCREASES
1950 - 1965

Year	Population	Percent Increase Since 1950
1950	44,522	
1960	109,990	147
1962	122,367	175
1963	124,581	179
1964	139,278	213
1965	157,730	254

Sources: U.S. Census of Population, 1950, 1960.
Long Island Lighting Company.

As illustrated in Plate No. 7, there has been a fairly even distribution of males and females at all ages between 1950 and 1960. The large numerical increases took place in the group under 14 years of age, which more than tripled; and in the 25 to 44 age group, which more than doubled.

Table No. 3 shows that the age group of 14 years and younger made up 25 percent of the Town's population in 1950 and comprised 34 percent of the Town's population in 1960. A large proportional gain in one age group of the population reduces the relative proportions of the remaining age groups.

POPULATION PROJECTION, 1960 - 1985

The best method of forecasting Brookhaven's population, that has any validity at this stage in the development of the Town's comprehensive plan, is that of projecting a curve for Brookhaven in relation to a curve

TABLE NO. 2

POPULATION GROWTH BY TOWNS
SUFFOLK COUNTY
1900 - 1960

POPULATION (in Thousands)

AREA	1900	1910	1920	1930	1940	Percent Change '30-'40	1950	Percent Change '40-'50	1960	Percent Change '50-'60
Suffolk County	77.6	96.1	110.2	161.1	197.4	23	276.1	40	666.8	142
Western Towns	49.6	63.2	76.9	118.2	153.3	30	230.0	50	601.7	162
Huntington	9.5	12.0	13.9	25.6	31.8	24	47.5	49	126.2	166
Smithtown	5.9	7.1	9.1	11.9	14.0	18	21.0	50	50.3	140
Babylon	7.1	9.0	11.3	19.3	24.3	26	45.6	88	142.3	212
Islip	12.5	18.3	20.7	33.2	51.2	54	71.5	40	173.0	142
Brookhaven	14.6	16.7	21.8	28.3	32.1	13	44.5	40	109.9	147
Eastern Towns	28.0	32.9	33.4	42.8	44.0	3	46.1	5	65.0	41
Riverhead	4.5	5.3	5.8	8.0	8.9	11	10.0	12	14.5	45
Southampton	10.4	11.2	11.7	15.5	15.5	0	17.0	10	27.1	59
Southold	8.3	10.6	10.1	11.7	12.0	3	11.6	-3	13.3	15
East Hampton	3.7	4.7	4.9	6.6	6.5	-2	6.3	-3	8.8	40
Shelter Island	1.1	1.1	0.9	1.1	1.1	0	1.1	0	1.3	18

Source: U.S. Census of Population.

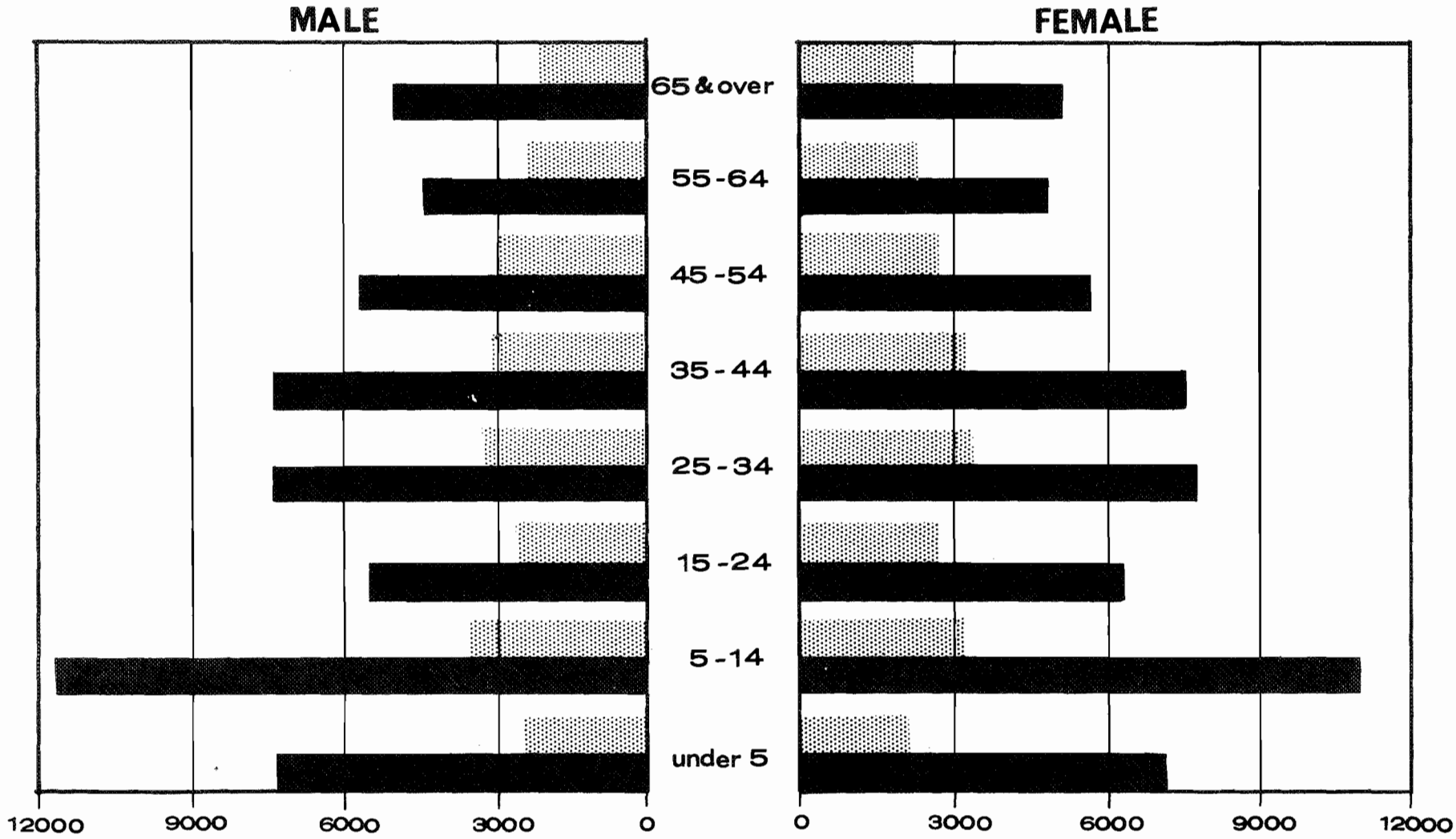


PLATE NO. 7

POPULATION BY AGE GROUPS AND SEX

TOWN OF BROOKHAVEN

1950
1960

EDWIN S. VOORHIS & SON, INC., 1963

TABLE NO. 3

DISTRIBUTION OF POPULATION BY AGE GROUPS AND SEX
TOWN OF BROOKHAVEN
1950 - 1960

Age Group	1950				1960			
	Male	Female	Total	Percent of Total	Male	Female	Total	Percent of Total
Under 5 Years	2,400	2,200	4,600	10	7,300	7,200	14,500	13
5 - 14 Years	3,500	3,200	6,700	15	11,700	10,900	22,600	20
15 - 24 Years	2,600	2,800	5,400	12	5,500	6,300	11,800	11
25 - 34 Years	3,200	3,400	6,700	15	7,400	7,800	15,200	14
35 - 44 Years	3,000	3,300	6,400	14	7,300	7,600	14,900	14
45 - 54 Years	2,900	2,900	5,800	13	5,700	5,700	11,400	10
55 - 64 Years	2,300	2,400	4,700	11	4,400	4,900	9,300	9
65 Years and Over	2,100	2,300	4,400	10	4,900	5,300	10,200	9
TOTAL	22,100	22,500	44,500	100	54,200	55,700	109,900	100

Source: U.S. Census of Population, 1950, 1960.

that has already been developed for the Region.

The Regional Plan Association has estimated the population of the Region and its counties to 1985. These estimates were determined by the Association after devoting several years to the study of the Region's present trends and policies. The continuation of the trends and policies now prevailing in the Region will have identifiable consequences, among which is their estimate that by 1985 six million people will be added to the 16 million now living in the New York Metropolitan Region. The population for Suffolk County is placed at 2,005,000 by 1985.*

These projections are shown on Plate No. 8. Curves are drawn for the Metropolitan Region, Nassau County, Suffolk County, and its five western towns, and the Town of Brookhaven. The curve for the five western towns, which includes Brookhaven, is drawn in order to show how closely the western towns follow the growth experience of Suffolk County.

The Regional Plan Association's projection for Suffolk County can be offered as an indicator at this time of Brookhaven's future projection. Plate No. 8, therefore, shows that the entire Town's population can be 190,000 persons by the year 1970. By 1980, the population can be 275,000; and by 1985, it can be 325,000 persons. The Town's increase for the past decade, 1950-1960, was 65,000 (147 percent). The projected population amounts to an increase of 80,000 (73 percent) for the years 1960-1970; an increase of 85,000 (45 percent) for 1970-1980; and for the five years, 1980-1985, an increase of 50,000 (18 percent).

The meaning of this projection in terms of families and housing is as follows: About 22,000 building permits were issued over the years 1951-1960 for the construction of new dwellings in the unincorporated area of the Town. (The population of the unincorporated area rose by about 62,500 persons, a gain of 18,000 to 20,000 families.) The 1985 population projected for Brookhaven (325,000 persons) means a gain of 215,000 persons or about 63,000 families over the population for 1960. This is an average of 2,500 new families per year, which can be translated into 2,500 new dwellings per year. Construction of new dwellings has averaged about 2,200 per year for about the past ten years.

The estimate of population for Brookhaven of between 300,000 and 400,000 within the next 25 years is based on a projection for the County which the Regional Plan Association feels is conservative.

This projection of Brookhaven's population, made for the purposes of this study, is not the ultimate projection of the population of Brookhaven. All the factors, elements, and complexities that are shaping the growth of the New York Metropolitan Region will impinge more and more forcibly on Brookhaven and the County as a whole as time goes on. It is the total of these forces that will determine the Town's actual long-range population.

---

*Regional Plan Association. Spread City, 1962.

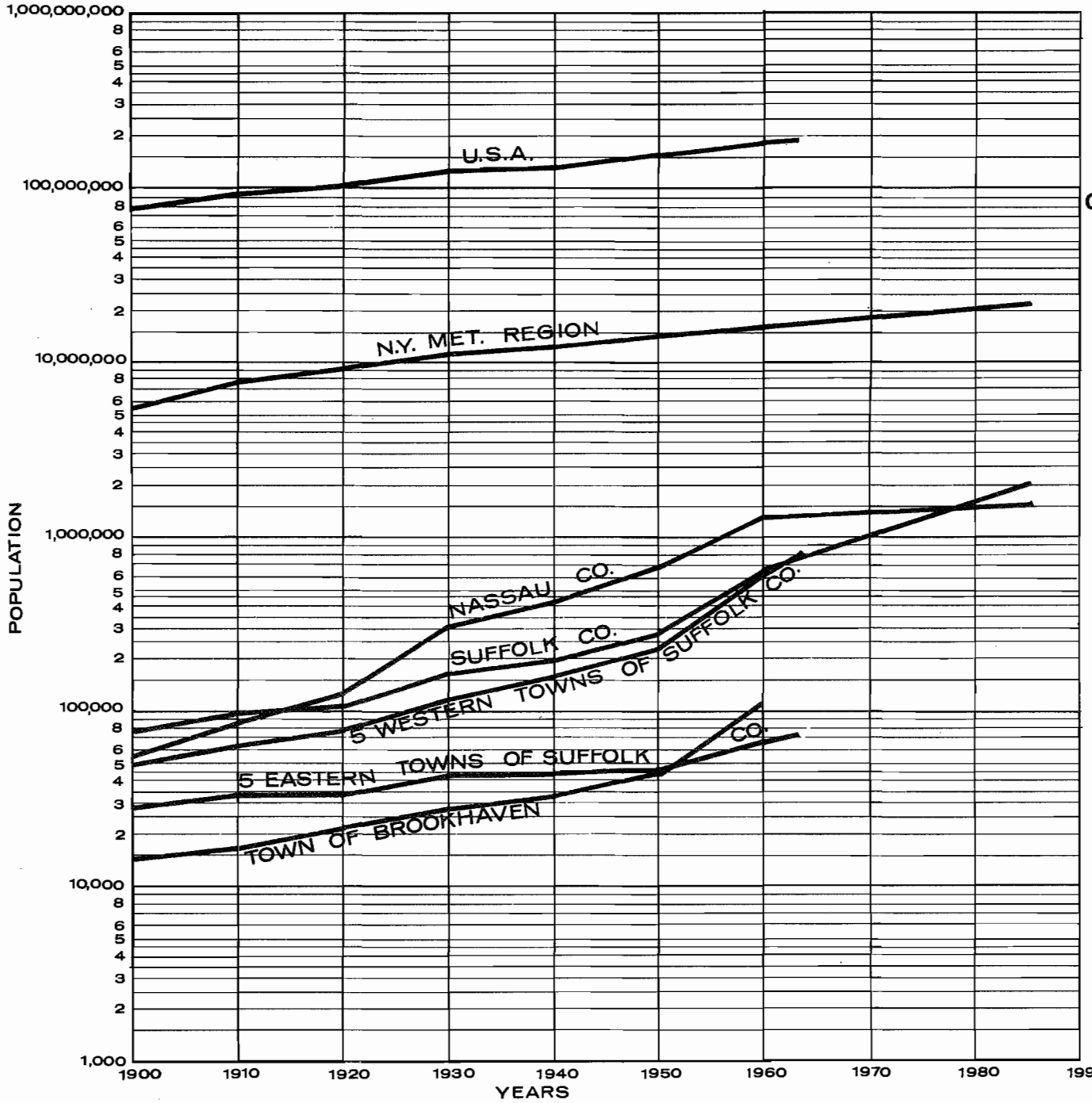


PLATE NO. 8

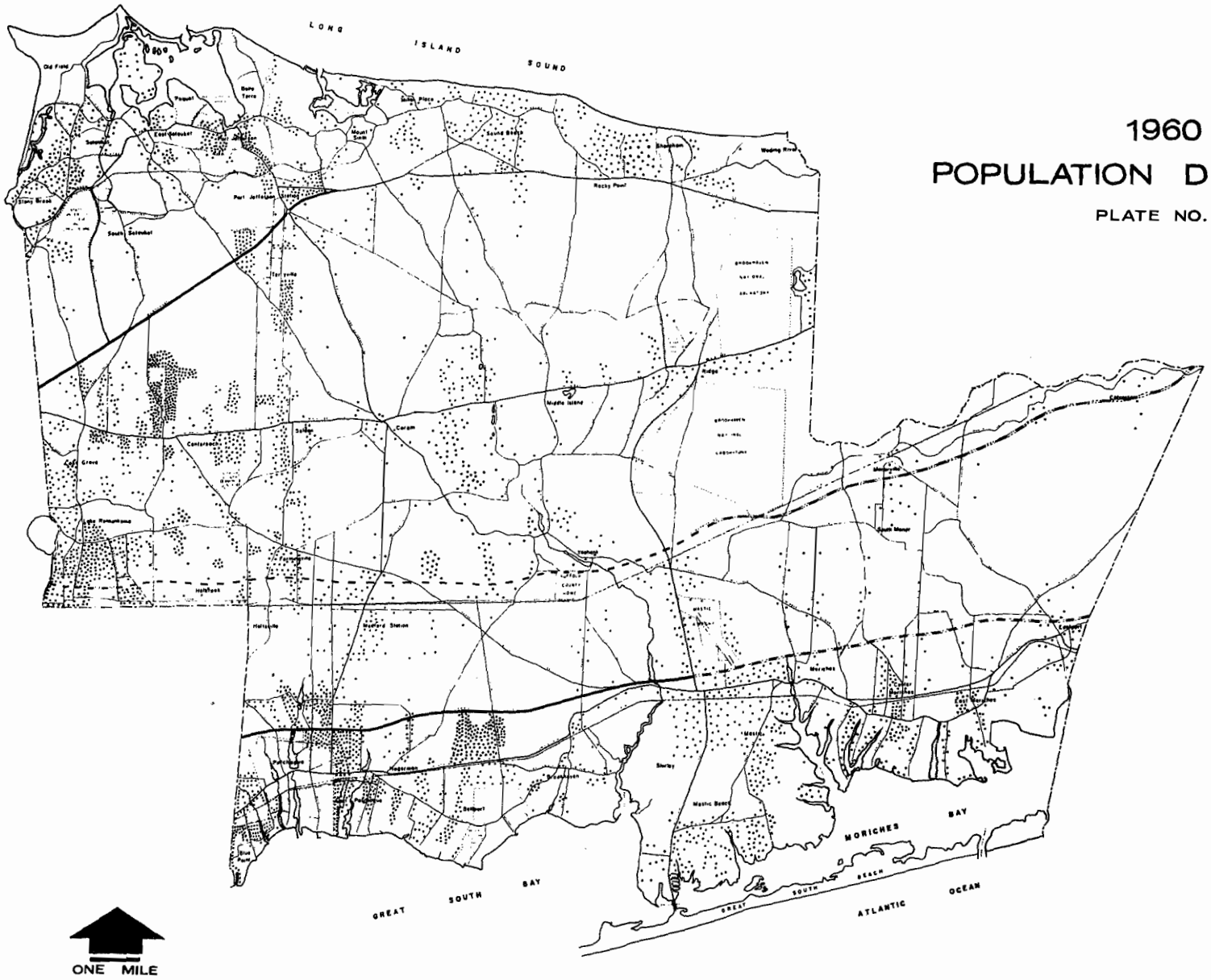
COMPARATIVE POPULATION GROWTH

TOWN OF BROOKHAVEN AND OTHER GEOGRAPHICAL AREAS

1900 – 1985

Source: U.S. Census of Population; Regional Plan Association; Long Island Lighting Company; Consultant's Estimates

EDWIN S. VOORHIS & SON, INC.
1963



1960
POPULATION DISTRIBUTION

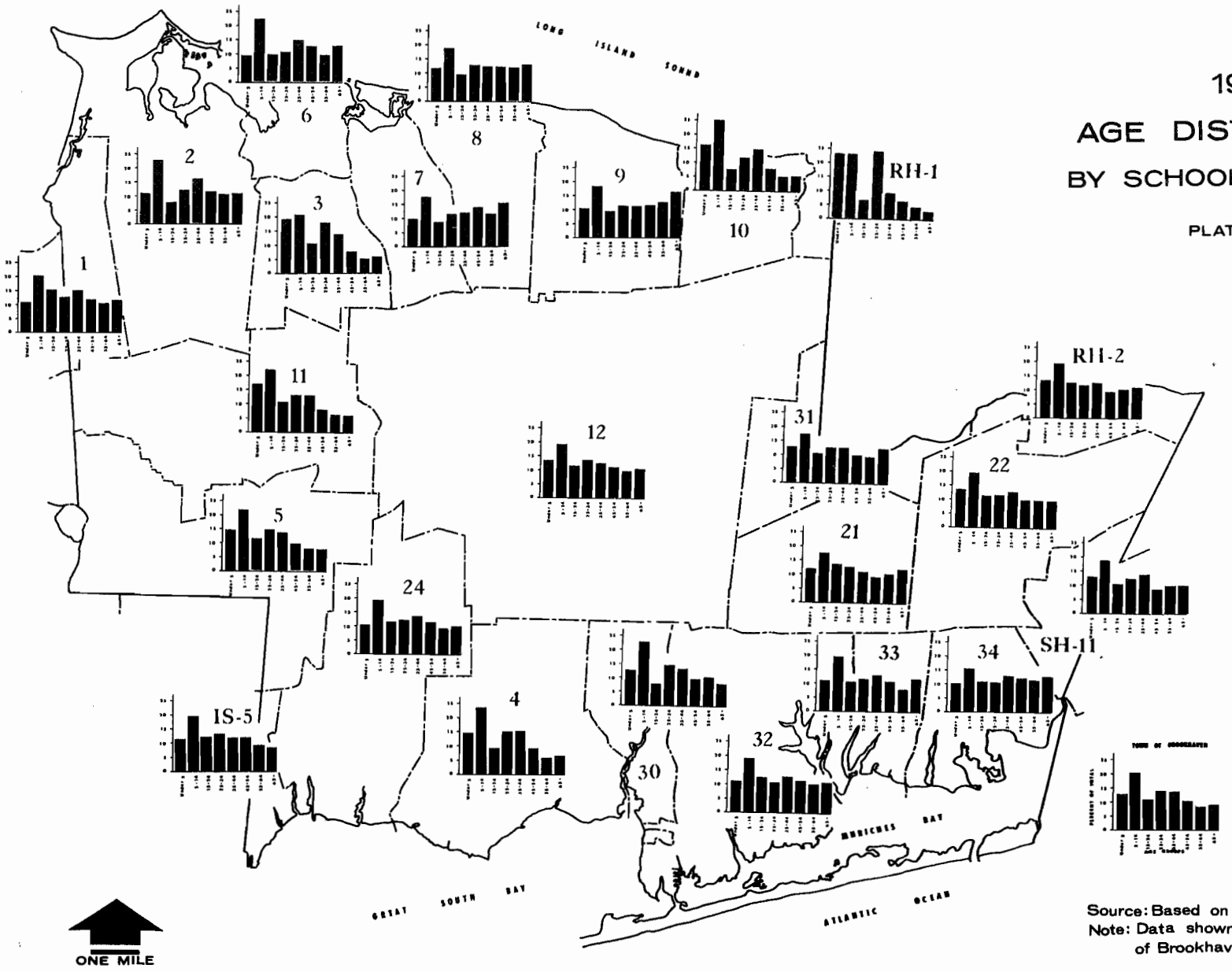
PLATE NO. 9

LEGEND
One dot represents 25 persons
Source: 1960 U.S. Census

EDWIN S. VOORHIS & SON, INC., 1963

1960
AGE DISTRIBUTION
BY SCHOOL DISTRICTS

PLATE NO. 10



Source: Based on 1960 U.S. Census
Note: Data shown is for the Town of Brookhaven only

EDWIN S. VOORHIS & SON, INC., 1963

ECONOMIC ASPECTS

EMPLOYMENT CHARACTERISTICS
OF THE RESIDENT POPULATION
1950 - 1960

Year	14 Years and Over	Civilian Labor Force	Employed Persons
1950	34,905	15,800	15,100
1960	74,368	38,528	36,683
Percent Increase	113%	144%	143%

Source: U.S. Census of Population, 1950, 1960.

1960 Census information indicates that the population growth in Brookhaven has also shown an accompanying increase in its labor force and employment.

LABOR FORCE CHARACTERISTICS

Travel Patterns of Employed Persons

The proportion of resident workers who are employed within their own local areas is an indication of where jobs are available in relation to their homes. The extreme commuting distance of Brookhaven from New York City, where most of the jobs in the Metropolitan Region are concentrated, also exerts an influence on the travel habits of the employed population. As the following Table shows, most of them have their place of work within Suffolk County.

The U.S. Census of Population has accounted for over 90 percent of the Brookhaven resident workers as to their places of employment. By location, number, and percent, these workers were distributed as follows:

PLACE OF WORK OF THE
BROOKHAVEN LABOR FORCE
1960

Location	Number	Percent
Suffolk County	27,718	82.3
Nassau County	2,527	7.5
New York City	3,313	9.8
Elsewhere	138	0.4
TOTAL REPORTED	33,696	100.0

Source: U.S. Census of Population, 1960.

It can be readily seen that the County provided employment opportunities for a vast segment of the working population of Brookhaven. Conversely, few people were attracted to the employment centers of New York City and Nassau County. The relative inability of New York City to attract the Brookhaven labor force is mainly attributable to the great distance between the areas. Although some workers will always

be attracted to jobs outside of Suffolk County, it is evident that jobs will have to be provided locally for the greater part of Brookhaven's growing labor force.

Occupational Characteristics

The division of Brookhaven workers into occupational groups shows how the 36,683 employed persons were accounted for in 1960.

OCCUPATIONAL GROUPS
OF RESIDENT WORKERS IN BROOKHAVEN
1960

Occupational Groups	Number	Percent
Professional and technical	4,685	12.8
Managers, officials and proprietors	3,308	9.0
Clerical	4,652	12.7
Sales	2,448	6.7
Craftsmen and foremen	6,981	19.1
Operatives	6,048	16.5
Private household	454	1.2
Service(except household)	3,391	9.2
Laborers	1,999	5.4
Not reported	2,717	7.4
TOTAL	36,683	100.0

Source: U.S. Census of Population, 1960.

Craftsmen and foremen constitute the largest occupation group in Brookhaven and this is followed by the operatives group. This latter group includes drivers, routemen, and various types of machine operators. It accounts for a larger percentage of employed persons than the same category does for Suffolk County as a whole.

The following Table indicates the number of workers and the percentage of the total resident employment by major industry groups in the Town of Brookhaven.

INDUSTRY GROUPS
OF RESIDENT WORKERS IN BROOKHAVEN
1960

Industry Groups	Number	Percent
Construction	4,019	11.0
Manufacturing	8,369	22.8
Transportation, communication and utilities	2,761	7.5
Wholesale and retail	6,380	17.4
Business and repair services	902	2.5
Personal services	1,491	4.1
Professional services	6,465	17.6
Public administration	1,290	3.5
Others and not reported	5,006	13.6
TOTAL	36,683	100.0

Source: U.S. Census of Population, 1960.

The Brookhaven data included in the above Table shows that manufacturing is the largest industry group in the Town although its proportion of the total resident workers is less than that for Suffolk County. The number of residents engaged in transportation, communi-

cations, and other utilities is also proportionately less in the Town than in the County. Larger percentages of employed persons engaged in construction, retail, and wholesale trade, and professional services offset the aforementioned proportional decreases. Variations in the percentage of resident workers engaged in the other industries shown on the list are minor.

The degree of similarity between Brookhaven and Suffolk County regarding the characteristics of the employed residents by industry groups parallels the similarities which were noted for the respective occupational groups. Thus, it becomes more evident that the Brookhaven labor market generally reflects the characteristics of the Suffolk County labor market.

The Suffolk County Department of Planning, the Long Island Association, and the Patchogue Electric Company have prepared valuable information regarding existing employment in Brookhaven. These surveys give a fair sampling of industrial activity in the Town but they are not all-inclusive because the surveys rely on the voluntary cooperation of the individual enterprises.

The largest employers in Brookhaven are not manufacturing firms. The major employer is the Brookhaven National Laboratory, which is engaged in fundamental and applied research in the nuclear sciences and related subjects. It employs over 2,000 persons. The County and Town governments are also major employers in Brookhaven. The majority of County employees within the Town are employed by the Department of Public Works at Yaphank and at the County Home. Among the utilities, the New York Telephone Company is the largest employer. Other utilities, including the Long Island Lighting Company and the Patchogue Electric Company, also account for a significant number of workers in Brookhaven.

The Town contains no outstanding large manufacturing concerns at the present time. Nevertheless, there are about one dozen production firms having employment figures in excess of 100 persons. The largest of these employs three to four hundred workers.

A study of the present employment patterns in Brookhaven shows that employment opportunities are quite varied and growing. This applies to job opportunities in manufacturing establishments as well as to the other industry groups.

Employment Opportunities

Employment in commerce and industry has been developing on Long Island at a rapid pace. In 1962, for example, more than a quarter-million additional persons worked in non-agricultural activities within the Nassau-Suffolk area than in 1950. These figures pertain to jobs that are located within the area and consequently include resident as well as non-resident workers.

More than half the manufacturing jobs within Nassau and Suffolk Counties are concerned with the production of aircraft and parts, electrical instruments and related equipment. To provide jobs of a more diversified nature, there is a need to encourage industries in the consumer products field to locate in the area.

Income

The measurement of individual or group income may be accomplished in several different ways. For the purposes of this report, family income data reported by the U.S. Census for 1959 was chosen because of its applicability to the Town, as well as to the larger geographic areas. Income comparisons are provided in Table No. 4. These show the median family incomes and the percentage distributions in three income ranges for the United States, New York City, two Long Island Counties, and the Town of Brookhaven.

The median family income in the entire United States in 1959 was substantially less than it is locally. The Brookhaven figure was about on a par with the family income of New York City residents.

Less than 15 percent of Brookhaven families earned annual incomes in excess of $10,000. This is a smaller proportion than for any of the other areas compared.

There is little doubt that the majority of the Town's families are in the middle-income bracket, with about one-third of them having earned less than $5,000 in 1959. Thus, buying power is not as favorable in comparison to the situation in Nassau and Suffolk Counties as a whole.

BUSINESS AND MANUFACTURING

Growth in Manufacturing

The amount of manufacturing that takes place in any given place is an important indicator of the vitality of the area. Significantly, Long Island's share of manufacturing within the New York Metropolitan Area has been increasing. The number of manufacturing firms, employment, value added, and other indicators, all reveal a definite upward trend in this regard.

Total manufacturing employment in Brookhaven accounts for less than one-quarter of all the jobs in the Town, although the actual number of production firms is plentiful. This is because no single firm claims a significantly large portion of the labor market. It should be noted that because of the lack of available comprehensive data for Brookhaven, no exact figures on manufacturing can be given.

Generally, as stated in its 1962 report, Economic Base, the Suffolk County Department of Planning stated that the large numerical gains in manufacturing and non-manufacturing job opportunities within the Nassau-Suffolk Industrial Area have made it into one of the leading industrial areas of the nation.

Growth in Retail Trade and Services

Growth in retail trade and service establishments on Long Island has also been quite dynamic.

Although the number of retail establishments within the Metropolitan Area diminished, the number of

TABLE NO. 4

MEDIAN FAMILY INCOME IN THE UNITED STATES, NEW YORK CITY, NASSAU AND SUFFOLK COUNTIES, AND THE TOWN OF BROOKHAVEN
1959

	United States	New York City	Nassau	Suffolk	Brookhaven
Median family income	$5,660	$6,091	$8,515	$6,795	$6,122
Percent earning under $5,000 annually	41.9	35.9	14.1	25.8	34.6
Percent earning $5,000 - $9,999	43.0	45.6	48.3	54.3	50.6
Percent earning $10,000 and over	15.1	18.5	37.6	19.9	14.8

Source: U.S. Census of Population, 1960.

outlets in Nassau and Suffolk Counties has shown substantial average annual increases since World War II.

Modern shopping centers are being established in Suffolk County in ever-increasing numbers. These include regional centers as well as local convenience goods outlets. Their locations in Brookhaven have generally been determined by their proximity to existing housing or by areas of new and vigorous residential development. Consequently, the majority of these centers have located in the western parts of the County. However, as urbanization moves eastward, new shopping centers will follow. Locations of new and proposed shopping centers in the Town of Brookhaven include communities such as Port Jefferson, Centereach, Patchogue, Lake Ronkonkoma, and Setauket.

Wholesale Trade

In the past, this element of the economy has had a relatively minor status in Suffolk County, but as the population of the County builds up, the need for local distribution outlets is certain to increase. New York City currently retains over 90 percent of the sales volume in wholesale activities, but the relative share of the sales volume of the outlying areas of the Metropolitan Area is increasing. Nassau County, for example, is fast becoming a vital factor in wholesaling activities. In the postwar period, it expanded its wholesale volume four and one-half times.

Agricultural Activity

Suffolk is the leading agricultural County of New York State despite the fact that large population increases in recent years have resulted in rapid urbanization of parts of the County. Partially because of its large area however, Suffolk County has thus far been able to absorb this influx without an appreciable diminution of agricultural activity. It still therefore, retains much of its rural atmosphere.

Suffolk County is well known for its Long Island ducks and other poultry and poultry products. The County is also a large producer of potatoes and field crops as well as nursery, greenhouse, and forest products. Within the County, this industry also includes the grading, packaging, and transportation of farm products, the selling and servicing of farm machinery and equipment, and the sales of insecticides and other materials for farm use.

The total acreage devoted to farming in the County diminished from 100,000 acres in 1954 to 90,000 acres in 1959. A land use survey made by the County Department of Planning, indicated that by 1962, agricultural lands had decreased to 70,000 acres in the County, accounting for 14 percent of its total land area. The same survey showed that Brookhaven had only eight percent of its total land area, or approximately 13,000 acres, in agricultural use. The Consultant's land use study revealed about the same figures. Agricultural lands in the Town are scattered throughout its 250 square miles of land area. The largest area of agricultural concentration in the Town is in the Moriches-Eastport section where many duck ranches, chicken farms, and other agricultural enterprises flourish.

The total acreage devoted to agricultural use in Brookhaven and its surrounding areas is diminishing. Resident employment in agriculture is also declining. This may appear paradoxical since total sales of farm

products have been climbing. However, acreage does not necessarily measure farm productivity. Small areas can produce heavily, especially if devoted to the types of products in which Long Island excels. Additional factors contributing to productivity include mechanization and modern farming processes. With fewer farms and workers and less land, agriculture in the County has increased its output and its investment. Thus, farming is still an important and vital enterprise in the County and in Brookhaven.

Apparently the lands that have been taken out of agricultural usage have been affected by their marginal nature for farming purposes and increasing land values. As urbanization continues, more land will be taken out of farming, but it can be expected that the most productive lands will also be most resistant to change. Thus, although the future role of agriculture will diminish in respect to the total economy of Brookhaven, this industry will still contribute a significant share of the Region's farm products.

ECONOMIC PROJECTIONS

Economic Implications for the Future

The future economy of the Town of Brookhaven will be influenced by national and regional economic trends, technological changes, the growth of the New York Metropolitan Region and other such influences as well as the Town's own endeavors to develop its economy.

Future Jobs in Brookhaven

The rate of population increase in Brookhaven is somewhat higher than that of the County. As a result of this, the labor market within the Town is also growing and is thus creating a stronger attraction for potential new industry and commerce. One of the major considerations of industry is the availability of a labor pool. It has been previously established that the Long Island labor force is increasing more rapidly in numbers than in new jobs. As long as this trend continues, the number of out-commuters will necessarily increase.

As of 1960, the Brookhaven labor force numbered almost 39,000 persons. According to the population projection presented earlier, Brookhaven's population could reach 325,000 by 1985. By using this population projection as an objective and by assuming a proportional increase of the 1960 labor force, roughly 35 percent, an estimate of the 1985 labor force may be made. It could reach 114,000 by the end of this period. This means that an annual increase of about 3,000 potential workers is possible.

Thus, in order to provide sufficient jobs for its growing population and also for its students coming out of high school and college, Brookhaven must greatly expand its employment opportunities. If the labor force expands as it is expected to, then approximately 3,000 new jobs must be created annually in Brookhaven. Seven to eight hundred of these should be in manufacturing in order to maintain the present balance between manufacturing and non-manufacturing jobs.

A smaller increase in jobs will mean that the excess members of the resident labor force will have to find employment outside of Brookhaven. Sufficient

numbers of jobs and a large variety of occupations and industries can also provide workers with a choice of employment opportunities near their homes.

Agriculture

The continuing urbanization of Brookhaven will further reduce agricultural acreage within the Town. Since Suffolk County and Brookhaven claim a relatively high value of agricultural product per productive acre, farming is anticipated to continue as a significant specialized segment of the total economy. Its continuation will also be of positive value in maximizing the diversification of the Town's economy. Selective zoning for agricultural activities can be of help to insure that this sector of the economy will maintain its important status in the years ahead.

New Industry

Brookhaven is experiencing the brunt of urban expansion in the New York Region. This trend includes the attraction of new manufacturing and other industrial activities to the Town. A number of other factors will influence the industrial development of Brookhaven. The positive influences outweigh the negative influences in determining the number of new jobs that the Town will be able to attract and offer in future years. Some of the advantages of Brookhaven are:

- The large and numerous suitable industrial sites.
- The adequate highway, rail, water, and air transportation facilities serving the Town.
- The diversified labor force which includes well educated and skilled personnel.
- The current active programs of the Town and County for attracting industry, and
- The greatly expanding educational facilities of the County, including schools of higher learning.

New industry will ultimately bring tax benefits to the Town and its inhabitants. Diversity of industry will make the economy relatively immune from changes within individual industries.

Commercial Activity

Commercial and service activities will grow in relation to the population increases. These activities use only a minor portion of the developed land but they must be properly located. It should therefore be a major concern of the Town to arrest the growth of commercial strip development and to work towards making its commercial enterprises more modern, attractive, better designed, and more competitive with new planned shopping centers.

Residential Land

Factors including anticipated population growth and the age and family structure, and the income distribution of the population will have an effect on the types of shelter which will be needed. It is therefore expected that an increasing interest and demand will occur for housing types other than single-family dwellings. Thus,

attached town houses, garden apartments, and multi-story apartment houses selectively located, should become components of the Brookhaven housing supply. This will afford a variety of dwelling types for every taste and need.

TRAFFIC CIRCULATION AND PARKING

Introduction

A complete inventory and analysis has been made of the existing major road system in the Town of Brookhaven, including the classification of all roads according to function and political jurisdiction. This inventory has also taken into account the critical geometric features of the roads within the system. This requires a knowledge of deficiencies in sight distance, curvature, gradients, and clearances as compared with acceptable standards.

In addition, detailed traffic studies, including volume counts, classification counts - indicating the percentage of types of vehicles such as trucks, buses, and automobiles using the routes - turning movement counts, speed and delay studies, and accident studies have been undertaken by the Consultant to aid in determining and measuring deficiencies. The technical details of some of these studies are contained in Volume IV of the individual series of Master Plan reports.

For reasons of economy, existing routes cannot be considered obsolete simply because they do not meet the ideal standards which would be required on a new route. Practically, if the existing road serves traffic in a reasonably efficient and safe manner then it can be considered to be within tolerable standards. Hazardous conditions should, of course, be corrected but the road need not be replaced until such time as it can no longer function adequately.

TRAFFIC CIRCULATION

Analysis of Hourly and Daily Traffic Variations

Traffic counts were taken at 128 selected points throughout the Town. In addition to automatic counts, numerous short counts and classification counts were taken to aid in interpreting the traffic flow patterns.

Plate No. 11 indicates the volumes for 1963 based upon these counts.

Adjustments were made in accordance with New York State Department of Public Works monthly variation factors. Plate No. 12 illustrates graphically these variations in terms of number of vehicles per month for 1961, which was the latest data available.

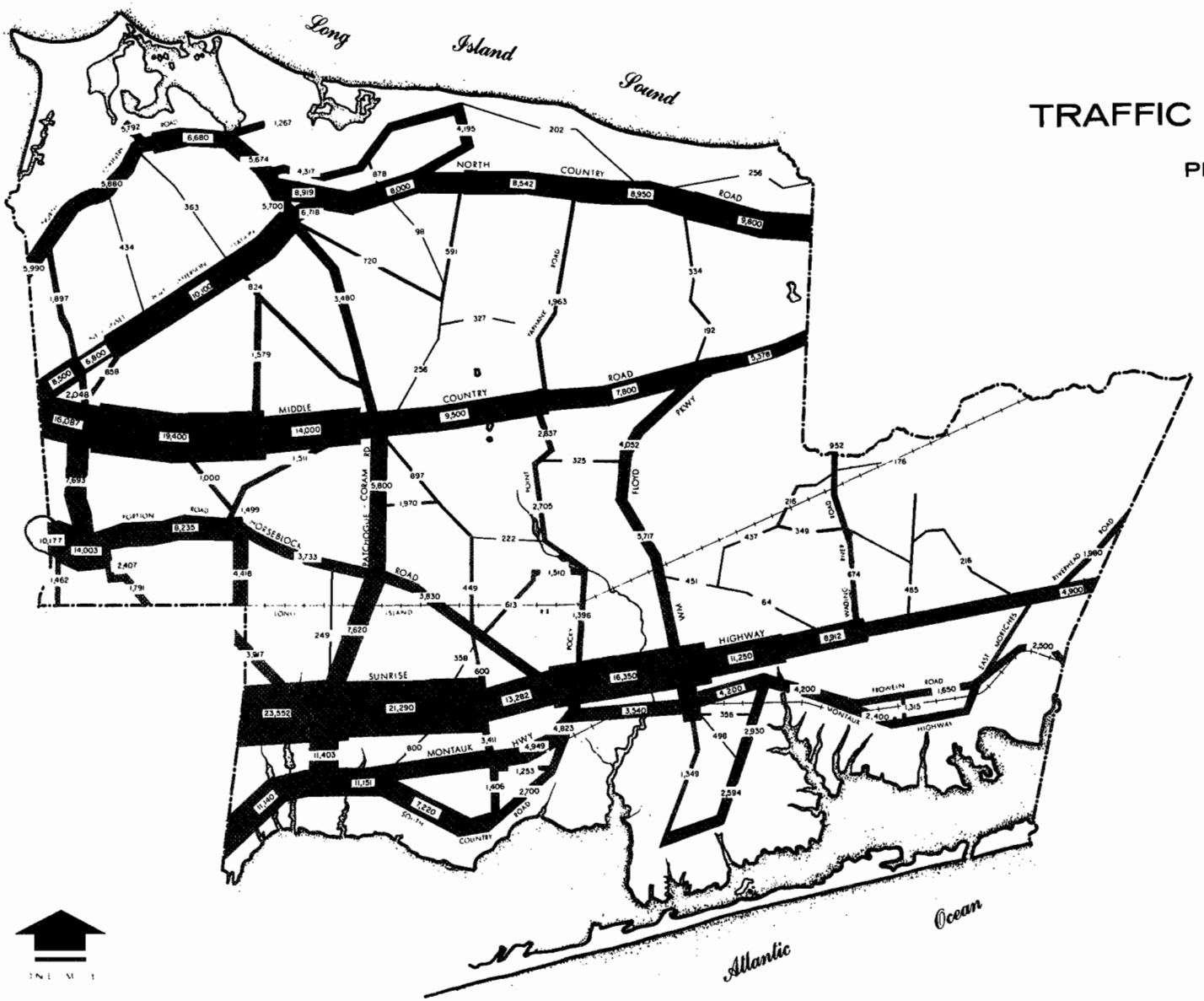
Plate No. 13 is a location map showing where counters were located for measuring the traffic volumes. "Annual Average Daily Traffic" (AADT) volumes for 1963 are shown for major routes on Plate No. 11.

