

Otto Kaufman
Mayor

Township Committee

David B. Landry
Maitland Van Nostrand
Leonard H. Ruppert
George A. Riley

Planning Board

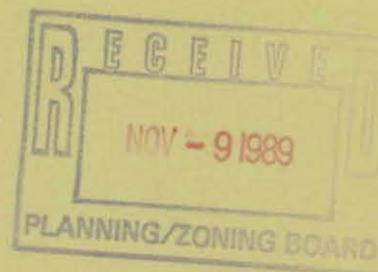
Nelson W. Thompson
Chairman
Edward A. Platz
Vice Chairman
Robert F. Schwenker, Jr.,
Secretary

John Cilo, Jr.
Otto Kaufman
David B. Landry
Peter A. Mistretta
Donald W. Perkins
Walter E. Raymond

Mrs. Lou Ann Perry
Alternate
William R. Wellemeyer
Alternate
Joseph C. Patrick
Alternate

Planning Board Advisory Committee

Arvind V. Kokatnur
Conservation Commission
William H. Searfoss
Board of Adjustment
Robert B. Medina
Frank S. Rose
Theodore F. Lubas, Jr.
Recreation Committee
Joseph W. Hoffman
Board of Health
Augustus R. Coddington
Board of Adjustment
Walter C. Baker
Board of Health
Richard D. Schmidt
Recreation Committee
Arthur M. Abrahams
Industrial Commission



MASTER PLAN

TOWNSHIP OF MONTGOMERY

SOMERSET COUNTY, NEW JERSEY

November, 1971

TABLE OF CONTENTS

	<u>Page</u>
Foreword	i
Introduction	1
Existing Land Use	1
Physical Characteristics	4
Population and Economic Data	6
Financial Analysis	10
Existing Facilities	11
Transportation	14
Capital Improvements Program	16
Master Plan Implementation and Continuing Planning	18
The Master Plan	18
Land Use and Housing Plan	20
Circulation Plan	24
Open Space, Recreation, Conservation and Historic Plan	26
Facilities Plan	27

LIST OF PLATES

<u>Plate No.</u>		<u>Page</u>
1	Generalized Land Use	2
2	Land Use Distribution	3
3	Topography	5
4	Soil Characteristics	7
5	Population Data	8
6	Migration Patterns	10
7	Existing Water and Sewer Facilities	13
8	Existing Highway Traffic Volumes, Highway Functions, and Airport Data	15
9	Long-Range Capital Improvement Needs	17
10	Neighborhoods	19
11	Land Use and Housing Plan	21
12	Circulation Plan	25
13	Open Space, Recreation, Conservation and Historic Plan ...	28
14	Facilities Plan	29

FOREWORD

A MASTER PLAN IS A STATEMENT OF POLICIES AND PROPOSALS TO GUIDE FUTURE GROWTH AND DEVELOPMENT WHICH CONSISTS OF BOTH WRITTEN AND MAPPED DATA .

AS A GUIDE TO PUBLIC POLICIES, THE MASTER PLAN PROPOSES LONG-RANGE GOALS. THE TOWNSHIP OF MONTGOMERY MASTER PLAN IS COMPOSED OF INDIVIDUAL PLANS FOR LAND USE AND HOUSING, CIRCULATION, COMMUNITY FACILITIES, AND OPEN SPACE AND RECREATION.

THE PLAN IS INTENDED TO HAVE FLEXIBILITY WITHIN THE BASIC PRINCIPLES INCORPORATED IN ITS OBJECTIVES. THE PLAN SHOULD BE REVIEWED ON A REGULAR BASIS AND, IF NECESSARY, ADJUSTED TO MEET CHANGING CONDITIONS AND REDEFINED OBJECTIVES. IT IS IMPORTANT THAT THE PLAN BE CHANGED WHEN THE TOWNSHIP'S GOALS AND OBJECTIVES WHICH UNDERLIE THE PLAN ARE THEMSELVES MODIFIED .

THE MASTER PLAN IS INTENDED TO PROVIDE A BODY OF FACTS, CONCLUSIONS, AND RECOMMENDATIONS IN SUFFICIENT DETAIL TO BE USED IN FORMULATING DAY-TO-DAY PLANNING DECISIONS. FURTHER, IT SHOULD BE REVIEWED AND UPDATED PERIODICALLY SO THAT ITS USEFULNESS IS MAXIMISED IN THE DYNAMIC FUNCTIONING OF THE TOWNSHIP.

TOWNSHIP OF MONTGOMERY
Somerset County, New Jersey

MASTER PLAN AND SUMMARY OF PROPOSALS

November, 1971

INTRODUCTION

An adopted master plan has existed in Montgomery Township since 1960. Since 1967, it has been under review for possible amendments to reflect changes that have occurred in recent years. It is apparent the township is beginning to emerge from a rural township into a suburban community. The broad indicators are new homes, more people, less vacant land, fewer active farms, and more schools and stores. Likewise, the township is forced to consider providing new services and expanding others such as public sewers, schools, formalized recreation programs, full-time police officers, and expanded road maintenance programs. In addition, the township has had Interstate Route 95 and all the ramifications of that highway superimposed on its present growth pattern. Route I-95's impact will be obvious. Growth will accelerate and with it will come more intensified problems which demand resolution.

Although the township is assured of growth at a rate more accelerated than in the past, it is more difficult to specify precisely when this growth will generate specific needs. For the most part, community growth occurs in bits and pieces. The pattern is more evolutionary than revolutionary, often resulting in growth taking place almost unnoticed. Gradual development, which is often scattered throughout the community, creates growth problems for which there are no convenient and clear-cut solutions.

The purpose of the master plan is to establish goals for guiding development. The resulting growth in population necessitates a realistic appraisal of the facilities and services necessary to serve the expanding population. It is the people who create the need and demand for streets, schools, areas to shop and play, potable water, facilities for the treatment of sewage, storm sewer systems, and other services. The development which people create also causes increased concern for preserving the remaining landscape, aesthetics, and open spaces.

Montgomery Township's planning program over the years has involved the study and analyses of many segments of the community. The following text represents a summary of data used as a foundation for the long-range plans and goals of the township.

EXISTING LAND USE

The land use pattern in Montgomery is primarily one of undeveloped, rural land. About 81% of the total land area is either vacant, agricultural or wooded. Another 2% is water and 5% roads. In 1970, only about 12% had been developed with homes, business, industry or public and quasi-public uses.

The 1970 land use pattern is shown on Plate 1. The 1970 land use distribution by acreage and percent is shown on Plate 2.

The residential pattern in Montgomery is one of a few remaining farm structures, some isolated individual homes, and more recent single-family structures within developments. The basic pattern of homes is scattered. Of the recent developments, the vast majority are in the eastern half of the township.

Commercial and office development represents less than 1% of the township's area. Most commercial uses are oriented to Route 206 in four locations: The Rocky Hill/Princeton Airport area with office, auto sales, shopping center, and service station-type uses; the Village of Harlingen with a service station, lawn mower shop, real estate office, and small clothing and grocer-type outlets; the Belle Mead area with a service station, real estate office, and branch bank in one location and warehousing and lumber facilities adjacent to the railroad in another location; and a few convenience uses located in the Village of Blawenburg clustered at the intersection of Route 518 and Great Road. The remaining few uses are scattered and consist of a restaurant, some offices, a riding stable, auto repair services, and a greenhouse.

The industrial pattern is even less established than the commercial pattern. For purposes of classification, the buildings containing offices, such as those around the Princeton Airport, were classified as commercial and office uses; not industry. Consequently, the total acreage is less than 1% of the township's area.

Public and quasi-public uses represent over 1,400 acres. This large amount of land (about 7%) is somewhat unusual. The large tracts owned by the New Jersey Neuro-Psychiatric Institute, the Carrier Clinic, two golf courses, the New Jersey Beagle Club, three township schools, and a variety of scattered other uses account for this significant portion of land.

The wooded areas (25% of the township) also have a pattern. The greatest single area of woods is in the northwestern portion of the township where the rocky soils and rugged topography tend to impede development. These factors also contributed to the fact that these areas were not cleared for agricultural purposes in the past. Other wooded areas generally follow flood plains or are remnants of wood lines separating farms. The extent to which vacant and agricultural land still dominates the township is an indication of its rural past. It also accounts in large part for the lack of wood cover.

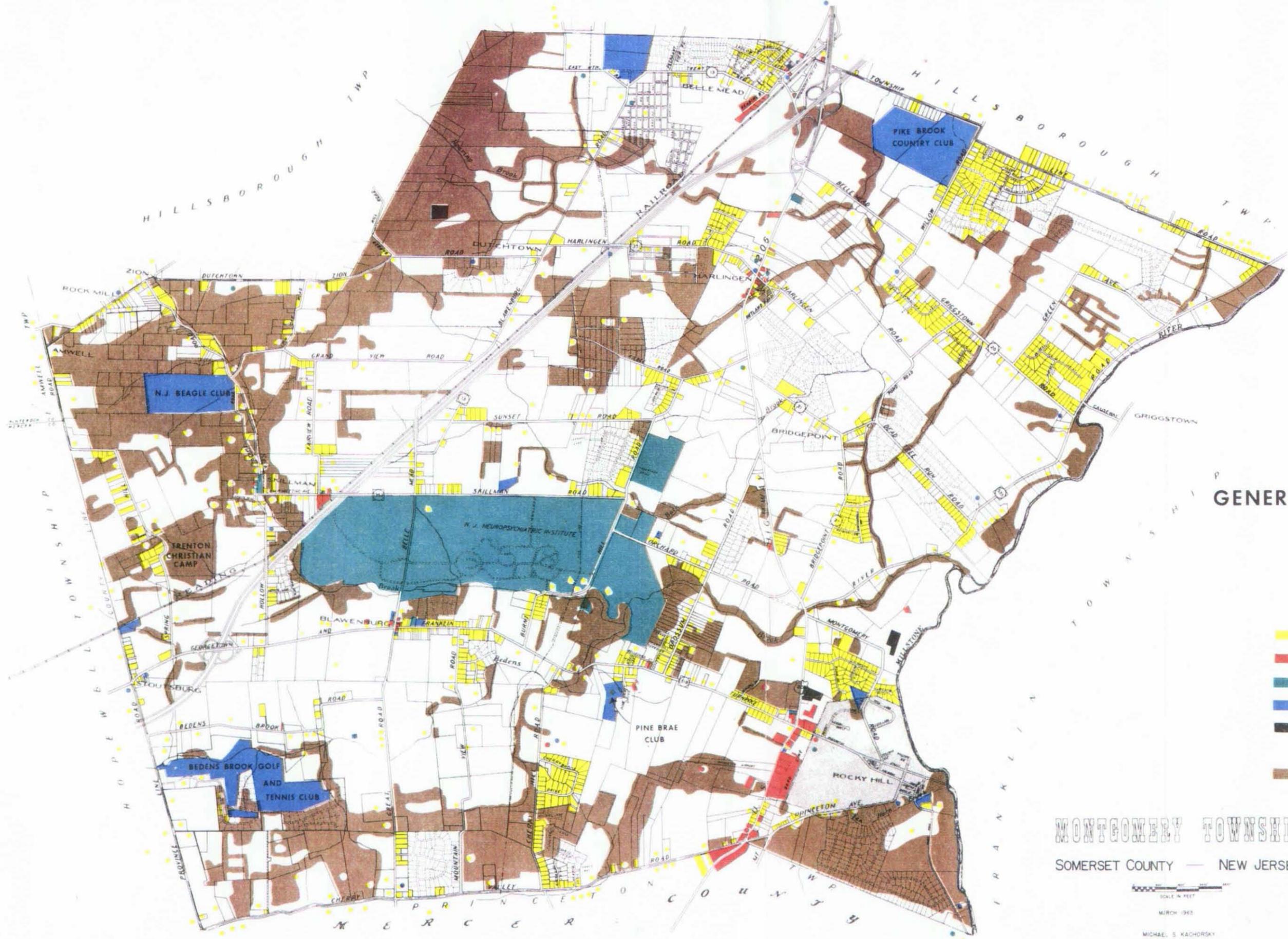


Plate 1
GENERALIZED LAND USE

MAY, 1970

LEGEND

- RESIDENTIAL
- COMMERCIAL AND OFFICE
- PUBLIC
- QUASI-PUBLIC
- INDUSTRIAL
- VACANT
- WOODED

MONTGOMERY TOWNSHIP
SOMERSET COUNTY — NEW JERSEY



MARCH 1965

MICHAEL S. KACHORSKY
TOWNSHIP ENGINEER

PREPARED BY / ALVIN E. GERSHEN ASSOCIATES / TRENTON, NEW JERSEY

- LEGEND
- LOTS WITH FINAL APPROVAL
 - LOTS WITH PRELIMINARY APPROVAL
 - SOMERSET COUNTY ROAD



PLATE 2

LAND USE DISTRIBUTION

Township of Montgomery

<u>Categories</u>	<u>1967</u>		<u>1970</u>	
	<u>Acres</u>	<u>%</u>	<u>Acres</u>	<u>%</u>
Residential	1,584	8	1,023	5
Commercial	47	*	114	*
Industrial	588	3	128	*
Public	1,121	5	893	4
Quasi Public	595	3	524	3
Roads + rights-of-way	453	2	941	5
Water	not included		332	2
Vacant + Agri.	13,031	63	11,508	56
Wooded	3,188	15	5,183	25
Utilities	<u>39</u>	<u>*</u>	<u>not included</u>	
	20,646	100	20,646	100

* less than 1%

NOTE: The differences in figures between 1967 and 1970 for residential, industrial, public, and wooded areas are assumed to be due to different sources of data and methods of calculating the figures. In 1970, the wooded areas were shown in more detail hence larger areas of woods resulted. Also, only one acre of a large lot was assumed residential; the remainder was either vacant, agricultural or wooded. Industrial areas, particularly 3M, were counted as industrial only on the portions used. The remainder was classified as it existed (vacant or wooded). Likewise, the Neuro-Psychiatric Institute had some wooded areas counted as woods resulting in more wooded acreage and less public.

SOURCES: 1967 A Comprehensive Plan for Montgomery Township, Part One,
by Herbert H. Smith Associates

1970 Alvin E. Gershen Associates field survey

In examining the land use map and the accompanying statistics, it is anticipated that the township's primary land use problems will center around the provision of services to an essentially undeveloped, but yet expanding, township where the pattern is basically scattered. The need for small, convenience commercial services will likely occur in small doses prior to the time when such services could be consolidated centrally to larger population centers. The danger rests in the possibility that the demand for commercial services will increase gradually with an evolution of scattered uses along the highway in a strip pattern.

