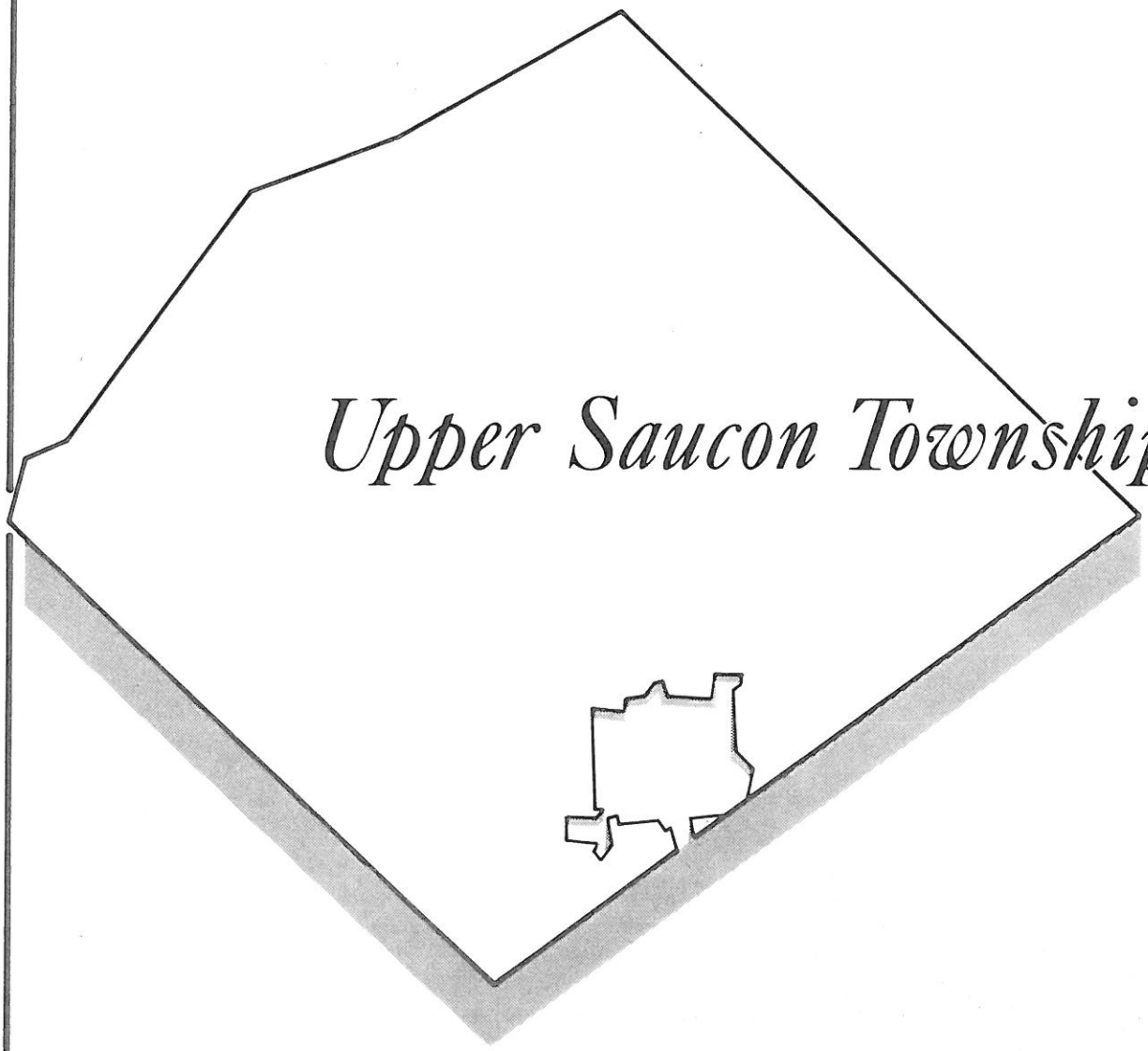
COMPREHENSIVE PLAN



Lehigh County, Pennsylvania

THE UPPER SAUCON COMPREHENSIVE PLAN

A GUIDE FOR THE PRESERVATION AND DEVELOPMENT OF UPPER SAUCON TOWNSHIP

Board of Supervisors

Donald S. Clum, Chairman
Frederick J. Lanshe
Charles V. Ruppert
Charles E. Anderson
George J. Bloeser, Jr.

Planning Commission

Allen C. Cassaday
Brent Benson
David D. Urbani
Arthur A. Gilbert
Joseph Marcin
Joseph E. Illick, Jr.
Philip W. Spaeth

Adopted July 25, 1985

Planning Consultant

Urban Research and Development Corporation
Bethlehem, Pennsylvania

CONTENTS

	PAGE
FOREWORD	i
SIGNIFICANT CONDITIONS AND TRENDS—A SUMMARY OF THE BACKGROUND FOR THE PLAN	1
FRAMEWORK FOR ACTION: THE COMPREHENSIVE PLAN	
A WORD ABOUT THE COMPREHENSIVE PLAN	10
THE PLAN'S MAJOR GOAL AND OVERALL POLICIES	12
A PLAN FOR LAND USE AND OPEN SPACE	16
Environmental Preservation Plan	16
Residential Land Use Plan	22
Commercial, Business and Industrial Plan	26
COMMUNITY FACILITIES AND SERVICES PLAN	29
CIRCULATION PLAN	34
ENERGY CONSERVATION PLAN	45
ACTION PROGRAM	49
BACKGROUND FOR THE PLAN	51

FOREWORD

PAST PLANNING

Fifteen years have passed since Upper Saucon prepared its first Comprehensive Plan. The last Comprehensive Plan guided the Township through a period of moderate change when the population increased from 6,800 to nearly 9,600. Today, 29 percent of Upper Saucon is developed. Another 65 percent of the Township land area is used for agricultural purposes, and the remaining 6 percent of the land is undeveloped.

The first Comprehensive Plan enabled the Township to provide for orderly growth and development. This updated Comprehensive Plan also intends to achieve orderly progress for the Township during the 1980s and beyond.

CHANGE

The changes that occurred between 1969 and 1984 will probably continue. Changing socioeconomic patterns, increased population, new jobs, longer life expectancy, inflation, and smaller households will cause lifestyle changes which will affect the use of land within Upper Saucon. Township officials, recognizing these changing patterns, decided to reevaluate and modify the first Comprehensive Plan.

THE NEW PLAN

This updated Comprehensive Plan has a two-fold purpose: to preserve the quality of life within Upper Saucon and to provide for the orderly growth and management of change within the Township. The Plan will serve as a guide for the development and preservation of land in Upper Saucon Township. This is possible because the Plan provides answers to most questions dealing with open space preservation, land use, highways, and public services and facilities.

While the Plan will serve as a rational guide for the use and preservation of land, it is not intended to be a rigid mold for the future. The Plan's goals and recommendations warrant continuous and thoughtful reevaluation in light of more detailed information, changing Township and Regional conditions, and new planning concepts and techniques.

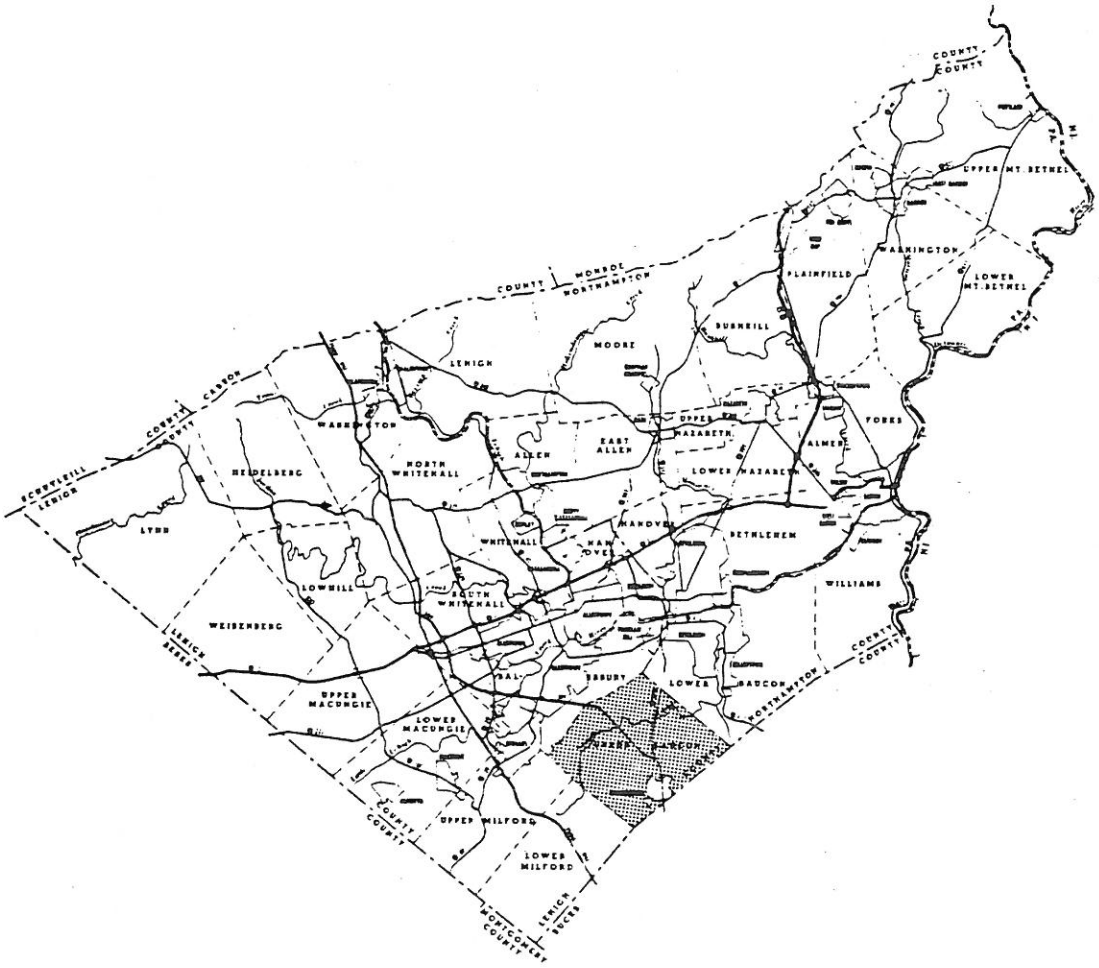
The Township Planning Commission should annually review the adopted Plan. If changes or additions are desirable, the Board of Supervisors should amend the Plan. This periodic updating will ensure that the Plan continually addresses the major concerns in the Township and continually remains a rational guide for Upper Saucon's future growth and development.

SIGNIFICANT CONDITIONS AND TRENDS--A SUMMARY OF THE BACKGROUND FOR THE PLAN

The following statements summarize the significant conditions and trends of the "Background For The Plan" found in the last section of this report. The Comprehensive Plan is partially based upon this foundation of fact.

REGIONAL SETTING

Upper Saucon is situated in the southeastern corner of Lehigh County, seven miles from the major services and employment centers of the Allentown-Bethlehem urbanized area. Upper Saucon is linked to the Lehigh Valley Region by two major highways--PA. Route 309 and PA. Route 378. Because of Upper Saucon's location and its attractive environment, the Township's present role within the Region is largely one of a residential and agricultural community.



NATURAL FEATURES OF THE LAND

Topographic Features - The Township's natural topographic features have influenced Upper Saucon's present pattern of development. Most development is concentrated on the flat to gently sloping land in the broad Saucon Creek Valley and around the Borough of Coopersburg. The steep slopes of South Mountain and Flint, Saucon, and Applebutter Hills are largely undeveloped.

Slope of the Land - The slope of the land frequently influences the type and intensity of development that a site can accommodate. The steeper the slope, the greater the potential is for storm water runoff and soil erosion problems. The costs of road construction and maintenance also increase greatly on steep slopes. Steep slopes (15%+) are best suited for open space uses or uses that occupy a small percentage of a lot. Most of the Township has a gently rolling topography with slopes of 0 to 10 percent. Areas with steep slopes over 15 percent, however, do exist along South Mountain and the several hills in the Township.

Geology - Most of the Saucon Valley area is underlain with limestone which subsurface water tends to dissolve. This has created faults, fractures and underground caverns which have caused sinkholes and provide the potential for even more. Sinkholes do exist in many locations, especially along a broad band which extends west of Route 309 and east of Limeport Pike in the vicinity of Lanark. Caverns, faults and fractures in limestone bedrock also pose a threat of groundwater pollution resulting from rapid percolation of sewage from septic tanks and stormwater discharge.

Streams and Drainage - Upper Saucon has a distinct drainage system consisting of the Saucon Creek and its tributaries. Together, there are approximately 23 miles of streams in the Township. Streams are important because: 1) they affect the quantity of an area's water resources, 2) they affect the quality of an area's water resources, and 3) they contribute to overall environmental health. Drainage basin boundaries, delineated by ridgelines, are also important because they are natural areas for planning and designing sanitary sewage and storm drainage facilities.

Groundwater Recharge Areas - Groundwater recharge areas exist where surface water is most likely to infiltrate the soil and replenish the subsurface water supply. In Upper Saucon Township these areas include the most permeable soils with the flatest slopes which overlie limestone. Reduction in the rate of infiltration in these areas may result in lowering the water table.

Alluvial Soils - Alluvial soils deposited in the past by flooding are a reliable indication that heavy runoff conditions will probably cause flooding in the future. Alluvial soils exist along the Saucon Creek and most of its tributaries. Because of their vital natural function in absorbing storm water runoff and because of potential flooding, these alluvial soils provide logical areas for open space preservation.

High Water Table Soils - Permanent and seasonal high water table soils exist in the Township, mostly in the low lying areas along streams. Development of these wet soil areas could result in poor foundation stability, ponding, and chronic wetness in homes and other buildings. These areas are generally unsuitable for conventional on-lot sewage disposal systems because of the potential for groundwater contamination.

Shallow Soils to Bedrock - Some soils, mostly in the areas northeast and southwest of Coopersburg, have bedrock which is generally less than three feet below the surface. These shallow soils have severe on-lot sewage disposal limitations and pose a threat of groundwater contamination because of rapid percolation. Also, development could be expensive in these areas whenever hard bedrock is encountered.

Prime Soils - Prime agricultural soils cover most of the northern half of the Township and are found at scattered locations in the southern half of the Township. These soils are deep and well-drained and are well-suited for corn, small grains, alfalfa, vegetables, and other farm crops. They are also well-suited for development.

Wooded Areas - Wooded areas are very important because they reduce soil erosion; they are also attractive and provide shade. Much of the Township's woodland has been cleared for agricultural use or for development purposes. Most of the existing woodland is found on steep slopes and along the stream valleys. The largest wooded area in the Township is on the steep slopes of South Mountain.

POPULATION CHARACTERISTICS

Population Change - Nearly 9,700 people lived in Upper Saucon Township in 1980, an increase of over 21 percent since 1970. If this rate of growth continues, approximately 11,700 people will live in the Township by 1990.

Population Density - Upper Saucon is not an intensely developed Township. An average of 385 persons per square mile in Upper Saucon compares to an average of 430 persons per square mile among the fifteen townships in Lehigh County. The Townships' population density ranges from 66 in Lynn Township to 1,644 in Whitehall Township.

Age and Sex Characteristics - In 1980, 29 percent of the Township's population was 18 and under, while 31 percent were 45 and over. The Township's largest age group is 19-44 representing nearly 40 percent of Upper Saucon's population. There is a virtual equal distribution of males and females in the Township.

Ratio of Dependent and Productive Age Groups - Children and adolescents (those under 18) and senior citizens (those 65 and over) are more "dependent" than the economically "productive" age groups between 18-64. Over 63 percent of the Township's population is between 18 and 64 years of age, indicating a favorable balance between the two groups.

Population Holding Capacity - If the remaining unused or agriculturally used land in the Township which is neither in floodplains nor in slopes over 15 percent were developed according to the way it is presently zoned, Upper Saucon Township's population could reach 31,700.

Housing Trends - Single family detached dwellings have unquestionably been the most popular type of house built in Upper Saucon Township over the past ten years.

Place of Employment - The majority of Upper Saucon's employed residents (76%) travel outside the Township to work, especially to Allentown and Bethlehem.

LAND USE CHARACTERISTICS

Development Pattern - Development in Upper Saucon Township in recent years has been scattered and has occurred primarily in the form of residential subdivisions on formerly agricultural land. Some new commercial development has occurred along Route 309, and recreational land has increased markedly within the last 15 years.

Residential Development - Residential uses represent nearly 25 percent of the Township's total land area. Single family detached dwellings located in small to moderately sized subdivisions comprise most of the residential areas in the Township.

Commercial Development - Commercial uses represent less than one percent of the total Township land area. However, they are a predominant use along Route 309. Limited commercial activity also exists in the villages and rural areas.

Industrial Development - The nearly 62 acres of industrial development in Upper Saucon is dominated by the holdings of the Stabler Land Company.

Public/Institutional Use - Though comprising only slightly less than three percent of the total land area, schools, churches, libraries and colleges provide invaluable public services and are essential in creating a character and identity for the community.

Park and Recreation Areas - Though this category accounts for over eight percent of the total land area, recreational opportunities in Upper Saucon Township are limited. Total acreage in park and recreational use has increased significantly in recent years, most of which has been devoted to four large golf courses and country clubs. At present, the Township does not operate any public recreational facilities.

Agricultural Land - There are about 6,555 acres of agricultural land in the Township, representing 41 percent of Upper Saucon's total land area. Furthermore, 4,189 acres or 26 percent of all land in Upper Saucon is being preserved under Acts 319 and 515 which encourages farmers to keep their land in agricultural and open space uses.

Land That is Either Unclassified or Unused For Any of The Above Purposes - About 22 percent of the land in Upper Saucon (3,529 acres) is either unclassified or unused for any of the above mentioned land uses.

COMMUNITY FACILITIES AND SERVICES

Schools - Upper Saucon Township, Lower Milford Township and Coopersburg Borough form the Southern Lehigh School District. Enrollment projections by the School District indicate that despite a gradual increase in elementary enrollment, total enrollment will decrease by about five percent from the 1981-1982 school year to the 1988-1989 school year. The District is not planning any new schools in light of this decreasing enrollment trend. Should expansions or new schools be needed, however, ample space is available at existing School District properties. Many parochial and private schools also serve area residents.

Park and Recreation Facilities - Developed, Township-owned park and recreation areas currently do not exist in Upper Saucon Township. However, Lehigh County recently gave the 32-acre County landfill property to the Township for use as a future recreation area. The old landfill site is located along Liberty Road, west of Center Valley. Two other smaller, undeveloped, Township-owned areas also exist for future recreation. Despite the lack of a developed Township park(s), many recreation opportunities exist in and near Upper Saucon. The schools provide play equipment, athletic fields, and other recreation and open space areas. Two country clubs, two golf courses, two camps, and a popular fishing lake also exist.

Township Municipal Building - The Township Municipal Building is located on Camp Meeting Road near the geographic center of the Township. The building adequately serves the Township's present needs. However, demands for the use of the building in future years will approach and, in some instances, exceed its capabilities.

Churches and Social Organizations - Nine churches in the Township and other churches in the area provide Township residents with a variety of religious and social activities. Social organizations of the Township include the Lions Club, Upper Saucon and Southern Lehigh Senior Citizens, Upper Saucon Fire Company, Southern Lehigh Sports Association, Southern Lehigh Gymnastics Club, boy and girl scouts, and others.

Library - The Southern Lehigh Public Library, located along Beverly Hill Road in the southern end of the Township, provides library service to residents of Upper Saucon, Lower Milford, and Coopersburg. The library contains nearly 30,000 volumes, not including numerous periodicals.

Police Protection - The Upper Saucon Police Department provides police protection in the Township. The current police force consists of one police chief and nine full-time officers. Future development will require an expansion of the police department.

Fire Protection - Upper Saucon has one fire company, the Upper Saucon Volunteer Fire Company, located in Lanark. The company cooperates on a reciprocal basis with other fire companies in surrounding municipalities. The Coopersburg Fire Company and the Se-Wy-Co Fire Company in Lower Saucon Township serve nearby portions of the Township on a regular basis as does Lower Milford Fire Company.

Ambulance Service - The Upper Saucon Ambulance Corps provides ambulance service in conjunction with the volunteer fire company. The Corps has approximately forty trained members.

Health Care Services - Less than five doctors are located in the Township, and no medical centers or hospitals are in Upper Saucon. Most Township residents use the Sacred Heart, Allentown, and Allentown-Sacred Heart Hospitals in Allentown and St. Lukes Hospital in Fountain Hill.

Water Service - A combination of private, individual on-lot wells and centralized public water systems provide water service in Upper Saucon. All of the public water is obtained from the City of Bethlehem, and the City and Upper Saucon Township distribute the water. The City is unable to supply large amounts of water to service future new development in the Township, requiring Upper Saucon to develop its own water supplies to meet future needs.

Sewer Service - Both on-lot (septic tank) and centralized sewage disposal exist in Upper Saucon Township. On-lot systems exist in the more rural areas of the Township. Centralized public sewage disposal is provided to the Center Valley area, the developed areas along Route 309, Allentown College, and Coopersburg by the Upper Saucon Treatment Plant. The plant is now operating at its design capacity of 0.60 million gallons per day. Expansion plans are underway to increase the capacity of the treatment plant.

Electric and Gas Service - The Pennsylvania Power & Light Company provides electric service and the UGI Corporation provides gas service to the Township.

Storm Water Drainage - Retaining natural drainage swales in open space is a particularly effective way to carry storm water runoff without designing, installing and maintaining costly storm sewer systems. Occasionally, particularly in highly developed areas, storm sewers will be needed to supplement the natural drainage swales to collect and carry storm water runoff.

Maintenance - The Department of Public Works provides Township Maintenance. Six of the Department's eight people work on the road crew and the other two operate the sewage treatment plant.

Solid Waste Disposal - Upper Saucon Township residents use private contractors for solid waste disposal.

CIRCULATION (TRANSPORTATION) CHARACTERISTICS

Existing Roads and Average Daily Traffic - Upper Saucons existing circulation system consists of a network of local roads and good regional connecting routes. U. S. Route 309 is the most heavily travelled highway in Upper Saucon Township. Its average daily traffic (ADT) ranges between 12,700 and 29,500. Route 378 which ranks second, (3,350-10,000 ADT) is followed by Limeport/Saucon Valley Road (1,300-4,100 ADT), Lanark Road (182-3,309 ADT) and Locust Valley Road (1,200-3,100 ADT).

Dangerous Intersections and Other Circulation Problems - The intersections listed below pose more dangerous situations than others:

- Route 309 and Passer Road
- Route 309 and Oakhurst Drive
- Route 309 and Camp Meeting Road
- Route 309 and Saucon Valley Road

In addition to dangerous intersections, other major circulation problems include:

- Narrow bridges over Saucon Creek on Camp Meeting and Valley Roads.
- Vertical curves on Vera Cruz, Saucon Valley, and Chestnut Hill Roads.
- Horizontal curves on Oakhurst Drive, Chestnut Hill and Hopewell Roads.

