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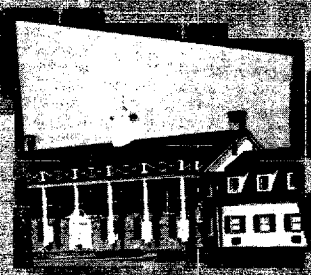
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Somerset County Master Plan of Land Use Toward the year 2006

pgs 29

Master Plan of Land Use

COMMISSION



toward the year 2000



SOMERSET COUNTY PLANNING BOARD
 COUNTY ADMINISTRATION BUILDING
 SOMERVILLE, N. J. 08876

AREA CODE 201
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To The Citizens of Somerset County:

The Somerset County Planning Board, in publishing this Master Plan, is culminating a decade and a half of comprehensive planning. In another sense, however, we are but commencing to build the overall framework for future land development.

The first major report of the Planning Board detailed the water supply requirements for Somerset County and analyzed the various natural features of soil and geologic horizons of the County. Since that publication, we have issued a series of studies and reports covering a wide spectrum of topics. Probably, the most significant report has been the Master Plan of Transportation adopted in 1965. Recently, a Housing and Jobs report was published jointly with the Somerset County Office of Economic Development. The Somerset County Planning Board also participated in the preparation of the Somerset County Park Commission's Park and Recreation Plan. The continuing comprehensive planning process involves a whole gamut of development activities, both private and public, which require coordination by the Planning Board.

The Master Plan of Land Use formulates a balanced land use development plan which stresses the need to accommodate growth in designated areas and to restrain the growth of selected areas. This Plan, adopted by the Somerset County Planning Board, provides for a hierarchy of more intensive areas for well defined community and neighborhood development and less intensive areas for the conservation of the rural landscape and the reservation of land for recreational open space. Citizens and local officials participated in the meetings at which this plan was formulated. To a large degree, the implementation of the Plan is dependent upon the citizenry of the local communities and their official representatives.

Very truly yours,

John J. Senesey
 Chairman

JJS/ss

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STATE OF NEW JERSEY Public Laws, 1968, Chapter 285, R.S. 40:27-2

The county planning board shall make and adopt a master plan for the physical development of the county. The master plan of a county, with the accompanying maps, plates, charts, and descriptive and explanatory matter, shall show the county planning board's recommendations for the development of the territory covered by the plan, and may include, among other things, the general location, character, and extent of streets or roads, viaducts, bridges, waterway and waterfront developments, parkways, playgrounds, forests, reservations, parks, airports, and other public ways, grounds, places and spaces; the general location and extent of forests, agricultural areas, and open-development areas for purposes of conservation, food and water supply, sanitary and drainage facilities, or the protection of urban development, and such other features as may be important to the development of the county.

The county planning board shall encourage the co-operation of the local municipalities within the county in any matters whatsoever which may concern the integrity of the county master plan and to advise the board of chosen freeholders with respect to the formulation of development programs and budgets for capital expenditures.

SOMERSET COUNTY MASTER PLAN OF LAND USE TOWARD THE YEAR 2000

INTRODUCTION

The Somerset County Master Plan of Land Use is part diagnosis and part prescription. This report contains an input of a land use data inventory giving definition to the various categories of land use and an output of the broad considerations and determinations that comprise a land use plan for the future development of Somerset County.

In many respects this Master Plan is the continuation and extension of the planning effort of the municipal master plans and County planning over the past decades. An elementary County Land Use Plan was formulated in conjunction with the Master Plan of Transportation, published in 1965. At that time Somerset County was divided into traffic zones for which population, employment, and retail employment were forecast to the year 1980. We have summarized a detailed land survey which was conducted during 1969 and 1970 in the various municipalities by staff of the Planning Board. The basic inventory was graphically recorded on aerial photographs in the low density areas and by tax maps in the areas of higher densities.

Considerable attention has been devoted to the impact of regional pressures on Somerset County and to the importance of the transportation network that is stimulating and channeling much of the growth of Somerset County. The relationship and the role of Somerset County within the metropolitan region has been a decisive factor in many of the considerations and planned accommodations. At the same time this Master Plan represents an effort to coordinate local and county planning requirements so as to achieve a coherent overall plan for the physical development of the County.

SUMMARY

The primary goal of the Somerset County Planning Board since its inception in 1955 has been to plan for and guide the development of Somerset County in order to provide the optimum environment for its residents, the wise use of natural resources, the preservation of open space, the preservation of flood plain areas, the provision of needed residences, utilities and facilities, and the proper coordination of regional facilities within the framework of local planning goals. The County Planning Board in the development of a comprehensive land use plan is busily endeavoring to delineate areas for more intensive development to accommodate the host of facilities that are required by a civilized society. The plan provides for an interrelationship and interaction between a scale of greater or lesser intensive development and areas of conservation to achieve a balance between natural resources and urbanization.

To this end the County Planning Board has completed a Comprehensive Water Resources

Study, the Somerset County Master Plan: Transportation, a Statistical Source Book, and, in collaboration with the County Park Commission, a County Park and Recreation Plan, and in collaboration with the Office of Economic Development, a Housing and Jobs Report. A Solid Waste Disposal Study was completed and the implementation of this study is being pursued. The County of Somerset during 1970 adopted a Subdivision Resolution and a Site Plan Resolution with detailed standards and requirements to provide implementation for the County's role in land planning. Currently, we are updating our Water Plan and working on a study of the Sewage Disposal Problem. The goal of this Master Plan will be to provide a frame of reference for all future development by all levels of government, as well as private development so that Somerset County will develop rationally in an economic and esthetic manner.

"Our challenge is to find ways to promote the amenities of life in the midst of urban development . . . Along with the essentials of jobs and housing, we must also provide open spaces and outdoor recreation opportunities . . . and develop cityscapes that delight the eye and uplift the spirit."

President Richard Nixon

It is fundamental to the evaluation of the plan to realize that the more intensive residential categories are areas including non-residential services that are directly related to the scale of development proposed. A balance of urban development is proposed with high density areas complemented by low density areas; and areas of intensive economic development with large areas of recreational open space. It is expected that there will be considerable differences within each category, dependent upon the historical-geographical setting and local attitudes and aspirations. Within each category the local characteristics of each area should assert themselves to provide specific design solutions.

A. SOMERSET REGIONAL CENTER

This area of approximately six square miles, representing about two percent of the County's land area, focused upon the highway and rail inter-connections in central Somerset, has demonstrated its capacity for growth as the highest density development area in Somerset County. Including the County seat in Somerville and adjacent areas in Bridgewater and Raritan, this Regional Center will be the primary focus for some of the more intensive County-wide activities. Land uses will vary including all the present types of residential, commercial, industrial and institutional development. Key to this development will be the increased land values which will necessitate increasing development densities. The area is destined to be the leading retail and commercial center of the County, but it will never attain the dominance of older central cities. Somerset Regional Center will be the most prominent among a series of developing centers in Somerset County.

B. COMMUNITY DEVELOPMENT

Community Development areas also consist of an intermixture of land uses where either the density or the scale of development is more moderate than Somerset Regional.

Approximately six percent of the land in Somerset Center is allocated for Community Development. There are eleven different areas so designated, five of them essentially older, more built-up areas; i.e., Bernardsville—Bernards, North Plainfield, Bound Brook, Manville and Franklin. Six

other community centers are indicated; Montgomery, in the vicinity of County Route 518 and Route 206; Hillsborough and Montgomery at Belle Mead; Hillsborough at Woods Tavern; Franklin at Franklin Park; Branchburg at Old York Road and Route 202; Warren Township south of I-287 on Mt. Bethel Road.

Of course, these areas vary considerably in size and in the style of the community. While the potential for community development exists in each of these areas, the intensity and the design of development depends upon the latitude and the guidance given in each municipality.

C. VILLAGE NEIGHBORHOOD

There are over twenty areas designated as Village Neighborhood, comprising about four percent of the land area of Somerset County. Again, the density of development varies considerably with the setting; and the design and extent of the neighborhood will vary with municipal and neighborhood planning goals. The village neighborhood will not have the larger commercial establishments, but will have shopping that supplies the day to day needs of the area. The character of many areas so designated, such as Finderne Heights, Neshanic Station, Peapack and Gladstone, and South Bound Brook is fairly well established and changes will only take place on an incremental basis. Other Village Neighborhoods are as yet no more than a potential created by the configuration of highway crossings.

The Village Neighborhood will probably exhibit the greatest variation in types of development, with each area developing its own set of values and reenforcing their views on the municipal level.

D. RESIDENTIAL NEIGHBORHOOD

This category encompasses more area, approximately 35 per cent, than any other single category in Somerset County. While not excluding isolated commercial development, cluster development, and in some cases the extension of planned unit development, most of the area should consist of low density residential development. Much of this area is now planned for one or two acre residential development, although there are modest interspersions of other activities.

THE ECONOMY

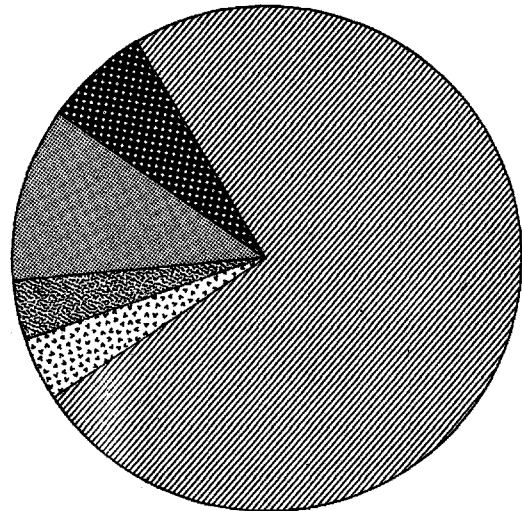
The economy of Somerset County can be evaluated in several ways, but foremost in importance should be the realization that the County is not an entity and that the most dynamic aspect of its development is its relationship to the New York Megalopolis. For example, approximately forty percent of its work force commutes from and to adjacent counties that are also integrated with the great megalopolis. With a large and versatile labor force on all levels—management, professional, white collar and blue collar—this resource is of the utmost importance (See Chart, Resident Work Force, 1970, Somerset and Vicinity).

The other side of the coin is the availability of resources within the economy. Somerset County, with approximately twenty per cent of its land undeveloped, for the most part offers no physical or topographic obstacles to development, has in this respect been juxtaposed in relation to its metropolitan area on every prospect for continued rapid development. Less than two per cent of land is zoned for industrial and manufacturing use and less than one per cent of the land is zoned for commercial development. The amount of land zoned for economic development in 1970 is about sixteen per cent of the total land area, that land resources for economic development are not in short supply.

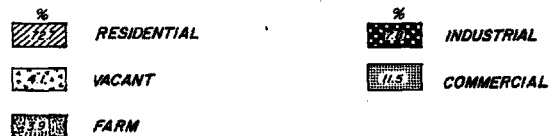
Agriculture, although a minor in respect to its contribution to the total production of the County, is a significant source of revenue for the municipalities and, for example, in 1970 it contributed 9 per cent of the property tax revenue in comparison to industrial ratables at 7.8 per cent (See Chart, Somerset County, District of Somerset, 1970). Agriculture, with twenty-two per cent of the land area, along with wooded and vacant areas, a major category of land use in Somerset County. It is obviously performing a holding action in many areas until land turns over into more intensive utilization, which accounts for some of the high land valuations of agricultural land in Somerset. It is important to note that agricultural land use also performs a compensating role for urbanization, both for open space requirements of the region and the need for the ecological balance of resources.

Utilities, rail transportation and streets and highways form a substantial economic resource to the region and the County. While in appearance transmission corridors often leave much to be desired, the ready availability of electric power in

all sections of Somerset County is taken for granted and both electric and gas services provide no restraint to economic development. Utilities and rail transportation utilized a little more than one per cent of the land area of Somerset County, and in many places the areas utilized by transmission lines serve a dual use as agriculture or open land. With five railroads within the County—Erie Lackawanna, Jersey Central, Lehigh Valley, Reading R.R. and a Penn Central freight spur—there is sufficient rail frontage to serve industrial sites.