Public services also are difficult, if not prohibitive, to provide to scattered development. Quite often the need for additional services exists, but a population base too small and scattered makes the initial capital expenditure prohibitively expensive and the continuing operating expenses questionable.

The township now has the opportunity to influence the design of much potential development and avoid some basic problems. The preservation of flood plains and wooded areas, the provision of adequate off-street parking, controlling access to collector and arterial streets, and guiding similar basic features are essential considerations. Ribbon development along the frontage of major highways can occur on many streets today without negative results. However, as development continues and traffic increases, the numerous driveways present traffic hazards, points of congestion and, in some cases, a reduction in the value of the property.

Future development in the township must also recognize that certain combinations of land use are frequently considered incompatible: industrial/residential; commercial/residential; retail commercial/industrial; schools/industrial or commercial; etc. Mixture per se is not bad, but recognizing the services required by different land uses, the street designs and intensity of traffic flow, noise and other nuisance factors, and the long-range efficiency of providing municipal services are the types of considerations which are helpful in establishing the level of compatibility of different uses and the desirability of establishing specific districts for different basic land use types. Where these districts abut each other, compatibility may be strained, but some techniques in design can lessen the potential incompatibility. The development of industry next to residences, as an example, is less offensive if industrial traffic need not go through the residential development, trees or topography or other buffering techniques are utilized to screen out the views or noise, the distance between the industrial uses and the homes is extended, soft lighting techniques are used in parking areas, and other design features which lessen the relationship of the two uses are used.

The township at present has no multi-family uses other than a few isolated conversions. There is no question that the demand for higher density uses will grow as time pro-

ceeds. Proper densities, thorough site planning, adequate sewage treatment, good architectural design, integrated open space, and controlled growth are some of the essential considerations which permit higher density uses to enter a community with little or no adverse affect upon the community's character or level of municipal services.

Montgomery is presently undeveloped. Its geographic location and recent development trends indicate massive growth pressures are but a short time away. Reasonable guidance of development can preserve the natural features and good site planning can minimize the visual impact of growth and allow increased traffic to be absorbed with fewer inconveniences.

PHYSICAL CHARACTERISTICS

Future development in Montgomery is significantly limited by two major physical factors. The first is the soil's capability to absorb and properly filter effluent and the second is ground water availability. Both are closely related and both reflect local geologic conditions.

The township lies partly between two diabase outcroppings which many geologists believe to be a continuation of the Palisades sill (the cliff along the western edge of the Hudson River in Bergen and Hudson Counties). This gives the township significantly higher elevations along its northwestern and southern extremities. These two areas largely influence existing drainage patterns.

Most of Montgomery is underlain by shale or sandstone of the Brunswick formation. Because this rock is less dense and more prone to erosion than diabase rock, there is a marked contrast in topography, sometimes as much as 200 feet or more, between these northwestern and southern portions of the township and the remainder of the township where the erosion has been more pronounced. The general topographic characteristics of the township are shown on Plate 3.

The largest areas not reflecting a shallow depth to bedrock are near the summits of the diabase outcrops in the northwestern and southern areas of the township. The fact that much of this land retains its natural tree cover (being too steep for agriculture) may partly account for a lesser degree of soil removal through erosion. In addition, the volume and intensity of runoff would tend to increase at lower elevations and hence increase the rate of erosion in the low lying areas.

Where land has a shallow depth to bedrock there tends to be significant amounts of stones and coarse gravel present, and an insufficiency of soil development as a result of erosion. The four most sizeable areas in the township where erosion has occurred have been classified as severe or moderately severe. These are found in conjunction with major drainage rights-of-way, usually where there is a slope of at least ten percent. The largest area of measurable erosion is the land along the northern slope of the southerly diabase outcrop, between Cherry Valley Road

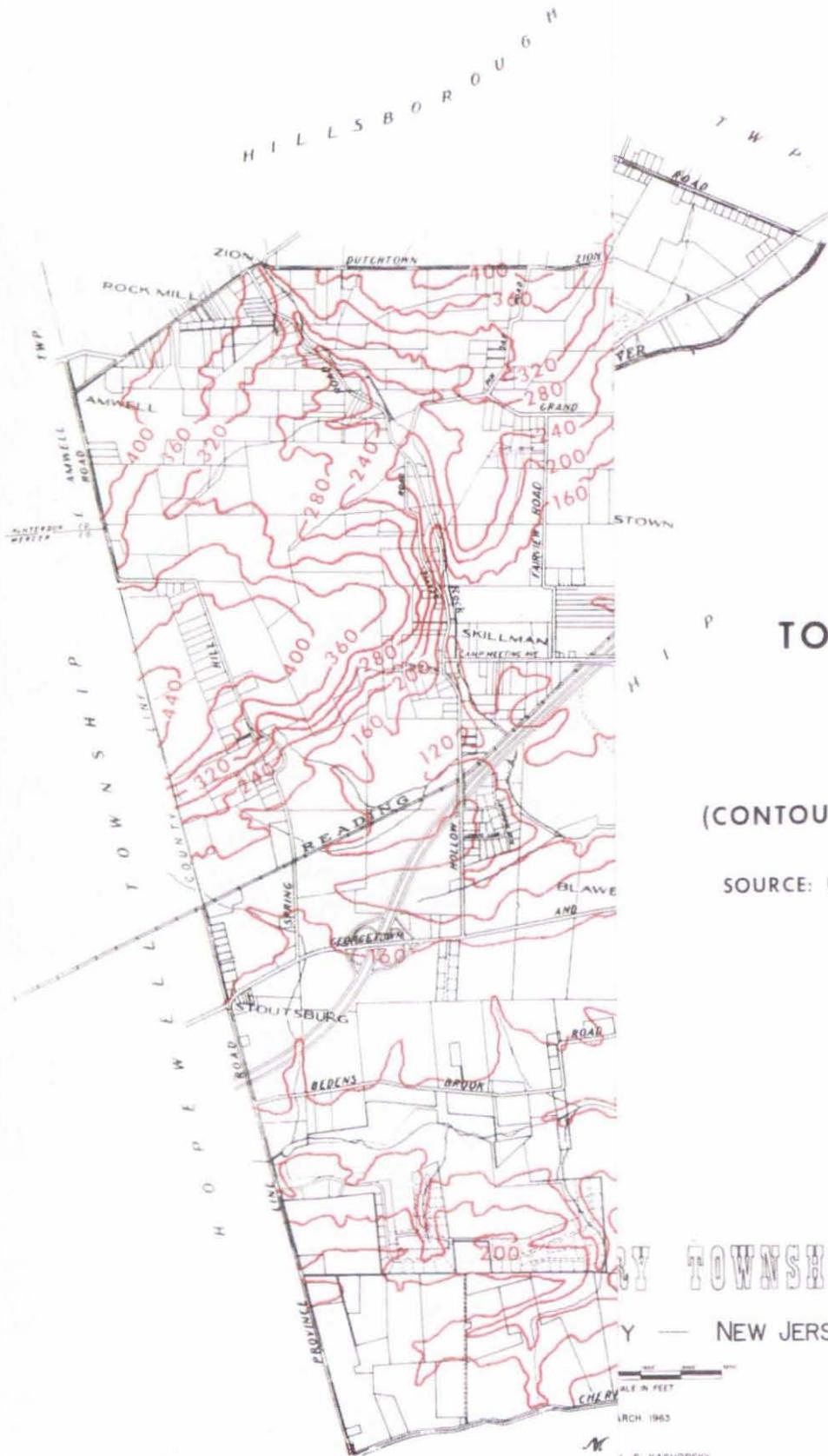


Plate 3
TOPOGRAPHY

(CONTOUR INTERVAL= 40 FEET)

SOURCE: U.S. GEOLOGICAL SURVEY

LEGEND

-  LOTS WITH FINAL APPROVAL
-  LOTS WITH PRELIMINARY APPROVAL
-  SOMERSET COUNTY ROADS

NEW JERSEY



ARCH 1965
 L. S. KACHORSKY
 CIVIL ENGINEER

PREPARED BY / ALVIN E. GERSHEN ASSOCIATES / TRENTON, NEW JERSEY

and Bedens Brook in the vicinity of Great Road. A second area is in the vicinity of the Rutland-Harlingen Road intersection, and the third is the northeastern corner of the township from Township Line Road southward to the more or less parallel segment of Green Avenue. The fourth large area of soil erosion is located in the western portion of the township, north of the Reading Railroad tracks, and involves lands adjacent to Cat Tail-Back Brook.

The topographic relief in the township ranges from about 440 feet above sea level along the ridge of Sourland Mountain to 40 feet adjacent to the Millstone River. The general topographic character east of Sourland Mountain is gently sloping to rolling with few impediments to development due to topography alone.

It must be emphasized that the local soil and drainage characteristics have a far greater impact upon the township than is normally the case. There are two reasons for this: First, most of the soils in Montgomery are residual (originating from underlying bedrock) rather than being deposited by glaciers, wind, or water. Thus their composition is largely based upon the interaction of the local bedrock and precipitation (cracks and fissures resulting from freezing and thawing and erosion of the particles). Second, the local segment of the Millstone River approximately parallels the northwestern or Sourland ridge and represents the most significant aspect of the local drainage system because it ultimately drains the entire township.

Two major tributaries, Bedens and Back Brooks, flow into the Millstone. These two brooks and their respective networks of smaller brooks and runoff lines flow in a predominantly easterly direction towards the Millstone. The Millstone flows in a general northerly direction. The coming together of many different streams in a locality having predominantly residual soils has served to produce a series of well defined flood plains. These flood plains in turn comprise a relatively large portion of the total township area and are an important natural feature to be preserved as new development occurs. Their preservation not only provides open space and a protection against flooding, but prevents septic systems from being placed in these areas.

The depth to bedrock is generally quite shallow, less than three feet, particularly where the land is between two flood plains situated within a mile or so of each other. This latter situation results from the concentration of runoff lines within a relatively small area and the transporting of soil particles in the runoff. Coupled with this is the fact that the water table also tends to fluctuate and be moderately high in many portions of the township. Where surface soils may contain good internal drainage characteristics, they are often found to be very shallow or where there is a high water table. In either event, these areas are not desirable for septic systems. The general soil characteristics are shown on Plate 4.

With respect to septic tank use in areas with a shallow depth to bedrock, fast water absorption may sometimes indicate a favorable percolation test while the liquid might be being

taken into the fissures of the bedrock and not being filtered through the soil. Such a situation represents a contamination hazard. Similar hazards exist where the water table is high and effluent reaches the water source without proper filtration. Another hazard is where a mantle of clay is just below the surface and the effluent cannot percolate through the clay. In either event, proper percolation and filtration of effluent is retarded. This condition is exaggerated during rainy periods.

Ground water resources under diabase or, as it is also found in the western and northwestern portions of the township, conglomerate and argillite, tend to be rather poor sources of water even for low density domestic use because they do not retain water and access to the water is rather a "hit and miss" proposition. While the Brunswick shale is sometimes considered a relatively good aquifer, this formation has little or no glacial overburden throughout most of Montgomery Township which significantly limits its water storage capacity. While the township relies on its ground water resources, it is very difficult to establish a meaningful maximum tolerable limit. This problem is increased by the fact that it is not known how long an aquifer could continue to provide water even if the initial flow appeared to be abundant, as in the case of the Sourland fault. Obviously the less demand placed on the source of water, the longer it will last.

Only one portion of the township, from Opossum Road east along either side of Route 518 into Rocky Hill, reflects the presence of non-residual soils, these being interglacial stream deposits possibly combined with glacial material. For the township as a whole these soils appear to present the least problems with respect to septic disposal or building construction as they are more than ten feet above bedrock. However, they are indicated to reflect a moderately high water table and moderate to slow permeability thus reducing their utilization for septsics.

As shown by the soil characteristics map of Plate 4, most portions of the township reveal at least one type of development problem with the soil relating to either precipitation or septic drainage. A large portion of those areas shown on Plate 4 as not having such soil problems tend, however, to reflect slope difficulties which is also a limiting development factor.

POPULATION AND ECONOMIC DATA

A study of population characteristics must include age trends, income characteristics, and the rate of population change, as well as the number of people. Population projections are needed in order to anticipate public facility needs while the characteristics of the emerging population assist in estimating not only the number of people, but what basic age and income characteristics they will have also. Various summary population data are shown on Plate 5.

Examining Montgomery Township in its regional setting provides an indication of the township's relative position within Somerset County as well as those trends outside the township which can influence the township's growth. Somerset County's population increased 45 percent between

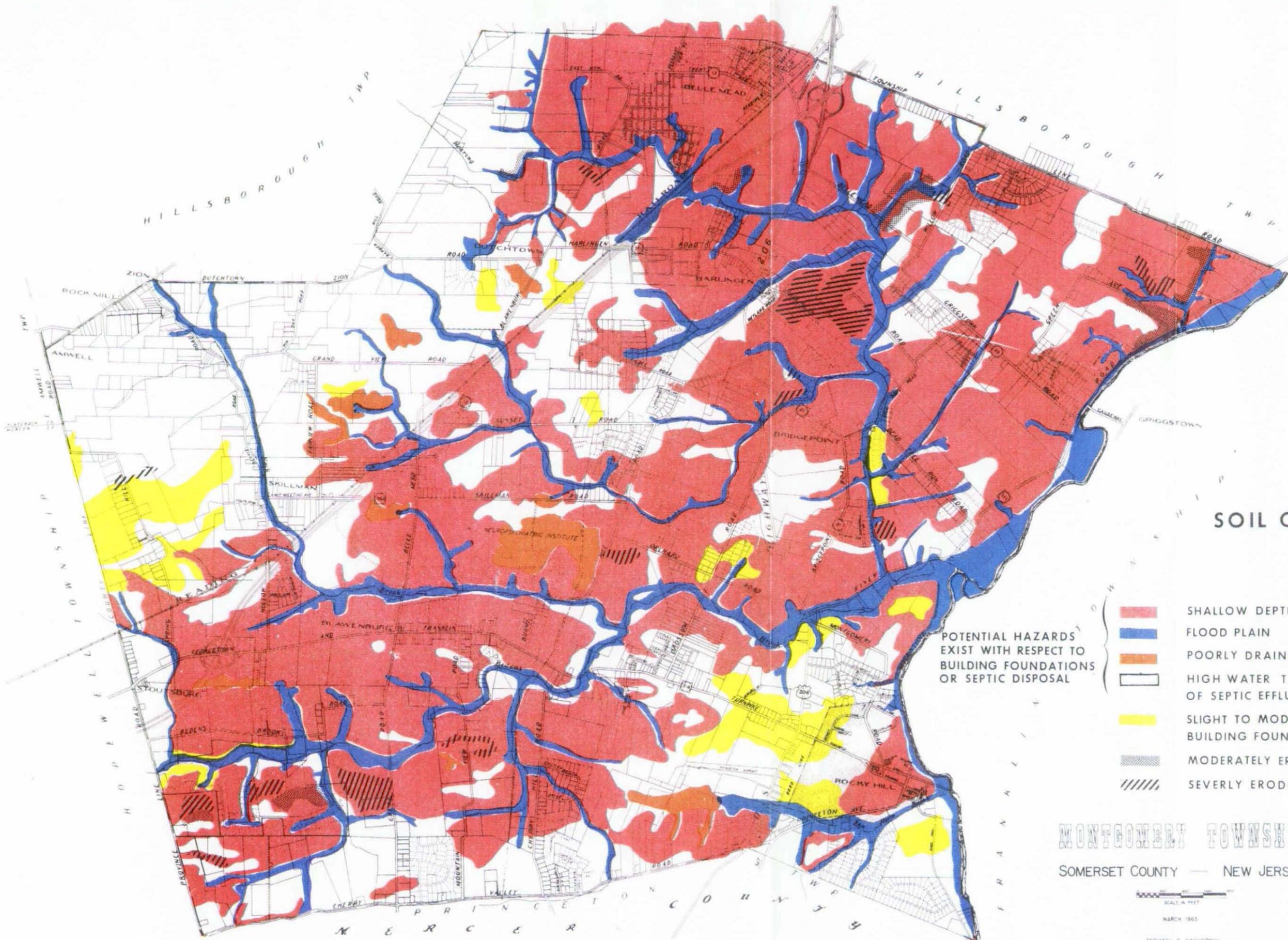


Plate 4
SOIL CHARACTERISTICS

LEGEND

- SHALLOW DEPTH TO BEDROCK (12-30 INCHES)
- FLOOD PLAIN
- POORLY DRAINED AREAS NOT IN FLOOD PLAIN
- HIGH WATER TABLE AND/OR SLOW PERMEABILITY OF SEPTIC EFFLUENT
- SLIGHT TO MODERATE PROBLEM WITH RESPECT TO BUILDING FOUNDATIONS OR SEPTIC DISPOSAL
- MODERATELY ERODED
- SEVERELY ERODED