Means of Transportation to Work - Over 80 percent of those responding to a Township questionnaire indicated that they rely on the automobile to get to work. Of those responding, 11 percent indicated car pooling as a means of transportation to work.

Scenic Drives - The JPC has proposed a scenic drive in Upper Saucon Township along Wimmer Road, Flint Hill Road, and Wards Lane as part of a regional scenic drive system. The route is characterized by rolling, forested countryside with many attractive views of the Saucon Valley to the north and Bucks County to the south. The Township Planning Commission has proposed another scenic drive: Blue Church, Chestnut Hill, and Beverly Hill.

Public Transportation - Public transportation is recognized as an integral part of a balanced transportation system. LANTA currently provides bus service twice each day between Coopersburg and Allentown.

A WORD ABOUT THE COMPREHENSIVE PLAN

Whether we personally would argue that change is all good or all bad, it is hard to argue with the proposition that change is inevitable. This Comprehensive Plan has been adopted to help manage the forces of change to achieve the goals we have carefully set for Upper Saucon Township.

This Plan enables the Board of Supervisors, the Planning Commission and the citizens to review current issues and proposals against a clear picture of what has been decided as the most desirable plan for the future physical development and the future character of the Township. The test of each proposal affecting land use and streets should be a question: "Is it in conformance with the Township's Comprehensive Plan?" or "Does it carry out the goals and objectives of the Plan?"

Upper Saucon's Comprehensive Plan is described in five parts:

- Major Goals and Policies
- A Plan for Land Use and Open Space
- A Plan for Community Facilities and Services
- A Plan for Circulation
- A Plan for Energy Conservation

FRAMEWORK FOR ACTION: THE COMPREHENSIVE PLAN

THE PLAN'S MAJOR GOAL AND OVERALL POLICIES

This Comprehensive Plan is fundamentally concerned with Upper Saucon Township's future physical environment. The importance of the goals and policies that underlie this Plan cannot be overemphasized. The goals are the long range destinations we wish to reach through public and private efforts. Policies describe some of the routes that should be taken to reach the goals.

The goals and policies that underlie this Plan were determined after understanding the limitations and opportunities for Upper Saucon and after understanding resident desires--an understanding that was gained from the Background Studies in the last part of this report, the evaluation of 1,425 resident questionnaires, and comments at public meetings.

MAJOR TOWNSHIP GOAL

The Plan's major goal is to provide a Township with maximum concern for those qualities which will enhance the Township's value for residential and agricultural uses. The goal is to have a community with the scenic atmosphere and feeling of openness to create an attractive setting for homes and a desirable place to live and to raise families.

This major goal is the most significant idea underlying the development of the Comprehensive Plan. The Plans policies and recommendations reflect the underlying importance of this major goal.

OVERALL POLICIES

This Plan has seven overall policies which support the Major Township Goal. They are described below.

Agricultural Land

To preserve agricultural land in Upper Saucon.

About 6,600 acres of land are now used for agricultural purposes in Upper Saucon; this represents about 40 percent of the Township's total land area. These lands, which are an invaluable resource to the Township as well as to the Region, provide needed crops and food and an open and scenic character to the Township.

The owners of these agricultural lands are encouraged to continue farming and, if they must sell their land, to sell their land to other farmers whenever possible. If this does not happen and the land is sold for development, then the Plan's land development policy for the area will guide its future use.

Natural Resources and Features

To recognize the importance of natural resources and features and certain man-made features in making Upper Saucon Township a desirable place to live and to preserve as many of the Township's natural resources and features as possible.

Certain man-made features such as schools, architecturally significant historic buildings, public recreation areas, and many churches also contribute significantly to the desirability of Upper Saucon as a place to live. Efforts should be continually made to protect and enhance these special man-made features.

Residential Areas

To maintain the character of existing residential areas and to provide a variety of residential living areas to meet the housing needs and desires for families and single persons of all ages.

Existing, potential and future Township residents should have a variety of attractive living environments from which to choose in Upper Saucon. This not only means providing opportunities for living in a wide variety of housing types but in residential developments with varied densities. The Plan strives to accommodate the single person or family who may be seeking a living environment that may range from a single home on a large lot in a rural setting to a townhouse or an apartment in a more dense living area.

Community Facilities and Services

To develop community facilities for Upper Saucon that are sufficiently adequate in scope to provide amenities, as well as necessities, for the Township.

We want to provide the best possible educational services and facilities for Township residents that adequately meet the requirements of the contemporary educational program. We also want to provide a system of park and recreational facilities, ideally sized and located, which (1) offers maximum opportunity for both educational and development activities and a rewarding use of leisure time and (2) provides those amenities necessary to retain and to enhance the environmental qualities of the Township's neighborhoods. Finally, we want to insure that high standards for all public services such as water, sewer, streets, pathways, bikeways, police and fire protection are maintained in all areas of the township.

These policies are directly related to the major goal of maintaining the desirability of Upper Saucon as a residential community.

Floodplains and Flood Prone Soils - These areas which adjoin watercourses and ponds are subject to a 100-year recurrence interval flood. They are vital to preserve in open space for two reasons:

- They are between the land and water and are crucial for the protection of water quality and aquatic life.
- They store water and accommodate fluctuations of stream volume during heavy rains. By retaining and absorbing water in these areas, flooding is localized and reduced.

Development on these natural areas diminishes their ability to function. Storage volume is reduced; impervious surfaces, such as roofs and pavements, decrease water infiltration. This leads to more severe flooding downstream, often in areas previously not affected. In short, the consequences of floodplain development are widespread: floodplains in the watershed tend to become fuller, even without severe storms. What were once twenty-year flood levels may become ten-year levels.

The protection of the floodplains and flood prone soils preserves the ecological balance between land and water, allows water to be stored and absorbed, guards against runoff from future development, and preserves the aesthetic qualities of the stream valley.

Wetlands - These swampy, marshy areas are where standing water is retained and unique vegetation has adapted. Like floodplains and flood prone soils, wetlands store large volumes of water and moderate flooding.

Unlike some resources, wetlands are incompatible with development. Building on marshy soil is expensive and runs the risk of flood damages. Septic tanks do not function and sewer pipes risk leakage. Because of these problems, development plans for wetlands often propose filling or draining. Such action eliminates the wetland, destroys the local ecology and natural balance, and alters the environment of a broad area. Development of wetlands should not be permitted.

Lakes, Ponds and Their Shorelines - These natural or artificial bodies of water also perform important ecological functions. As areas of evaporation, these are integral elements of the water cycle. In addition, ponds moderate stream flows, harbor wildlife, and are significant recreational and aesthetic resources.

Steep Slopes - Slopes which exceed eight percent are subject to noticeable rates of storm water runoff and erosion; these rates become particularly high when the average slope exceeds fifteen percent. Most soil loss comes from construction sites, plowed farm fields, and sites where land has been inadequately stabilized after development. Practices such as stripping forest or grass cover can also increase soil loss significantly. Even relatively slight changes in the ground cover lead to erosion and environmental damage.

The loss of topsoil means that the land loses its ability to support vegetation and loses its aesthetic and productive qualities. Storm water runoff is another slope-related problem. Runoff water does not enter underground water deposits (aquifers) and it burdens streams with more water than they can handle. Severe floods result when the land is saturated and nearly all precipitation runs off. Runoff also carries silt into streams and ponds, polluting them with sediment. Sedimentation reduces the water capacity of the stream, increases the frequency and severity of flooding, lowers water quality, and kills aquatic life.

The two measures of storm water runoff which affect flooding are the direct runoff (the actual amount of water which rolls off the land surface) and the peak discharge. The peak discharge reflects both the amount of water and the speed at which it runs off. As slopes become steeper, impervious surfaces are increased, or vegetative groundcover is decreased, direct runoff and the peak discharge increase.

The regulation of development on slopes is necessary to limit soil loss and flooding and to preserve the aesthetic qualities of the hillsides. These are reasons why the Plan recommends that slopes 15-25% either remain in open space or, if developed, in low density residential uses (about 1 dwelling unit for every three acres). Lands with slopes over 25% should not be developed.

Forests - The wooded areas are another natural resource that help make Upper Saucon such an attractive Township. But woodland is valuable in other ways, underscoring the importance of preserving and protecting these areas. These are areas, groves, or stands of mature or largely mature trees. In addition to being resources of some commercial value, forests moderate the environment. They are major factors in the oxygen-carbon, nitrogen, and water cycle.

Forests hold soil in place and slow the flow of water, preventing erosion. Cutting woodlands leads to increased soil losses, greater water runoff, stream sedimentation and flooding and natural balances may be severe. Reasonable development standards to protect forested areas will aid in avoiding these problems.

Sinkhole Prone Areas - The underlying geology of the Township has important implications on development. Most of the Saucon Valley area is underlain with limestone which subsurface water tends to dissolve. This process creates underground caverns and fissures which can collapse and produce a sinkhole at the surface. Caverns and fissures in the limestone bedrock also pose a threat of groundwater pollution resulting from rapid percolation of sewage from septic tanks and stormwater discharge. Test borings are advisable for all development in areas where there is a proclivity toward sinkholes, especially when heavy construction is contemplated.

OPEN SPACE GUIDELINES FOR RESOURCE PROTECTION

The Plan urges the protection of the previously described natural features and resources by applying the following guidelines to retain these resources and features in complete or partial open space.

RESOURCE PROTECTION GUIDELINES

Natural Resource	Percent of Natural Resource to Preserve In Open Space
Floodplains	100%
Flood Prone Soils	100%
Ponds and Wetlands	100%
Watercourses	100%
Pond Shores	60% - 80%
Forests	40% - 60%
Steep Slopes - 25% or greater	70% - 85%
15-25%	50% - 70%
8 -15%	40% - 60%
Sinkhole Prone Areas	Based on site characteristics
Beekmantown-Jacksonburg Limestone Aquifer area	Based on site characteristics

These Resource Protection Guidelines should be used in updating the Township's Zoning Ordinance** and Subdivision and Land Development Ordinance to recognize that each piece of land has natural development limitations and potential. A potential developer can then use the Resource Protection Guidelines when preparing a sketch or preliminary development plan to calculate the amount of buildable area that exists after land is reserved in open space to prevent degradation of the site's natural features.

The purpose of the Resource Protection Standards is to insure public health, safety and welfare by protecting the natural systems of the environment. The intent is not to reduce the value of any landowner's property. Therefore, the zoning ordinance should contain flexible standards. In both residential and nonresidential subdivisions, the landowner would be permitted to cluster his buildings on smaller lots on the unrestricted portion of his property. In areas where appropriate water and sewer services are available, small lot singles and attached dwellings could be permitted. This will help achieve a balance between the economic returns to the landowner and the land conservation practices for the public good.

AGRICULTURE

The Plan encourages the continuation of farming and the preservation of prime agricultural land, pastures, and other high value agricultural land throughout Upper Saucon. Much of this land is located below the South Mountain in the northern portion of the Township.

**See page 21 to see how these guidelines can be used to plan for Performance Residential Developments.

Farmers in the Township are encouraged to continue farming. The use of Act 43 and Act 515 are particularly encouraged. If a farmer sells his land, he is encouraged to sell his land to another farmer whenever possible. But if development occurs, it would be in accordance with the Plan's land development policy for the area.

SOUTH MOUNTAIN CONSERVATION

The Plan recognizes South Mountain as a unique regional natural resource. This beautiful Mountain not only has presence, but it is steep, wooded and largely undeveloped. Because of these characteristics, South Mountain warrants protection and preservation. While open space preservation is preferred, low density residential development (one dwelling on every five acres) would be appropriate to preserve the Mountain's undeveloped, scenic, and unique natural qualities.

RESIDENTIAL LAND USE PLAN

The Upper Saucon Comprehensive Plan is vitally concerned with the total living environment. This means the establishment of residential areas which not only contain sound, adequate housing, but which are well served by shopping areas, schools, parks, churches and centers of leisure time activities. These facilities must offer a wide range of opportunities for families and single persons of all ages.

The two themes that are woven throughout this Comprehensive Plan are especially important to the Residential Land Use Plan. These themes are (1) to produce a Township with maximum concern for the qualities which will enhance Upper Saucon's value for residential uses and as a place to live and to raise families; and (2) to retain and enhance those qualities which make Upper Saucon a desirable place in which to live.

Equally important are the eight objectives that underlie the Residential Land Use Plan:

- To provide land at appropriate locations for various residential types and densities to increase the variety of choices available.
- To guide more intensive residential development into areas that can be served with public sewers by gravity from the existing sewage treatment plant.
- To create incentives for all residential development to meet the highest standards of site design, and enforce standards for site layout and building construction.
- To provide housing at intensities and development standards which will ensure the new development blends well with the character of already existing developed areas.
- To establish community facilities which effectively serve residential areas.
- To avoid over-burdening public service facilities.
- To develop a coordinated system of residential access and collector streets for internal traffic circulation.
- To preserve natural features and resources and blend them with streets and buildings when developing a site to help ensure an attractive, well-designed developed site.

The Plan provides five residential living environments to provide Upper Saucon's present and future residents a broad choice of different types of living areas. Housing types and residential densities, in particular, are the major distinguishing characteristics between the four living environments.

The Plan's five living environments are described on the following pages.

RURAL AGRICULTURE

This area is located in the northwestern portion of the Township immediately south of South Mountain and west of Lanark Road. If development occurs, the Plan calls for single family homes. Development will be determined on a sliding scale basis patterned after techniques promulgated in Shrewsbury Township, York County, PA for the protection of agricultural lands. This area is characterized by agriculture and/or prime agricultural lands, is sparsely populated, lacks public sewer and public water, and contains a large concentration of sinkholes. This Plan recommended sliding scale development will preserve and support the agricultural use of this area.

CONSERVATION/AGRICULTURE PRESERVATION

This area includes land in north central and east central portions of the Township where, if development occurs, the Plan calls for single homes on lots at least three acres in size.

RURAL RESIDENTIAL

This area is located 'between' the Conservation/Agriculture Preservation Area and that portion of the Township which can be served with public sewers primarily by gravity from the existing sewage treatment plant. Here is where single homes on at least one acre lots would be provided when development occurs—a development pattern that now exists in the Rural Residential Area.

This Rural Residential Area, the Agriculture Area and the Conservation/Agriculture Preservation Area can be viewed as a "Limited Development Area" in contrast to the following two residential living environments that represent the Township's "Development Area" where more intensive residential development is appropriate.

SUBURBAN RESIDENTIAL DEVELOPMENT

This living environment area, which will provide the opportunity for single family homes on lots no less than one-half acre, is the most dominant residential area on the Plan. This area is located within a watershed that can be served with public sewers by gravity from the existing sewage treatment plant. Many subdivisions exist in this area on lots approximately one-half acre in size.

MULTIPLE FAMILY RESIDENTIAL

This fourth living environment is where apartment, townhouse and related multi-family housing are provided. The density of eight to ten dwellings per gross acre creates a more dense living environment than the previously described residential areas.

The Multiple Family Residential Areas are located along the vicinity of Route 309 and Route 378, to ensure convenient access. The following land development principles should guide development in this Area:

- Provide landscaping (berms, trees, grass, other appropriate groundcover and plantings) between the development and Route 309 to help ensure attractive development. Where multiple family areas are located back from U. S. 309, it is equally important to ensure that landscaped buffer areas are located on the periphery of these multiple family areas to help make these areas compatible with the adjoining areas.

- Ensure that roads which serve any multiple family development are, if necessary, improved to safely carry the traffic associated with the development.

- Provide vehicular access off roads other than Route 309 (i.e. marginal access road or a road which intersects with Route 309 where a traffic light either exists or is appropriate) to avoid direct access on to and off of this important major arterial highway whose primary function is to carry through traffic.

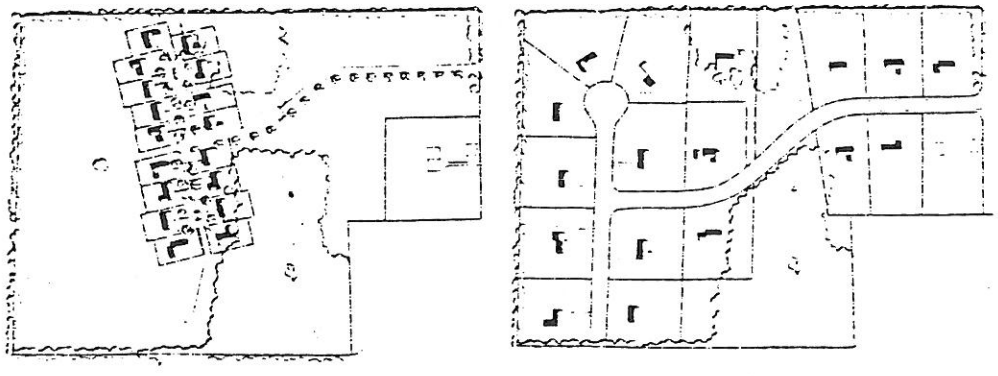
One major portion of this Multiple Family Residential Development is proposed as an appropriate location for a manufactured home (mobile home) park. It is bounded by 378, Saucon Valley Road, Camp Meeting Road, and the Saucon Creek. The area is particularly appropriate because it has very good access from Saucon Valley Road and Route 378 and because it is relatively convenient to the Township's major schools and other community facilities.

PERFORMANCE RESIDENTIAL DEVELOPMENT AND PLANNED RESIDENTIAL DEVELOPMENT

Performance Residential Development

Residential developments are proposed with variations in planning which will encourage the preservation of unique natural features and resources (see page 16) in open space. One method is Performance Residential Development where homes are grouped together and the land that is saved remains in open space for the benefit of residents. This Plan recommends this concept (as shown on the Plan Map) in a large area west of 309 which is almost all planned for Suburban Residential.

EXAMPLES - Performance Residential Developments

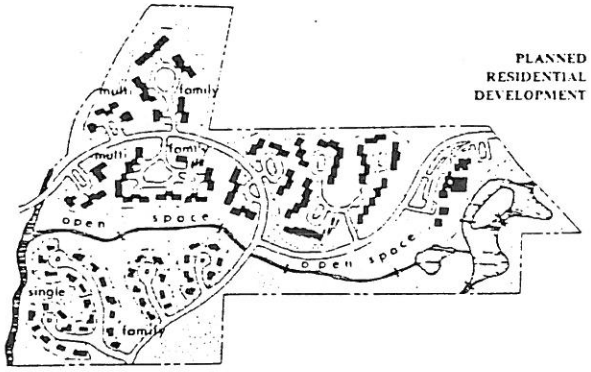


Planned Residential Development

The Plan accepts the concept of planned residential development on residentially planned land in the Suburban Residential and Multiple Family Residential Living Environments. Under this concept, a developer would be allowed to build a controlled variety of housing types--single-family detached, duplex (twin), townhouse, patio house, atrium or multi-family. This allows better land planning by "fitting" different housing types to the characteristics of the site.

Existing adjacent land uses must be recognized when developing a site. If single-family homes already exist, the planned residential development should plan single homes next to single family homes. Multi-family housing could be planned next to a noise corridor such as Route 309. Uses can be mixed to compatibly match up with adjoining land uses. Preserving unique natural resources to insure open space within the development is an equally important objective.

Example Planned Residential Development



AN OVERVIEW OF THE PLAN'S RESIDENTIAL DEVELOPMENT POLICIES

The following table summarizes the Plan's housing and density recommendations for conventional, performance and planned developments in each of the four residential areas.

ALTERNATIVE DEVELOPMENT TECHNIQUES	RESIDENTIAL LIVING AREAS				
	Agriculture	Conservation/Agricultural Preservation	Rural Residential	Suburban/Residential Development	Multi-Family Residential
CONVENTIONAL					
Permitted Housing Types	S	S	S	S	S, D, T, A
Density (dwellings/acre)	Sliding Scale	1 dwelling/3 acres	1 dwelling/acre	2 dwellings/acre	8-10 dwellings/acre
PERFORMANCE					
Permitted Housing Types	- - - -	- - - -	S, D, T	S, D, T	S, D, T, A
Density (dwellings/acre)			2 dwellings/acre	2 dwellings/acre	8-10 dwellings/acre
PLANNED					
Permitted Housing Types	- - - -	- - - -	- - - -	S, D, T	S, D,T, A
Density (dwellings/acre)				2-3 dwellings/acre	8-10 dwellings/acre

HOUSING TYPES: S - Single Family Dwelling, D - Duplex, T - Townhouse, A - Apartment

COMMERCIAL, BUSINESS AND INDUSTRIAL PLAN

The Plan provides carefully planned locations for business opportunities for two major reasons: to provide convenience shopping and personal service needs for primarily Township residents and to provide an attractive, diversified and well-planned nonresidential sector within the Township.

Commerce and Business

Four objectives underlie the commerce and business portion of this Plan:

- To physically concentrate the Township's major commercial activities.
- To provide dispersed and relatively small (1-5 acre tracts) convenience centers to serve residential areas.
- To give maximum attention to creating a high quality of site and building design in the Township's commercial areas.
- To designate areas for commerce and business development with regard for safe, efficient highway access and for compatibility with neighboring uses.

The Plan shows major concentrated commercial locations along Route 309 and a location along Route 378 in the vicinity of Center Valley. The locations along Route 309 have been carefully considered to ensure that these areas, if they are unable to be served by a marginal access road off Route 309, are able to have vehicular ingress and egress from a connecting road onto Route 309 where a traffic light exists. The Plan shows an excess of retail commercial land over that which is needed to meet anticipated retail commercial uses needed by 1990.* Access to the commercial area along Route 378 should be taken from Old Bethlehem Pike or Preston Lane. When this commercial area is partially or fully developed, Old Bethlehem Pike should become one-way to prohibit cars from entering onto Route 378 from Old Bethlehem Pike.

The Plan also shows minor commercial locations at selected key intersections away from Route 309 in recognition of the need to provide close-to-home small retail and professional uses primarily for Township residents. These well-designed small shopping areas would be relatively small (one to five acres) to ensure compatibility with the general residential character of the area.

The following planning principles should be used to plan and develop new commercial development:

1. Small single properties should have connecting roads and driveways with adjacent properties to either minimize the number of new vehicular access points onto a highway or to provide the opportunity for these small properties to be served from existing highway intersections.

---

*See Supportable Commercial (Retail) Space Needs Whitepaper in the Township Building.

2. Commercial developments should be planned and developed as a total unit, where practical, even though only one building at a time may be involved.

3. Large setbacks should be required from the arterials and collector roads.

4. Adequate parking should be provided in all instances and, in order to minimize the adverse impact of large paved areas on the environment, parking areas should be designed to be combined for use by several different independent commercial establishments, if such establishments are not part of a totally planned commercial development.

5. Attractive landscaping should be an important part of each commercial development plan.

6. Signs should be planned and designed with a minimum of clutter, be located in areas which will permit adequate sight distances from the highways, and not be distracting to motorists.

7. Every effort should be made by independent commercial developers to coordinate their planning on a phased basis to permit different commercial users to share parking areas and access roads and, at the same time, minimize the disruption of through traffic on Routes 309, 378, Pike Avenue and other important highways.