SOMERSET COUNTY REAL PROPERTY RATABLES



PREPARED BY SOMERSET COUNTY PLANNING BOARD 1969

Somerset County's economic development is presently served by the interstate freeways I-78 and I-287. Three highway routes, U.S. 22, U.S. 202 and U.S. 206, are also major arterials. An examination of the Somerset County Land Use Map clearly demonstrates the influence the highway and rail corridors have had upon the location of industrial and commercial development. After regional locational factors, probably the most significant factor in allocation of land use development has been the transportation system. In evaluating the health of the economy and the prospect for future development, the transportation system is perhaps the most critical feature in land use planning.

There has been a marked trend in all establishments for a higher component of white collar workers, especially among the industries more recently locating in the County. A breakdown by percentage of "Covered Employment Trends", issued by the State Department of Labor and Industry, shows that the Electronics industries comprise about 25% of all manufacturing employment, Chemical and Allied Products about 20%, and Building Materials about 20%. Next in importance are Machinery and Metal Products and Instruments, each with about 10% of manufacturing workforce. Of less weight, although still significant, are Food and Kindred Processing, Textile and Apparel, and Printing and Publishing. With little or no significance to manufacturing employment are a number of basic goods industries—Lumber, Automotive and Aircraft, Leather, and Paper and Allied Products.

INDUSTRIAL DEVELOPMENT

The industrial landscape of Somerset County exhibits considerable variety in type and scale of development. While less than two per cent of the County area is utilized for industrial development, the prominence of a number of the larger industries and their proximity to the major transportation arterials visibly stresses the importance of the economic base of Somerset County.

The older industries in Somerset lie between the Raritan River and the Jersey Central Railroad, aside from a scattering of relatively small plants and the major quarrying operations which are related to resource locations. Another feature of the location of older industries is their proximity to closely built-up residential areas adjacent to the commercial centers of Bound Brook, Manville, Somerville and Raritan. Smaller industrial loca-

SOMERSET AND VICINITY— PROPERTY VALUES, 1969

	Resi- dential %	In- dustrial %	Com- mercial %	Farm %	Vacant %
Middlesex	65.0	18.7	10.8	1.1	4.4
Mercer	68.0	9.8	16.8	2.5	2.9
Morris	73.7	9.1	10.6	1.1	5.5
Union	68.8	16.7	12.8	.1	1.6
Hunterdon	56.6	8.0	12.8	5.2	17.4
Somerset	72.7	7.8	11.5	3.9	4.1

Source: State of New Jersey, Division of Local Finance, THIRTY-SECOND ANNUAL REPORT, 1969, Trenton, N. J.

tions are oriented to small clusters of residential development. The need for a ready labor force was a dominant locational consideration, when walk to work considerations still prevailed.

The post World War II industries are thoroughly oriented to the highway and freeway systems, with industrial development radiating forth from the older centers of Plainfield, New Brunswick, Somerville, and even Princeton. The interstate freeways have developed their own momentum of industrial development pressures with only a tenuous relationship to the older centers. I-287, and now I-78, and the forthcoming I-95 are undoubtedly major factors in the locational pattern of industry. Industry is already anticipating I-95 by utilizing sites in close proximity of the proposed route. The commercial-industrial impact of U.S. Route 22 is self-evident, with the only significant new residential development taking place at apartment densities. There are existing residential areas along the freeway system and there are residentially zoned areas which will mitigate against complete industrial frontage.

LAND USE IN SOMERSET COUNTY

Municipality	Low Density Residential	High Density Residential	Industrial and Manufacturing	Transportation, Communications and Utilities	Commercial	Public and Quasi Public	Recreation	Vacant	Agriculture	Wooded Areas	Streets	TOTAL
Bedminster	1,888		8	61	49	146	527	1,359	7,749	4,616	686	17,088
Bernards	3,085		221	192	45	846	1,137	2,699	1,503	4,276	812	15,616
Bernardsville	3,351	49	115	49	52	221	482	101	830	2,783	351	8,364
Bound Brook	427	28	12	67	63	71	21	68		78	191	1,026
Branchburg	1,512	21	86	220	124	63	327	2,068	6,533	1,519	455	12,928
Bridgewater	5,779	44	1,042	578	239	433	1,318	3,584	1,258	4,967	1,873	20,915
Far Hills	778		1	56	4	14	18	248	719	1,178	186	3,200
Franklin	3,369	60	568	174	124	558	1,572	8,889	9,085	6,375	914	29,696
Green Brook	485		29	24	97	71	168	323	2	1,600	209	3,008
Hillsborough	3,269	2	106	454	132	1,395	353	12,650	8,431	7,337	879	36,008
Manville	463	5	180	95	45	63	52	403	42	8	244	1,600
Millstone	82			19	2	3	27	202		35	14	364
Montgomery	1,584		498	114	47	1,044	730	6,333	6,760	3,158	378	20,646
North Plainfield	867	93	14		122	74	54	69		110	453	1,856
Peapack-Gladstone	287		15	33	23	46	152	114	1,358	1,627	121	3,776
Raritan	410	4	123	77	53	57	50	204	38	177	125	1,316
Rocky Hill	112		7		2	10	45	174	18	26	16	410
Somerville	607	45	43	45	121	147	50	199			252	1,509
South Bound Brook	233	5	22		10	10	7	153		49	87	576
Warren	2,422		74	20	101	103	475	2,431	518	5,366	840	12,352
Watchung	749		160	25	116	67	155	344	14	2,037	301	3,968
County Total	32,560	355	3,325	2,302	1,573	5,441	7,724	40,542	44,882	47,329	9,132	195,264

All figures are in acres.

*Columns may not total due to rounding.

Prepared by Somerset County Planning Board.



COMMERCIAL DEVELOPMENT

Commercial Development in Somerset tends to be concentrated along major highway frontage and in older traditional small downtown areas. The Land Use Map graphically portrays the small urban centers in Somerville and Bound Brook, and the extent of commercial development in Franklin, North Plainfield, Manville, Bernardsville and Raritan. The dominant position of U.S. Route 22 is also quite evident with strip development along much of the frontage in Watchung, North Plainfield and Green Brook. There is also considerable concentration keyed to Somerville, but not located downtown. Development along U.S. Route 22, U.S. Route 28 and around the Somerville Circle shows the trend toward commercial highway development in Central Somerset.

Somerset County has about 2½ square miles of commercial development. While this only represents slightly less than one per cent of the total land area of the County, these retail and service facilities accounted for 11.5 per cent of the ratables in Somerset County in 1969. Commercial development on an overall basis utilizes the least land, but with the highest degree of intensity of any of the land uses. The Table, "Land Use in Somerset County" shows that all municipalities have some commercial development, but only seven municipalities have a hundred acres or more of land allocated to commercial development. Because many diverse activities are classified as commercial, the amount of land allocated to commercial development represents only one measure of land use activity. Another useful measure of commercial development is the amount of ratables designated as commercial. The fact that Somerville had the highest proportion of taxable commercial

SOMERSET COUNTY RETAIL TRADE—1967

	Establishments	Sales in Millions
Somerset County	1,293	304.3
Somerville	276	59.9
Watchung	46	59.1
North Plainfield	125	34.8
Bridgewater	71	23.8
Bound Brook	142	22.9
Franklin	124	20.1
Bernardsville	74	18.1
Manville	89	15.9
Raritan	58	6.7
South Bound Brook	27	4.8
Rest of County	261	38.2

Source: 1967 Census of Business, Retail Trade, Bureau of the Census.

SOMERSET COUNTY SELECTED SERVICES—1967

	Establishments	Receipts (Millions)
Morris County	1,736	65.4
Middlesex County	2,256	101.9
Hunterdon County	354	9.6
Mercer County	1,774	124.3
Union County	2,978	152.8
Somerset County	810	23.1

ratables at 23.78 per cent in 1969, and Rocky Hill had the lowest at 3.05 per cent is indicative of the concentration of commercial development in Central Somerset.

It should be noted that many types of land uses which may not be considered to be commercial development are so classified for tax purposes. These land uses vary from the land holdings of utility companies to nursing and convalescent homes. The personal services (beauty and barber) and various repair services (automotive, business machines, various miscellanies) and amusements are not substantial in revenue or in tax base but they provide an important source of employment. The availability of the service industries is of great importance. The services are usually provided on an incremental basis, but the growth of Somerset County has tended to out-distance the provision of service industries. An increase in the number of service facilities and in the multiplicity of the types of service tends to increase competition and provides for a wide range of choice. A disproportionate residential development toward higher priced houses has had the tendency to limit occupational groups which provide services. Thus, on a per capita—revenue receipts basis, Somerset County tends to lag behind other counties on the provision of services. (See Table, Somerset County, Selective Services).

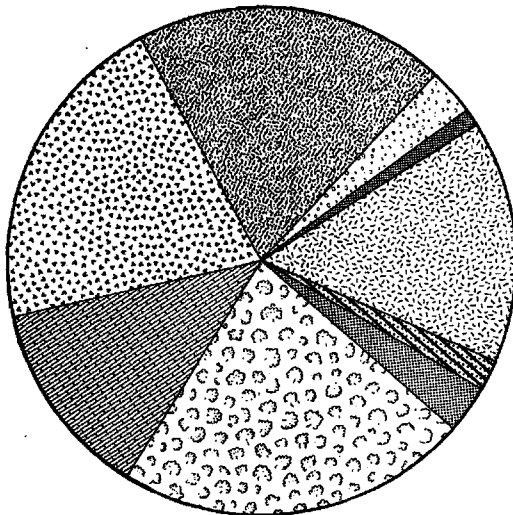
scattered three and four family houses are in communities where the predominant grouping is a mixture of single and two-family structures. For the purposes of this study, these scattered three and four family houses were not accorded separate treatment. On a countywide basis they represent less than one per cent of the housing units.

All the significant areas of apartment development are concentrated in five municipalities—North Plainfield, Franklin, Somerville, Bound Brook and Bridgewater. These locations tend to be in proximity of previously developed areas, but in the vast majority of the cases development is taking place on previously undeveloped tracts. The close proximity of many of these developments to major highways also indicates a related locational factor. Approximately 12 per cent of the housing units in Somerset County are in multi-family structures which represents over a 100 per cent increase over the last decade in contrast to an increase of about 33 percent in single family residences.



while in other areas single family structures occupy rather large lots. For the purposes of this survey, lot size was defined either as the land immediately related to the structure or the amount of land required by the zoning ordinance. Thus, in a three-acre subdivision all land would be allocated to residential use and a rural house on a larger tract in the same zone would only be allocated three acres.

The predominant residential zone in Somerset County requires one to two acres of land (See Somerset County Composite Zoning), and most new residential single family developments are taking place at this density. About 35 per cent of the population of Somerset County presently lives in single family houses on parcels of land of one acre and larger. One acre residential development is a predominant land use in Watchung, Warren, Montgomery, Millstone, Hillsborough, Bridgewater, Branchburg and Bernards. It is important to note that this pattern of development is spread out over the countryside more often than not contiguous with open areas of vacant, farm and wood lands. Thus, densities of development tend to be considerably less on a square mile basis than the capacity of development at about 2,000 persons per square mile.



SOMERSET COUNTY LAND USE

16.88% RESIDENTIAL	2.92% PUBLIC & QUASI PUBLIC
1.70% INDUSTRIAL	23.05% AGRICULTURE
5.89% TRANSPORTATION & UTILITIES	20.97% VACANT
.81% COMMERCIAL	24.94% WOODED
2.87% RECREATION	

PREPARED BY SOMERSET COUNTY PLANNING BOARD 1970

THE SINGLE FAMILY RESIDENCE

The single family residence is the largest category of urbanized land use in Somerset County. Almost 17 per cent of the total land area of the County is devoted to such residential development. The development ranges from small homes to large estates. In the built-up boroughs quite a few large older homes are on relatively small lots,

SOMERSET COUNTY LAND USE

	Acres	Per Cent
Low Density Residential	32,560	16.68
High Density Residential	354	.18
Industrial	3,325	1.70
Transportation and Utilities	2,302	1.17
Commercial	1,574	.81
Public and Quasi Public	5,441	2.92
Recreation	7,724	2.87
Vacant	39,713	20.50
Agriculture	44,882	23.05
Wooded	47,329	24.94
Ponds, Rivers, Canals	928	.47
Streets	9,132	4.71
TOTAL	195,264	100.00

OPEN AREA: Vacant, Woodlands, Farm Lands

Approximately seventy per cent of the land area in Somerset County is in open area, undeveloped in context with the remaining thirty per cent which is dedicated to various urban uses. About one-half of one per cent of the area is covered with bodies of water, ponds, reservoirs, rivers and canals. There was no attempt to measure each rill and rivulet, nor to gauge the perhaps larger areas of backyard swimming pools. In any event, typical of the topography of Central New Jersey, there are no large natural bodies of water in Somerset County, and this is hardly compensated by the few man-made lakes and reservoirs.