POTENTIAL HAZARDS EXIST WITH RESPECT TO BUILDING FOUNDATIONS OR SEPTIC DISPOSAL

MONTEGOMERY TOWNSHIP

SOMERSET COUNTY — NEW JERSEY



MARCH 1965

MICHAEL S. KACHORSKY
TOWNSHIP ENGINEER

PREPARED BY ALVIN E. GERSHEN ASSOCIATES, TRENTON, NEW JERSEY

- LEGEND
- LOTS WITH FINAL APPROVAL
 - LOTS WITH PRELIMINARY APPROVAL
 - SOMERSET COUNTY ROADS

SOURCE: SOMERSET COUNTY SOIL SURVEY, U.S. SOIL CONSERVATION SERVICE.

PLATE 5

POPULATION DATA

Montgomery Township

POPULATION GROWTH

	<u>Township Population</u>			<u>Total Population</u>	<u>Total</u> <u>Somerset</u> <u>Co. Pop.</u>	<u>Total</u> <u>Township</u> <u>as % of</u> <u>Total Co.</u>	<u>Township</u> <u>Population</u> <u>in Households</u> <u>as % of County</u>
	<u>Total</u>	<u>Population</u> <u>in Households</u>	<u>Group</u> <u>Quarters*</u>	<u>Density</u> <u>Per</u> <u>Sq. Mile</u>			
1930	2648	-----	-----	83.3	65,132	4.1	---
1940	3360	-----	-----	104.2	74,390	4.5	---
1950	3819	2349	1470	118.4	99,052	3.8	2.3
1960	3851	2779	1072	119.4	143,913	2.7	1.9
1970	6353	5103	1250	197.0	198,372	3.2	2.6
1980	11,500	10,000	1500	356.5	280,000	4.1	3.6

* Inmates and personnel living in institutions

TOWNSHIP AGE TRENDS

	<u>Median</u> <u>Age</u>	<u>Percent of Total Population</u>		
		<u>Under 20</u>	<u>35-44</u>	<u>Over 65</u>
1930	30.1	31.2	16.4	5.5
1940	32.3	25.0	16.7	6.2
1950	-----	Not Available -----		
1960	33.6	31.9	15.3	7.7
1970	29.8	38.6	15.6	6.7

ECONOMIC CHARACTERISTICS

	<u>Montgomery</u> <u>Township</u>	<u>Somerset</u> <u>County</u>	<u>New Jersey</u>
<u>1960</u>			
Median school years completed	12.1 yrs.	11.5 yrs.	10.6 yrs.
Percent 4+ years college completed of population 25 and older	17.6	11.6	8.4
Median Family Income	\$7,181	\$7,484	\$6,786
Percent Employed in Two Highest Paying Positions	32.4	26.4	21.2
<u>1970</u>			
Median Household Size	3.63	3.40	3.17
Median Age	29.8	29.7	30.4

1950 and 1960. The 1970 population was another 38 percent higher than 1960. During these two decades the county's total population increased to 198,372. This is double the 1950 population. During this same twenty year period, the total township population increased more than 2,500 people which represented a growth rate equivalent to about two-thirds of the county's. Somewhat misleading is the number of persons residing in Montgomery who live in group quarters (the inmates of the Carrier Clinic and the New Jersey Neuropsychiatric Institute and the personnel who live in group quarters). In 1950, those in group quarters represented 39 percent of the total population. By 1960 this had decreased to 28 percent due to the combined effect of an absolute decline in persons living in group quarters and an increase in the absolute number of other township residents. By 1970 those in group quarters had declined to 20 percent. This occurred primarily as a result of a rapid rise in the population of township residents outside the group quarters which more than offset the increase in the number of persons residing in the group quarters. By examining only that portion of the township's population that resides in households (those outside the group quarters), the township's rate of growth from 1950 to 1970 was about 117% (2,349 to 5,103) or slightly higher than the growth rate of the county.

The population trend in Montgomery, therefore, has two aspects: the number of people residing in group quarters has fluctuated over the past 20 years, and while the total township population can be influenced by these fluctuations, it is clear that there has been a consistent increase in the population of persons residing in households with the 1960 decade representing a significant advance. Comparing the township population with the county, it is also clear that the county increased at a rate faster than Montgomery Township during the 40's and 50's, but that during the 1960's, the township's rate of growth increased at a rate higher than Somerset County's.

Further analyses of the age and economic characteristics of the population shown on Plate 5 reveal several other pertinent items. The township's median age is decreasing. The apparent reason is due to more children (now at 38.6% of the total population under age 20 and the median household size is 3.63 people compared to 3.17 for the state). Further, the number and portion of the population which is school age are increasing as reflected in the rising percentage of an increasing population under age 20 compared to previous decades. Coinciding with this data are economic characteristics (available at this time only for 1960 but which are expected to be similar when the 1970 data becomes available). In changing from a rural community into a suburban community, the township is attracting persons with higher educational levels; families whose median incomes are higher; and families whose occupational categories are oriented to the highest paying positions. All this would indicate that Montgomery, in attracting persons working in higher paying and more responsible positions, would be developing a populace where the parents are slightly older simply because it takes several years of experience to attain the higher paying and responsible posi-

tions. Likewise, these families are producing a higher proportion of school age children since, presumably, they can afford more children and also because, being older, a higher percentage of their children can be expected to be of school age. While this pattern of parents tending toward middle age and having more children than the state average was not as pronounced in the 1970 census and not as pronounced as it is expected to be by 1975-80, the 1970 census does permit a breakdown, by age groups, able to be compared with the 1960 data. This comparison showed that the age group with the largest amount of migration into the township during the 1960's was the 5-14 age group with 771, followed by the 35-44 group (463), the 25-34 group (335), and the 45-54 age group (222). These figures are shown on Plate 6. The emphasis on the children above the age of five is significant, as is the combined effect of the two adult age groups of 35-44 and 45-54. Any significant continuation of this pattern will also accelerate the time when a public need for elderly housing will present itself along with the simultaneous need for school expansion.

Population projections are estimates. If there were no zoning, subdivision, and other land use controls operative in Montgomery Township and development pressures in the area could proceed unchecked, it is likely that by the year 1980 the population would reach at least 30,000 people. To a large extent the rate of growth depends upon the progress of the highway network program scheduled for the township and the degree to which presently undeveloped sections of the township receive the services of water and sewer facilities. Given current trends, however, including such considerations as external growth pressures, present topographic and soil constraints, the highway construction timetable, market potential, and existing land use controls, it appears realistic that Montgomery Township in 1980 will reach a population of from 10,500 to 12,500 people, representing an in-migration to the township between 1970 and 1980 of approximately 5,000 people.

As indicated in the June, 1969 phase of the township's comprehensive master plan, the estimated 1967 total annual income of all township residents was \$16.4 million, almost 3 times the 1960 figure. The 1967 estimated disposable income, after taxes, was \$14.2 million from which 5.6 percent was deducted for savings. This left an estimated purchasing power of \$13.4 million. The 1967 report further estimated that 61 percent of this purchasing power is a reasonable estimate of income to be spent on retail goods, or \$8.2 million. Next, the report estimated that only 15 percent of this total is spent within the township, or the equivalent of \$1.2 million. It was estimated in 1967 that total retail sales for retail and service activities in the township were about \$6 million. Since only \$1.2 million were spent by local residents, the remaining 80 percent (\$4.8 million) was generated from people outside the township.

In conjunction with the findings from the 1967 report, and relating those figures with the population data on Plate 5, the future economic picture for Montgomery appears very favorable. Not only is additional population growth pro-

jected at rising rates, but the basic pattern is one of township residents having more disposable income than the average family and, at present, the bulk of their spending is done outside the township.

FINANCIAL ANALYSIS

Financial trends in the township are one indication of the extent to which suburbanization is taking place. In 1970

almost 61% of the total revenues for the township were derived from property taxes for school purposes. Almost 19% more were derived from taxation for county and municipal purposes. Slightly more than 20% of the total revenues were derived from surplus revenues, miscellaneous revenues, state aid, and delinquent property taxes of which over half had its basic source of revenues from property taxation. Compared with the average for communities throughout the state, Montgomery had a slightly

PLATE 6
MIGRATION PATTERNS 1960-1970

Township of Montgomery

Age Group	1960 Population			Cohort Survival*	Actual 1970	Net Gain by Migration 1960-70
	Male	Female	Total	Estimate of 1970 Population		
Under 5	153	154	307	311 **	454	143
5-14	397	268	665	752 **	1,523	771
15-24	294	199	493	662	807	145
25-34	275	261	536	489	824	335
35-44	273	317	590	526	989	463
45-54	278	303	581	562	784	222
55-64	166	217	383	514	549	35 (not significant)
65+	115	181	296	405	423	18 (" ")
	<u>1,951</u>	<u>1,900</u>	<u>3,851</u>		<u>6,353</u>	

* Number of persons in each age group (cohort) estimated to have survived ten years hence using actual mortality data for the total New Jersey population, 1959-1961, as compiled and developed by the U.S. Department of Health, Education, and Welfare.

** Cohorts under the age of 10 were obtained by applying the actual 1970 fertility rates of the childbearing age groups to the cohort survival estimates of the 1970 population for each of those age groups.

higher percentage of its revenues derived from current property taxes. Of more significance is the fact that township school revenues represented about 1.5 times the ratio of revenues for schools than the average municipality. This higher ratio again reflects the immediate impact of new families with more school aged children. On the other hand, the tax for municipal purposes was only slightly more than one quarter higher than the average New Jersey municipality. This relationship of school to municipal expenditures is indicative of the growing community's immediate impact on school growth and the delayed impact for other municipal services such as expanded fire, road maintenance, and water and sewer programs.

The pattern and rate of Montgomery's development is also reflected in a general manner by comparing the aggregate assessed valuation of 1965's to 1970's. In this period, residential properties went from \$9.7 to \$13.5 million. This rate of growth enabled the residential properties to maintain their level of just less than 60 percent of the township's total aggregate assessed valuation. Commercial properties, however, grew from \$2.2 to \$5.0 million during this same period which reflects the commercial development along Route 206 near Rocky Hill. The vacant land category dropped from \$1.4 to \$1.1 million while industrial and farm property remained about the same during this five-year period.

Between 1960 and 1970, the aggregate true value of real property in Montgomery increased almost four fold. In 1960 the aggregate true value of real property was \$22.1 million which by 1970 had jumped to \$82.6 million. This rate of growth when compared to all of Somerset County reflects that the township was growing at a rate faster than the county as a whole. While these figures would reflect both inflation and the value of new construction, the bulk is composed of new construction.

Another means of indicating the impact of development upon the financial capacity of the township is to compare the rate of increase of property evaluation between 1960 and 1969 to the rate of growth of expenditures. During this period the aggregate true value of real property for Montgomery increased almost 302 percent. This was significantly more than the county's 108 percent increase and the state's 73 percent. By comparison, total municipal appropriations for county, school, and municipal purposes increased 437 percent during this same period. Appropriations increasing more rapidly than the value of property was a pattern also for Somerset County and the average for all New Jersey municipalities at 184 percent and 113 percent respectively. The significance of appropriations increasing more rapidly than the aggregate true value of real property is the necessity for taxes to increase in order to generate the revenues to pay for the higher appropriations. In the case of Montgomery, another significance is that the large rate of increase indicates the relatively small base from which the growth is being measured.

In 1970 and 1971, the municipal debt limit was less than the 3.5% of the township's equalized valuation permitted by state statutes. In both years, the school debt was in excess of the 4% of the township's equalized valuation permitted by state statutes. When there is excess school debt, it is applied against the municipal borrowing capacity. In 1971, the excess school borrowing of over \$1.1 million when added to the \$705,325 issued and authorized debt of the municipality still left the municipality with an unencumbered borrowing margin of slightly more than \$1 million.

The financial position of Montgomery Township is viewed as one where the tax base is increasing favorably and broadening the sources of revenues. On the other hand, in the emergence of a suburban community the need for expanded municipal services and the subsequent maintenance of those services will place an increasing financial burden upon the township resulting in budget increases which can often be expected to exceed the growth in the tax base. Many basic services such as schools, sewers and improvements to existing roads will require large increased expenditures for new facilities that must be designed with capacities larger than needed at the time of construction in order to anticipate further growth. In addition, there are recurring maintenance costs once these facilities are constructed. Other services may create less of an impact individually, but their collective impact will result in similar increased expenditures for services such as drainage improvements, fire equipment, police force expansion, health services, and recreation programs.