Industry

Four objectives exist under the industrial portion of Plan:

- To physically concentrate the Township's industrial activities.
- To strive for compatibility of site and building design in industrial areas with the Township's predominately rural character.
- To designate areas for industrial development that have safe and convenient highway access and that are compatible with neighboring uses.
- To allow industrial development only with fully adequate performance and development standards.

Upper Saucon is a suburban residential community, and the major goal of the Plan recognizes this role. Yet, the Plan also recognizes that industrial growth has a place in the Township.

Permitting desirable industries which will meet the Township's objectives can prove a long term benefit to all residents. New tax revenues, nearby employment for Township residents, and attractive buildings and grounds are examples of benefits which can accrue to the Township. In a primarily residential community, however, each new industry should be compatible with nearby residences.

Two areas are planned for industry with access to Route 309. The Plan strongly encourages well-planned, modern industrial and office development in these areas. Stringent yet reasonable industrial development and performance standards which are incorporated into the Township's revised zoning ordinance will protect nearby residential areas and help insure attractive employment centers.

In suburban industrial areas these performance standards are usually welcomed since the industrial developer, most industrial firms, and suburban residents desire attractive locations and no nuisances. The following principles are proposed as guidelines for future industrial development within the Township.

Setbacks--Building lines should be well set back from the street right-of-way, particularly along Route 309. Large setbacks provide a more attractive setting for industrial uses.

Landscaping—All open space except drives, parking, and loading facilities, should be landscaped with shrubs, trees, lawn or flowers to present an attractive well-kept appearance.

Light and Air--Adequate light and air should be provided between all buildings.

Service Areas—Parking and service areas should be located on those sides of each building which do not front on the street.

Uniform Sign Standard—Maximum standards on the size, type and location of signs should be provided to preserve the aesthetic value of buildings and landscaping.

Objectionable Uses--Open outdoor storage should be screened by planting, wall or other appropriate means, and no use shall be allowed which is objectionable by reason of noise, odor, vibration, smoke or the hazardous nature of the operation.

Building Coverage--Buildings should occupy a low percentage of their lot area to assure sufficient space for parking, loading, and unloading facilities without using adjacent streets and highways.

COMMUNITY FACILITIES AND SERVICES PLAN

Any well-balanced community must provide its residents with a series of public services and facilities necessary to protect their welfare and promote their social and cultural well being. The buildings, parks and other facilities necessary to carry out these basic services are the concern of this Community Facilities and Services Plan. Since most of these facilities are provided for by government agencies, they represent one very effective way in which governmental action can directly influence the development of the Township.

SCHOOLS

The existing public and private schools in the Township should continue and expand, if needed, in the future. No new public schools are proposed in the Township, at least in the foreseeable future. The Southern Lehigh School District continues to experience declining enrollment trends. The Plan endorses the continued use of the Hopewell Elementary School, the Middle School and the High School for education, recreation, and community use.

PARK AND RECREATION AREAS

Although the Township does not currently own any developed parks, Upper Saucon owns land that could be developed for active and passive leisure opportunities. These include the 32 acre former County landfill site along Liberty Road west of Center Valley, a ten acre site at Blue Church and Mill Roads, and a ten acre site east of the existing sewage treatment plant. These or other comparable future sites should be developed for recreation use. The Plan endorses the Township's continued support of the Living Memorial Park.

The following guidelines provide the basis for planning park and recreation areas.

PARK AND OPEN SPACE GUIDELINES

Upper Saucon Township, Lehigh County

Classification	Function	Size	Population	Service Area
Local Park	Small recreation areas such as playlots or miniparks normally provided in built up areas where space is at a premium. The facilities which are primarily intended for children up to seven years include play apparatus, a paved area, benches, sand areas, landscaping, quiet time areas, and multi-purpose courts.	Up to two acres	500- 2,500	Sub-neighborhood
			Owned and sponsored by a private group or association or by a nonprofit organization.	
Neighborhood Park	These moderately sized parks should adjoin public elementary schools whenever possible and serve as a center for education, recreation and cultural activities for the people of a neighborhood. Active and passive recreation areas for children and adults should be complemented by attractive landscaping.	2 to 20 acres	2,000- 7,500	¼ to ½ mile
Community Park	The larger community park should whenever possible, adjoin junior and senior high schools. While having many of the same facilities as the neighborhood park, the community park has facili-	20-100 acres	7,500-35,000	½ to 3 miles

	ties which require more space such as tennis courts, swimming pool, multi-purpose courts, extensive ballfields, community center building and adequate off-street parking.	
Open Space and Conservation Area	Steep slopes, floodplains, low wet areas, dense woodlands and other areas of conservation significance constitute these areas. Although preservation-oriented, limited and scattered recreation activities such as hiking, fishing, nature study, picnicking, biking and other activities which do not disturb the environment would be encouraged in these areas.	Distributed wherever appropriate to protect natural resources

SOURCES: National Recreation and Park Association, National Park, Recreation and Open Space Standards; and, Urban Research and Development Corporation, Bethlehem Area Recreation, Parks and Open Space Plan, 1975.

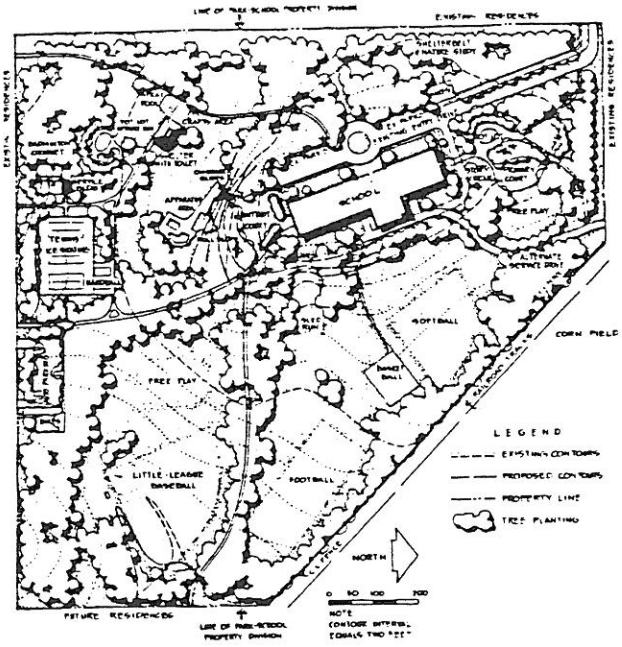
Education Recreation Centers

The three public schools located in the Township offer excellent opportunities for indoor and outdoor recreation; they are used for this purpose now. The School District also owns adjacent undeveloped land that offers potential for future education and/or recreational use. The Township could share in this recreational development potential.

The Plan encourages continued use of the schools for recreation and designates the existing schools in the Township as "Education-Recreation Centers."

EDUCATION-RECREATION CENTER

This is a sketch of a prototype Education-Recreation Center, a concept this Plan endorses for the public schools in Upper Saucon Township.



This term implies the optimum use of public facilities for both the development and application of skills, insights and resources of individuals through education and recreation. Not only can the dual functions of a center be performed without interfering with any part of the education program, but they actually broaden and strengthen the school curriculum.

Naturally, the school pupil will receive a certain amount of training and instruction in skills, insights and resources through after school recreation programs, just as he enjoys some opportunities during school hours, through games, sports, music, dramatics, science and other activities. Primarily, however, the education program involves instruction under a required schedule of curricular and extra-curricular activities, whereas the recreation program involves voluntary participation during free time in desired activities. Such participation can and should continue throughout life.

The education-recreation concept is economical because it serves two important public programs with only one plant; because of careful planning for multi-purpose use, the taxpayers buy maximum education and recreation. They get almost twice the value for their tax dollar as compared with the cost of providing two comparable separate facilities.

MUNICIPAL BUILDING

The Township Municipal Building is located near the geographic center of the Township on Camp Meeting Road. The Municipal Building should continue as the center for Township Government and, if necessary, be expanded to meet future Township needs.

POLICE PROTECTION

The Upper Saucon Police Department, headquartered at the Municipal Building, consists of one police chief and eight full-time officers.

Future development in the Township will eventually require an expansion of the police department. In evaluating the Township's need for police protection or law enforcement services in general, many factors must be taken into account. These factors include: population size, settlement pattern, residential-nonresidential land use mix, the amount of existing development, and the rate of development. In addition to these types of factors, cost and the residents' perceived need for police protection also must be considered.

Guidelines exist for estimating how many full-time police officers a municipality should consider based only on population (see following table). Since population is only one factor to consider, Upper Saucon Township must evaluate the level of service that is appropriate to satisfy its particular needs and to fit its particular budget.

GUIDELINES FOR ESTIMATING THE NUMBER OF NEEDED POLICE OFFICERS

POPULATION		NUMBER OF FULL-TIME OFFICERS NEEDED*	
		Low[1]	High[2]
6,000		6	12
8,000	(9,635 Upper Saucon's 1980 population)	9	16
10,000		11	20
12,000		13	24
14,000		16	28
16,000		18	32

*NOTES: [1]The Pennsylvania Police Chiefs' Association recommends .9 police officers per 1,000 residents in nonurban municipalities.

[2]Based upon a nationally recognized guideline of 1.8 to 2.0 officers per 1,000 people, the FBI has reported that in the Mid-Atlantic Region, suburban municipalities have 1.9 officers per 1,000 residents.

Based only upon these population guidelines and given the Township's 1980 population of about 9,600, two or more additional full-time officers may be needed.

FIRE PROTECTION

Upper Saucon has one fire company, the Upper Saucon Volunteer Fire Company, located in Lanark. The company cooperates on a reciprocal basis, with other fire companies in surrounding municipalities. The Coopersburg, the Se-wy-Co and the Lower Milford Fire Companies serve nearby portions of the Township on a regular basis.

The Township is well served by the Upper Saucon Volunteer Fire Company, the Coopersburg Fire Company, Se-Wy-Co Fire Company and the Lower Milford Fire Company. Mutual cooperation should continue and the Township should consider adopting a fire prevention code such as the BOCA Basic Fire Prevention Code.

WATER AND SEWER SERVICE

The Plan recognizes the potential limitation for the City of Bethlehem to supply large amounts of water to serve future development in Upper Saucon.

The Township is currently planning to develop its own water supply by pumping from the abandoned New Jersey Zinc mine shaft. The underground reservoir created by the mining operations contains in excess of one billion gallons of water and lies within an underground aquifer which extends along the full width of the Township contiguous to South Mountain. The Plan strongly endorses the need to expand the supply of water to serve future development.

The central portion of the Township, where more dense development is proposed, is largely an area that is or can be served by gravity sewers. Alternative sewage treatment methods may be appropriate for performance and other similar types of development in areas where public sewers do not and will not serve.

Since the Township's existing sewage treatment plant is now operating at and sometimes exceeds its design capacity of 0.60 million gallons per day, the Plan strongly endorses the Township's current expansion plans to increase the treatment plant's existing design capacity.

STORM SEWERS

As Upper Saucon Township becomes more developed, the amount of storm water runoff will increase, sometimes requiring the construction of a storm sewer system to alleviate runoff problems. Many runoff difficulties can be avoided by discouraging the development of natural drainage channels and swales and by requiring developers to provide adequate storm detention areas and adequate means for water drainage.

CIRCULATION PLAN

Upper Saucon's road and highway system forms the framework for development. The location and character of this system determine the general direction of growth and are frequently deciding factors in commercial, industrial, and residential location.

The network of streets and highways in the Township must serve three basic purposes:

- Permit safe, expedient movements of traffic within and through Upper Saucon without excessive delay or congestion.
- Make all parts of the Township accessible to one another ad to places outside the Township.
- Fit harmoniously into the overall development pattern of the Township.

Seven objectives underlie this Plan to achieve the three previously stated purposes:

- To identify accident-prone areas and alleviate these driving hazards.
- To identify roads in need of maintenance and improvements, and continue annually updating priorities for the establishment of maintenance and improvements programs.
- To classify roads according to the function they will serve in the future and establish standards which relate to these road functions.
- To consider developing a safe pedestrian pathway and bikeway system which links residential areas and links major residential areas with community facilities.
- To plan road improvements in close coordination with land use policies.
- To limit the number of new driving hazards by carefully examining the circulation improvements proposed for each subdivision, land development or change of use.
- To identify and provide appropriate setbacks and other standards along designated scenic roads to not only protect views but the overall scenic and aesthetic character along these scenic roads.

This Circulation Plan addresses circulation-related planning and design principles, a functional road classification system, and other facets of a circulation system--street maintenance, intersection improvements, pedestrian pathways and bikeways, scenic drives, and public transportation.

PLANNING AND DESIGN PRINCIPLES

Three important principles are emphasized in this section:

- A functional road classification system
- Roadway width principles
- Highway development principles.

Functional Road Classification

Every road and highway in Upper Saucon Township has a part to play in moving traffic within and through the Township. Some highways, like Route 309 and Route 378, primarily serve through traffic. Other roads, however, primarily provide local access and serve residents in residential subdivisions. The width of a road, the availability of on-street parking, the number of vehicular access points along a highway, and other design considerations should be based upon the purpose of a highway or road. The following table shows four types of roads that are needed to efficiently and safety circulate traffic within and through Upper Saucon Township. Where possible, the design principles associated with the four types of roads should be followed to insure that a road functions as it is intended.

FUNCTIONAL ROAD CLASSIFICATIONS, CHARACTERISTICS, AND DESIGN PRINCIPLES
Upper Saucon Township

Road Classifications	Road	Characteristics	Design Principles
Expressway	Route 309	Expressways carry very large volumes of traffic at high speeds. They have four lanes or more and grade-separated interchanges.	• 55 MPH • No parking • Limited access, i.e., at an interchange and selected intersections where traffic lights exist and/or acceleration lanes exist. • Noise barriers/ buffers • Front access road
Arterials	Route 378 Pike Avenue	Arterials, which generally require four lanes, carry large volumes of traffic at moderate to high speeds.	• 35-55 MPH • No parking • Control access to and from lots • Encourage reverse frontage and front access roads, where possible.
Collectors	Limeport Pike Station Avenue Blue Church Road Camp Meeting Road Gun Club Road Honeysuckle/ Stonesthrow Roads Locust Valley Road Mill Road Lanark Road Oakhurst Drive Saucon Valley Road Vera Cruz Road	Collectors intercept local traffic, carry a moderate volume of traffic, and usually have two lanes.	• 25-35 MPH • Parking on one or both sides • Some access controls to and from lots
Locals	All other existing roads	Local roads carry smaller volumes of traffic, provide direct access to abutting properties, and channel local traffic to collector roads.	• 15-35 MPH • Parking permitted • No access controls to and from lots

The Comprehensive Plan Map (Page 11) shows each road in the Township as one of the four types—Expressway, Arterial, Collector, Local.

Roadway Width Principles

A road's capacity to carry traffic is affected by a number of factors including the number of vehicles using the road, cartway width, turning movements, vertical and horizontal alignment, number of lanes, traffic control regulations, and the spacing of intersections and driveways. The following table shows the Pennsylvania Department of Transportation's road design standards based upon various traffic volumes.

ROAD & HIGHWAY DESIGN STANDARDS RELATED TO AVERAGE DAILY TRAFFIC VOLUMES

Design Standards	AVERAGE DAILY TRAFFIC VOLUMES						
	13,000 to 20,000	5,000 to 13,000	3,500 to 5,000	1,500 to 3,500	800 to 1,500	200 to 800	0 to 200
Right-of-Way	120 feet plus median	120 feet plus median	80 feet	80 feet	60 feet	60 feet	50 feet
Cartway Width**	53 feet*	48 feet*	24 feet	22 feet	20 feet	18 feet	18 feet
Number of Lanes	4	4	2	2	2	2	2
Width of Lanes	12 feet	11 feet	12 feet	11 feet	10 feet	9 feet	9 feet

*Includes four feet median strip.
**Does not include provision for on-street parking.
SOURCE: Pennsylvania Department of Transportation.

The following table indicates the 1981 average daily traffic volumes on selected roads and highways in the Township and compares existing cartway widths with recommended cartway widths based strictly on traffic volume.

1981 AVERAGE DAILY TRAFFIC VOLUME, EXISTING AND RECOMMENDED CARTWAY WIDTHS
Upper Saucon Township

ROAD	1981 ADT	CARTWAY WIDTH	
		EXISTING	RECOMMENDED
U. S. Route 309 (north of Lanark)	2,700-29,500	30'-90'	—
U. S. Route 309 (south of Lanark)	20,800	30'-90'	—
LR 297 State Route 378	3,350-10,000	30'	48'
LR 39002 Limeport/Saucon Valley Rds.	1,300- 4,100	14'-24'	24'
LR 39107 Vera Cruz Rd.	182- 3,309	14'-22'	22'
LR 39008 Locust Valley Rd.	1,200- 3,100	14'-18'	22'
LR 39081 Camp Meeting Rd.	2,650	16'-18'	22'
LR 39114 Lanark Rd.	1,900- 2,500	18'-24'	22'
LR 39097 Gun Club Rd.	400- 2,300	16'-22'	22'
LR 39009 Station Ave.	600- 2,050	18'	22'
LR 39007 Blue Church/Mill Rds.	1,200- 1,900	14'-24'	22'
LR 39076 Oakhurst Dr.	550- 1,700	16'-34'	22'
LR 39117 Honeysuckle/Stonesthrow Rds.	300- 1,200	16'-21'	20'
LR 39079 Beverly Hills/Blue Church Rds.	850	16'-22'	20'
LR 39011 Blue Church Rd.	658	14'	18'
LR 39078 Landis Mill Rd.	400	16'	18'
LR 39118 Church/Stonesthrow Rds.	300	14'	18'
LR 39010 Spring Valley Rd.	250	16'-18'	18'
LR 39080 Weyhill Dr.	125	16'	18'

SOURCE: Pennsylvania Department of Transportation, 1981 Average Daily Traffic Count.

Other roadway design principles are important to consider in helping to determine the appropriate width of roads in the Township:

- Wider streets provide for larger and faster traffic flows, an undesirable objective within residential areas. For local roads that serve a single family home subdivision, a 26-foot wide pavement is adequate. This width provides either two parking lanes and a driving lane or one parking lane and two driving lanes; widening this pavement a few feet more will not provide any significantly increased capacity. But it will provide wider driving lanes, which will tend to encourage faster driving.

- A 24-foot wide road is technically suitable for automobile parking on both sides of the street without impeding one-lane of traffic. While not normally recommended, the proliferation of small automobiles may well make the use of a 24-foot wide pavement feasible and desirable.

- A 22-foot wide pavement offers no significant advantage over a 20-foot wide pavement. Although parking is feasible only on one side, a 22-foot width is wide enough to tempt drivers to park on both sides.

- A 20-foot wide pavement is the minimum width which generally offers year-round utility and convenience where snow and ice control needs are foreseeable such as in the Township. Suitable for cul-de-sacs up to about 300 or 400 feet, a 20-foot wide pavement will provide parking on one side with alternating vehicular traffic flow.

- An 18-foot wide pavement is suitable only for use on short one-way loop streets serving not more than 15 dwellings, or on short cul-de-sacs, usually serving no more than five to seven dwellings. A properly parked vehicle on an 18-foot wide one-way pavement will not impede the largest truck which might use the roadway.

- The 16-foot pavement is not suitable for cul-de-sacs having more than three dwellings but offers acceptable utility on one-way loop streets. The 16-foot pavement cannot be considered a desirable width but must be conceded to be acceptable under certain conditions such as 16-foot wide one-way streets created to avoid destruction of unique natural features.

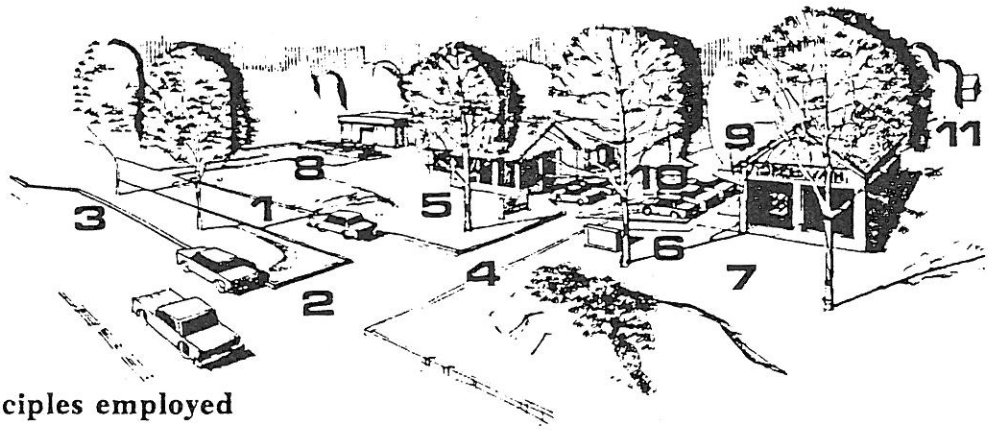
- Once the traffic from local residential streets has reached sufficient volume so that two clear traffic lanes are required, a street takes on the function of primarily moving traffic and should be designed for accommodating more traffic; the street becomes a collector. Automobile movements should be relatively swift (34-45 mph) and unrestricted. Ideally, homes should not face on a collector street since this results in the multiple traffic hazards of street parking, automobiles entering the street from driveways, and children who may dart unseen into the roadway.

Collector streets having a pavement width of 36-feet will provide two adequate traffic and two curb parking lanes. Where houses do not have access to the collector street and, hence, no parking is normally to be expected, two moving lanes of pavement will be adequate with shoulders graded to provide for emergency parking.

The roads that serve developments which generate considerable traffic warrant particular attention to ensure their width, alignment and other characteristics are capable of safely accommodating the traffic. The Township should understand the volume and other traffic implications of each development and what actions will be taken to ensure the smooth, safe movement of traffic associated with each development.

Site Planning Design Principles Along Major Highways

The following design principles serve as guidelines for achieving safe and attractive highway development, particularly along the more heavily travelled highways. The Township should not only apply these design and development principles to new development on vacant land along Route 309, Route 378, and Pike Avenue but also encourage the use of these principles in already developed areas where practical opportunities exist. For example, by the Township (e.g., a highway committee) encouraging discussions between adjoining property owners, a highway access point might be closed, a shared parking lot might occur, and landscaping might be planted. Requiring easements across properties and having each property owner participate in building an access road is an equally desirable technique to use.



Principles employed

1. Marginal Access Road
2. Reduced Number of Highway Access Points
3. Acceleration/Deceleration Lanes
4. Provision for Future Extension of Marginal Access Road
5. Deep Front Yard Setback
6. Parking Areas Screened from Highway
7. No Parking in Front Yard
8. Parking Area in Front of Building but not in Front Yard
9. Parking Areas Broken up by Landscaping
10. Combined Parking Area for Two Uses
11. Buffer Yard

Correcting Traffic Hazards

The background studies identified and mapped numerous dangerous intersections and circulation hazards in the Township. These hazards are summarized in the following table. The Plan recognizes that these thirty-nine hazards will take time to correct. But whenever an opportunity arises to correct a hazard, such as a development at one of the hazardous intersections, remedial efforts should be taken to correct the hazard at the time that development takes place. In other instances, improvements can be programmed into the Township's and State's Capital Improvements Programs. The Upper Saucon Township Planning Commission should be designated as the group responsible for ensuring that proper attention is given to the dangerous intersections and circulation hazards in the Township.

