

Chapter 1

Introduction

Purpose of the Plan

The Manheim Township Comprehensive Plan is a multi-faceted document which provides the primary framework for the management of future growth and development. It contains many components and serves numerous functions. The Plan is designed to acquaint the reader with Manheim Township while identifying the Township's aspirations and expectations heading into the 21st century to preserve the unique character of the Township which has made the area such a desirable location for residences and businesses.

In its most basic form, the Plan serves as a valuable resource of information on the Township's population, environmental characteristics, existing land use, housing, Township services and facilities, and Township infrastructure. This information provides a solid foundation for the overall planning program of the Township. It is recognized that a thorough understanding of the Township's makeup is necessary to facilitate effective decision making.

The preparation of this Comprehensive Plan included a survey of Township residents. The survey, conducted from November 1992 to February 1993, was prepared, and results compiled, by the Township Comprehensive Plan Steering Committee. There were 11,675 return postage paid surveys delivered to solicit responses. Of the surveys circulated, 2,784, or 23.8%, were returned. This high rate of return may be interpreted as considerable resident interest in the future of Manheim Township.

The survey had two basic purposes: first, to make residents aware of the ongoing process to update the Township Comprehensive Plan; and second, to learn more about the residents of the Township, and their attitudes regarding growth and development of the Township, and their desires for the future of the Township. The attitudes and values of residents play an essential role in the identification of planning issues and provide a foundation of planning goals and the appropriate steps to implement those goals.

The Plan is most visible in its role of directing the future growth and development of the Township. Although the Plan itself is not legally binding, it defines the parameters for the Township's growth management tools: the zoning ordinance, and subdivision and land development regulations. Likewise, it provides a basis for other functions such as the capital improvements program. In establishing an overall planning framework, the Plan provides a forum for fostering creative ideas and innovative techniques which will enhance Manheim Township.

The Plan seeks to direct future growth in two major ways. The first, and most important, is through the Plan's goals, objectives, and policies which are interwoven throughout the Plan's text. Besides addressing growth and development issues, the goals, objectives and policies deal with various socio-economic aspects of the Township. This format is designed to articulate more clearly the Township's goals and to provide an effective framework for achieving these goals. It is hoped that the policies will facilitate the development of action strategies and the revision of zoning and subdivision ordinances. This process is discussed in greater detail in the chapter dealing with the implementation of the Plan.

The second way the plan seeks to direct growth is by the more traditional and visible future

land use map. The future land use map supplements the goals, objectives and policies of the plan and is designed to reflect the intent of the goals of the plan by visually depicting the appropriate development patterns up to the year 2010. The future land use map should be used as a general guide for rezoning requests and to encourage specific types of development in appropriate areas.

The Plan's Vision

Interestingly, the Plan's vision for the future of Manheim Township also includes a return to the past, and a return to neighborhoods. During the last decade, residential developments within Manheim Township have been designed and built lacking a distinctive character and physical presence that provide a sense of neighborhood and identification. These new developments do not provide a mix of dwelling types at a variety of prices; nor the ability to walk on sidewalks or designated paths to recreational, educational or commercial areas; nor residential densities sufficient to support mass transit service.

This Comprehensive Plan addresses the return to neighborhoods which would be resident-friendly, with opportunities for social interaction, recreational activities and a sense of community. Specific goals, policies and implementation strategies are outlined so that in the future individual neighborhoods would be defined by parks, open spaces and greenways, providing non-vehicular travel between neighborhoods and residential and non-residential areas. Interconnections between neighborhoods would allow for local travel through the community without the need to utilize major thoroughfares.

The natural resources of the Township are dwindling assets which must be protected. Future neighborhood design should protect natural streams, floodplains, wetlands and the limited remaining woodlands. Although the majority of the Township's prime agricultural production area has been zoned to protect against the conversion to non-agricultural uses, continued efforts to preserve this resource would result in permanent protection through various landowner initiated development restrictions.