Classification of Roads and Streets

Plate No. 14 is a classification map of the street system within the Town of Brookhaven according to primary function and governmental jurisdiction. State and County roads are indicated by their appropriate route numbers and all others, not so identified, are Town roads. The categories according to function are:

1963
TRAFFIC VOLUME MAP

PLATE NO. 11



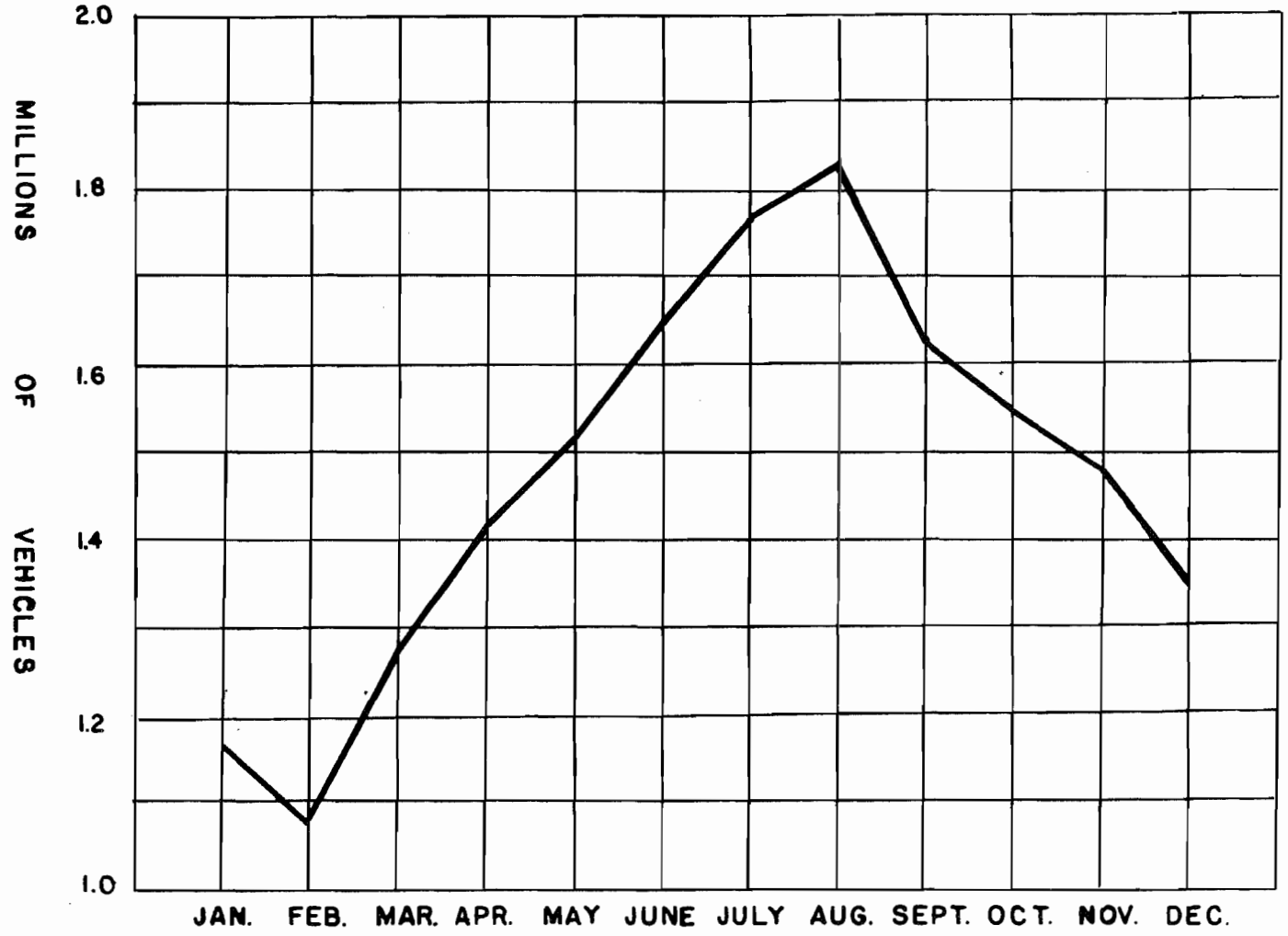
LEGEND

1 2 4 6 8 10 12 14 16 18

VOLUME IN THOUSANDS
1963

11,400 NUMBER OF VEHICLES (ANNUAL AVERAGE DAILY TRAFFIC)

EDWIN S. VOORHIS & SON INC., 1963



STATE OF NEW YORK

MONTHLY AVERAGE TRAFFIC TRENDS

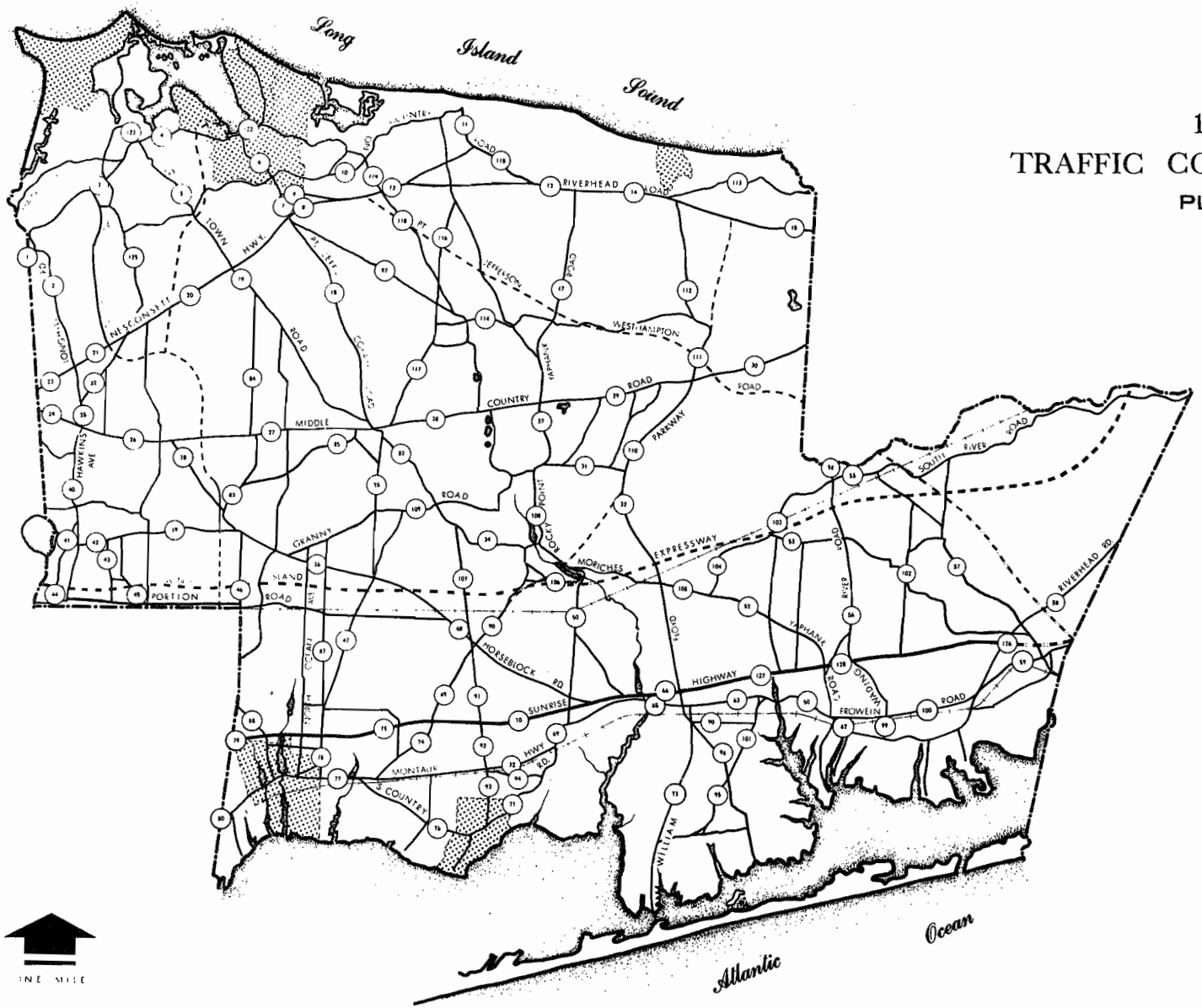
1961

PLATE NO. 12

SOURCE: N.Y.S.D.P.W.

EDWIN S. VOORHIS & SON, INC., 1963

1962 - 1963
TRAFFIC COUNTER STATIONS
PLATE NO. 13



LEGEND

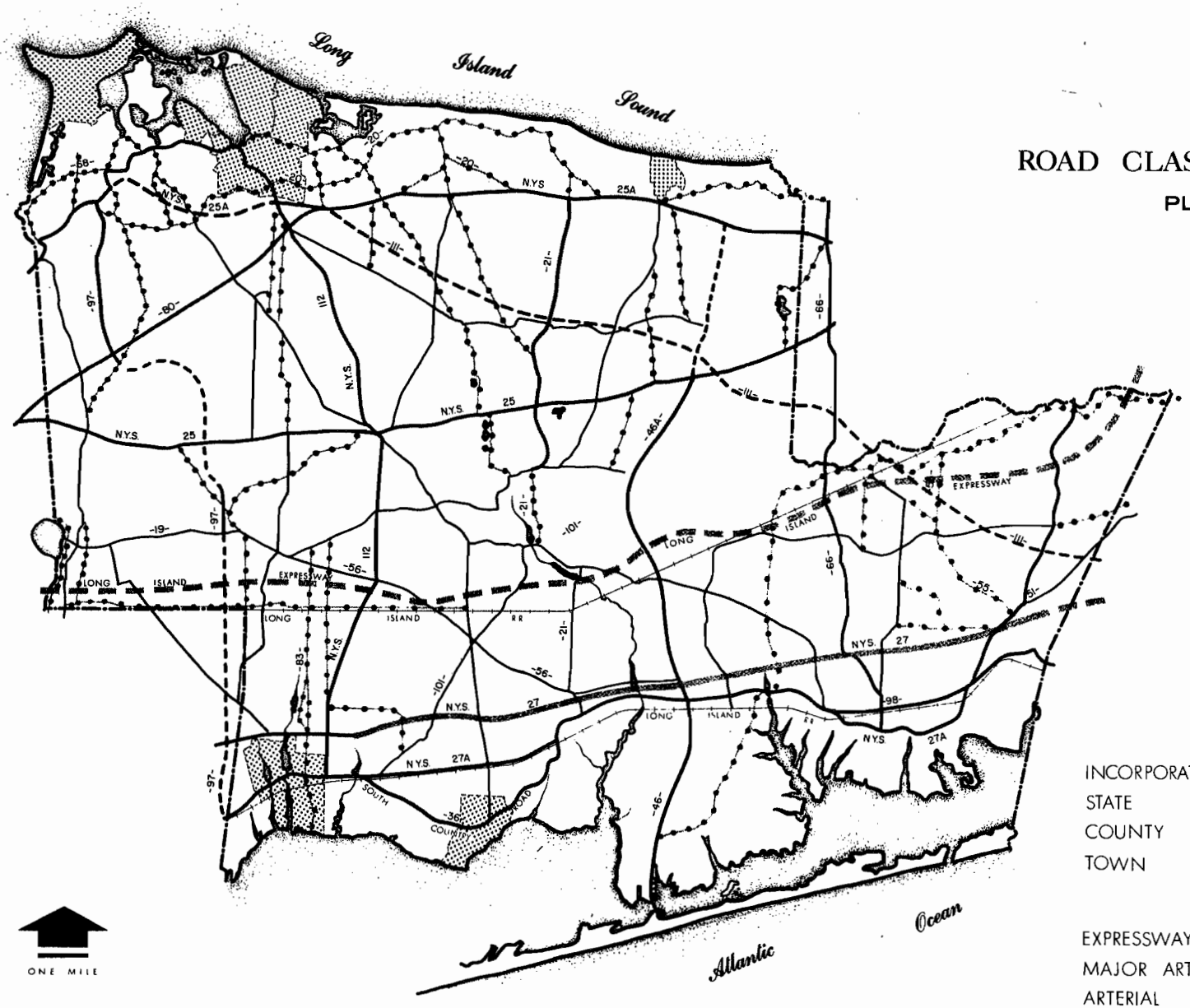
PROPOSED ROAD

INCORPORATED VILLAGE

EDWIN S. VOORHIS & SON, INC., **1963**

1963
ROAD CLASSIFICATION MAP

PLATE NO. 14



LEGEND

INCORPORATED VILLAGE	
STATE	N.Y.S. 23
COUNTY	-123-
TOWN	NO NUMBERS OR NAMES SHOWN

	EXISTING	PROPOSED
EXPRESSWAY		
MAJOR ARTERIAL	——	- - -
ARTERIAL	——	
COLLECTOR	-•-	

EDWIN S. VOORHIS & SON, INC., **1963**

controlled access or expressway; major arterials; arterial; and collector roads.

Plate No. 15 illustrates the typical sections recommended for the various Town street and highway categories. The recommendations are set forth here in order to provide a yardstick for evaluating the existing street system. Likewise, Table No. 5, "Minimum Design Standards", is included at this time for the same reason.

In order of importance, the highest type of arterial highway is the controlled access or expressway facility. It is characterized by complete or partial control of access, high standards of design and wide rights-of-way. Within the Town of Brookhaven the proposed Long Island Expressway and the extension of Sunrise Highway fall into this category. This type of highway is generally a part of the Federal or State Highway System and comprises only a small part of the Town's highway mileage although carrying a relatively large percentage of the traffic.

Next in importance is the major arterial highway. It is intended primarily to serve through traffic and should be designed to facilitate the orderly movement of relatively large volumes of traffic with a minimum of interference.

The difference between the major arterial highway and the arterial highway is mainly volumetric. While the function of the arterial highway is also to provide for the through movement of motor vehicles, a greater degree of service to abutting properties can be tolerated.

The fourth category, collector roads, comprises a large percentage of the local system. They serve the internal movement of traffic by providing access to adjacent properties and carrying local traffic to the arterials.

Typical Section 5 of Plate No. 15 is recommended for minor residential streets. The indicated minimum roadway width of 34 feet is considered essential to insure two-way circulation when vehicles are parked on both sides of the street, as is frequently the case. In one-family residential areas where lot size indicates parking will not be a problem and development is such that the character of the streets is unlikely to change, lesser values could be used for the paved roadway while still maintaining a 50 foot right-of-way. This should be the exception rather than the rule.

Actual and Required Capacities

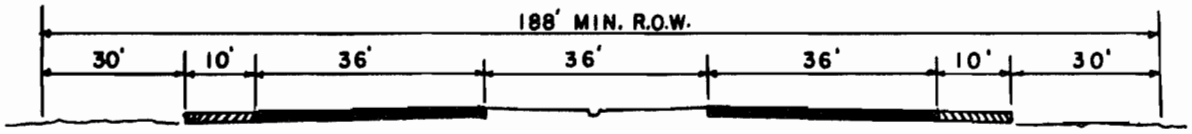
The practical capacity of a roadway is defined as the maximum number of vehicles that can pass a given point on the roadway during one hour without the traffic density being so great as to cause unreasonable delay, hazard, or restriction to the driver's freedom to maneuver under the prevailing roadway and traffic conditions. When this practical capacity is exceeded, delay will occur.

Practical capacity is in itself a variable. For urban areas, where drivers are willing to accept lower speeds, the practical capacity of a roadway is higher than in rural areas. Practical capacity is also affected by lane width, alignment, and grade, percentage of commercial traffic, horizontal clearance from edge of pavement, and other factors which govern motor vehicle performance. All of these factors have been considered

PLATE NO. 15

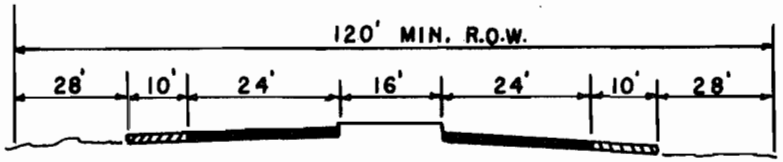
RECOMMENDED CROSS SECTIONS

(1)



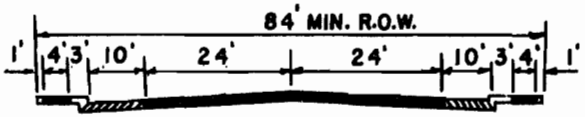
CONTROLLED ACCESS

(2)



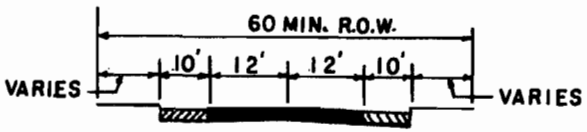
MAJOR ARTERIAL

(3)



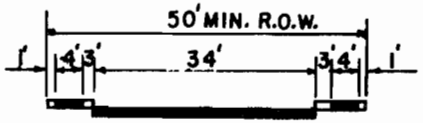
ARTERIAL

(4)



COLLECTOR

(5)



MINOR RESIDENTIAL

TABLE NO. 5

RECOMMENDED MINIMUM DESIGN STANDARDS
FOR THE
TOWN OF BROOKHAVEN

Type of Facility	Design Speed M. P. H.	Maximum Curvature (degree of curve)	Maximum Grade	Minimum Sight Distance Feet	Minimum Lane Width Feet	Minimum R/W Feet
Expressway	60 - 70	5° - 3° 500' Min. Length	3%	475-600	12'	188'
Major Arterial	50 - 60	7° - 5°	6 -5%	350-475	12'	120'
Arterial	40 - 50	11° - 7°	7 -6%	275-350	12'	84'
Collector	30 - 40	20° - 11°	10 -7%	200-275	12'	60'
Minor Residential Street	30	*	*	*	34' total width	50'

R/W - Total width of public right-of-way.

* Variable - Will depend on conditions.

Source: Edwin S. Voorhis & Son, Inc.

in analyzing the capacities of the major routes in the Town of Brookhaven. A summary of the actual and required capacities for the major routes under present conditions is included in Table No. 6.

In some areas the practical capacities of the roadways are not being fully realized due to the fact that intersection capacities are inadequate. This is the case, for example, on Sunrise Highway at the intersection of Route 112, on Portion Road at the intersection with Hawkins Avenue, and on Route 25 at the intersection with Gould Road. Practical intersection capacity is the maximum volume that can enter an intersection during one hour with most drivers being able to clear the intersection without waiting for more than one signal cycle. Obviously, any measures which can be introduced to permit a larger number of vehicles to pass through an intersection will aid in enabling a given roadway to operate at its practical capacity. Plate No. 16 depicts three such capacity-increasing measures. Figure A represents an intersection in which the paved areas have been increased by using larger curb return radii; Figure B shows approach widening by paving the shoulders within the intersection areas; and Figure C shows an intersection channelized for left and right turns with opposing lanes on the major street separated by a median divider.

Indications are that the turning conflicts are associated with the existing congestion and/or recurring accidents at many locations. Since many of these routes are scheduled for widening, intersection improvements can be built in at the time of construction. In other cases, turning lanes can be provided by channelizing the traffic flows, by obtaining additional lane width through the elimination of some curb parking, and the control of turning movements by signalization where warranted.

In general, most of the road system of the Town of Brookhaven is adequate for present needs. Serious defects in horizontal and vertical alignment should be corrected, however. Future requirements are discussed in Part II of the Master Plan report. For the present, the deficiencies outlined herein should be corrected.

PARKING

Shopper Parking Facilities

Parking problems exist because of the increased mobility of the public and the greater use of the automobile. The Town of Brookhaven is fortunate in that, with the exception of a few shopping areas, there is ample suitable land available for acquisition to satisfy the present and future parking needs.

In approaching the parking problem, the fundamental concept that highways are intended primarily for the movement of traffic must be recognized and accepted. Curb parking especially along a major highway, creates added hazards and obstructs the flow of traffic. Unfortunately most of the commercial development in the Town has taken place along the major highways but existing curb parking should not be tolerated any longer than is absolutely necessary.

Studies have shown that where curb parking has been prohibited, traffic movement has increased considerably. Such improvements in traffic flow are important since they have a great effect on the maintaining of competition between the newer shopping centers and the older downtown shopping areas. Prospective customers will make their choice based on convenience of

TABLE NO. 6

CAPACITIES OF EXISTING MAJOR ROUTES
TOWN OF BROOKHAVEN

Street Name or Route No.	1963 AADT	Practical Capacity	Lanes Available	Lanes Required
Route 25-A	5,600- 8,600	5,000- 8,000	2	2-4
Nesconset-Port Jefferson Highway	6,800-10,100	18,000-23,000	4	4
Route 25	5,378-19,400	8,000-10,500	3	4-6
Portion Road	8,235-14,003	6,000- 9,000	2	2-4
Horseblock Road	3,700- 3,800	5,055- 8,400	2	2
Route 27	4,900-23,552	22,000-26,000	4	4-6
Route 27-A	2,322-11,151	8,875-11,900	3	2-4
Route 112 - between Route 27-A and Route 27	11,403	7,000-10,000	2	4
Route 27 to Horseblock Road	7,620	8,900-11,900	2-3	2
Horseblock Road to Route 25-A	3,480- 5,800	4,775- 7,945	2	2
Yaphank-Middle Island-Rocky Point Road	1,396- 2,837	4,100- 6,860	2	2
William Floyd Parkway	4,052- 5,717	21,000-25,000	4	2
Hawkins Avenue	7,693	6,000- 9,000	2	2

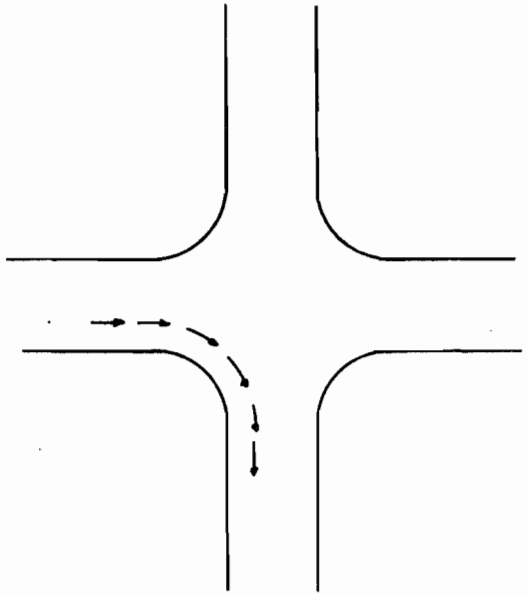


Fig. A

APPROACH WIDENING

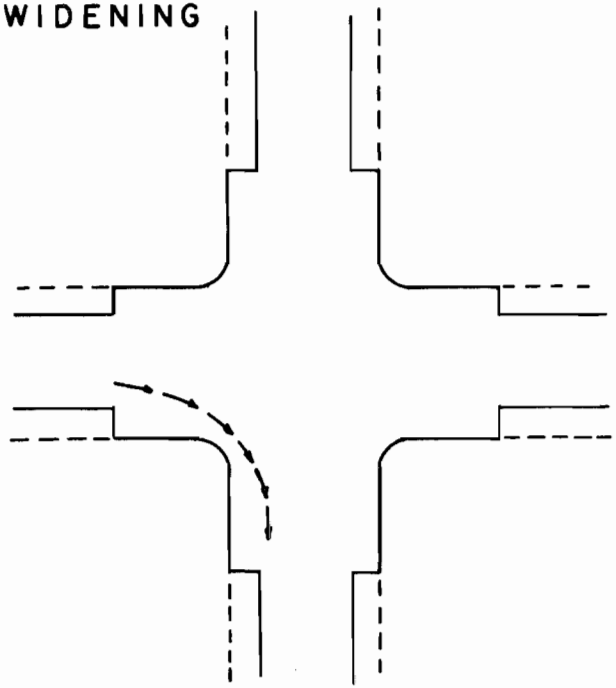
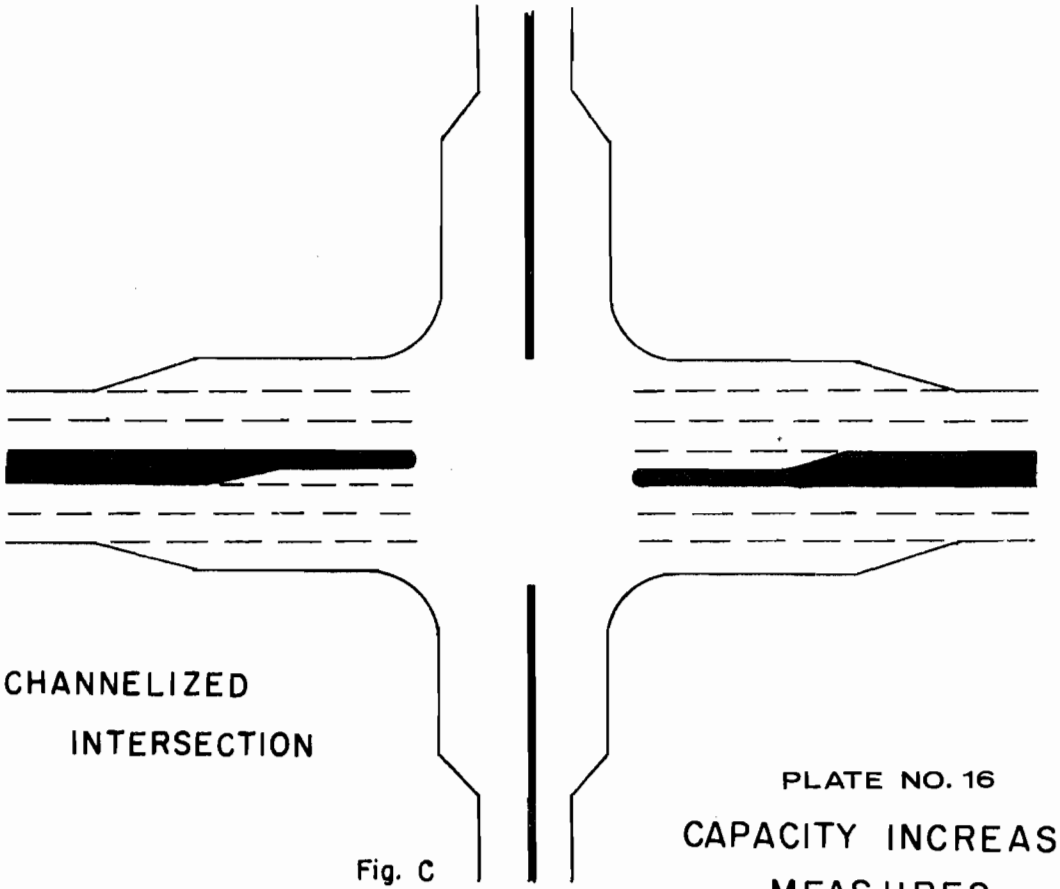


Fig. B



CHANNELIZED INTERSECTION

Fig. C

PLATE NO. 16

CAPACITY INCREASING MEASURES at INTERSECTIONS

travel and adequate parking. The modern shopping center has these features "built in". If the older downtown area is to compete effectively, it must offer similar conveniences.

A further dividend which will be gained from the removal of curb parking is a reduction in accidents. Parking or unparking cars account for one-tenth of all accidents. There are more accidents caused by angle or diagonal on-street parking than by parallel parking. Parking near intersections also contributes to accidents and parked cars contribute to pedestrian accidents.

An extensive field survey of the unincorporated area of the Town of Brookhaven was undertaken in order to identify the major shopping districts. Some of the locations are relatively small in area but have considerable local importance and could form the nucleus of greater future development. A total of 14 separate commercial areas were studied and analyzed.

All of the commercial areas included in the analysis have in common the fact that they are strip developments located on major streets or highways. They have all begun to exhibit in varying degrees, the problems inherent in this type of development. Curb parking is practiced without exception and off-street parking facilities are generally inadequate.

Shopping centers throughout the Town were also located and analyzed. Sufficient off-street parking has been supplied in each of these centers so that no problem exists.

In open unmarked areas which are, or could be, utilized for parking and in determining space requirements from gross areas, a yield of 112 spaces per acre has been assumed. This allows for irregularity of area, but for ease of internal circulation within the improved parking facility and to avoid congestion, the total parking space requirement has been upped 15 percent.

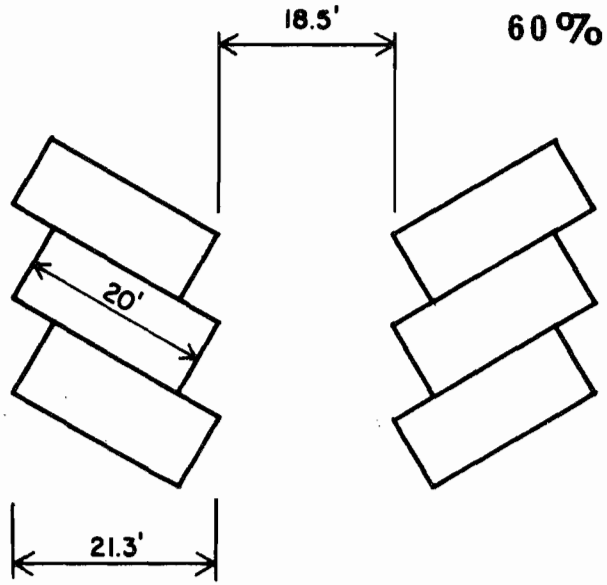
It should be pointed out that strict adherence to the zoning ordinance in determining parking requirements for new construction in built-up commercial areas could result in numerous small off-street parking fields, each requiring access from the street. In terms of interference to vehicle and pedestrian traffic, this could be as detrimental as curb parking.

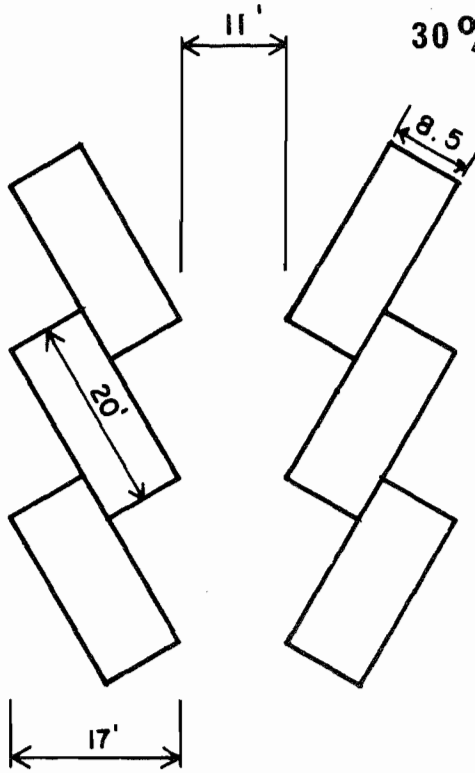
It is suggested therefore, that the Town give serious consideration to acquiring title to the existing private parking fields. These existing fields might then be added to, extended, redesigned for safer and better access, lighted, drained, and converted to adequate off-street municipal parking. The Town's cost of acquiring additional raw land and providing modern improvements could then be assessed against the benefitting property owners in proportion to the benefits each derives.

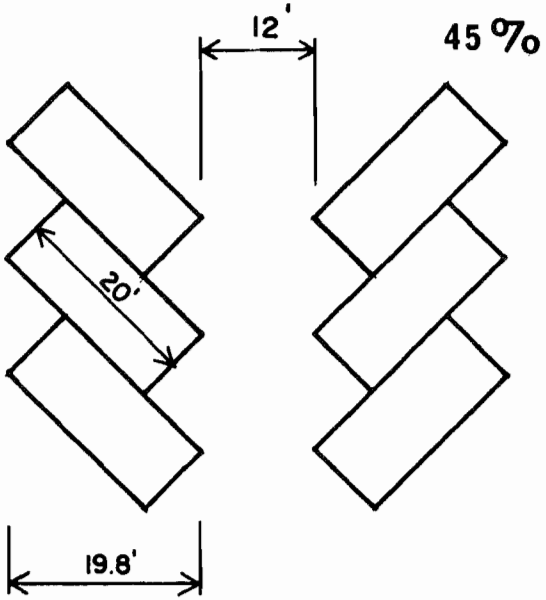
Recommended design standards for parking facilities have been included in a separate report to the Town. Shown on Plate No. 17 are suggested aisle and space requirements for various angles of parking.

It should be noted that the Town should not attempt to supply its off-street parking by obtaining lands too far removed from the commercial area for which they are needed. A parking field located beyond acceptable walking distances for shoppers will not be used.

The number of spaces to be required should be based on the measured amount of commercial floor area to be served. Other factors such as turnover, time limitations, and degree of enforcement have a







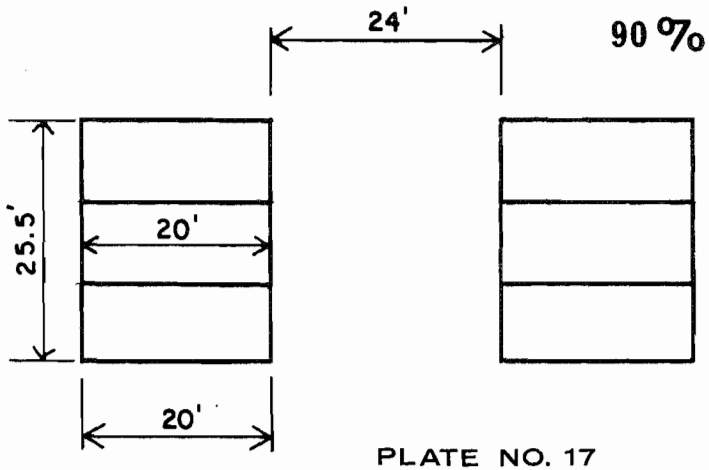


PLATE NO. 17

AISLES AND SPACES REQUIRED FOR VARIOUS ANGLES OF PARKING

bearing on adequacy of parking facilities.

Commuter Parking

There were a total of 12 railroad stations in the Town of Brookhaven in 1963, the four most important being those at Ronkonkoma, Port Jefferson Station, Stony Brook, and Mastic-Shirley. Of these, only Ronkonkoma had a surplus of parking available. At the three other major stations, the existing facilities were completely filled by the following estimated percentages of commuters:

Port Jefferson Station	68%
Stony Brook Station	33%
Mastic-Shirley Station	50%

Future commuter parking requirements for the Town of Brookhaven are extremely difficult to assess. Much will depend on the measures taken to improve the existing rail service. The development of transportation centers has been suggested as a means of increasing commuter usage of the rail facilities and if such transportation centers do develop, a substantial increase in rail commuters will probably occur. However, the crux of the transportation center plan calls for providing adequate parking at these centers so that no parking problems should develop from this proposed plan.

Most long-range forecasts of future rail commutation indicate the likelihood that by 1980 there will be only a slight increase in commuter traffic from Long Island to Manhattan and a somewhat larger increase in average trip length. Plate No. 18 indicates the change in percentage of total commuters in the 35-50 mile range from Manhattan. In the ten year period from 1954 to 1963 this group has increased 6.5 percent. During this same period the group travelling less than 25 miles to Manhattan has shown a 14.7 percent decrease. If this trend continues by 1985 the present commuter demand at most of the major stations in Brookhaven will increase by 13.7 percent. This represents an annual increase of about 0.7 percent per year. Improved service on the railroad in terms of modernization of equipment, frequent and regular service, and adequate terminal parking, might raise this figure to 1.5 percent per year. On this basis the future commuter parking requirement for Brookhaven at the major stations would be as follows.

Station			
Stony Brook	Port Jeff. Sta.	Ronkonkoma	Mastic-Shirley
Existing No. of Spaces			
60	160	500	75
1964 Spaces Required			
160	192	430	116
1964 Deficiency			
100	32	0	41
1985 Spaces Required			
210	252	565	153
1985 Deficiency			
150	92	65	78

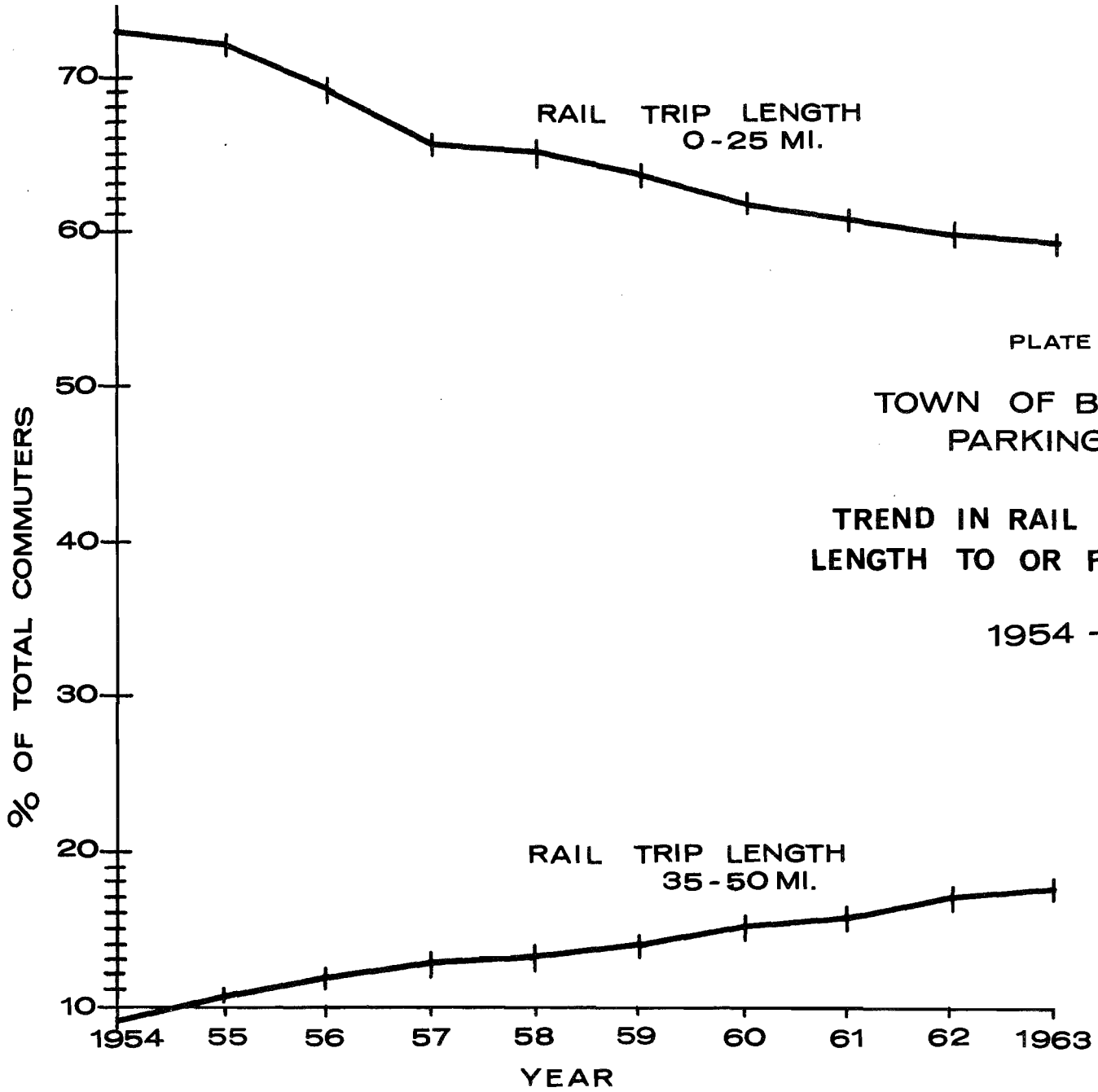


PLATE NO. 18

TOWN OF BROOKHAVEN
PARKING STUDY

TREND IN RAIL COMMUTER TRIP LENGTH TO OR FROM MANHATTAN

1954 - 1963

Edwin S. Voorhis & Son, Inc., 1964

Future commuter parking requirements at the remaining stations throughout the Town can be accommodated by the existing facilities.

PUBLIC UTILITIES

WATER SUPPLY

Introduction

The Town of Brookhaven is completely dependent upon the ground water reservoir for its water supply. The sole replenishment of this supply is from rain or snowfall filtering into the ground to replace the water which is pumped out for daily use. The assurance of a continuing source of supply therefore, can only be had by effecting a balance between water used or lost and water returned into the ground. Under normal conditions up to one-half of all the precipitation will percolate through to the ground water reservoir. The remaining half will be lost due to evaporation, runoff, used by vegetation, or lost through underflow into the numerous creeks and streams throughout the Town or directly into tide water.