DANGEROUS INTERSECTIONS AND CIRCULATION HAZARDS

Upper Saucon Township

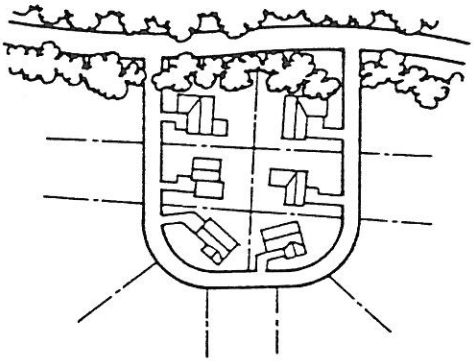
Dangerous Intersection/Area and Type of Hazard
Intersections With High Speed Traffic
Route 309 and Oakhurst Drive
Route 309 and Abbott Street
Route 309 and Saucon Valley Road
Route 309 and Passer Road
Route 309 and Fairmount Street
Spur Route 153 and Vera Cruz Road
Intersections With High Speed Traffic and Less Than 90°
Route 309 and Camp Meeting Road
Routes 309 and 378
Route 378 and Saucon Valley Road
Intersections Less Than 90°
Landis Mill Road and Taylor Drive
Wards Lane and Flint Hill Road
Oakhurst Drive and Old Bethlehem Pike
Stonesthrow Road and Honeysuckle Road
Limeport Pike and Saucon Valley Road
Chestnut Hill Road
Vera Cruz Road and Kozy Korner Road
Chestnut Hill Road and Applebutter Hill Road
Chestnut Hill Road and Glen Road
Saucon Valley Road and Lanark Road
Hazardous Road Alignment
Stonesthrow Road
Vera Cruz Road
Beverly Hill Road and Blue Church Road South
West Hopewell Road
Spring Drive
East Saucon Valley Road
Station Avenue
Oakhurst Drive
Mill Road and Blue Church Road South
Chestnut Hill Road and Blue Church Road
Limeport Pike and Chestnut Hill Road
Lanark Road and Limeport Pike
Vera Cruz Road and Lanark Road
Street and Railroad Crossings
Spring Valley Road and Conrail Crossing
Washington Lane and Conrail Crossing
Landis Mill Road and Conrail Crossing
Landis Street and Conrail Crossing
Station Avenue and Conrail Crossing
Flint Hill Road and Conrail Crossing

SOURCE: Upper Saucon Township Police Department information and URDC Field Survey, 1982.

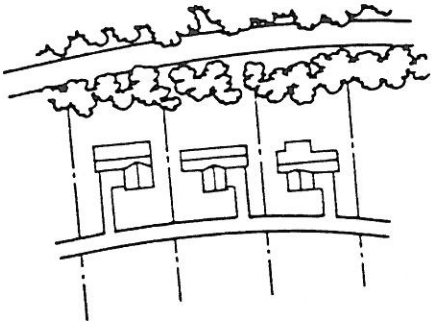
Route 309 warrants special mention because of its vital importance in carrying through traffic. The Plan expressly discourages opportunities for left hand turns on Route 309 other than at selected intersections. In discussions with PennDOT, the Township should stress the importance of PennDOT installing a medial barrier to minimize left hand turns on Route 309.

Lotting Along Major Highways

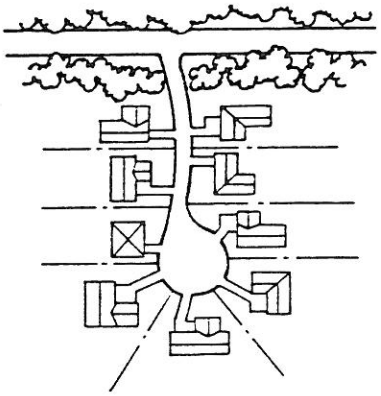
The following sketches show design principles which should be used when lotting residential, business and other uses along Route 309 and the arterial and collector highways in the Township. The application of these principles will reduce traffic hazards and congestion and provide quieter and more attractive residential areas.



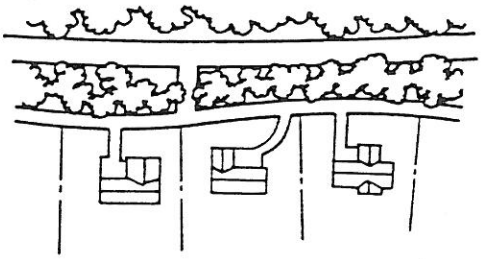
LOOP



REAR ACCESS ROAD



CUL-DE-SAC



FRONT ACCESS ROAD

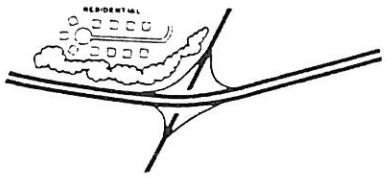
I-78 AND INTERCHANGE PLANNING PRINCIPLES

Interstate 78 is planned to pass through a portion of Upper Saucon Township, as shown on the Comprehensive Plan Map, and to have an interchange at Route 309. This interchange will be a large public investment which will create opportunities for private entrepreneurs. Because of the potential interest in developing land around the interchange, this Plan has given careful attention to selecting appropriate land uses around the Route 309/I-78 interchange. But proper interchange planning goes far beyond the selection of appropriate land uses; it extends into the details of interchange area site design and development, and into traffic engineering. This section of the Plan presents interchange planning and development concepts and principles essential for guiding the development of a functional and attractive interchange area within Upper Saucon.

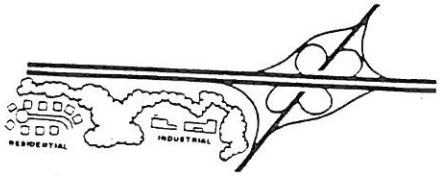
Land Use and Development Principles

All uses within the interchange area should comply, wherever appropriate, to the following interchange planning and design principles:

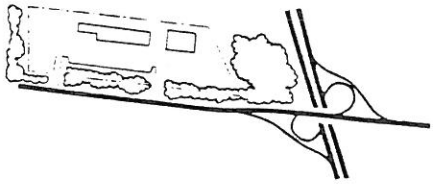
Landscaped buffer areas should be established between development areas and I-78, where visibility from the highway is not an important factor. Wooded buffer areas can reduce both highway noise and distractions to the motorist.



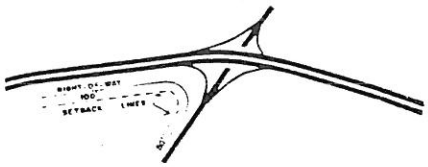
Buffer areas should be used to insure land use compatibility between adjacent uses which ordinarily would be considered incompatible (for example, residential and industrial uses).



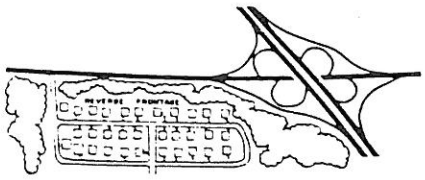
Nonresidential uses and their parking or service areas should be physically-separated from the highway by a curb, planting strip or other suitable barrier against unchanneled motor vehicle access.



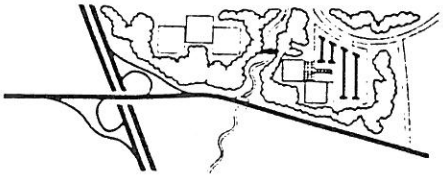
Setback lines should be established at least 100 feet from the I-78 right-of-way and 50 feet from the approach highway right-of-way. Setbacks will prevent buildings and other structures from crowding the right-of-way area and will assure safe sight distances. They also will allow space for future improvements, with less disruption to the landowner and lower cost to the public.



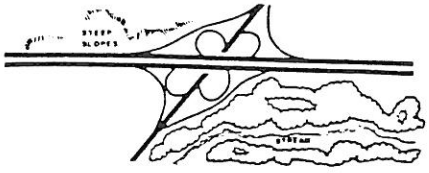
The concept of reverse frontage should be applied to residential uses within interchange areas. Eliminating numerous driveways on the approach highway will result in traffic entering the traffic stream by intersecting collector roads in a safe and efficient manner.



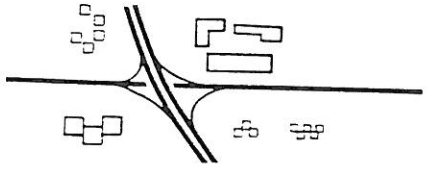
Buildings and parking areas should be arranged in a manner which creates variety, harmony and attractiveness in site design, and respects the site's natural assets and limitations.



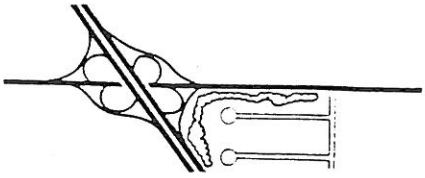
Areas unsuitable for development, i.e., steep slopes, floodplains, shallow soils, etc. should remain undeveloped and be incorporated into plans for highway beautification.



Individual land uses should be grouped on the basis of their similarity and compatibility. the mixing of land uses may result in functional and visual conflicts between the site users.

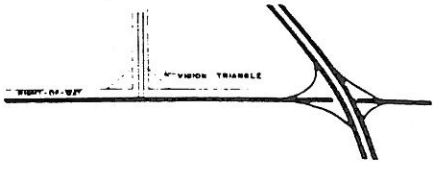


Interior tracts of land should be protected from becoming "land locked" by development along approach highways. Interchange land should be developed to provide access to interior tracts and to discourage development with shallow lots.

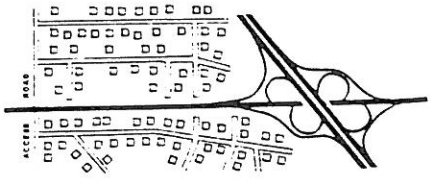


Traffic and Transportation Principles

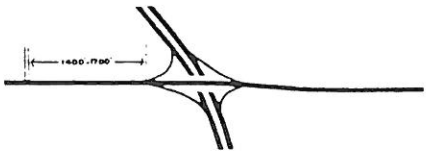
Vision triangles should be established at public street openings on the intersecting highway. This cleared area allows drivers to see stopped or approaching vehicles. No structure, fence, planting or other obstruction should be permitted within a triangle bounded by the street right-of-way lines and a straight line drawn between points on each right-of-way line 175 feet from their intersection.



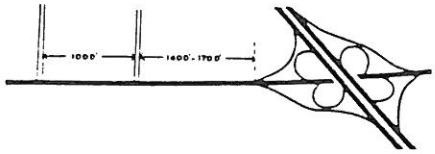
Traffic moving to local destinations around the interchange should be separated from through traffic by the use of special access provisions.



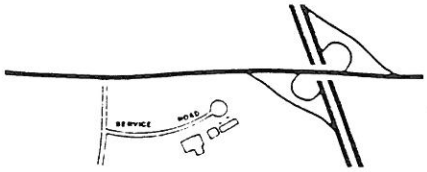
Accessways to Route 309 and other highways should be prohibited in the vicinity of the ends of approach ramps. Location of the first access point in relation to ramp terminals should be based on distance required for safe and efficient merging traffic. The proper distance between the ramp and the first access point depends upon the design speed of the highway and the amount of traffic it carries. For most highways with normal traffic, 1,400-1,700 feet is adequate. Heavily-traveled roads may require 2,000 feet.



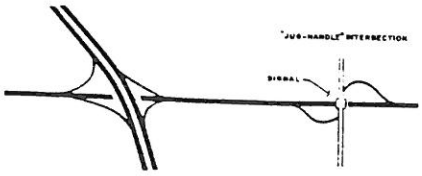
The opening of local road intersections with the approach highway should be controlled. As a general rule, the spacing between intersections should not be less than 1,000 feet.



Service roads (common accessways) should be provided parallel to the approach highway, thus minimizing the number of direct access points to the intersecting highway.



Access points to major trip generators should be located opposite each other at previously-designated locations. These strategic intersection locations should be designed so that no left turns are permitted from the arterial route. Turns should be accommodated by "jug handles" which require left turns and U-turns to be made from the right side. Lesser access points would be permitted only for right turns in, and right turns out with left turn maneuvers provided by jug handles at the next downstream major intersection.



PUBLIC TRANSPORTATION

Bus service is limited in Upper Saucon Township at the present time. As more intensive development occurs, the feasibility of extending service should be explored primarily to Allentown and Bethlehem.

PEDESTRIAN PATHWAYS AND BIKEWAYS

The automobile has been, is, and will undoubtedly continue to be important to the residents of Upper Saucon Township. But walking and bicycling are growing in popularity in the Township, despite hazardous conditions for these activities along many of the arterial, collector and other roads and highways in the Township.

The Plan encourages the provision of pathways/bikeways, particularly within the central portion of the Township. Natural paths along the Plan's linear open space areas and even along treelines could be provided. Separate bike lanes along carefully selected roads could complement a natural pedestrian/ bikeway system. Limiting the speed and widening selected roads are other techniques to permit safe pedestrian travel.

The Upper Saucon Township Planning Commission should evaluate potential pathway and bikeway locations to provide a potential system which can be used as a framework for evolving a pathway/bikeway system in Upper Saucon Township. The Township should undertake a detailed bikeway system and action program, a study which goes beyond the scope of this Plan.

SCENIC DRIVES

The Plan designates selected roads as Scenic Drives, recognizing the importance of protecting the outstanding views and other scenic qualities along these roads: Wimmer Road, Wards Lane and portions of Blue Church Road, Chestnut Hill Road, Beverly Hill Road, and Taylor Drive.

Small but distinctive signs should mark these Scenic Drives. Special provisions should also be incorporated into the Township's Zoning Ordinance to ensure the preservation of views and other scenic qualities and the protection from undesirable uses.

ENERGY CONSERVATION PLAN

BACKGROUND

The higher costs of energy and the need for national independence for sources of energy have caused a greater need for energy conservation. This Plan acknowledges Upper Saucon's awareness of the need to achieve effective energy conservation. Energy use guidelines and techniques are described which Township Officials, developers and builders can use to help conserve energy.

WHAT CAN THE TOWNSHIP OFFICIALS DO?

With rising operating costs due to inflation, Township Officials must continuously seek ways to reduce or at least hold the line on the costs of operating government. Energy is one of the ever increasing operating costs because it is required to heat buildings, light streets, operate vehicles, and provide many municipal services.

Township Officials should set practical energy use goals and policies, continuously monitor their implementation, and make needed adjustments to set a desirable example for sustained energy conservation measures in the Township. These goals and policies should relate to a) the encouragement of public transportation, pedestrian pathways, and bikeways; b) land use energy conservation policies; c) the operation and maintenance of Township equipment and facilities; and d) other relevant energy conservation matters.

PLANNING, ZONING, DEVELOPMENT REGULATIONS, BUILDING CODES

Township Officials can use this Comprehensive Plan document, zoning, subdivision/land development regulations, and building codes to help make Upper Saucon more energy efficient.

Comprehensive Plan

This Comprehensive Plan recognizes the importance of energy conservation. It includes this specific energy section as a component of the Plan. The Comprehensive Plan includes an energy-efficient land use pattern which encourages close-to-home shopping and recreation as well as the encouragement of public transportation and bikeways.

Zoning Ordinance

Zoning can help to achieve energy conservation. An energy conscious zoning ordinance provides for a full range of housing types. The types and sizes of housing directly affect the amount of energy consumed for space heating and cooling.

The Zoning Ordinance should also recognize that protecting solar access will become more important in the future and that alternative energy sources (e.g., windmills, methane distillation) will likely play an increasing role in the future use of energy by residents. The land use controls of the Township should encourage the safe and reasonable development and the use of alternative sources of energy.

Subdivision and Land Development Ordinance

Subdivision and land development regulations govern the process by which land is converted into lots and set standards for site design and required improvements. These regulations can influence energy-conservation land development through their street layout and design standards. Township Officials should be sensitive to the need for energy-efficient site planning (clustered housing, north-south lot orientations, nonexcessive street widths, etc.).

Site plan review procedures should include energy efficiency as a criterion for approval. Streets in new subdivisions and land developments, for example, should be oriented in a general east-west direction. This will permit siting buildings to take best advantage of the sun's energy. In areas of the Township that have already been developed in a manner which was detrimental to efficient solar access, building additions and in-fill developments should be encouraged to be solar-oriented.

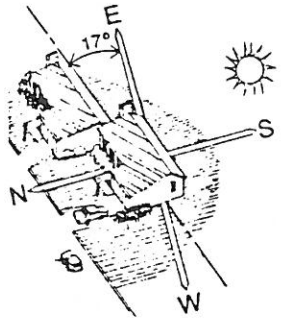
Building Code

A Building Code regulates new development by setting standards for construction materials and for plumbing and electrical systems. Incorporating energy standards into a building code contributes to energy conscious design of new structures and of existing structures undergoing major renovations. The purpose of these standards in a building code is to minimize a building's heat gain and loss. Building codes should comply with or exceed Act 222 provisions for building construction. The code should include adequate insulation standards for walls, ceilings, floors and attics. The 1981 BOCA Code includes provisions for energy efficient buildings.

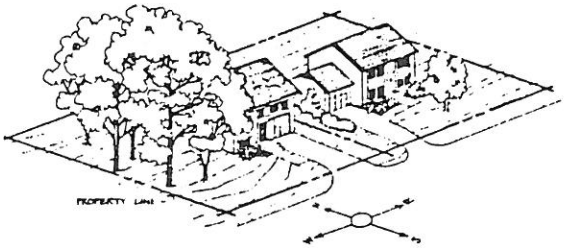
WHAT CAN DEVELOPERS AND BUILDERS DO?

Developers and builders also share the responsibility of conserving energy. The Township should require builders to construct energy-efficient buildings. Energy-efficient site planning and landscaping will also contribute toward energy conservation.

Developers and builders and Township Officials can encourage more energy-conscious development by applying, where possible, the following principles which are only several of many site planning techniques that will conserve energy.

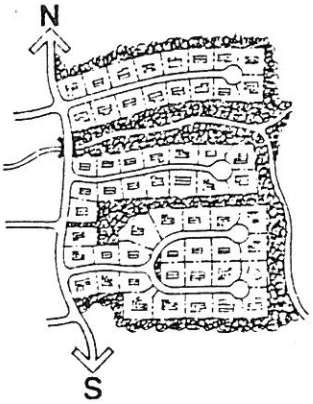


In temperate climates, the ideal sun orientation is slightly east of due south.

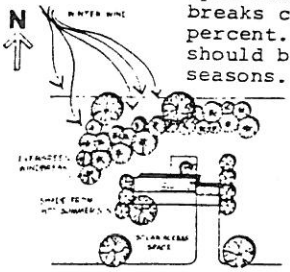


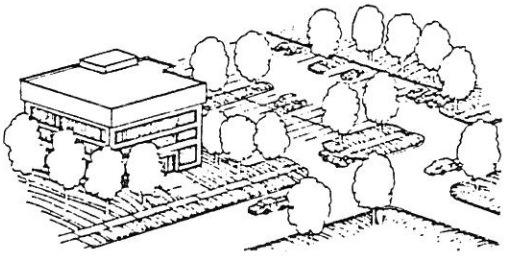
Flexible siting saved the existing grove of trees that shade the house from hot afternoon sun.

Cooling requirements for a house on a well-landscaped lot can be 70 percent lower than the same house on an open lot. Well-designed winter wind breaks can reduce wind speeds by 50 percent. Energy-conscious planting should balance the needs of all seasons.



Street alignments are crucial for an energy efficient community. When streets run east-west, the road right-of-way and rear yards provide ample solar access.





Proper shading of large paved areas can reduce the cooling needs of commercial, institutional, and high-density residential buildings by as much as 20 percent.

INDUSTRIAL AND COMMERCIAL ENERGY

Over 60% of the nation's energy is consumed by industrial and commercial uses. Therefore, residents are not expected to bear the brunt of the energy problem alone. Industrial plants and businesses are encouraged to develop and implement energy conservation programs. Many of the suggested techniques in this Plan can be applied to industry and business.

PUBLIC AWARENESS/EDUCATION

Township Officials should work toward making residents, property owners, builders, and developers more aware of the need for energy conservation in Upper Saucon Township. The following techniques are examples of what can be used to educate the public about the need for and value of energy conservation:

- Distribute energy conservation brochures, booklets, or information packages explaining the importance and value of conserving energy and listing energy conservation techniques.
- Conduct energy seminars for local participation.
- Sell water conservation kits.
- Encourage residents to take advantage of Federal energy tax credits and advise qualified families of the Federal Weatherization Assistance Program which reduces home heating costs through publicly funded conservation improvements.

ACTION PROGRAM

This section indicates ways to help carry out the goals, policies and proposals of the Plan and to help ensure that the Plan is continuously current.

PERIODIC REEVALUATION AND UPDATING THE PLAN

This Plan is not intended to be a rigid mold for the future; no Plan can be. But it will serve as a rational guide for the use and preservation of land and the improvement of roads. The Plan's goals and recommendations must continually and thoughtfully be reevaluated and updated in light of more detailed information, changing Township and Regional conditions and new planning concepts and techniques.

The Township Planning Commission should annually review the adopted Plan. If changes or additions are desirable, the Plan should be amended by the Board of Supervisors. This periodic updating will ensure that the Plan continually addresses the major problems of the time.

THE NEXT STEPS

Although the Comprehensive Plan expresses the rationale and recommendations for guiding future physical development of the Township, it is not a legislative document. Three types of ordinances can be instrumental in implementing the objectives of the Plan: (1) the zoning ordinance, (2) the subdivision and land development ordinance, and (3) the official map and right-of-way ordinances.

In addition to codes and ordinances, Upper Saucon's planning proposals can be implemented through capital improvement programming and continuous planning.

Zoning Ordinance - The changing conditions in the Township, the plans and projects which are creating more and more impacts, the development policy in this Plan and the legislative changes represented by the Pennsylvania Municipalities Planning Code require that the present Township Zoning Ordinance be reevaluated.

Subdivision and Land Development Ordinance - The Subdivision and Land Development Ordinance, which comprises a series of regulations used to guide and control the laying out of streets, planning of lots, and provision for utility systems should be evaluated and amended to be compatible with the revised zoning ordinance.

Official Map - The Pennsylvania Municipalities Planning Code empowers the Board of Supervisors to have surveys of the exact location of the lines of existing and proposed public streets, watercourses and public grounds including widenings, narrowings, extensions, diminutions, openings or closing of same for the whole Township. The Supervisors may also adopt these surveys as the official map of the Township. Upon the adoption of an official map, no permit may be issued for any building within the lines of any street, watercourse or public ground shown on the official map.

Capital Improvement Programming - The development of a good capital improvement program involves a complete and intensive study of the financial resources of the Township. This study would analyze aspects of the fiscal structure such as operating revenues and expenditures, debt limit, tax rates, etc., to determine exactly what the financial capabilities are. Recommendations for capital improvements based upon the Comprehensive Plan are then scheduled in accordance with the Township's financial capacity. These capital improvements normally include major physical facilities such as streets, public buildings, storm water systems, parks, etc., and involve expenditure of funds over and above those needed for normal operations and maintenance in the Township.