The Open Area in Somerset County is mostly in three large categories—Wooded, Agricultural and Vacant and to a lesser degree as recreational land. All of these categories have served as land reserve for the developing suburbanization of the County. Frequently, they tend to blend together to provide abundant vistas, unaffected by the encroachment of the builders. But, in many open areas there is an abundant discord and disharmony created by the infringement of utility corridors—highways, strip commercial development, mining operations and subdivisions. Somerset is neither all-beautiful English countryside, nor is it a sea of tacky-tacky residential boxes, but there is truth to both characterizations. There is enough trash and gross commercialization to abhor it, and a plentitude of beauty to work to conserve it. We must also acknowledge there are aesthetic urban developments and that some of the vacant areas of the County are not an asset aesthetically.

THE VACANT AREA

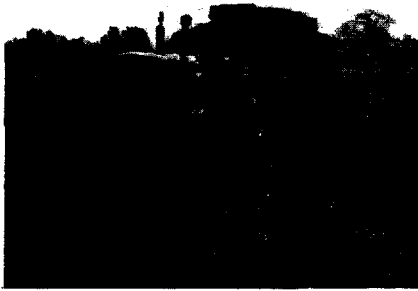
Every municipality in the County has vacant areas of some consequence. In older boroughs some of this vacant land is merely chinks that have been left over and remain vacant because our property tax system treats vacant land with circumspection. Actually many of these gaps are aesthetically pleasing for they perform as a break in a pattern that would otherwise be continuous rows of housing. This is especially true in the areas where there are no neighborhood parklands. In other areas, the urban vacant land has become an eyesore deposition of refuse and would be far better with a neat cottage to enhance the appearance of the neighborhood.

These vast vacant lands are both south of and along the tributaries of the Raritan and north of the Watchung Mountains. Many of these lands were family farmland and now lie overgrown with weeds and brush. They are no longer agriculturally productive, but neither are they unattractive for frequently they act to separate and define urban development. At other times the land is pieced out and circumscribed by adjacent industrial development or subdivisions and violated by transportation corridors so as not to be considered prime land, either from a development viewpoint or with an eye to open space preservation.

RECREATION AREAS

There are twelve square miles of land in the County utilized for recreational open space. Some of this is natural open area and there may well be a few acres of virgin woodlands in William Hutcheson Memorial Forest and in the more inaccessible river bottoms. There are other areas where the topography has been altered and land manicured into beautiful fairways in the private and public golf courses of the County. Some areas in local playgrounds are small enough that the area is barren of vegetation from the pounding of sneakers on the red clay, but for the most part this recreational open space is the green acres utilized by the people of Somerset County. There are also wilderness acres in public or private ownership where there are very few visitors. It is important to emphasize that the lands mapped and designated as Recreation are not necessarily permanently committed to open space utilization, and, in fact, the private golf courses, holdings of riding stables, and non-profit institutional holdings could all come upon the real estate market with increasing land values. While it is true that some of these areas have structures upon them, their predominant use is recreational open space, whereas structures that provide recreational facilities, such as bowling alleys, are classified as Commercial facilities.

There are also some open areas which are adjacent to institutional buildings and, here again, the predominant use of land was ascribed as institutional and the land so classified. Probably the public school lands offer the most opportunity for recreational use with many facilities well developed and providing for intensive athletic activities. Of course, some of the athletic fields are



west and therefore the extent of metropolitan area contamination in the airshed is being magnified. Hence, the retention of significant sections of woodlands is an important planning goal.

Concern for preservation of wooded land is often related to the water retentive characteristics of woodlands. While it is true that trees utilize considerable water in the transpiration process, they also tend to normalize the seasons and provide a reservoir for enhancing stream flow during the dry seasons. Both the Passaic River and the Raritan River are used as a source of potable water and the existing woodland coverage is most useful toward preserving the quality of this water supply as well as providing augmentation of stream flow. The effect of wooded land in restraining flood waters and in prevention of erosion to slopes is all too evident. It should be noted that, while woodlands have increased in Somerset County, the amount of impervious surfaces such as paved areas and roof tops has also significantly increased; thus, in some areas, such as along the Green Brook, there is a significant growing problem of floods. Thus, the trend toward a slight increase in woodland coverage has not been balanced throughout the County. Some municipalities where urbanization has been more extensive have had significant decreases in wooded areas while others, with the decrease in farm activity, show substantially more wooded areas.

FARM LAND

The Land Use Survey, conducted by the Somerset County Planning Board, classified 44,882 acres as agricultural land. The 1969 Census of Agriculture, conducted by the U.S. Bureau of the Census, was a mail survey of farmers throughout the County. The census tallied 50,418 acres of land in farms, but included in this total of farm

land were 6,934 acres of woodland in Somerset County. In the Planning Board Survey all woodlands were classified in that category. The amount of land classified as fallow will differ and in some cases estate lands, while not directly in agricultural use, are very similar in nature and may pose classification difficulties. In any event, approximately one-fourth of Somerset County presents a vista of well-tended, rural landscape which is in large blocks in some areas and interspersed with urban development in others.

Agricultural land is mainly located in five large Townships—Franklin, Hillsborough, Bedminster, Montgomery and Branchburg in order of farm areas designated. These municipalities all have substantial farm areas and together they have over eighty per cent of all farmland in the County. Most of the Boroughs in Somerset County, excepting Peapack and Gladstone, Far Hills and Bernardsville, have no significant farmland, while the remaining Townships are rapidly succumbing to urbanization.

The historic data on land in agricultural use indicates a continuing trend toward the decline in agriculture, both in Somerset County and in the State of New Jersey. Census data shows that the continuing decline in agricultural land from 1890 to the present period was only interrupted briefly during World War II; but this decline has slowed perceptively between 1964 and 1969, as compared with the post World War II years. Probably the main factors accounting for the slower diminishment of farmland over this period was a decline in subdivision activity since 1966, attributable to increased mortgage rates. Another factor has been the enactment of the Farmland Assessment Law which has had the effect of providing a guarantee against increasing property taxes.

It is interesting to note that cultivated land only decreased by about 1,100 acres from 25,786 to 24,660, and total cropland decreased only slightly from 38,442 to 37,716 acres from 1964 to 1969. Over this five year period, the total land in farms decreased by approximately 1.7 per cent of the total land in Somerset County, as compared with a 3.5 per cent decrease in the State of New Jersey. Despite the relatively small decrease in acreage, the number of farm operators in Somerset County decreased from 297 to 224, and the number of hired farm laborers decreased from 188 to 144.

In New Jersey, the market value of farm products was little changed (leave aside inflation) from 215 million dollars in 1964 to 214 million dollars in 1969. However, in Somerset County, the market value of farm products fell from 7.4 million dollars to 5.7 million dollars. In a significant reversal of the overall trend in Somerset County, cropland products, including hay products, increased in market value from 1.5 million dollars to 1.9 million dollars. Poultry and livestock, including dairy cows, showed the greatest decrease — from 5.8 to 3.8 million dollars.

The average value of land and buildings, by census data, increased from 1,012 dollars per acre in 1964 to 1,855 dollars in 1969, and the average farm increased in value from 120,000 dollars to 252,000 dollars, and average farm size also increased from 114.5 acres to 135.9 acres.

Over the years most farm products have tended to decline in production as urbanization and the

accompanying inevitable land speculation have taken hold. Somerset County at one time had extensive orchards with a total of 539,243 peach trees in 1890 and 84,789 apple trees in 1900. In 1969, there were a total of 4,813 peach trees and 9,526 apple trees. Another example is that as late as 1935 there were 32,437 grape vines in Somerset, while the 1969 census reported a total of 36 vines. While Somerset County has seen its agricultural heyday, with most farm products exhibiting this pattern of declining production, there are several notable exceptions.

In recent years the hay and alfalfa crop has been holding up quite well and corn has shown a dramatic increase in production. Over the past eighty years, corn has increased from an average 30 bushels per acre to 70 bushels per acre, and wheat from about 13 bushels per acre to 66 bushels per acre. Also increasing dramatically is the cultivating of soybeans, which was not historically significant, but soybean acreage increased from 906 to 3,301 from 1964 to 1969 and production increased from 10,034 bushels to 93,071 bushels. There also has been an increase in "truck farming", with the number of acres cultivated for vegetable production increasing from 381 to 478. While there was apparently little attention paid to horses in the 1964 census, the 1969 census indicates the highest number of horses in several decades. It should be noted that Somerset County has a number of major horse breeders, and that most of the horse population in the County is not reflected in the farm census.

**SOMERSET COUNTY
SELECTED AGRICULTURE CENSUS DATA, 1890-1969**

	1890	1910	1930	1950	1954	1964	1969
No. Farms	2,029	1,947	1,258	1,136	1,035	471	371
Area in Farms	174,009	165,966	99,137	97,532	93,558	53,941	50,448
Corn (For Grain)							
Acres	20,553	18,748	7,290	6,472	8,407	3,035	4,497
Bushels	590,210	637,517	205,994	239,514	379,192	171,305	367,927
Wheat							
Acres	11,339	11,496	6,250	7,846	5,103	2,807	2,207
Bushels	145,770	195,798	116,745	182,158	137,142	79,993	74,846
Hay Crops							
Acres	42,272	37,903	18,691	17,787	17,682	14,246	10,027
Tons	53,537	39,228	23,034	27,923	28,219	22,401	20,004
Chickens	120,337	178,504	257,528	348,217	575,911	410,999	220,173
Cows	9,057	9,199	5,682	8,105	7,572	4,496	2,943
Horses	6,837	6,259	1,885	633	446	N.A.	704

Source: Agricultural Census, Bureau of the Census.

PUBLIC AND QUASI PUBLIC INSTITUTIONS

PUBLIC AND QUASI PUBLIC INSTITUTIONS

The inventory of public and quasi public land concentrated on the use of land for public purpose, rather than mere ownership. In some cases land in ownership of school systems was classified as vacant, and, in another case, large tracts of land owned by Zarepath was classified as agriculture—again keyed to the use of land rather than the ownership. Approximately eight and one-half square miles of land was classified as institutional. About four square miles are allocated to the four major institutions—the State Neuropsychiatric Institute, the Federal Lyons Veterans Hospital, Somerset County College and Zarepath College.

Municipal community facilities are classified as institutional and have been located on the map entitled Public Facilities Map. It should be noted that municipal parks and playgrounds are included under the category Recreation facilities on the Land Use map and in the Land Use inventory. Public and Private Schools are designated on the map bearing this title, with an accompanying index of the names of each facility.

The Land Use Plan has regarded the specific location of new public and quasi public facilities as beyond the scope of a County Plan. Most of these facilities are related to the growth in residential development, and in accord with the Land Use Plan, the allocation of these facilities to areas of concentrated residential development would be advisable. Dependent on the type of facilities and the extent of their services, sites should be located in either the Somerset Regional Center, Community Developments or in the Village Neighborhoods.

Institutions that are separate entities, segregated from the community, are the exception rather than the rule. Even so, the automobile is tending to isolate institutions which might otherwise form a more integrated part of the fabric of society.

In particular, large institutions are not in vogue because in many cases they appear to be synonymous with lack of individual attention. In any event, this concern for alienation of the individual in a mass society appears to particularly affect those institutions where the clientele is

“institutionalized”. Therefore, it would appear unlikely that there will be many new large tracts of land which will be similar to Lyons Veteran’s Hospital or the Neuropsychiatric Institute. At this time most of the objections appear to be levied against massive institutions rather than the fact that the institute may be isolated from the rest of the community. Even if this prognostication proves inaccurate and there is a demand for large institutional complexes, there would appear to be very little specific locational determinations that could be predestined. Each case will present unique problems and requirements and these are superimposed upon a land market that cannot tolerate severe limitations which might preclude the possibility of the marketability of the land on one hand, or, on the other, set into motion a monopoly situation which unduly escalates the value of the specific site. There would appear to be every likelihood that there will be additional demands for large educational institutions as the urbanization of Somerset County proceeds and since there are large areas of low density zoning and also large low density areas designated by the Land Use Plan in the Residential Development and the Rural Settlement areas.