There are many factors which can affect the quantity of water which is returned to the ground. The degree of development of an area in terms of houses, sidewalks, and other impervious areas directly influences the quantity of water lost to runoff. The amount of rainfall, topography, soils and vegetation are important determinents in the amount of water which can be drawn from the supply without danger of serious depletion of the reservoir.

Existing Water Supply Systems

Plate No. 19 shows the public and private water companies which presently serve the Town of Brookhaven. Table No. 7 lists these water companies and the estimated population served by each of them. As can be readily seen, the Suffolk County Water Authority is by far the largest supplier in the Town. In addition to the water companies there are numerous private wells which serve individual household needs.

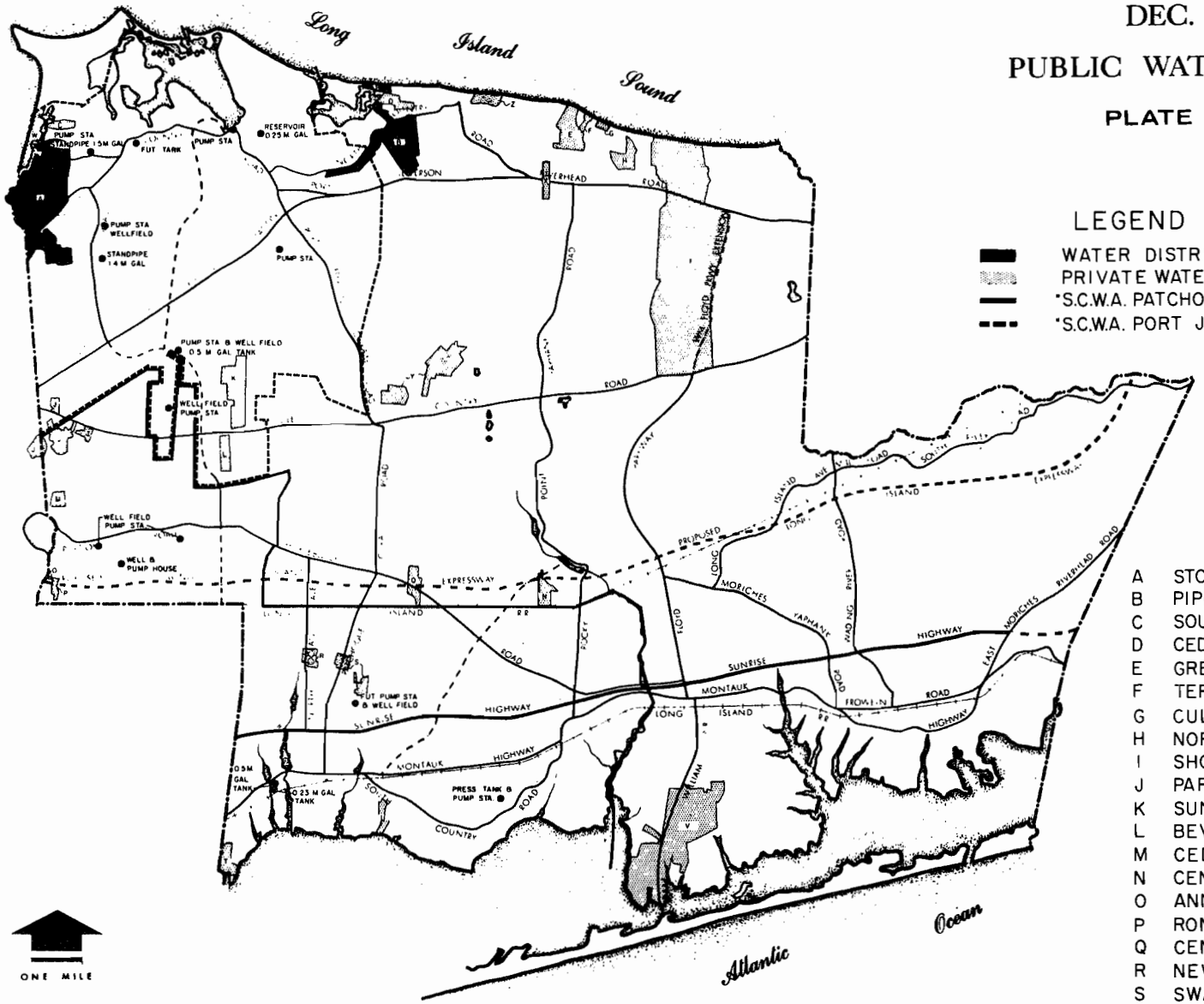
Control over the quality of water obtained from public water supplies is exercised by a program of sampling and quality analysis by the Suffolk County Department of Health.

However, due to the large number of private wells in the Town, extension of this testing program to insure the quality of private water supplies would be very costly and pose administrative problems. In 1960 there were 18,200 private wells in the Town of Brookhaven. While the extension of the Suffolk County Water Authority facilities into a number of areas which used private wells, has undoubtedly reduced this number, the remaining wells are still too numerous to permit a close monitoring of them. There is therefore, a very real danger that some of the private wells may be polluted and unless some measures of control are initiated this number is likely to increase.

DEC. 1964

PUBLIC WATER SUPPLY

PLATE NO. 19



EDWIN S. VOORHIS & SON, INC., 1964

* SUFFOLK COUNTY WATER AUTHORITY

LEGEND

- WATER DISTRICTS
- PRIVATE WATER CO.'S
- *S.C.W.A. PATCHOGUE PLANT (AREAS SERVED)
- *S.C.W.A. PORT JEFFERSON PLANT (AREAS SERVED)

KEY

A	STONY BROOK WATER DIST.
B	PIPE STAVE HOLLOW W.D.
C	SOUND VIEW ASSOC., INC.
D	CEDAR WATER SUPPLY CO., INC.
E	GREAT BEACH WATER CORP.
F	TERRACES-ON-THE-SOUND
G	CULROSS CORP.
H	NORTH SHORE BEACH
I	SHOREWOOD WATER CO.
J	PARSNIP POND W.W. CO., INC.
K	SUNHILL WATER CORP.
L	BEVON WATER CORP.
M	CEDAR GROVE PARK
N	CENTER ISLAND WATER CO., INC.
O	ANN K. MALIN
P	RONKONKOMA WATER CO., INC.
Q	CENTRAL SUFFOLK WATER CORP.
R	NEW ZONE INC.
S	SWAN LAKE WATER CORP
T	BLUE POINT COMM. ASSOC., INC.
U	PATCHOGUE SHORES
V	SHIRLEY WATER WORKS CO.
W	WEST MEADOW BEACH CORP.
X	GROVELAND PARK ASSOC.
Y	EASTER SUFFOLK WATER CORP.
Z	SCOTT'S BEACH INC.

TABLE NO. 7

TOWN OF BROOKHAVEN
PRIVATE WATER COMPANIES

Name	Population Served
Sound View Association, Inc.	150
Cedar Water Supply Co., Inc.	182
Great Beach Water Corporation	No Data
Terraces-on-the-Sound	400
Culross Corporation	200
North Shore Beach	400
Shorewood Water Company	1,950
Parsnip Pond W. W. Company, Inc.	350
Sunhill Water Corporation	2,040
Bevon Water Corporation	650
Cedar Grove Park	197
Ann K. Malin	110
Ronkonkoma Water Company, Inc.	468
Central Suffolk Water Corporation	2,210
New Zone, Inc.	800
Swan Lake Water Corporation	975
Blue Point Comm. Assoc., Inc.	130
Patchogue Shores	450
Shirley Waterworks Company	343
West Meadow Beach Corporation	278
Scott's Beach, Inc.	280
Eastern Suffolk Water Corporation	No Data
Groveland Park Association	No Data

PUBLIC WATER SUPPLY

Suffolk County Water Authority	60,000

Salt Water Intrusion

The intrusion of salt water into the ground water system is a direct result of overpumping when, because the demand for water exceeds the quantity of water which can be replenished, the ground water level drops to or below that of the sea water. The salt water then enters the ground water system destroying its usefulness as a potable water supply.

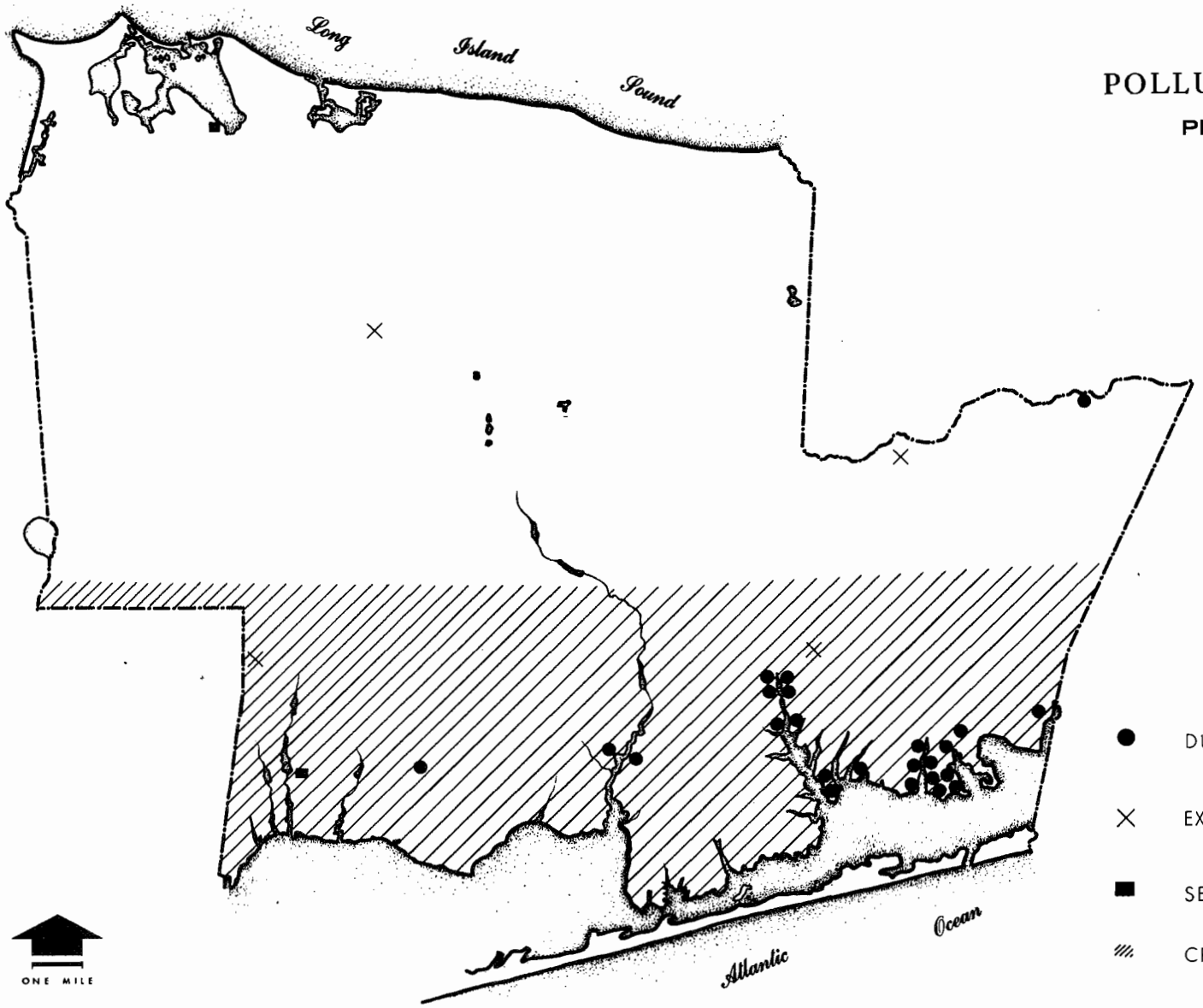
Overpumping can be avoided by a well planned water supply system in which the wells are properly placed and pumping is regulated.

The immediate problem facing the Town of Brookhaven lies in the pollution of individual water supplies by infiltration of sewage from cesspools and leaching fields.

Plate No. 20 shows the area of Brookhaven which has been designated as "critical" by the Suffolk County Department of Health. Also shown on this Plate are the locations of garbage and refuse dumps and duck farms which are obvious sources of pollution. The entire southern section of the Town is classified as critical, probably because of the relative closeness of the ground water table to the ground surfaces.

Obviously, the greatest danger of contamination in private wells lies in the more densely populated areas of the Town. The extension of public water supplies into the more densely populated sections of the "critical areas" should be undertaken as soon as practicable to provide an adequate supply of potable water to the residents thereof.

Further consideration is given to the extension of water supplies in the Public Utilities Plan.



POLLUTION AREAS

PLATE NO.20

LEGEND

- DUCK FARMS
- EXISTING TOWN DUMPS
- SEWAGE TREATMENT PLANT
- CRITICAL AREAS

EDWIN S. VOORHIS & SON, INC., 1964

SOURCE: SUFFOLK COUNTY PLANNING COMMISSION - 1960

SEWAGE DISPOSAL

Introduction

The basic means of sewage disposal within the Town of Brookhaven is through individual systems. There are two public sewerage disposal systems, one in Port Jefferson and the other in Patchogue, both serving relatively small areas. Many individual sewage disposal systems within the Town can and do present a threat to the public health and will ultimately become a financial problem to the homeowners who use them.

Individual Sewage Disposal Systems

The individual sewage disposal system utilized within the Town of Brookhaven will generally be either of septic tanks discharging into a leaching field, septic tanks discharging into a cesspool or a system of two or more cesspools. Most of the disposal systems are cesspools.

All of these individual systems are subject to failure due to the accumulation of the suspended solids clogging the surrounding soils and nullifying the leaching ability of these soils. According to the Suffolk County Report " The Need and Feasibility for Public Sewerage Facilities", this survey revealed that 20 percent of the residential disposal systems require service when less than five years old and 50 percent require service in less than ten years. In the southern areas, where the ground water level is high, the efficiency of these systems is greatly reduced. In these low lying areas the Suffolk County Department of Health will not approve subdivisions where the use of individual systems is proposed, but requires the installation of public sewerage facilities. After January 1, 1965, public sewerage treatment plants are required of all realty subdivisions under specific standards.

Public Sewage Disposal Systems

The two sewage treatment plants within the Town of Brookhaven are located in Patchogue and Port Jefferson. The Port Jefferson Plant is a primary treatment plant. That is, it has facilities for primary sedimentation, digestion of settled solids and chlorination of the effluent. This plant serves an area of about 0.25 square miles. The Patchogue Plant also provides primary treatment and serves an area of 0.06 square miles. The remainder of the Town depends upon individual or private disposal systems.

Causes of Ground Water Pollution

The major cause of pollution is the infiltration of residential and industrial sanitary wastes into the ground water reservoir. The highly porous sands and gravels provide excellent leaching qualities for the cesspools and leaching fields. These same leaching qualities however, facilitate the flow of sewage into the ground water reservoir. Under the present circumstances the only measure of control lies in the spacing between cesspools and wells for new structures. There are certain contaminants, however, which have been known to travel many times this distance so that spacing between sewage system and water supply is not in itself an assurance of well purity.

There are other sources of contamination which

threaten the ground water supply such as seepage from open dumps, recharge basins which leach the runoff from lawns and streets carrying salts, insecticides, herbicides, and other chemicals, and scavenger wastes which in Brookhaven are deposited at the refuse dump sites.

The presence of synthetic detergents (syndets) has been discovered in numerous wells throughout the Town and County. While the harmful effects of these syndets has not been determined they are a positive indication of contamination of ground water by infiltration of sewage.

The Suffolk County Health Department has conducted extensive investigation into ground water pollution and has concluded that the discharge of individual sewage systems into the ground water is contributing to existing and future public health problems through ground water pollution.

The importance of the preservation of the ground water supply as the only source of water for Brookhaven and for Suffolk County cannot be over-emphasized.

Aside from the serious threat to the continuing availability of a potable water supply, there are indications that sewage is polluting the recreational waters. Important recreational facilities for residents and tourists alike can be lost if sewage wastes continue to find their way into these waters.

Contamination from sewage can also have a very serious effect on the commercial shellfishing industry. The New York State Conservation Department prohibits the taking of shellfish from the creeks which empty into Great South Bay and for one-quarter mile offshore due to pollution of these waters.

Suffolk County has prepared a preliminary report on the need and feasibility for public sewerage in the five western towns. Plate No. 21 shows the tentative collection districts within the Town of Brookhaven outlined by this report. Part of the easterly end of the Town is not included in this proposal. This area has a low population density and is not in immediate need of sanitary sewers.

The County is currently developing a more detailed comprehensive sewage plan for the five western towns.

The Suffolk County Department of Health requires public sewers for all realty subdivisions after January 1, 1965. This is a major step in the elimination of the threat to the ground water supply. Ultimately these individual public systems can be connected to the overall County system with considerable savings in cost of piping, labor, road repairs, and other costs.

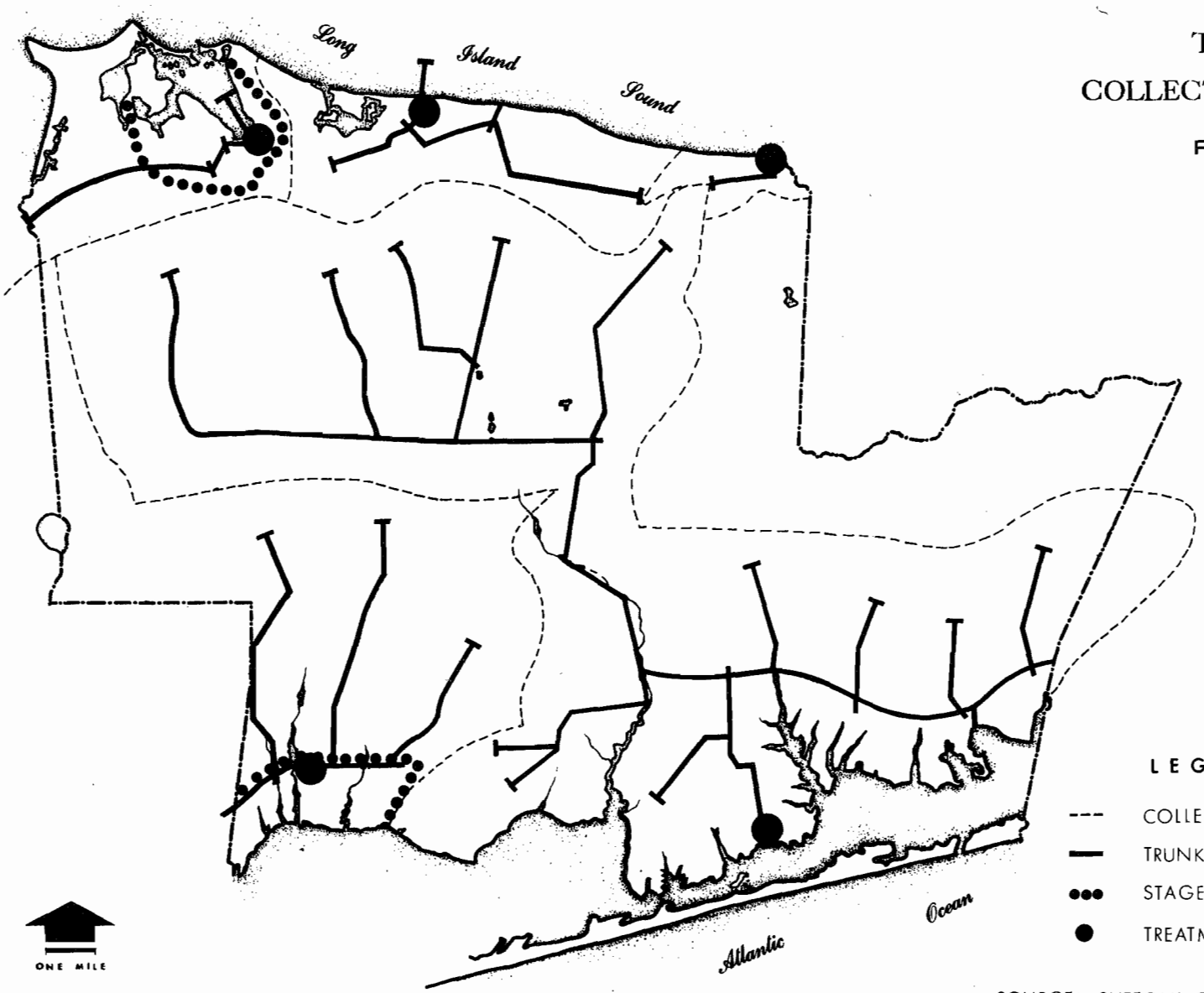
DRAINAGE

Introduction

The rapid development of the western section of the Town of Brookhaven has created problems of storm water drainage and made intolerable some of the natural drainage conditions which a few years ago were no great problem. Many of the natural drainage courses have been changed or eliminated by new developments. Low lying areas which at one time acted as natural

TENTATIVE COLLECTION DISTRICTS

PLATE NO. 21



LEGEND

- COLLECTION DISTRICT
- TRUNK SEWER
- STAGE I AREAS
- TREATMENT PLANT

SOURCE: SUFFOLK COUNTY PLANNING COMMISSION - 1960

EDWIN S. VOORHIS & SON, INC., 1964

collection basins are now developed and the accumulation of drainage runoff in such areas can no longer be permitted without means of secondary disposal.

Large pervious areas are being replaced with subdivisions having large areas of impervious roofs and roadways. This greatly increases the quantity of storm water runoff. The development of a Master Plan must recognize the need for long-range drainage planning and recommend general drainage procedures which will ultimately lead to an effective, comprehensive drainage system.

Existing Conditions

A 1957 Suffolk County Drainage Report listed 35 major drainage areas within the Town of Brookhaven. These areas are shown on Plate No. 22. Within the Town the report also cited 22 drainage problems.

A Preliminary Drainage Report prepared for the Town of Brookhaven in 1963 revealed a total of 400 problem drainage locations compiled by the Town Highway Department.

Plate No. 22 indicates the major drainage sheds in the Town of Brookhaven and areas of 100 acres or more in which drainage problems occur. The broken lines outline the boundaries of the major drainage areas while the shaded areas show the approximate size and location of the problem areas. Each of these drainage areas has been discussed in detail in the previously submitted Volume X.

The Drainage Program

The current drainage program of the Town of Brookhaven, as outlined in its September 1964 Progress Report, involves the construction of 42 recharge basins to store the runoff from a gross area of over 4,000 acres. The aggregate project length is about 72 miles. The total number of Town recharge basins existing and proposed exceeds 150 and in addition, the State and County have installed a number of basins. The locations of these recharge facilities are shown on Plate No. 23.

The ideal program would be to develop a Townwide comprehensive drainage plan. This would involve a detailed study of existing needs and projection of future requirements. Unfortunately there are many drainage problems which exist now which need immediate remedial action. This is likely to result in stopgap measures designed to alleviate the local problem without consideration of the overall area-wide drainage requirements. Such need for immediate relief should not stall for long the development of comprehensive Townwide drainage planning.

Many of the present drainage problems will ultimately be relieved as the lands which contribute to create the problem become developed and subdividers are required to provide adequate drainage.

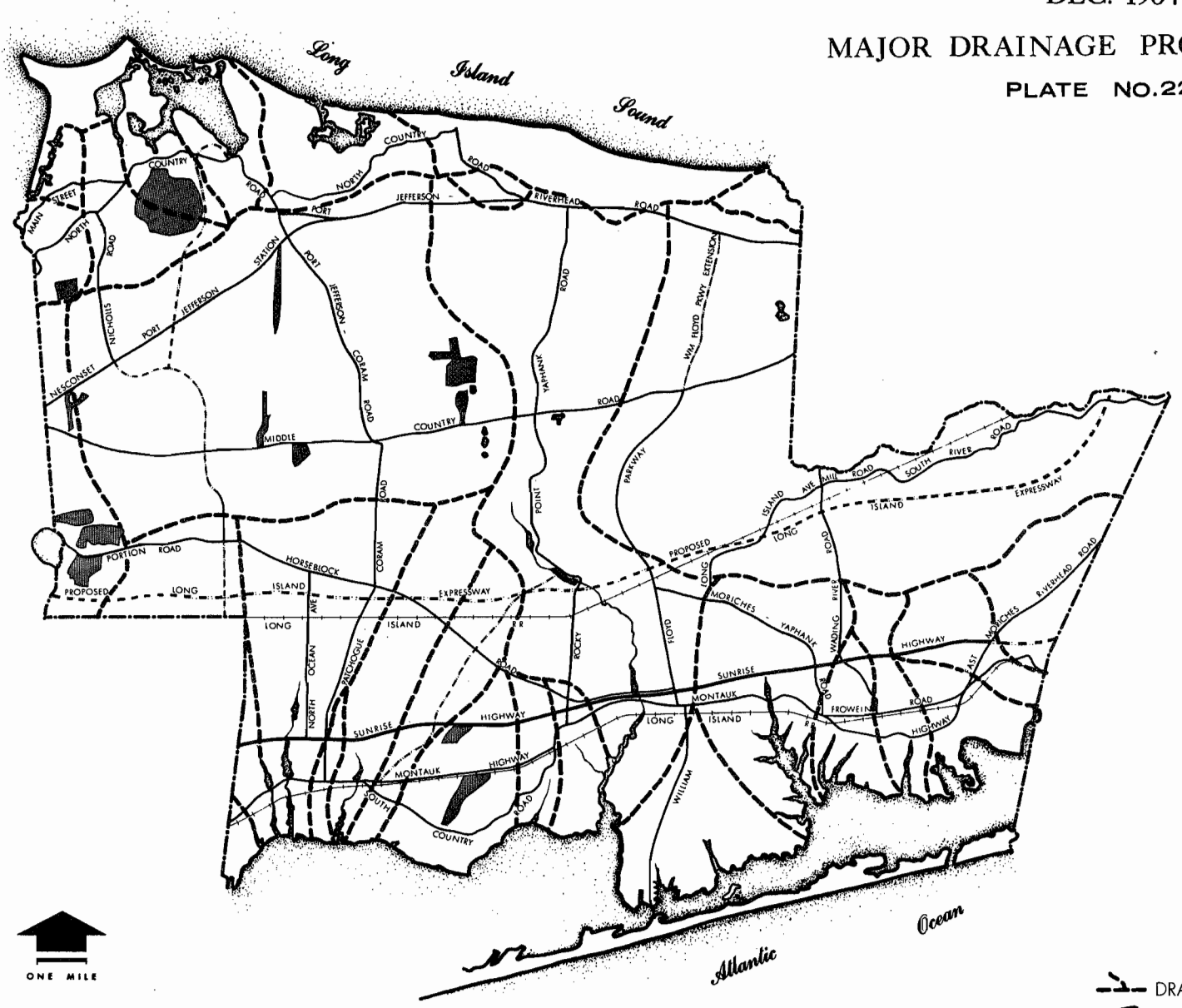
In other areas however, future development is likely to compound the existing problems because of increased runoff and greater public objection to conditions which today cause inconvenience to only a few.

Within the limits of available funds the Town must endeavor to catch up with a backlog of long needed drainage improvements and at the same time handle

DEC. 1964

MAJOR DRAINAGE PROBLEM AREAS

PLATE NO.22



LEGEND

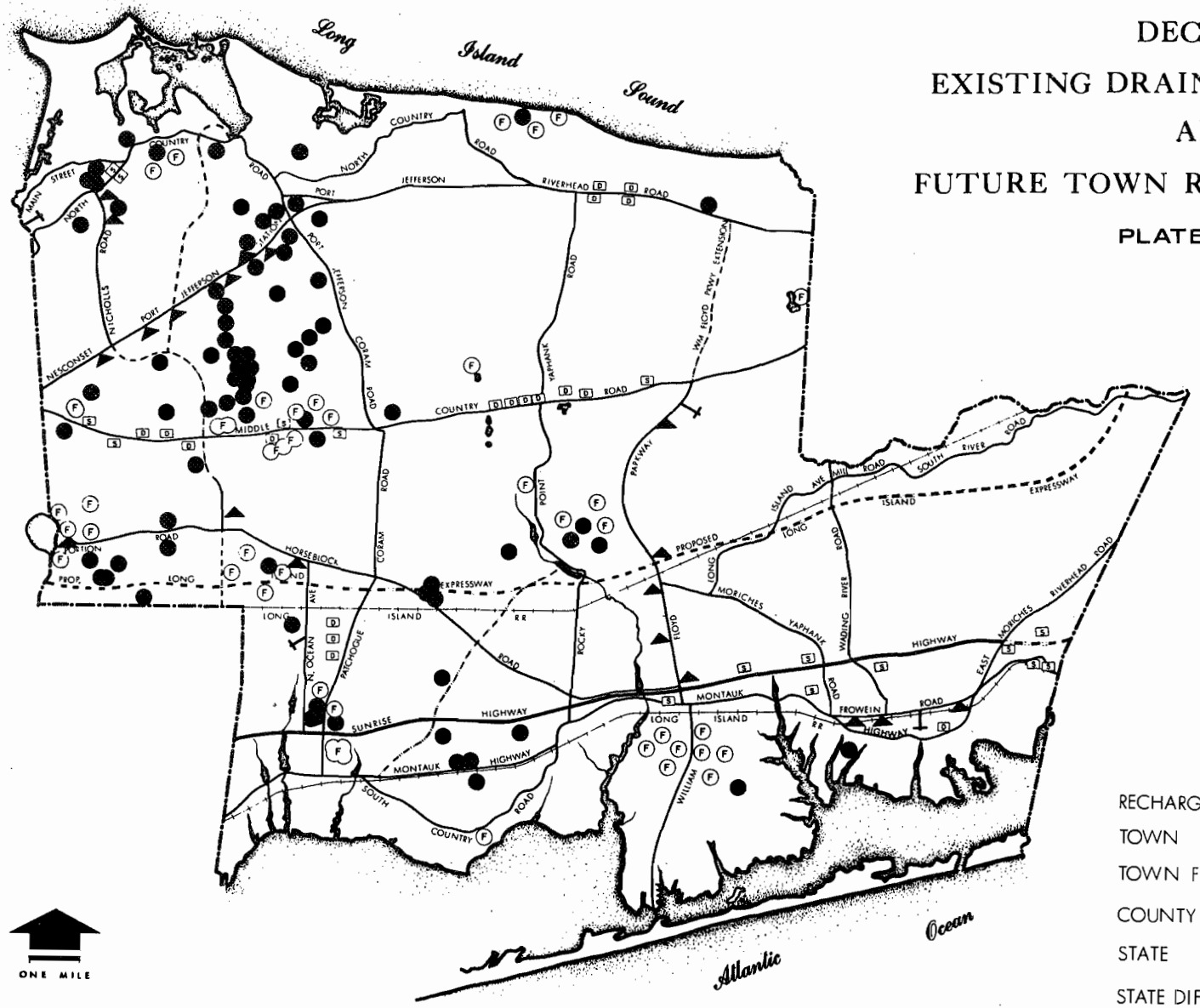
DRAINAGE AREA BOUNDARY

DRAINAGE PROBLEM AREA

EDWIN S. VOORHIS & SON, INC., 1964

DEC. 1964
EXISTING DRAINAGE FACILITIES
AND
FUTURE TOWN RECHARGE BASINS

PLATE NO. 23



EDWIN S. VOORHIS & SON, INC., 1964

LEGEND

RECHARGE BASINS:	
TOWN	●
TOWN FUTURE	Ⓕ
COUNTY	▲
STATE	S
STATE DIFFUSION WELL	D
COUNTY DRAIN	→

new problems as they arise. Flooding in some low areas, which previously could be tolerated, has now become a major public inconvenience which must be eliminated. The current drainage program, when completed, will do much to accomplish these objectives.

The avoidance of future problems, however, can most readily be accomplished by the development of a Town-wide comprehensive drainage plan. Coordinated with the future land use plan and with updated zoning, the drainage plan would anticipate future development densities in the Town, and provide integrated drainage facilities embodying economy and conservation of water supplies.

The early establishment of vertical alignment on Town roads is essential to the development of the drainage plan and can result in substantial savings in future highway and drainage costs by avoiding the expense of attempting to make the roadways conform to haphazard development at some future date.

REFUSE DISPOSAL

Existing Conditions

The Town of Brookhaven presently operates four dumps located throughout the Town as indicated on Plate No. 24. They are located in Holtsville, Coram, Manorville, and Center Moriches. In addition, the Town has proposed to purchase an 82-acre disposal site in the Setauket area but this proposal was defeated in a public referendum in November 1964.

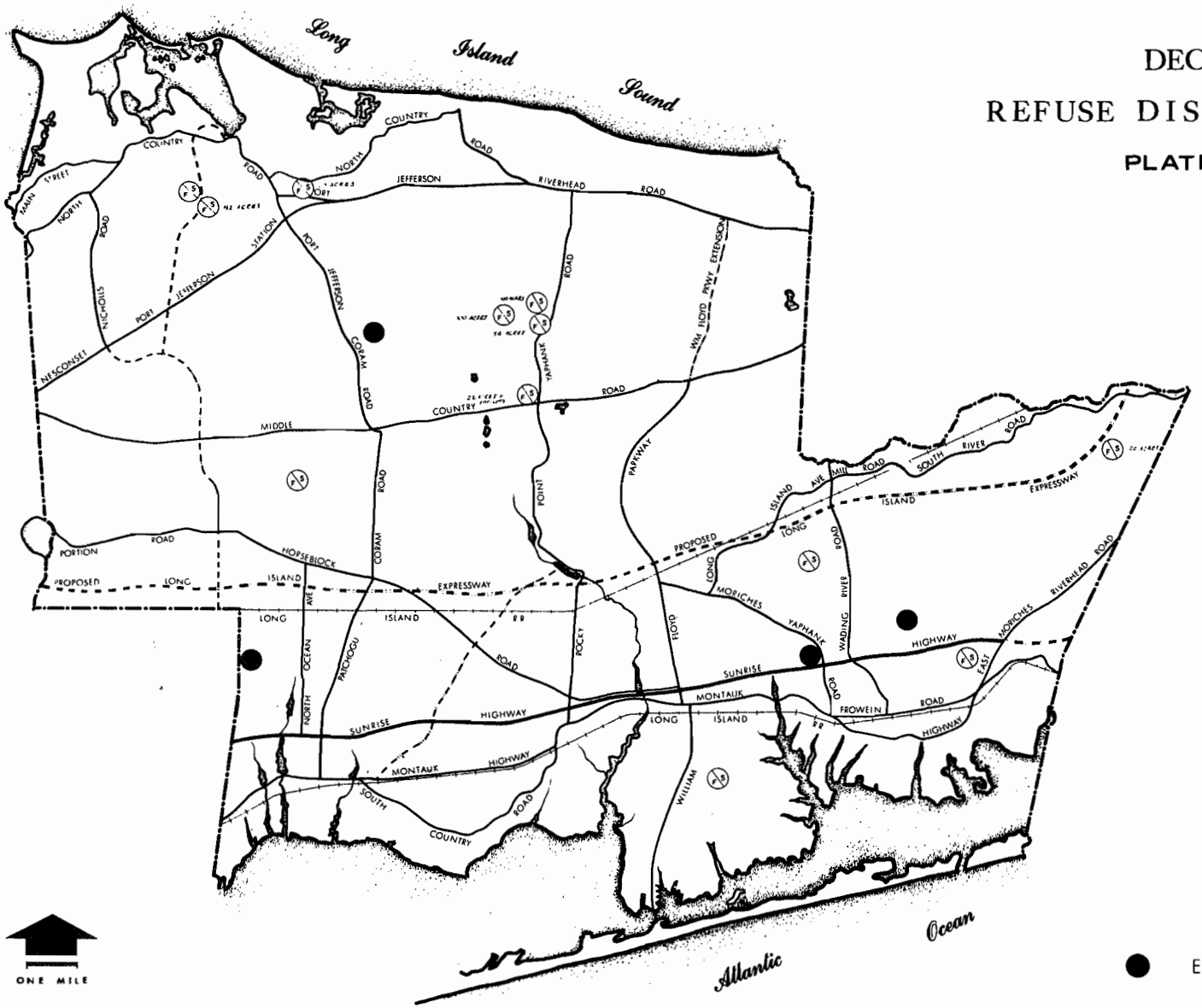
The Holtsville dump is located on Buckley Road. This dump accepts sanitary wastes as well as garbage and trash. It is expected to remain operable for from five to ten years. The Coram dump is located on Pine Road off Route 112. It accepts sanitary wastes as well as refuse and is expected to remain operable for about one year. The Manorville dump located on Paper Mill Road, in addition to accepting sanitary wastes, has an additional pit for duck blood from the duck farms. This dump is expected to last approximately five more years. The Center Moriches dump located on Center Moriches-Yaphank Road handles only refuse. This site is rented by the Town and should last approximately 15 years.

The present system of disposal is unsatisfactory. Inadequate facilities and equipment and shortage of personnel have resulted in an unsightly and unhealthy operation. Conversion of operations on these present sites to true sanitary land-fill methods is a necessity to comply with the New York State Sanitary Code. Every effort should be made to improve the operations on these sites so they will not present a hazard to health and a nuisance to surrounding communities.

As the population of Brookhaven increases and presently open land adjacent to the dump sites develops, the problems will multiply. An inefficiently operated dump provides a breeding place for rats, flies, and other disease-carrying vermin, contributes to ground water pollution, adds to air pollution because of dust and smoke from the numerous fires which occur, and creates a general nuisance and a blight on the areas in which they are located. On the other hand, an efficiently operated land-fill will eliminate most of the above undesirable features and provide the community low-cost disposal and eventual land reclamation.

In view of the fact that the Coram dump will soon

DEC. 1964
REFUSE DISPOSAL SITES
PLATE NO. 24



LEGEND

● EXISTING SITES

(PS) POSSIBLE FUTURE SITES

EDWIN S. VOORHIS & SON, INC., 1964

be filled the Town is in need of an additional land-fill site. Abandoned sand and gravel quarries, if or sufficient size, make excellent locations for land-fill operations. Plate No. 24 shows the locations of some of the sand and gravel quarries in the Town which might be acquired for land-fills. Investigation by the Town as to the availability of these sites and a detailed engineering evaluation of their suitability for the intended use would have to be made. Included in Volume X of the individual series of Master Plan reports is a discussion on site selection, land requirements, equipment, operating methods and other factors relative to a land-fill operation.

In the Public Utilities Plan consideration is given to all methods of refuse disposal and recommendations are made as to the method which will best satisfy the future requirements of the Town.

The availability and sufficiency of community facilities and services are of vital concern to all the residents of Brookhaven, and the satisfactory provision of these facilities reflects the quality, character, and convenience of the Town as a place in which to live, work, and play. Sound planning for community facilities can affect the ability of Brookhaven to attract and maintain the components of a sound economy and a healthy environment.

COMMUNITY FACILITIES

TOWN - OWNED FACILITIES

Town Hall

The Brookhaven Town Hall is located on a one-acre site at the intersection of South Ocean Avenue and Baker Street in Patchogue. It is a structurally sound, brick building containing two floors and a basement. The first floor area of the building is approximately 8,000 square feet. The small site on which the building is situated provides parking spaces for approximately 35 automobiles.

Some of the departments located in the Town Hall have inadequate space in which to carry out their functions properly. Yet, not all departments of the Town are located in the Town Hall. These include the offices of the Receiver of Taxes, Building Department, Highway Department, and Industrial Commissioner. Some of these departments do not need to be located in the Town Hall. An example of this is the Highway Department, which has centralized its office, garages, and operations at Coram near the geographical center of the Town. Other departments, such as the Building Department, should be located in the Town Hall because personal contacts with other departments are required daily.

It is evident that the space requirements of the Brookhaven Town government have outgrown the present Hall. Thus the Town must enlarge its present site and building, find a satisfactory site for a new building, or continue to decentralize its operations.

Highway Department

The center of operations of the Town Highway Department is on a 13-acre tract of land on Old Town Road in Coram. This site contains most of the Department's buildings. The Recreation Department and the Sanitation Department also store equipment at this site.

The Highway Department also has buildings and sheds at other locations for the purpose of storing small tools and providing shelter for its field personnel. These structures are located in Bellport, Mastic Beach, Manorville, Setauket, Port Jefferson Station, Miller Place, Rocky Point, and Centereach.

Brookhaven Airport

Brookhaven Airport is now owned by the Town. It was originally built for military purposes in 1941.

The 300-acre airport is located in the Shirley area northeast of the interchange between Sunrise Highway and William Floyd Parkway and south of Brookhaven National Laboratories.

Civilian use of the airport is currently limited to private planes, taxi service, and flight instruction. There are 45 privately owned planes based at this facility, and during 1963 the airport averaged approximately 2,000 landings per month.

Major improvement projects are continually in progress at the Airport. The completion of those now in progress and those planned for the future will greatly augment the utility of Brookhaven Airport. Its future value to the Town, to industry, and to Brookhaven residents should more than justify the programs of expansion and development of this important transportation facility.

Among other Town-owned buildings are the office of the Receiver of Taxes in Port Jefferson; a frame building in Center Moriches which formerly housed a precinct of the Town Police prior to the organization of the County Police; a dog pound in Patchogue; and a museum in East Patchogue.