The capital improvement program is a five year expenditure plan which is extended by adding another year to it at the end of each year.

The Township may want to consider developing a capital improvements program for the following reasons:

1. It helps assure that projects will be based upon the ability to pay and upon a schedule of priorities determined in advance.

2. It helps assure that capital improvements are viewed comprehensively and in the best public interest of the Township as a whole.

3. It promotes financial stability by scheduling projects at the proper intervals.

4. It avoids sharp changes in the tax structure by the proper scheduling of projects.

5. It facilitates the best allocation of community resources.

BACKGROUND FOR THE PLAN

Before the Upper Saucon Comprehensive Plan could be updated, it was necessary to first study the following characteristics of the Township:

- Regional Setting
- Natural Features
- Population Characteristics
- Existing Land Use Characteristics
- Community Facilities and Services
- Circulation (Transportation) Characteristics

This part of the Plan Report describes these characteristics and provides the back-up data, statistics, and analysis maps which support the conclusions and recommendations of the Comprehensive Plan.

REGIONAL SETTING

Upper Saucon Township is part of a much larger region which has some influence on the Township's destiny. That is why it is important to understand the regional characteristics which have influenced and will more than likely continue to influence change in the Township.

REGIONAL SETTING

Upper Saucon Township is situated in the southeastern corner of Lehigh County (Map 1). Most of the Township's twenty-five square mile area lies seven miles from the major services and employment centers of the Allentown-Bethlehem urbanized area. The Township is bounded on the north by Salisbury Township, on the east by Lower Saucon Township, on the south by Coopersburg Borough and Springfield Township (Bucks County), and on the west by Lower and Upper Milford Townships.

Upper Saucon Township is linked to the Lehigh Valley Region by two major highways--PA. Route 309 and PA. Route 378. Route 309 provides a convenient link to Allentown and points north, and Quakertown and other Bucks County Municipalities to the south; Route 378 provides direct access to the City of Bethlehem and Northampton County. Both routes also provide access to U.S. Route 22.

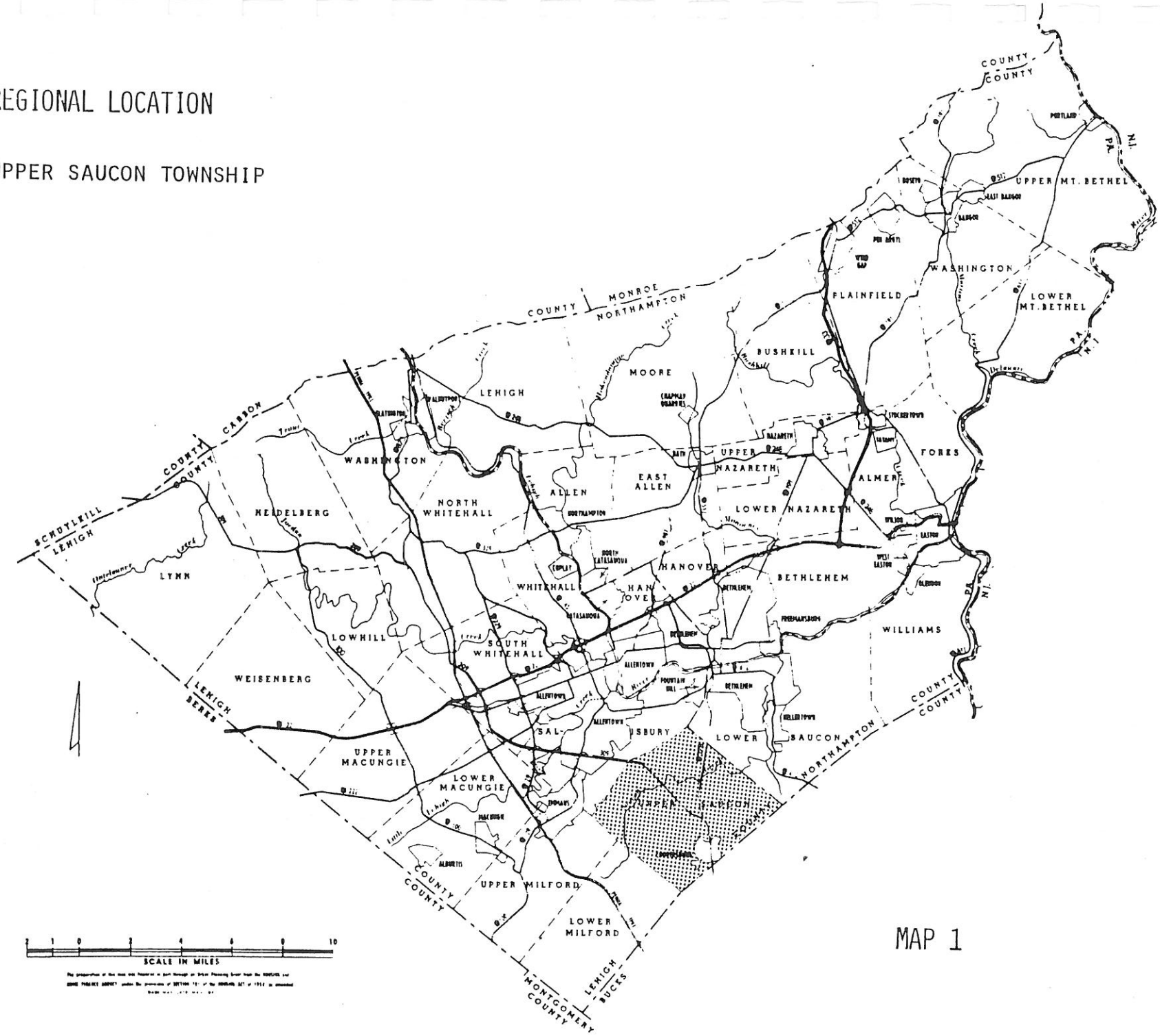
Situated nearby the Cities of Allentown and Bethlehem, it is not surprising that the Township has experienced significant residential development during the past twenty years. Since 1960, Upper Saucon's population has increased by over 60 percent. The rolling hills and farmland which characterize the Township provide an attractive environment to live.

Because of Upper Saucon's location and its attractive residential living environment, the Township's present role within the Region is largely one of a residential community. Employment opportunities are limited, requiring most residents to travel outside Upper Saucon Township to work and shop.

As choice developable land near the cities becomes increasingly scarce and as public sewer and water services are expanded, more development is almost certain in Upper Saucon.

REGIONAL LOCATION

UPPER SAUCON TOWNSHIP



MAP 1

NATURAL FEATURES OF THE LAND

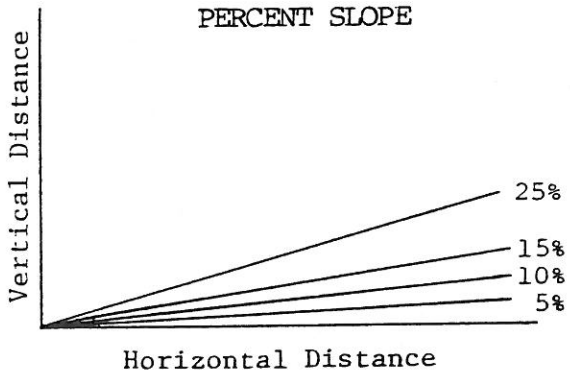
Natural features play an important role in determining the most desirable patterns of land development. They can either provide optimum conditions for development or severely limit it. The slope of the land, geology, depth of soil to water table or bedrock, surface water drainage, soil qualities, and tree cover all need to be examined to determine which land areas can be most economically and appropriately adapted to man's needs and which areas should remain undisturbed. Map 2 shows environmentally sensitive areas which merit special consideration when preparing the updated Plan. These areas and other natural features in Upper Saucon Township are discussed in this section.

TOPOGRAPHIC FEATURES

The present pattern of development in Upper Saucon is largely a direct result of the Township's natural topographic features. Its northwestern boundary approximately follows the ridge of South Mountain which rises to a general elevation of about 900 feet (above mean sea level) to create both a scenic backdrop and a transportation impediment. Flint Hill, Saucon Hill, Applebutter Hill, and similar areas of quantative sandstone conglomorate and shale have been weathered to form moderate to rugged slopes. These hills occupy about a third of the Township's areas in a broad band paralleling the southeastern boundary. Most of the Township's development has thus tended to concentrate on the flat to gently sloping land in the broad Saucon Creek Valley and around the Borough of Coopersburg.

SLOPE OF THE LAND

The slope of the land can limit the type and intensity of development that a site can accommodate:

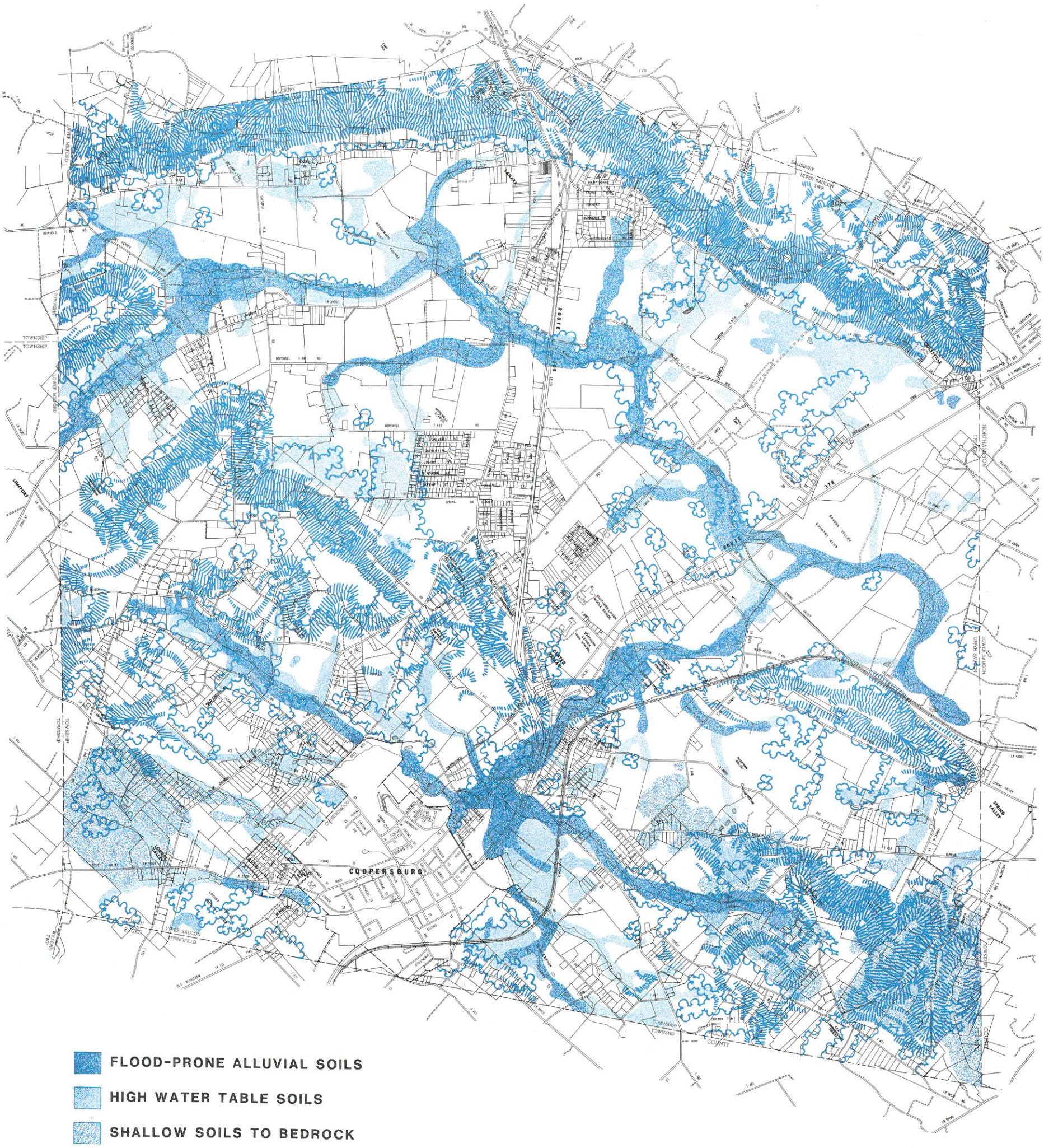


(a 5% slope means a 5 feet vertical change for every 100 feet of horizontal distance.)

- 5 percent slopes are suitable (topographically) for almost any kind of development.
- 10 percent slopes are where water runoff, erosion and other similar adverse side effects begin to occur when development takes place.
- 15 to 25 percent slopes are best suited for uses that occupy a small percentage of a lot. Ideally, these areas should remain open.
- 25 percent slopes and steeper areas because of their severe development limitations, should be kept in open space.

MAP 2

ENVIRONMENTALLY SENSITIVE AREAS



- FLOOD-PRONE ALLUVIAL SOILS
- HIGH WATER TABLE SOILS
- SHALLOW SOILS TO BEDROCK
- WOODLAND
- STEEP SLOPES

UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
526 North New Street–Bethlehem, Pennsylvania 18018

0 400 800 1600 2400 3200
SCALE IN FEET

Most of the Township has a gently rolling topography with slopes of 0 to 10 percent. Areas with steep slopes (over 15 percent), however, do exist along South Mountain and the several hills in the Township (Map 2).

Many municipalities limit development in steep slope (15%+) areas for the following reasons:

- the expense of constructing and maintaining 1) streets at reasonable grades to accommodate traffic safely, and 2) water and sanitary sewer lines making on-site wells and drain fields more desirable;
- the danger of potential increased downstream flooding from excess precipitation runoff as the natural groundcover is disturbed and/or replaced with impervious surfaces; and
- the expense of special footings or pilings to ensure structural stability.

Since this steeply sloping land is often wooded, its aesthetic value must also be considered.

GEOLOGY

The underlying geology of the Township has important implications on development. Most of the Saucon Valley area is underlain with limestone which subsurface water tends to dissolve; this process has created underground caverns, faults and fractures. The collapse in the roof of a cavern and the existence of faults and fractures have caused sinkholes and provide the potential for even more. Sinkholes do exist in many locations of the Township, especially along a broad band which extends from Kozy Korner Road in the west to Colesville in the east. Test borings are advisable for all development, and essential when heavy construction is contemplated. Caverns, faults and fractures in the limestone bedrock also pose a threat of groundwater pollution resulting from rapid percolation of sewage from septic tanks.

STREAMS AND DRAINAGE

An area's ability to drain is a critical factor in determining its suitability for community development. Upper Saucon has a distinct natural drainage system consisting of the Saucon Creek and its tributaries which include the South Branch of Saucon Creek and Tumble Creek, as well as several other smaller streams. Together, there are approximately 23 miles of streams in the Township.

Unfortunately, many municipalities do not learn the real value of their streams and watercourses until they become polluted, depleted, or pose a threat from flooding. Streams and natural drainage channels are important because:

- They affect the quantity of an area's water resources. Increased runoff and sedimentation from development can cause irregular flow and choke a stream's connection with groundwater formations, creating low and irregular groundwater resources;

- They affect the quality of an area's water resources. As a source of groundwater recharge, river flow, and reservoir storage, clean water in streams and creeks is an important resource; and

- They contribute to overall environmental health. Streams and creeks transport nutrients and sediments and are habitat corridors for many birds and animals. They link together uplands, woodlands, and floodplains with the shared resource of water.

Drainage basin boundaries, delineated by ridgelines, are also important because they are natural areas for planning and designing sanitary sewage and storm drainage facilities. Map 3 shows Upper Saucon's major and minor drainage basins and their ridgelines.

GROUNDWATER RECHARGE AREAS

Groundwater recharge areas exist where surface water is most likely to infiltrate the soil and replenish the subsurface water supply. In Upper Saucon Township these areas include the most permiable soils with the flatest slopes which overlie the bedrock formation with the greatest water-bearing capacity (limestone).

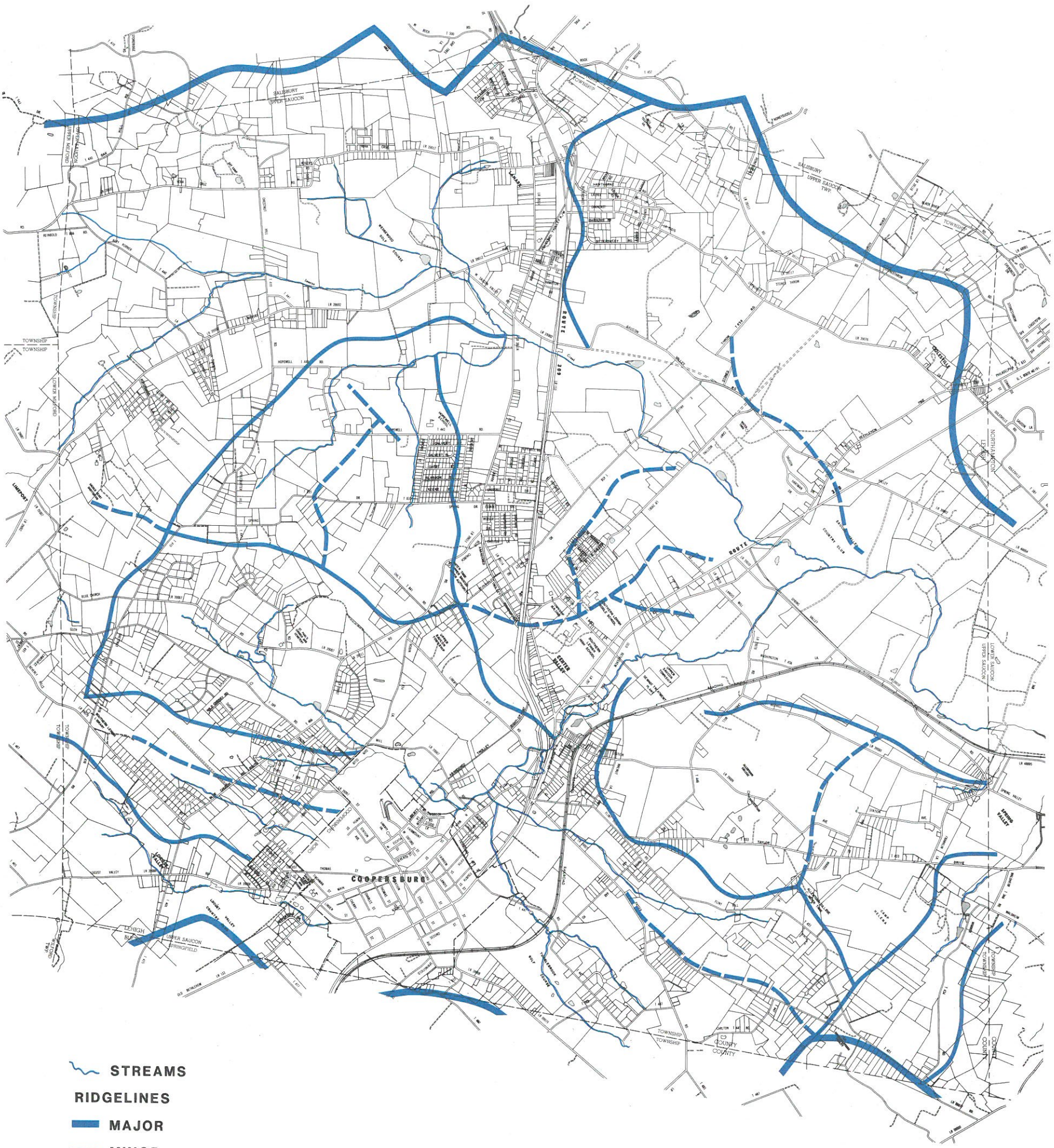
Protecting stream valleys and natural drainage channels is prudent environmental conservation. Equally important is protecting (e.g., regulating the amount of impervious surface on a lot) the most valuable areas of groundwater recharge since, on a large scale, any reduction in the rate of water infiltration will lower the water table.

SOIL CONSIDERATIONS

Soil quality is an important factor affecting development. Soil conditions help determine the suitability of areas for development, sewage disposal, and agriculture; soils can also be used to identify flood prone areas.

MAP 3

RIDGELINES & DRAINAGE BASINS



STREAMS

RIDGELINES

MAJOR

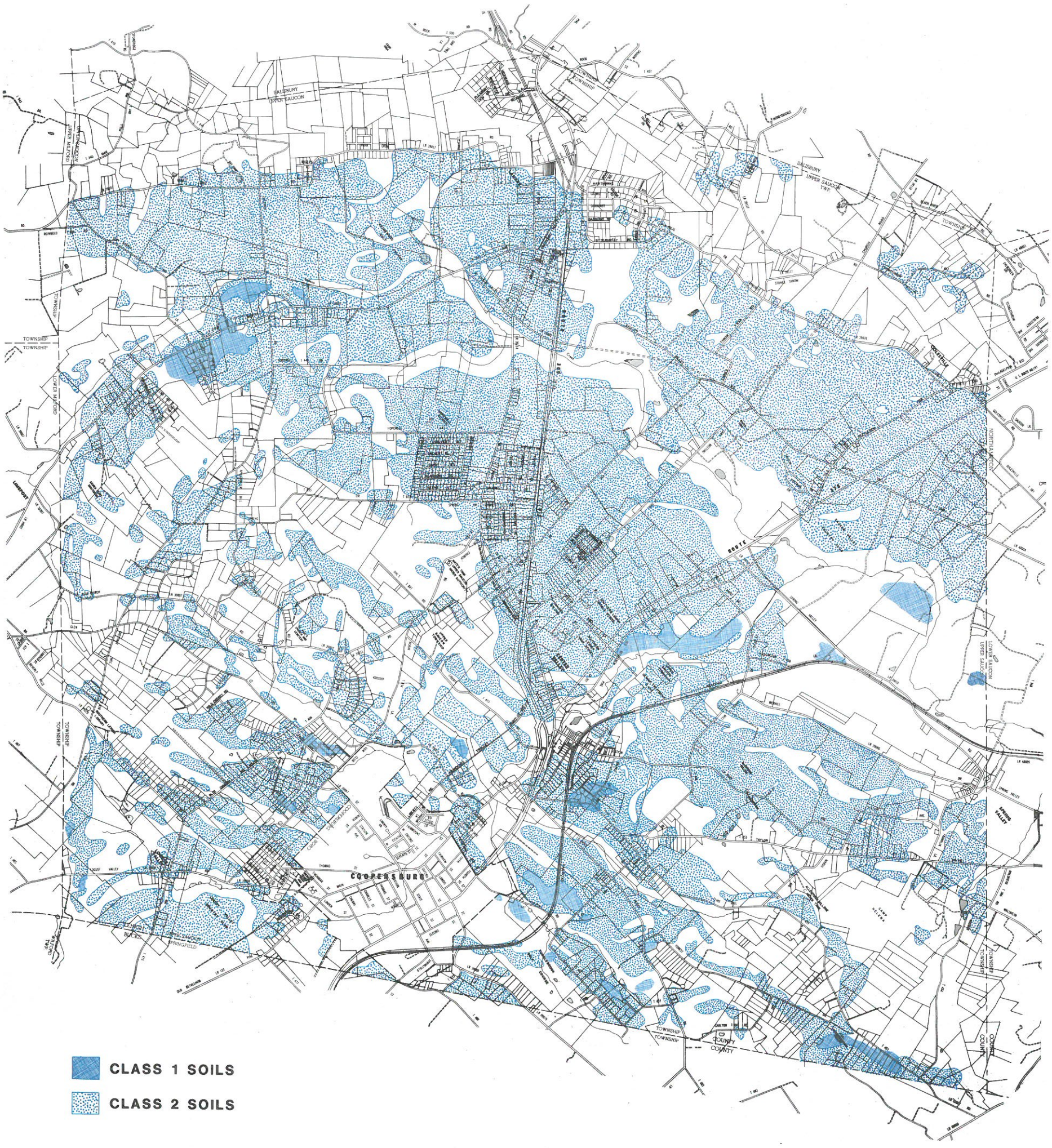
MINOR

UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street-Bethlehem, Pennsylvania 18018

0 400 800 1600 2400 3200
SCALE IN FEET

MAP 4
PRIME AGRICULTURAL LAND



UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street–Bethlehem, Pennsylvania 18018

0 400 800 1600 2400 3200
SCALE IN FEET

ALLUVIAL SOILS

Alluvial soils deposited in the past by flooding are a reliable indication that heavy runoff conditions will probably cause flooding in the future. Flood prone, alluvial soil areas exist along the Saucon Creek and most of its tributaries (Map 2).