EXISTING FACILITIES

The township has two elementary schools and one high school in operation. The Burnt Hill Road Elementary School was constructed in 1956 and expanded in 1968. The Orchard Road Elementary School was constructed in 1967. Montgomery High School was built in 1969. Coinciding with this development was the demise of the two old schools in Blawenburg and Harlingen which were small, outmoded and unuseable for the expanding township school needs. The old school in Blawenburg is now used by the Board of Education for offices. The present school facilities and enrollment characteristics illustrate three major items: (1) the three schools now in use have all been constructed since 1956 indicating recent growth; (2) these three schools are centrally located rather than decentralized within neighborhoods and, therefore, require the busing of all students, again indicating the scattered and semi-rural nature of the township; and (3) the grades that had more than a 55% increase in students from 1966-67 to the 1970-71 school year have all been of the 4th grade and higher indicating the increased median age of the parents. Another indication of an emphasis on older children is the fact that grades 9-12 represented 21.3% of the total school system enrollment in 1966-67 which percent gradually increased to 25.5% for the 1970-71 school year. Assuming that total school enrollment will increase 8% each year through 1980, the need for an additional 25 classrooms will be generated by the 1976-77 school year. Beyond 1980, the population growth in Montgomery is expected to accelerate, but at a

level which would make projecting the number of school children of questionable accuracy. An ultimate township population of 40,000 would indicate that while centralized facilities are serving the need of the current, scattered population pattern of 5,103 people outside of the Neuro-Psychiatric Institute and Carrier Clinic, the long-range needs would indicate future elementary facilities be located within neighborhoods for two reasons: (1) the school needs will be larger than the capacity of the current land holdings; and (2) neighborhood schools would tend to keep overall transportation costs lower as well as make public facilities for recreational and community meeting purposes more convenient to the various township neighborhoods.

Public recreational facilities in Montgomery are limited at this time. Facilities are available at each of the three schools plus a partially developed baseball field at Lubas Field west of Belle Mead. In addition, the township owns an undeveloped 25 acre plot along the Millstone River and has begun acquisition of an 84 acre parcel along Rock Brook. Private facilities include two golf courses, a private club, the Trenton Christian Camp, and the New Jersey Beagle Club lands. Somerset County is currently in the negotiation stage for the acquisition of land for the Sourland Mountain County Park, a portion of which is in the north-west corner of Montgomery. The State of New Jersey also proposes the acquisition of land along the Millstone River along the eastern border of the township. At present, only 58 acres of the Millstone Park have been acquired through the Green Acres Program. The bulk of the land area included in the above list is primarily open space of a passive recreation nature. There is a noticeable lack of active recreational areas, particularly neighborhood playgrounds and/or tot lots. In conjunction with or in addition to future school development, the township should be providing neighborhood, active recreational areas in anticipation of future population growth.

As indicated in the earlier section regarding soils and topography, the township requires serious conservation efforts in order to control erosion and conserve the potable water supply. The township should consider the preservation of flood plains by ordinance and acquisition to serve several purposes: open space, passive and active recreational uses, safety from floods and flood control, buffer areas between neighborhoods, water recharge areas, and major routes for regional water and sewer facilities. In addition, the fault line along the Sourland Mountains should be designated a conservation zone. This area is considered by the New Jersey Bureau of Geology to be an important aquifer. Any extensive development poses a high potential for pollution from septic systems due to the impermeable nature of the geological formations in the region. It is felt that a conservation zone about 1,000 feet wide along the fault line would protect the aquifer. Once preserved, it could also serve an important open space function. The preservation of this fault line area is enhanced by the rugged topography in the area which in itself is a limiting factor to development.

The history of Montgomery Township indicates many structures existing today also existed during the Revolu-

tionary War. Many more structures and some bridges are well over 100 years old. There are approximately twelve small cemeteries and family burying grounds scattered throughout the township dating back, in some instances, to the 18th Century. Finally, a small portion of the Villages of Harlingen and Blawenburg have preserved the architectural and small village way of life of the early 19th Century. With the township projected to have accelerated growth in the foreseeable future, steps to preserve selected structures as well as the small village areas should be implemented today in order to properly organize the administrative machinery to handle the responsibilities for acquisition and maintenance of the selected landmarks, sites, or districts.

Water is currently provided to limited areas of the township by the Elizabethtown Water Company. Primary service is provided along Route 206 and to the New Jersey Neuro-Psychiatric Institute, and the township schools. The Bedens Brook development is also served. Fire hydrants are located every 1,200 feet along existing water mains. Elsewhere in the township, water is derived from private wells.

Existing sanitary sewer facilities are shown on Plate 7. As of early 1971, of the twelve treatment plants in the township, one was operating over its capacity (New Jersey Neuro-Psychiatric Institute), seven more were operating at their design capacity, and only four were operating under capacity. Of those operating under capacity, their service areas are still growing and the capacity can be expected to be reached upon completion of their respective developments. In short, the sewers serving Montgomery Township are a series of package treatment plants designed for specific properties or developments. In 1965, a "Waste Water Feasibility Study" was prepared which proposed a completed sewer system for the township to be constructed in seven stages. The construction of the Municipal Treatment Plant below Rocky Hill along the Millstone River is the implementation of Stage 2 of this proposal. The soil conditions discussed earlier, together with the anticipated pressures for additional development in the township, make it essential that a sanitary sewerage system for the entire township be implemented in anticipation of this growth and the threat this development poses to the potable water supply of the area if septic systems are used.

The township operates a small land fill site of 2.5 acres, but provides no municipal refuse collection. Private scavengers contract directly with individual township residents. The land fill site is open one day per week for the dumping of non-combustible materials only. Long-range solid waste disposal for the township is considered a part of the broader regional needs which are best met by either the county or some regional body capable of supplying sufficient customers to develop the most economic and ecologically sound program of solid waste disposal. The township urges the implementation of such a regional program and is prepared to participate in a meaningful program.

Health facilities are provided by the Princeton and Somerville hospitals, the Somerset Valley Visiting Nurses Asso-

EXISTING WATER AND SEWER FACILITIES

JANUARY 1971



- EXISTING SEWAGE TREATMENT PLANTS
- LINES
- EXISTING WATER SERVICE
- W WELL
- ▲ S STANDPIPE

	NAME:	OPERATING CAPACITY*	DESIGN CAPACITY*
1	CARRIER CLINIC	12,000	12,000
2	3M COMPANY	6,200	6,200
3		5,800	5,800
4	CONSUMER-FARMER MILK CO-OP	22,500	22,500
5	BEDENS BROOK DEVELOPMENT	3,000	10,000
6	BEDENS BROOK COUNTRY CLUB	5,000	10,000
7	N. J. NEUROPSYCHIATRIC INSTITUTE	OVER CAPACITY	33,000
8	ELEMENTARY SCHOOLS	15,300	15,300
9	HIGH SCHOOL	25,000	25,000
10	SLEEPY HOLLOW ESTATES	45,000	90,000
11	INGERSOLL-RAND	4,500	4,500
12	MUNICIPAL	150,000	300,000

* GALLONS PER DAY

MONTGOMERY TOWNSHIP

SOMERSET COUNTY — NEW JERSEY



MICHAEL S. KACHORSKY
TOWNSHIP ENGINEER
PREPARED BY: ALVIN E. GERSHEN ASSOCIATES/TRENTON, NEW JERSEY
REVISED JANUARY 1971

- LEGEND
- LOTS WITH FINAL APPROVAL
 - LOTS WITH PRELIMINARY APPROVAL
 - 20 SOMERSET COUNTY ROADS

ciation, and the administration of the township board of health and sanitation who inspect and approve septic systems, inspect food establishments, certify health cards, and approve certificates of occupancy.

Fire facilities are provided by Fire Company #1 in Belle Mead and Fire Company #2 in Blawenburg. In addition, supplemental fire facilities are available from neighboring Rocky Hill, Griggstown, Hillsborough, and Hopewell. The New Jersey Neuro-Psychiatric Institute's resident fire company will also provide mutual aid if required. For the current level of development, a radius of three miles from each station is considered adequate. At the time the community is more completely developed, the service radius of each fire company should gradually be reduced to no more than 1.5 miles. Applying the present three-mile radius, areas in the northeast, southeast, northwest, and southwest corners of the township are outside the service area of both fire companies. It is apparent that as the development of the township continues, two additional, fully-equipped fire houses should be anticipated. One location should be east of Route 206, perhaps centrally located on Griggstown Road, in order to provide service to this northeast portion of the township. A second location should be west on Route I-95, perhaps on Grand View Road between Hollow Road and Pin Oak Road. The next fire house should be anticipated by 1985-90 located in the northeast quadrant of the township.

Police headquarters is located in the Municipal Building on Route 206 near Belle Mead. At present, the chief and four men are employed part-time. Evening patrols are regular and daily patrols are supplemented by the state police. The New Jersey Neuro-Psychiatric Institute serves as a dispatcher for calls during the day. As with the fire facilities, the police cooperate with and can be supplemented by police services of adjoining communities. By 1980 the township should anticipate converting its present part-time force to full-time personnel. This recommendation is based on the long-range anticipation that state police service will not be available to the township and that the current township population generates the need for a full-time force equivalent to the personnel now on a part-time basis. Additional population growth can be expected to create the need for approximately 3-5 more full-time officers by 1985-90.

In conjunction with the proposed expansion of police and fire facilities, the township should include first aid and emergency equipment. At present, the township relies upon the rescue squads in Hillsborough, Hopewell, and Rocky Hill.

TRANSPORTATION

The major elements affecting the township's transportation network are the proposed Route I-95, the proposed Route 92 Freeway, the Princeton Airport, existing Routes 206 and 518, and the extensive land areas undeveloped.

At the present time, highway utilization is strongly oriented to county Route 518 and State Highway 206; Route 518

because it is the only east/west highway through the township and Route 206 because of its regional north/south function.

The importance of Route 206 has been emphasized in the New Jersey Department of Transportation's 1968 report entitled, "A Master Plan for Transportation". From its intersection with the proposed Route 92 Freeway at the Montgomery/Princeton boundary extending north to Somerville, Route 206 has a first priority designation for dualization. The need to improve this highway's traffic capacity is emphasized by the rate of growth in its Average Annual Daily Traffic (both directions over a 24 hour period). In 1960 the AADT was 5,948. By 1965 it had increased 14 percent to 6,823. By 1970 it was over 11,000 at the Princeton airport. The 1970 AADT is shown on Plate 8 together with the traffic counts taken by the Somerset County Engineering Department in June, 1971.

Comparing the 1971 traffic volumes on county roads shown on Plate 8 with figures for 1965 indicates traffic on Route 518 (Georgetown and Franklin Turnpike) increased from an average of 2,578 cars per day to 5,616 west of its intersection with Route 206, and 5,856 west of Blawenburg. The traffic volume on Route 518 has more than doubled in the past six years without any impact from Route 95.

The most significant aspects of the proposed Route I-95 and Route 92 Freeway and the dualization of Route 206 is the ultimate ability of these highways to place Montgomery Township closer to the New York, Philadelphia, and Trenton metropolitan areas. As a result, residential, commercial, and industrial expansion will occur creating secondary traffic increases on the existing local roads. The proposed Route 92 Freeway connects Route 206 at the Montgomery/Princeton Township boundary with State Highway 33 at the New Jersey Turnpike Exit 8 in Hightstown. This road will provide direct and convenient access to Montgomery from the Asbury Park area, the New Jersey Turnpike, and State Highways 130 and 1. Route I-95 will provide a direct link to the Philadelphia region as well as Northeast New Jersey.

Many of the township roads function as direct access to individual residences. In recent years, considerable development has taken place. Continued development is expected. The essential problem presented by this growth is one of adapting former rural roads to a greater capacity with appropriate design features to serve local and collector functions. It is recognized that the present rural characteristics of the township are desired to be retained. Many of these roads, however, do not contain the capacity nor design features capable of adequately and safely absorbing the anticipated future traffic volumes. In order to permit the existing local streets to accept increased traffic, the township's long range plan must anticipate cartway widenings, shoulders, increased curve radii, lower crowns, and some improved intersections. In order to preserve the rural character as much as possible, it is also recommended that these road improvements be applied to an essential minimum number of roads in order

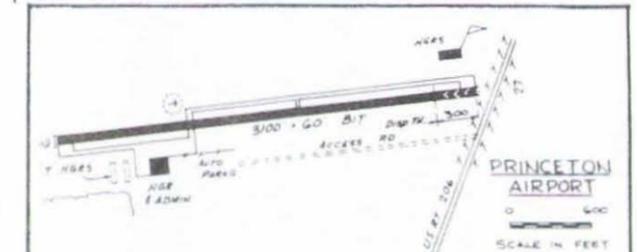
EXISTING HIGHWAY
TRAFFIC VOLUMES,
HIGHWAY FUNCTIONS,
AND
AIRPORT DATA



LEGEND

- RT. 206: 1970 AADT* FROM DEPT. OF TRANSPORTATION
- OTHERS: 1971 COUNTS FROM SOMERSET COUNTY**
- TRAFFIC VOLUME SCALE: 1"=5000 VEHICLES
- STATE HIGHWAYS
- COUNTY HIGHWAYS
- TOWNSHIP ROADS

*Average Annual Daily Traffic, both directions, 1970
 **Average of 24 hr. counts, both directions for one week in June, 1971



AIRPORT DATA and FACILITIES

Elevation: 140'
 Traffic: Standard left-hand pattern
 Runway Type: Bituminous
 Oper. Hrs: Daylight hours, 7 days per week
 Nearest NAVAID: Name, Type, Dist. & Dir. to Aprt. Solberg
 Remarks: Air instruction, charter, air taxi. FBO—Princeton Aviation Corp.
 SOURCE: Airport Directory N.J. Dept. of Transportation

SERVICES:
 Fuel: 80 & 100 octane
 Repairs: Major and minor, aircraft and engine.
 Lights: Prearrangement
 Radio: UNICOM

MONTGOMERY TOWNSHIP

SOMERSET COUNTY — NEW JERSEY

SCALE IN FEET
 MARCH 1965
 MICHAEL S. KACHORSKY
 TOWNSHIP ENGINEER
 PREPARED BY: ALVIN E. GERSHEN ASSOCIATES/TRENTON, NEW JERSEY

LEGEND

- LOTS WITH FINAL APPROVAL
- LOTS WITH PRELIMINARY APPROVAL
- SOMERSET COUNTY ROADS

to preserve as much of the present character as possible while at the same time encouraging increased traffic to gravitate to the improved roads rather than the retained rural roads.