OTHER PUBLIC FACILITIES

Public Libraries

There are ten public libraries and one branch library located in the Town of Brookhaven. Public libraries serve the school district in which they are located. As shown on Plate No. 25, five libraries are located along the south shore of the Island. Three main libraries and the Centereach Branch Library are located in the Lake Ronkonkoma-Coram area, and the remaining two libraries are situated on the north shore in Setauket and Port Jefferson.

As of 1963, public libraries within the Town ranged in size from the Middle Island Public Library in Coram, with a floor area of 500 square feet and a total of 4,460 volumes, to the Patchogue Public Library which has 12,500 square feet of floor space and holds 43,306 volumes. The size, and other data on existing Town libraries are listed in Table No. 8.

Bookmobile Service

Areas that do not have free library service are visited by a bookmobile once every two weeks. The bookmobile is provided by the Suffolk Cooperative Library System.

In addition to the public libraries listed on Table No. 8, public schools have such facilities as do the State University in Stony Brook, and the Suffolk County Community College. The Brookhaven National Laboratory Research Library has an outstanding technical collection of material. The library is restricted to employees of Brookhaven Laboratory but with special permission, graduate students and researchers in related fields may use the facilities.

Colleges and Universities

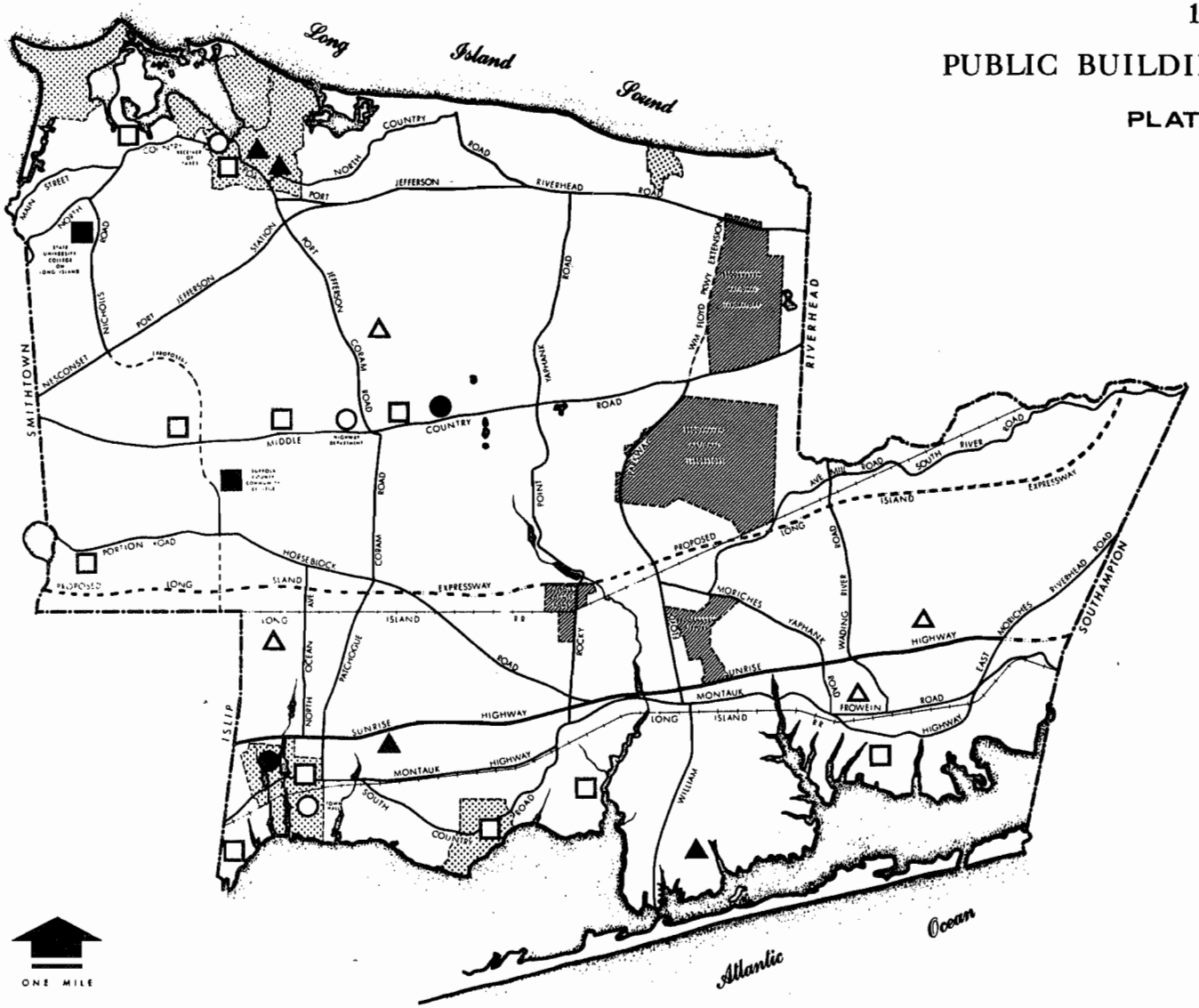
The residents of Brookhaven are fortunate in having two institutions of higher learning within the Town boundaries. Suffolk County Community College, which opened in 1960, is located in Selden on a 130-acre campus. The College's extension center for evening students is situated east of the Town in Riverhead High School. The 1962-63 college enrollment numbered 935 full time students and 1,400 evening students.

The State University, College on Long Island, at Stony Brook was founded in 1957 as a college for training teachers in mathematics and natural science

1963

PUBLIC BUILDINGS & FACILITIES

PLATE NO. 25



LEGEND

- TOWN BUILDING
- POLICE STATION
- PUBLIC LIBRARY
- COLLEGE
- DUMP
- HOSPITAL
- INCORPORATED VILLAGE

EDWIN S. VOORHIS & SON, INC., 1963

TABLE NO. 8

PUBLIC LIBRARY FACILITIES
TOWN OF BROOKHAVEN
1963

Name	Floor Area (in sq. ft)	No. of Volumes	No. of Card Holders	Circulation	Population Served*	School District Served
Bayport-Blue Point	2,000	19,609	2,200	45,839	7,000	
Bellport Memorial	1,275	10,360	1,845	23,655	12,000	SD # 4
Brookhaven Free	1,000	6,736	413	6,145	1,700	SD # 4
Center Moriches	600	9,700	794	16,217	3,500	SD #32
Middle Island	504	4,463	1,056	7,197	6,000	SD #12
Patchogue	12,500	43,306	10,659	251,385	38,000	SD #24
Port Jefferson	1,500	15,161	4,000	50,000	12,000	SD # 6
Middle Country	1,342	16,547	4,781	39,611	18,000	SD #11
Emma S. Clark Memorial	2,200	13,364	2,450	39,196	9,800	SD's # 1 and 2
Sachem	800	10,000	3,200	35,592	17,500	SD # 5

*Figures are estimates from the individual libraries.

for secondary schools. The college, located at that time in temporary quarters on an estate in Oyster Bay, had 14 members on the teaching faculty and a freshman class of 145 students. Within five years the school acquired university status with the formation of two colleges. The university then moved to its permanent campus of 480 acres in Stony Brook. The faculty increased to 126 members and the school enrollment rose to 750 undergraduate and graduate students.

Considering the rapid growth experienced by these schools in the past and the prospective future development in the Town of Brookhaven, both schools expect a great influx of students within the next decade. Twenty thousand or more full or part-time students will attend the University at Stony Brook and the Community College by 1970.

Proposals are now under consideration for three new colleges in the Town of Brookhaven: a 100-acre campus near Yaphank is contemplated for the Suffolk County branch of Long Island University; a site adjacent to the Brookhaven National Laboratory is being considered for the campus of a State University of Science; and a parochial liberal arts college is proposed on a 170-acre site in the Shoreham area.

Hospital

There are four general hospitals within the Town of Brookhaven. Two of these, St. Charles Hospital, and the John T. Mather Memorial Hospital, are located within the Incorporated Village of Port Jefferson. The other two hospitals are Brookhaven Memorial Hospital in Hagerman and Bayview Hospital in Mastic Beach.

In 1963 the four hospitals had a capacity of about 475 beds and 65 bassinets. There were 330 physicians and 850 full time employees. The hospital had approximately 19,000 admissions, of which more than 3,000 were maternity cases. The majority of all admissions took place at Brookhaven Memorial Hospital, which was usually filled to capacity. The other hospitals reported that they were normally filled to between 80 and 90 percent of capacity.

Active plans for expansion are being carried out at the four hospitals. The most immediate of these are additions for Brookhaven Memorial Hospital, and Bayview Hospital. All of the hospitals in Brookhaven are now located on sites that will provide ample space for future expansions, including parking requirements.

FIRE DEPARTMENT FACILITIES

Introduction

For fire protection purposes, the Town is divided into 41 districts. Four of these, which operate only part of each year, are located on Fire Island and are excluded from this study. The Brookhaven National Laboratory provides its own fire protection and is also excluded from this study. All incorporated areas are included in the study. Thirty of the 37 districts on the mainland have their own fire fighting equipment and the others are served by neighboring districts. The Eastport and Manorville Fire Districts extend beyond the boundaries of Brookhaven. Table No. 9 provides a list of Fire Districts and Fire Protection Districts. Plate No. 26 shows the boundaries of the districts and the location of fire stations.

TABLE NO. 9

FIRE DISTRICTS, PROTECTION DISTRICTS AND CONTRACT DISTRICTS (a)
TOWN OF BROOKHAVEN
1963

FIRE DISTRICT Number	Name
1	Bellport
2	Blue Point
3	Brookhaven
4	Centereach
5	Center Moriches
6	Coram
7	East Moriches
8	Eastport
9	Gordon Heights
10	Hagerman
11	Holtsville-Farmingville
12	Manorville
13	Mastic Beach
14	Mastic
15	Medford
16	Middle Island
17	Miller Place
18	Mount Sinai
19	North Patchogue
20	Patchogue
21	Port Jefferson
22	Port Jefferson Station-Terryville

FIRE DISTRICT (continued) Number	Name
23	Ridge
24	Rocky Point-North Shore Beach
25	Ronkonkoma
26	Selden
27	Setauket
28	Stony Brook
29	Sound Beach
30	Yaphank

FIRE PROTECTION DISTRICT	
31	East Patchogue
32	Moriches
33	North Bellport
34	Station Road

CONTRACT DISTRICT	
35	Belle Terre
36	Old Field
37	Shoreham

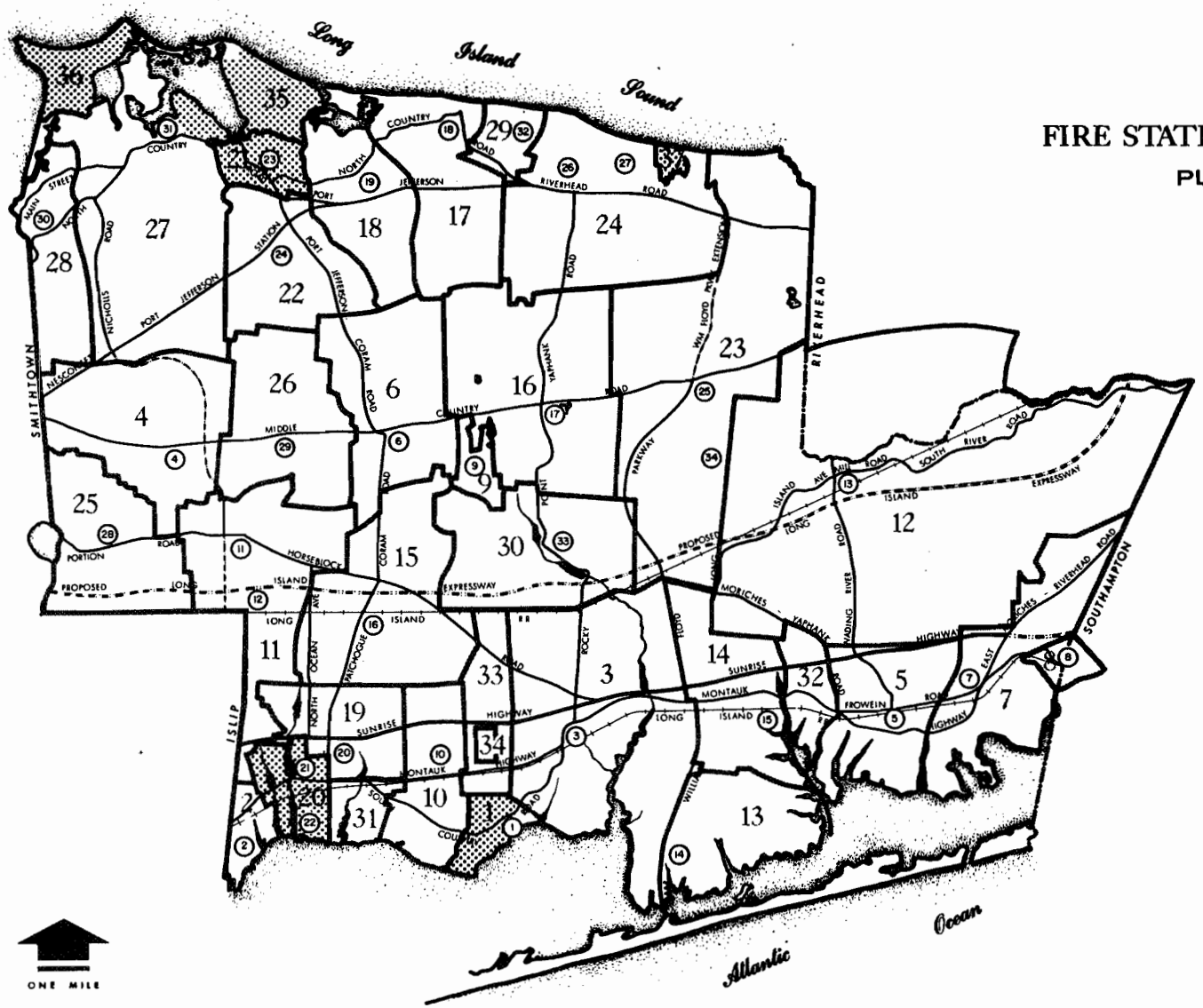
(a) Excludes four fire districts on Fire Island

Source: Town of Brookhaven Building Department, Bureau of Fire Prevention, 1963
Suffolk County Department of Planning, Fire District Map, 1961.

1963

FIRE STATIONS & DISTRICTS

PLATE NO. 26



EDWIN S. VOORHIS & SON, INC., 1963

LEGEND

(30) FIRE STATION

30 FIRE DISTRICT KEY

INCORPORATED VILLAGE

With the exception of the Village of Patchogue, the fire companies operate independently of the local governments. The commissioners and officers of the districts are elected by the voters of their respective areas.

Inventory of Firehouses

The 30 operating fire companies within the fire districts serving the Brookhaven mainland are located in 33 firehouses. The Holtsville-Farmingville, Rocky Point-North Shore Beach, and Patchogue fire districts each contain two firehouses.

The majority of the firehouses are not new structures but many have had recent renovations. Recent additions or renovations have been made to at least ten firehouses, while new structures have been built at five locations. The newly built firehouses are all of masonry construction.

The program of periodic improvement and replacement of firehouses in Brookhaven will insure that the buildings will be structurally adequate. However, additional space will be required for more apparatus to serve the anticipated population growth and physical development in the Town. New locations convenient to new development areas should also be provided. Some of the fire districts are currently planning to construct auxiliary fire houses in order to meet these problems.

Fire Prevention

The Town of Brookhaven adopted a comprehensive Fire Protection Ordinance in 1961. It established a Bureau of Fire Prevention to administer this ordinance. A fire Advisory Board was also created. Its function is to review the operation of the ordinance and its administration by the Bureau of Fire Prevention for the purpose of recommending further improvements and changes in the ordinance.

Among other things, the Fire Prevention Ordinance provides for the inspection of buildings and premises, the serving of orders to eliminate dangerous conditions, the investigation of fires, fire drills at institutions such as hospitals and nursing homes, and fire protection regulations covering various buildings, equipment, and land uses.

Distribution of Fire Companies

The geographic distribution of fire stations in the Town is in direct relationship to the concentrations of development. Fire stations are most closely spaced along the north and south shores and along Middle Country Road. The usual locations for the stations within their respective districts is close to the most densely developed areas.

The American Insurance Association (formerly the National Board of Fire Underwriters) recommends that, to respond quickly, no point in any high value or populous commercial area be more than three-quarters of a mile distant from an engine company. Distances within an engine company's effective range may be as great as three miles in areas of scattered development.

The proximity of an area to a firehouse is not necessarily the criterion for measuring distances. A property or a building may be closer to the fire station

of a neighboring district than to that of its own fire district, but only the fire company of its own district will respond on the initial alarm for a fire or other emergency. Based on the fire district boundaries, most of the areas within Brookhaven currently meet the standards of the National Board of Fire Underwriters.

The accessibility of fire apparatus to all areas of their districts must take into consideration such factors as road conditions, traffic congestion, and natural barriers.

POLICE DEPARTMENT FACILITIES

The Town of Brookhaven is policed by the Suffolk County Police Department. The Department began its operations in 1960 and replaced the individual police departments that had previously functioned in the five western towns and some villages of Suffolk County.

The five western towns, all covered by the Suffolk County Police Department, are divided into precincts. Two of these, the Fifth and Sixth Precincts, are located in Brookhaven. These precincts protect the south and north portions of the Town, respectively. The Fifth Precinct is located on Waverly Avenue in Patchogue and the Sixth Precinct is located on the north side of Middle Country Road, approximately one mile east of Coram.

The headquarters of the Suffolk County Police is located in Hauppauge, Smithtown. This facility houses the central communications for the County, the Detective Division, and a tactical force. The tactical force is used for major emergencies throughout the five western towns. The Marine Division is based at Brightwaters, Town of Islip, and operates four police boats on the south shore and four on Long Island Sound. The Traffic Division for the entire area is located in Lindenhurst, Town of Babylon.

Further population expansion in an eastward direction may require the redistricting of precinct boundaries which may subsequently result in the need for more precinct buildings.

PUBLIC SCHOOLS

Elementary and Secondary School Facilities

For the purpose of administering primary and secondary education, the Town of Brookhaven is divided into 25 school districts. Nineteen districts are within the jurisdiction of the Second Supervisory District, with administrative offices in Patchogue. Three school districts are within the jurisdiction of the First Supervisory District and three operate independently under what is known as Village Superintendencies.

School districts provide education for their children by one of three administrative methods. Three districts with no school facilities contract with other school districts to provide elementary and secondary education for their students. Eleven school districts provide children with both elementary and secondary classes. With the exception of Ocean Beach, which is not within the scope of this report, the remaining districts have elementary facilities but must send a part or all of their junior and senior high school pupils to schools

in other districts.

There are six districts that lie partly in the Town of Brookhaven and partly in one of the adjacent towns. As shown on Plate No. 28, Wading River and Riverhead Central Districts are located partially in the Town of Riverhead; part of Eastport District is in the Town of Southampton; the Bayport-Bluepoint and Ocean Beach Districts are partially in the Town of Islip; and a small portion of Stony Brook is situated in the Town of Smithtown. Sachem Central School District is located in three towns: Brookhaven, Islip, and Smithtown.

The State Department of Education, in conjunction with local Boards of Education, have sometimes deemed it necessary or advisable to change school district boundary lines. Since 1950, eighteen school districts in the Town have been consolidated into six.

The State Department of Education, in their Master Plan for School District Reorganization in New York State, continually studies and reviews school district boundaries with an eye toward recommending their consolidation wherever practical.

Several school districts in Brookhaven, both on the north shore and the south shore, are currently being considered for such reorganization.

Location of Existing Schools

Elementary Grades - In 1963 there were a total of 44 schools with elementary facilities in the Town of Brookhaven. As shown on Plate No. 27, schools are generally well distributed throughout the school districts. Most elementary students who reside in the western section of the Town and along the north and south shores are within one mile of a school.

In the case of East Manor and West Manor School Districts, where there are not enough residents to warrant having an elementary school, children must travel as far as seven or eight miles to Eastport.

Secondary Grades - There were 16 schools in the Town serving students in the seventh through the ninth grades at the beginning of the 1963-64 school year.

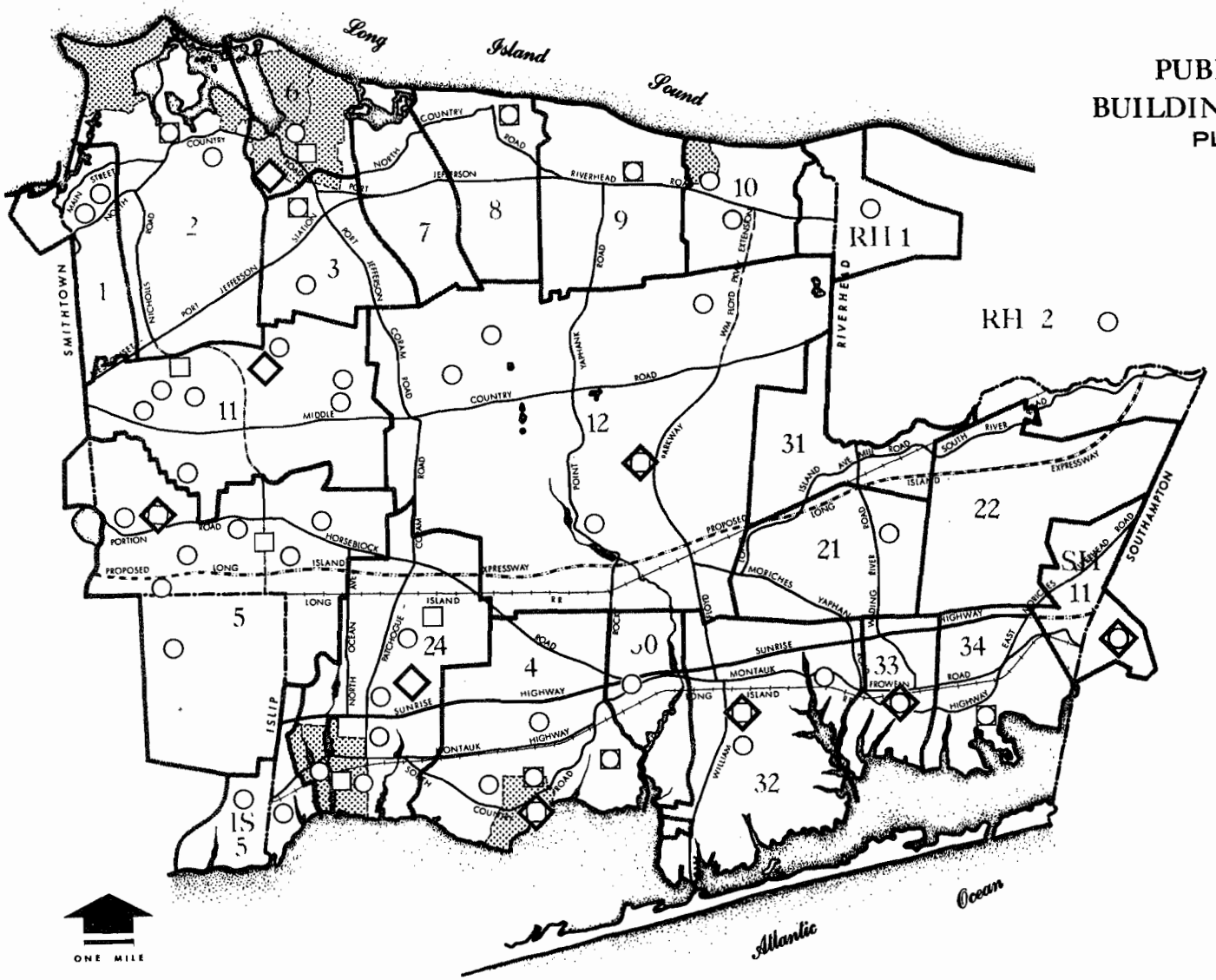
Schools providing junior high education are fewer and farther apart than the elementary schools. The eight elementary schools that contain seventh and eighth grades draw almost all their enrollment from the area within one mile of the school. Junior high schools, for the most part, serve students within a radius of one or two miles. However, in the case of Port Jefferson Junior High, students travel as far as 12 miles from Wading River. In 1963 there were eight schools in the Town of Brookhaven that contain senior high grades.

With the exception of Longwood High, which is situated in the central section of the Town, these schools are distributed throughout the more populated areas. The greatest distance between any two adjacent schools in this pattern is the four and three-quarters miles between Vandermeulen High School in Port Jefferson and Newfield High School near Centereach.

Enrollment

The important factor affecting enrollment in Brookhaven's public schools is the great number of

1963
PUBLIC SCHOOL BUILDINGS & DISTRICTS
PLATE NO.27



EDWIN S. VOORHIS & SON, INC., 1963

LEGEND

30 SCHOOL DISTRICT NO.

○ ELEMENTARY

□ JUNIOR HIGH

◇ SENIOR HIGH

▨ INCORPORATED VILLAGE

people moving into the Town. As stated earlier, the population in the Town grew from 44,500 persons in 1950 to 109,900 persons in 1960, an increase of 147 percent. Net migration accounts for 87 percent of this population increase. Since most of those moving to the Town are families with children, the number of children in the age group 14 years and younger rose 228 percent from 11,300 in 1950 to 37,100 in 1960. This age group increased from 25 percent to 33 percent of the total population over the decade.

As a result of this population growth, public school enrollment in the Town increased 229 percent from 1950 to 1960. From 1960 to 1963, enrollment increased another 36 percent. In 1950 there were 7,900 pupils in the Town of Brookhaven. In September 1963, the 56 public schools located in the town had a total enrollment of 35,400 students. The average annual increase since 1950 has been approximately 2,100 students. As shown in Table No. 10, school enrollment is growing at an increasingly higher rate. Almost 4,000 new students enrolled in Brookhaven public schools in 1963 - a 13 percent increase from September 1962.

Although school enrollment continues to increase in the Town, a decrease in enrollment is noted in a few individual school districts. These fluctuations occur because all children do not attend school in the district of their residence. For instance, the only school building in Mount Sinai was abandoned between 1950 and 1960 and students within the district started attending schools in other districts. Enrollment figures will continue to fluctuate in some school districts because children must be shifted from one district to another as classroom space and demand dictate.

School Capacity

Elementary Schools - Criteria and standards for construction, size, and capacity of school buildings are established by the New York State Department of Education. For example, a six-year elementary school should have between 10 and 20 classrooms. With half-day kindergartens, a building of 20 classrooms will provide space for three sections of each grade. Twenty-six classrooms are needed to provide three sections of each grade in a K-8 elementary building. Building capacity based on 27 pupils per classroom should fall within 300 to 800 pupils for an elementary school.

However, strict adherence to standards is not always possible or desirable. Population density, the size of area which must be served, transportation costs, fiscal policies, and other factors may require a building of larger or smaller size than the recommended standards. In the case of Brookhaven, the recent trend has been to construct large schools. There are 20 elementary schools with a design capacity of 600 students or more. More than one-half of these structures were constructed or enlarged to their present capacity after January 1960. There are only ten schools designed for 300 pupils or less and eight of these were built prior to 1960.

Despite the fact that school enrollment in the Town has increased approximately ten percent a year since 1960, most school districts have managed thus far to provide adequate classroom space for elementary students.

Secondary Schools - There are four junior high schools in the Town of Brookhaven. Three of these schools were constructed in 1962 or later and each has a design capacity at or near 1,000 students. South

TABLE NO. 10

PUBLIC SCHOOL ENROLLMENT
TOWN OF BROOKHAVEN
1950 - 1963

District	1950	1960	Percent Change 1950-60	1961	Percent Change 1960-61	1962	Percent Change 1961-62	1963	Percent Change 1962-63
1	121	387	220	410	6	419	2	470	12
2	266	1,029	287	1,167	13	1,325	14	1,736	31
3	223	724	225	938	30	1,216	29	1,643	35
4	804	2,812	250	2,977	6	3,147	6	3,375	7
5	593	3,551	499	3,863	10	4,421	14	5,024	13
6	1,246	2,588	108	2,660	3	2,585	-3	2,730	6
7	49	0	-100	0	---	0	--	0	--
8	107	383	258	403	5	455	13	543	19
9	156	474	204	546	15	548	0	579	6
10	30	198	560	242	22	291	20	300	3
11	513	4,472	764	5,060	13	5,621	12	6,612	18
12	218	1,210	455	1,496	24	1,958	31	2,093	7
21	14	73	421	60	-18	75	25	102	36
22	0	0	---	0	---	0	--	0	--
24	2,211	4,713	113	5,039	7	5,424	8	6,146	13
30	22	69	214	62	-10	67	8	70	4
31	0	0	---	0	---	0	--	0	--
32	370	1,854	401	1,976	7	2,055	4	2,168	5
33	599	904	51	958	6	1,022	7	1,038	2
34	133	195	47	187	-4	205	10	241	18
IS-5	266	471	77	490	4	505	3	535	6
	7,941	26,107	229%	28,534	9%	31,438	10%	35,408	13%

Total number of resident students in the Town of Brookhaven, 1963 - 35,900 (est.)
Resident students attending schools outside the Town of Brookhaven, 1963 - 700 (est.)*
Non-resident students attending schools in the Town of Brookhaven, 1963 - 200 (est.)

* Figure does not include District No. 14 on Fire Island.

Source: Suffolk County Second Supervisory District, Sachem Central School District, Middle Country School District and Patchogue Public School District.

Ocean Avenue School, the fourth junior high, is older and can accommodate only 500 students. The Center Moriches School District is the only one having elementary and senior high grades located in one school.

As of 1963 with the exception of Central School District No. 4, containing Bellport High School, all school districts are operating within the capacity of their secondary school facilities.

School Recreation Facilities

School playgrounds and playfields provide a significant portion of the public recreational area in the Town of Brookhaven. With the exception of Nassakeag Elementary School in Setauket and Oregon Avenue Junior High in Medford Station, all elementary and secondary schools have outdoor recreational areas.

Public use of school recreational facilities is limited due to their extensive use during and after school hours by physical education departments of each school. When recreational facilities are not being used for school activities, they may be used by the general public with permission of the Board of Education.

RECREATIONAL FACILITIES

Introduction

Recreation in Brookhaven, as in other parts of the country, is taking on an increasingly important function in day to day living. Giving impetus to recreation are the increasing population in the Town, the added leisure time, and the continuously changing living patterns, particularly the popularity of participation sports. Emphasis herein is placed on those facilities which are under the jurisdiction of the Parks and Recreation Department of the Town of Brookhaven.

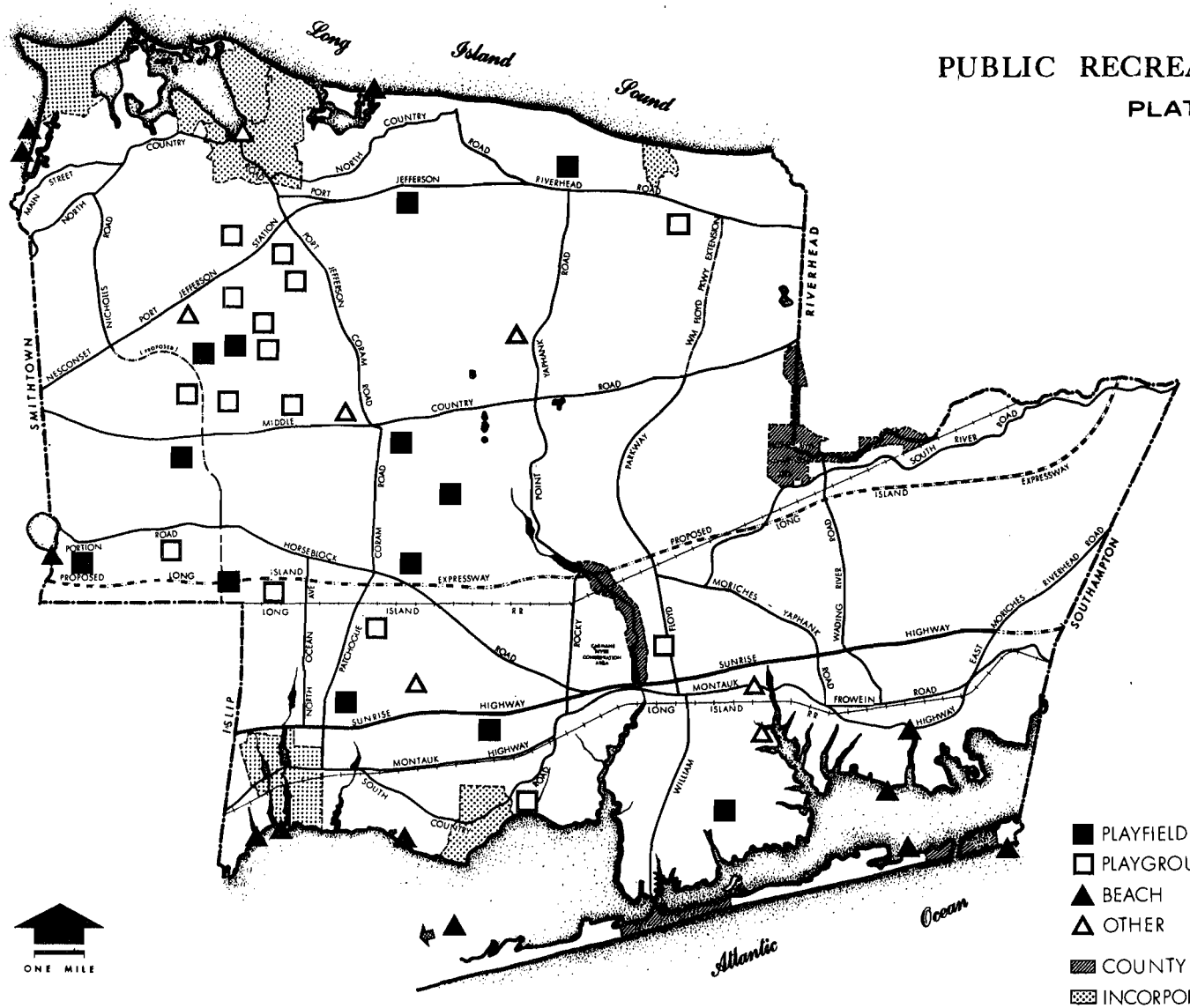
At present there are 45 recreation facilities under the jurisdiction of the Town either in use or under construction. These areas are shown on Plate No. 28, Recreation Facilities. Two additional areas not shown on the Plate have been acquired by the Town for future development as parks or playfields. In addition, the Town has entered into agreements with the Boards of Education for the use of the facilities at the Terryville School and the Middle Island School. The agreements provide that the school recreation areas be made available to all Town residents at certain specified times.

Playgrounds

Essentially, most of the playgrounds in the Town contain only playlot and playground equipment though some also include multi-purpose areas for such uses as skating and picnicking. The average size of this group of facilities is the smallest in Brookhaven with their acreage ranging from one-half acre to six acres.

The Town currently owns and maintains 15 playgrounds of which 12 are located in the western portion. All are located in residentially developed areas and are used primarily by children of pre-school and primary school age. The equipment at the playgrounds generally includes large and small swings, slides, and seesaws. The majority of the playground apparatus is in good condition, and periodic inspections and maintenance by

1963
PUBLIC RECREATION FACILITIES
PLATE NO.28



LEGEND

- PLAYFIELD
- PLAYGROUND
- BEACH
- OTHER
- COUNTY PARK OR CONSERVATION AREA
- INCORPORATED VILLAGE

EDWIN S. VOORHIS & SON, INC., 1963

the Recreation Department insure the continued safety of the playground equipment.

Playfields

Playfields are areas used for organized active games such as baseball and softball that require large amounts of space. They usually contain a section developed as a playground.

There are at present 13 Town-owned areas classified as playfields. Their sizes range from two to fifty acres. The largest of these are Centereach Recreation Park, Mount Sinai Ballfield, and Farmingville Ballfield. The distribution of these areas throughout Brookhaven is based generally on the present population centers. Baseball and softball are the major organized sports activities at the playfields. Portable bleachers and dugouts are located at some of the fields.

Inadequacies at some fields include short outfields, poor turf, and the location of lightpoles in the outfields which interferes with the active play.

Beaches

There are currently 12 Town beaches in Brookhaven varying in size from one acre at Stony Brook to 40 acres at West Meadow Beach. Three beaches are on Long Island Sound, four are on the south shore, two are on Fire Island, one is east of Moriches Inlet, and the remaining two are lakeside beaches.

Picnic facilities are located at West Meadow Beach, Blue Point Park, Kalers Pond, Bellview Avenue Beach, and at the three sandbar beaches. In addition, playgrounds are situated at all beaches with the exception of Bellview Avenue, and Lake Ronkonkoma.

Other Town Recreation Areas

There are seven additional recreation areas within Brookhaven that do not fit into the general categories of playgrounds, playfields, and beaches. These are: The Rifle and Pistol Range, which is the largest Town-owned recreational area, being 54 acres in size. The Port Jefferson Marina, and the site at Forge River are used exclusively for launching and docking purposes. An outdoor skating area is maintained by the Recreation Department at Coram, and the Mastic Club House is used for indoor recreation. The two remaining areas are those at Nesconset Highway and at Whiskey Road. These 50-acre sites have been acquired by the Town for recreation purposes, but development plans have not yet been prepared.

In summary, as of August 1964, the acreages of the recreation facilities administered by the Town are as follows:

Playgrounds	26.0
Playfields	160.5
Beaches	143.0
Other	173.0
Total	502.5

One of the major deficiencies of the Town's recreation system is a shortage of neighborhood parks. These are areas for passive recreation that are commonly provided with walks, benches, shade, and pleasant views. This type of area may be located on a site

together with the active play facilities or it may be on a site by itself.

The play areas which are part of the public schools of Brookhaven account for an additional 529.5 acres, thus currently providing the Town with a total of 1,032 acres of recreational land.

In addition to the Town facilities, there are two County parks within Brookhaven. These include 512 acres at Smith Point Park on Fire Island opposite the mouth of Carmans River, and Moriches Inlet Park, covering 470 acres on both sides of the inlet. Smith Point Park is a beach and picnic facility provided with automobile access via the Smith Point Bridge. Moriches Inlet Park is undeveloped. There are no State parks in Brookhaven.

Two other areas owned by the County are the Carmans River, and Peconic River Conservation Areas. These have not been included in the total recreation acreage figures because they are preserves rather than active recreation places.

PART II
DEVELOPMENT PLANS and IMPLEMENTATION

Land Use Plan

Traffic Circulation and Transportation Plan

Community Facilities Plan

Public Utilities Plan

Capital Improvement Programming

Subdivision Regulations

Zoning Ordinance

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF PLATES

LIST OF TABLES

LAND USE PLAN

Introduction

Presented here is the proposed Land Use Plan for the Town of Brookhaven for 1985. The Plan is in the form of a policy statement drawn pictorially. (see Plate No. 1.) This policy statement is of a general nature; firm in purpose yet flexible in its application.

The Land Use Plan is accompanied by a general description of each land use category and the reasons for development proposals. In most instances, locations of proposed uses are intended as approximations only.

The proposed future Land Use Plan for Brookhaven is based on, and related to, existing and evolving patterns of land uses. While existing conditions are the foundation of the Plan, many of these situations have not been accepted as desirable for the future. In these instances, corrective measures are recommended. In open areas where no development character is yet evident, natural features and the location of major facilities such as highways have largely determined the best possible future use of the land.

It must be emphasized that the real importance of the Land Use Plan lies in its goals and objectives, rather than the specific details which can be worked out once development policies have been accepted by the Town.

Land Use and Zoning

A Land Use Plan frequently is confused with a Zoning Ordinance and Use District Map. There are however, clear and very definite distinctions between the two. The Land Use Plan is not a legal document but is considered as a guide to future growth and development. It is a valuable tool for the Planning Board to use in shaping their recommendations to the Town Board through whose acts the use of land is finally determined

A Zoning Ordinance and Use District Map, on the other hand, is a legal document. It should be based on the objectives of the Land Use Plan. The Zoning Ordinance and Use District Map are adopted by the legislative body and become law. In this ordinance, use district boundaries are fixed and measurable and the exact conditions under which the land may be legally used are spelled out.