Flooding that exists along these streams undoubtedly will become more extensive as more development occurs. When roofs, driveways, and streets replace natural land areas which now hold and absorb much of the storm water, more water will flow into the streams. This underscores the importance of keeping open the alluvial soil areas which absorb water runoff and are prone to flooding.

HIGH WATER TABLE SOILS

Areas with a high water table have soils saturated to within 1 1/2 feet of the surface sometime during each year. High water table soils are found in Upper Saucon Township, mostly in the low lying areas adjacent to streams and drainage channels (Map 2).

Development of these wet soil areas could result in poor foundation stability, ponding, and chronic wetness in homes and other buildings. These problems can be minimized or eliminated by locating buildings away from high water table soils or by sealing foundations and walls, and providing adequate drainage for homes and other buildings. These areas are generally unsuitable for conventional on-lot sewage disposal systems because of the potential for contamination of groundwater. Development is contingent upon specially designed on-site systems or centralized sewage treatment service.

SHALLOW SOILS TO BEDROCK

Some soils in the Township, mostly northeast and southwest of Coopersburg, have a very shallow depth to bedrock (Map 2). Because bedrock is generally less than three feet below the surface, development could be expensive wherever hard bedrock is encountered. Also, these shallow soils severely limit the suitability of septic tank absorption fields because of the hazard of groundwater contamination resulting from inadequate percolation.

PRIME AGRICULTURAL SOILS

Prime soils (i.e., Class I and II soils) for agricultural use cover most of the northern half of the Township and are found at scattered locations in the southern half of the Township (Map 4). They consist mostly of the Washington soils which are deep and well-drained. These soils are well-suited for corn, small grains, alfalfa, vegetables, and other farm crops. They are also well-suited for development.

WOODLAND

Groups of trees lend a particular charm and quality to the landscape. Besides being aesthetic and producing oxygen, trees aid in reducing soil erosion and unwanted noise. They also affect the micro-climate by reducing and/or channeling surface winds and altering temperatures and moisture content of the underlying soil. In addition, woodland provides a variety of animal habitats. For these and other reasons, it is desirable to preserve trees whenever possible.

Much of the Township's woodland has been cleared for agricultural use or for development purposes. Most of the existing woodland is found on steep slopes and along the stream valleys. By far the largest area of woodland is found along the steep slopes of South Mountain. Small wooded areas are found scattered throughout the Township.

POPULATION CHARACTERISTICS

POPULATION CHANGE

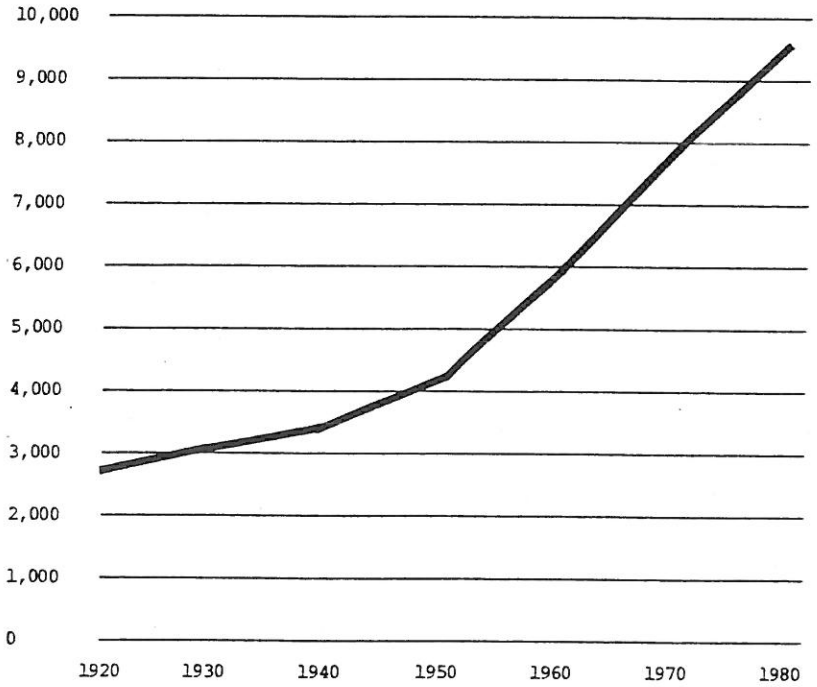
The U.S. Census shows that 9,635 people lived in Upper Saucon Township in 1980. This represents a 21 percent increase in population (1,681) since 1970. Though this rate of growth is considerably less than that experienced by the Township between 1950-1960 (40%) and between 1960-1970 (34%), Upper Saucon still remains a principal growth area in the Lehigh Valley region. Furthermore, of all adjacent municipalities, only Upper and Lower Milford Townships are growing at a faster rate, and with a growth rate over 20 percent, Upper Saucon significantly exceeds that of Lehigh County (6.7%). If Upper Saucon would continue to grow at its present rate, the Township's population would reach 11,700 by 1990.

The availability of utilities, an attractive living environment, well run government, good schools, and close proximity to the Allentown and Bethlehem employment centers have been the major factors that have caused growth in Upper Saucon during the past decade and in the early 1980's. As growth continues, there will be increased pressure upon basic municipal services. This makes sound and effective planning imperative if Upper Saucon Township is to nurture and maintain those qualities which have made it a desirable place to live.

Figures 1 and 2 show the Township's population growth trends over a 60 year period.

Figure 1

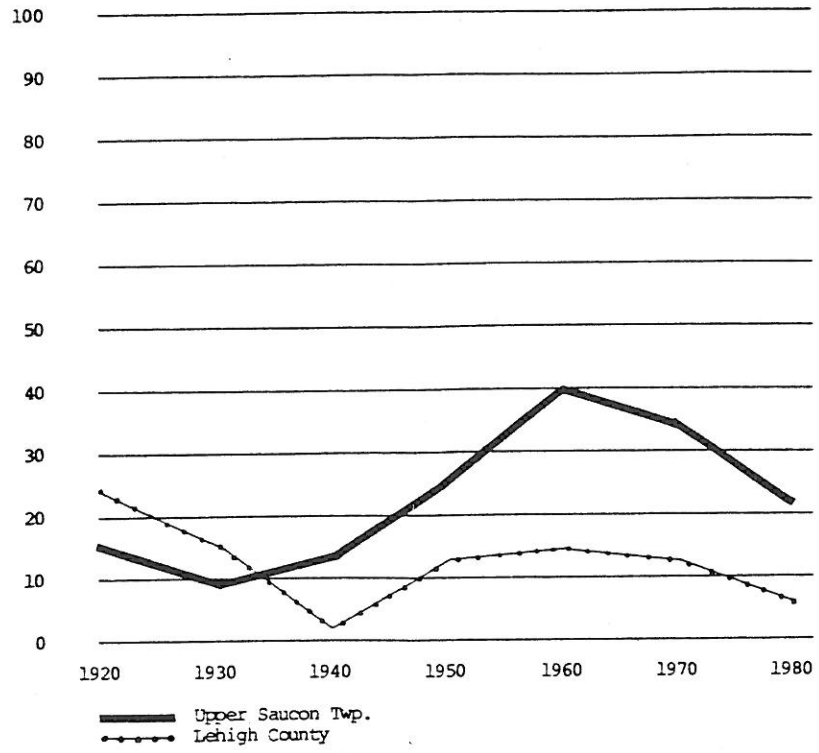
ABSOLUTE POPULATION GROWTH
Upper Saucon Township 1920-1980



SOURCE: Population Growth Trends 1980, JPC Lehigh-Northampton Counties.

Figure 2

RATE OF POPULATION GROWTH
Upper Saucon Township and Lehigh County 1920-1980



SOURCE: Population Growth Trends 1980, JPC Lehigh-Northampton Counties.

POPULATION DENSITY

Upper Saucon's population density averaged 385 persons per square mile in 1980, less than the average of 430 persons per square mile among the fifteen townships in Lehigh County. The Townships' population density ranges from 66 in Lynn Township to 1,644 in Whitehall Township.

AGE AND SEX CHARACTERISTICS

Understanding the Township's age and sex characteristics will help determine the kind of public facilities needed, how large they should be, and what types of housing should be encouraged. Two words best describe the age and sex characteristics of Upper Saucon's population: well balanced. Twenty-nine (29%) percent of the population are 18 and under while 31 percent are in the 45 and over age group. The Township's largest age group is 19-44, representing nearly 40 percent of everyone living in the Township. These characteristics, the virtual equal distribution of males and females in Upper Saucon, and other information are shown in Table 1 on the following page.

Table 1

AGE AND SEX CHARACTERISTICS
Upper Saucon Township 1980

AGE GROUPS	Male		Female		Total	
	#	%	#	%	#	%
Under 1 Year	52	.5	47	.5	99	1.0
1 - 4	215	2.2	205	2.1	420	4.3
5 - 14	788	8.1	821	8.5	1,609	16.6
15 - 18	396	4.1	382	3.9	778	8.0
19 - 44	1,858	19.2	1,905	19.7	3,763	39.0
45 - 59	861	8.9	802	8.3	1,663	17.2
60 - 64	210	2.1	230	2.3	440	4.5
65 - 74	270	2.8	272	2.8	542	5.6
75 and Over	109	1.1	212	2.2	321	3.3
All Ages	4,759	49.3	4,876	50.6	9,635	100

SOURCE: 1980 U. S. Census of Population.

RATIO OF DEPENDENT AND PRODUCTIVE AGE GROUPS

Children and adolescents (those under age 18) ordinarily are not a significant factor in the community's labor force; in an economic sense they are more "dependent" for necessities than they are "productive." Likewise, senior citizens (those 65 and over) generally take advantage of their right to retire from the need to be economically productive.

These relationships are not absolute, but it is generally true that the young and the elderly depend upon the labor of the remaining population (ages 18-64) to provide the services and income needed for their support. This need extends beyond economics to include physical facilities such as schools and recreation facilities.

In Upper Saucon Township, 63 percent of the population is of "productive" age and 37 percent of the population is of "dependent" age, providing a favorable dependency ratio. Table 2 indicates this "dependent/productive" relationship.

Table 2

DEPENDENT AND PRODUCTIVE AGE GROUPS
Upper Saucon Township and Lehigh County 1980

	DEPENDENT AGE				TOTAL DEPENDENT AGE		PRODUCTIVE AGE		DEPENDENCY RATIO
	Under 18	%	Over 64	%		%	18-64	%	"Dependency Age" / "Productive Age"
Upper Saucon Township	2,685	27.8	863	8.9	3,548	36.8	6,087	63.2	.58
Lehigh County	67,194	24.5	35,404	12.9	102,598	37.7	169,751	62.3	.60

SOURCE: 1980 U. S. Census of Population.

POPULATION HOLDING CAPACITY

Population holding capacity represents the approximate number of people who could live in Upper Saucon Township if all physically suitable land remaining for residential use were ulitmately developed. Knowing Upper Saucon's population capacity allows Township officials to anticipate with some degree of accuracy future public service and facility demands. The following procedure was used to estimate Upper Saucon Township's population holding capacity:

- Determine remaining developable land* within each zoning district.
- Deduct 20 percent of developable land area for roads, utilities and open space to determine net buildable area.
- Determine the number of new dwellings that could be built on the net buildable area according to the guidelines and density requirements in the Upper Saucon Township Zoning Ordinance.
- Multiply the number of potential new dwelling units by the number of persons anticipated per each unit.
- Add this total of potential population to the existing total (9,635) to determine Upper Saucon's estimated population holding capacity.

According to this process, the Township has an ultimate population holding capacity ranging between 29,765 and 31,720. Tables 1 and 2 summarize the methodology.

*Remaining developable land includes all that which is vacant or in agricultural use and does not lie within a floodplain or in an area above 15% slope.

Table 3

POPULATION HOLDING CAPACITY
Upper Saucon Township
-Development with On-Site Sewerage Systems-

ZONING DISTRICT	TOTAL DEVELOPABLE AREA 0-9% SLOPE	TOTAL DEVELOPABLE AREA 10-14% SLOPE	NET BUILDABLE AREA 0-9% SLOPE	NET BUILDABLE AREA 10-14% SLOPE
R-1	1,230 acres	301 acres	984 acres	241 acres
R-2	2,649 acres	1,226 acres	2,119 acres	981 acres
R-3	7 acres	10 acres	6 acres	8 acres

ZONING DISTRICT	POTENTIAL NEW UNITS 0-9% SLOPE		POTENTIAL NEW UNITS 10-14% SLOPE		AVERAGE PERSONS/D.U.		POPULATION CAPACITY
R-1	984	+	121	x	3.2	=	3,534
R-2	4,616	+	490	x	3.2	=	16,340
R-3	40	+	40	x	3.2	=	256
							20,130
					PRESENT POPULATION		+9,635
					TOTAL CAPACITY		29,765

Table 4

POPULATION HOLDING CAPACITY
Upper Saucon Township
-Development with Public Sewerage System-

ZONING DISTRICT	TOTAL DEVELOPABLE AREA 0-9% SLOPE	TOTAL DEVELOPABLE AREA 10-14% SLOPE	NET BUILDABLE AREA 0-9% SLOPE	NET BUILDABLE AREA 10-14% SLOPE
R-1	1,230 acres	301 acres	984 acres	241 acres
R-2	2,649 acres	1,226 acres	2,119 acres	981 acres
R-3	7 acres	10 acres	6 acres	8 acres

ZONING DISTRICT	POTENTIAL NEW UNITS 0-9% SLOPE		POTENTIAL NEW UNITS 10-14% SLOPE		AVERAGE PERSONS/D.U.		POPULATION CAPACITY
R-1	984	+	241	x	3.2	=	3,920
R-2	4,616	+	981	x	3.2	=	17,909
R-3	40	+	40	x	3.2	=	256
							22,085
					PRESENT POPULATION		9,635
					TOTAL CAPACITY		31,720

POPULATION FORECASTS

Four 1990 population forecasts have been prepared for this study:

Forecast	Result
• Population will increase at the present 21 percent growth rate.	11,668
• Population will increase based on the Lehigh-Northampton Joint Planning Commission Comprehensive Regional Plan.	15,280
• Population will increase 9.5% between 1980 and 1990, the average decade increase between 1920 and 1980.	10,565
• Trends in housing construction in the Township during the past five years will continue into the near future.	11,355*

HOUSING

The single family detached home is the prevailing housing type in Upper Saucon Township. Many of these units are located in small to moderately sized residential subdivisions throughout the Township. In fact, in recent years most new development in Upper Saucon has been single family home construction. Although the Township's zoning ordinance has also permitted mobile homes, duplexes, townhouses and apartments, only single homes and mobile homes were built from 1972 to 1980. Table 5 shows that over 97 percent of all new housing starts were single family units.

---

*Assumes: Estimate C - population will increase in relation to present rate of new housing starts (Annual Average of New Units 1975-1980) by type of unit.

- 66 single family detached (Annual Average of New Units) x 3.2 persons/Dwelling Unit (township average) = 211 persons

- 1.3 mobile homes (Annual Average of New Units) x 3.2 persons/Dwelling Unit = 4 persons

215 persons/year

Anticipated population 1990 (215 x 8) = 1,720 + 9,635 (present population) = 11,355.

Table 5

HOUSING GROWTH TRENDS
Upper Saucon Township 1972-1980

YEAR	HOUSING TYPE					
	Single Family Homes	Apartments and Townhouses	Mobile Homes	All New Units	Total Units	% Increase
1972	44	-	7	51	2,478	—
1973	68	-	1	69	2,547	2.7
1974	76	-	-	76	2,623	2.9
1975	80	-	-	80	2,703	3.0
1976	44	-	1	45	2,748	1.7
1977	47	-	-	47	2,795	1.7
1978	91	-	-	91	2,886	3.3
1979	71	-	6	77	2,963	2.7
1980	60	-	1	61	3,024	2.1
1981	15	-	1	16	3,040	.5
1982	17	-	-	17	3,057	.6
1983	33	-	-	33	3,090	1.1
1984	53	-	-	53	3,143	1.7

SOURCE: Joint Planning Commission of Lehigh and Northampton Counties, 1978 and 1980 Housing Information Package. U. S. Census of Population 1980.

Preliminary 1981 and 1982 housing data show a drastic decline in housing production, namely single family units. This reflects the overall sluggishness of the housing and real estate market.

PLACE OF EMPLOYMENT

Upper Saucon Township is essentially a bedroom community. The results of the questionnaire distributed to Township property owners show that over 76 percent of the population work outside the Township; 26 percent are employed in Allentown and 16 percent in Bethlehem. Surprisingly, the next largest group of respondents was the retired population accounting for nearly 14 percent of all those responding. Other significant areas of employment include Upper Saucon Township (9%) and Bucks County (8%). The following table lists places with the highest number of respondents and the percentage of those responding employed in that location.

Table 6

PLACE OF EMPLOYMENT
Upper Saucon Township 1982

PLACE OF EMPLOYMENT	NUMBER OF RESPONDENTS	% OF RESPONDENTS
Allentown	480	26.2
Bethlehem	299	16.3
Retired	247	13.5
Other*	160	8.7
Upper Saucon Twp.	155	8.5
Bucks County	147	8.0
Coopersburg	84	4.6
W. Lehigh County	75	4.1
Montgomery County	61	3.3
Emmaus	44	2.4
Unemployed	28	1.5
Whitehall Twp.	25	1.4
S. Whitehall Twp.	25	1.4

SOURCE: Upper Saucon Township Property Owners Questionnaire, June-July 1982.

*See Table 6A, Places of Employment - Other.

Table 6A

PLACES OF EMPLOYMENT - OTHER

	Number of Respondents
Many areas (sales, construction, etc.)	33
Northampton County	14
Hellertown	12
Philadelphia	12
New Jersey	12
Salisbury Township	7
Easton	6
Other-unspecified	6
Trexlertown	5
Catasauqua	3
King of Prussia/Valley Forge Area	3
Hanover Twp., Away at College, Limeport, Lower Milford Twp., Fort Washington, Berks County, New York City, Walnutport	2 each
Martins Creek, Berwick, Upper Gwynned, Wilmington, Del., Wayne, Pa., Bally, Pa., Villanova, Stockerton, Perkasie, Reading, Abington, Delaware County, Carbon County, Poconos, Nazareth, Hamburg, Florida	1 each

LAND USE CHARACTERISTICS

Planning for the future growth and development of Upper Saucon Township requires matching existing conditions and opportunities with future needs in the most practical way possible.

Knowing how land is used today is important to planning for two major reasons: 1) existing land use conflicts can be identified and ways can be sought to resolve these conflicts and 2) future land uses that are compatible with existing uses and meet future needs can be planned.

OVERALL DEVELOPMENT PATTERN

Concentrated residential development is the prevailing development pattern in Upper Saucon Township. However, recent development has deviated from this pattern by locating throughout the Township primarily on land that was formerly agriculture (Map 5).

The rapid growth of Upper Saucon Township as a suburban bedroom community, particularly in the last 20 years, may be attributed to two major features: 1) proximity to the cities of Allentown and Bethlehem, thereby enabling the township to readily absorb "spillover" population seeking a suburban and rural living environment, and 2) the availability of land in Upper Saucon for prospective single family homeowners as well as for large scale developers.

Table 7 shows how the distribution of land uses has changed in the Township between 1966 and 1982. Most notable are the increases in park and recreational land. Upper Saucon also had nearly 1,400 acres less land undeveloped and in agriculture use in 1982 than in 1966. This means that while 72 percent of the Township's land was in agricultural use and undeveloped in 1966, about 63 percent of the land was used this way in 1982. During this sixteen year period there was a loss of total commercial and industrial land.

Table 7

LAND USE TRENDS
Upper Saucon Township 1966-1982

LAND USE CATEGORIES	1966 Acres	1966 % of Total Land Area	1982 Acres	1982 % of Total Land Area	% Change 1966-1982
Residential	3,632	22.7	3,985	24.8	+ 2.1
Commercial	80	0.5	69	0.4	- 0.1
Industrial	80	0.5	62	0.4	- 0.1
Public & Institutional	464	2.9	456	2.9	0.0
Parks & Recreation (Private) (Public/Quasi-Public)	304	1.9	1,344 (1,082) (262)	8.4 (6.8) (1.6)	+ 6.5
Agricultural	10,400	65.0	6,555	41.0	- 24.0
Undeveloped	1,040	6.5	3,529	22.1	+ 15.6
TOTAL	16,000	100%	16,000	100%	

SOURCE: Land Use Data Summary Report, Joint Planning Commission Lehigh-Northampton Counties, August 1966 and Urban Research & Development Corporation Land Use Survey, July 1982.

The Existing Land Use Map (Map 6) indicates those areas of Upper Saucon Township now occupied by residential, commercial, industrial, recreational and other uses.

AGRICULTURAL USE

Productive agricultural land is dwindling as new development takes its place. Since the most prime agricultural land tends to be relatively level and well-drained, it is suitable for development. Between 1966 and 1982, there has been a 24 percent decrease in the amount of agricultural land. Some farms have been sold in their entirety while portions of others have been sold off on a lot-by-lot basis.

Despite the loss of farmland, agriculture still represents a significant land use in the Township. The majority of farms lie within the broad limestone valley stretching across the center of the Township. Some are scattered in the southwest and northwest corners, and all are essentially

small and moderately sized (20-150 acres) farms. Furthermore, due to the excellent soils and temperate growing season of the region, agriculture has remained a productive and profitable activity in Upper Saucon Township.

As of July 1982, a total of 4,277 acres of land have been coveted with Lehigh County under Acts 515 and 319 to keep this land in agriculture/open space. This represents 27 percent of the Township's total land area or 42 percent of the nearly 10,100 acres of land that is in agricultural use and land that is undeveloped.