CAPITAL IMPROVEMENTS PROGRAM

The term "capital improvement" denotes a facility or project which is generally permanent, costly, and an infrequent or non-recurring expense. It is an overall term used to refer to improvements such as streets, street lighting, water and sewer improvements, schools, and land acquisitions. Non-recurring projects such as new schools, sewers, and municipal buildings are designed and constructed for long-term use. Other facilities have life expectancies somewhat less, but nevertheless the expenditure is a considerable investment and are often included in capital improvements programs. These would include fire trucks, bulldozers, and, in some cases, road reconstruction programs. Items of municipal expense which are predictably recurring or of a constant maintenance nature should not be incorporated in a capital improvements program. These might be normal maintenance improvements and the replacement of vehicles such as police cars which normally are replaced every two or three years. Such expenses should be incorporated in the annual municipal operating budget.

Most developing communities are able to financially provide only a fraction of their capital needs during any given year. Even the use of municipal and school bonds is often insufficient to satisfy a particular need at any given time. As a result, the question of financing capital needs is usually a consistent task rather than a periodic one.

The purpose of the capital improvements program is to anticipate necessary projects in order to offer the widest latitude to the township in anticipating paying for the project. Financial planning increases the chances for keeping the tax rate more predictable and possibly more stable over a period of years. It also represents a coordinated approach which leads to greater, overall efficiency in undertaking projects. By programming and anticipating capital needs, more time is also made available to investigate and utilize any grant programs for which the township might be eligible.

The planning board should have a role in preparing the annual capital improvements program which can provide basic assistance to the township committee. The planning board is charged with guiding the orderly development of the community. It is therefore logical that the board have a part in the formulation of the capital improvements program.

In order to do this, it is suggested that the planning board create a sub-committee whose job would be to develop a draft program to present to the planning board. The board as a whole would act upon the program and make a recom-

mendation to the township committee. For general guidance, the development of the capital improvements program is outlined below in four stages:

STAGE I

The subcommittee should first compile a list of improvements. This list should be developed in conjunction with the different township departments, the board of education, etc. and should incorporate all projects anticipated in the next six years and as many major projects that can conceivably be anticipated within the next 15 to 20 years.

STAGE II

Cost estimates should be assigned to each project to assist in recommending priorities. The more urgent the need, the more precise the cost estimate should attempt to be. Part of the determination of the feasibility of a project and its priority position would be the various sources of funds. Self liquidating revenue bonds, general obligation bonds, municipal appropriations, and state and federal grants are some of the possible sources. Although the means of financing can be varied or a combination of the above, the end result must be a single, unified program having a net annual cost to the township. Projects may be combined or placed in sequence in order to avoid duplication of efforts or maximize cost savings. In many instances, grants or bonded indebtedness are the only means by which projects are feasible. In conjunction with the accumulation of annual costs of the projects, it is necessary to make projections regarding the township's spending capacity. This requires a projection of capital spending compared with total spending, property value increases, and outstanding municipal and school bonds.

STAGE III

After estimating the funds to be available in future years, the next step is to make a tentative allocation of these funds. Each improvement project should be assigned a priority rank based on cost and urgency. The practical problem of developing a program can be expected to require several drafts to be prepared. Each draft is a refinement of the previous one and attempts to maintain the priority of projects within the practical limitations of the monies expected to be available.

STAGE IV

After a capital improvements program has been completed, the final phase is one of incorporating the program into the municipal operations. This is the all important matter of having the township committee approve the program and integrate the first year's cost into the municipal budget.

A capital improvements program is a continuing function of government. It is necessary to re-examine the needs of the township annually in line with other fiscal considerations. It is recommended that the planning board sub-

PLATE 9

LONG-RANGE CAPITAL IMPROVEMENT NEEDS

<u>PROJECT</u>	<u>1975-80</u>	<u>1980-85</u>	<u>1985-90</u>	<u>1990-95</u>	<u>1995-2000</u>
1. <u>Firehouse (Griggstown Road)</u> 750 gallon pumper 1000 gallon tanker		\$100,000 \$ 55,000 \$ 40,000			
2. <u>Schools</u> Third elementary school @ Central location Expand high school Fourth elementary school (Northeast) Fifth elementary school (Great Road Area)	\$2,000,000	\$3,000,000	unknown	unknown	
3. <u>Sewerage System</u> Stage 6 tertiary Stages 3 and 7 tertiary Stage 1 tertiary Stage 4 tertiary Stage 5 tertiary	\$1,997,000	\$3,508,000	\$2,347,000 \$1,556,000	\$1,511,000	
4. <u>Fire House (Grand View Road)</u> 750 gallon pumper 1000 gallon tanker			\$ 120,000 \$ 60,000 \$ 50,000		
5. <u>Municipal Building Expansion</u> Separate police headquarters Double office space Meeting room		\$32/sq. ft. \$26/sq. ft. \$26/sq. ft.			
6. <u>Drainage Survey of Township</u>	\$50,000				
7. <u>Road reconstruction and widening, right-of-way acquisition, and drainage improvement.</u>	\$70,000/yr.	\$70,000/yr.	\$80,000/yr.	\$90,000/yr	\$90,000/yr.
8. <u>Open Space and Recreation</u> a) <u>Neighborhood rec. (3-5 ac.)</u> Site on Griggstown Road Improvements b) <u>Recreation Improvement at Neuro-Psychiatric Site</u> c) <u>Neighborhood rec. (3-5 ac.)</u> Grand View Road Site Improvements d) <u>Flood plain acquisition other than donations, cluster zoning or PUD</u> e) <u>Rock Brook Project</u>	\$10,000 \$10,000 \$100,000 \$50,000 \$50,000	\$100,000	\$10,000 \$10,000		

committee undertake the initial research in the early summer of each year. Their draft recommendation to the entire planning board should be completed around September. The entire planning board's recommendation should then be made to the township committee before the end of the calendar year in order that the governing body can have the recommendation in time to be incorporated in their budget considerations and in their capital improvements program required to be submitted to the State of New Jersey by May of each year.

The broad picture of Montgomery's financial position related to capital needs is one of an expanding tax base, but the cost of capital improvements will grow at an equal or greater rate. With the addition of each major, new capital improvement, the maintenance and operating expenses of the township also increase and become an annual expense. In short, the next 15-20-25 years will be one of expansion, both for population and public facilities. The combination will result in increasingly higher financial obligations.

Plate 9 represents a list of the major capital improvement items anticipated at this time. This list can serve as the basis for undertaking the annual program and should be refined each year by adding to, deleting from, or altering the estimated time periods.

MASTER PLAN IMPLEMENTATION AND CONTINUING PLANNING

The master plan is a document of agreed upon policies to help guide the physical development of the township. It is an important factor in establishing the zoning, subdivision and official map ordinances, a capital improvements program, and aiding public policy through referrals to the planning board. The master plan essentially assists the planning board in making recommendations. It is not a law to be rigidly followed, although many of its principles may be rigidly adhered to in order to insure implementing a desirable goal. It, therefore, is basic that as the objectives and policies change, so should the master plan and the tools for its implementation.

A master plan is a compilation of facts and analyses of past trends, present conditions and prospects for the future. It is a framework of existing data, legitimate assumptions, and accepted community values and standards organized into a series of goals against which future decisions are to be measured.

It is essential that the plan be constantly reviewed and modified. While a master plan is most valuable when it is used, it must be recognized that as development takes place, new forces are brought into play, new engineering techniques and technological advances may have been developed, and other methods of treating local problems heretofore unknown may have been created through new zoning techniques, new laws, and improved administrative techniques. When combined, all these create the need for a re-examination of the original goals and objectives established in the master plan.

For these reasons, the plan cannot be static, but must grow with the township. As ideas are explored and established proposals re-examined, more extensive and final decisions will have to be made which may require amendments and alternate proposals to the original plan. At the same time, the planning board must be the special champion of long-range advantages instead of short term expediencies. A planning board should be devoted to the soundest community needs and insist upon standards that will not readily be judged inadequate in the years ahead.

Many of the planning board's undertakings should be joint projects coordinated with other municipal agencies, other municipalities, the county, and appropriate regional groups. The final usefulness of a master plan and the effectiveness of the planning board's actions will depend upon the relationship established between the planning board and these other agencies.

Because the master plan is a guide, it is adopted only by the planning board. The tools to implement the master plan, however, are the responsibility of the governing body. These include the adoption of a capital improvements program, a subdivision ordinance, a zoning ordinance, and an official map. While elements of the master plan should be incorporated in each of these documents as adopted by the governing body after recommendations from the planning board in order to coordinate the community's total development, their adoption is the responsibility of the elected officials, not appointed boards.

The elements of the adopted plan are enforceable in several ways: (1) if a parcel of land is recommended on the plan for a school site, park or playground and the owner requests a subdivision, the subdivision may receive final approval, but the area designated for the above facilities may be reserved for that facility by the township for up to a one-year period after the final approval. During this period of one year, the township may purchase the land for the use proposed on the master plan; (2) if any other public agency proposes a project involving the expenditure of public money, it must be commented upon by the planning board. In reviewing a proposal that does not conform with the master plan, the planning board may consider the proposal more valid than its plan and amend the master plan. On the other hand, it may disapprove the proposal. If a proposal is disapproved by the planning board, the agency submitting the proposal may either amend the proposal to conform to the planning board's objections or it may override the planning board's disapproval by a majority vote. In overriding the planning board, the agency's actions must be referred to the governing body where a final determination is made by a majority vote.

THE MASTER PLAN

In developing a plan for Montgomery, the existing and proposed streets as well as the retention of major drainage rights-of-way were used to establish suggested boundaries for neighborhoods. These are shown on Plate 10. They evolve as a broad guideline for future subdivisions and site plans to suggest how self-contained street systems, con-

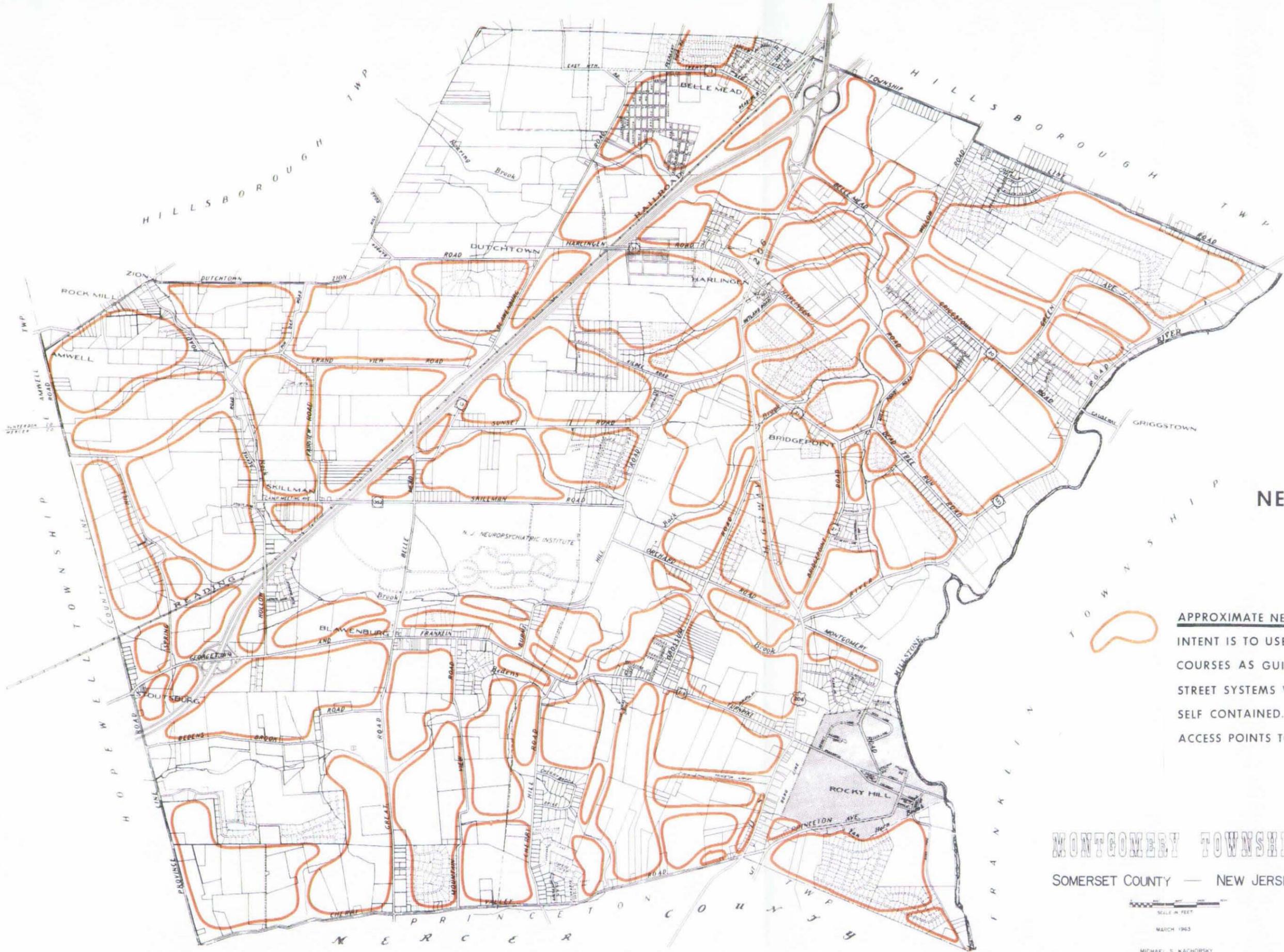


Plate 10
NEIGHBORHOODS
 NOVEMBER, 1971

LEGEND

APPROXIMATE NEIGHBORHOODS
 INTENT IS TO USE STREETS AND MAJOR DRAINAGE COURSES AS GUIDES TO ESTABLISH PERIMETERS. STREET SYSTEMS WITHIN NEIGHBORHOODS SHOULD BE SELF CONTAINED. THERE SHOULD BE CONTROLLED ACCESS POINTS TO ARTERIAL AND COLLECTOR STREETS.

MONTGOMERY TOWNSHIP
 SOMERSET COUNTY — NEW JERSEY



MICHAEL S. KACHORSKY
 TOWNSHIP ENGINEER

PREPARED BY / ALVIN E. GERSHEN ASSOCIATES / TRENTON, NEW JERSEY

- LEGEND
- LOTS WITH FINAL APPROVAL
 - LOTS WITH PRELIMINARY APPROVAL
 - SOMERSET COUNTY ROADS



trolled access to collector and arterial streets, maintaining major drainage rights-of-way, and constructing a minimum number of major streets can be used to logically extend existing developments as well as anticipate future growth. The plan assumes that Route I-95 will be constructed and also that the soil conditions in Montgomery are uniquely troublesome with a combination of high erosion potential and limited ability to handle septic effluent.