In the future, shoppers and commuters would experience a reduction in traffic congestion through development designs and programs that are community driven and implemented by Township residents and businesses. Mixed use developments would provide residents with the opportunity to walk to their place of employment or to neighborhood shops and services. Densities within developments would make mass transit service efficient and convenient. Designated public parking facilities would serve as meeting points for carpools and mass transit vehicles. Businesses would implement carpooling, flexible scheduling for employees, and other tools to reduce traffic on the community's roads.

Of course, a vision is usually more perfect than reality. What we want to become is often more than we are able to achieve. But, without a vision, without bold goals, we will never experience even a modicum of success.

The fulfillment of this Comprehensive Plan's vision for the Township's future will depend upon the commitment of the Township's Board of Commissioners, present and future, and the public to make it work. It should be remembered that the Comprehensive Plan is a guideline of objectives, recommendations and development patterns which form the framework for Manheim Township's future. It should be treated as a goal to be worked toward and achieved through the use of strong and effective implementation tools, many of which are identified and addressed in the plan.

This Comprehensive Plan is a continuation of Township efforts to provide a long-range planning program for Manheim Township. Just as this Plan updates comprehensive planning efforts undertaken by the Township in 1966 and 1987, this Plan's recommendations and future land use map must be continually evaluated and updated as necessary to ensure that the Plan will continue to reflect the attitudes of the community and be a dominant force in Manheim Township's growth and development. It is also hoped that this Plan will be supplemented by additional long-range planning studies and projects. The more sophisticated analyses incorporated into these additional studies will expand upon many of the planning issues introduced in the following chapters. These studies will undoubtedly lead to more effective, better informed formulation of policies and decision making.

Regional Context

Manheim Township is situated in the central portion of Lancaster County in south-central Pennsylvania. The Township is situated immediately north of the City of Lancaster, which serves as the County seat of government.

Manheim Township contains a total land area of 22.6 square miles, being roughly 7.5 miles wide and 3.2 miles long. The Township's east and west boundaries are generally determined by natural features, the Conestoga River and

Little Conestoga Creek respectfully, whereas the northern and southern boundaries are man-made lines. The annexation of land by the City of Lancaster has resulted in a very irregular southern boundary that includes "islands" of Township land area completely surrounded by Lancaster City. In addition to the City of Lancaster, Manheim Township is contiguous to Warwick Township to the north, West Earl Township to the northeast, Upper Leacock Township and East Lampeter Township to the east, Lancaster Township to the southeast and southwest, East Hempfield Township and East Petersburg Borough to the west, and Penn Township to the northwest.

Manheim Township provides a link for major transportation routes through the Lancaster metropolitan area. Two Federal (US Route 222 and 30), and seven State roads (PA Routes, 283, 4011, 72, 501, 272, 23 and 230) connect the Township with other parts of the County.

The proximity of Lancaster to many larger eastern cities, provides Manheim Township residents with convenient access to Philadelphia, Baltimore, and Wilmington, and reasonable access to New York, Pittsburgh and Washington, D.C.

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Chapter 2

Township Characteristics

I. History / Cultural

Resources

Township History

Established in 1729, Manheim Township is one of the original townships in Lancaster County. Although annexations by the City of Lancaster have resulted in a reduction in the total area of the Township, the original Township boundaries have not substantially changed.

The Township developed as a rich agricultural area due to its highly productive limestone soils. Early crops include spelt (a type of wheat), barley, oats, buckwheat, and rye. Grain that was not used on the farm was sold to local millers to be ground and sold to distilleries for whiskey. The production of whiskey was the first industry in Manheim Township.

In 1717 Jacob Bear built the first mill on Carter's Creek, now named Lititz Creek, and later built a second mill a half mile upstream from the first. Today, this area is known as the Village of Oregon. Bear's son, Samuel Bear, started the first tavern in the area and succeeded his father in the ownership of the mills. As late as 1965, the area was known as Bear's Mill.