The nursing homes in many areas, including Somerset County, are often segregated from society because of their physical location on highway sites which preclude pedestrian access. For example, new nursing homes are located on Route 22, Routes 202-206, and on Easton Avenue, and in each case there appears to be little chance of any inter-relationship between the outside community, except by vehicle access. The ambulatory patient would find the surroundings unconducive to a stroll. While nursing homes are classified as an institutional use, and sometimes commercial, they are in another sense residential and should be accessible to the community allowing for increased personal contact.

Most institutions in Somerset that serve the residents have a relationship to the communities which they serve and the whole orientation of this plan is that such institutions should be located in the regional, community, and neighborhood centers.

TRANSPORTATION: Network and Plan

Technology, remember, is a queer thing. It brings you great gifts with one hand, and it stabs you in the back with the other.

C. P. Snow

The streets and highways of Somerset County comprise about five per cent of the area of Somerset County. Utility lines in separate rights-of-way and railroad rights-of-way account for another one per cent of the land. In many highly urbanized cities the amount of land devoted to transportation exceeds thirty per cent of the entire area, although the amount of pavement **per person** actually is considerably less in the compact city. It is quite evident that the relationship of a road system to the community is an amalgam of necessity, convenience, nuisance and hazard. Beyond any doubt our vehicle oriented civilization will not lessen its demand for vehicular accessibility to residential origins and commercial, industrial, institutional and recreational destinations. Our civilization has become so intertwined with the motor vehicle that they appear to be totally inseparable. Although there is considerable resistance to the ever increasing miles of pavement, there would appear to be little serious attention given to viable alternatives. Despite the liabilities of the highways and the internal combustion vehicle, the utilization of both continues to exceed most other indices of growth.

A basic assumption of the Land Use Plan is that the motor vehicle (not necessarily powered by the internal combustion engine) will be the predominant mode of transportation in the year 2000. Within this framework, the Plan can anticipate various levels of public bus operation, but it is doubtful that the different levels of bus operation that appear feasible will materially affect the extent of the road system within Somerset County. On a wider scale, significantly greater utilization of buses could materially reduce freeway or major highway requirements.

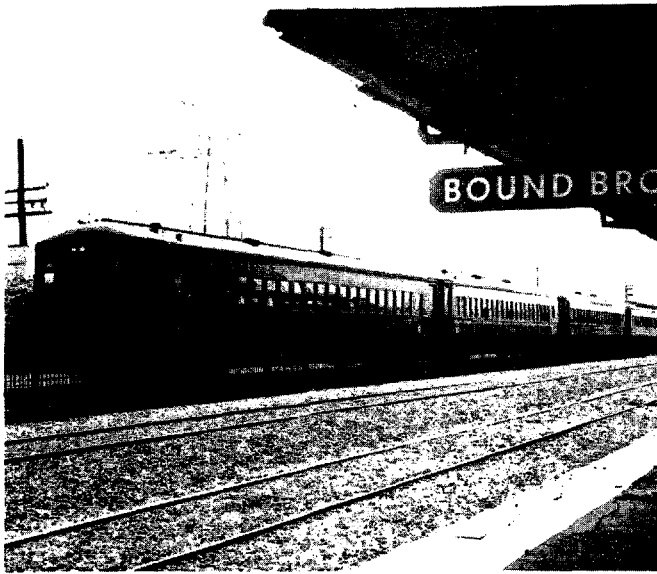
The County Land Use Plan anticipates the requirements for Major Highways (See Map Circulation Plan). This Circulation Plan, with some modification, is similar to the Master Plan of Transportation adopted by the Somerset County Planning Board in 1965. Even so, the area allocated to interstate freeways would only utilize an additional one per cent of the land even if the entire freeway system were duplicated, as some regional transportation planners anticipate. The major highway system is not, in and of itself, a voracious consumer of land in Somerset County, but nevertheless the visual, auditory, olfactory and eco-

nomic impact of the major highway is decisive. Also, the highway system forms an integral part of the pattern of urbanization that must be balanced against ecological resources of the region. The land use categories of development include street, rail and utility right-of-way, with an increasing proportion of land for these facilities and with increasing densities. It is probable that on an overall basis, at the level of development called for by the Land Use Plan, the land allotted to local streets, arterials, and freeways will amount to about eight per cent of the total area. Other transportation, communications and utilities will consume an additional two per cent of the County. It is important to recognize that large portions, perhaps as much as two-thirds of the land in these categories are not paved and therefore gross figures require more detailed examination when calculating drainage run-off. It is also important to stress that privately owned paved areas for vehicular use on all land uses constitute a major source of accelerated drainage run-off and increased reflective surfaces. The continued ground coverage by impervious pavement in Somerset County, while not approaching the problem of the large city, is of enough consequence to receive serious consideration in the Somerset County Land Use Plan. This consideration was a factor in the endeavor to restrict sprawling development and to recommend nodes of community and neighborhood development on one hand and large areas of rural development and open space on the other.

TRANSPORTATION INNOVATIONS

The genesis of radical developments often appears in a recognizable embryonic form. Quite frequently development is aborted, or stunted, or becomes gargantuan as in the case of the motor vehicle. Thus, while the embryonic form exists, it is extremely difficult to estimate life expectancy, nature of growth, or the rate and amount of growth.

In the formulation of a year 2000 plan for a related land use—transportation system, consideration must be given to the accommodation of various types of technological development that will be coming upon the scene. In reviewing past development, certainly the most dramatic has been the assault of the motor vehicle upon land development patterns. Had all the consequences of motopia been foreseen, then society might have had a dif-



The low-powered cart has a place on the golf course and on the ocean boardwalk, because there is no clash of vehicles. This holds true also for that ubiquitous vehicle, the fork lift truck. It is plausible to utilize a miniature motorized cart in areas where automobile and truck traffic are not in great volume and where low speed limits are feasible. An environment where there is inadequate segregation of traffic, or where land development plans do not provide for utilization of miniature carts, will not attract these vehicles. Since most new land development, especially in Somerset County, is being attuned to the standard motor vehicles, the utilization of miniature carts in Somerset County would appear to have limited prospects on a countywide scale.

The utilization of motorized carts in the day-to-day activities of a community will probably, at least at inception, only be considered in communities that are heavily oriented to serve the elderly. The motorized cart speed of 10 to 15 miles per hour is less than that of a bicycle and it is difficult to conceive an admixture of full sized motor vehicles and motorized carts. Although the existing transportation system mixes pedestrians, bicycles and motor vehicles with an abandon that produces a deadly concoction, there is no need to add another destabilizing element. Therefore, the utilization of the motorized cart requires a separate pathway, but such a pathway would have the additional advantage of providing added accessibility and safety for the bicycle rider and the pedestrian.

Areas that are presently largely undeveloped and designated as Village Neighborhood and Community Development probably offer the most fertile ground for such innovative designs in Somerset County.

The miniature bus, while partaking the nature of a small bus, is nevertheless a full-sized vehicle. Miniature buses are in operation in a number of areas, with one of the most well-known operations in the Central Business District of Washington, D. C. Another very successful transit miniature bus operation is the jitneys along the main business street of Atlantic City.

It would appear that future development of a minibus system would most likely take place in the Somerset Regional Center. This Center, which is heavily oriented to motor vehicular traffic, could not accommodate low-powered carts. The minibus (or perhaps a dial-a-bus system) would be physically compatible and would perform a useful service within this core area with its high density of residential and commercial development.

RAIL TRANSIT

Year after year the weight of rail versus rubber in the economy evolves to the detriment of the railroad, with a few notable exceptions. In probably no industry in America has there been for such an extended period a lack of originality. Along with this factor has been a public relations image that has had a stultifying effect upon attempts to gain necessary public support for the role of rail in our transportation system.

The railroad industry has faced a competitor heavily subsidized by the government. Part of the subsidy has been inherent in the versatility of the street system which serves the adjacent land use along with the through traffic. This street system provided a ready made and publicly owned, exempt from taxation, right-of-way. While it is true that the railroads at their inception were also heavily subsidized with land grants, this initial subsidy has given way to an inequitable relationship with their prime competition.

There have already been innovations in passenger service in some areas of the country including New Jersey, especially the Lindenwold Rapid Transit Line to Philadelphia, built, owned, and very successfully operated by the Delaware River Port Authority. The Delaware River Port Authority, whose main source of revenue is bridge tolls, will provide the fiscal backing for the Lindenwold Line. Additional rapid transit lines are planned north to Morrestown and south to Woodbury, but this time with federal and state financing of capital investments. Decisions which are placing governmental bodies into rapid transit business are also tending to integrate revenue sources. The realization that rapid transit can meet some of the transportation needs of the metropolis cheaper than new highway construction is gaining widespread acceptance.

there has been the hope that there will be substantial improvements in service. These hopes have seen reality in the PATH operation from Newark and Jersey City to Manhattan, and the purchase of new and rehabilitated cars for the commuter railroads. The knowledge that the State has taken responsibility from the railroads for passenger service has also given assurance that the rail passenger operations would continue. Nevertheless, the State of New Jersey still faces a number of serious difficulties, primarily because the system is ancient and secondly because the institutional structure (both management and union) of bankrupt railroads and deficit passenger operation continue to plague the State program for modernization.

The State of New Jersey is fortunate in that a working prototype of a suburban rapid transit system has been built from scratch (Bridge tolls) by the Delaware River Port Authority. Virtually an automated service with personnel essentially monitoring the operation, the Lindenwold-Philadelphia service is meeting its current expenses, in contrast to the Port Authority of New York's PATH where a substantial annual operating loss is claimed. Nevertheless, it is quite evident from experience with the Lindenwold Line that, at the very least, rapid transit will require complete subsidization of capital expenditures.

Yet, the highway transportation of the large metropolitan region simply does not function effectively to meet peak hour loads. The alternatives would appear to be not only new investments in rapid transit but also a reorientation of land use policies so that development can take place on a coordinated basis with transit improvements. The Somerset County Master Plan of Transportation (1965) among its recommendations stated, "The desirability of orienting residential and commercial development to the vicinity of rail stations should be considered". The Port of New York Authority is improving station facilities at New York and in Jersey City and developing office facilities which are directly related to PATH. Even though the rail operation is an afterthought on their part, this symbolizes the need for coordinated development.

Such development in Somerset County is probably most possible in relation to Somerville, Bound Brook, and Belle Mead. Each of these sites offers unique possibilities, but it is incumbent upon the municipalities to be cognizant of these potentialities. It is recognized that the problem of implementation of a large scale residential, office, and commercial complexes at these locations is difficult to attain within the framework of municipal powers. The limited powers of small

municipalities in New Jersey to effectuate urban renewal projects clearly demonstrates need for more sophistication and more financial resources than local government possesses. Nevertheless, unless local government is committed to intensive development in conjunction with rail improvement, any such project could well flounder.

The modernization and operation of the railroads are of metropolitan importance. It is also important that the cost of rapid transit be balanced off by revenues from other sources. Every study of the relationship of land values to rail passenger improvements has demonstrated an intimate relationship between increased land values and the improved transit facilities. It is only logical that any subsidy to rail transit should endeavor to take advantage of values created by the transit rather than solely seeking funds from the general tax base. The other major source of funding, besides the general tax base, must relate to transportation authorities.

A significant feature in the viability of a transit system is for two way utilization—or reverse commutation. This can only occur if suburban rail heads serve as nodes for Regional or Community Centers of development. The creation of communities where individuals have pedestrian accessibility to rail station and to their immediate shopping requirements should substantially reduce congestion on the highways and enable more families to become one-car families rather than multi-car families.

BUS TRANSIT

The availability of bus transportation in Somerset County is dependent upon passenger location. Much of the County is too lightly settled and too dispersed in its pattern of settlement to warrant bus service. The built-up areas in central and eastern Somerset County are served to some degree while northern, western and southern Somerset County are without service. The school bus is omnipresent with over 750 routes throughout most of the County, while there are only a few local bus routes within the County. Bus service to New York City is somewhat better, with eleven interstate bus routes serving Somerset County. A few of these routes also provide for intra-county service.