PURPOSES OF LAND USE PLANNING

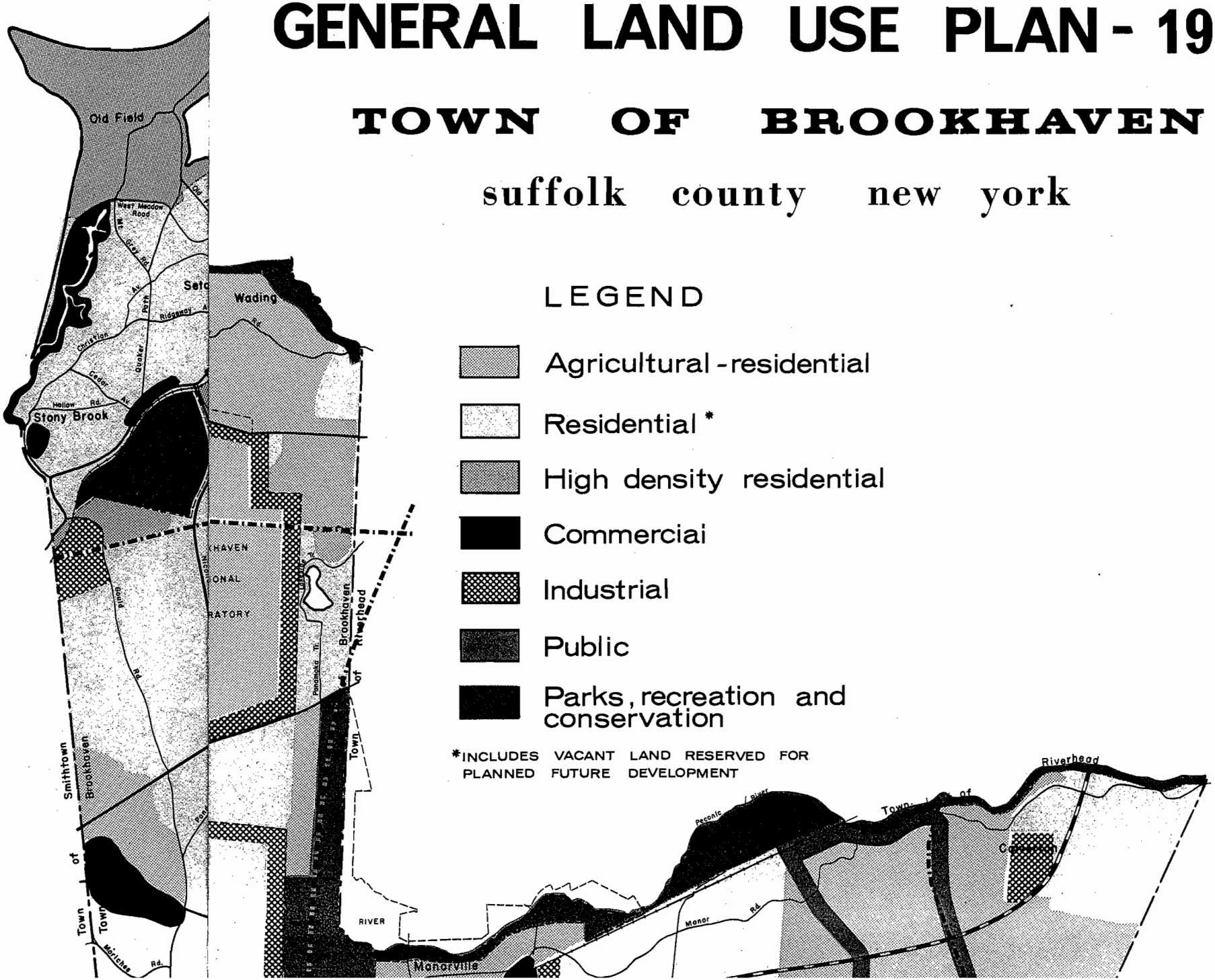
Land is a community's basic resource and certainly its most valuable asset. It is however, an exhaustible resource which can be dissipated senselessly through aimless sprawl and premature subdivision development. Sprawl not only creates confusion and problems but is expensive to service. Thus the relationship of one area to another, one acre to another, or one lot to its neighbor, becomes of prime importance to the community.

PLATE NO.1

GENERAL LAND USE PLAN - 1985

TOWN OF BROOKHAVEN

suffolk county new york



LEGEND

- Agricultural - residential
- Residential *
- High density residential
- Commerciai
- Industrial
- Public
- Parks, recreation and conservation

*INCLUDES VACANT LAND RESERVED FOR PLANNED FUTURE DEVELOPMENT

The Land Use Plan is that instrument of the Master Plan which establishes long-range policy and serves as a guide for the growth and development of the community. Its function is to determine the best use of the land on the basis not of expediency but of the probable future needs of the population. In effect, the primary aim of planning for land use is the creation of a well-balanced community which is attractive, efficient, and within the limits of financial practicability.

MAJOR GOALS AND OBJECTIVES OF THE BROOKHAVEN LAND USE PLAN

Today Brookhaven may be characterized as a suburban community which, at least in its westerly half, is rapidly urbanizing. The amenities of living in an open environment have attracted people from more congested areas in the Metropolitan Region and will continue to do so in the future. However, lest the land requirements of an expanding population destroy the very amenities that first attracted them, every effort should be made to conserve natural resources, the natural qualities of the landscape, and maintain the predominantly "open" character of the Town.

Only through land use planning with the purpose of guiding and controlling future development can Brookhaven retain its amenities.

The Brookhaven Land Use Plan sets forth a broad planning policy with respect to all future land uses. Proposals have been made for residential areas, commercial and industrial areas, major transportation routes, recreation and conservation areas, community facilities, and agricultural areas. As noted previously the Plan is based on the analysis of existing conditions, and the projection of regional and local trends in population, economic development, and transportation. These have been discussed in previous volumes of the individual series of Master Plan reports. The following may be summarized as the major goals and objectives of the Land Use Plan:

1. A variety of housing types and population densities should be provided to enable people with different incomes, personal and family requirements and tastes to live in the Town.

2. A variety of commercial and industrial enterprises should be encouraged to locate in the Town so that children being raised in Brookhaven may have employment opportunities in the Town when they are ready to join the labor force.

3. Commercial and industrial enterprises should not be permitted to scatter haphazardly throughout the Town. They should be located within clearly defined areas under strict planning controls so that these areas become welcome assets, rather than detriments, to the community.

4. The prevention and reduction of traffic congestion should be a major goal. A coordinated transportation system should be provided to serve the needs of through and local traffic.

5. A wide range of recreational facilities should be provided in readily accessible areas throughout the Town. The major

park system should be developed as an interconnection of large and smaller recreational areas, utilizing highway rights-of-way, and conservation areas. Agricultural areas should be worked into this pattern wherever possible.

6. Conservation of natural resources is a prime objective of the Land Use Plan. Also, the most productive soils should be reserved for agricultural development.

7. Measures should be taken for the development and rehabilitation of substandard areas. Those areas which are beginning to show signs of deterioration should be the subjects of a code enforcement program.

8. The Town should acquire land for public uses based on estimated future requirements. This land should be held in reserve in order that it may be allocated properly according to the Plan as the need arises.

9. Nonconforming uses should be eliminated eventually. New zoning categories should be adopted to carry out the policy for future growth as indicated on the General Land Use Plan.

Population and Land Use

Future land use requirements are based on the needs of the anticipated future population. It is estimated that the population in the unincorporated portions of the Town of Brookhaven will be 284,300 by 1985. This projection is based on regional and local trends in population growth and migration, and on zoning and residential construction trends in Brookhaven.*

The figure of 284,300 represents an increase of more than 200 percent over the 1960 population figure of 94,200 in the unincorporated portions of the Town.

In terms of households, the population projection results in a total of 83,610 households by 1985, an increase of 207 percent over the 1960 figure of 27,210 households. It is assumed that the current household size of 3.4 persons will continue for the expected population increase by 1985.

The land to accommodate these additional households will absorb the largest amount of the acreage required for all estimated future land uses. Plate No. 2 shows estimated population density by Planning District for 1985.

LAND USE COMPONENTS

Residential

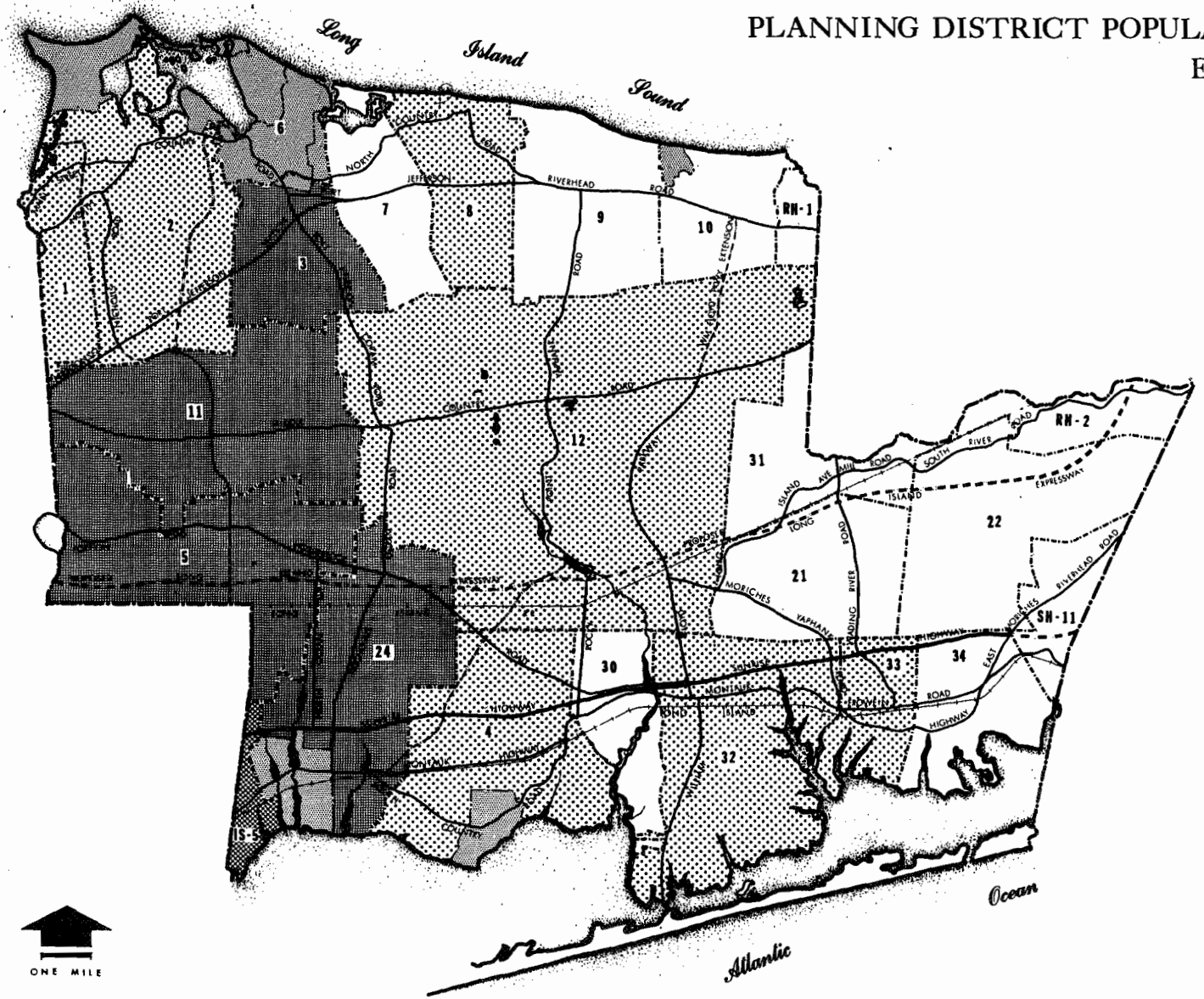
It is estimated that 37,850 acres of land will be used for residential development by 1985. This is an increase of 186 percent over the 1962 figure of 13,240 acres.

---

*Brookhaven's incorporated communities of Belle Terre, Bellport, Old Field, Patchogue, Poquott, Port Jefferson, and Shoreham; and the unincorporated area of Fire Island are not included in the Land Use Plan.

PLANNING DISTRICT POPULATION DENSITY
ESTIMATED - 1985

PLATE NO. 2



EDWIN S. VOORHIS & SON, INC., 1964

LEGEND

PERSONS PER ACRE

- 0 - 0.99
- 1 - 2.99
- 3 - 4.99
- 5 & OVER
- INCORPORATED COMMUNITIES

It is recommended that single-family detached homes be built on minimum lot sizes of 15,000 square feet. Where public sewerage systems are not provided, densities should be even lower in order to protect the ground water supply from contamination. High density areas which would contain multi-family housing units should be encouraged in appropriate places convenient to shopping, transportation, and community facilities and where public services can be provided economically.

Apartment units should be provided for two reasons. First, such space should be made available to young married couples, childless families, and aging citizens of the Town. Also, extensive cost of municipal services vs. tax revenues studies have shown that apartment house development, when compared with single-family house development, produces a more favorable effect on the community's tax structure.

It is essential that new multi-family developments be subject to rigid planning controls, be well designed and beautifully landscaped, in order that they become assets to the community.

Commercial

It is estimated that commercial land use requirements will account for 2,280 acres by 1985. This represents an increase of nearly 190 percent over the 1962 figure of 790 acres in commercial usage.

Most of the commercial land to be developed by 1985 should be shopper oriented, with office and related uses being encouraged to accommodate the projected increase in population.

Residents of the Town are entitled to convenient shopping facilities. Therefore, neighborhood centers should be located where population is concentrated. Larger shopping centers should be located in relation to convenient transportation routes where access can be controlled.

Strip commercial development should be discouraged in favor of planned business centers. Strip business development usually lacks adequate off-street parking because of short depth lots and small lot areas in single and separate ownership. The lack of off-street parking causes traffic congestion, impedes the movement of traffic, creates nuisances for the adjoining residences and requires a pattern of costly and uneconomic public services. Strip business development is generally lacking in good architectural design and does nothing to promote civic pride.

Industrial and Railroad

Future industrial and railroad uses are estimated to require a minimum of 8,720 acres by 1985, an increase of 2,530 acres, or more than 40 percent, over the 1962 figures. Excluding the acreage used by RCA (5,000) and Press Wireless (350), the increase in industrial and railroad use is approximately 300 percent, from 840 acres in 1962 to 3,370 acres by 1985.

Industry is needed to support the labor force and provide revenue for required community services. It is proposed that major industrial areas be developed in the form of industrial parks. These should be planned as integrated units with adequate off-street parking and loading spaces with each site containing room for expansion. The properties should be well landscaped and

buffered from surrounding residential development.

In addition, the major industrial areas should be developed in conjunction with highway, rail and airport facilities in Brookhaven in order to take full advantage of the transportation facilities that either already exist, or are proposed.

Agricultural-Residential

Agricultural land uses are proposed to be expanded from the 1962 figure of 12,480 acres to 17,700 acres by 1985. This represents an increase of 42 percent, or 5,220 acres in new agricultural uses.

The land proposed for agricultural development is located in those portions of the Town where the most productive soils exist and where land development has not already become prevalent.

The facts refute the belief that productive agricultural land is the last to yield to the march of urbanization. However, it is completely unnecessary for agricultural land to be reduced further by residential subdivision development. There is sufficient land available for residential development which is neither suitable nor desirable for agricultural usage.

From the standpoint of community development goals and objectives, farm land is an economic resource for conservation. Certainly the openness of agricultural land is consistent with the principle of preserving as much as possible of Brookhaven's existing character.

Low density residential development and certain types of recreational activities may be permitted on agricultural land. Residential development should be restricted to minimum lot sizes of three acres.

Streets and Highways

This land use category should require a minimum of 12,825 acres by 1985.

Proposed local minor and major residential streets, marginal access streets, secondary highways, and primary and major expressways are discussed in the Traffic Circulation and Transportation Plan. The major purpose of the general alignment of new thoroughfares on the Land Use Plan is to indicate the connections between various concentrations of development.

Not all connections will be new rights-of-way. In some cases the existing alignments are good, but may need widening. This will all require additional land, but the major portion of the overall increase in land devoted to street and highway use will be in local residential development, the cost of which will be borne by the developer.

Local Parks and Recreation

Local parks should be developed throughout the Town in direct proportion to population. Based on the projected population of 284,300 persons and on a standard of three acres per 1,000 persons, a total of 905 acres should be provided by 1985.

These facilities should include small playgrounds, passive recreation areas for sitting and walking, village squares or greens, and large playfields which should provide baseball diamonds and space for other team sports.

When possible, a combination of these facilities should be grouped together in central areas to facilitate their maintenance and to permit adequate supervision. At any rate, their provision in the future is considered essential to maintain the open character and well-being of Brookhaven's communities.

MAJOR PARKS, RECREATION AND CONSERVATION

It is estimated that a total of 11,650 acres of land used for these purposes will be required by 1985; the majority of this acreage being in conservation.

Major Parks and Recreation

Existing park areas will be inadequate to handle the recreational needs of an ever-expanding population which has ever-increasing leisure time. Spacial requirements should be increased and the distribution of parks should take into consideration such factors as natural features, access routes and the population they are intended to serve. Major parks should be at least 200 acres in size to be able to include such facilities as golf, picnic areas, horseback riding trails, and other uses which require a large amount of land.

All parks and recreation, including the required local facilities discussed earlier, should total a minimum of 3,000 acres, or slightly less than 11 acres per 1,000 population.

Conservation

The need for an ecological balance; a physical balance between man and his environment, is the basic reason for conservation and open space preservation.

Too often, land that is vital to the maintenance and preservation of natural processes and resources has been subdivided for residential construction. River and stream beds, drainage basins, marsh lands and woodlands should be conserved for the future to the degree deemed necessary.

Effectuating a policy aimed at preserving lands deemed essential for conservation purposes would not be in conflict with subsequent development plans or policies. If future planning decisions indicate the desirability of developing rather than preserving these lands, this could be accomplished easily since these lands would still be vacant. However, as a practical matter, it should be expected that public conservation land once designated as such will remain that way.

Other Public and Semi-Public Uses

It is estimated that 14,575 acres of land will be used for a great variety of public and semi-public activities by 1985. This category includes municipal buildings, parking fields, schools and colleges, hospitals, churches, cemeteries, recharge basins, etc. Included also is the Brookhaven National Laboratory site which accounts for more than 6,000 acres of the total, and which is expected to continue as the largest single development of any kind in the Town.

Land Reserved for Planned Future Development

It is estimated that 49,720 acres of land in the Town will remain unused by 1985, available for planned future development.

TABLE NO. 1

ESTIMATED LAND USE REQUIREMENTS
UNINCORPORATED PORTION OF TOWN OF BROOKHAVEN
BY PLANNING DISTRICTS
1985

Planning Districts *	Total Population	Total Number of Households	Total Acreage	Residential	Commercial	Industrial and Railroad	Agricultural - Residential	Streets and Highways	Local Parks & Recreation	Major Parks Recreation and Conservation	Other Public and Semi-Public	Land Reserved for Planned Future Development
1	8,400	2,470	2,900	1,235	60	85	500	380	25	100	(4) 470	45
2	15,200	4,470	9,850	2,625	150	(1) 500	900	685	45	400	(5) 545	3,920
3	16,000	4,705	4,350	1,745	140	160	400	720	50	100	335	700
4	17,600	5,175	9,750	2,430	100	175	700	790	50	300	425	4,780
5	46,000	13,530	10,300	5,220	350	460	200	2,070	140	200	720	940
7	2,600	765	3,850	520	50	25	1,800	115	10	300	100	930
8	4,800	1,410	4,350	845	40	100	1,500	215	15	100	150	1,385
9	5,200	1,530	6,300	1,165	80	(2) 2,750	400	220	15	100	150	1,420
10	2,900	850	3,550	480	20	30	700	130	10	200	(6) 400	1,580
11	52,000	15,300	10,600	4,915	350	520	300	2,340	155	300	(7) 1,090	630
12	32,000	9,410	32,300	5,520	270	(3) 2,900	4,000	1,440	100	3,000	(8) 5,375	9,695
21	2,500	735	6,600	395	15	50	1,000	115	10	50	75	4,840
22	1,000	295	8,800	190	10	20	700	70	10	50	(9) 1,100	6,650
24	39,000	11,470	9,300	4,385	250	390	300	1,755	120	400	450	1,250
30	2,000	590	4,000	300	30	20	400	90	10	2,500	100	555
31	1,900	560	4,400	300	15	75	600	85	10	1,000	(10) 1,310	1,005
32	17,300	5,090	10,300	3,120	170	200	600	780	50	1,000	(11) 500	3,880
33	6,300	1,855	3,300	890	70	80	200	285	20	100	200	1,455
34	2,300	675	4,400	405	20	40	1,000	105	10	200	200	2,420
IS 5	6,800	2,000	1,300	600	40	70	50	300	20	50	90	80
SH 11	1,300	380	2,450	190	15	35	1,200	60	10	----	20	920
RH 1	550	160	850	110	10	10	200	25	10	200	20	265
RH 2	650	190	2,550	265	25	25	50	50	10	1,000	(12) 750	375
TOTALS	284,300	83,610	156,350	37,850	2,280	8,720	17,700	12,825	905	11,650	14,575	49,720

* DISTRICT #6 is excluded because almost entire area is incorporated. However, the peninsula at Mount Misery Point is recommended for recreational and conservation uses.

(1) Includes Press Wireless (350 Acres)
(2) Includes RCA (2,700 Acres)
(3) Includes RCA (2,300 Acres)
(4) Includes State University (240 Acres)
(5) Includes State University (240 Acres)
(6) Includes Brookhaven National Laboratory (300 Acres)
(7) Includes Suffolk County Community College (415 Acres)
(8) Includes Brookhaven National Laboratory (4,560 Acres); Suffolk County Home (260 Acres); Brookhaven Airport (115 Acres)
(9) Includes U.S. Naval Research site (1,075 Acres)
(10) Includes Brookhaven National Laboratory (1,200 Acres)
(11) Includes Brookhaven Airport (265 Acres)
(12) Includes U.S. Naval Research site (725 Acres)

This is a reduction of 51,695 acres in the quantity of land designated as vacant in the 1962 land use inventory. Thus, approximately 50 percent of Brookhaven's vacant land will become used by 1985 to accommodate the anticipated population increase.

PLANNING DISTRICTS

Table No. 1 shows estimated land use requirements by 1985 on a Planning District basis. It must be understood that these Districts are not "communities" in a planning sense. Rather, they are the Town's School Districts which have fixed boundaries and for which important data has been collected. Only the unincorporated portions are included because the Town has the power to guide and regulate development in these areas only. However, the planning analysis has considered the conditions which exist in the incorporated villages.

The future land use proposals for each of the Planning Districts has taken into account the Town's overall land use goals and objectives, the influence of physical features, topography, soils, anticipated population growth, and future land use requirements for other than residential needs.

By and large, within the framework of sound planning principles, there is an equitable distribution of land uses within each Planning District. Where certain imbalances appear to exist, it is because Townwide considerations have been deemed more important than individual Planning District requirements. In such instances a consolidation of Districts, along the lines proposed by the State Department of Education, may remedy the situation.

It must be reiterated that acreage figures for each use category are not nearly so important as the goals, objectives, and development concepts proposed in the Land Use Plan for the Town.

CONCLUSION

There is no doubt that rapid population growth will continue in Brookhaven for some time to come. What is important now is to determine how this growth will be accommodated. It is hoped that the recommendations contained in this Master Plan will go a long way toward answering this question. It is incumbent upon the Town's officials and residents to work closely together so that required services and community facilities may be provided on a priority basis, at the lowest cost and in the most appropriate places.

Attempts to preserve open space and conserve natural resources should be a major concern throughout all planning efforts, and care should be taken to insure the protection of Brookhaven's residential areas, whether of low, medium, or high density, from intrusion of undesirable business and industrial uses. There is enough land available in the Town to accommodate these activities so that they too may expand and be spared intrusion from residential development.

The land use requirements presented in this report should serve as a guide to all concerned with the growth and development of Brookhaven. Unless positive steps are taken now to implement the recommendations set forth herein, the Town's future land use pattern

may be inefficient, chaotic, and detrimental to the suburban way of life sought by the Town.

Brookhaven Town officials are fully cognizant of this and are trying to create those conditions which will attract permanent residents, business, and industry to the Town while preserving its physical amenities. The General Land Use Plan will further guide Town officials in these efforts.

It will often be necessary for the Town to prepare detailed studies when specific problems arise. In such instances, proper consideration should be given to the goals and objectives of the General Plan, Zoning, and other factors related to land development activities.

TRAFFIC CIRCULATION AND TRANSPORTATION PLAN

Introduction

In Volume IV of the individual series of Master Plan reports, a detailed inventory and analysis of the Town's existing road system was made. Where deemed appropriate, some recommendations relative to the future were also made.

At this juncture, with the development of population projections, future land use patterns and the crystallizing of planning throughout the Town, it is necessary to consider the long-range function and capabilities of existing roads and to propose locations for the development of additional routes to provide for 1985 traffic requirements.

For both the primary and secondary highway systems, the fast, safe, and continuous movement of traffic is the major function. In order to strengthen this function and provide maximum control of access to primary highways, the practice of constructing marginal service roads adjacent to and parallel with the main roads must be continued and planned for to a greater degree.

A considerable portion of the street improvements recommended in this report may be obtained at no direct cost to the Town through its subdivision regulations. It is within the power of the Town Planning Board to require that a new subdivision road system be properly related to proposals set forth in the Master Plan. Effectively, this gives the Town through its planning function, the right to require that roads shown on the subdivision plat conform to the system recommended in the Master Plan.

Where other forms of transportation such as by railroad, air, and sea, play a roll in the future growth and development of the Town, they have been discussed and recommendations have been made.

Determination of Travel Desire Lines

In view of the relatively undeveloped nature of Brookhaven a synthetic approach was used since origin and destination data could at best represent only the developed areas, leaving other data to be synthesized for the remainder of the Town.

The method of synthesizing present travel desires in lieu of origin and destination data utilizes the fact that travel generally conforms within reasonable limits to a pattern. Any given population will generate a certain number of trips depending on mobility and economic level. These trips can be categorized according to purpose, such as work, business, shopping, social, school, and miscellaneous. Each of these trip purposes can be expected to fall within a certain percentage range. If the various land uses are known within the area under study and the relative sizes of the areas are determined, a pattern of travel desires can be synthesized. These desires are based on the population, commercial area, employment area, and other factors, depending upon trip type and distance or time between

zones.

Using this synthetic method, trips were plotted according to purpose and then combined into single desire lines between zones. The synthesized work trips were then compared with the 1963 "Journey to Work Report" of the New York State Office of Transportation which was derived from origin and destination data and were found to agree within satisfactory limits. All other trip types were synthesized as previously described. The resulting desire line map was tested against known traffic volumes crossing a number of screen lines which were established throughout the Town of Brookhaven and the model was adjusted to conform to these known volumes.

In estimating future travel a projection of future population and motor vehicle registrations had to be made. The total 1985 population in the Town, including the incorporated villages, has been estimated at 350,000 persons, and motor vehicle ownership is estimated as 2.0 persons per car. Since the present persons per car ratio is approximately 2.6 it is evident that Brookhaven will face not only an increase in traffic due to the population increase, but an additional increase due to greater mobility of this growing population.

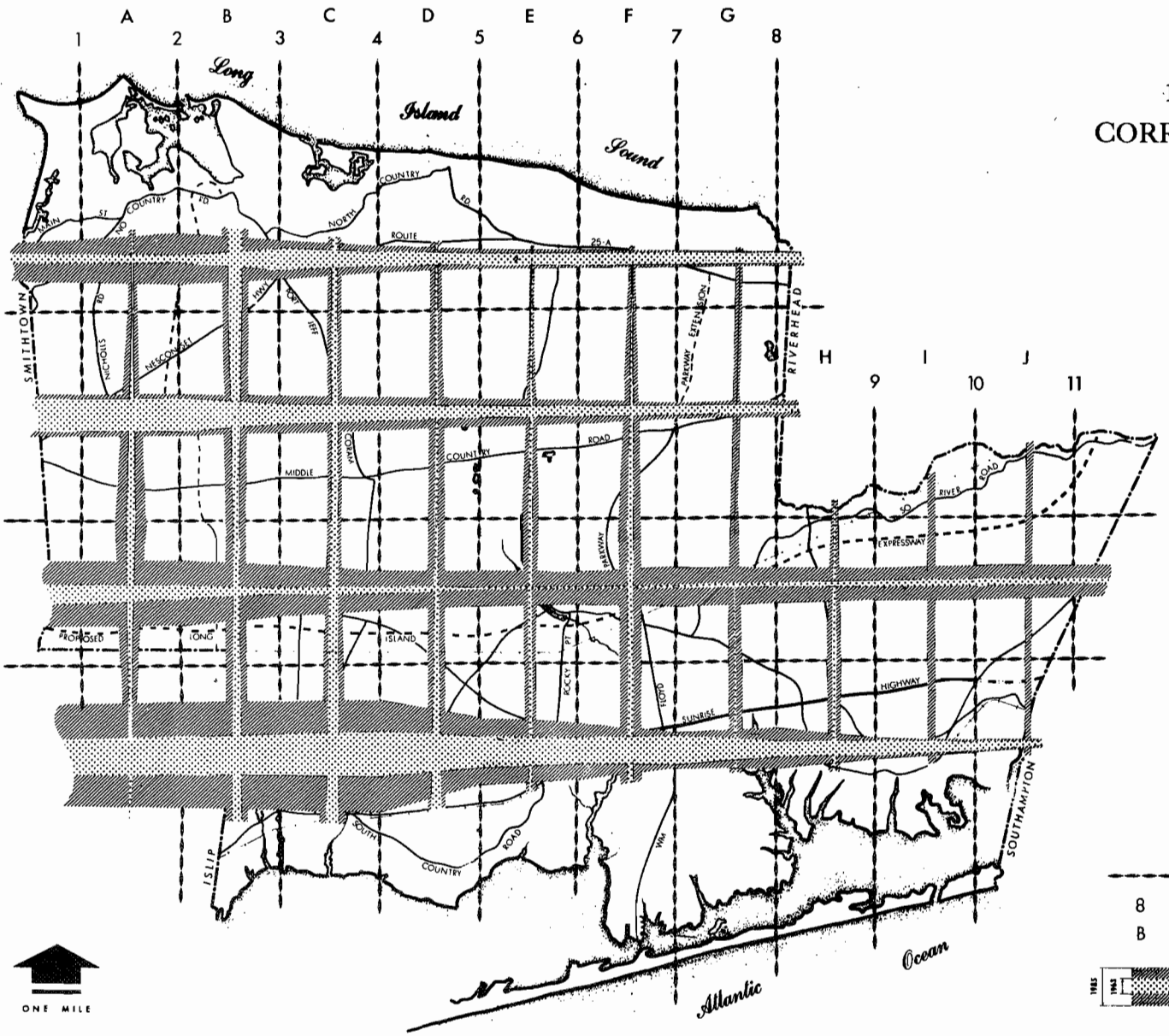
Utilizing population and land use statistics developed in this Master Plan, and with due consideration of the expected increase in mobility, growth factors were developed for each of the zones and new interzone transfers were computed for 1985. These were plotted according to trip purpose and then combined into single desire lines between zones. The 1985 highway needs were then determined by a corridor analysis. This in effect is a determination of the number of trips which could be expected to cross the established screen lines through the various corridors compared with the capability of the existing major routes to handle them. Where deficiencies exist, new routes, or widening of existing routes have been recommended.

Plate No. 3 is the corridor volume map indicating the 1963 and 1985 corridor volumes.

Plate No. 4 is the corridor deficiency map which shows the number of additional lanes through each corridor which will be required to accommodate the 24-hour two-way traffic volumes in the year 1985 at the indicated screen line. For example, in corridor K at screen line 1 a deficiency of eight lanes is anticipated. Part of this deficiency could be made up by additional major street laneage in the adjacent corridors; by a number of new facilities in the same corridor; or by a single facility having the equivalent capacity. A four-lane, limited access facility would more than satisfy the eight-lane deficiency, assuming an average street capacity of 500 vehicles per lane and the ability of an expressway to carry three times this volume, per lane.

PROPOSED ROUTE SYSTEM

Plate No. 5 indicates the traffic circulation plan which will be required to adequately handle the anticipated and projected 1985 traffic. The three major route categories, expressway, primary highway, and secondary highway, are designated by their appropriate symbol. For the most part, existing routes have been utilized in developing the system in order to minimize future right-of-way land acquisition costs. Where routes presently in use are utilized in the future plan



1963 & 1985 CORRIDOR VOLUMES

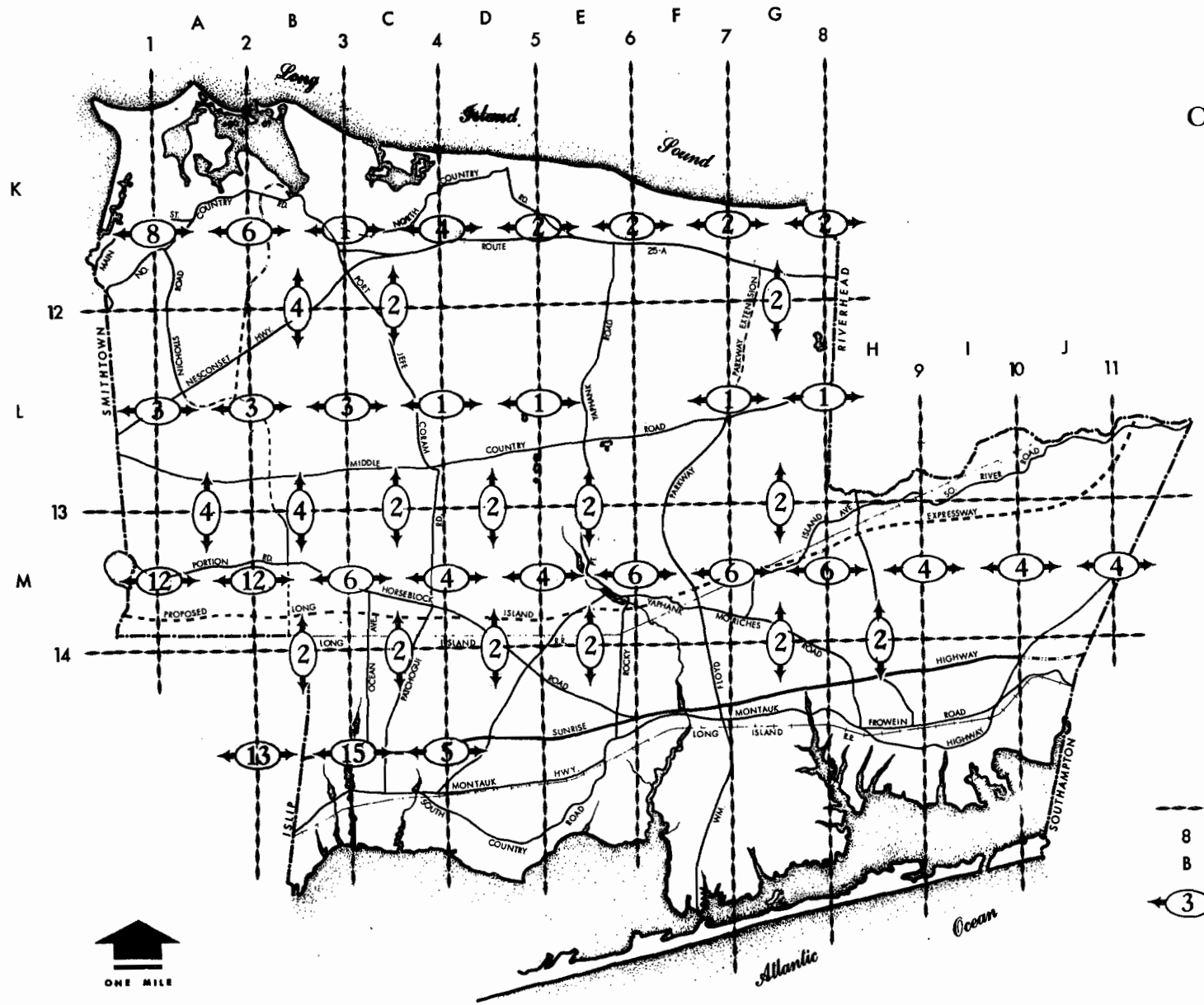
PLATE NO.3

LEGEND

- SCREEN LINE
- 8 SCREEN LINE NUMBER
- B CORRIDOR
- 1985 / 1963 — 30,000 / 15,000 / 0 — 24 HOUR VOLUMES

EDWIN S. VOORHIS & SON, INC. APRIL - 1964

1985
CORRIDOR DEFICIENCY
PLATE NO. 4

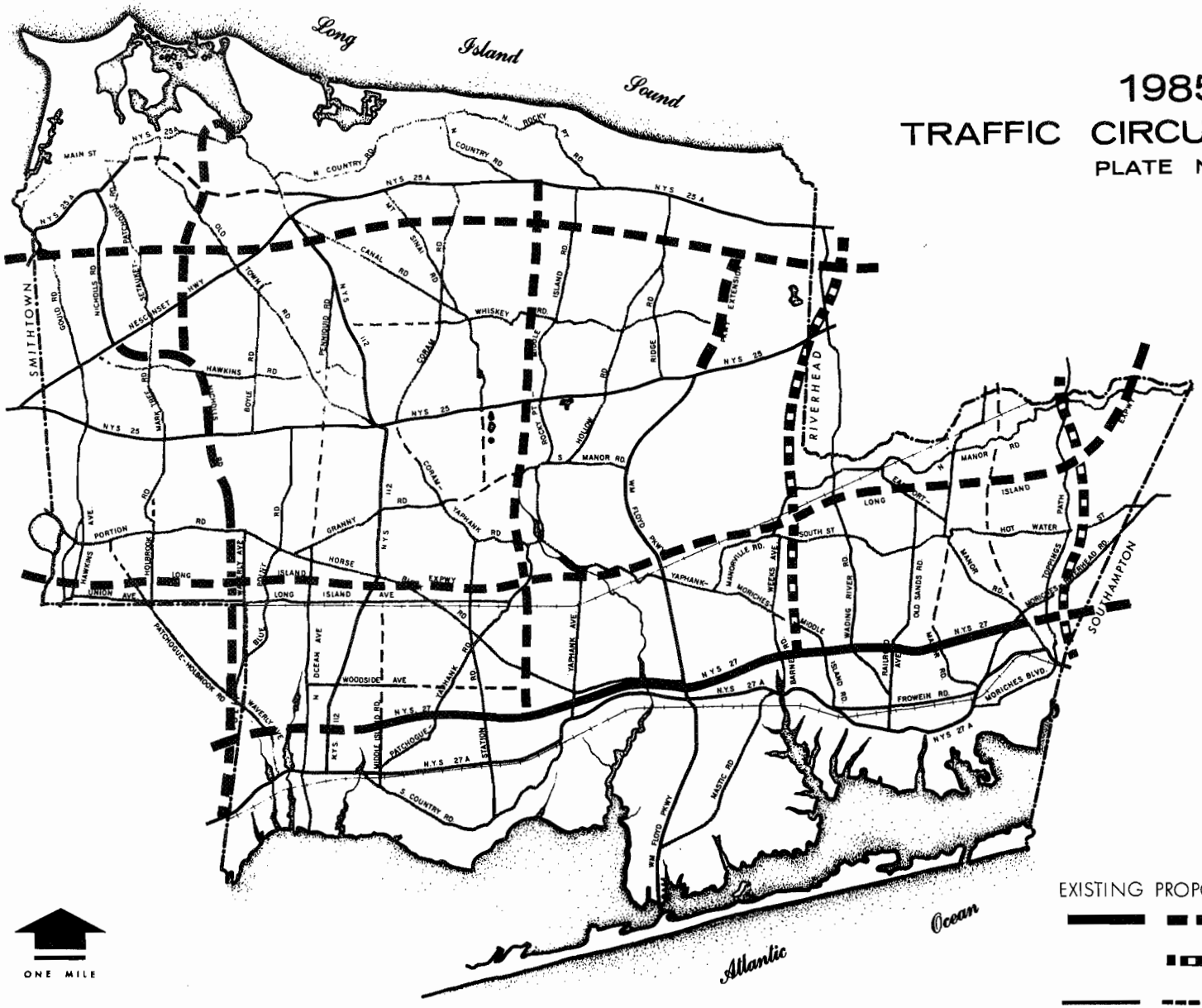


LEGEND

- SCREEN LINE
- 8 SCREEN LINE NUMBER
- B CORRIDOR
- (3) TRAFFIC LANE DEFICIENCY AT SCREEN LINE

EDWIN S. VOORHIS & SON, INC. APRIL - 1964

1985
TRAFFIC CIRCULATION PLAN
PLATE NO.5



ONE MILE

LEGEND

EXISTING	PROPOSED	
———	- - -	EXPRESSWAY
	▮▯▮	R/W ACQUISITION BY 1985
———	- - - - - -	PRIMARY HIGHWAY
———	- - - - - -	SECONDARY HIGHWAY

EDWIN S. VOORHIS & SON, INC. APRIL - 1964

it is assumed that existing alignment deficiencies will be corrected in accordance with the recommended minimum design standards.

The routes recommended will fulfill the laneage requirements developed in the corridor analysis. All routes proposed by other agencies have been evaluated and wherever possible have been included in the proposed system. In terms of fulfilling the corridor laneage requirements it should be understood that one expressway lane is equivalent to from two and one-half to three average street lanes, and that a divided highway with only a limited number of points of access and intersections at grade and with channelized turning movements can carry up to twice the volume of traffic that the average street without these measures is capable of handling.

Many of the routes proposed will not require ultimate development by 1985. This is particularly true in the easterly section of the Town. The right-of-way for these routes should however, be obtained at the earliest possible time, commensurate with the availability of funds as determined by the establishment of a priority system of allocating these funds. Early acquistion of rights-of-way will naturally result in reduced costs.

It may be that detailed studies will indicate that the development of a parallel route in place of a route proposed herein is more feasible. As long as such parallel route satisfies the corridor requirements, and land use factors have been considered, it will be in accordance with the objectives of the Master Plan.