In 1767, Samuel Bear sold the mill property to Martin Myers, who called the locality "Catfish." The Lititz Creek was well known for its abundance of catfish and frequently drew anglers from Lancaster for a few days of sport, who in turn lodged at Bear's Tavern. During the Revolutionary War, Samuel Bear and Martin Myers sympathized

with the English, and when Major Andre was a paroled prisoner at Lancaster, he came out to fish for catfish and eat at Bear's Tavern.

About the time the question of Oregon statehood was before Congress, the people of Catfish took measures to secure the establishment of a post office. Henry Leman, a rifle manufacturer in Lancaster and local resident, proposed the name of Oregon, which was adopted. The Union Church currently located in the village was built in part through the contributions of people living in Oregon and the nearby vicinity. The church cemetery is one of the oldest in the county located outside the City of Lancaster.

The expansion of roads in the late 1700's and early 1800's opened new markets for Lancaster County's agriculturally related produce. Wheat and whiskey were the predominant trade goods for the area. In the late 1770's there were four distillers, two grist and sawmills, one filling mill and one oil mill within the Township. Roadside taverns became an important commercial resource in the early 1800's as the Township was opened to the east coast by four major turnpikes built during this time frame.

The introduction of tobacco in 1825 started the most important agricultural revolution of the time. This single crop brought affluence to many local farmers and spurred further economic growth in the region, especially in the area of Landis Valley. A village of Landis Valley was developed as a commercial center after Jacob Landis built a hotel in 1855. A post office was established in 1872, replacing the post office located to the south at the village of Roseville. This agricultural area was considered as a good tobacco growing area, and was the location of leaf-tobacco businesses for many years. By 1880, tobacco was returning a value of \$250 per acre, with a profit of about \$100 per acre.

Fifty years ago, the State of Pennsylvania dedicated a living museum for the preservation of 19th century farm life named the Landis Valley Farm Museum, located in "Landis Valley."

The expansion of roadways to serve the rich agricultural economy in Manheim Township inspired the location of many small villages. Many of the early towns that were founded as weigh stations, taverns, hotels, or post offices remain as familiar landmarks in the Township.

The village of Binkley's Bridge had its origin in 1790 in the building of a bridge over the Conestoga River by Christian Binkley. The bridge, located where the current Route 23 crosses the river, was the first stone bridge in Lancaster County and cost about \$17,000 to build. To repay the cost of construction, Binkley sought to have the State grant him the privilege of making it a toll-bridge. Unable to secure permission, he later transferred the bridge to the public for one thousand pounds in gold and silver coin.

Binkley also built a grist mill at the same general location as the bridge. In 1866 the mill became the property of the Printer's Paper Mill Company. The mill produced book and newsprint papers of machine and super-calendared finish. A large and successful business was carried on until it as well as the bridge were destroyed by fire in 1882. For many years, there was a tavern and a post office in the village of Binkley's Bridge.

The village of Neffsville was once viewed as the most important village in Manheim Township and is still a thriving area of the Township. The village is named after John Neff, who came from East Hempfield Township about 1806 and acquired the farm upon which a year later he laid out a town site that was eventually given his name. However, it is possible that Neffsville came into existence by means of a land lottery, a favored mode of town creation at the time.

Soon after the hamlet was laid out, Leonard Fiddler established a tavern and used a green tree as a sign. As a result, the village became generally known as "Fiddlers Green."

The first store in the village was erected as a residence by a Mr. Slater in 1815. Mr. Slater was also the postmaster and used the store as a post-office. The residence and store building eventually became the Pennsylvania Hotel. A small brick school house was built in the early days of the village, unknowingly laying the foundation for the administrative and secondary educational campus for the Township's school system today.

Roseville, Dillersville, and Fruitville were also identifiable hamlets in Manheim Township which today have corresponding local identities in residential or commercial development. Roseville was founded on a hotel built in

1836. For a number of years the village consisted of the tavern and a single residence. The name of the village came about some time later as the number of houses increased. A traveler suggested the name from an abundance of rose bushes growing in home gardens. Dillersville was established between the Harrisburg and Manheim turnpikes at the junction of the Lancaster and Reading Railroads. Fruitville, the smallest of the hamlets, was located in the western portion of the Township on the Manheim turnpike.