RESIDENTIAL DEVELOPMENT

Residential areas are a predominant land use in Upper Saucon Township. About 1/4 of the Township's total land area is developed in housing. This development has tended to cluster around existing development and around the built-up areas of Coopersburg, Center Valley and Lanark. However, major new subdivisions have been developed primarily in the western portion of the Township along the Limeport Pike (Sunset Acres) and in the area of Blue Church and Glen Roads (Chestnut Hill Acres, Glenn Hill Estates).

COMMERCIAL USE

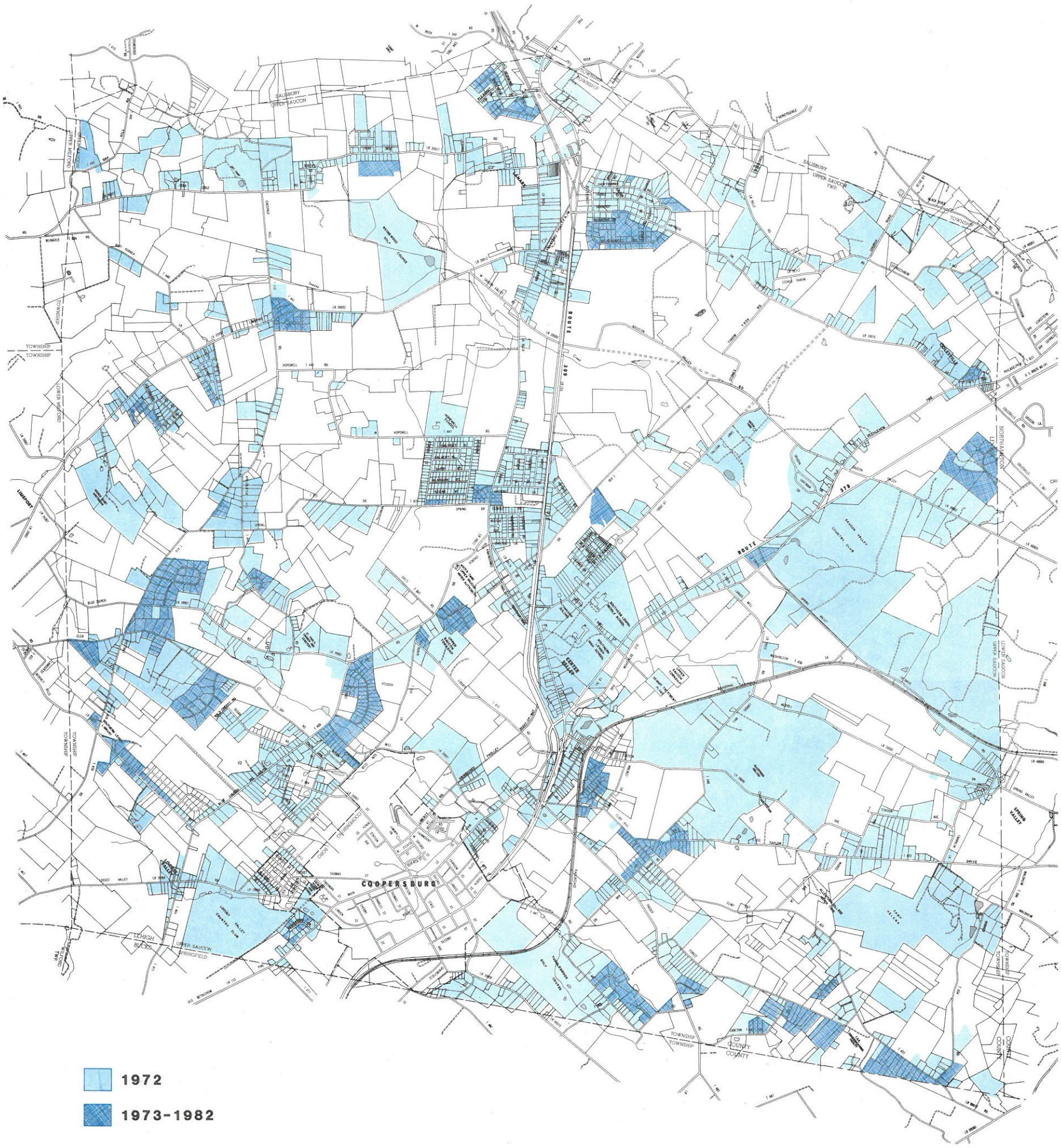
Though commercial uses comprise less than one percent of all land in the Township, it is one of the predominant activities along Route 309 from Lanark to Coopersburg. In fact, the majority of all commercial activity in the Township is located along this heavily travelled highway. Motels, restaurants, service stations and retail outlets in this area primarily serve the needs of motorists and travellers passing through the Township along Route 309, though in fact they are patronized by local residents as well. Commercial uses throughout the remainder of the Township are limited to small restaurants, taverns and home repair services.

INDUSTRIAL DEVELOPMENT

Industrial land use in Upper Saucon Township is almost exclusively confined to the properties of the Stabler Land Company located in the northeast section of the Township outside the village of Freidensville. The company maintains a production facility on approximately 50 acres at the intersection of Saucon Valley and Camp Meeting Roads as well as an extensive mining operation located northeast of the plant. The plant has access to major arterials (Routes 309 and 378) via Saucon Valley Road.

Industrial uses currently occupy only 62 acres of land, less than one percent of the Township's land area.

MAP 5
DEVELOPMENT TRENDS

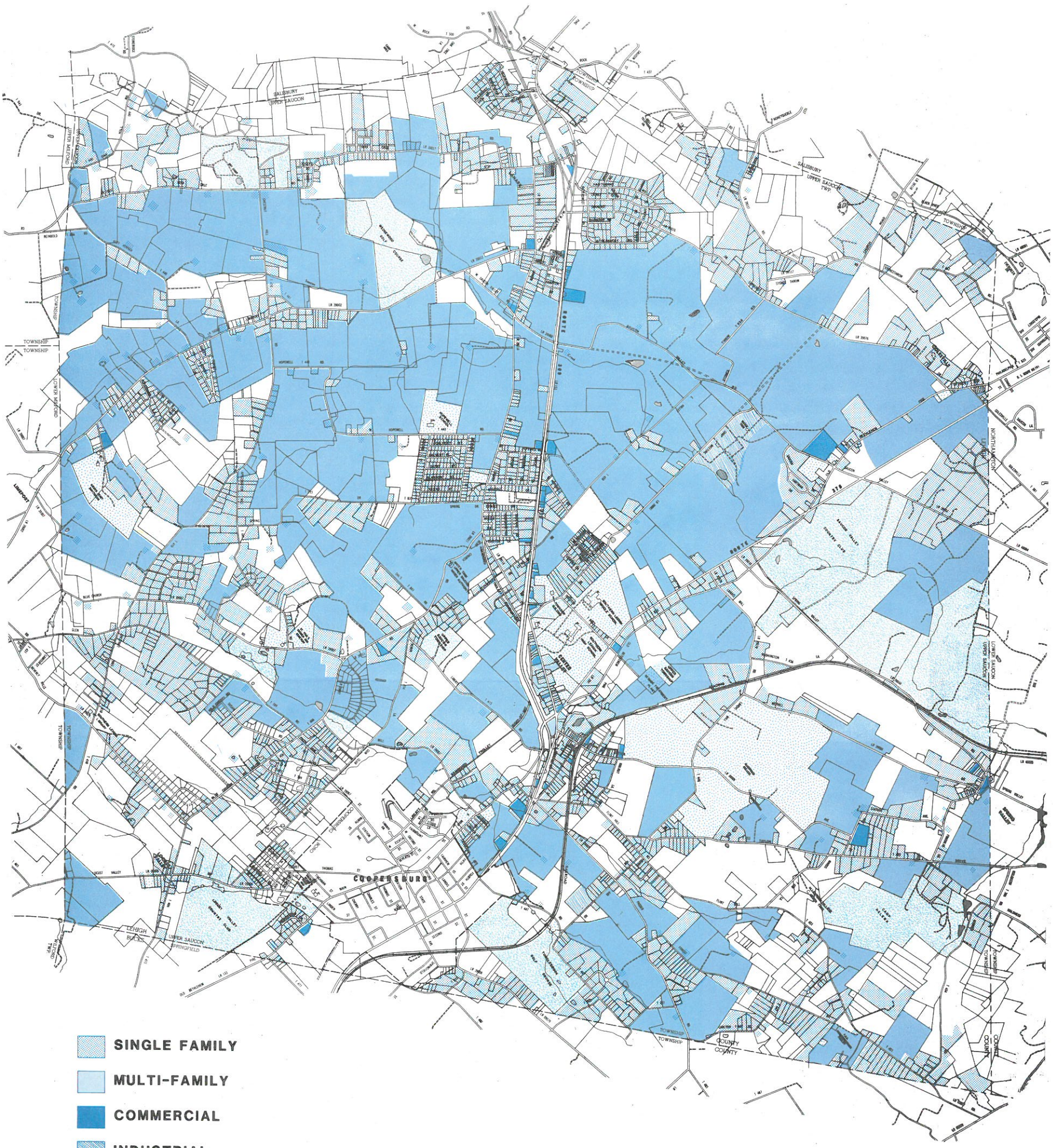


UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street-Bethlehem, Pennsylvania 18016

0 400 800 1600 2400 3200
SCALE IN FEET

MAP 6
EXISTING LAND USE



- SINGLE FAMILY
- MULTI-FAMILY
- COMMERCIAL
- INDUSTRIAL
- PUBLIC/QUASI-PUBLIC
- PARK & RECREATIONAL
- AGRICULTURAL
- UNDEVELOPED

UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street-Bethlehem, Pennsylvania 18018

0 400 800 1600 2400 3200
SCALE IN FEET

PUBLIC/INSTITUTIONAL USE

Public, semi-public and institutional uses account for just under three percent of all land use in Upper Saucon. However, collectively they represent a vital and necessary part of living in the Township. Schools, colleges, churches and libraries provide invaluable public services and are essential in creating a character and identity for the community. These uses are described in greater detail in the Community Facilities report.

PARK/RECREATIONAL USE

One of the most significant changes in land use in the Township over the last ten years has occured in the amount of acreage devoted to recreational uses (1.9% to 8%). This change has not occurred because of substantial land in public/quasi-public land. The Township does not operate any public recreational facilities of its own, and the vast majority of recreational space that does exist is comprised of four large golf courses. That is why, as shown in Table 7, that 81 percent of the parks and recreation land in the Township is privately owned. Park and recreational facilities are discussed further in the Community Facilities and Services section of the Plan.

UNDEVELOPED LAND

Undeveloped land accounts for about 22 percent of the Township's entire land area. Information concerning undeveloped land is useful in planning for the future of Upper Saucon Township. Future development potential can be more accurately assessed, a "population holding capacity" can be determined, and needed community facilities and capital improvements can be identified. The systematic examination of all the remaining undeveloped land also provides an essential step in planning for the most logical future use of this land. It is noteworthy that 4,277 acres or 27 percent of the total land area in the Township is being preserved under Act 515 and 319 (Map 7).

REMAINING DEVELOPABLE LAND

Undeveloped and agricultural land which is unsuitable for development because of steep slopes (15% or greater), flood-prone alluvial soils, high water table and hazardous limestone geology has been subtracted from the total amount of vacant and undeveloped land to determine the amount of remaining developable land in Upper Saucon Township. The 5,600 acres of remaining developable land is distributed relatively evenly throughout the Township. Most remaining developable land exists in residential zoning districts, particularly the Suburban Residential (R-2) District where approximately half acre lots for single family homes would be permitted.

Table 8 indicates the distribution of the remaining developable land within each of the current six zoning districts in the Township.

Table 8

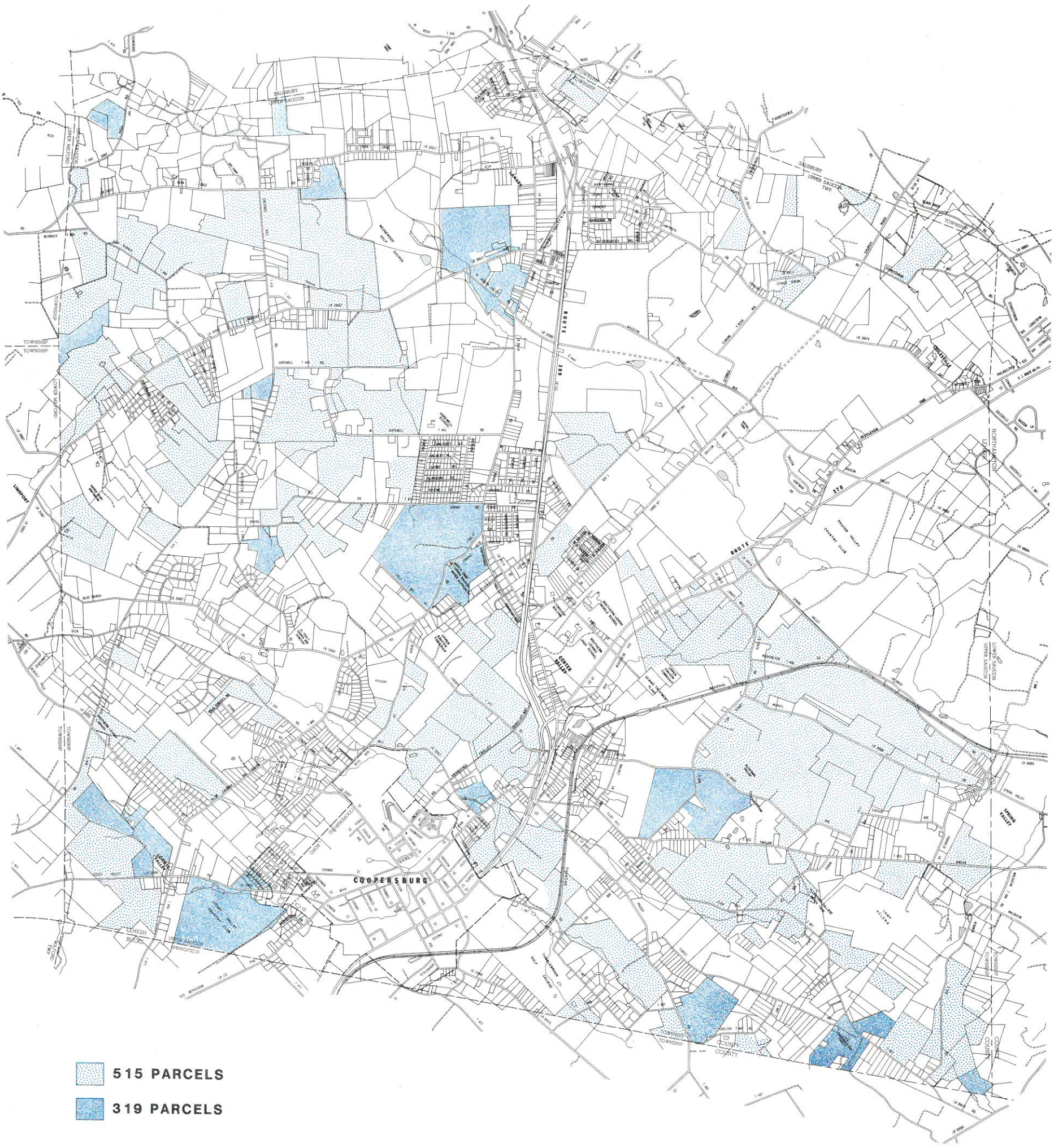
REMAINING DEVELOPABLE LAND
Upper Saucon Township - 1982

ZONING DISTRICT	Remaining Developable Acres	% of Total Developable Land
R-1 Agricultural Rural Residential	1,531	27.0
R-2 Suburban Residential	3,875	68.2
R-3 Multi-Family Residential	18	.3
C-1 Planned Commercial	52	.9
C-2 Planned Professional	17	.3
LI Light Industrial	189	3.3
TOTALS	5,682	100%

SOURCE: URDC Land-Use Survey.

MAP 7

ACT 515 & 319 AREAS



515 PARCELS

319 PARCELS

UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street-Bethlehem, Pennsylvania 18018

0 400 800 1600 2400 3200
SCALE IN FEET

COMMUNITY FACILITIES AND SERVICES

Community facilities and services include schools, park and recreation areas, churches and social organizations, public buildings and structures, police and fire protection, hospital/medical/health-care locations, and maintenance and utilities. These uses, whether public or private, provide services to the entire community and establish a feeling of community identification and support among the residents of Upper Saucon Township.

SCHOOLS

For many families, the quality of education offered in a community's school system is an important factor in choosing the location of their home. In Upper Saucon there has always been an important concern for good education.

SOUTHERN LEHIGH SCHOOL DISTRICT

The Southern Lehigh School District includes three municipalities: Upper Saucon Township, Lower Milford Township, and Coopersburg Borough. Three of the District's six public schools are located in Upper Saucon Township.

Schools in Upper Saucon	Schools Outside Upper Saucon
Hopewell Elementary School	Coopersburg Elementary School
Southern Lehigh Middle School	Liberty Bell Elementary School (in Coopersburg)
Southern Lehigh Senior High School	Lower Milford Elementary School

The three schools located in the Township are described below:

- Hopewell Elementary School (Grades Kindergarten through Five) - The school is on a 23-acre site which is located along the north side of Hopewell Road, 1/4 mile west of Route 309. In addition to the modern school facilities (built in 1970), this site contains a paved playground with play equipment and a basketball court, as well as a baseball field and a free-play area. The school has a current enrollment of 452 pupils and the capacity for 680.

- Southern Lehigh Middle School (Grades Six through Eight) - This school (built in 1966) is located between Routes 309 and 378, 1/2 mile north of the intersection in Center Valley. The Middle School is situated on a 53-acre site which includes three paved tennis courts, a basketball court, a 1/4-mile track, a football stadium, and athletic fields and free-play areas. Eight acres are leased for farming. The school has an enrollment capacity of between 780 to 800 pupils. The current enrollment is 705.

- Southern Lehigh Senior High School (Grades Nine through Twelve) - Located directly across from the Middle School, the high school's 62 acres include athletic fields for baseball, softball, soccer, and hockey, as well as basketball courts. Ten acres are leased for farming. The school was constructed in 1953, with an additional wing added in 1973. The capacity of the high school is 1,206 and the current enrollment is 962.

These schools perform a dual role serving as both education and recreation centers for the community. The indoor and outdoor facilities of the Southern Lehigh Schools are heavily used for many community activities and recreation programs. Currently, there are over 30 different groups using the schools.

Approximately 150 Southern Lehigh Senior High students attend the Lehigh County Vocational-Technical School in Schnecksville (North Whitehall Township). These students take their required academic subjects and physical education at Southern Lehigh High School and attend the Vocational-Technical School for their specialized vocational-technical program.

The School District's enrollment projections show that total enrollment will decrease about five percent between the 1981-1982 school year and the 1988-1989 school year, despite a gradual increase in elementary enrollment during that seven year period (Table 9). Because of this decreasing enrollment trend and the available space in existing schools, the School District is not currently planning any new schools. The District continually keeps abreast of population growth in the area and periodically prepares enrollment projections to monitor the need for additional school facilities. Should school expansions or new schools be needed, the District has ample space at the existing school sites.

The District is now considering closing the Coopersburg Elementary School. If the school does close, utilization figures indicate that the existing schools can accommodate the entire Coopersburg Elementary School population.

Table 9

PRESENT AND PROJECTED ENROLLMENT TRENDS
Southern Lehigh School District

	Enrollment 1981-1982	Projected Enrollment 1988-1989	
	Number	Number	% Change
Elementary Schools	1,131	1,238	+ 9.5
Middle School	705	542	- 23.1
High School	962	869	- 9.7
TOTAL	2,798	2,649	- 5.3

SOURCE: Southern Lehigh School District

OTHER SCHOOLS

Parochial and Private Schools

Parochial and private schools also serve area residents. The School District transports about 340 students to various nonpublic schools. Two parochial elementary schools are located in the Township:

1) St. Joseph's Parochial School, located at the northern edge of Limeport just inside Upper Saucon's boundary; and

2) Assumption BVM, located in Coleville.

Some of the other parochial and private schools located outside the Township that are used by Southern Lehigh Students include the following schools: Christian Day, St. Francis, St. Pauls, Allentown Christian Academy, Lehigh Christian Academy, Allentown Central Catholic, Moravian Academy, Bethlehem Christian, Bethlehem Catholic, Upper Bucks Christian, and Quakertown Christian Academy.

Allentown College

Allentown College of St. Francis de Sales is located in the Township on an attractive 300-acre campus near Center Valley. Allentown College is a four-year, coeducational, liberal arts, catholic college. The College offers Bachelor of Arts and Science degrees in sixteen areas of concentration. It is accredited by the Middle States Association of Colleges and Secondary Schools and is a member of the Lehigh Valley Association of Independent Colleges which offer cross-registration with Lafayette, Cedar Crest, Muhlenberg, and Moravian Colleges and Lehigh University. Enrollment at the college is approximately 1,000.

PARK AND RECREATION FACILITIES

Recreation facilities provide both passive and active means of using leisure time. They also serve as a focal point for neighborhood and community activities as well as a physical and visual relief from more intensive forms of development.

The Township does not currently own any developed parks. Recently, however, Lehigh County gave the 32-acre County landfill site, located along Liberty Road west of Center Valley, to the Township with the proviso that the site be used for future recreation and open space. This site could be developed into an attractive Township recreation area. Two other future Township recreation areas also exist; both are approximately 10 acres in size. One area is located at the intersection of Blue Church and Mill Roads and the other is located directly east of the existing sewage treatment plant.

These two areas were acquired as a result of the Township's Subdivision and Land Development Ordinance which requires developers to provide land or cash (in lieu of land) for open space and recreation uses. This provision will assure close-to-home recreation opportunities in the Township.

Although Upper Saucon does not have its own developed parks, many recreation opportunities are available within the Township and within reasonable driving time for residents. The public and parochial schools provide play equipment, baseball and athletic fields, and other recareation and open space areas. Two country clubs, two golf courses, two camps, and a popular fishing lake also exist in the Township. The Southern Lehigh Pool Association, the Southern Lehigh Sports Association, the Southern Lehigh Gymnastics Club, and the Saucon Valley Living Memorial, located in and near Coopersburg, also help fulfill the recreation needs of the Southern Lehigh residents.

Table 10 provides a summary of the major existing recreation areas in Upper Saucon Township.

Table 10

MAJOR RECREATION AREAS
Upper Saucon Township

RECREATION AREA	SIZE (Acres)	ACTIVITIES/FACILITIES																		OWNERSHIP			
		Badminton/Volleyball	Ballfield(s)	Basketball Court(s)	Benches/Sitting Area	Boating	Fishing	Golf	Hiking	Hunting	Ice Skating	Playground(s)	Playfield(s)	Picnic Tables	Refreshment Stand	Restroom(s)	Shelter	Swimming Pool/Beach	Tennis Courts	Public	Quasi-Public	Private: Open to Public	Private: Members Only
Camp Belena	130.9						●		●												●		
Freidensville Rod & Gun	17.0									●													●
Jewish Day Camp	40.0	●		●			●		●					●			●	●	●		●		
Living Memorial	68.0	●	●	●	●						●	●	●	●	●	●	●	●			●		
Locust Valley Country Club	92.2							●										●					●
Moyer's Lake	20.0					●							●	●								●	
Saucon Valley Country Club	432.0							●						●									●
Tumblebrook Golf Course	72.1							●														●	
Wedgewood Golf Course	101.0																					●	

SOURCE: URDC Land Use Update, 1982 and JPC, Regional Recreation and Open Space Plan, 1980 Update.