East-West Controlled Access Routes

The future Traffic Circulation Plan indicates the construction of three controlled access routes to carry the east-west traffic through Brookhaven. Two of these routes, the Long Island Expressway, and Sunrise Highway are either already constructed or proposed for future construction by the State of New York. The third route should be in the northern section, entering Brookhaven on the west just below the State University, then proceeding easterly on a line either immediately parallel with existing Route 25-A or approximately midway between Whiskey Road and Route 25-A. The exact route must be determined by a detailed route study.

The need for a third facility of this type is indicated by the high laneage deficiency through this corridor from the westerly boundary of the Town of Brookhaven to approximately the Mount Sinai area. The projected travel desires indicate that this deficiency will not be made up by the proposed realignment and widening of Route 25-A to four lanes. East of Mount Sinai the anticipated traffic could probably be carried by Route 25-A, subject to the prevention of extensive roadside development and frequent interference by intersections at grade.

Another factor which will influence the need for extension of the northern expressway beyond the Mount Sinai area will be an affirmative decision on the construction of the Long Island Sound Bridge. If this project is undertaken, then extension of a northerly expressway through Brookhaven may be a necessity.

In the southern area of the Town of Brookhaven it is recommended that Sunrise Highway be continued

as a six-lane expressway from Phyllis Drive west. This route is presently access controlled from Phyllis Drive east to Eastport-Manor Road and the westerly extension at least as far as the Hecksher Spur would give complete continuity to a southern limited access route from Manhattan through the Town of Brookhaven.

North-South Controlled Access Routes

It is further proposed that three additional north-south controlled access routes be developed by 1985 and two rights-of-way be acquired. These five routes are as follows:

1. Suffolk County proposes to extend Nicholls Road south from its present terminus at Nesconset Highway to Montauk Highway. The County also proposes the construction of A. O. Smith Turnpike from Port Jefferson south to a junction with the proposed Nicholls Road. Both of these routes will fulfill the laneage requirements in this area.

2. Farther east, construction of another controlled access route is proposed. This route would have its northerly terminus at Route 25-A, west of the existing Rocky Point-Middle Island Road and would follow a more or less southerly route, skirting Middle Island and the Carmans River area to the west, and continuing south to Montauk Highway, parallel with and just west of Lexington Avenue in the Bellport area.

3. William Floyd Parkway is scheduled for extension to the north from Route 25 to Route 25-A. This section will be controlled access although the remainder of William Floyd Parkway is not.

4. It is recommended that right-of-way be acquired before 1985 for another controlled access route in the vicinity of Wading River Road. Beginning just east of Wading River Road this expressway would proceed southerly, cross Wading River Road in the vicinity of Route 25, then remain west of the existing road to a southerly junction with Montauk Highway in Moriches.

5. The remaining north-south expressway would be constructed in the vicinity of Toppings Path, far enough east to clear the Grumman property. Sufficient right-of-way should be acquired by 1985 to permit ultimate construction of a four-lane expressway.

These east-west and north-south routes comprise the proposed expressway system. When fully developed it will be capable of carrying the major traffic burden efficiently and safely. It should reduce the traffic demands on the remaining highway systems, thereby helping to maintain the capacities of the lesser routes.

Primary Highways

The primary highway system as proposed in the Traffic Circulation Plan includes Route 25-A, Route 25, Montauk Highway, Nesconset Highway and Route 112, the northerly section of Nicholls Road and William Floyd Parkway from Route 25 to the Smith Point Bridge. These routes should all conform to cross section 2 of the recommended cross sections shown in Part I of the Master Plan.

The most northerly route, North Country Road or Route 25-A, is scheduled for realignment from Port Jefferson to Setauket and widening to four lanes for its entire length. This will be a divided highway and if the recommended northerly expressway is constructed, this route will be adequate for 1985 traffic.

Middle Country Road, which traverses the central area of the Town of Brookhaven from west to east, is a three-lane highway, scheduled for future widening to four lanes, divided, with provisions for separating some of the intersections which are now at grade.

Montauk Highway is also a three-lane highway which is to be widened to four lanes. This route passes through numerous community business districts and is subject to extensive capacity reduction as a result. There are a number of sections of this route which have poor standards of alignment, further reducing its capacity. Extensive realignment of Montauk Highway will be quite costly because of the high degree of abutting commercial land use. The more dangerous sections should be improved however, and widening to four lanes should be undertaken. It is extremely doubtful that Sunrise Highway will divert much of the traffic from Montauk Highway since a high percentage of this traffic is local in origin, bound for the numerous retail areas along its route. It is suggested that an extensive traffic engineering analysis of the troublesome areas be conducted prior to construction of the aforementioned improvements in order to insure that maximum benefit be derived from this highway in terms of capacity.

Nicholls Road and William Floyd Parkway are both four-lane divided highways, with relatively little commercial or residential development along them. As long as development and points of access are limited, these routes will be able to function efficiently as arterial routes and will be capable of handling the anticipated 1985 traffic.

For all of the routes mentioned above every effort should be made to preserve their capacities. The primary purpose of carrying through traffic should not be overridden by extensive roadside development and numerous curb cuts.

Secondary Highways

Volume VI of the individual series of Master Plan reports lists the streets in the Town which have been designated as primary and secondary highways. Indicated therein are recommended cross sections, the present number of lanes, and the number of lanes which will be required by 1985. Discussed briefly on the following pages are recommended improvements to existing secondary routes and proposed new routes or extensions of existing routes.

When fully developed, traffic in the Town of Brookhaven should be served by a system of primary or secondary highways spaced approximately one mile apart and a system of major streets spaced approximately one-half mile apart. It is not possible to predict when full development will be reached but it is important that the Town begin now to provide the right-of-way for this eventual network of highways. It is extremely important that the development of a sufficient number of arterial routes not be barred by a continuous band of developed area in which no thought has been given to future traffic circulation.

Plate No. 5 shows the system necessary to meet the requirements for ultimate development from the expressway classification down to the secondary highway level. As the large open areas develop it will be necessary to make provisions for sufficient major streets to adequately serve these areas. It is not feasible at this time to pinpoint these roads since their alignments can be relatively meandering in character

while performing their function.

It is recommended that part of the potential traffic be diverted from Route 112 by extending North Ocean Avenue from its present terminus at Granny Road, utilizing portions of Public Road, Pennaquid Street, and New Street to a junction with Route 112.

- It is recommended that Granny Road be realigned to form a continuous route with South Manor Road as indicated.

- Mount Sinai-Middle Island Road should be extended south from Route 25 to Granny Road, possibly utilizing Bartlett Road as the extension.

- The westerly extension of Whiskey Road to a junction with Route 112 is also recommended.

- Woodside Avenue should be extended easterly to the proposed expressway.

The remaining routes shown on Plate No. 6 utilize existing rights-of-way except for those sections of the roads which will require additional land to correct existing alignment deficiencies.

An important fact to consider in Brookhaven is that the road system includes a number of diagonal roads cutting across a predominantly north-south and east-west grid. This can lead to the development of a number of problem intersections, particularly where this condition involves the intersection of major routes. The evolution of five and six-cornered intersections which are hazardous to navigate and difficult to control, and which seriously reduce highway capacity, should not be permitted. There are many examples of this type of intersection in more built-up areas outside the Town of Brookhaven, around which major business and commercial districts have developed, which face serious difficulties because of the traffic problems that have been created. In Brookhaven, improvements in alignment can presently be made to avoid the creation of these intersections before intensive development occurs. The cost of such alignment adjustments will be far less today than in the future when full development has been reached.

Scenic Routes

There is a highway concept worthy of consideration in Brookhaven. Specifically, Long Island possesses many points of historic interest and natural beauty which should be preserved. Many of these points of interest lie along existing routes while extremely attractive scenic areas lie along both the north and south shores of Long Island. There remain numerous villages and hamlets which have been able despite vigorous land development all about them, to maintain their individuality and historic character. To insure the preservation of these areas it is suggested that there be established a system of scenic highways along which any development out of character with its surroundings and purpose would be prohibited.

Essentially, the scenic highway concept would be a designation of existing routes rather than a program of new highway construction. The primary purpose of the system is to preserve for the appreciation of residents and tourists alike, now and in the future, the remaining areas of historic import and natural beauty.

In keeping with their purpose these routes would be designed for relatively low speeds and would be per-

mitted to maintain irregular alignments where they exist, compatible with their design speeds. Commercial traffic would be permitted only where necessary and the erection of billboards and development of new commercial areas would be forbidden. Access to off-the-highway tourist facilities to serve the highway users would, of course, be permitted and in fact, development of these facilities should be encouraged.

Definite routes for this purpose need to be determined. Certainly sections of North Country Road, Montauk Highway, and Middle Country Road would qualify to be incorporated in this plan. Plate No. 6 indicates several routes which could be included in such a plan.

Routes designated as scenic routes would, of course, be designed to perform their primary function of moving traffic. The other requirements of the scenic route concept could still be met.

Railroad Crossings

Warning signs at the approaches to railroad crossings are inadequate for all but the most lightly travelled roads. They will not be adequate for most, if not all, of the routes proposed for the 1985 traffic. For moderately travelled roads, automatic crossing gates and flashing lights can be utilized for the protection of traffic.

The type of railroad grade crossing control utilized will depend upon both the volume of traffic on the affected street and the frequency of railroad service.

The most effective means of preventing accidents at railroad grade crossings is by grade separation and this means will ultimately have to be employed on the major routes.

Traffic Control

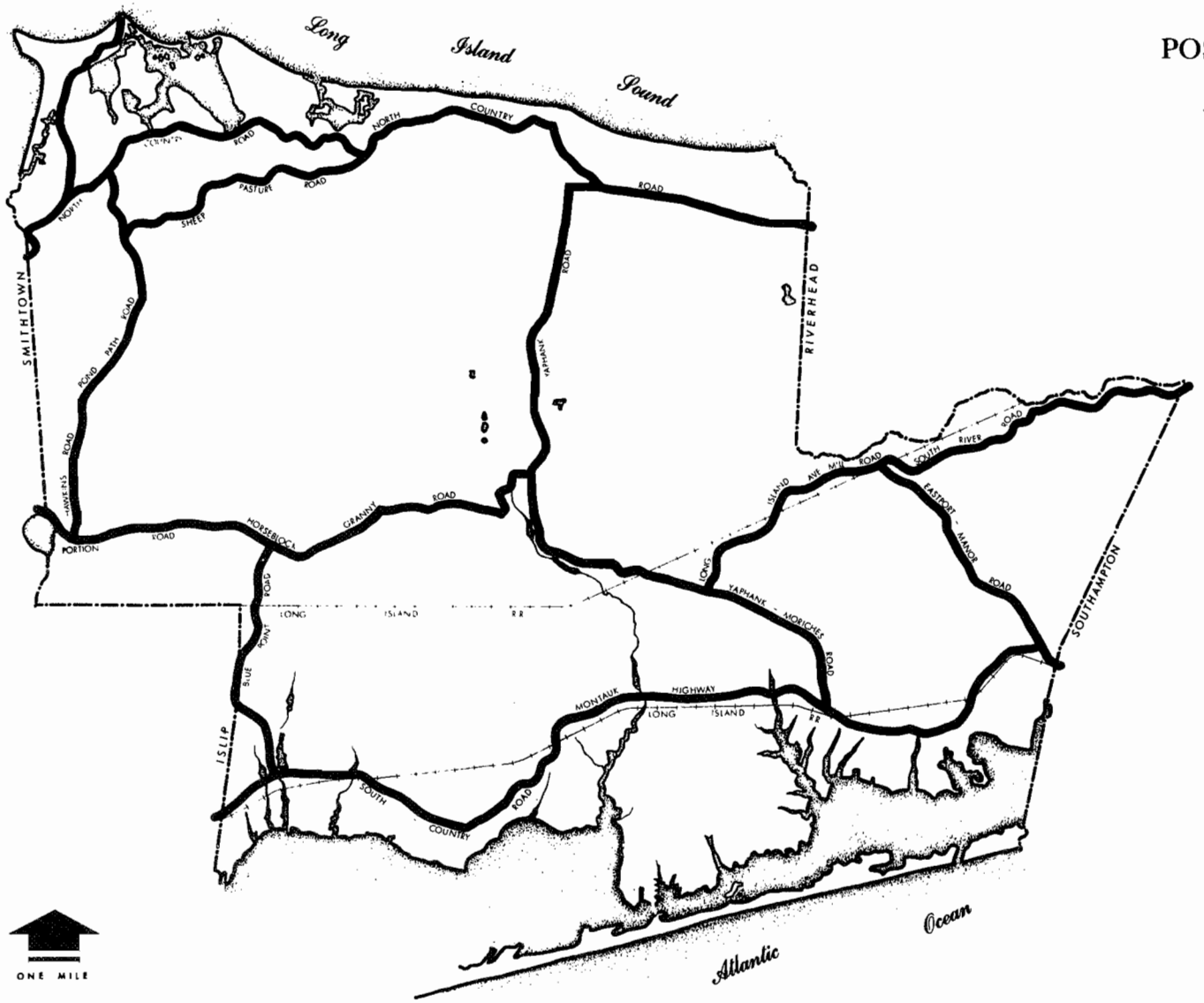
There are many aspects to the traffic control function for an area as large as the Town of Brookhaven. The judicious application of sound traffic engineering principles will do much to insure the safe and efficient performance of the street system propose herein. Essentially, traffic control for the major routes should be designed to facilitate the movement of through traffic, utilizing where necessary, signal progression, automatic controls, one-way operation, channelization, and turning and parking restrictions.

Major streets which are permitted to serve abutting properties in addition to providing access to minor streets, should be provided only with those traffic controls necessary for safe and efficient operations. Parking on these roads may be permitted where it is feasible.

It must always be borne in mind that a traffic signal should be an absolute necessity before it is installed. Signals in themselves constitute generally one of the major delaying influences on any motor vehicle trip. Other means of moving traffic through any intersection safely should be studied carefully before resorting to the stop and go signal.

POSSIBLE SCENIC ROUTES

PLATE NO.6



EDWIN S. VOORHIS & SON, INC., 1964

OTHER TRANSPORTATION FACILITIES

Railroad

The Town of Brookhaven, as is the case generally in Suffolk County, is mainly dependent upon the automobile as the principal mode of travel. Approximately 73 percent of all trips made in Suffolk County are made by automobile.* It is now and will remain primarily a County on rubber wheels. Nevertheless there is a sizeable portion of the population which depends on the Long Island Railroad for transportation to and from work. These commuters total approximately 9.2 percent of the population or about 19,547* persons. For these persons, as well as for commuters in Nassau County, this facility performs a necessary and vital function.

The New York Regional Plan Association has forecast a very slight increase in employment in Manhattan for the 1980's. There will be however, an increase in the number of types of jobs which will be likely to generate commuters from the suburban areas. This will mean a modest increase in commuters to New York City and total trip lengths by 1985.

The value of the Long Island Railroad lies not only in its service to the commuters it now carries but in the number it could carry if services were improved and expanded. In terms of savings of highway costs, this revitalization of the Long Island Railroad offers a comparatively inexpensive means of transportation for the future. The alternative to improved mass transportation is a never-ending expansion of highway facilities. The New York Regional Plan Association has also estimated that by 1985 there must be at least a doubling of the limited access highways now in use and under construction, if present growth trends continue.

If a realistic plan is to be developed for revitalization of the railroad it must be attractive to the commuter in terms of comfort, comparative costs and dependability, and it must be accessible to the people who will use it. The newly organized Metropolitan Commuter Transportation Authority which now owns and operates the Long Island Railroad is expected to make comprehensive long-range improvements to keep pace with future transportation demands on Long Island.

Bus Travel

The Long Island Journey to Work Report suggests a reasonable solution to the problem of accessibility in their recommendation for the establishment of transportation centers at the junction of major highways. In addition to the center proposed at Lake Ronkonkoma others could be established farther east. Connecting bus lines from the major population centers would carry passengers to and from these transportation centers. Traffic generators such as shopping centers could be incorporated into these transportation centers where ample parking facilities would be made available.

Other means of transportation play a relatively minor role in the movement of people in Brookhaven. Bus lines presently carry two percent or less of the daily work trips. Establishment of transportation centers would undoubtedly require expansion of the feeder

---

* L. I. Journey to Work Report, 1963
Office of Transportation
State of New York

bus services.

Trucking Facilities

Transportation includes the movement of goods as well as people and from this aspect the Town of Brookhaven has and will continue to have a wide range of transportation facilities available. The movement of truck freight will be greatly enhanced by the completion of the Long Island Expressway, the proposed northern expressway, and improvements to other major routes.

Air Travel

Brookhaven's air transportation needs will be served adequately by the Town airport at Mastic, MacArthur Airport in Islip, and by the Town's accessibility to the larger regional facilities of LaGuardia and Kennedy International Airports. Expansion of the Brookhaven Town facilities at Mastic will help to develop the availability of this important commercial service.

Sea Travel

The availability of the deep water port at Port Jefferson, which is capable of accommodating ocean-going vessels, further enhances the Town's position as a readily accessible entity, offering a wide choice of transportation media. There has developed in recent years, a degree of local opposition to any expansion of this deep water port for other than recreational purposes. It would seem that the industrial character of a large part of the port has been too well established and economic value to the surrounding region has become too great to afford any real chance of a change in direction of the port's land and water usage in the future.

Many new types of transportation are currently under study or in limited use. By 1985 it is possible that a breakthrough will occur which will enable one or several of these systems to challenge in importance the methods upon which we now depend for the movement of people and goods, including the hydrafoil. For the present however, it is necessary to plan with the tools now available.

CONCLUSION

It is important to realize that no system of classification can be exact. Most streets actually perform more than one function. A primary highway through a particular area might serve the local traffic to a much higher degree than through traffic. An arterial road might require two lanes while a heavily travelled major street requires four. Conditions change constantly and so therefore, must concepts. Jurisdictions too, quite frequently overlap, so that the responsibility for a given route might not be as clear as would be desirable.

This Plan recommends a road system for 1985. From the long-range plan a more detailed inventory of the physical status of the routes must be undertaken. Defects in alignment, surfacing and structural adequacy as well as traffic problem areas must be noted with greater detail. From these data the physical needs of each of the routes can be determined and the cost of improvements estimated.

The street system proposed herein is based on future land use as anticipated by the Master Plan. Extensive changes in this land use will affect the future circulation requirements. For this reason the Master Plan should be reviewed at least every four or five years in order to adapt the plan to the changing conditions. It is recommended that a budget item be established on an annual basis for the Planning Board to enable it to conduct a limited amount of traffic and highway engineering work. The purpose would be to determine deficiencies based on accident rates and intensity of land use and establish a priority system for correction of these deficiencies.

COMMUNITY FACILITIES PLAN

Introduction

In order to provide the community facilities, services, and amenities necessary to support the anticipated future population of the Town, sufficient land areas in appropriate locations must be found and allocated for the intended purposes.

Although the Town is growing at a very rapid pace, an abundance of land is available to provide for all forms of public uses. It is recommended that the Town acquire properties in the future in close accordance with the Land Use Plan in order to implement the recommendations contained herein. The opportunity to acquire needed land should be seized at the earliest time because once land is partially or totally developed, it becomes difficult, expensive, and often impossible to acquire sites for public use to serve the population adequately.

It is far better to view the situation, if possible, from the aspect of "Here are the public sites to support this form of development", not "Here is the development, how can we provide public sites?"

TOWN BUILDINGS AND FACILITIES

Town Hall

To satisfy the long-range growth and development needs of Brookhaven a new Town Hall should be provided. As discussed in Part I, the existing Town Hall in Patchogue lacks the modern conveniences and facilities necessary to carry out modern public administrative activities.

It is recommended that a new Town Hall be located in the Coram-Yaphank area on a minimum ten-acre site with adequate parking for all Town officials, employees, persons, and organizations having business with the Town. The structure itself should contain a minimum of 25,000 square feet of floor space.

Highway Department

The Town's Highway Department owns and maintains land scattered throughout Brookhaven. It is not recommended that additional sites be acquired. However, with the constant acquisition of new equipment, proper shelter should be provided to store this equipment.

The sites and storage areas should be protected from vandalism and maintained in such a way as not to detract from their surroundings. This may be accomplished by maintaining proper driveways, fencing, and living year-round green hedge to keep down dust, noise, lights, and general unsightliness which normally accompany any equipment and stockpiling operations.

Brookhaven Airport

Brookhaven Airport performs an important func-

tion for the Town and County. The present expansion and improvement program should be completed within a few years.

Serious consideration should be given to the development of an Air Industrial Park to include the area in the northeast quadrant of the William Floyd Parkway and Sunrise Highway. This type of industrial park is rapidly gaining favor and acceptance, the general concept being that a plant may operate and conduct its shipping directly from its site. Stock storage requirements are reduced since material is seldom more than an hour or two away. Shipping time is also reduced.

Also, with the development of the Fire Island National Park it is important that proper passenger and private plane facilities be provided, perhaps including an air taxi service connecting with the mainland terminal facilities.

OTHER PUBLIC FACILITIES

Libraries

The existing library locations are adequate to serve the Town of Brookhaven's present population, especially supplemented as they are by the Bookmobile. As the Town develops however, additional permanent libraries will have to be provided. In general, a population of from 10,000 to 15,000 should have its own library facilities.

A library should be housed in its own structure with more than adequate shelf space to allow for additional volumes. In addition, working space for reference material should be provided.

In some cases existing libraries, while properly located, are inadequate in size and provide very little in the way of amenities such as parking for cars and bicycles, landscaping, and rest-rooms.

The American Library Association has set many standards which the Town should work toward implementing wherever possible. According to these standards for example, a library should have a service area enclosed within a one-mile radius in areas of full development. Table No. 2 shows additional standards.

In Brookhaven both suburban and rural types of development exist. Thus, in the densely populated areas libraries are located fairly close, and in the rural areas library structures are supplemented by Bookmobile Service. Plate No. 7 shows recommended locations of libraries to serve the Town by 1985. A minimum of 15 libraries is recommended. These libraries would each contain some 65,000-70,000 volumes, 75 seats, occupy a structure of 9,000 square feet, and would cost in the neighborhood of $300,000 each.

Museums

The Town owns and operates a small museum in East Patchogue. Every effort should be made to develop further both the structure and its site in order to achieve the maximum potential of the facility.

As part of the park and museum development program, the 600-acre Floyd Estate should be acquired by the Town or County as a museum and wetland preserve.

TABLE NO. 2

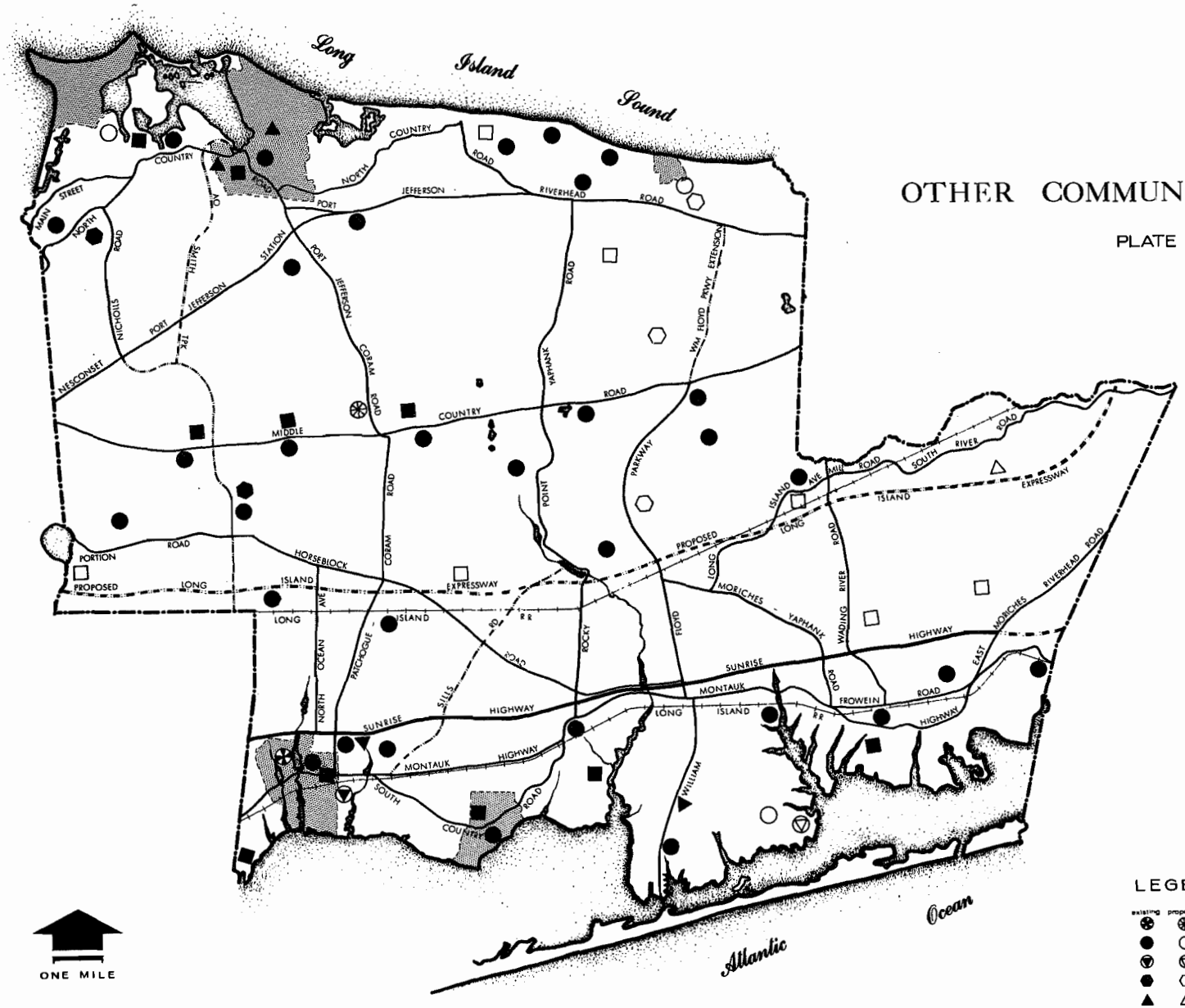
EXPERIENCE FORMULAS FOR LIBRARY SIZE

Population	Book Stock Vol./Capita	No. of seats per 1,000 Pop.	Circulation Vol./Cap.	Total Sq. Ft./Cap.	Desirable 1st Fl. Sq. Ft./Cap.
Under 10,000	3.5 to 5.0	10	10	0.7 to 0.8	0.5 to 0.7
10,000 - 35,000	2.75 to 3.0	5	9.5	0.6 to 0.65	0.4 to 0.45
35,000 - 100,000	2.5 to 2.75	3	9	0.5 to 0.6	0.25 to 0.3
100,000 - 200,000	1.75 to 2.0	2	8	0.4 to 0.5	0.15 to 0.2
200,000 - 500,000	1.5	1.25	7	0.35 to 0.4	0.1 to 0.125

Source: Wheeler and Goldhor, Practical Administration of Public Libraries, 1962.

OTHER COMMUNITY FACILITIES

PLATE NO. 7



EDWIN S. VOORHIS & SON INC., 1965

LEGEND

existing	proposed	
⊛	⊛	TOWN HALL
●	○	FIRE STATIONS
▽	▽	MUSEUMS
⬢	○	COLLEGES & UNIVERSITY
▲	△	HOSPITALS
■	□	LIBRARIES
		INCORPORATED VILLAGE

Colleges and Universities

The two existing and three proposed colleges within the Town should be more than sufficient to supply the Town's needs for higher education. If the three proposed colleges locate in the Town, Brookhaven could easily become one of the leading cultural centers on Long Island. The required supporting amenities in the form of transportation, housing, shopping, and recreation should be encouraged in every possible manner.

Higher education facilities serve a function quite similar to industrial park development in that it boosts the local economy by providing employment and bringing the necessary supporting service trades to the area.

Also, the location within the Town of the Brookhaven Laboratories indicates tremendous possibilities of jointly sponsored educational research related to physics, nuclear energy, medicine, and the like.

Hospitals

The present capacity of the four existing hospitals is 475 beds. When this figure is compared with the New York State Joint Hospital Survey and Planning Commission's standard of 4.5 beds per 1,000 persons, it is found that there are not now sufficient beds to supply the needs of 140,000 persons, which is the total Town population, including the incorporated villages. In order to fulfill this need, an additional 155 beds are required. In general, hospitals will serve both the incorporated and unincorporated areas of the Town and to a lesser degree, adjoining areas of other Towns.

By 1985 it is expected that the total population of the Town and villages will be 350,000. Thus, if hospitals are to be adequate in serving the Town, a minimum of 1,418 beds will be required. It is therefore recommended that the four existing hospitals plan to expand to a total of 1,020 beds and an additional hospital be planned in the eastern portion of the Town, preferably north of the proposed Long Island Expressway extension. This additional hospital would furnish the remaining 398 beds required by 1985.

Fire Department Facilities

The Fire Departments operate on a volunteer basis and with the good services they provide there seems little reason to change the method of operation. The Departments are in general, well staffed and equipped. Each Department is under constant review to meet the new demands placed upon it resulting from growth of population, construction, and new techniques.

One possible exception to the general high standards is the lack of radio in one of the North Shore stations. It is strongly urged that all emergency vehicles be equipped with radios as quickly as possible. In order to protect properly the expected future development, it is recommended that four additional fire stations be located in the more rapidly developing areas of the Town.

PUBLIC SCHOOLS

Future Enrollment and Capacity Trends

The population of the Town, projected to 1985,

and including the seven incorporated villages, is 350,000 persons. It is normally assumed that school age children number 30 per 100 persons. On this basis, there will be between 94,000 and 95,000 public school students in two decades. Using a nation-wide standard of 30 students per classroom as a guide, by 1985 between 3,133 and 3,167 classrooms will be required. This calls for an increase of some 1,518 additional classrooms over the current supply.

Existing schools may be able to expand to some degree, but the majority of the new classrooms will have to be in new schools, partly because of the limited size of many existing school sites and also to provide locations more central to the future residential development.

While acknowledging the fact that there will be dropouts for one reason or another, parochial school enrollments, and other factors which may serve to reduce the required number of classrooms, it is necessary to at least plan for the maximum of 3,167 classrooms, broken down as follows: three senior high school grades to require 443 additional classrooms; three junior high school grades to require 444 additional classrooms; and six elementary grades to require 888 additional classrooms.

Using the State Department of Education's standard of 10 to 20 classrooms per elementary school plant, and working with the higher figure, it is calculated that 44 more schools will be required by 1985. It must be pointed out that the figure of 20 classrooms is not firm. The number of classrooms per school is often greater. Using an average of 1,000 students per school, 13 new junior high schools and 13 new senior high schools will also be required by 1985.

School Construction Program

In reviewing the current five-year construction program in the Town, a large percentage of the anticipated growth has already been provided for through the increase of existing school plant facilities. Facilities for a total of 4,440 additional elementary and 5,205 secondary pupils are contemplated. If the current program was repeated for four five-year periods, only 38,600 of the anticipated 94,000 to 95,000 pupils could be accommodated.

By the end of the proposed five-year program, existing facilities will have been expanded about as far as is practical. New sites will have to be found and new plants constructed thereon.

School Recreational Facilities

A minimum standard for elementary school sites is ten acres. Junior high school sites and high school sites should be larger. Sites should provide adequate space for expansion as well as for facilities normally expected in conjunction with a well-rounded educational system. A review of existing school sites indicates that 24 schools are located on ten or more acres and 31 are on sites smaller than ten acres.

The sites which are below standard vary in size from one-half acre to eight acres. Occasionally there is joint use of a site by junior, senior, and elementary schools. Play areas in such cases should function separately.

Joint use of recreation space by School District and Town officials has been successful in many places

TABLE NO. 3

SCHOOL ENROLLMENT PROJECTIONS*
BY SCHOOL DISTRICTS

School District	1960	1965	1970	1975	1980	1985**
1 - Elementary	360	540	720	900	1,080	1,260
Jr. High	180	270	360	450	540	630
Sr. High	180	270	360	450	540	630
2 - Elementary	1,435	1,095	1,515	1,935	2,370	2,790
Jr. High	718	598	758	968	1,185	1,395
Sr. High	717	547	757	967	1,185	1,395
3 - Elementary	711	1,050	1,383	1,725	2,061	2,400
Jr. High	356	525	692	663	1,031	1,200
Sr. High	355	525	691	662	1,030	1,200
4 - Elementary	1,620	1,935	2,025	2,130	2,220	2,310
Jr. High	810	968	1,013	1,065	1,110	1,155
Sr. High	810	967	1,012	1,065	1,110	1,155
5 - Elementary	2,013	2,985	3,969	5,047	5,925	6,900
Jr. High	1,007	1,493	1,985	2,524	2,963	2,300
Sr. High	1,006	1,492	1,984	2,523	2,962	2,300
6 - Elementary	390	690	795	1,215	1,610	2,055
Jr. High	195	345	398	608	805	1,028
Sr. High	195	345	397	607	805	1,027
7 - Elementary	135	186	237	278	339	390
Jr. High	68	93	119	139	169	195
Sr. High	67	93	118	139	169	195
8 - Elementary	369	435	507	579	448	720
Jr. High	185	218	254	289	224	360
Sr. High	184	217	253	290	224	360

Table No. 3 (continued)

School District	1960	1965	1970	1975	1980	1985
9 - Elementary	435	510	572	642	711	780
Jr. High	218	255	286	321	356	390
Sr. High	217	255	286	321	355	390
10 - Elementary	126	180	249	312	372	435
Jr. High	63	90	125	156	186	218
Sr. High	63	90	124	156	186	217
11 - Elementary	2,331	3,420	4,518	5,612	6,705	7,800
Jr. High	1,166	1,710	2,259	2,806	3,353	3,900
Sr. High	1,165	1,710	2,259	2,806	3,352	3,900
12 - Elementary	1,140	2,175	2,604	3,336	4,068	4,800
Jr. High	570	1,098	1,302	1,668	2,034	2,400
Sr. High	570	1,097	1,302	1,668	2,034	2,400
21 - Elementary	126	177	225	274	324	375
Jr. High	63	89	113	137	162	188
Sr. High	63	88	112	137	162	187
22 - Elementary	21	48	72	99	122	150
Jr. High	11	24	36	50	61	75
Sr. High	10	24	36	49	61	75
24 - Elementary	3,165	4,050	5,085	6,135	7,170	8,220
Jr. High	1,583	2,025	2,543	3,068	3,585	4,110
Sr. High	1,582	2,025	2,542	3,067	3,585	4,110
30 - Elementary	60	108	156	204	252	300
Jr. High	30	54	78	102	126	150
Sr. High	30	54	78	102	126	150
31 - Elementary	36	87	135	186	234	285
Jr. High	18	44	68	93	117	143
Sr. High	18	43	67	93	117	142

Table No. 3 (continued)

School District	1960	1965	1970	1975	1980	1985
32 - Elementary	1,251	1,521	1,785	2,058	2,325	2,595
Jr. High	626	766	893	1,029	1,163	1,298
Sr. High	625	765	892	1,029	1,162	1,297
33 - Elementary	465	561	657	753	816	945
Jr. High	238	281	329	377	408	473
Sr. High	237	280	328	376	408	472
34 - Elementary	216	243	267	294	318	345
Jr. High	108	122	134	147	159	173
Sr. High	108	121	134	147	159	172
IS-5 Elementary	501	606	718	813	915	1,020
Jr. High	251	303	359	407	458	510
Sr. High	250	303	359	406	457	510
SH 11 Elementary	66	93	117	144	168	195
Jr. High	33	47	59	72	84	88
Sr. High	33	46	58	72	84	87
RH 1 Elementary	9	21	36	51	66	81
Jr. High	5	11	18	26	33	41
Sr. High	4	10	18	25	33	40
RH 2 Elementary	39	48	63	72	84	99
Jr. High	20	24	32	36	42	50
Sr. High	19	24	31	36	24	49
Total						
Elementary	16,485	22,155	28,440	34,710	40,980	47,250*
Jr. High	8,243	11,078	14,220	17,355	20,490	23,625*
Sr. High	8,242	11,077	14,220	17,355	20,490	23,625*

* Population pro-rated by 5 year progressions.
** All totals are rounded.

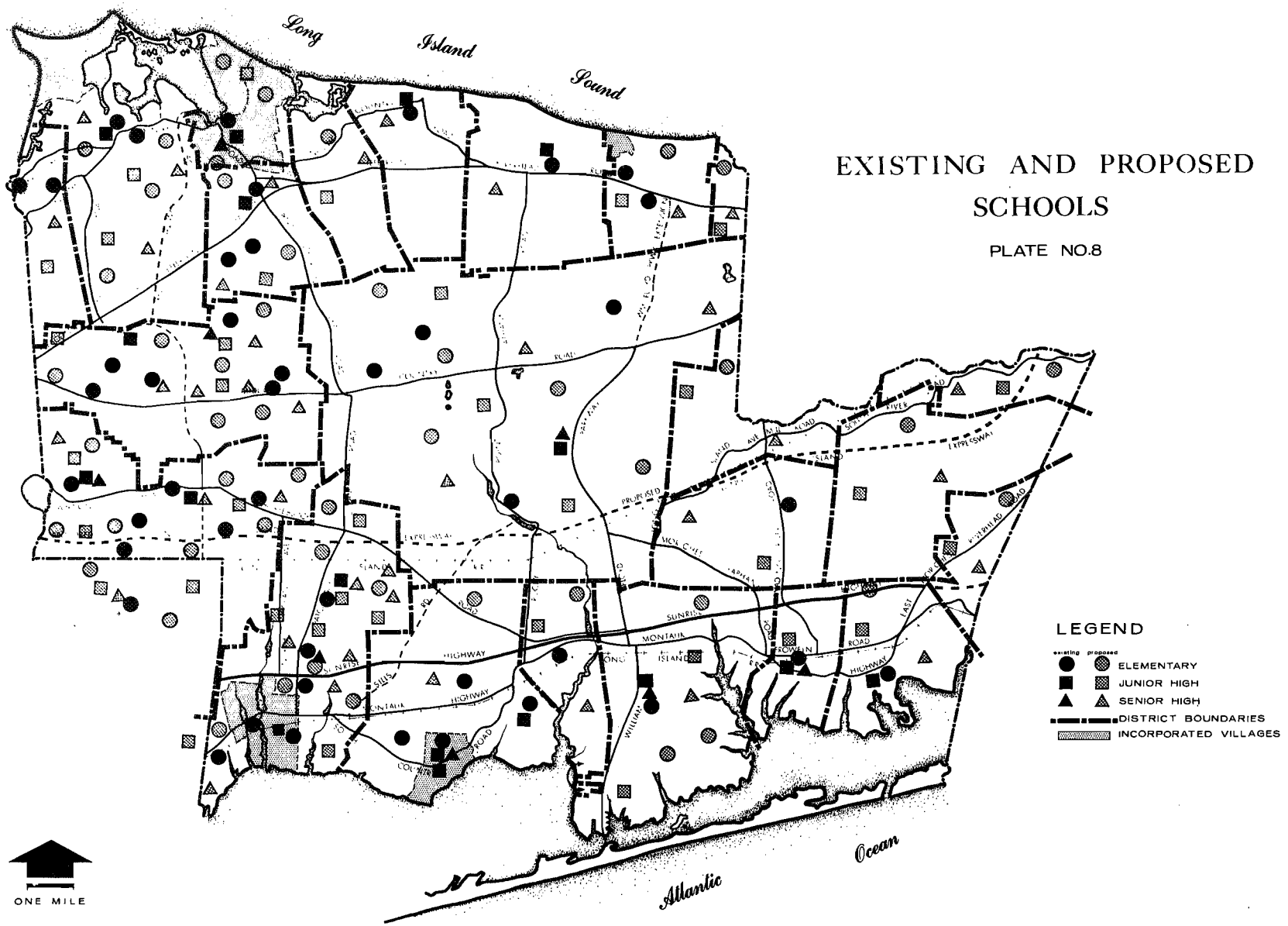
TABLE NO. 4

SCHOOL ENROLLMENT/POPULATION/SCHOOL DISTRICT*

School District	1960 Total Population	1960 Total Pupils	1965 Total Population	1965 Total Pupils	1970 Total Population	1970 Total Pupils	1975 Total Population	1975 Total Pupils	1980 Total Population	1980 Total Pupils	1985 Total Population	1985 Total Pupils**
1	2,400	720	3,600	1,080	4,800	1,440	6,000	1,800	7,200	2,160	8,400	2,520
2	4,868	1,470	7,307	2,190	10,124	3,030	12,941	3,870	15,759	4,740	18,577	5,580
3	4,750	1,425	7,000	2,100	9,250	2,765	11,500	3,450	13,750	4,125	16,000	4,800
4	10,761	3,240	12,884	3,870	13,519	4,050	14,154	4,260	14,789	4,440	15,423	4,620
5	13,450	4,035	19,960	5,970	26,470	7,941	32,988	9,894	39,490	11,847	46,000	13,800
6	2,631	780	4,556	1,380	5,267	1,590	8,099	2,430	10,912	3,270	13,743	4,110
7	900	270	1,240	360	1,580	474	1,920	576	2,260	378	2,600	780
8	2,450	735	2,920	870	3,390	1,017	3,860	1,158	4,330	1,299	4,800	1,440
9	2,900	870	3,360	1,020	3,820	1,146	4,280	1,284	4,740	1,422	5,200	1,560
10	850	255	1,260	360	1,670	501	2,080	624	2,490	747	2,900	870
11	15,550	4,665	22,840	6,840	30,130	9,039	37,420	11,226	44,710	13,413	52,000	15,600
12	7,600	2,280	12,480	3,750	17,360	5,208	22,240	6,672	27,120	8,136	32,000	9,600
21	850	255	1,180	354	1,510	453	1,840	552	2,170	651	2,500	750
22	150	45	320	96	490	147	660	198	830	249	1,000	300
24	21,088	6,330	27,006	8,100	33,940	10,170	40,865	12,270	47,824	14,340	54,756	16,440
30	400	120	720	216	1,040	312	1,360	408	1,680	504	2,000	600
31	250	75	580	174	910	273	1,240	372	1,570	471	1,900	570
32	8,350	2,505	10,140	3,042	11,930	3,573	13,720	4,116	15,510	4,653	17,300	5,190
33	3,100	930	3,740	1,122	4,380	1,314	5,020	1,506	5,660	1,632	6,300	1,890
34	1,450	435	1,620	486	1,790	537	1,960	588	2,130	639	2,300	690
IS 5	3,350	1,005	4,040	1,212	4,730	1,419	5,420	1,626	6,110	1,833	6,800	2,040
SH 11	450	135	620	186	790	237	960	288	1,130	339	1,300	390
RH 1	50	45	150	45	250	75	350	105	450	135	550	165
RH 2	250	75	330	99	410	123	490	147	570	171	650	195
Total	109,900	32,970	147,733	44,310	189,550	56,880	231,367	69,420	273,184	81,960	315,000	94,500

* Population pro-rated by 5 year progressions.