Why growth and development occurred in Manheim Township, rather than other suburban townships around the City of Lancaster, can only be speculated upon. However, there are several factors such as: the location of the mainline of the Pennsylvania Railroad; transportation access through the Township on Lititz Pike, New Holland Pike, Oregon Pike, and Fruitville Pike; and the availability of sewer and water facilities. The period from 1950 to 1960 was a major growth period in the Township as population grew from 9,289 to 14,855 people (a 60 percent increase), establishing Manheim Township as the second largest municipality in Lancaster County.

Historic Preservation

Historic preservation is a broad category of activities with a basic purpose of ensuring that important traditional qualities of the community are passed along to future generations. Local officials and residents recognize the value of conservation, rehabilitation, restoration, or adaptive reuse of historic features and styles to preserve the Township's past, and to create the unique identity that stimulates civic pride. Historic properties provide the community with a sense of time and place and a sense of continuity. They are physical reminders of the accomplishments of our predecessors and a stabilizing influence for the community. As tangible objects of our past, they serve a valuable educational function.

It is a common misconception that the primary objective of historic preservation is to accurately restore every historically significant site to its original appearance. While this may apply to a limited number of structures, far more often historic preservation merely seeks to maintain and enhance existing historic buildings through the most minimal means possible. Preservation instead of restoration, and adaptive reuse are often very cost effective because they seek to take best advantage of what is available to repair rather than replace, and to not alter things that are working well.

Manheim Township shares in the rich cultural history of Southeastern Pennsylvania. The Township's architectural heritage is apparent in many individual buildings, structures and related settlements that are scattered throughout the Township. However, many fine old structures give way to the pressure of development and significant details of the Township's built environment have been lost to insensitive alteration.

To identify historic and architectural resources within the Township, the Historic Preservation Trust of Lancaster County conducted a comprehensive survey of all buildings in Manheim Township (in 1992).

The survey identified a wealth of historic structures and sites throughout the Township. A total of 750 sites were identified and inventoried. Four of these properties are currently listed on the National Register of Historic Places (See Table 2.1). Several others are potentially eligible for listing on the National Register of Historic Places or the Lancaster County Historic Sites Register.

Objectives and Policies

Objective:

Preserve and enhance the historic resources of Manheim Township to ensure that the historic and cultural legacy will continue to help shape and define the unique character of the Township.

Policies:

- Provide incentives for the rehabilitation and preservation of significant historic and cultural resources

throughout the Township.

- Encourage the training and education of members of Township Boards and Commissions about the value and advantages of regulating and preserving historic resources.
- Consider rehabilitation of historic structures as a means of meeting affordable housing goals of the Township.
- Ensure that Township ordinances, building codes, and other development regulations acknowledge and permit special treatment for historic sites and structures.
- Ensure that public infrastructure improvements are located and designed to encourage preservation, revitalization and rehabilitation of historic resources and discourage destruction of historic resources.

II. Natural Resources

An analysis of natural resources in Manheim Township is essential to the development of the goals, objectives and policies that will direct future land use and public service decisions. It is the one aspect of the comprehensive planning process which must be considered as an unchanging, "given" factor. A knowledge of the natural environment is important not only for planners, developers, and Township officials, but for every citizen as well. The quality of life in Manheim Township rests on the understanding and maintenance of our environment. Whether one is choosing a new home site or maintaining an existing one, an understanding of how the natural environment affects the site will have much to do with its overall quality.

The benefits of involving natural resources in planning decisions are two fold. First, a proper understanding of the components of the Township's natural resources will help to protect people and property from natural and man-made hazards. Secondly, it is important to preserve and maintain the natural and man-made values associated with these natural resources.

Hazards that may result in damage to people and property range from floodwaters, to building foundation damage resulting from a high water table, to loss of a reliable water source due to contamination of the groundwater. These hazards are identifiable and manageable with an understanding of the effects natural resources have on land use decisions.