There are basically two corridors served in Somerset County, the Central corridor which has an interstate bus service utilizing U.S. Route 22 with Somerville serving as the most important station. There is regular bus service to Plainfield, Newark and New York City. The other corridor is along the eastern border of Somerset County on Highway Route 27, with accessibility extended

AIR TRANSIT

There have been tremendous strides in the technological development of the airplane, and this revolution in long distance travel will undoubtedly continue. However, within the framework of this transportation plan and until the year 2000, there is almost no potential for the utilization of aircraft for any significant portion of the residential, commercial, or industrial trips within the metropolitan region. In fact, the pattern of automobile trip generation within Somerset undoubtedly has been stimulated by the ready access to the major airports of the New York-Philadelphia Region.

The Somerset County Planning Board has given considerable attention to air transportation as it affects land use development in the County. Published in recent years have been the Master Plan of Transportation, including Section III, "Air Transportation", a "Report on the Proposed Jetport", and a report, "General Aviation in Somerset County".

Probably most decisive in its impact on land use would be the Jetport proposal for Solberg, falling partially in Somerset County and partially in Hunterdon County. Several factors have since reinforced the position, taken in 1965, that

"There is no area within the County, or bordering upon Somerset County, which the Somerset County Planning Board considers suitable for a new major jetport. The limiting factor is that land development patterns are already too widespread to allow for the provision of an extensive buffer area that a great jetport would require".

Land development has continued to intensify in both counties and this, along with land values, has substantially kited the cost of locating a jetport at Solberg. The acquisition of the Confluence Reservoir site and, to a lesser degree, the Six Mile Run Reservoir site is proceeding, which emphasizes the concern the County Planning Board has expressed about the jeopardy of a major jetport, and attendant industrialization, to the water resources of the State of New Jersey represented by the Raritan River, Round Valley and Spruce Run.

Along with these factors is the growing understanding that the air transportation industry's main problem is not a new jetport, but more rational utilization of the investments in the three major jetports of the New York Region. Also, there is now increased concentration on providing rapid transit access to J. F. Kennedy and Newark Airports, with the realization that the major bottleneck to airport utilization is ground accessibility. It also seems probable, at this time, that another conclusion of Somerset County's Jetport Report,

that Stewart Airport at Newburgh be utilized, especially for cargo aircrafts, may come to fruition.

General Aviation in Somerset County continues to service that portion of the population utilizing small aircraft for business and pleasure. These airports utilize a relatively small area, 460 acres, but there is a tendency for residential development to encroach upon their environs. The Somerset County Planning Board's position remains that the preservation of general aviation airports is vital to the economic growth of the County. Over the past decade these airports have significantly improved their facilities and are providing a useful service to residents of Somerset County.

UTILITY ALIGNMENTS

The accommodation of utilities in separate easements or rights-of-way through Somerset County is increasing. Although these rights-of-way are utilizing only one per cent of the land area, they have a pronounced visual impact upon the countryside and also require consideration when allocating abutting land uses. Recently, Public Service Electric and Gas Company of New Jersey has designated a new alignment from the Branchburg switching station easterly across Somerset County. In places, adjacent to an existing electric transmission line, this will provide a right-of-way 350 feet in width.

At this time, there is no evidence that additional large swaths of land will be required for utility rights-of-way; but past experience indicates a continued rapid increase in electric power demand and in gas consumption. It is probable that in the future even the high voltage transmission lines will be placed underground, and that existing utility, rail, and highway rights-of-way will be utilized to accommodate new lines.

The utility rights-of-way offer unusual opportunities that are often overlooked for additional use by the communities. The alignments are now widely used for agricultural purposes and there are some recreational uses. The alignments also offer the possibility of additional uses for pedestrian ways, bicycle paths and equestrian trails. The rights-of-way of the underground gas and oil transmission lines offer more aesthetic possibilities for such trails, and these easements should receive additional attention in order to improve their design as multi-purpose facilities.

THE CIRCULATION PLAN

The Circulation Plan accompanying this Land Use Plan is an updating of the Findings and Recommendations of the Somerset County Master Plan of Transportation, adopted December 3, 1965. In this report, more detailed consideration has been given to the relationship of the specific categories of land use development and transportation facilities.

The major highways which allow a high degree of accessibility to contiguous land fronting on the highways have been designated as expressways. The amount of control exercised over access to the expressway can be subject to considerable variation; but, for the most part these controls on existing expressways are more notable in their absence. An example of an undivided highway that serves as an expressway, albeit poorly, is U.S. Route 206 in Hillsborough with complete access permitted. An example of a major highway, an expressway which for the most part handles adequately an intermixture of land access traffic and through traffic, is the dualized State Highway U.S. 202 west of the Somerville Circle. Here, the low intensity of contiguous traffic generators is decisive, a condition which is temporary and subject to imminent change. An inadequate handling of an admixture of land access traffic and through traffic is exemplified by another major expressway, the dualized U.S. Route 22, east of Green Brook.

U.S. Route 22 is a major highway where the State Department of Transportation has commissioned plans which would entail three moving lanes of traffic, shoulders, and additional grade separated interchanges. However, the Department has not finalized any plans, perhaps because the admixture of through traffic and business traffic presents serious problems and the Department always faces problems allocating priorities for limited funds. There may well not be any good solution for U.S. Route 22 because of the need of the road to serve two masters; first, the through traffic, and second, the ever increasing commercialization called for by zoning. Perhaps the

use of a striated concrete division between third acceleration and deceleration lanes would help. This would cause the tires to sing and vibrate a warning for the vehicle changing lanes as it now does along sectors of U.S. Route 46.

While most express highways cannot evolve into limited access freeways, there appears to be general agreement among traffic experts that controlled access on major highways is essential. The status of express highways that are deteriorating into extended commercial streets has received considerable attention. This response has taken many forms but there would appear to be agreement in principle, if not in practice, that the road will handle traffic flows in more suitable fashion—more safely, more economically, and less frustrating—if the road conforms to the specifications for an express highway, or is allowed to become a business street. The mixture of high speed through traffic with local slow moving traffic is a deadly concoction.

In Somerset County, probably the greatest challenge to State transportation planners and local land use planners is the evolution of U.S. Route 206 between the Route 92 Freeway in southern Montgomery north to, and including, the Somerville Circle. There is ample opportunity to introduce design features and land use controls along this route which will prevent at least the worst features of U.S. Route 22. Unless there is more coherent advance planning on both levels, this would seem to be the inevitable goal toward which U.S. Route 206 is descending. In no place is the need for adequate setback and advance right-of-way acquisition more evident.



THE PLAN: Imperatives and Constraints

We have reached a point in this State where the zoning criteria in many municipalities is twofold: dwelling units of all kinds must be curtailed; industrial development must be encouraged. This is a far cry from the original concept of municipal zoning and planning.

Our prime fiscal dependence upon real estate taxation which is required to meet the needs of our citizens is a substantial factor in creating a stagnation and misuse of our zoning and planning policies.

Whatever the reasons for the perversion of zoning and planning laws that exists today, I am convinced that we cannot afford the luxury of continuing the status quo in this area.

William T. Cahill

From "A Blueprint For Housing In New Jersey"

December 7, 1970

The Land Use Plan of Somerset County must take cognizance of national and regional trends that indicate development pressures. Somerset County comprises one-thousandth of the nation's population, and, as such, interacts as only a small cog in national development trends. These are, however, blind forces which are relatively immutable. Exclusive of major catastrophe, there will be a growth of about one-third in the number of households in the United States by 1985. This projection by the Bureau of the Census requires no crystal ball, but merely the projection of the existing death rates and the maturing of children now in our school system.

There has been a rise in the number of first marriage households in the late Sixties and this will accelerate by ninety percent over the period 1960-1980. This growth in young households must inevitably produce another baby boom, despite counteracting factors which appear to mitigate against large families. The actual number of births have not as yet shown an increase in Somerset County, in fact the record of the Sixties shows a declining number of births, but the national trend has turned about and there can be no doubt the Seventies will show a marked increase in births. Even an average of two children per family, while eventually resulting in a decline in population, would result in an increased population and a growing number of births over the next decades.

The decline in births during the Sixties was primarily the after effect of the low birth rate during the Great Depression of the Thirties, along with later marriages and postponed family formation. From census data it would appear that this decline in the number of births reached its low point in the United States in 1968.

The Bureau of the Census has estimated the parameters of growth to the year 2000 as between 80 and 160 million more Americans. If the lower figure proves more accurate, it would still mean over the next three decades—the normal life of a home mortgage—there will be a need to increase our nation's housing stock by fifty per cent.

POPULATION DISTRIBUTION

The concatenation of economic, political, social, and governmental forces are now channeling increased population growth to the outlying, low density suburbs of metropolitan areas. While most of the older cities have lost population or gained less population than the national norm, the metropolitan areas continued to grow rapidly.

Over the past thirty years the vast rural sections of our country have lost population due to outmigration. In the midst of the rapidly growing suburbs it is at times difficult to realize that over half the counties in the United States have lost population during this period. This pattern of development is sharply accentuated in New Jersey with all the cities remaining stable or losing population from 1960-1970. There also has been a small decline in some of the more distant rural townships. Thus, national factors that account for growth in the suburban rings of the metropolitan areas are also evident in New Jersey and Somerset County.

The only sectors of the population that are not fully responding to this trend are the elderly, the poor, and the Negro population. While there has been some dispersion of these groups into suburban areas, they tend to be under-represented. The cities, on the other hand, have a growing proportion of the poor, the elderly, and especially the Negro population. There is some evidence of migration of these groups into older suburbs, but

velopment trends, we have indicated a moderate growth pattern for the built-up boroughs and a very high increase for the large townships.

The County Planning Board in advocating nodes or centers of development is not unaware of the forces accentuating dispersion and strip development along every linear foot of state highway and county road. This focus on regional, community, and neighborhood centers is indicated where an interaction and a complementary relationship with a variety of land uses can be attained. The Land Use Plan, in order to gain enactment, must be realistic enough to gain substantial acceptance of the citizenry, the marketplace, and the municipal authorities.

Aside from a comprehensive plan for the proper allocation and coordination of land development and the balance between ecological requirements and urbanization, the most critical component of development at this stage is housing. In 1970, Somerset County published a Report, "Housing and Jobs", which outlines housing goals and some of the policies required to attain these goals. Specifically, the Report indicated a need for 27,500 units during the Seventies—about 2,500 units per year during the first five years and 3,000 units per year during the last half of the decade.

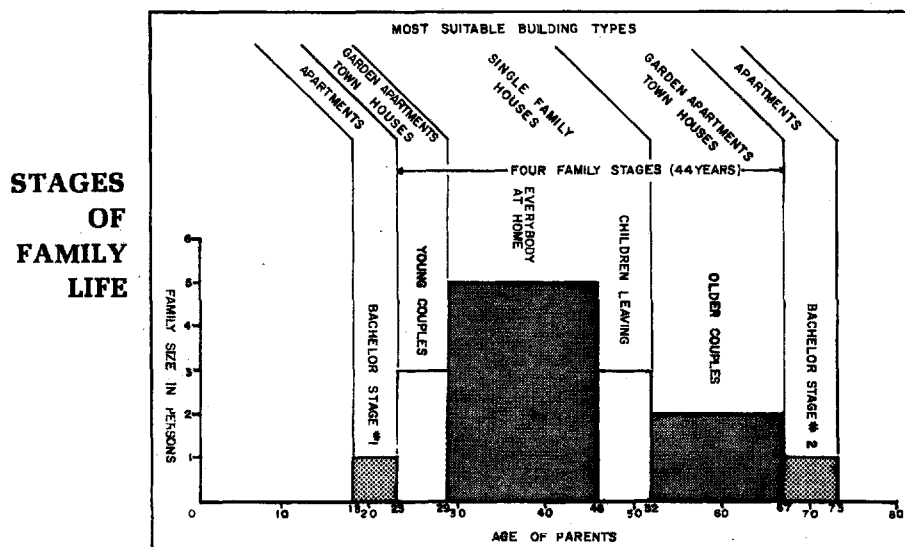
The Report stressed these goals would not be attained unless the Federal Government was able to drastically increase the availability of money and decrease the cost of money. It indicated that under present federal housing programs the vast majority of wage and salary employees, not just lower income or minority groups, are being priced out of the new housing market.