** All totals rounded.



EXISTING AND PROPOSED SCHOOLS

PLATE NO.8

EDWIN S. VOORHIS & SON INC., 1965

throughout the country and should be considered in Brookhaven wherever such an administrative arrangement is appropriate.

RECREATION FACILITIES

Introduction

The Town of Brookhaven, like other towns in Suffolk County, has a tremendous potential for recreation in its large amount of open space and lengthy water frontage. This open space should not be unduly diminished. Many of the natural assets of the Town lend themselves to recreational use. Since lands attractive for recreational purposes frequently are equally attractive for residential development, the Town must have an overall policy to guide its future open space and public land development, and thus make the best of its natural land resources.

The term " recreation use" does not infer that all open space and recreation areas need be owned and operated by the general public. Open space and recreation can and should be provided, in part by private enterprise in the form of marinas, golf courses, hunting preserves, ski slopes, ice skating rinks, swimming clubs and the like.

Recommendations contained herein concern land to be developed for active recreation, such as playfields, playgrounds, beaches and picnic areas, and for land which lends itself to passive recreation, such as wildlife preserves, conservation areas for protection of drainage basins, wetlands and natural woodlands. The passive areas would serve a twofold duty in that green areas would be maintained as buffers between neighborhoods, while acting as a filter medium through which the critical underground water supplies can be constantly replenished by natural runoff from rain and snowfall.

The present acreage devoted to recreational use by the Town amounts to 503 acres. This figure increases to 1,032 acres if all public school sites were also open to general public use. More cooperation between school and Town officials is required in order that large amounts of land suitable for continuous planned recreation are made available for use by the general public as well. The figure of 503 acres is augmented somewhat by the fact that the State and County both offer recreational opportunities within the Town. State parks are open to unrestricted use and the local resident must compete with a large population from the metropolitan area for use of these lands.

Using a minimum standard of ten acres for all types of recreational land per 1,000 persons, a total of 1,300 acres should be available at the present time, and a total of 3,155 acres should be provided by the time the 1985 population is reached. The following Table shows how this breakdown is recommended by use.

Plate No. 9 shows the general location of the existing and proposed playfields, playgrounds, beaches, and conservation and park areas.

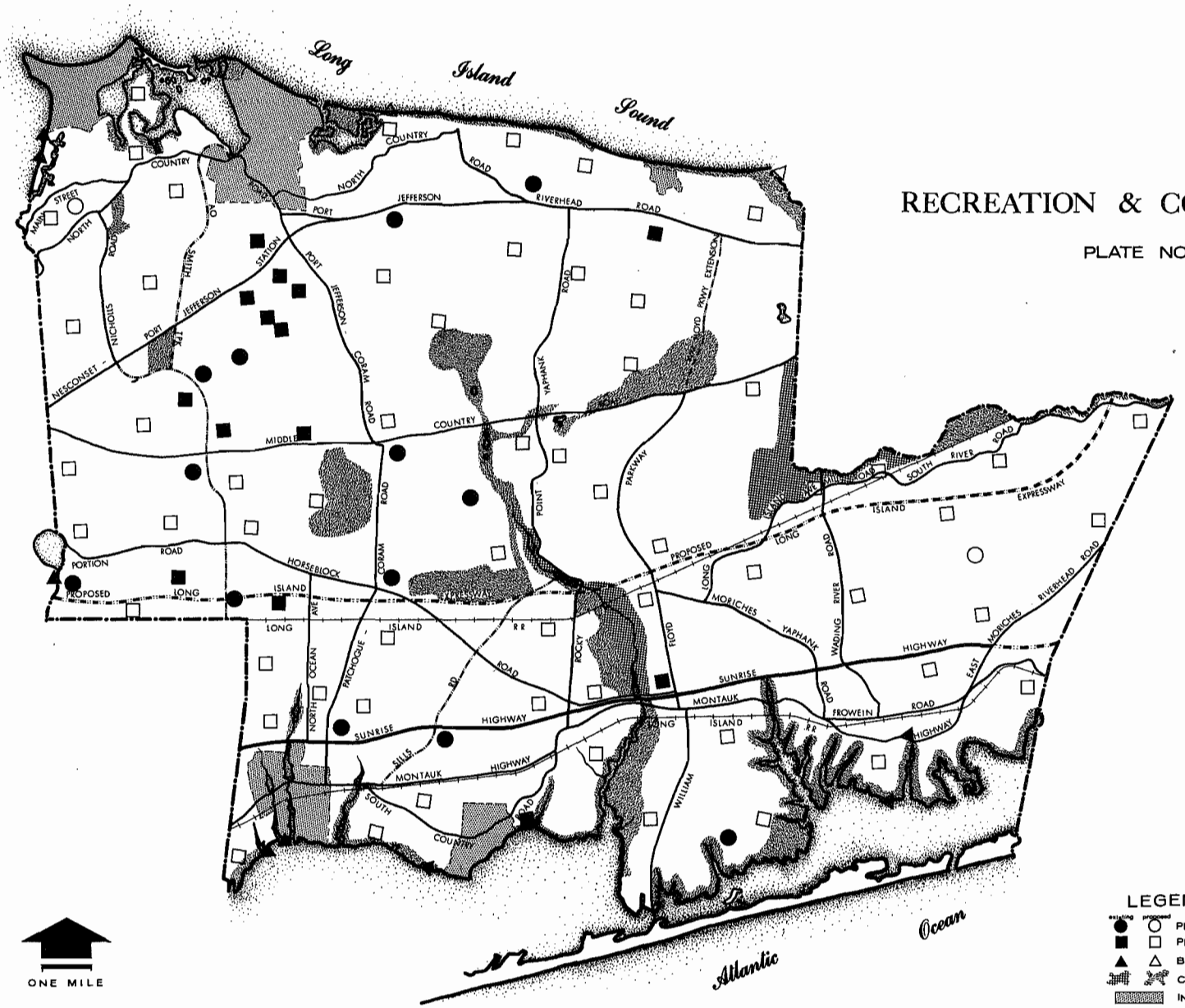
TABLE NO. 5

RECOMMENDED TOWN RECREATION AREAS

Type	Minimum Size in Acres	Acres Per 1,000 Pop.	Minimum Acres Required by 1985 (Rounded)	No. of Units (Rounded)
Playgrounds	5.0	1.25	395	79
Playfields	15.0	1.25	395	26
Neighborhood Parks	0.5	1.00	315	630
Community Parks	50.0	5.00	1,575	32
Beaches	5.0	1.00	315	63
Misc. Green Areas Corridors, etc.		0.50	160	
		10.00	3,155	

RECREATION & CONSERVATION

PLATE NO. 9



LEGEND

- EXISTING / PROPOSED PLAYFIELD
- EXISTING / PROPOSED PLAYGROUND
- BEACH
- CONSERVATION OR PARK
- INCORPORATED VILLAGE

EDWIN S. VOORHIS & SON INC., 1965

Playgrounds

The National Recreation and Park Association recommends 1.25 acres of developed playground per 1,000 persons. These playgrounds should be distributed throughout the Town, each serving a population of approximately 4,000 persons. By 1985 a total of 395 acres, or 79 playgrounds will be required, assuming five acres per playground. These sites, in certain instances, may be combined with other facilities provided the individual playgrounds are clearly separated in order to avoid interference of various age groups.

Playfields

Playfields should range in size of from ten to twenty acres, with each facility serving a population of 12,000. Using a fifteen-acre figure as the guide, by 1985 fourteen new playfields will be needed, bringing the total to 26 individual sites, with a total of 395 acres.

Neighborhood Parks

This type of park is intended primarily to provide passive recreation, buffer strips between incompatible uses and an attractive neighborhood setting for all residents of the immediate area.

In general, the small park should be provided for the same population group which requires a playground. In residential areas which are zoned for large plots, small parks might not be necessary. Since the main purpose is to provide for passive recreation all that is required are trees, shrubbery, landscaped areas, walks, and benches. Scenic views should be used wherever possible. Parcels not suitable for maintenance development should receive first consideration.

Beaches

The Town now has 12 beach sites ranging in size from one to 40 acres. Every attempt should be made to protect the remaining water-frontage from dense residential development and acquire it for public use wherever possible. Recreational development in the form of beach clubs, marinas, and other private enterprises should be encouraged. Pollution along all water-fronts should be strictly controlled by adequate setbacks and sanitary waste controls.

One of the areas where beach rights should be acquired is along the Long Island Sound. This waterfront is rapidly being closed to the public through private residential development.

The southern shore of the Town on the Great South Bay is almost entirely closed to the public except for water-frontage already controlled by the Town. Here also the Town should, wherever possible, acquire additional parcels through gift, purchase, and/or tax foreclosures. Very small parcels might be suitable for launching ramps or fishing.

The two inland water areas of Lake Ronkonkoma and Kalers Pond should be more accessible to residents of the Town. Private development is rapidly enclosing the lake except for frontage already acquired. The Planning Board should recommend a program of land acquisition to the Town Board by which all of the lake frontage in the Town of Brookhaven might ultimately be acquired for public use.

Natural Woodland and Preserves

This type of recreational land is not meant to be intensely developed with equipment and facilities. These areas and the following category of "Conservation Areas" are proposed primarily to maintain the general open character of the Town and to preserve natural resources such as ground water supply and woodlands. The areas should be publicly owned and maintained.

Conservation Areas

The conservation areas need not be owned outright by the Town. In most instances the present landowners would continue their ownership and use, but any intensive development would be discouraged. These conservation areas would as a rule, follow the flood plains of drainage creeks, tidal flats, and inlets.

A suggested development proposal for conservation areas includes a series of small dams to create fresh-water ponds along the drainage creeks. Not only would these help in replenishing ground water but also in preventing salt-water intrusion during periods of extreme high tides along the shore lines.

CONCLUSION

The time is rapidly approaching when the urbanization of the Town of Brookhaven will have used much of the valuable open space and driven land costs up to a point where acquisition requires a second thought. In addition, as the better land is absorbed there is an even greater tendency to encroach on marginal lands that should be undisturbed, not only from the aspect of open space but from a viewpoint of health and conservation of natural resources. The Town is located in a region that can boast of many natural advantages. It should profit from these assets and preserve this natural beauty for future generations. This can only be achieved if the Town actively participates in a program of open space conservation.

The Town can get help from outside sources for such purposes. The Federal Government presently provides grants to aid in the acquisition and development of land at both the Town and private ownership level. It is recommended that the Town make application for such financial assistance at its earliest opportunity.

PUBLIC UTILITIES PLAN

Introduction

This section presents an estimate of the future public utilities which will be necessary to serve the Town of Brookhaven within the period encompassed by the Master Plan. Included herein are discussions of water supply, sanitary sewerage, refuse disposal, and drainage. Most of the recommendations are necessarily general in scope since the Town is still relatively undeveloped.

The primary purpose of planning future public utilities is to determine in a general way the extent of services to be supplied in accordance with the estimated growth so that more comprehensive plans can be developed before the actual need for these utilities is present. Only through such planning can expensive and often ineffective stopgap measures be avoided.

WATER SUPPLY

General Considerations

The future supply of water for the Town of Brookhaven can be assured by the application of sound, long-range planning principles. Assuming that pollution hazards will be recognized and avoided, the supply of water available in Suffolk County has been estimated as being capable of sustaining a population of 3,300,000 people at a daily per capita consumption of 150 gallons.* This estimate is based on residential development of about 36 percent of the total area of the County.

In the development of the future water supply for the Town of Brookhaven it is well that eventually, responsibility for providing water service to the Town will be assumed by a single agency - the Suffolk County Water Authority. In this way the problems which frequently occur when numerous small companies are active in an area can be avoided. Some of these problems are varying rate systems, insufficient capacity in certain areas, and inadequate fire protection service. These and other problems can be eliminated by the development of a coordinated water service plan. The Suffolk County Water Authority will expand its services to areas where population density is sufficiently great to justify such extension.

Desalinization

At the present time the sole source of water supply in Brookhaven is from the ground water reservoir. A salt-water desalinization plant has been proposed for construction in the Northville area of Riverhead. If built, this plant will be capable of converting about

---

* Report on a Comprehensive Plan for the Development and Distribution of the Available Water Supply of Suffolk County - Thomas H. Wiggin, 1957.

1,000,000 gallons of sea water per day. Until such time as desalinized water becomes economical to produce, the ground water reservoir must be considered as the only practical source of water for the Town.

Land Development Control

It has been pointed out that the ground water reservoir is a limited, but vital resource in Suffolk County. It cannot supply an indefinite population without ultimately being depleted. Thus, some control over future population must be exercised in order to insure an adequate supply of water. Much of this control is available through the zoning ordinance which will be necessary to carry out the goals and objectives of the Land Use Plan.

The estimate of future population which can be sustained by the available water supply in Suffolk County was based on residential development of approximately 36 percent of the total area in the County. The General Land Use Plan provides for residential development in Brookhaven of 24 percent of the total area of the Town which is well below the County figure and thus contributes to the adequacy of the future water supply, at least to 1985.

Future Requirements

In order to estimate the quantity of water which will be needed by 1985, an analysis was carried out on a planning district level. These are the smallest units for which future land use data was developed and therefore provides a basis for more closely determining areas in which extension of water service will be required.

The United States Public Health Service* suggests certain standards for determining the feasibility of extending public water supply to new areas based on population density. The lowest density for which the extension of water service can normally be economically justified is 1,000 to 2,500 persons per square mile. This is the equivalent of lot sizes of one to two acres. Plate No. 10 indicates the areas which are anticipated to reach this density by 1985. If it is assumed that growth within the planning districts will occur on a straight line basis between now and 1975, then the entire area with the exception of Planning District No. 8 will require water service by 1975. It is much more likely however, that growth will occur more rapidly in the western and southern portions of the Town and gradually move outward from these areas.

Since the residential development of much of the Town will largely be subject to the actions of future subdivision developers, it is not possible to prepare a precise water plan detailing locations of wells, tanks, and pipelines. Thus, the ultimate development of the Town's water supply will consist of a large number of wells, the locations of which will depend on the future pattern of development.

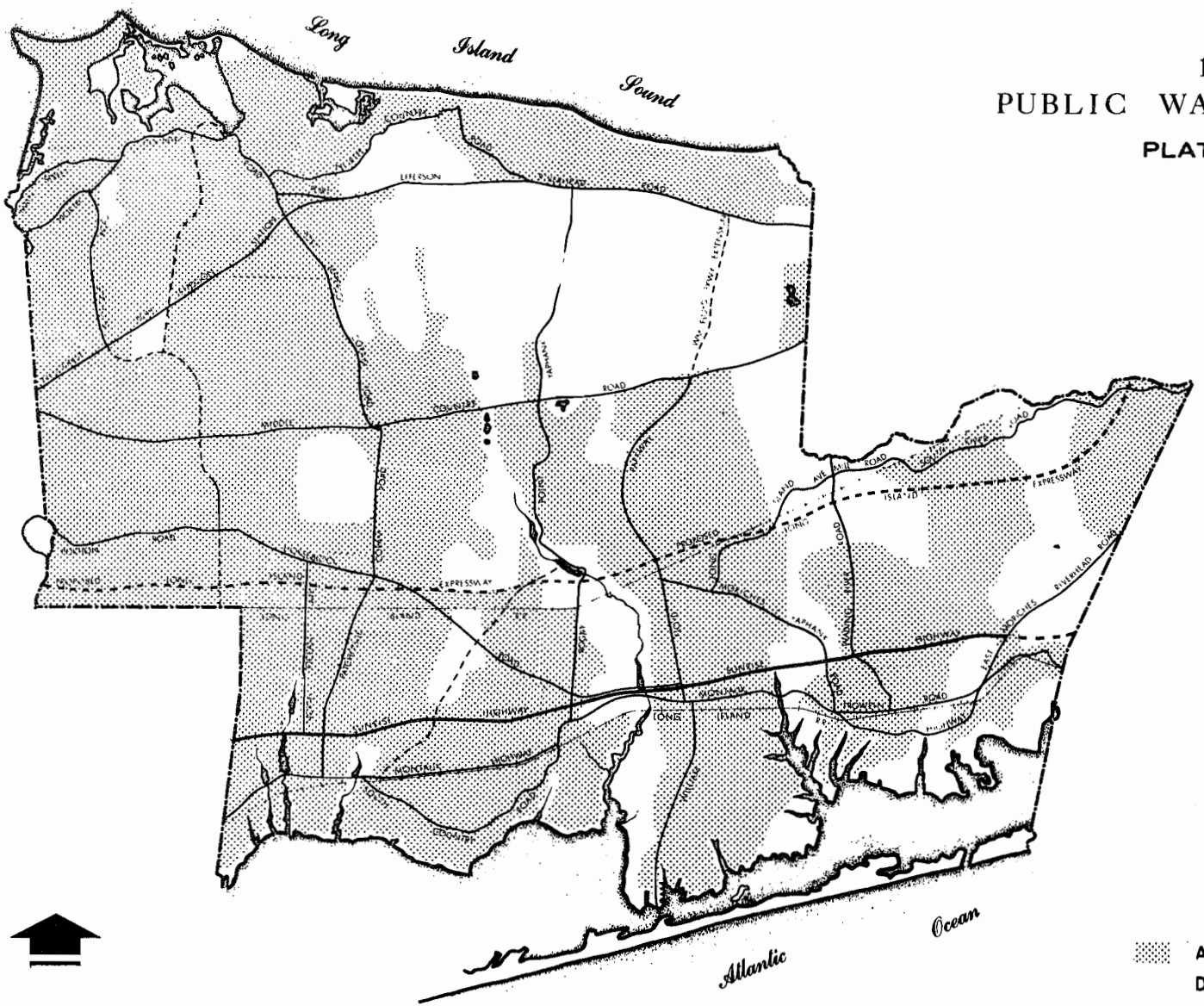
An estimate of the quantity of water which will be required to serve the Town can be made. For this purpose an estimated quantity of 150 gallons per capita

---

* Environmental Health Planning Guide - U.S. Department of Health, Education and Welfare, Public Health Service, 1962.

1985
PUBLIC WATER SUPPLY

PLATE NO.10



LEGEND

AREAS IN WHICH POPULATION DENSITY WILL WARRANT PUBLIC WATER SUPPLY

EDWIN S. VOORHIS & SON, INC., 1965

per day, which includes all uses, has been used as a basis for estimating the Town's future water requirements.

Again assuming a straight line increase in population, by 1975 the Town will have a population of 231,367 which will require approximately 36 million gallons per day.

By 1985 with a total Town population of 315,000 the daily water requirement will be 47 million gallons. This compares with approximately 28.6 million gallons of water produced for the entire County by the Suffolk County Water Authority in 1963. The average per capita consumption for that year was 82 gallons per capita per day.

Conclusion

The available water supply in the Town will be adequate for the future population forecast in the Master Plan provided that the dangers of pollution are recognized; that measures are taken to avoid pollution; and that through intelligent planning and development controls a steady and adequate replenishment of the ground water supply is maintained.

The Suffolk County Department of Health is vitally concerned with the problems of pollution and has established a number of standards for administration of the Sanitary Code which should be of significant value in safeguarding the quality of the water supply. It remains for the various public agencies involved to institute sound planning programs so that future growth is controlled within the limits of the available water supply.

PUBLIC SEWERAGE

General Considerations

A preliminary comprehensive sewerage plan for the five western towns in the County, including Brookhaven, is now being prepared. Several alternatives to the tentative Suffolk County plan have been proposed but no final plan has been chosen as yet. For the purposes of this report however, the actual configuration of the sewage disposal system is not as important as the consideration of areas which will require service at future dates, in this case 1975 and 1985.

The final sewerage plan, when developed, will undoubtedly be based on certain fundamental considerations. For example, population density and topography are two major factors which will influence the final plan. Population density estimates and projections determine areas where public sewerage is needed now and where it will be needed in the future. Topographic data aids in determining service areas and locations of treatment facilities.

The future sewerage system should be flexible and the following points should be considered: (1) It should be so designed that sewer sizes are adequate to handle present and future needs; (2) Treatment plants should be capable of expansion at a minimum of cost; (3) Connection to a public sewerage system should be required when such service is available. This is usually determined by distance factors; (4) The extension of sewer lines should be made wherever such service is economically justified and/or public health considerations require it; (5) All public sewage should be treated and the effluent disposed of so as not to endanger the

public health. The Suffolk County Department of Health suggests that effluents should be disposed of in the deep waters of Long Island Sound or the Atlantic Ocean.

Future Requirements

As was the case with the future water supply, analysis of future public sewerage requirements for the Town of Brookhaven was made on the basis of planning districts.

The United States Public Health Service's suggested standard is the basis of the analysis. This standard selects a population of 2,500 to 5,080 persons per square mile as the minimum density which normally justifies public sewerage. This density will generally result from lot sizes of one-half acre to one acre.

Plate No. 11 indicates the areas which will require sewerage service by 1975. At this time the total population will have reached 240,000 and most of the western and southern districts will have attained the required density. Two of the planning districts, 32 and 34, will not actually have reached this density, but they are located in the so-called critical areas where high ground water renders the use of individual disposal systems undesirable.

If it is assumed that the original Suffolk County Tentative Plan is finally utilized, the quantities of sewage which will be produced by the 1975 population can be estimated for each of the proposed collection districts.

In Volume X of the individual series of Master Plan reports, sewage quantities by planning districts and by collection districts have been estimated for 1975 and 1985 based on an average per capita flow of 150 gallons per day. By 1985 all of the planning districts, with the exception of RH-2, will require service. These areas are also indicated on Plate No. 11. The areas shown to require public sewerage by 1975 and 1985 should be considered as approximate only. Within these areas are included vacant lands reserved for future development. It is not possible to predict the precise locations where this development will take place.

Conclusions

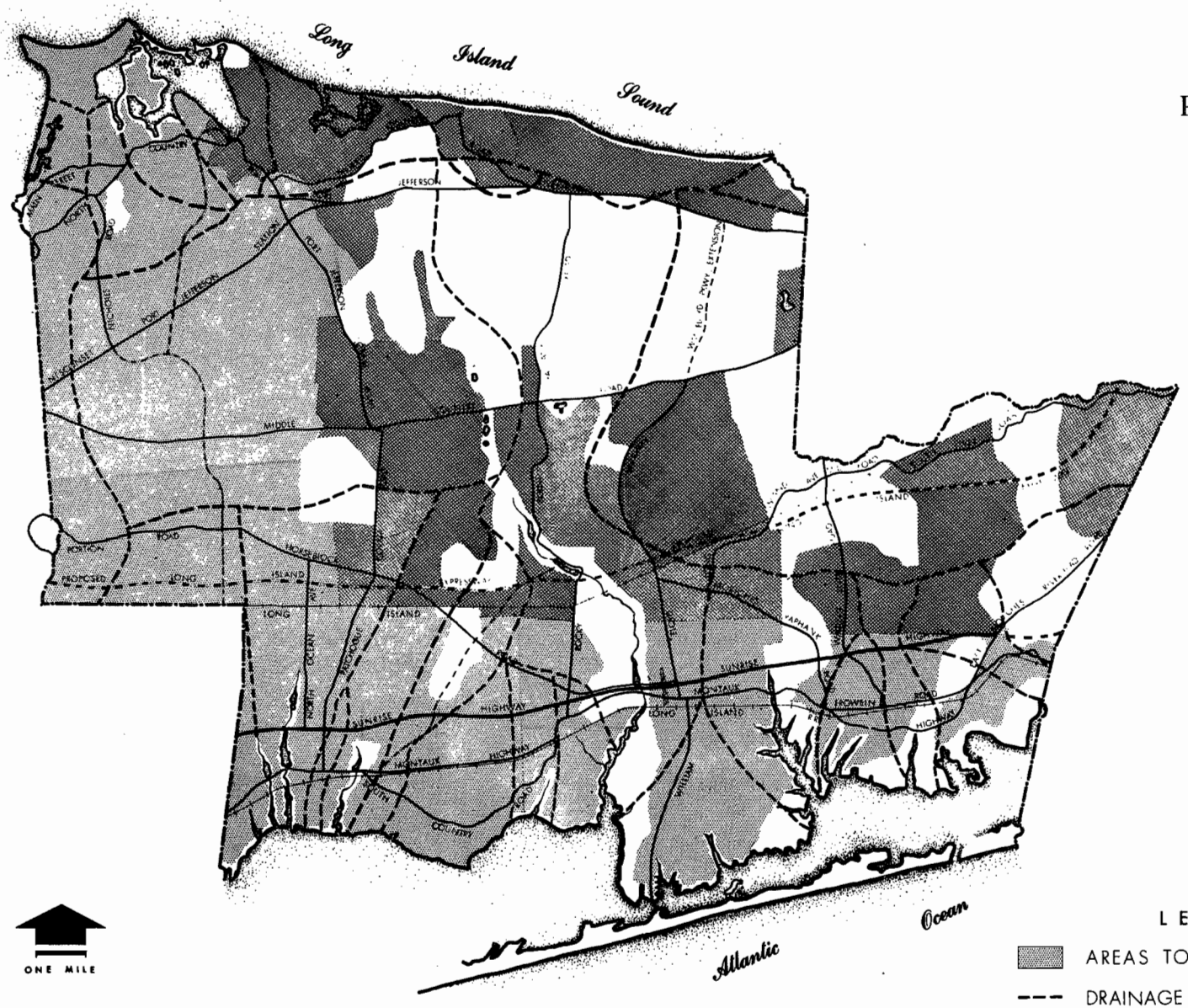
Except for the low density, mainly agricultural areas, the use of individual disposal systems must be replaced by public sewerage systems in order to protect the ground water supply. This can be accomplished most economically by the development of a comprehensive plan based on an engineering study of major drainage areas and soils. The system, when developed, should be flexible in order to accommodate new areas of growth as they arise. Treatment plant facilities should be so designed that expansion can be carried out at a minimum of expense.

In accordance with existing Suffolk County Department of Health standards a number of communal treatment facilities will develop throughout the Town before the development of a Town-wide system. These will afford the necessary protection of the ground water system until such time as connection to the County system can be made. At such time when connection to the County system becomes feasible, it should be mandatory for the connection to be made.

In terms of priority, the extension of public sewerage facilities to the Stage 1 areas and those areas classified as critical by the Suffolk County Department

PUBLIC SEWERAGE

PLATE NO. 11



LEGEND

- AREAS TO BE SERVED BY 1975
- DRAINAGE AREA BOUNDARIES
- AREAS TO BE SERVED BY 1985

EDWIN S. VOORHIS & SON, INC., 1965

TABLE NO. 6

PROJECTED SEWAGE FLOWS
1975

Tentative Sewage Collection District Number	Planning District Number	Projected 1975 Population		Daily Flow @ 150 Gallons Per Capita
2	5	28,370		4,255,500 gpd*
	4	3,114		467,100
	24	40,865		6,129,750
	12	2,446		366,900
	11	2,994		449,100
	IS-5	5,420		813,000
			Total	12,481,350 gpd
3	4	11,040		1,656,000 gpd
	30	1,360		204,000
	32	13,720		2,058,000
	33	5,020		753,000
	34	1,960		294,000
	SH-11	960		144,000
	12	13,789		2,068,350
	22	251		37,650
	21	1,012		151,800
	11	34,426		5,163,900
	1	660		99,000
	2	3,753		562,950
	3	10,350		1,552,500
	7	1,267		190,050
	8	1,930		289,500
	9	2,525		378,750
	10	291		43,650

*gpd - gallons per day.

Table No. 6 (continued)

Tentative Sewage Collection District Number	Planning District Number	Projected 1975 Population		Daily Flow @ 150 Gallons Per Capita
	5	4,618		692,700
			Total	16,339,800 gpd
8	6	5,102		765,300 gpd
	2	9,188		1,378,200
	1	5,340		801,000
			Total	2,944,500 gpd
9	6	2,997		449,550 gpd
	7	653		97,950
	8	1,930		289,500
	9	1,626		243,900
			Total	1,080,900 gpd
10	RH-1	130		19,500 gpd
	10	707		106,050
	9	128		19,200
			Total	144,750 gpd
	Total Daily Flow - All Collection Districts			32,991,300 gpd

TABLE NO. 7

PROJECTED SEWAGE FLOWS
1985

Tentative Sewage Collection District Number	Planning District Number	Projected 1985 Population		Daily Flow @ 150 Gallons Per Capita
2	5	39,560		5,934,000
	4	3,872		580,800
	24	54,756		8,213,400
	12	3,520		528,000
	11	4,160		624,000
	IS-5	6,800		1,020,000
			Total	16,900,200 gpd*
3	4	13,728		2,059,200
	30	2,000		300,000
	32	17,300		2,595,000
	33	6,300		945,000
	34	2,300		345,000
	SH-11	1,300		195,000
	12	19,840		2,976,000
	22	380		58,000
	21	1,375		206,250
	11	47,840		7,176,000
	1	924		138,600
	2	4,408		661,200
	3	14,400		2,160,000
	7	1,716		257,400
	8	2,400		360,000
	9	3,068		460,200
	10	406		60,900
	5	6,440		966,000
			Total	21,919,750 gpd

*gpd - gallons per day

Table No. 7 (continued)

Tentative Sewage Collection District Number	Planning District Number	Projected 1985 Population		Daily Flow @ 150 Gallons Per Capita
8	6	8,658		1,298,700
	2	10,792		1,618,800
	1	7,476		1,121,400
			Total	4,038,900 gpd
9	6	5,085		762,750
	7	884		132,600
	8	2,400		360,000
	9	1,976		296,400
			Total	1,551,750 gpd
10	RH-1	204		30,600
	10	986		147,900
	9	156		23,400
			Total	201,900 gpd
	Total Daily Flow - All Collection Districts			44,612,500 gpd

of Health should be given first consideration. The Stage 1 areas are already populated in sufficient densities to warrant service and the critical areas include those localities where there is a high percentage of failure of individual disposal systems and where the dangers of ground water contamination are greatest.

REFUSE DISPOSAL

General Considerations

There are a number of methods available for the disposal of refuse. However, none of these methods are particularly attractive in the eyes of the public and it therefore becomes a matter of determining which will best suit the community's need. The most common methods of refuse disposal are by hog feeding, garbage grinding, composting, open dumping, sanitary land-fill and incineration. For reasons discussed in Volume XII of the individual series of Master Plan reports, the first four of these methods have been ruled out for Brookhaven.

Sanitary Landfill

The sanitary land-fill is an acceptable method of refuse disposal. Essentially it consists of spreading and compacting each day's refuse, then covering it with a layer of earth. This process is continued until a predetermined surface elevation is reached. The final earth cover should be a minimum of two feet in thickness.

Some of the advantages of a sanitary land-fill over other refuse disposal methods are:

1. Low initial investment.
2. All types of refuse may be disposed of in a sanitary land-fill.
3. Submarginal land can be reclaimed.

Incineration

Incineration is an excellent means of refuse disposal. It can be used where available land for sanitary land-fill has been depleted.

Incineration is not a complete disposal method, however, and the final residue must be disposed of in a suitable dumping area. The volume of refuse is reduced by 90 to 95 percent so that the land requirements are considerably less than for a sanitary land-fill. In addition, the burned residue does not create a health problem and makes an excellent fill material which can be compacted and used for building sites.

The major disadvantage of incineration is its greater cost. This has been estimated at from two to four times the cost of a sanitary land-fill operation.

Future Requirements

In estimating the future quantity of refuse which will be disposed of within the period of this Master Plan, an assumed average per capita refuse production of 3.0 pounds per day with a 10 percent increase over the next 20 years is used. The present Brookhaven production is approximately three pounds per capita per day and there has been a general overall increase in refuse

production in past years. The following Table gives the estimated refuse output for this period in tons.

FUTURE REFUSE PRODUCTION
TOWN OF BROOKHAVEN

Year	Population	Refuse* Production (Tons)
1965	158,000	237
1970	197,250	304
1975	236,500	372
1980	275,750	445
1985	315,000	520

*Based on present contribution of 3 lb. per capita per day with 10% increase in production over 20-year period.

Based on an estimated land requirement of one acre per year per 10,000 population the average annual land requirement for a land-fill operation, assuming a six-foot depth would be 24 acres. Over a twenty-year period, a total of 480 acres would be required for the land-fill operation.

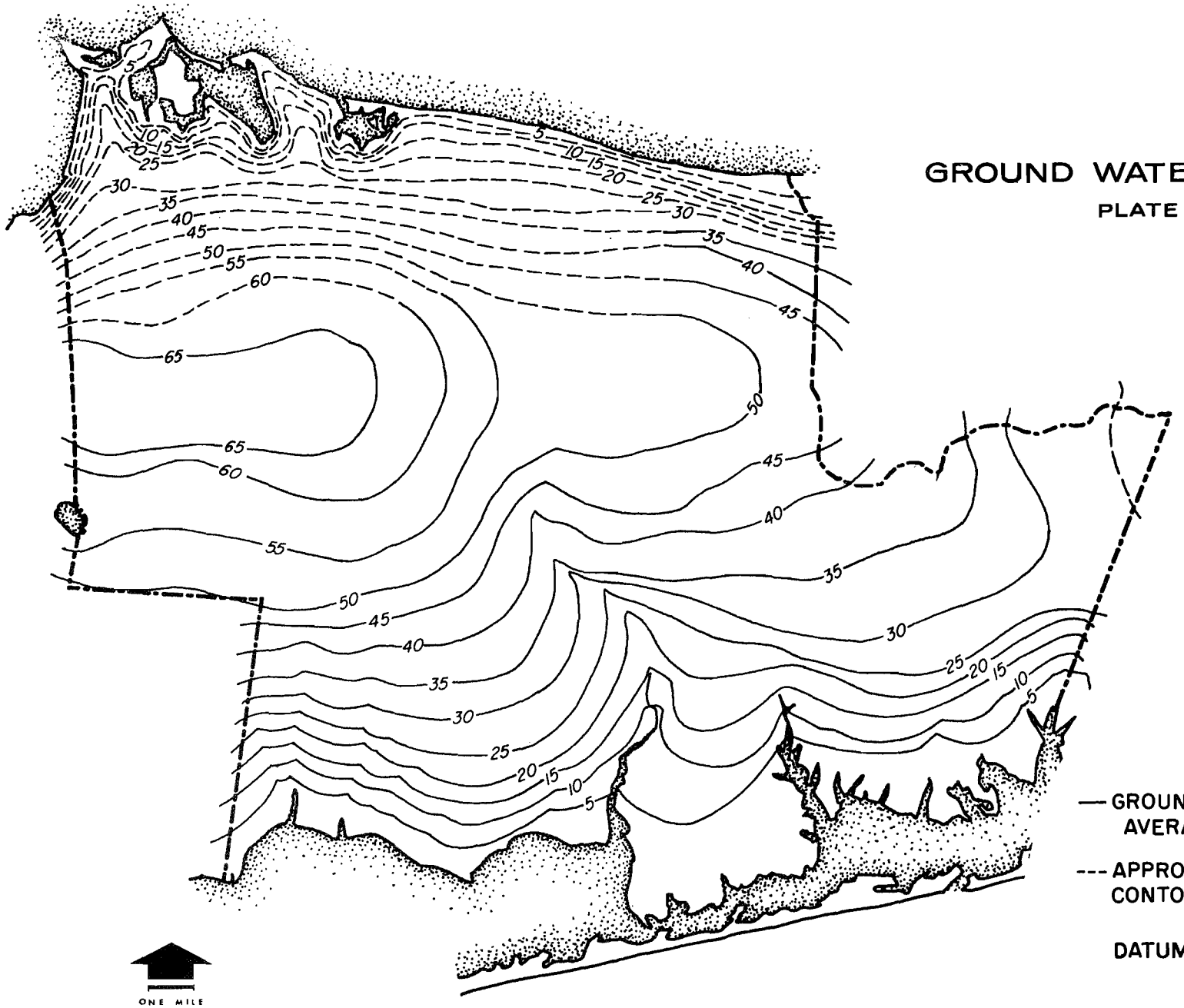
Assuming that sites are available which lend themselves to deeper land-fill operations, such as abandoned quarries, this land-fill need could be materially reduced. It should be borne in mind however, that deeper land-fill sites will not be available to the Town for other uses, such as parks, for considerably longer periods of time because they will take longer to fill. Maintenance requirements of these deeper fills will be greater since the settlement increases with greater depths of fill. In addition, the areas where deep fills can be operated will be limited by the proximity of the ground water table to the proposed bottom of fill. Plate No. 12 shows the ground water contours which can be used in estimating the difference in elevations between the surface and ground water levels throughout the Town. There are also indications that the rate of decomposition of the buried material decreases as the depth of fill increases to that the availability of these sites for other uses is further delayed.

The interests of the Town will best be served by four or five land-fill sites. This will reduce the time and lengths of haul from different parts of the Town. If four sites are acquired and two of these are in the middle or northern section of the Town where the construction of thirty-foot deep land-fills is feasible, the land requirement would be for about 300 acres. As can be readily seen, the land requirements are a function of the type of land-fill operation which is conducted. If all land-fill sites were 30 feet deep there would be a corresponding decrease in land requirements.

If an incineration program is introduced in preference to a sanitary land-fill operation the Town would require two 200-ton units now, and a third unit by 1975 or 1980.

Cost Estimates

Estimates vary as to relative costs per ton for incineration versus sanitary land-fill. In general, the land-fill costs are estimated at between one-fourth and one-half of the cost of incineration. Locally, the cost per ton of refuse disposal by incineration in Huntington and Hempstead is about two and one-half times the cost



GROUND WATER CONTOURS

PLATE NO.12

LEGEND

— GROUND WATER CONTOUR AVERAGE FOR 1955)

--- APPROXIMATE GROUND WATER CONTOUR

DATUM: MEAN SEA LEVEL

SOURCE: SUFFOLK COUNTY WATER AUTHORITY

EDWIN S. VOORHIS & SON, INC., 1965

per ton of disposal by land-fill methods in the Town of Smithtown. The choice of method of disposal therefore becomes contingent upon the availability and cost of land for sanitary land-fill operations.

Conclusions

In the Public Utilities section of the Master Plan report, a number of possible future land-fill sites were designated. One of these sites, located in the vicinity of Rocky Point-Yaphank Road, and Jericho Turnpike will become available in about one year. In addition, according to the Town Sanitation Department, the existing Center Moriches site will be adequate for 15 years, the Manorville site for five years and the Holtsville site from five to ten years. Furthermore, there are still large open areas within the Town which might be acquired for land-fill sites. It is therefore the opinion of the Consultant that sanitary land-fill represents the most economical method of refuse disposal for the Town.

It is further suggested that consideration be given to supplementing the land-fill operation with relatively low-cost refuse burners. Since 60 to 80 percent of refuse collected is rubbish, the installation of such units could substantially reduce land requirements. The sorting of refuse prior to collection would of course, assure the maximum effectiveness of the refuse burners since they are not intended for burning of garbage.

DRAINAGE

General Considerations

As the Town grows, drainage problems will become more acute. This is due to the fact that previously undeveloped areas which absorb much of the rainfall and provide for drainage through natural channels and by infiltration to the water table would, through development, become less permeable. Low lying areas serve as natural sumps until the water dissipates through infiltration, evaporation, or runoff into drainage channels. Housing developments however, create large impervious areas of paved streets, sidewalks, driveways, and buildings which prevent the infiltration of water into the ground and greatly increases the storm water runoff.

Since drainage problems are created, or at least aggravated by land development, it is generally conceded that the developer has the responsibility for providing adequate drainage facilities for his development. Obviously, a considerable amount of drainage facilities will be supplied at no cost to the Town. However, there will be large areas which will remain relatively undeveloped, the runoff from which might affect built-up areas. Drainage of these areas will have to be supplied by the Town. In addition, unless drainage facilities for individual developments are carried out in accordance with a comprehensive drainage plan, additional facilities may be required to provide for deficiencies.