Values of the natural resources may be man-made or may be interrelated with other natural processes. For example, prime farmland provides a value to man by its productivity. As such, it should be protected from land uses that adversely impact on these values.

Natural resources such as wetlands have value beyond direct benefit to man. This resource helps to maintain base flows in streams, moderate effects of downstream flooding, and provide habitat for a great range of plant and wildlife species, which are part of the ecosystem upon which all living things depend for life.

In analyzing the appropriate development for the future land use plan, the characteristics of certain environmental conditions will constrain some types of development and promote others. Development constraints are related principally to the intensity with which any specific site should be developed. For example, the most obvious constraint is the flood prone areas which will be covered with water when specific amounts of rain falls.

The following is a brief analysis of the components of the Township's natural resources. More importantly, the analysis of each component provides for Township objectives and policies.

Geology

The underlying geologic formations shape the topography of the landscape and determine the waterbearing

characteristics of our aquifers. Geologic formations can also restrict the nature and extent of surface development. In addition the underlying rock is subjected to forces that erode its original shape and form soils. The resultant soils then possess distinct characteristics that often impact land use decisions.

The physical properties of underlying rock determine its strength and suitability to support development. These properties determine the ease of excavation and ability to support the foundation of various structural types.

Geology is also a primary determinant of groundwater quality and quantity. Certain rock types and structures convey water better and serve as more abundant well sources. For example, limestone areas are characterized by solution channels that readily allow the passage of water; whereas, other local metamorphic rocks have very low secondary porosity. Rock type and structure can affect the degree of filtration that takes place within the groundwater and the chemical composition of the rock can also contribute to the chemical properties of its groundwater.

The geology of Manheim Township consists primarily of sedimentary rock layers which cross the Township in an east to west fashion. The exception is the location of igneous dikes and the adjoining metamorphosed rock in the central and northern portions of the Township.

There are ten geologic formations found within Manheim Township which can be broken into four groups based upon their similarities in composition and engineering characteristics. All of the formations found in Manheim Township are shown and listed in order of increasing age on Map 1.

Table 2.2 shows the relationship between the geology of the Township and such land use planning elements as porosity and permeability, ease of excavation, foundation stability and quantity of groundwater resources. These four elements are important to consider when allocating and planning land use activities. This table is intended for a reference only and should be utilized to determine general characteristics of the formation type.

The presence of limestone allows the passage of groundwater through solution channels. Generally, these solution channels continually become larger, and thereby increase their capacity to carry additional groundwater. The presence of solution channels provide a ready source of water for wells that are drilled into the geologic foundation.

Although geologic formations that are characterized by solution channels may be beneficial for groundwater supplies, the formation of these channels may pose potential problems. The formation of large solution channels and caverns can create sinkholes that may result in significant safety hazards for land uses located on the surface.

Another concern associated with the presence of formations with open solution channels deals with the suitability of an area for on-site sewage disposal methods. On-site sewage fields often rely upon the subsurface soil and rock particles to filter impurities from the effluent prior to entering the groundwater. The presence of solution channels can intercept effluent before the soils have had the chance to purify it. As a result, the polluted groundwater can travel along the solution channel and degrade other water sources. The rapid movement of water through these channels increases the risk that once pollutants are introduced, they will spread quickly to a large area with little chance of control or renovation.

Groundwater

An understanding of local groundwater conditions is important in the allocation of future land use so as to protect important groundwater recharge areas, assure adequate water for rural neighborhoods reliant on wells, and plan for sewage facilities.

Lancaster County is plagued with widespread groundwater contamination. High concentrations of nitrates have been identified within many water supply wells throughout the county. Manheim Township is no exception to this problem. On-site well testing conducted as part of the Township's Official Sewage Facilities Plan revealed high nitrate levels in 33% of those wells tested. High nitrate levels (above the U.S. Public Health Service and Environmental Protection Agency standards of 10 milligrams per liter) can be harmful to infants and livestock.