The County Planning Board stressed the need for the State of New Jersey to modify the property tax so that municipalities will receive benefits for residential development. It further stated that the

present property tax is strangling the possibility of rational community development and is a major obstacle to the housing requirements of the citizenry.

On the local level, the County Planning Board has advocated greater attention be given to providing a variety of community development and of housing types, including a range of housing to meet needs of all sectors of the population. Also, worthy of consideration in areas with a full range of utilities are mobile home parks. The modern mobile home in a well designed landscaped site can be an asset to the community. Community design should include all densities of housing and allow for clustering of residential and community facilities. Community facilities and easy accessibility to available jobs are essential especially to lower income groups, black and white.

The design of housing in relation to various age groups is also of critical importance. The accompanying chart, Stages of Family Life, is derived from a chart made by Charles Agle, Planning Consultant, in a report for Bedminster Township entitled, "Family Sizes and Building Types: Zoning". This Report was distributed to all municipalities in Somerset County with the permission of Mr. Agle and Bedminster Township. The chart illustrates a basic postulate of the Master Plan of Land Use, that the stages of the life cycle require a variety of housing types—apartments, garden apartments, townhouses, and single family houses. Another major postulate is that the arrangement of dwellings should also exhibit a wide choice of types of settlement, from high density clusters of apartments to isolated rural homesteads in low density settings. While some aspects of the implementation of the Somerset County Master Plan of Land Use are dependent upon the Federal and State government, there is considerable latitude for local action in determining the location, as well as the type and quality of development.



SOMERSET REGIONAL CENTER

The development of a regional center at a focal point of the major transportation arterials is already taking form in the vicinity of Somerville. The Somerset Regional Center's strength as a future economic and cultural center for hundreds of thousands of persons is yet to be determined; but the emphasis of the County Master Plan is to define this capacity and advocate overall structural solutions so that the quality of development will function to enhance the design of this regional center.

Essential to the development of the Regional Center is the attraction of facilities which might otherwise become dispersed in continuous highway strip development. Equally important is the exclusion of shoddy development and the upgrading of the existing business areas. The placing of establishments surrounded by a sea of black top, and with no regard to the intimate blending of open space with urbanization is the areas' greatest deficit. Sprawling random commercialization may become the dominant theme of the Regional Center if the short term ratable consciousness of the public prevails.

Fundamental to all consideration of central core activities are the transportation foci and the arterial roads radiating to place most sections of the County within a thirty minute travel time of the Regional Center. Key to the functioning of the Regional Center are transportation improvements in Somerville and at the Somerville Circle. Other areas where the Master Plan has indicated a need for improvement relate to the upgrading of Route 206 to the south and the need for a I287-I95 connector to separate through traffic from traffic with a local destination. The construction of bus and railroad passenger depot facilities is another facet of the Master Plan.

However, the existing network of transportation facilities will suffice to intensify development of the Regional Center. Without a series of major and minor improvements, traffic congestion will grow.

The Somerville area continues to be a major retail center in Somerset County, along with intensive commercial development along U.S. Route 22 in eastern Somerset. The Somerset Regional Center, including Somerville and portions of Bridgewater and Raritan, in aggregate provides the greatest volume and variety of commercial goods and services despite the absence of a major department store. The market availability

for a major regional shopping center in this area has existed for some years but there has been a hesitancy upon the part of retailers to move to the outer fringe of the metropolis. When the consciousness arrives that the market is available there will be a splurge of retail commercial development. Since the retail development will not be confined to a single central business district, there is need to try to better integrate the haphazard strip commercialization with more unified traffic circulation system.

SOMERSET COUNTY--POPULATION AHEAD

Municipality	1960	1970	1980	1990	2000
Bedminster Twp.	2,322	2,597	4,000	8,000	7,000
Bernards Twp.	8,018	13,305	19,000	24,000	30,000
Bernardsville	5,515	8,562	8,000	9,000	10,000
Bound Brook	10,283	10,450	13,000	16,000	16,000
Branchburg Twp.	3,741	5,742	12,000	18,000	25,000
Bridgewater Twp.	15,769	30,235	40,000	45,000	50,000
Far Hills	702	790	1,500	2,000	2,000
Franklin Twp.	19,858	30,389	45,000	55,000	65,000
Green Brook Twp.	3,622	4,302	6,000	8,000	8,000
Hillsborough Twp.	7,594	11,061	22,000	48,000	45,000
Manville	10,895	15,029	15,000	18,000	17,000
Millstone	408	630	1,000	1,500	1,500
Montgomery Twp.	3,851	6,353	12,000	18,000	22,000
North Plainfield	16,983	21,796	25,000	27,000	28,000
Peapack and Gladstone	1,804	1,924	3,000	4,000	5,000
Raritan	6,137	8,691	8,000	9,000	10,000
Rocky Hill	528	617	1,500	1,500	1,500
Somerville	12,438	13,332	18,000	18,000	20,000
South Bound Brook	3,626	4,525	6,000	7,000	7,000
Warren Twp.	5,386	8,592	15,000	20,000	22,000
Watchung	3,312	4,750	7,000	8,000	8,000
County Total	143,913	198,372	280,000	350,000	400,000

Note: Data for 1960 and 1970 are from the Bureau of the Census. The estimates for 1980, 1990 and the year 2000 were prepared by the Somerset County Planning Board. Population forecasts are at best venturesome, and are subject to the vicissitudes of war, recession, federal monetary policies, inflation, and population control. These forecasts are, therefore, an extrapolation of present trends.

Prepared by: Somerset County Planning Board, January 1971.

To a considerable extent the highway corridors and private vehicular oriented shopping provides automobile linkage readily integrating various quadrants of the Regional Center. At the same time these corridors divide the Center for pedestrian traffic and, in effect, limit access to portions of the Center to the private motor vehicle. With increased traffic flows and increased residential densities, accessibility for those without cars takes on added difficulties and hazards. Increased residential densities will probably increase the number of elderly and perhaps also the proportion of other sectors of the population that do not have access to an automobile. The Regional Center can continue to be structured to discourage pedestrian flows and provide only rudimentary public transportation; or with the development of a

COMMUNITY DEVELOPMENT

We are a nation of communities, cities, and rural settlements, of urban areas and suburbs. Often the planned development of a county, a region, or a state offers rather limited scales of development. In much of New Jersey, and Somerset County in particular, this limitation has been standardized by the typical subdivision or the garden apartment, with community facilities more often an afterthought spliced in along the highway in strip development.

The Somerset County Master Plan of Land Use advocates that land development take place on a much more variegated level than past development practices. Several related factors lead to the need for more variety of development. There is the need for more free choice so that the citizen looking for new housing is not straitjacketed into only one kind of development. Complementing this is the fact that the cost of housing at low residential densities has become prohibitive for the majority of our citizens.

Perhaps of more importance is the fact that we now realize land resources of the State of New Jersey and of Somerset County are finite and are rapidly being consumed. All estimates of the population growth of Somerset County indicate that the available land will be utilized by the year 2000 under present land development practices. The amount of open rural landscape remaining will be virtually nonexistent unless we are able to build communities of higher density. With the normal attrition of residentially zoned land to other uses, especially industrial and institutional uses, Somerset County will not be able to accommodate all of its population growth on one acre or larger lots.

Surveys of residents of new residential developments have indicated that the type of community is often an important consideration in the choice of housing. The asset of many residential subdivisions is the protection afforded young children from motor vehicle traffic as well as the outdoor living facilities. As the range of activities of children increase with age, the accessibility of community oriented facilities is frequently lacking. The very scatteration of development haphazardly placed across the County mitigates against any sense of community, and limits the activities of all age groups.

While low density agricultural communities do have deeply bases ties, these relationships are usually developed over long periods and relate

to the common interest in farming and are not analogous to subdivision development.

The development of relatively compact communities presents the possibility of offering commercial, cultural, educational, and recreational facilities within a reasonable distance from the home. The Little Leaguers then can reach the ball field on foot or by bicycle, while the shopping facilities also are then available to sectors of the population that cannot utilize a car.

Each of the proposed eleven areas of Community Development will of course evolve with different characteristics, dependent on the private market and upon municipal land use policy. Probably the most characteristic feature will be the tendency toward residential development at higher densities. It is expected that the Community sizes will vary from five to fifty thousand persons and in overall densities varying from five to fifteen families per acre and that this concentration of development will take place on approximately six per cent of the County's land area. While very few high rise apartments are anticipated, there should be considerable low rise and garden apartments. The greater utilization of townhouses, or attached single family houses also appears to be a promising form of development. It is doubtful whether a major expansion of small lot single family houses would constitute the best utilization of land in these communities.

There are basically two major variants of areas designated for community development; five of the areas are high density areas with relatively little vacant land, while six areas are mainly open areas which offer more opportunity for planned residential communities.

In eastern Somerset County, at the northern edge of the environs of Plainfield, within North Plainfield and Watchung, there is a high density community built abreast both sides of Route 22. This community will undoubtedly continue to develop with a large retail component serving a widespread region based on portions of Somerset, Middlesex, and Union Counties. External vehicular accessibility is limited somewhat by the congestion on Route 22. State Highway proposals for widening Route 22 could, if properly keyed to retail commercial development, improve accessibility. The removal of through traffic, especially over-the-road trucking, from U.S. Route 22 upon the completion of I-78, is essential to the proper functioning and expansion of retail facilities. The completion of I-78 will tax the capacity of the con-

been benefited by the construction of I-287. Now, at least some of the high speed through traffic avoids the downtown sector that has spread as a commercial strip north along U.S. Route 202 from Olcott Square. The State Department of Transportation has been considering plans for improving this highway, and the municipalities and the county have evidenced their concern that the design of the improvements relate to the community rather than to criteria for a major highway. Unfortunately, much of the commercial development is haphazard and represents little more than typical strip highway development. The need for a better circulation pattern in the business district is evident and is recognized by the community, but there is also a need for a better pedestrian circulation plan. New residential development in the community, particularly apartments for elderly, should offer pedestrian access to the shops. This Bernardsville-Bernards Community is the only older center without any bus transportation, although it has good commuter train service. A bus service linking Bernardsville with Morristown and Somerville is a worthwhile goal that may be attainable with continued growth of the area and with greater concern on the part of the State of New Jersey's Department of Transportation.

THE NEW COMMUNITY DEVELOPMENTS

The Hillsborough Community is still basically on the drawing boards of the architects and the engineers, guided by the Hillsborough Planning Board under a Planned Unit Development ordinance. This ordinance provides for a mixture of land uses and for some variety in types of residential dwellings. It provides residential balance to the areas zoned for exclusive industrial development. The Hillsborough Master Plan has designated this area as the high density core of the Township.

The area presently has some single family homes, neighborhood shopping facilities, and schools. The existing two lane U.S. Route 206 is serving the area and there is no bus or rail transportation in this Community. However, Interstate Route 95 is scheduled to interchange with County Route 514 (Amwell Road) at the gateway to the Community. There are still many decisions to be made on the types of community facilities required. There is need to schedule improvements for U.S. Route 206 and to set a timetable for the construction of I-95. Without these highway improvements existing roads will be overwhelmed. Probably the most significant unresolved question facing the development of the Hillsborough Community Center is the location of a "downtown" regional shopping center, along with a pedestrian circulation pattern. The avoidance of the highway strip commercial development in favor of a large,

well-designed shopping center that serves as a community center set back in depth from the highway is critical to the community.

There are five other new Community Development Centers indicated in the Master Plan of Land Use. One area is located in Hillsborough and Montgomery at Belle Mead centered on the Interstate Route 95 and U.S. 206 interchange, and also served by the Reading Railroad passenger station. Another area is located in Montgomery and Rocky Hill just north of Princeton Township at the intersection of U.S. Route 206 and Route 518. Another Community Development Center is designated for Franklin Township which has an older community center developing in the Somerset district of the Township. The development of the Franklin Park area along Route 27 into a Community Center is related to land developments in South Brunswick Township. In Branchburg a Community Development area has been designated along U.S. Route 202 in the vicinity of Old York Road. In Warren Township at the Interstate Route 78 interchange with King George Road, there is a Community Development area designated. The development of this area is dependent upon the completion of Interstate Route 78 to the east.