The combined elements of the Master Plan incorporate the concept of encouraging multiple functions of each primary land use goal. For example, schools should be centers of recreation and community meetings as well as educational institutions. Wooded areas should be preserved for soil erosion control, aesthetics, visual breaks and buffers between neighborhoods and changes in land uses. Flood plain preservations can also provide recreation areas, water recharge, flood and silt control programs and utility rights-of-way. Site planning on each building proposal can obtain maximum utilization of the tract within the bounds of safety and good taste by selecting parking areas, landscaping plans, selective tree clearance, locating buildings below the horizon or behind foliage, and using greater setbacks to reduce the visual impact of larger buildings. Finally, residential development proposals should provide an open space theme, adequate road standards with no more mileage than necessary, controlled highway access, flood plain preservation, housing variety and maximum design features to enhance the natural terrain.

Land Use and Housing Plan

There are several existing conditions in Montgomery which dictate certain practical objectives. These would include the Route I-95 intersections, the rock and steep terrain west of Route I-95, the fault line west of Route I-95 at the base of the ridge, the airport, the availability of sewage treatment in the southeast corner, the lack of sewage treatment elsewhere in the township, and the proposed construction of Route 92 into the southeast corner of the township.

These conditions plus the township's acknowledged location in the broader New York-Philadelphia Regions require the township to examine the conclusion that future growth will continue to accelerate and that the township, by the year 2000, can expect to be reasonably well-developed. The crucial problem becomes one of directing development. It cannot be stopped. Growth will be forced on the township. The township's real responsibility lies in requiring future growth to adhere to sound, basic principles that will preserve the necessary open space, provide sewage treatment, preserve flood plains, expand the potable water system, designate areas for schools and other public uses, provide employment opportunities, and guide housing development responsive to the expected demand.

The Land Use and Housing Plan shown on Plate 11 reflects the general pattern of land use toward which the township should guide its growth. The location of the office and industrial-type uses were selected on a basis of available transportation facilities, relationship to population concen-

trations, practical considerations of available sewage treatment and the current land use pattern. In the case of the Research Development District, the intent is to acknowledge the existence of the airport, accessibility of sewage treatment, the improved accessibility of the area due to the proposed Route 92 Freeway, proximity to Princeton and Rocky Hill populations and the apartment/townhouse provisions of this plan, the area's frontage on Routes 206 and 518, and a tract of sufficient size to enable adequate site planning so that interaction with adjacent residential areas can be minimized and strip development of the non-residential uses along the streets can be prevented.

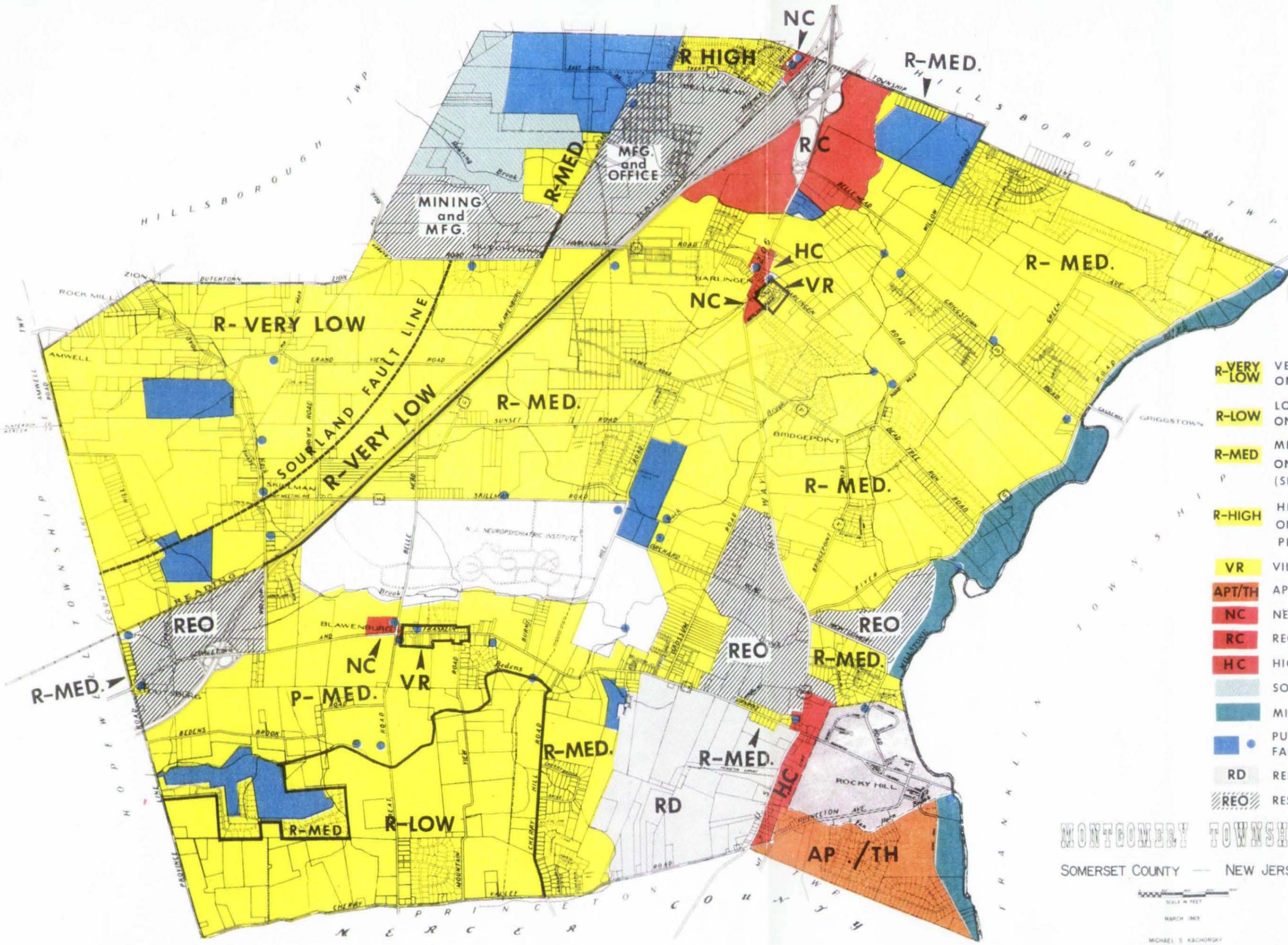
The plan also shows two other general areas for research, engineering and office uses. One is located along Route 206 north of the airport area. The other is on three corners of the intersection of Routes I-95 and 518. The area adjacent to Route 206 offers good highway access, is near population concentrations and is presently undeveloped affording greater flexibility for site design. The eastern portion of this area is already occupied by the Ingersoll-Rand Corporation.

The other Research, Engineering and Office District at Routes I-95 and 518 is situated on land which has become a series of relatively small parcels split into awkward configurations by Route I-95 as it curves around existing local and county streets and the railroad. The improved access to metropolitan areas provided by Route I-95, the concentration of traffic to this area, parcels adjacent to the railroad, and the odd and somewhat triangularly shaped parcels of small size are the primary reasons for encouraging this non-residential use in this area. This district, however, is purposely kept small in order to discourage the expansion of non-residential uses in this portion of the township. It is felt that the southeast quadrant of the intersection provides sufficient land away from Routes I-95 and 518 that design considerations can minimize the impact of Route I-95 on any new homes constructed.

A large industrial area is shown in the northern portion of the township southwest of Belle Mead. The primary advantage of this location is the intersection of Routes I-95 and 206. This site also has access to the Reading Railroad and is a large, relatively flat, undeveloped area at the present time. It is anticipated that this site provides excellent highway access to population concentrations from within as well as outside the township. There are also major industrial and residential proposals and developments in Hillsborough near this site. In addition, Roaring Brook provides the opportunity to construct a trunk sewer to serve the industry. This will aid in advancing the feasibility of completing regional sewers for the northern and northeastern residential portions of the township. The intended purpose of this industrial district is to encourage the concentration of industrial uses and recognize the existence of the present mining operation. The grouping of industry into one area will enable the development of unique transportation opportunities necessary for their operations, as well as water and sewer facilities at sufficient capacities, and internal

Plate 11 LAND USE AND HOUSING PLAN

NOVEMBER, 1971



- R-VERY LOW** VERY LOW DENSITY RESIDENTIAL
ONE DWELLING UNIT PER THREE ACRES
- R-LOW** LOW DENSITY RESIDENTIAL
ONE DWELLING UNIT PER TWO ACRES
- R-MED** MEDIUM DENSITY RESIDENTIAL
ONE DWELLING UNIT PER ONE ACRE
(SEE TEXT)
- R-HIGH** HIGHER DENSITY RESIDENTIAL
ONE DWELLING UNIT
PER 1/2 ACRE
- VR** VILLAGE RESIDENTIAL
- APT/TH** APARTMENT AND TOWNHOUSE 8-10/ac.
- NC** NEIGHBORHOOD COMMERCIAL
- RC** REGIONAL COMMERCIAL AND OFFICE
- HC** HIGHWAY COMMERCIAL
- SOURLAND MOUNTAIN PARK**
- MILLSTONE RIVER STATE PARK**
- PUBLIC AND QUASI-PUBLIC PER FACILITIES PLAN**
- RD** RESEARCH DEVELOPMENT
- REO** RESEARCH ENGINEERING AND OFFICES

MONTGOMERY TOWNSHIP

SOMERSET COUNTY — NEW JERSEY



MICHAEL S. KACHORSKY
TOWNSHIP ENGINEER

PREPARED BY / ALVIN E. GERSHEN ASSOCIATES / TRENTON, NEW JERSEY

- LEGEND
- LOTS WITH FINAL APPROVAL
 - LOTS WITH PRELIMINARY APPROVAL
 - SOMERSET COUNTY ROAD

road networks catering to the concentration of automobiles and tractor trailers. It is hoped that the entire tract can be developed and designed as one parcel, regardless of the use distribution. Under such a development scheme, the plan anticipates the middle portion of this area, east of the Blawenburg/Belle Mead Road, could be designed for residential properties in a manner compatible with the industrial uses. Residential uses are encouraged to be in this middle portion rather than the northern area in order to remove them from the concentration of traffic entering the industrial area from the Route I-95 interchange as well as placing the residences near the proposed Sourland Mountain County Park and the existing Lubas Field recreation area. Encouraging residential uses in this district is also intended to recognize the need for employee housing, the expected availability of sewage treatment to be constructed for the industry and, therefore, available to the residences, and the desire to keep such housing close to the source of work to reduce travel.

The plan anticipates three types of commercial developments and illustrates two of them. One type, designated "RC" and "HC" on Plate 11, is the highway commercial uses of a regional nature and the other, designated "NC", is a neighborhood convenience type. The two "HC" highway commercial areas both are shown adjacent to Route 206, one near Rocky Hill and the other in Harlingen where current commercial patterns are already established. In conjunction with the recommended realignment of Route 206 north of Cherry Valley Road, it is intended that the "HC" area be extended west to the new Route 206 right-of-way once construction commences.

The "RC" highway commercial area is concentrated around the eastern portion of the Route I-95/206 interchange in Belle Mead. This district is significantly large and a major portion is intended to serve for a shopping center. The various quadrants are intended to be designed as single tracts in the concept of modern shopping centers, office complexes and highway service areas. Piecemeal, strip commercial patterns along existing highway frontages are specifically intended to be prohibited.

The uses intended are such things as a retail shopping center with possible service station, motel, restaurant, and office buildings, as well. By placing these regional facilities in this location, the large land area together with the proper design of the proposed uses will serve to shield the residential areas from the highway activity attracted to this interchange. The boundaries specifically follow natural drainage rights-of-way in order that these rights-of-way be preserved and either left in their natural state or improved as buffer areas if their current topographic and foliage conditions do not provide an adequate buffer between the proposed commercial uses and the adjacent residences.

The neighborhood commercial areas indicated are in Blawenburg, Harlingen and Belle Mead. These three dis-

tricts recognize the existing convenience centers now in these areas and make provisions for a slight expansion of that pattern. Again, the intent is to specifically prohibit strip commercial patterns along the arterial highways.

Additional commercial facilities, not illustrated on Plate 11, are foreseen in the township as residential development continues to expand. Particular importance must be given to the convenience centers where daily demands can be met by supermarkets, banking services, cleaners and barbers, drug stores and professional offices such as doctors and dentists. It is contemplated that a limited number of these centers will be designed within future subdivisions with modern parking, landscaping, lighting, architectural design and tasteful signs compatibly erected. They should be compact, well designed, unimposing to the immediate area, well landscaped, and efficiently coordinated with collector or primary local streets. Particularly, should large residential developments be proposed, such commercial uses could be included as part of the development.

The residential pattern includes five general densities. The purpose is two-fold: (1) to recognize the limitations of the existing sewage treatment plant as well as the serious soil limitations in the township; and (2) to maintain reasonable predictability of population growth in order to be able to financially provide the expanded services that must accompany growth.

Both the "APT/TH" and "VR" areas indicated on Plate 11 provide for relatively high residential densities. The southeastern corner has been devoted to high density uses in which townhouses and garden apartments are specifically encouraged. This area is convenient to the municipal sewage treatment facility and would be required to tie into that facility. In addition, the proposed Route 92 will provide direct access to this area giving more direct access to Route 1 and the New Jersey Turnpike to the east thereby expanding the employment opportunities served from this location. This high density area is also adjacent to the township's proposed research development district around the airport as well as other areas for employment opportunities. Finally, by concentrating the dwelling units in townhouse and apartment type quarters, it is anticipated that the structures be removed from Route 92 as much as possible and that particular care will be taken in site planning to save the heavily treed characteristic of this neighborhood. The factor of distance and densely wooded areas will considerably reduce the noise which can be expected to emanate from Route 92. The topographic characteristics of this neighborhood also lend the possibility that the apartments could be located in one or more multi-story structures without dominating the horizon. Such structures would further minimize the amount of building coverage and maximize the retention of the wooded areas. Any apartment and townhouse proposal is expected to incorporate recreational facilities on a portion of the open space area and develop the tract in a manner that will coordinate its total street system and open spaces with this entire section of the township.

The Land Use and Housing Plan also designates the Villages of Harlingen and Blawenburg as areas with relatively high densities in recognition of their current development pattern of smaller lots. These two villages are treated as unique, historic and architectural areas within the township and should be preserved. They are viewed as a collection of individual buildings whose total character reflects the nineteenth century, small village way of life.

The second residential category, designated "R-High" on the Land Use and Housing Plan, provides for continuing the residential subdivisions of one-half acre lots previously established in the Belle Mead area of the township north of Trent Avenue. The area, near the proposed Route I-95/Route 206 interchange, is in close proximity to large commercial, office and manufacturing areas, thus locating the residents near potential places of employment.