Primary sources of nitrates existing within Lancaster County are fertilizer, manure, on-lot sewage disposal system effluent and residue from decaying vegetation. Based upon analysis performed in the Lancaster County Sewer and Water Resources Study (May 1987), excess fertilizer and manure are the principal causes of high nitrate

concentrations throughout the County, rather than on-lot disposal systems.

The four most common remedial measures used to improve groundwater quality are pumping and treatment of groundwater, construction of wells and caps to block water movement, biological treatment of groundwater in place, and site excavation. All four of these measures are very expensive and impractical for treatment of widespread groundwater contamination. Consequently, practical remedial actions appear limited to the treatment of groundwater after it has been withdrawn for specific water uses. However, by comparison, to any treatment of contaminated groundwater, prevention is far less costly.

Soils

The identification and evaluation of soils has historically played an important role in allocation of land use activities. Soils may limit development due to their drainage characteristics or erodible nature. Other soils may be best suited for particular land uses such as agriculture.

The United States Department of Agriculture (USDA) Soil Conservation Service has completed its second soil survey of the County. This survey was completed in 1985, and utilizes the best soil classifying and mapping technologies available at that time. Table 2.3 lists the soils found in Manheim Township.

The Soil Survey of Lancaster County, Pennsylvania (1985) shows the Township containing two of the County's six general soil groups. The first group is the highly agriculturally productive Duffield-Hagerstown association. This soil group is the predominate soil in the Township, and includes most areas nearly level to rolling hills. The underlying geologic formations that have acted to form this soil group are made up of limestone residue.

The second general soil group found in the Township is the Bedington Association. The Bedington soils are located in areas on and surrounding the ridge known as Blossom Hill. These areas are underlain by the metamorphic rocks of the Antietam and Harpers Formation , and the shales of the Kinzers Formation.

Development Constraints

Often soil characteristics have constraints for building development. Such characteristics include steep slopes, wetness, depth to bedrock, frost active, shrink-swell, flow strength, and cohesiveness, and flooding. Other soil constraints become important if on-lot sewage disposal methods are contemplated. The constraints for on-lot sewage disposal include steep slopes, wetness, flooding, slow percolation rates, poor filtration characteristics, and high secondary porosity due to fractures and solution channels. It is important to identify and locate these soils that possess these building development and on-site sewage disposal constraints so that the projected land uses can be kept away from these environmentally sensitive areas. The following Table 2.4 lists those soils that possess "severe" constraints for these specified activities, along with their particular problems:

Prime Farmland

One primary consideration of soils mapping is the identification of prime farmland. Prime agricultural soils are one of Manheim Township's and Lancaster County's most important natural resources. The preservation of prime agricultural soils is important in maintaining land for future farming activity.

The U.S. Department of Agriculture's Soil Conservation Service defines prime farmland as " the land that is best suited to producing food, feed, forage, fiber, and oil-seed crops. It has the soil quality, growing season, and water supply needed to economically produce a sustained high yield of crops where it is treated with and managed using acceptable farming methods. Prime farmland produces the highest yields with minimal inputs of energy and economical resources and farming. It results in the least damage to the environment."

Prime farmland is characterized by an adequate source of water supply, favorable climatic conditions, proper chemical properties, good permeability to air and water with few or no rocks, resistance to erosion, and relatively flat topography.

Land capability classification provides a general indication of the suitability of soils for most kinds of field crops. Soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management.

In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit. Only class and subclass were used in the Lancaster County Soil Survey.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for a practical use.

Class I soils have few limitations that restrict their use. Class II soils have moderate limitations that

reduce the choice of plants or that require moderate conservation practices. Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both. These three classes of soils are considered prime soils for agricultural production.

Class IV soils have very severe limitations that reduce the choice of plants or that require very careful management, or both. Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use. Class VI soils have very severe limitations that make them generally unsuitable for cultivation. Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e*, *w*, or *s*, to the class numeral. The letter *e* shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; *w* shows that water-in or on the soil interferes with plant growth or cultivation; and *s* shows that the soil is limited mainly because it is shallow, droughty, or stony.