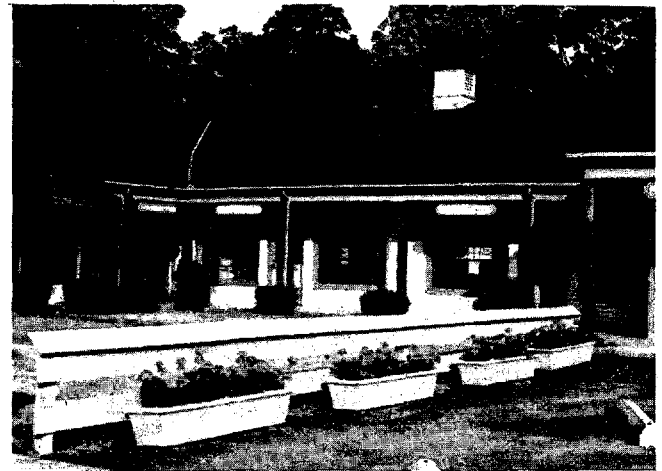
All of these areas are in a pre-embryonic form and their development depends upon private capital investments and on the degree of commitment of the local municipalities and the citizens thereof to Community Development. As in all facets of this Master Plan, there are many local and regional forces, and private and public forces which will determine the amount of commitment and modification to the concept of clustered Community Development. The Plan is merely the first step, but the alternative is commercial and residential sprawl which is omnipresent in most urban areas. In most of these new areas there is in existence the precursor of strip commercial development that may preclude the development of an integrated commercial center.

In all the Community Development Areas and, for that matter, also very decisive to any of the areas developing at a higher density or with commercial land use, the requirement for a comprehensive site plan in each of the Areas is critical. In areas of higher densities and in areas with large commercial developments, it is essential for the municipality to design for the interplay of open space and urban cluster, and provide for the interlocking of land uses in a landscaped design. Increased density also results in increased complexity of traffic patterns which call for advanced planning. Finally, new structures at increased densities must be in accord with their neighboring structures. To prevent a hodgepodge of buildings, concepts of architectural style must be considered as essential to the Community Development Plan.

able highway by-passes can be programmed, such as the Liberty Corner by-pass, then the reduction of speeds on existing roads may be possible. The County Planning Board and the County Engineer have, over the years, been engaged in this process, especially since the adoption of the Somerset County Master Plan of Transportation in 1965. Since then some additional problem areas have been under consideration, and the County will continue to respond to local interests in these matters.

Where the construction of by-passes is not feasible, planning for new residential and commercial development should endeavor to create off-center locations for Village Squares and for neighborhood shopping facilities. An example of such development is the Far Hills Country Mall, set back from U.S. Route 202. This method of development is advantageous because much greater flexibility in design can be achieved, when contrasted with strip commercial development along a thoroughfare. Also, the hazardous mire of pedestrian traffic and through vehicular traffic is eliminated. The aesthetic setting and environment, including a reduction in air pollutants to the neighboring facilities and establishments, is also an asset.

Probably most critical to the preservation and continued development of the Villages in Somerset County is the formalization of at least an outline of an overall site plan including considerations of architectural style in each area. The only Village which has somewhat defined its position relative to this concept is in Millstone Borough with its zoning of a Historical District. Millstone has also designated a highway by-pass to simplify future traffic movements and the Borough has also outlined an area for park development. However, there has been no comprehensive architectural site plan for integrating this historic area with the overall development of the Village. As of now, the Historical District is very limited and most of the new development adjacent to this district has but one requirement, the acre lot and attendant building codes.

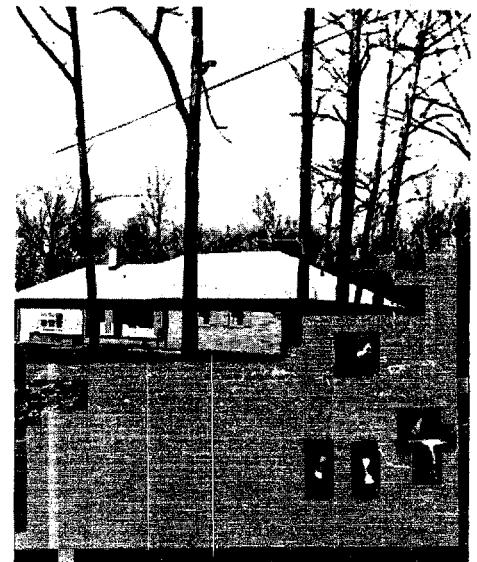
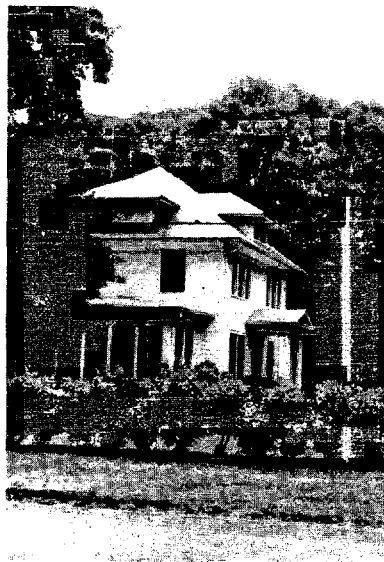


The quality of life in Somerset County, the character of the County, will be demeaned if the Kingstons and Peapack and Gladstones are absorbed into a uniform development pattern. If every gas station and every supermarket must be stamped out in a pattern reflecting a national image and a fixed architectural style, then the character of each neighborhood takes on the appearance ordained by a universal cookie cutter. Equally invalid would be the requirement that all the Villages be developed on a pseudo-colonial style.

The attractiveness of the Villages in Somerset County is not merely in the architectural attractiveness of some of the housing but also consists of the arrangement and compact inter-relationship of the structure of a village set in an open space surrounding. The new housing development in the vicinity of the Village should endeavor to replicate both the compact development and the open space settings. In this process, apartment development may be an optional form of development to the smaller lots which also would be valid in this context. Large tracts of garden apartments or single family housing often present a monotonous uniformity that would clash with the architectural style of the Village. The technique of a variety of different stylings, with varying numbers and groupings of townhouses intermingled with detached houses, is worthy of consideration.

New analytic approaches, as well as accumulated experience of recent years, now show that not only high densities but also very low densities may lead to various pathologic conditions. We should now be aware that there are thresholds of stimulation in both directions that must be considered.

Dr. Lawrence D. Mann
Professor and Chairman, Department of Urban Planning and
Policy Development, Livingston College



By way of contrast, Franklin Township developed according to its Master Plan on the basis of smaller lots, (again for families of above average income) but all the lots are provided with sewers and water and to some extent with school sites. Unfortunately, there is insufficient park and recreational space as an integral part of this development. While developing at a rapid pace, Franklin was able to channel its development into the area most readily and economically available for development. The remaining portions of the Township were not so immediately suitable for development and have larger lot zoning which has performed the function of preserving open space and preventing scatteration. Thus, Franklin has been able to accommodate large residential developments over the last decade with a lower rate of tax increases, despite the fact that industrial ratables have been a small portion of the tax base. The County Land Use Plan advocates a continuance of these policies for Franklin Township, but with greater attention to design solutions for areas of higher density. In one case in Franklin Township the courts specified the design for garden apartments, allowing no possibility for a better design solution. If municipalities do not meet the housing needs of the people we will undoubtedly see more cases of "planning" by judicial edict.

The County Land Use Plan, in allocating a substantial segment of the land area, over one-third to the Residential Neighborhood category, is not advocating the self-same continuance of the one to two acre lot by lot development pattern but is advocating overall development densities with differing development patterns. In effect, wherever feasible, the pattern of development

should be modified to provide clusters of residential neighborhoods, with open areas integrally related to these neighborhood clusters. Hillsborough Township has provided an excellent prototype in the Village Green subdivision where lot sizes were reduced to approximately one-third of an acre, while the overall tract was developed at a density of one dwelling unit per acre. The remaining open area became permanent public open space, some for athletic activities and some in natural areas. Another method of preserving the open space is to place the land in a perpetual trust, in the ownership of a Home Owners Association. The technique of clustering, while preserving overall density patterns, is well established in planning and conservationist circles and has been supported by court decision. The enactment of a Planned Unit Development Ordinance is also a useful approach toward the creation of neighborhood clusters.

There are large areas in the Residential Neighborhood category that would be adaptable to clustering and, given larger tracts, there would be more flexibility for greater design innovation. The open space areas could be larger and related to neighborhood public facilities. With a greater understanding on the part of the courts of the environmental issue and need for proper utilities, in particular sanitary sewers, there would be more substance to a municipal decision to phase development in accord with utility development. The phasing of development over a period of years in accord with overall planning of all facilities would answer the allegation that cluster development was too attractive to the home buyers and therefore to be avoided.

RURAL SETTLEMENT

In a number of cases, courts have prohibited townships from using large areas, for example five acres, as the minimum size for building lots on the grounds that this is "snob zoning" designed to keep out the poor.

By prohibiting an obviously unacceptable social policy, the courts have been forced to eliminate the one possible protection for portions of outlying areas as open countryside. If the townships located in areas that are readily accessible to the open countryside were to include in their zoning ordinances both a minimum lot size (say ten acres in some areas) to preserve essentially natural features, and a maximum in other areas to provide lots just large enough for immediate family needs, the social, practical and environmental purposes of each would combine to provide an environmentally balanced community. The courts might take a new and different view of such zoning.

Edmund N. Bacon
From "7 Principles For An Urban Land Policy"
April, 1971

The areas of Rural Settlement comprise approximately twenty-three per cent of the total County area and are located in nine of the municipalities of Somerset County. As in the case of many other aspects of the County Land Use Plan, this proposal is the result of precepts of land use planning evolving on the municipal and community level. There is a close relationship between large acreage zoning (three acres and larger) and the area designated Rural Settlement. However, there are several areas where higher densities over and above the existing zoning are advocated, and also there are areas where lower densities are suggested.

Probably the question most frequently posed is whether it is realistic to assume any area of northern New Jersey can, or should, develop at the very low density of lot sizes averaging well over three acres. The desires of the communities have been embodied in land use regulations which have existed in some cases for decades and stem mainly from a desire of the landholder to preserve the countryside. The visual attractiveness of much of the area is undeniable, but there are other considerations that are equally or more important.

The areas designated Rural Settlement are all directly related to the Raritan River basin which has become New Jersey's major source of potable water. Spruce Run and Round Valley are already operational in the headwaters of the Raritan, and two additional reservoir sites are under acquisition, one at the Confluence of the North and South Branches of the Raritan River and the other in Franklin Township at Six Mile Run. All these reservoirs deliver, or will deliver, potable water

via the Raritan and Millstone for north-central New Jersey. Fundamentally, if the headwaters and the runoff to these water supply facilities are not to be contaminated, there must need be highly restricted land development controls. The most suitable method of achieving this effect is to restrain and control intensive economic and residential development. Without these controls, the water resources of New Jersey will become so polluted as to force the State into a very uneconomic water purification program or radically restrict all economic and residential development in northern New Jersey.

There is an additional consideration that is related to the viability of metropolitan regions. From a number of points of view—water resources, air quality, recreational areas, waste disposal, costs of utilities and services, and transportation costs—there is a need to limit the growth of the spread city metropolitan region and bring about increased densities in regional centers, communities and neighborhoods. The Rural Settlement areas are in most cases contiguous to areas in Hunterdon, Mercer and Morris Counties which are prime areas for the preservation of a Green Belt. The Open Space category of the County Land Use Plan proposed a vastly expanded area of public open space serving the same purposes, much of which will prove difficult to acquire. Even if it was altogether desirable, the acquisition of all the Rural Settlement area for public open space would prove fiscally unfeasible. If we can protect the rural qualities of this area by zoning, an attractive dimension of open space will have been achieved, which is different in character than parkland but as attractive in its own way and with-

ECONOMIC DEVELOPMENT

The Economic Development category of the Somerset County Master Plan of Land Use designated only those areas recommended for exclusive economic development, while most development categories anticipate a variety of interacting land uses. A comparison of the Composite Zoning Map and mapped Master Plan of Land Use illustrates the close correspondence between municipal and county planning. There are areas of industrially zoned land that have been incorporated in the areas designated as Community Development and in the Somerset Regional Center. A comparison of the tables tallying zoned areas and the recommended area for Economic Development would appear to indicate a slight reduction in the amount of land allocated for economic utilization as compared with Industrial and Special Use Zoning (Research and Office).