The third residential category, "R-Medium", is intended as a medium density range in which the primary housing type is expected to be the single-family, detached dwelling unit. Because of the current lack of regional sewers, the immediate development pattern is expected to be homes on approximately one acre lots. As development occurs and sewers are eventually constructed, more concentrated development will be feasible. Accordingly, provisions for cluster development and planned unit development are also contemplated. It is intended that any cluster development or planned unit development be on tracts of sufficient size to enable proper open space and aesthetic design (at least 25 acres for cluster and 100 acres for planned unit development). In order to preserve open space, it is contemplated that any planned unit development allow some townhouses and apartments along with a required minimum percentage of detached dwelling units. Any cluster or planned unit development must connect to public water and sewer facilities. As discussed above, any large development could also include provisions for some commercial services and, depending on any particular development size, school and recreational facilities as well. The portion of this medium density area generally west of Route 206 and Burnt Hill Road is primarily anticipated as development through lots for detached dwellings although it is anticipated that development through cluster zoning would provide an opportunity for homes to be kept significant distances away from Route I-95 so that combinations of landscaping, topographic features, and maximum distance will be coordinated to buffer the noise of the traffic.

The plan proposes a low density residential area, "R-Low", in the southwest corner of the township where the basic pattern is one of large lots and rural open space. The character of this area is intended to be preserved and the proposed density is one dwelling unit per two acres. It is anticipated that this density is needed in order to support septic systems and that even lots this size with septic systems may have difficulty obtaining building permits because of soil and drainage conditions. Provisions for cluster development serviced by public water and sewer facilities are also contemplated for this area, though at a lower

net density than envisioned for the medium density category.

The final residential density is a very low density area, "R-Very Low", equaling about one dwelling unit per three acres. This area is located in the topographically rugged northwest section of the township. It is contemplated that sewers will be a long time arriving in this area. Likewise, the area reflects large lots along the Sourland Fault Line. Fewer homes on larger lots are the intended goal for this band in order to protect the Sourland aquifer and also to prevent numerous homes close to the right-of-way of Route I-95. Therefore, the practical unavailability of sewers, preservation of the Sourland Fault Line aquifer, bedrock soils, rugged topography, remoteness from arterial road access, corresponding low-density areas in adjoining communities, and compatibility with the proposed county master plan are reasons for this lower density area. Because of the proposed low density, certain requirements for physical improvements to the lots in this area can be safely omitted provided that future subdivision of these lots into smaller lots is prohibited.

The housing aspects of the four residential densities incorporate a combination of a goal as well as the realization of the practical limitations imposed on the township. Route I-95 is not yet under construction thereby extending the time when extensive development will be realized. In the meantime, the building slump of the latter 1960's and early 1970's will pass and subdivisions of 10-15-20 homes each are expected to reappear and continue as the basic development pattern of the immediate future. On the other hand, the township recognizes that the current pattern of families attracted to Montgomery is basically one of families whose income levels have enabled them to undertake the additional financial burdens incumbent upon residents in growing suburban areas. The cost of new schools, sewers, and highway improvements has saddled the township with extensive financial obligations with the only realistic prospect being more obligations for more facilities. The proposals for Routes I-95 and 92 have already placed the township in a more strategic position than the current generalization of being on the fringe of the New York Metropolitan Area. These two highways will make the township part of the urban growth. The full impact of the growth pressures is not expected to be felt for about 10-15 years. This will correspond with the time when many residents now in their peak earning years with growing families will have reached or be nearing retirement age. Their housing needs and income status will change. This time period is also expected to correspond with the surge in industrial development which will bring with it the need for housing to accommodate more employees. Recognizing this, the plan allows for some high density development in the future in areas having sewage treatment facilities. It also includes the two low density areas to continue the character of large lot residential development in the two limited areas on the west side of the township. Today, however, the plan provides for continued, single lot subdivisions since sewers are still financially infeasible and yet there is a continuing demand for new homes. The areas along and to the north

and east of Route 206 are expected to be the first areas to receive sustained growth pressures since it is convenient to all three major highways and closer to the proposed regional sewage treatment facility. As a result, the plan anticipates townhouse and apartment developments will occur once the sewers are available thus providing some housing variety to meet the needs of various age and economic brackets. All developments, regardless of housing style or density, are expected to incorporate designs to preserve trees and flood plains, encourage open space, and incorporate proper landscaping to reduce stream siltation. This is encouraged by the recommendation of cluster and planned unit development concepts. The low and very low density areas are areas of more rugged topography where the low densities are intended to retain the open space, large lot characteristics, notwithstanding the additional growth pressures to be experienced by the township.

The public uses indicated on the plan are located to conform with many existing facilities. The proposed expansion of the municipal building, recreation areas, flood plains, schools, and other uses are outlined in detail in the Facilities and Open Space Plans.

Circulation Plan

In conjunction with the Land Use and Housing Plan, the Circulation Plan shown on Plate 12 relates the highway needs to land uses. Once again, of prime consideration is the location of Route I-95 with its two interchanges as well as the proposed Route 92 and its intersection with Route 206 in the southeast corner of the township. It is a strong intent of this plan that the Route I-95/Route 206/Belle Mead-Griggstown Road interchange provides complete turning movements for traffic going in any direction.

The plan's basic concept is to utilize, as much as possible, the current streets in the township. This was done for two reasons: (1) to increase the probability of having the Circulation Plan implemented due to the practicality of improving existing roads rather than building new ones; and (2) to utilize the existing roads as a means of preserving the rural character while experiencing continued growth. The plan also incorporates development in conjunction with and around the retention of the airport.

The major improvements are limited to five. The first is the connection of Route 92 with Route 206 near Cherry Valley Road. Part of this complex includes aligning Route 92 along the Princeton Township boundary to eliminate the possibility of a narrow, difficult-to-service strip of township land between the highway and the Princeton Township line; relocating Route 206 west of its present alignment in order to straighten the alignment and widen Route 206 to four lanes between the Route 92 intersection and Route 518; provide a direct, eastbound entrance to Route 92 from Cherry Valley Road; and simplify and improve the current intersection of Cherry Valley Road and Route 206.

The second major improvement is a road running generally north-south between Cherry Valley Road and Route 518 through the research/development district. This road of necessity would have to be west of the airport runway. As shown on the plan, it is proposed to intersect 518 opposite Opposum Road. As an alternate, the road could be aligned further east in order to allow it to be extended north through the research, engineering and office district to connect with Orchard Road and Route 206. The main purpose of this new road is to provide an interior highway specifically oriented to the non-residential uses proposed in these districts. It is intended to offer the opportunity to have the industrial traffic get directly to the industries and offices without utilizing Route 206 in the vicinity of the highway commercial district. In this manner, the shopper is not confronted with a concentration of truck and vehicular traffic oriented to the industries. Also, the intersection of Route 206 with Route 518 will continue to be a major intersection. By providing this alternate road, the rate of traffic increase at the Route 206 and 518 intersection would be slowed.

A third major highway proposal is the Blawenburg bypass. The bypass is considered essential to preserve the character of the village. The intersection of Routes I-95/518 will undoubtedly increase traffic flow on Route 518. Continued growth of the township even without Route I-95 will continue to create additional traffic on Route 518. The recent traffic counts have already shown this trend is under way. Constant traffic increases with the relentless pounding of traffic through this colonial village will create an untenable situation where Route 518 will ultimately need widening. The widening within the village would place the traffic physically closer to the homes and small stores than even exists today and would accelerate their deterioration. A northern bypass is recommended for the following reasons: (1) traffic from Route I-95 going north to the industrial complex will be able to turn left on the Belle Mead/Blawenburg Road and not pass through the village; (2) a northern bypass is more easily accomplished since the land is essentially undeveloped (a southern alignment would require passage through existing developed lots); and (3) the topographic features on the north side, while requiring attention, do not appear to be prohibitive. It is anticipated that access to the bypass from properties abutting its south side be prohibited. This will reduce the number of access points to the bypass and permit traffic to flow more freely. The properties abutting the south side could be served from the existing Route 518 or the intersecting roads of Belle Mead/Blawenburg or Burnt Hill Roads. As can be seen, the bypass is recommended to continue past Burnt Hill Road and join Route 518 again near Bedens Brook. This would require the construction of a new bridge across Bedens Brook, but would also permit the straightening of Route 518 where a reverse curve now exists.

The fourth and fifth road improvements are in the northeast portion. One proposal is to connect Burnt Hill Road past Harlingen Road to Willow Road. This proposal will provide more direct alignment from the northeast quadrant to the high school and existing elementary schools as well



Plate 12
CIRCULATION PLAN
 NOVEMBER, 1971

LEGEND

EXISTING	PROPOSED	RIGHT-OF-WAY	CARTWAY
NONE	NONE	UNKNOWN	UNKNOWN
—	—	80'	64'
—	—	66'	54'
—	—	56'	38'
—	—	50'	34'

MONTGOMERY TOWNSHIP
 SOMERSET COUNTY — NEW JERSEY

SCALE IN FEET
 MARCH 1965



LEGEND
 LOTS WITH FINAL APPROVAL
 LOTS WITH PRELIMINARY APPROVAL

MICHAEL S. KACOROSKY
 TOWNSHIP ENGINEER

PREPARED BY / ALVIN E. GERSHEN ASSOCIATES / TENTON, NEW JERSEY

as a more convenient assemblage of road functions. The other is part of a regional highway proposal to construct a new bridge across the Millstone River and provide better east-west access between Route 206 in Montgomery Township and Route 1 in South Brunswick Township. This proposal will also serve to alleviate traffic flow desiring access to Route 95 (compared to using several existing local streets with indirect routes) as well as improved access to the commercial and office area proposed at the Route 95/Route 206 intersection.

In general, while the plan does not specify particular areas for realignment improvements, there are many areas where the present rambling alignment of township roads conform to the current rustic and quaint rural atmosphere. Many of these should be preserved. However, the arterial and collector roads designated on the Circulation Plan are those to which the voluminous and faster traffic should be directed. These are the roads toward which the traffic is expected to gravitate regardless of their designation. Recognizing the increased burden these roads will be called upon to assume necessitates periodic reviews of the alignments, crowns, rights-of-way, and shoulders. These major roads are kept to a minimum in order to encourage fewer roads to be built to maximum specifications and provide a balance of good north/south and east/west traffic flow within the township. Where sudden curves, narrow rights-of-way, lack of shoulders, and poor visibility exist, the township should have a program of improvement so these conditions are removed as traffic volumes increase.

A major feature in the Circulation Plan is the intent that all arterial and collector streets have access to them controlled as well as encourage the buffering of adjacent uses from the streets. These streets will be the ones carrying the bulk of traffic within and through the township. Reducing their impact by controlling access and providing buffers will not only increase their safety, but will assist in preserving the rural, aesthetic, open, and natural features which the township is intent on preserving as part of the community's goal. Where new streets or street widening programs parallel heavily wooded areas, every effort should be exercised to retain the existing natural features for visual pleasure as well as the practical value of buffering against noise and reducing soil erosion potential. In other instances, the topography might provide a natural ridge between the road and the proposed development. Such natural contours should be retained in order to more completely separate the desired, residential neighborhoods from the more active and noisy collector and arterial streets. In some areas, man-made berms might be constructed to provide the same function. Where no natural foliage or contours exist, a planting and landscaping scheme should be incorporated in the subdivision approval in order that the final development will include the satisfactory buffer between the streets and the residential lots. These buffer strips are also easily adaptable to the principle of limited access along the arterial and collector streets through such concepts as parallel service roads, reverse frontage, and intersecting side streets where the driveways from each lot would enter the side streets.

As part of the eventual development of the township, street names and house numbering designations should be planned in advance. Streets with similar names, the same names, or even names pronounced phonetically the same as existing roads should be prohibited. This not only provides a general convenience, but can eliminate serious crises by being able to properly identify the location of a fire or some other emergency need.

Open Space, Recreation, Conservation, and Historic Plan

This plan has been separated from the Facilities and Land Use and Housing Plans in order to emphasize the importance placed upon open space. The plan recognizes open space for its aesthetic, recreational and safety values while also including the preservation of those areas and landmarks which reflect the township's history and heritage.

Plate 13 has been developed to show in greater detail the interrelationship of active play areas, wooded tracts, schools, and flood plains. Where wooded areas exist adjacent to streets, their preservation should be incorporated in the highway design. When developments are proposed, the street system should take maximum advantage of existing trees in locating buildings on individual lots as well as in locating the streets themselves (i.e., a street next to trees is more desirable than going through them and destroying the trees).

Plate 13 also reflects the drainage rights-of-way considered most important for preserving flood plains. Their preservation is intended for several purposes: to anticipate increased surface water runoff due to the construction of more roads and roofs; to create greenways serving as neighborhood dividers and visual breaks to encourage the continuation of the rural atmosphere; to create rambling open space, portions of which can also be developed for active recreational uses to serve the expected population growth; to preserve natural drainage courses where sanitary sewer collection systems can be located; and to create areas where small dams may be constructed in the future to create small lakes and reservoirs serving as sources of water for fire fighting purposes as well as flood control, recreation, water recharge of underground aquifers, and increased aesthetics. In particular, the Millstone River flood plain is contemplated for a state park along the entire eastern border of the township east of River Road in the northern and southern portions of the township and east of the ridge immediately north of Rocky Hill. The use of the flood plain in the Mill Pond area for picnicking, canoeing, fishing, and similar recreational uses is recommended. Also, an area is included east of Rock Brook off Hollow Road where, in addition to the flood plain itself, an area for sledding, skiing, or passive recreation is possible. The site selected is essentially wooded up to the ridge line. As can be seen, the two existing elementary schools, the high school, and the proposed elementary school are on both sides of Back Brook where the flood plain can be used as part of the educational and recreational programs of the schools. Finally, a recommended elementary school and recreation area are located along the north side of the Bedens Brook flood plain adjacent to Great Road.

Included in Plate 13 are the two golf courses, the Pine Brae club, the proposed Sourland Mountain park area, and the two tracts used by the New Jersey Beagle Club and the Trenton Christian Camp. These areas, while not directly within the jurisdiction of the township, nevertheless provide areas of open space, the aesthetic value of which is part of the community.

The open space aspects of the plan also incorporate protecting the Sourland Fault Line. This geologic formation is considered a unique regional aquifer which should not be endangered. Its protection is enhanced by the existence of rugged topography and rocky soils. This area should be left in its natural state as much as possible and the removal of foliage should be prohibited.

Because of the township's rural history and active farming, agricultural pursuits should be encouraged both as a means of employment as well as a tax paying form of open space. Retaining active farms on the open spaces generated by cluster developments or planned unit developments should be encouraged. Soils which are the most productive should be the areas where open space is maintained rather than the first to be developed. Continually cultivating these preserved open spaces or the large yard areas of modern industries not only preserves the rural character and keeps a form of aesthetic open space, but it keeps the soils agriculturally active and provides lands where incomes and jobs can be generated rather than lands requiring maintenance fees and taxes with no income.