The recharge of storm water, that is the return of rainwater to the ground water reservoir, occurs naturally whenever rainfall reaches pervious soils and

percolates down to the water table. As these porous soils are covered by impervious materials such as concrete and asphalt, the rate of recharge diminishes and runoff increases. This surface runoff, unless it is intercepted, continues until it reaches other pervious areas, evaporates or finds its way into channels, creeks and streams and ultimately into bodies of salt water.

In sparsely populated, undeveloped areas, this surface runoff generally does not create major problems except where it might cause interference with streets and highways. In this case the problem is usually resolved by the agency having jurisdiction over the particular road.

In developed areas the accumulation of surface runoff can cause serious flooding, resulting in costly property damage. Thus, the interception and disposal of this surface runoff becomes a necessity. Such interception can be accomplished through the construction of a series of catch basins, and pipelines, to collect the water and convey it to natural or man-made channels, disposal can be into recharge basins. These basins actually serve the dual purpose of storing storm water and permitting this water which might otherwise be lost, to be returned to the ground water reservoir.

In the Town of Brookhaven there are approximately 33,000 acres of land which have no surface outlets to oceans, bays, or streams and the utilization of recharge basins becomes the most feasible means of disposal of storm water. These areas are in the Rocky Point vicinity, the Lake Ronkonkoma vicinity, and the Selden Basin area which, as shown on Plate No. 23 of the Public Utilities Inventory, have a large number of recharge basins already constructed. The remaining 123,000 acres have natural outlets into coastal waters, streams, and interior bays. The disposal of storm water in these areas becomes a matter of choice depending upon economic considerations, topography, and soils. However, the interception of part of this outflow and the diversion of it to recharge basins could represent a substantial addition to the available water supply.

Future Requirements

On Plate No. 11 the outlines of the major drainage areas have been shown and reveals an approximation of the degree of development anticipated by 1975 and 1985. The western and southern areas of the Town will require adequate storm drain facilities before the other areas as these areas are developing at the greatest rate.

Conclusion

It is recommended that the development of a comprehensive drainage plan be initiated so that future drainage facilities can be constructed as a part of an overall system rather than one of a series of non-related facilities which will ultimately have to be supplemented by additional facilities at the expense of the Town.

Recharge basins should be designed as units in a network of inter-connected basins with successive overflows. While the need for additional recharge of the ground water is not specifically indicated, based on present population projections, the value of this recharge should not be overlooked.

The immediate need for drainage facilities is in

the already developed western end of the Town and in some of the southerly areas. By 1975, comprehensive drainage facilities will be required as indicated on Plate No. 11. By 1985, additional areas will have to be served. The establishment of road grades, the determination of watershed areas and the development of a comprehensive system for each of these areas should be undertaken at the earliest possible date.

CAPITAL IMPROVEMENT PROGRAMMING

Introduction

The implementation of many Master Plan recommendations requires that the Town expend public funds for capital improvements, facilities, and services which are necessary to serve a fast growing population.

Since a Master Plan is not a self-effectuating document but rather a guide, positive action must be taken to carry out the Plan's stated goals and objectives. One of the tools used in this regard, in addition to controlling growth and development through zoning and subdivision regulations, is a capital improvements program.

Capital Improvements

A capital improvements program can be thought of as having two parts; the physical and the financial. The physical part contains a list of actual project improvements to be carried out, while the financial part deals with ways and means of paying for the improvements. Thus, a capital improvements program establishes a flexible schedule of priorities - since it should be reviewed annually - based on urgency and cost considerations.

To be successful, a capital improvements program must be preceded by comprehensive planning studies and be a part of a long-range financial plan in which revenues, expenditures, debts, assessments, tax rates, and borrowing capacity are examined and projected to determine the adequacy of the community's financial resources and its ability to pay for vital physical improvements.

Capital improvements refer to the initial construction or acquisition of public facilities together with improvements and additions thereto. Funds spent for such purposes are known as capital expenditures, as differentiated from operating costs which the Town expends in maintaining capital items and in providing government operating services to the residents of the Town on a day-to-day basis.

The capital plan of the Town includes streets, parks, playgrounds, water, sewage and drainage facilities, public buildings and grounds. These are the basics which must be provided in a community if it is to function in a sound, efficient manner. Of course, not all capital items are the responsibility of the Town. The County, State, and Federal governments also must share in providing the people with necessary public improvements.

The term "capital improvements program" is often used interchangeably with the term "capital budget". Both lack widespread, specific definitions, although a recent study by financial experts * described the term as follows:

---

* Capital Programming and Capital Budgeting, Municipal Finance Officers Association of the United States and Canada, 1964.

A capital program is a plan for capital expenditures to be incurred each year over a fixed period of years to meet capital needs arising from the long-term work program or otherwise. Thus, it sets forth each project or other contemplated expenditure in which the local government is to have a part and it specifies the full resources estimated to be available to finance the projected expenditures.

A capital budget is a plan for capital expenditures to be incurred during the budget year from funds subject to appropriation by the governing body of the concerned government for projects scheduled in the capital program for the first year thereof.

PURPOSES OF CAPITAL PROGRAMMING

The programming of capital improvements will enable the Town officials to have a long-range view of their future responsibilities to the residents of the Town. By having a schedule of priorities for necessary improvement together with cost estimates, tax rates can be predicted and forward thinking, long-range policies can be adopted.

At least five specific advantages resulting from a capital improvements program are listed below:

1. The Town is assured that projects will be carried out in accordance with a predetermined priority schedule within the community's ability to pay.

2. The Town can protect itself from undue influence of special interest pressure groups, since the capital program considers the needs of the community as a whole, on an impartial basis.

3. The Town can schedule the acquisition of undeveloped land for future public uses in advance of actual construction.

4. The Town can anticipate future bond issue requirements and by forecasting revenues, officials will be assisted in maintaining financial stability. Thus, sharp periodic increases in the tax rate may be avoided.

5. The Town can provide sufficient time in advance for proper technical design and engineering studies, thus avoiding the problems inherent when projects are designed from scratch at the last minute.

FISCAL ANALYSIS

Within certain practical and legal limitations, the Town's future financial resources can be estimated and balanced against anticipated expenditures for general Town government operations, debt service, and other purposes. This information must be known, for example, before a realistic capital improvements program can be prepared. It therefore becomes necessary to undertake an analysis of the Town's recent and current financial structure. Trends in revenues and expenditures, assessed valuation, tax rates, outstanding debt and borrowing capacity require study in order that projections into the future can be made. Presented here are the more important aspects of such information.

A final determination of the most satisfactory method of financing capital improvements should be

based on the advice of financial counselors. Such advice could result in a large saving to the Town. For example, depending upon ready knowledge and understanding of the money market and interest rate at the time a bond issue is being considered, it may be advanced or delayed accordingly.

A complete analysis of the Town's financial structure is presented in Volume III of the individual series of Master Plan reports. Included is a discussion and statistical tables of revenues and expenditures; assessment and taxation trends; property taxes for general Town and school purposes; bonded indebtedness, debt limits and borrowing capacity; and related fiscal matters. Table No. 8 shows current figures for the Town pertaining to bonded indebtedness and borrowing capacity.

Revenues - Real estate taxes for general Town and highway purposes continue to provide the greatest share of total Town revenues, although their relative importance has diminished as other revenue sources have increased more rapidly. In 1959 real property taxes accounted for 57 percent of all Town revenues. In 1964 the figures declined to 38 percent of the total.

Total Town revenues have increased by more than $2,664,000, or 32 percent, during the past five-year period. Table No. 9 shows Town revenues and expenditures from 1959 through 1964.

Expenditures - The greatest share of Town expenditures goes toward providing day-to-day government services, including highway maintenance. Operating expenditures have been increasing primarily because of rapid population growth in the Town. The more people there are in a community, the more public services are required. If the Town continues to grow as anticipated, it will require ever-increasing funds to serve the growing population. From 1959 to 1964, general operating and highway expenditures grew by almost $1,900,000 or 36 percent, in the five-year period.

Per Capita Revenues and Operating Expenditures - As shown in Table No. 10 recent increases in total revenues have taken place at a lower rate than the growth in population. From 1959 to 1964, the Town's population grew by 53 percent, as compared to a 32 percent increase in revenues during the same period. On a per capita basis, there has been a decrease of 14 percent in revenues during the five-year period ending December 31, 1964; having declined from $81 to $70 per person.

Town operating and highway expenditures have increased by 36 percent from 1959 to 1964. This figure also represents a lower rate of growth than that of population (53 percent). Per capita operating expenditures have remained quite stable during this period, especially since 1960.

Assessment and Taxation Trends

Since real property taxes are so important to the Town, a look at property values and assessments, on which such taxes are based, is appropriate.

Table No. 11 reveals that total assessed valuations have increased by over $50,000,000 or 46 percent in the five-year period from 1959 to 1964. After deducting veteran's exemptions, the amount subject to taxation has grown by over $46,000,000 or 44 percent.

In order to arrive at figures which most nearly represent true market value of real property in the

TABLE NO. 8

BONDED INDEBTEDNESS AND BORROWING CAPACITY
TOWN OF BROOKHAVEN
1959 - 1964

	1959	1960	1961	1962	1963	1964
Total Bonded Debt	$1,101,000	$1,205,000	$1,136,000	$1,685,000	$1,584,000	$6,370,000
Less Deductible Items*	475,000	636,000	614,000	610,000	590,000	2,755,000
Net Bonded Debt - Town and Special Districts	$ 626,000	$ 569,000	$ 522,000	$1,075,000	$ 994,000	$3,615,000

1964 Data

Average Full Valuation of Taxable Real Property for the previous 5 years	=	$591,913,000
Debt Limit - 7% thereof	=	$ 41,434,000
Total Net Indebtedness	=	$ 3,615,000
Net Debt - Contracting Margin	=	$ 37,819,000

Note: All figures are rounded to nearest thousand dollars.
* Includes water bonds and other items not subject to debt limit.
Source: Town of Brookhaven financial records.

TABLE NO. 9

REVENUES AND EXPENDITURES
TOWN OF BROOKHAVEN
1959 - 1964

Item	1959	1960	1961	1962	1963	1964
Revenues:						
Real Property Taxes	$4,759,000	$4,000,000	$4,097,000	$ 4,080,000	$ 4,107,000	$ 4,211,000
State Aid	829,000	852,000	1,005,000	925,000	1,092,000	1,167,000
Special District	974,000	1,241,000	1,183,000	1,644,000	1,710,000	2,781,000
Opening Balance	698,000	985,000	1,243,000	1,323,000	1,225,000	1,858,000
Other	1,117,000	791,000	2,079,000	2,310,000	3,880,000	5,889,000*
Total Revenues	$8,377,000	$7,869,000	$9,607,000	$10,282,000	$12,014,000	$15,906,000
Expenditures:						
General Town Operating and Highway	$5,285,000	$4,907,000	$5,894,000	$ 5,916,000	$ 6,138,000	$ 7,178,000
Debt Service	957,000	490,000	527,000	456,000	916,000	1,093,000
Special District	1,057,000	1,136,000	1,734,000	2,437,000	2,762,000	2,704,000
Closing Balance	985,000	1,243,000	1,323,000	1,225,000	1,858,000	4,296,000**
Other	93,000	93,000	129,000	248,000	340,000	635,000
Total Expenditures	$8,377,000	$7,869,000	$9,607,000	$10,282,000	$12,014,000	$15,906,000

Note: All figures are rounded to nearest thousand dollars.
* Includes receipts from a $4,865,000 bond issue.
** Includes undisbursed funds from the $4,865,000 bond issue.
Source: Town of Brookhaven financial records.

TABLE NO. 10

PER CAPITA REVENUES AND OPERATING EXPENDITURES
TOWN OF BROOKHAVEN
1959 - 1964

Year Ending	Estimated Population	Total Revenues	Per Capita Revenues	Total Operating and Highway Expenditures	Per Capita Operating Expenditures
1959	103,000	$ 8,377,000	$81.00	$5,285,000	$51.00
1960	115,000	7,869,000	68.00	4,907,000	43.00
1961	122,000	9,607,000	79.00	5,894,000	48.00
1962	130,000	10,282,000	79.00	5,916,000	46.00
1963	139,000	12,014,000	86.00	6,138,000	44.00
1964	158,000	11,041,000*	70.00	7,178,000	45.00

Note: All figures are rounded.
* Excludes proceeds from a $4,865,000 bond issue.
Source: Town of Brookhaven financial records; Edwin S. Voorhis & Son, Inc.

TABLE NO. 11

ASSESSMENT AND TAXATION TRENDS
TOWN OF BROOKHAVEN
1959 - 1964

	1959	1960	1961	1962	1963	1964
Total Assessed Valuation	$109,286,000	$118,669,000	$125,102,000	$136,401,000	$142,696,000	$159,474,000
(-) Less Veterans' Exemptions	4,422,000	5,162,000	5,881,000	6,621,000	7,327,000	8,330,000
(=) Total Valuation Assessable for State, Town and County Tax Purposes	$104,865,000	$113,507,000	$119,222,000	$129,781,000	$135,369,000	$151,144,000
(X) New York State Equalization Rate	28%	22%	20%	18%	18%	18%
(=) Full Market Value of Property Subject to Taxation	$377,514,000	$515,932,000	$596,114,000	$720,963,000	$752,049,000	$839,687,000
Town and County Tax Rate Per $100 Assessed Valuation:						
Unincorporated areas only	$6.68	$7.10	$7.13	$6.99	$7.89	$7.57
Incorporated Villages	$4.85*	$5.10*	$5.26*	$4.85	$5.76	$5.06

Note: All figures are rounded to nearest thousand dollars.
* For Patchogue, the figures were $3.92 in 1959, $3.05 in 1960, and $5.25 in 1961.
Source: Town of Brookhaven financial records.

Town, assessed valuation subject to taxation is adjusted by the New York State Equalization Rate. This adjustment results in a figure of almost $840,000,000 worth of real property in Brookhaven, as of December 31, 1964. It represents an increase of more than $462,000,000 over the 1959 figure, or 122 percent during the five-year period.

Property Taxes

Real property taxes, as previously noted, provide the Town with the largest single source of revenue. The County and School Districts likewise depend upon such taxes for their basic source of revenue. Also, the Town's borrowing capacity is by law specifically related to and limited by property assessment values.

The property tax rates for unincorporated areas of the Town has climbed from $6.68 in 1959 to $7.57 in 1964, for every $100 of assessed valuation. The rates for incorporated Villages in Brookhaven are less because of certain services not provided by the Town.

When comparing tax rates at different times, it is important that some consideration be given to their relationship to true property values. For example, in 1959, when the equalization rate was 28 percent, the tax rate in the unincorporated area of the Town was $6.68 per $100 of assessed valuation. The equivalent tax rate, in terms of full market value was $1.87 per $100. In 1964, when the equalization rate was 18 percent, the tax rate was $7.57 per $100 of assessed valuation. The equivalent tax rate, in terms of full market value was only $1.36 per $100 of true market value.

Thus, while the tax rate itself has increased in Brookhaven from 1959 to 1964, the rate based on tax dollars paid per $100 of true value actually decreased during the past five-year period.

School Taxes

School district taxes vary from district to district as well as from year to year, depending upon population pressures and local demands for increased services which result in the need for more schools, additions to existing facilities, and higher operating costs.

The Town serves as the collection agency for school taxes, which it then distributes to the 24 school districts located wholly or partly within Brookhaven. However, the Town has no jurisdiction over the administration, taxing policies, financial matters or operating programs of the school districts.

School district taxes throughout Nassau and Suffolk Counties regularly account for the major share of all local taxes collected. In Brookhaven during the last fiscal year, school taxes accounted for 52 percent of the total. County taxes accounted for 26 percent, Town taxes for 16 percent, and special districts for the remaining six percent of the total of all taxes collected.

Bonded Indebtedness and Borrowing Capacity

Debt Limits - Brookhaven is limited by the laws of New York State as to bonds it may issue for specific amounts, purposes and time periods. Briefly, the legal debt limit is computed as a percentage of the true or assessed value of the taxable real estate in the

Town as averaged for the preceding five years as follows:

- Bonded indebtedness for general Town purposes may not exceed seven percent of the five-year average true valuation.

- For urban renewal purposes, bonds may not exceed two percent of the five-year average of assessed valuation.

- School districts may borrow up to five percent of the five-year average of true valuation.

- Self-sustaining revenue or assessment bonds, such as water bonds, are excluded from the Town's debt limit.

New York State law also requires that at least five percent of the cost of any project being financed through the issuance of bonds (except water and urban renewal) be paid for in cash.

Bond Issues - Because capital improvements are usually quite costly, they are generally financed through bond issues. Attempts to pay for them solely on a pay-as-you-go basis in Brookhaven would result in rapid and high increases in the property tax rate. This is not a desirable practice and should be avoided. However, at least some portion of current revenues should be used to finance capital improvements in order to avoid unnecessary bonded indebtedness. A sound borrowing policy for any community is one that seeks to conserve rather than exhaust credit.

In this regard, the State's requirements that at least five percent of the cost of a capital project financed through a bond issue be paid from current funds should be treated as a minimum requirement; the percentage should be exceeded wherever possible.

A pay-as-you-go program is less costly than borrowing since it avoids the added cost of interest. By borrowing money and incurring the interest charges, the Town's taxpayers are relieved of large immediate tax payments in favor of smaller future annual payments.

Thus, a partial pay-as-you-go system has the advantage of encouraging the Town to live a little more within its income.

A partial pay-as-you-go system for financing capital improvements through current revenues as well as through the issuance of general obligation bonds can be accomplished by establishing a capital reserve fund. Brookhaven does have surplus funds which are carried over from year to year. Part of these funds can be used for capital expenditures by placing them in a capital reserve fund. This places the Town in an excellent position to borrow the funds necessary for capital improvements.

Debt Service - As a community's net indebtedness increases so do interest payments. Debt service, which is the annual repayment of principal as well as interest on bonds and notes, was over $1,000,000 in 1964. As more bonds are issued to effectuate the capital improvements program, debt service will increase further. However, on a proportional basis to total expenditures, as well as on a per capita basis, debt service payments will keep pace with increased revenues from property taxes and with population growth.

In a community which has stopped growing and where assessed valuations are stable, incurring new debt may prove to be too heavy a burden for the com-

munity to handle. In Brookhaven, which should continue to grow for many decades, such a problem does not exist.

According to guidelines set up by the International City Manager's Association, Brookhaven's current debt is well within the bounds of recommended sound municipal financing. Although guidelines are useful in assessing a community's financial position, it may also be argued that aside from keeping within statuatory limits, there is no rule as to the amount of money a community should spend on public improvements. What the public demands, or fails to demand, in the way of public improvements, will determine tax rates and indebtedness. What is deemed a desirable policy for one community may be undesirable in another.

A low tax rate, a small amount of indebtedness, and a corresponding large borrowing capacity may not be as desirable as it first appears. It may indicate that the community is lagging behind in providing necessary public facilities and services. On the other hand, a community may have a relatively high tax rate, a heavy debt, and be slowly approaching its statuatory debt limit. Yet its residents may demand and be willing to pay for even more public improvements.

ESTABLISHING PROJECT PRIORITIES

Perhaps the most important aspect of preparing a capital improvements program is establishing project priorities. While a community may require many physical improvements it is obvious that everything cannot be done at once. Thus, a system of project ranking must be set up. The responsibility to recommend a project priority list should be part of the planning function since judgment and objectivity, based on overall community planning functions are the responsibility of the Planning Board and its staff.

Establishing a priority schedule should consist of three stages, namely:

1. An examination of the priority rankings as shown on departmental forms submitted by each Town department.

2. A careful study of each project, using a checklist for marking all factors which must be considered in ranking these projects.

3. A determination of the recommended order of priorities and inclusion in a master priority schedule without regard to department or function.

In carrying out its responsibility, the Planning Board should be free to re-schedule projects, but only after prior consultation with department heads. Intra-departmental friction and usurping of authority must be avoided throughout the process.

Following the preparation of a master priority schedule, it should be sent to the Town's financial and legal personnel for review. These persons must have the entire long-term picture of priorities before them in order to work out the financing of projects and to resolve legal or other technical questions which may arise.

The Checklist Approach

The checklist approach discussed on the follow-

ing page, is recommended as the most satisfactory method of establishing project priorities in a capital improvements program.

The checklist is a tool to assist planners in rating projects according to urgency. Its purpose is to help assure that a systematic approach be followed and that no pertinent factors to a decision be overlooked. Thus, the checklist is a means to an end; that end being a well informed value judgment.

Although not discussed in detail in this condensed Master Plan report, the following is a suggested two-part checklist that is designed to include all possibilities in reaching final decisions. A project that fits at the top of the list in Part I would command the highest ranking. If two projects appear to be of equal need, according to the indicies listed in Part I, the one that satisfies more requirements from Part II, would then merit the higher priority ranking. It should be kept in mind throughout that all capital projects should conform to the stated goals and objectives of the Master Plan.

Checklist - Part I (in order of importance)

1. Projects to protect life, prevent injury and eliminate hazardous and unhealthy conditions.

2. Projects to conserve existing facilities and services.

3. Projects to secure the convenience, comfort and general welfare of the population.

4. Projects to promote future growth and development.

In addition to these general criteria, there are other considerations which should be made part of the overall decision-making process for establishing a priority list of capital improvements. These indicies are as follows:

Checklist - Part II (not in order of importance)

1. Intensity of satisfaction.

2. Number of people benefitting directly.

3. Fulfillment of Town physical plant.

4. Multiple-use potential.

5. Citizen dollars saved.

6. Relation to nearby communities.

After completing the project priority schedule it should go to the financial planners in the Town. Although need, not finance, should be the controlling factor in determining priorities, there are some situations where modifications of the original ranking will have to be made for the following financial reasons:

1. To take advantage of available Federal or State aid.

2. To achieve savings through a smart fiscal policy.

3. Self-supporting projects can be moved up on the list upon certain occasions.

In addition to these financial reasons, modifica-

tions in the original ranking may have to be made because of other reasons. Mandatory action is one such instance. For example, if the State Health Department orders the end of stream pollution by a certain date, the Town must build the necessary sewage treatment facilities. Action by other government jurisdictions may also affect an established project priority system. For example, a State expressway interchange is built which brings heavier than foreseen traffic on certain local streets. This causes the Town to consider a widening program and/or intersection improvements to resolve the situation.

PROPOSED CAPITAL IMPROVEMENTS PROGRAM

Recommendations contained in the Brookhaven Master Plan cover the next 20 years to 1985, and in some instances, periods beyond that time. Over the next two decades, substantial private as well as public expenditures will be required to carry out many of these recommendations.

The Capital Improvements Program presented in this section includes a listing of all projects, by priority, recommended for the entire long-range program as well as estimated costs for those projects proposed for the period 1965 through 1969, the first five-year phase of the twenty-year program.

It must be reiterated that the Capital Improvements Program presented herein includes only those items which are recommended in the Master Plan. If other proposals by Town departments are deemed more urgent they should be placed in appropriate places in the priority schedule. Such other proposals, however, should not conflict with the Master Plan's goals and objectives.

There are certain capital improvements which should be provided in Brookhaven but which are not within the Town's responsibility, per se. Rather, the responsibility for providing these improvements may rest with school districts, public authorities, the County, State, or Federal government. Town residents must realize that many different governmental jurisdictions have obligations to provide them with various services. Officials in the Town of Brookhaven are part of a much larger team which should have as its main purpose, the goal of providing the people with those necessary facilities and services which promote the health, safety, convenience, and general welfare.

Projects which are not the direct responsibility of the Town are excluded from consideration in the recommended capital improvements program even though the Town may ultimately defray a small part of the cost.

Proposed Schedule of Improvements - Table No. 12 shows the breakdown of proposed capital improvements and estimated costs for the first five-year period of the long-range program.

In tabular form the recommended five-year capital improvements program is shown on Table No. 13. Table No. 14 shows the program, excluding cost estimates, for the remaining fifteen-year planning period. As the Town reviews the program each year, cost estimates for these projects recommended after 1969 can be more firmly established, based on then current prices of material, labor costs, and land values. A discussion of the projects proposed for inclusion in the Capital Improvements Program is contained in Volume

TABLE NO. 12

FIVE YEAR SCHEDULE OF CAPITAL IMPROVEMENTS
TOWN OF BROOKHAVEN
1965 - 1969

1965		
1. Drainage facilities		$ 760,000
2. Parks and recreation: land acquisition		700,000
	Total Cost	$1,460,000
1966		
1. Drainage facilities		$ 760,000
2. Refuse disposal site and equipment		350,000
3. Parks and recreation: land development		500,000
4. Hawkins Avenue widening		124,000
5. Town Hall and equipment		500,000
	Total Cost	$2,234,000
1967		
1. Drainage facilities		$ 760,000
2. Parks and recreation: land acquisition		700,000
land development		500,000
3. Station Road widening		132,000

Table No. 12 (continued)

1967 (continued)

4. Town Hall and equipment		$ 500,000
	Total Cost	$2,592,000

1968

1. Drainage facilities		$ 760,000
2. Parks and recreation: land development		500,000
3. Ocean Avenue extension		129,000
	Total Cost	$1,389,000

1969

1. Drainage facilities		$ 760,000
2. Parks and recreation: land development		500,000
	Total Cost	$1,260,000
Total Cost - Five Year Program		$8,935,000

Source: Edwin S. Voorhis & Son, Inc.

TABLE NO. 13

RECOMMENDED CAPITAL IMPROVEMENTS PROGRAM
BY YEAR PROJECTS ARE ACCOMPLISHED
1965 - 1969

Proposed Project	1965	1966	1967	1968	1969	Totals
	(In Thousands of Dollars)					
Drainage facilities	760	760	760	760	760	3,800
Parks and recreation:						
Land acquisition	700	---	700	---	---	1,400
Land development	---	500	500	500	500	2,000
Refuse disposal site	---	350	---	---	---	350
Street widenings	---	124	132	---	---	256
Street extension	---	---	---	129	---	129
Town Hall	---	500	500	---	---	750
Totals	$1,460	$2,234	$2,592	$1,389	$1,260	$8,935

Source: Edwin S. Voorhis & Son, Inc.

TABLE NO. 14

LONG RANGE CAPITAL IMPROVEMENTS PROGRAM
1970 - 1984

1970 - 1974

Drainage facilities
Refuse disposal site and equipment
Parks and recreation - land acquisition and development
Whiskey Road extension

1975 - 1979

Drainage facilities
Parks and recreation - land acquisition and development
Granny Road - South Manor Road extension

1980 - 1984

Drainage facilities
Parks and recreation - land acquisition and development
Mastic Road widening

Source: Edwin S. Voorhis & Son, Inc.

XIII of the individual series of Master Plan reports.

FINANCIAL CONSIDERATIONS

Basically there are five sources of funds available to the Town for financing capital projects:

1. Current revenues, including reserve funds.
2. Grants-in-Aid from other governments.
3. Benefit assessments.
4. General Obligation Bonds.
5. Revenue Bonds.

It is beyond the scope of this report to advise the Town on fiscal policies. Except for the general comments offered herein the advice of financial experts should be sought and heeded.

The brief discussion which follows is therefore limited to the consideration of what effect the capital improvements will have on the Town's finances. Table No. 15 summarizes the five-year program by showing each project, cost estimates, bond issues, and their duration, and annual debt service payments.

Bonded Debt - Assessed Valuation Ratio - From 1959 to 1964, assessed valuation in Brookhaven grew from approximately $105,000,000 to $151,000,000 or an increase of 44 percent. If these trends continue, the Town's assessed valuation should be about $217,000,000 in 1969.

Also, assuming that no other bonds are issued for the next five years, except those recommended in the Capital Improvements Program, the Town total bonded debt will be $11,681,100* in 1969.

Thus, the ratio of debt to taxable assessed valuation will be 5.4 percent, a figure higher than at present but still well within the acceptable guidelines discussed previously.

Debt Service - Annual Operating Budget Ratio - From 1959 to 1964 the Town's operating budget rose from $5,300,000 to $7,200,000, an increase of 36 percent, or an annual increase of seven percent. It is expected that operating costs will continue to increase during the next five years, and at a somewhat greater rate. This is so primarily because effectuation of the Capital Improvements Program will result in added personnel, administrative, and maintenance costs.

The annual operating budget for the Town in 1969 should therefore approximate $10,500,000. This is an increase of almost 46 percent over the five-year period, or an annual increase of nine percent. Debt service** should, in 1969, approximate $990,000. (See Table No. 16.)

Thus, the ratio of debt service to the annual operating budget will be just under nine percent. This

---

* Total existing and proposed bonded debt less all principal payments from 1965 to 1969.

** All principal and interest payments on existing and proposed bond issues.

TABLE NO. 15

BOND ISSUES AND ANNUAL DEBT SERVICE PAYMENTS[1]
RECOMMENDED CAPITAL IMPROVEMENTS PROGRAM
TOWN OF BROOKHAVEN
1965 - 1969

Capital Expenditure	Estimated Cost [2]	Bond Issue[3]	Length of Bond[4]	1965	1966	1967	1968	1969
Drainage facilities	$3,800,000	$3,420,000	30 yrs.	$230,280	$226,404	$222,528	$218,652	$214,776
Parks and recreation:								
Land acquisition	1,400,000	1,260,000	30 yrs.	84,840	83,412	81,984	80,556	79,128
Land development	2,000,000	1,350,000	20 yrs.	---0---	113,400	111,105	108,810	106,515
		450,000	10 yrs.	---0---	60,300	58,770	57,240	55,710
Refuse disposal site	280,000	252,000	30 yrs.	---0---	16,968	16,682	16,396	16,110
Refuse disposal equipment	70,000	63,000	20 yrs.	---0---	5,292	5,184	5,076	4,968
Street widening	124,000	112,000	15 yrs.	---0---	11,208	10,956	10,704	10,452
Street widening	132,000	119,000	15 yrs.	---0---	---0---	11,946	11,677	11,408
Street extension	129,000	116,000	15 yrs.	---0---	---0---	---0---	11,644	11,382
Town Hall	1,000,000	900,000	30 yrs.	---0---	60,600	59,580	58,560	57,540
Totals	$8,935,000	$8,142,000		$315,120	$577,584	$578,735	$579,315	$567,989

(1) Includes repayment of principal, and interest on remaining amount at 3.40 percent.
(2) Does not include any state or federal financial aid which may be available and thereby serve to reduce Town costs.
(3) Assumes that 10 percent of estimated costs are not bonded.
(4) Based on N.Y.S. Local Finance Law.

Source: Edwin S. Voorhis & Son, Inc.

TABLE NO. 16

DEBT SERVICE PAYMENTS
TOWN OF BROOKHAVEN
1965 - 1969

	1965	1966	1967	1968	1969
Debt Service on Existing Bonds[1]					
Principal	260,000	274,000	279,000	284,000	299,000
Interest	160,678	151,675	142,324	132,803	122,942
Total	$420,678	$ 425,675	$ 421,324	$ 416,803	$ 421,942
Debt Service on Proposed New Bonds	$315,120	$ 577,584	$ 578,735	$ 579,315	$ 567,989
TOTAL DEBT SERVICE	$735,798	$1,003,259	$1,000,059	$ 996,118	$ 989,931

[1] Excludes special district bonds which are self-liquidating.

Source: Town of Brookhaven financial records; Edwin S. Voorhis & Son, Inc.

is a lower figure than at present, and well within recommended guidelines.

Borrowing Capacity - Currently the Town has a borrowing capacity of almost $38,000,000. Of this amount, over $8,100,000 will be borrowed if the recommendations of this Capital Improvements Program are carried out. However, the Town's remaining legal debt limit will remain very high. The current debt limit, as noted previously, is over $41,000,000 (based on seven percent of the average full valuation of taxable real property for the previous five years). As land appreciates in value and as new assessed valuation is added to the tax roles, the debt limit will likewise increase substantially by 1969.

Thus, the Town's authorized borrowing capacity will be little affected by the proposed Capital Improvements Program.

It is important to note that State and Federal programs of financial aid have not been considered in estimated project costs. It is strongly urged that all programs which offer such aid should be investigated by the Town. For example, there are programs for acquiring and preserving land for open space purposes, for developing recreational facilities, for improving the community through urban renewal programs, and for various public works projects. Furthermore, private developers will themselves provide a great deal in the way of community improvements as dictated by health, subdivision, and zoning regulations.

In instances where the Town is eligible for financial assistance, the Capital Improvements Program would have to be revised to take such monetary gains into consideration.

Property Taxes - The projects recommended for completion within the next five years are costly enough to warrant paying for them through bond issues. It must be made clear that all project costs as well as principal and interest payments are estimated figures.

While, in a growing community, it is impossible to predict or forecast tax rates from year to year, it must be noted that some of the projects, in addition to the possibilities of their being eligible for financial assistance as stated above, would be revenue producing. For example, income can be derived from users of golf courses, swimming pools, and other recreational facilities. Also, the refuse disposal site can be revenue producing.

Thus, the residents living in the Town today will not be subjected to sharp increases in property taxes as a result of the effectuation of the Capital Improvements Program.

CONCLUSION

Without a long-range financial plan it is impossible to determine whether the community can afford the physical improvements recommended in the Master Plan or whether the proposed projects are far too extravagant in that they are well beyond the community's financial resources.

Cost estimates and financial projections contained herein are for illustrative purposes only. They are intended as a guide to the preparation of a financial plan which the Town should prepare annually, after setting up the necessary procedures. In addition, it must

be reiterated that the projects recommended herein are based only on the Master Plan. Departmental needs and still other items considered important by the Town should be placed in appropriate places on the priority schedule.

Brookhaven is fortunate in that it has a high borrowing capacity, while current debt service payments are low. Since the population is growing and assessed valuation figures are advancing at a healthy rate the Town is in an excellent position to carry out a program of providing necessary capital improvements for the benefit of its residents.

SUBDIVISION REGULATIONS

The process of transforming open land in the Town of Brookhaven into built-up developments has, in the past, constituted a real challenge to the Town and its Planning Board and as time passes, many opportunities to improve and strengthen the patterns of growth will be presented. Because there is yet a large amount of undeveloped land it is probable that the sum total of the future development can become the fundamental structure of this extensive Town. The growth pattern resulting from the successive addition of new subdivisions will endure for generations.

Evidences of the need for adequate subdivision control abound in many parts of the Town. In more recent years a growing awareness of the problems resulting from lack of controls has resulted in the establishment of subdivision regulations and land planning requirements, which have resulted in the upgrading of the character of residential development. This tremendous step forward will now be augmented by the Planning Board having a comprehensive Master Plan to provide a basis for technical judgment in administering the Board's planning function.

Serious problems exist. Perhaps the most irritating of these is the sanitary waste disposal problem; the problem of redevelopment of older mapped but still vacant subdivisions; the problems of acquiring rights-of-way for future thoroughfares; and the problem of reserving suitable sites for schools, parks, and playgrounds in advance of the actual needs therefor.

It frequently happens in real estate as in all other business enterprises, that persons owning or acquiring property will find they have made a bad investment. The fact that such a person will suffer a financial loss as a result of strict enforcement of land planning and subdivision controls should not deter the Town from establishing and maintaining suitable standards of health, safety, welfare, and morals. The level of profit or loss may be a matter of interest but not of concern to those who have the responsibility of guiding the Town's development along the paths chosen by its citizens.

With the guidance and direction afforded by the Master Plan and the constant, strict enforcement of the Subdivision Regulations, the individual residential development will, regardless of its size or location, become a part of a planned neighborhood fully integrated into the community. Through continued enforcement of land planning controls and effectuation of the Master Plan provisions, the Town can be assured of a continuity of public improvements and the essential facilities needed to maintain over the years, relatively high and stable property values.

Several minor improvements to the Town's existing good subdivision regulations have been proposed and discussed in Volume XI of the individual series of Master Plan reports. They are not repeated herein.

ZONING ORDINANCE

RECOMMENDED REVISIONS

In Volume XIV of the individual series of Master Plan reports the Consultant has set forth the major changes and revisions which are recommended to be made in the existing Zoning Ordinance. By underscoring, the new material as well as changes in wording or sentence structure in the existing Town Zoning Ordinance are clearly shown.

It is not the Consultant's intention that these recommendations be adopted "as is". Town officials, together with the Town Attorney, must review these proposals before actually preparing revisions in precise legal terms.

Accompanying the proposed changes is a set of the Town's existing Zoning Maps on which the Consultant has delineated the various areas for which specific major zoning changes are made. These maps have been presented separately to the Town Planning Board.

Among the principal revisions proposed for Brookhaven's Zoning Ordinance are those designed to do the following:

1. To exclude all new residential uses from commercial and industrial zoning districts, and commercial uses from industrial zoning districts.

2. To rezone certain vacant and residentially developed properties from commercial and industrial zoning districts to residential zones.

3. To provide logical and feasible boundaries to the major industrial districts.

4. To exclude intensive development from tidal and drainage plains and from as much of the Long Island Sound and Great South Bay shore line as possible.

5. To provide large acreage zoning in areas where the best soil conditions prevail.

6. To provide adequate multi-family zoning districts for both high and low density apartment complexes.

7. To require that construction take place within a two-year period after a zoning change has been granted. If at the end of two years construction has not commenced, the zoning shall revert to its original category.

8. To establish an amortization period for non-conforming uses.

9. To separate fully the functions of the Board of Appeals from the Planning Board.

In addition to a zoning ordinance and subdivision regulations, other important regulatory tools now in the Town's possession are: a building code, housing code, electrical code, plumbing code, and a fire code.

The Brookhaven Zoning Ordinance is one of the major legal instruments in the hands of Town officials to carry out the major recommendations set forth in

the Master Plan. However, it is essential that certain revisions be made in the Ordinance to execute properly the Town's wishes as expressed by the Land Use Plan.

The existing Zoning Ordinance has served the Town well, but because of rapidly changing physical characteristics, social values, new technology, and continuing strong development pressures, it should be updated and strengthened. Thereafter, changes of zoning should be made more difficult to obtain. The burden of proof, at the present time, falls more heavily on the Town, rather than on the petitioner where it rightfully belongs.

Planning and Zoning

The basis of planning is the organization of land uses and the objective of a planning program is to develop a plan for the physical development of the Town. The Master Plan suggests the way in which existing and proposed physical features, such as highways, institutions, residences, commercial and industrial areas, should be related to each other.

The Land Use Plan is a part of the Master Plan. It is essentially a statement of objectives that the elected officials and the public at large should aim for in making decisions affecting future development and redevelopment of the Town. The Zoning Ordinance and Map is the tool by which some of these objectives may be progressively realized. Neither the Land Use Plan nor the Zoning Map are valid unless both are based upon adequate surveys and intelligent appraisals of the prospective uses of land.

Blight and Zoning

It is a generally accepted fact that inadequate zoning contributes to the spread and creation of slums and blighted areas. Realizing this, the Federal Urban Renewal Administration insists that a community have proper zoning safeguards where Federal monies are being used on projects designed to eliminate and prevent slums and blight.

The experiences of cities and towns throughout the country show that over-zoning (to zone or to keep zoned more land for certain uses than can possibly be developed), spot zoning (the arbitrary zoning of lots for a use that is incompatible with surrounding uses) and strip zoning (the practice of zoning a strip along highways, usually commercial, for a certain depth usually inadequate) tend to deteriorate the character of an area. Another evident weakness is the neglect of the relationship of zoning to land use planning. Zoning has been too often mistaken for planning. To be effective, zoning must be based on and enforced within the framework of a guiding comprehensive plan.

NATURE AND CHARACTER OF ZONING

Zoning is a system of regulations for the use of land. Under State law, it is an exercise of police power by a governmental jurisdiction so as to protect the public health, safety, and general welfare.

Preparing or revising a zoning ordinance is one of the most difficult jobs of public administration. It is imperative that an ordinance take into account all of the court decisions concerning various regulations;

that it be made clear to the many people who will have to interpret it; that it consider existing conditions along with long-range objectives; and that it must not be an arbitrary or unreasonable use of police power.

There is no doubt that the practice of zoning has won public support and judicial approval as a reasonable exercise of public control. To maintain this public acceptance and court approval, zoning regulations must be consistent in their requirements, administration, and enforcement throughout the Town.

Land Use · Population · Playfields
Codes and Ordinances · Marinas
Economics · Community Facilities
Subdivision Regulation · Schools
Parking · Industry · Urban Renewal
Public Utilities · Redevelopment
Urbanization · Housing · Railroads
Employment · Traffic Circulation
Relationships · Markets · Research
Natural Resources · Condominium
Transportation · Commerce · Zoning
Migration · Capital Improvements
Semi-Public · Highways · Financing
Commercial Centers · Residential
Conservation · Density · Inventory
Parks and Recreation · Wholesale
Expenditures · Public · Communities
Shopping Centers · Neighborhood
Playgrounds · Water · Forecasting
Historical Sites · Retail Trends
Land Use · Population · Playfields
Codes and Ordinances · Marinas
Economics · Community Facilities
Subdivision Regulation · Schools
Parking · Industry · Urban Renewal
Public Utilities · Redevelopment
Urbanization · Housing · Railroads
Employment · Traffic Circulation
Relationships · Markets · Research
Natural Resources · Condominiums

EDWIN S. VOORHIS & SON, INC.
Consulting Engineers and Planners
Massapequa • Huntington, New York