This is more apparent than real because, aside from significant areas in the more intensive centers, the zoning is often not exclusive and frequently permits a wider range of land uses. There have been some individually significant recommendations for enlargements or retrenchments for this category, but the major deletion from Economic Development has been deletions of flood plains along the main stream of the Raritan River and along the South Branch. Associated with these deletions are several adjacent areas that have been suggested for the Open Space and Rural Residential categories.

It is evident from an examination of the map, Master Plan of Land Use, that most of the land allocated for Economic Development is in the large townships and is closely related to and dependent on the highway and railway systems. Well over ninety per cent of the land presents no topographic problems whatsoever for new development. The remaining ten per cent is mainly existing quarrying operations and, even where there are a few sites with rough topography or with drainage problems, none of the sites are unmarketable. The Master Plan, by concentrating development in the most suitable corridor, has closely adhered to criteria that requires the availability of all utilities on the basis of sewer and water planning.

There is a close relationship drawn between the higher densities of residential development along the same transportation corridors where the major areas of employment are concentrated. There are also smaller nodes of Economic Develop-

ment which are keyed to county arterials and at times related to state highway routes and rail spurs. These development corridors tend to be less intense than the major corridors which are associated with the interstate freeway system and the major highways. Probably the greatest concentration of economic development as measured by building square footage, tax ratables, or employment will continue to be located in Bridgewater Township, primarily because of its geographical location in relation to transportation facilities. Nevertheless, this dominance of Bridgewater will continue to decline as the other large townships begin to attract more industrial establishments. While the spread of industrial development will pervade most sections of the County, as has been the case of residential development, the two largest municipalities in area—Hillsborough and Franklin—are destined to approach Bridgewater as major areas of employment concentration. These municipalities are also scheduled by the County Master Plan to sustain rapid and large absolute increases in population, brought about by the construction of both single family housing and apartments.

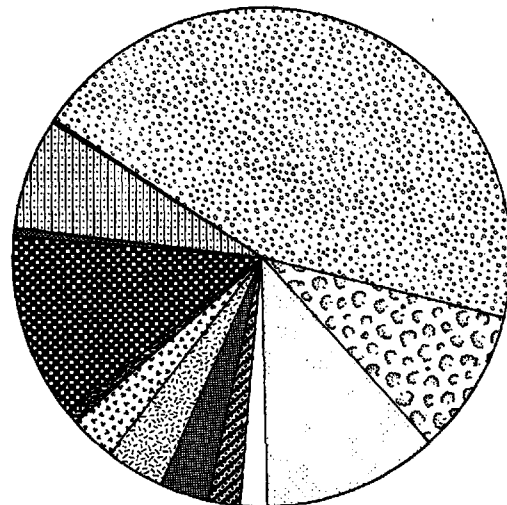
It is important to recognize that less than half, between thirty-five and forty per cent, of the total employment in Somerset County will be concentrated in the twelve per cent of the land area allocated to Economic Development. The Somerset Regional Center and the various areas of Community Development have approximately eight per cent of the County's total area and they will contain about forty per cent of the total employment. Thus, while the Economic Development areas will serve most of the basic industrial employment, most of the service employment will tend to be even more concentrated at the commercial centers. Service and Office employment is scheduled to grow at a much faster rate than the basic industrial or manufacturing labor force, but this disparity in growth in Somerset County will not be as accentuated as the national trend. The availability of prime industrial tracts in Somerset, along with its excellent geographical location, will attract a higher proportion of industrial establishments. By way of contrast, the lack of a large dominant commercial center has tended to restrict growth of service and office employment. Thus, even with the development of a large Somerset Regional Center, there will be a residual lag in employment growth in these categories.

density of residential development and the limited capacity for disposal of liquid and solid waste preclude this type of heavy industry even though there is sufficient land available. Availability of industrial land is a factor in the type of industry and the quantity of employment to be located at the given site. There can be no absolute numbers for employed persons per acre because this data will vary widely, primarily with the type of industrial development. While larger areas, large metropolitan regions, states, and nations, can adequately forecast the mix of industrial development, a small component of a large industrial region can only forecast industrial demand within wide latitudes. Where industrial demand is strong, as in Somerset County, this offers the opportunity to balance off industrial and residential growth to some extent. The allocation of twelve per cent of the land area for Economic Development is related to the expected growth in industrial employment in tune with the present outlook of management to acquire large sites for new plants.

Very large new industrial factories with employment in the tens of thousands, or even in many thousands, appear to be on the decline, while concentration of white collar, research, and especially office employment will increase, especially in Somerset County.

Land values and tax rates on vacant industrial land can have a significant effect on the type of industrial development attracted on one hand, and in the holding of land for speculative gain on the other. A large warehouse facility with bulk storage will utilize a high number of acres per person. An electronics firm may, on the other hand, utilize a multi-story building located on a small site and employ a large number of persons per acre. The amount of land required in relation to capital investment and current operating expenses sets up a different equation for site costs in each industry.

There is no doubt that only a few existing industrial sites are completely utilized in the sense that the zoning requirements will not permit further development, or that the parking requirements for employees have taxed the capacity of the site. Somerset County has been fortunate in the fine spirit shown by many industries, who wish to locate an attractive structure on a landscaped site to enhance community appearance and corporate image. Not to be overlooked is the fact that undeveloped land is often a small cost factor when posed against other costs of production, and the cost appears to be smaller once initial investment has been made; therefore, the tendency to invest in larger sites than foreseeable requirement would mandate becomes exemplary management policy. This is partially a hedge against the unexpected need to expand and perhaps, in some cases, a desire to speculate in land values. The maintenance of elbow room for future expansion is a factor not always measurable in simple economic terms. Yet, with all indicators pointing to continued increases in land values, no large corporation will economize with a site that only meets their near term requirements. In any event, this is a factor in the land allocation process of comprehensive planning, and tends to increase the amount of land required to accommodate industrial growth.

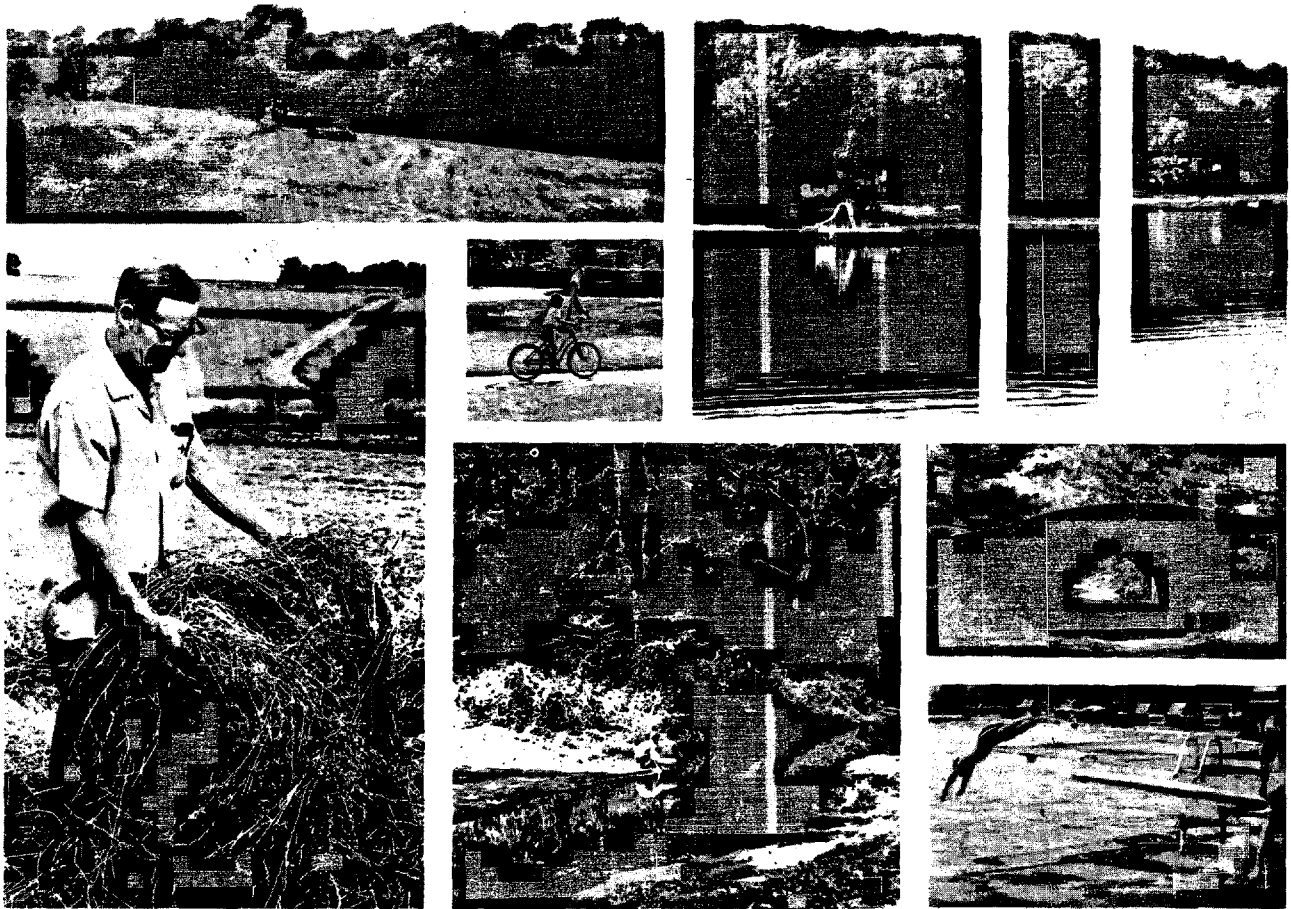


COMPOSITE ZONING

1.8	10 Ac.	2,500 to 5,000 sq. ft.
11.1	5 Ac.	MULTI-DWELLING
3.6	3 Ac.	P.U.D. (PLANNED UNIT DEVELOPMENT)
1 to 2 Ac.		BUSINESS
20,001 to 40,000 sq. ft.		SPECIAL USE
10,001 to 20,000 sq. ft.		INDUSTRIAL
5,001 to 10,000 sq. ft.		

PREPARED BY SOMERSET COUNTY PLANNING BOARD 1970





—the Millstone Valley Park, Six Mile Run Reservoir site in Franklin Township, and the Confluence Reservoir site in Branchburg, Bridgewater, and Hillsborough Townships. The Somerset County Park Commission has assigned priority to acquisition of parkland in the Sourland Mountains and the Watchung Mountains. The preservation of open space in the vicinity of Ravine Lake and in the upper Passaic does not appear to be critical under existing ownership and zoning. Both of these areas have been suggested as reservoir sites by the State Division of Water Resources, but there is no program for acquisition.

Another suggested reservoir site is along the Dead River and in the Passaic Valley above Millington. Whether or not this area proves feasible for a reservoir as the Army Corps of Engineers has suggested, there is no doubt that most of the area is flood plain and unsuitable for development.

Probably the most significant feature of the Open Space allocation of the Master Plan of Land Use is the proposal that the flood plains of the major stream valleys be reserved and protected from development. The municipality with the greatest problem of flooding, Green Brook Township, has enacted zoning protection for both the

flood plains and for excessive slopes. This can be an important method in the struggle to provide an ecological balance between development and open area allocated to drainage requirements. The Somerset County Planning Board has endorsed legislation which would provide added inducements for municipal purchase of lands prone to flooding. If another Green Acres program is funded, there is the hope that grants equal to seventy-five per cent of the cost of site acquisition of flood plains will be available.

The Open Space element of the Land Use Plan is based upon the assets of the natural features of Somerset County. Some of these assets, for example the ridgeline of the First Range of the Watchung Mountains, have been developed to such an extent that only a portion of this area is designated for open space preservation. It is proposed to develop a trail along the top of the second range of the Watchung Mountains from the County border at the Watchung Mountain Reservation of the Union County Park Commission, and thence westward to an Overlook off I-78 being developed by the State Department of Transportation on the most westerly ridge of the Watchungs. A portion of this trail would be adjacent to the Twin Brooks Golf Course. Another trail is proposed to start at