Facilities Plan

Plate 13 was prepared in conjunction with Plate 14, Facilities Plan, where multiple uses of public land are suggested. In short, school property should continue to provide active recreational facilities for the township as a whole, flood plains should serve as recreational uses and utility rights-of-way, and the two additional fire houses proposed are suggested to be within the tracts proposed for other public uses.

Plate 14, in addition to the features of Plate 13, proposes another elementary school within the current central complex plus two elementary schools outside this complex. One site is proposed off Griggstown Road in conjunction with active recreational facilities and a new fire company. The other is proposed along Great Road to serve expected population growth in this southern and southwestern portion of the township. Both elementary schools should anticipate minimum parcels of 30 acres. It is currently anticipated that the next elementary school needed (the third in the township) will be around 1975-80 and can possibly be added within the present school complex between Back Brook and the high school. Depending on continued growth, the fourth elementary school can be anticipated around 1990. Since initial growth is expected in the eastern portion of Montgomery, the site around Griggstown Road is given priority for the township's fourth elementary school. The fifth elementary school recommended in the vicinity of Great Road has no foreseeable time period attached to it. It is conceivable

that one or more major developments may take place which may generate the need for a school for that project alone. In such an instance, locating the school within the development should be given serious consideration.

The Facilities Plan also recommends two new fire companies. The first is contemplated around 1985 and is also recommended at the Griggstown Road site. The Griggstown Road site has been selected for the fire company and elementary school facilities in that it is centrally located in the north-east portion of the township east of Route 206. Griggstown Road also provides a good east/west route toward River Road and Route 206 and also is convenient to Green Avenue and Willow Road for access to the north. Access south is provided by Mill Pond Road.

The second new fire company is suggested west of Route I-95. A location on Grandview Road in conjunction with the recommended neighborhood recreational facility would provide dual utilization of the property and is situated near the junction of three roads giving reasonably quick access, in all directions, to this north-west portion of the township. A fire company fully equipped in this location is not anticipated before 1990-95.

The plan also calls for the expansion of the municipal building and its facilities by 1980-85. It is anticipated that the police facilities will need expansion due to increased full-time personnel. Police facilities should be separate from the normal administrative and public functions of the municipal complex. The amount of office space currently provided should be anticipated to be doubled and a separate public meeting room contemplated.

The major consideration in the Facilities Plan is the ultimate construction of a regional sewer system incorporating Montgomery and surrounding municipalities. As indicated earlier, the construction of the municipal treatment plant near Rocky Hill along the Millstone River is the implementation of Stage Two of the township's "Waste Water Feasibility Study" prepared in 1965. This township study proposed a series of gravity flow trunk sewers in stages that will permit ultimate connection into the regional system. Also, it is anticipated that continued growth in the township will be concentrated in the township's eastern half, partly because of the area's convenient location to regional sewage treatment facilities and partly because of regional highway access. Notwithstanding the growth pressures created by present expansion, the New Jersey Neuro-Psychiatric Institute's current sewage treatment facility is operating over its capacity. The improvement of this facility (Stage Six of the feasibility study) should be given priority in order to remove the pollution threat to Rock Brook and Bedens Brook. This improvement should be anticipated by 1975. By 1980, it is anticipated that the Rocky Hill area and northeast portions of the township (Stages Three and Seven of the feasibility study) will require sewerage. By 1985, and conceivably earlier, the develop-

- Existing facilities (see Facilities Plan).
- Proposed facilities (see Facilities Plan).

- Historic/Architectural Districts where the land use relationships, structural appearance, and small village way of life is to be preserved.
- Flood plains to be preserved, the boundaries of which shall generally be those outlined on the Soil Conservation Service maps and shall specifically be determined by topographic data provided on subdivision or site plan applications.
- Sourland Fault Line Conservation Area about 500 feet wide on either side wherein construction shall be minimal in order to protect the aquifer.
- Millstone River State Park
- T Township Property
- Sourland Mountain Park
- "Private open space uses"

No.	Acreage	
1		Lubas field should be retained and improved to a greater degree to allow for two baseball fields, football, tennis, and similar teenage and adult activities. In addition, a portion should be improved with facilities for children such as swings, slides, climbing devices, and see-saws. Off street parking and rest rooms should be provided.
2	30	Proposed playground and playfield for township use. Football, baseball, soccer, volleyball, etc. Design compatibly with fire house.
3	84	Hollow Road/Rock Brook area to provide an area adjacent to the flood plain in more rugged topographic section of the township for hiking, sledding, possible skiing, and passive recreation.
4	15	Mill Pond area along the flood plain to provide more passive recreation purposes such as picnicing, canoeing and fishing.
5	30	Tennis and similar teenage and adult activities as scheduled by the Recreation Committee. In addition, a portion should be improved with facilities for children such as swings, slides, climbing devices and see-saws. Off-street parking and rest rooms should be included. Should provide for a fire company and also anticipate development in conjunction with an elementary school.

6		Existing High School area to be prepared and retained for active recreational use by the township as a whole in conjunction with, but outside the normal school activities. School building to be expanded on the site.
7		Proposed new elementary school site and recreation area. Recreation area proposed for use outside normal school activities.
8	50	Proposed playground and playfield to be utilized by state institution and township residents. Included will be ball fields, swimming pools, tennis courts, and other active recreation facilities for both teenagers and adults as scheduled by the Recreation Committee. Off-street parking and rest rooms should be included.
9		Existing elementary school site and recreation area to continue for school use with playground facilities available outside normal school activities.
10		Existing elementary school site and recreation area to continue for school use with playground facilities available outside normal school activities.
11	7	Schuss Woods for open space, woods and flood plain preservation.
12	5	Playground area with active recreational facilities for children.
13	30	Proposed elementary school with playground and playfield for township use. Football, baseball, soccer, volleyball, tennis and similar teenage and adult activities as scheduled by the Recreation Committee. In addition, a portion should be improved with facilities for children such as swings, slides, climbing devices, and see-saws. Off-street parking and rest rooms should be included.
14		Stone arch bridges which have both historic and aesthetic value to the township

NOTE: Controlled street access, plantings, buffer areas, and use of natural contours are to be used along all arterial and collector highways as a means of minimizing the future impact of traffic on adjacent properties and to maintain or enhance the natural beauty of the area. Areas where soil erosion potential is high, plantings and other soil conservation techniques shall be employed to prevent erosion and siltation in streams.

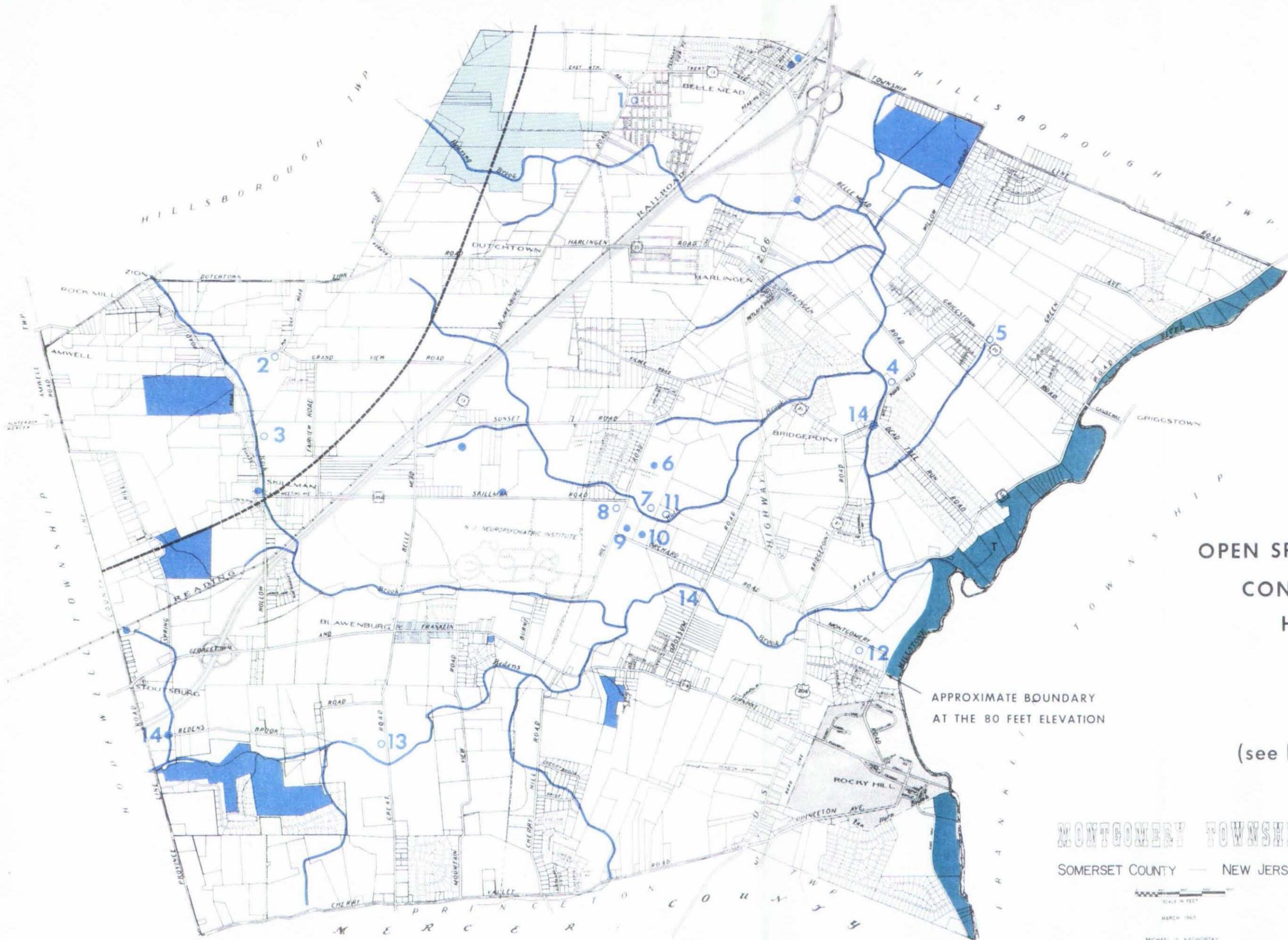


Plate 13
 OPEN SPACE, RECREATION,
 CONSERVATION, AND
 HISTORIC PLAN

NOVEMBER, 1971

APPROXIMATE BOUNDARY
 AT THE 80 FEET ELEVATION

(see legend reverse side)

MONTGOMERY TOWNSHIP
 SOMERSET COUNTY — NEW JERSEY



MARCH 1963
 MICHAEL S. KACHORSKY
 TOWNSHIP ENGINEER



- LEGEND
- LOTS WITH FINAL APPROVAL
 - LOTS WITH PRELIMINARY APPROVAL
 - SOMERSET COUNTY ROAD

PREPARED BY ALVIN E. GERSHEN ASSOCIATES, TRENTON, NEW JERSEY

Plate 14 FACILITIES PLAN

NOVEMBER, 1971

LEGEND

EXISTING	PROPOSED	FACILITY
S		SCHOOL W/PLAYGROUND
P		PLAYGROUND
M		MUNICIPAL BUILDING
NONE		SEWAGE TREATMENT PLANTS
NONE		TRUNK SEWERS
F		FIRE COMPANIES
G	NONE	TOWNSHIP GARAGE
PO	NONE	POST OFFICE
NONE		TO BE VACATED
SW	NONE	SWIMMING CLUB
NONE		POSSIBLE TREATMENT PLANT PENDING DECISION ON REGIONAL SEWAGE TREATMENT

NOTE: RECREATIONAL AND OPEN SPACE FACILITIES ARE SHOWN ON PLATE 13

MONTEOMERY TOWNSHIP

SOMERSET COUNTY — NEW JERSEY



MARCH 1963

MICHAEL S. KACHORSKY
TOWNSHIP ENGINEER

REVISED JANUARY 1967

PREPARED BY / ALVIN E. GERSHEN ASSOCIATES / TRENTON, NEW JERSEY



ment around Belle Mead is expected to have its impact and require the implementation of Stage One. In this same approximate period, the area incorporating the schools is expected to have received sufficient development to precipitate sewerage in that district as well (Stage Four of the feasibility study). Stage Five is the southwestern portion of the township and encompasses Bedens Brook. While this area has been proposed for lower density residential development south of Bedens Brook, the area north of Bedens Brook to Route 518 will be subject to pressures due to Route I-95. Sewerage in this area is expected by 1990-95 unless Route I-95 is completed prior to 1985.

While not specifically designated on the Facilities Plan, an important consideration is the need for an overall storm

drainage survey to assure proper storm water collection, distribution and discharge. Since development will occur in scattered areas, a storm drainage plan will enable the township to determine the ultimate pipe size required to handle water runoff from upstream contributors after these upstream areas have also been developed.

It is also contemplated that the New Jersey Neuro-Psychiatric Institute property will be further developed by the State of New Jersey for expanded and new facilities. The township's proposal for a parcel in the northeast corner of the state's property for active recreational purposes is considered an opportunity to provide a necessary service to the township and its development needs while, at the same time, not impeding plans for further development on the state's property.

RESOLUTION

WHEREAS, pursuant to N.J.S.A. 40:551.10, the Montgomery Township Planning Board has prepared a master plan for the general purpose of guiding and accomplishing a coordinated, adjusted and harmonious development for the Township of Montgomery; and,

WHEREAS, said preparation has included careful and comprehensive surveys and studies of present conditions and the prospects for future growth of the Township; and,

WHEREAS, the Montgomery Township Planning Board is of the opinion that the adoption of said master plan will best promote the health, safety, morals, order, convenience, prosperity and general welfare of the citizens and future citizens of the Township; and,

WHEREAS, a public hearing was held regarding the proposed Master Plan on April 13, 1972; and,

WHEREAS, as a result of said public hearing and further study and consideration by the Planning Board the following additions or corrections have been made to the Master Plan:

1. Green Avenue should be extended from Griggstown Road to Township Road in order to insure a fluid road pattern in the northeast corner of the Township.
2. The northern Blawenburg By-pass should allow for some road access from south of by-pass.
3. The definition of the R C area abutting I-95 Route 206 Interchange has been reworded so as to more closely conform to the intention

of the Planning Board.

4. The precise boundary lines of the proposed Sourland Mountain Park will be changed to conform to the proper boundaries and will be described in an addendum; and,

WHEREAS, it is the opinion of Counsel that these changes are of such a minor nature that a second public hearing is not required.

NOW THEREFORE, be it resolved that the Montgomery Township Master Plan, dated November, 1971 and hereby is, adopted by the Planning Board of the Township of Montgomery.