The Cities of Allentown and Bethlehem and the Boroughs of Coopersburg and Hellertown offer nearby park areas, tennis courts, swimming pools and other recreation activities. Nearby facilities also are provided in Bucks County at Tohicken Valley Park and two major regional recreation facilities: 1) the 4,500 acre Nockamixon State Park in Bucks County and 2) the 1,600 acre Trexler Game Preserve in North Whitehall Township.

TOWNSHIP MUNICIPAL BUILDING

The Township Municipal Building is located near the geographic center of the Township on Camp Meeting Road. It is here where Township meetings are scheduled and where files of records, maps, and other Township information are kept. In addition to a large meeting room, administrative rooms, and police headquarters, the building serves as a garage for Township equipment.

CHURCHES AND SOCIAL ORGANIZATIONS

Upper Saucon offers a variety of cultural activities. For example, nine churches are located within the Township, in addition to a variety of social organizations (Lions Club, Upper Saucon and Southern Lehigh Senior Citizens, Upper Saucon Fire Company, Southern Lehigh Sports Association, Southern Lehigh Gymnastics Club, boy and girl scouts, etc.).

LIBRARY

The Southern Lehigh Public Library, located along Beverly Hills Road in the southern end of the Township, provides library service to residents of Upper Saucon, Lower Milford, and Coopersburg. Membership is free to these residents. The library contains nearly 30,000 volumes, not including numerous magazines and periodicals. Normal library hours are 10 a.m. to 5 p.m. and 7 p.m. to 9 p.m. Monday through Thursday and 10 a.m. to 2 p.m. on Saturdays. The Library is closed on Fridays. (Summer hours are different.)

POLICE PROTECTION

The Upper Saucon Police Department provides police protection in the Township. Police headquarters are located at the Municipal Building. The current police force consists of one police chief and eight full-time officers.

Future development in the Township will eventually require an expansion of the police department. In evaluating the Township's need for police protection or law enforcement services in general, many factors must be taken into account. These factors include: population size, settlement pattern, residential-nonresidential land use mix, the amount of existing development, and the rate of development. In addition to these types of factors, cost and the residents' perceived need for police protection also must be considered.

Guidelines exist for estimating how many full-time police officers a municipality should consider based only on population (see following table). Since population is only one factor to consider, Upper Saucon Township must evaluate the level of service that is appropriate to satisfy its particular needs and to fit its particular budget.

Table 11

GUIDELINES FOR ESTIMATING THE NUMBER OF NEEDED POLICE OFFICERS

POPULATION		NUMBER OF FULL-TIME OFFICERS NEEDED*	
		Low[1]	High[2]
6,000		6	12
8,000	(9,635 Upper Saucon's 1980 population)	9	16
10,000		11	20
12,000		13	24
14,000		16	28
16,000		18	32

*NOTES: [1]The Pennsylvania Police Chiefs' Association recommends .9 police officers per 1,000 residents in nonurban municipalities.

[2]Based upon a nationally recognized guideline of 1.8 to 2.0 officers per 1,000 people, the FBI has reported that in the Mid-Atlantic Region, suburban municipalities have 1.9 officers per 1,000 residents.

Based only upon these population guidelines and given the Township's 1980 population of about 9,600, two or more additional full-time officers may be needed.

FIRE PROTECTION AND AMBULANCE SERVICE

FIRE PROTECTION

Upper Saucon has one fire company, the Upper Saucon Volunteer Fire Company, located in Lanark. Major fire equipment includes a 1,000 gallon Mack pumper, a four-wheel drive field truck with a 200-gallon water tank, an emergency truck, and a "Jaws of Life" tool used to free victims from accidents. In 1976, a new addition to the fire company was completed. The company cooperates on a reciprocal basis, with other fire companies in surrounding municipalities. The Coopersburg Fire Company and the Se-Wy-Co Fire Company in Lower Saucon Township serve nearby portions of the Township on a regular basis.

When evaluating a municipality's fire insurance rating, the National Board of Fire Underwriters considers the following factors: community water system, fire department equipment and manning, fire alarm systems, and the community's building code. In addition, the Middle Atlantic States Fire Underwriters Association recommends standards for service areas for fire departments. These standards suggest that industrial and commercial development be within a 3/4 mile radius of a fire department, that residential development be within a 1.5 mile radius, and that rural development be within a 3 mile service area. Except for the extreme southeast and southwest corners of the Township, all of the Township lies within a 3 mile distance from the Upper Saucon Volunteer Fire Company. The central portion of the Township also lies within the 1 1/2 mile service area.

AMBULANCE SERVICE

In 1976, the Upper Saucon Ambulance Corps was formed. The Corps provides ambulance service in conjunction with the volunteer fire company. The Corps has approximately 40 trained members. One ambulance is available.

HEALTH CARE SERVICES

Maintenance of health is a basic concern of all people, and the provision of health care service facilities is generally considered to be an essential part of community development. Fewer than five doctors are located in the Township and no medical centers or hospitals are in the Township. Most Upper Saucon residents use the Sacred Heart, Allentown, and Allentown Sacred Heart Hospitals in Allentown, and St. Lukes Hospital in Fountain Hill.

UTILITIES AND MAINTENANCE

WATER SERVICE

A combination of private individual on-lot wells and centralized public water systems provide water service in Upper Saucon Township. All of the public water service which is presently supplied to Upper Saucon is obtained from the City of Bethlehem water system. The City and Upper Saucon Township distribute this water. The City of Bethlehem provides public water service to the northern part of the Township (north of Saucon Creek and east of Route 309). The Township buys bulk water from the City of Bethlehem and distributes it through its own system to its own customers. The Township's service area includes the central part of the Township and the northern part of the Township, west of Route 309.

Arterials - Provide access between major parts of counties and through and around cities, towns and major commercial and industrial nodes. They are designed for relatively large traffic volumes at high speed with access to abutting properties often restricted. (ADT 5,000-10,000)

- Pike Avenue
- Route 378 FAPR, FAPU*

Collectors - Provide connections between arterial highways and connect residential areas to each other. They are designed for moderate traffic volumes, to intercept traffic from local streets and directly serve local activity centers. (ADT 1,000-5,000)

- Limeport Pike	FASR*
- Station Avenue	FSAR*
- Blue Church Road	NFAR*
- Camp Meeting Road	NFAR*
- Gun Club Road	NFAR*
- Honeysuckle/Stonesthrow Roads	NFAR*
- Locust Valley Road	NFAR*
- Mill Road	NFAR*
- Lanark Road	NFAR, NFAU, FAU*
- Oakhurst Drive	FAU*
- Saucon Valley Road	NFAR, NFAU*
- Vera Cruz Road	NFA, FAU*

Locals - Provide direct access to abutting properties and channel local traffic to collector streets.

- All other existing streets and roads NFA*

---

*These symbols indicate the relationship to the Federal Aid System:

FAP	Federal Aid Primary
FAPU	Federal Aid Primary Urban
FAPR	Federal Aid Primary Rural
FAS	Federal Aid Secondary
FASU	Federal Aid Secondary Urban
FASR	Federal Aid Secondary Rural
FAU	Federal Aid Urban
NFA	Non-Federal Aid
NFAU	Non-Federal Aid Urban
NFAR	Non-Federal Aid Rural

DANGEROUS INTERSECTIONS AND OTHER CIRCULATION PROBLEMS

According to the Upper Saucon Police Reports, there were 286 traffic accidents in the Township in 1981. These accidents resulted in 6 fatalities and 120 people being injured. Most of the traffic accidents occurred at Route 309 intersections.

Thirty-three of the most dangerous intersections and other circulation hazards are summarized in Table 11 and shown on Map 8. Through responsive planning and design, many of these circulation problems can be alleviated. The dangerous intersections and areas shown on the map and listed in the table have at least one of the following characteristics which warrant their attention:

- poor sight distance caused by obstructing buildings, topography or other objects;
- streets intersecting at less-than 90-degree angles which results in less than adequate sight distances, making it difficult to see on-coming traffic and creating left-turn problems;
- intersections where horizontal or vertical curves result in less than adequate sight distances, making it difficult for motorists to see on-coming traffic and creating left-turn problems;
- poor horizontal or vertical alignment interrupting traffic flow and creating an unnecessary hazard;
- street and railroad intersections; and
- intersections with high speed traffic.

- intersections where horizontal or vertical curves result in less than adequate sight distances, making it difficult for motorists to see on-coming traffic and creating left-turn problems;
- poor horizontal or vertical alignment interrupting traffic flow and creating an unnecessary hazard;
- street and railroad intersections; and
- intersections with high speed traffic.

Table 11

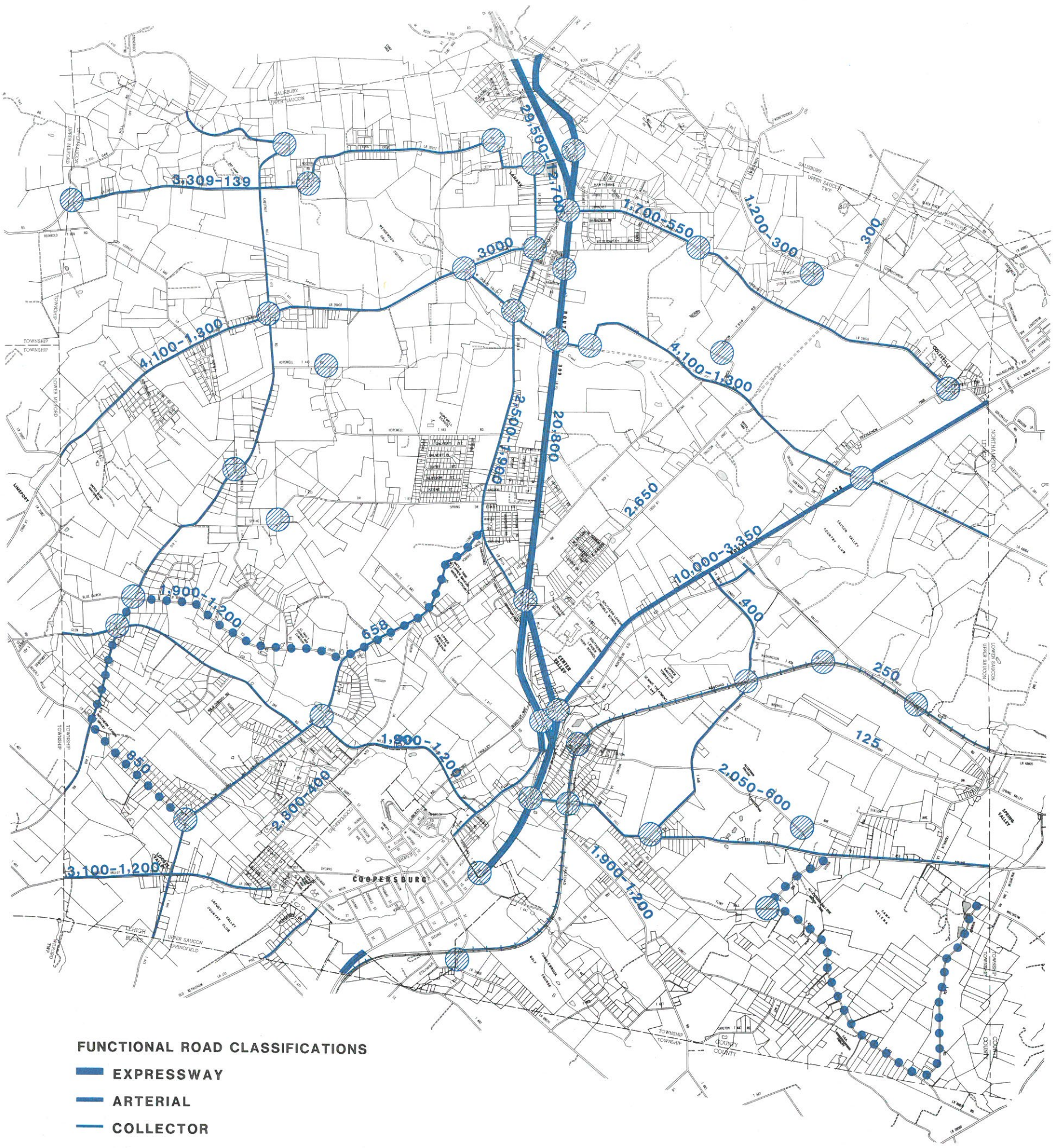
DANGEROUS INTERSECTIONS AND CIRCULATION HAZARDS
Upper Saucon Township

Dangerous Intersection/Area and Type of Hazard	
Intersections With High Speed Traffic	
Route 309 and Oakhurst Drive	1
Route 309 and Abbott Street	2
Route 309 and Saucon Valley Road	6
Route 309 and Passer Road	7
Route 309 and Fairmount Street	8
Spur Route 153 and Vera Cruz Road	28
Intersections With High Speed Traffic and Less Than 90°	
Route 309 and Camp Meeting Road	3
Routes 309 and 378	4
Route 378 and Saucon Valley Road	13
Intersections Less Than 90°	
Landis Mill Road and Taylor Drive	5
Wards Lane and Flint Hill Road	9
Oakhurst Drive and Old Bethlehem Pike	14
Stonesthrow Road and Honeysuckle Road	16
Limeport Pike and Saucon Valley Road	18
Chestnut Hill Road	19
Vera Cruz Road and Kozy Korner Road	20
Chestnut Hill Road and Applebutter Hill Road	22
Chestnut Hill Road and Glen Road	24
Saucon Valley Road and Lanark Road	30
Hazardous Road Alignment	
Stonesthrow Road	15
Vera Cruz Road	17
Beverly Hill Road and Blue Church Road South	34
West Hopewell Road	21
Spring Drive	23
Vera Cruz Road	27
East Saucon Valley Road	29
Station Avenue	32
Oakhurst Drive	33
Mill Road and Blue Church Road South	
Chestnut Hill Road and Blue Church Road	
Limeport Pike and Chestnut Hill Road	
Lanark Road and Limeport Pike	
Vera Cruz Road and Lanark Road	
Street and Railroad Crossings	
Spring Valley Road and Conrail Crossing	10
Washington Lane and Conrail Crossing	11
Landis Mill Road and Conrail Crossing	12
Landis Street and Conrail Crossing	25
Station Avenue and Conrail Crossing	26
Flint Hill Road and Conrail Crossing	31

SOURCE: Upper Saucon Township Police Department information and URDC Field Survey, 1982.

NOTE: The numbers in the extreme right-hand column of the table are keyed to the numbers on Map 8.

MAP 8
CIRCULATION CONDITIONS



FUNCTIONAL ROAD CLASSIFICATIONS

- EXPRESSWAY
- ARTERIAL
- COLLECTOR
- LOCAL

2,200 AVERAGE DAILY TRAFFIC VOLUMES (1981)

SCENIC DRIVES

HAZARDOUS INTERSECTIONS & AREAS

RAILROAD

UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street-Bethlehem, Pennsylvania 18018

0 400 800 1600 2400 3200
SCALE IN FEET

MEANS OF TRANSPORTATION TO WORK

According to the results of a questionnaire distributed to all Township property owners, over 80 percent of those responding indicated that they use their personal automobile to get to work. About 12 percent of the respondents indicated that they used car pooling. Table 12 shows the results of the questionnaire:

Table 12

WAYS IN WHICH PROPERTY OWNERS TRAVEL TO WORK
Upper Saucon Township

MEANS OF TRANSPORTATION	RESPONDENTS	
	Number	Percent
Automobile	1,129	80.8
Car Pool	154	11.0
Walking	37	2.6
Public Transportation	28	2.0
Motorcycling	23	1.6
Other*	16	1.1
Bicycle	12	0.9

SOURCE: Upper Saucon Township Property Owners Questionnaire, June-July, 1982.

*Other includes: Truck, Van, Taxi and Business vehicle.

SCENIC DRIVES

Sightseeing is a popular pasttime. Township residents who enjoy this activity are very fortunate because Upper Saucon Township has many scenic areas.

Recognizing the need to preserve and enhance the Region's scenic and historic drives, the Regional Recreation and Open Space Plan* recommends the establishment of a system of scenic and historic drives for the Lehigh County-Northampton County Region. In Upper Saucon Township, Wimmer Road, Flint Hill Road, and Wards Lane represent segments of this proposed system of scenic drives. The portion of Taylor Drive east of Wards Lane is designated as a "connector" route. The Plan states that the scenic drives should be marked with small but distinctive signs along their routes, especially at intersections and turns, and should be protected from commercial encroachment, especially from gas stations, billboards, and junk yards.

Portions of other roads, not mentioned in the JPC report, are equally scenic: Blue Church, Chestnut Hill and Beverly Hill; these roads warrant a scenic roads status.

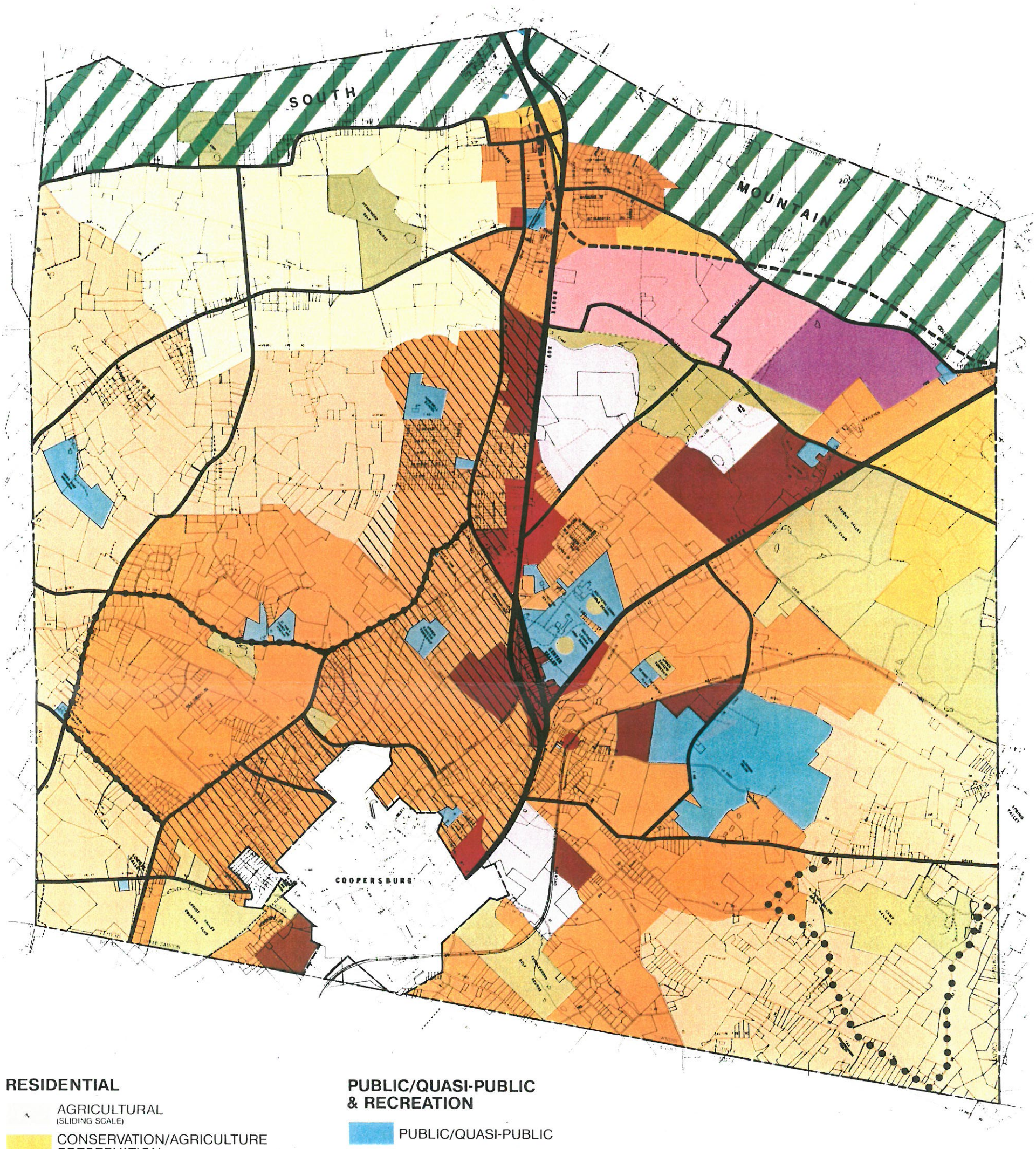
PUBLIC TRANSPORTATION

Public transportation is recognized as an integral part of a balanced transportation system. Besides offering commuters a reasonable alternative to driving to work, public transportation enables people without cars to reach jobs, shopping areas, schools, libraries, and other community facilities. Public transit also offers an alternative to the automobile—one of the least efficient uses of our available resources. The Lehigh and Northampton Transportation Authority (LANTA) currently provides bus service twice each day along Route 309 between Coopersburg and Allentown.

---

*SOURCE: Joint Planning Commission, Lehigh-Northampton Counties, Regional Recreation and Open Space Plan, Report #6, "Programs and Priorities: 1970-1990," January 1971, p. 41.

COMPREHENSIVE PLAN
FOR UPPER SAUCON TOWNSHIP



RESIDENTIAL

- AGRICULTURAL (SLIDING SCALE)
- CONSERVATION/AGRICULTURE PRESERVATION (1 DWELLING UNIT PER 3 ACRES)
- RURAL RESIDENTIAL* (1 DWELLING UNIT PER ACRE)
- SUBURBAN RESIDENTIAL* (1 DWELLING UNIT PER ½ ACRE)
- MULTI-FAMILY RESIDENTIAL* (2-8 DWELLING UNITS PER ACRE)
- *PERFORMANCE RESIDENTIAL DEVELOPMENT (2-8 DWELLING UNITS PER ACRE), as described on pages 24 and 25 of this Plan report.

CONSERVATION

- SOUTH MOUNTAIN CONSERVATION (1 DWELLING UNIT PER 5 ACRES)

PUBLIC/QUASI-PUBLIC & RECREATION

- PUBLIC/QUASI-PUBLIC
- RECREATION

COMMERCIAL

- PLANNED COMMERCIAL

INDUSTRIAL

- LIGHT INDUSTRIAL
- OFFICE/RESEARCH
- RESOURCE RECLAMATION

TRANSPORTATION

- EXPRESSWAY (PROPOSED)
- ARTERIAL
- COLLECTOR
- LOCAL
- SCENIC DRIVE

UPPER SAUCON TOWNSHIP
LEHIGH COUNTY, PENNSYLVANIA

PLANNING AND DESIGN CONSULTANTS
Urban Research and Development Corporation
528 North New Street Bethlehem Pennsylvania 18018