About 55 percent of the soils within Lancaster county are considered prime farmlands. These soils have enabled the County and its farmers to attain State and National distinction as one of the most productive sources of agricultural products. Manheim Township, has some share in these valuable resources as can be seen in the Table 2.3.

Map 2 exhibits the location of prime soils have been mapped to illustrate their concentrations. As this map reveals, the majority of the undeveloped land in the Township is covered by highly productive agricultural soil. There are, however, several scattered ridges and floodplains that reduce the productivity of these prime soils, and also inhibit their suitability for future development.

Topography and Drainage

Slope and Topography

Manheim Township lies within the physiographic area referred to as the Lancaster Plain. Within the Lancaster Plain, the topography is relatively flat. Slope conditions within the Township occasionally exceed five percent, and only rarely exceed ten percent. Slopes greater than 10 percent tend to be closely related to streams.

Though erosion and runoff in slope areas are natural processes, development activities located in slope areas can alter the gradients and upset the natural balance. By redirecting water runoff from buildings and impervious surfaces away from the face of steeper slopes, severe soil erosion and drainage problems can be avoided. Development projects in areas with slopes greater than 15 percent should be carefully reviewed. Areas with slopes in excess of 25 percent should be considered unsuitable for development.

Drainage

One of the more obvious features of the natural environment is how water drains after it rains. The major channels water takes on its way to rivers are called drainage basins or watersheds. Each basin is basically a valley into which water flows by gravity.

Drainage in Manheim Township is either east, into the Conestoga River, or west, into the Little Conestoga Creek. The approximate boundary line is Lititz Pike, PA Route 501. The actual boundary line goes as far west as the

intersection of Buch Avenue and Weaver Road and as far as two thirds of a mile east of Lititz Pike at Lancaster Airport. There are numerous small streams throughout the Township which contribute to these two surface channels.

The Conestoga River, and the Little Conestoga Creek flow south until they meet at Rock Hill, after which the Conestoga River flows into the Susquehanna River at Safe Harbor, south of the Safe Harbor Dam.

The way in which these waterways flow through the Township have definite land use implications. A watershed or drainage basin is a basic geographic unit which should be used to plan and design sanitary and storm sewer systems. Systems that can make use of gravity-fed lines can reduce the initial cost and long-range maintenance costs of these utilities.

Floodplains

Manheim Township is currently in compliance with the Federal Flood Insurance and the State Floodplain Management Act. The Township utilizes the Federal Insurance Administration's (FIA) Flood Hazard Boundary Map as an initial determinant for floodplain location. This information is supplemented by Township requirements for special floodplain studies in association with development projects.

The vast majority of Manheim Township's existing development is located well above any stream that might threaten properties in periods of flooding. However, there are existing structures and uses that are located in floodplain areas that pre-date current floodplain regulations.

Preserving these floodplain areas from development disturbances is crucial in minimizing potential damages to property and risk of injury due to flooding. Allowing the floodplain areas to remain in their natural state will also minimize any major changes to the balance of the hydrologic system and allow for groundwater absorption for recharge of subsurface water supplies. The unplanned encroachment of structures and land filling activities in floodplain areas have the potential of reducing the floodplain land area and water carrying capacity, thus increasing water heights, velocities, and flood hazards in areas beyond these encroachments. Incorporating conservation area in the land use program will be effective in preserving floodplain areas.

Surface Water Quality

The physical setting of Manheim Township has had an effect on flooding along streams or rivers in Lancaster County. The Township, as well as other Lancaster County municipalities, have developed stormwater management ordinances to ultimately eliminate or greatly reduce the dangers of major flooding. These ordinances generally prohibit additional water run-off caused by site development by mandating the developer carry out water run-off plans and construction of appropriate water containment facilities if needed.

Within the past few years, a heightened awareness of surface water quality has strengthened the control on agricultural-related runoff. Much of this interest has been generated through the efforts to reverse degradation of the Chesapeake Bay. Several agencies have developed voluntary and mandatory programs aimed at improving the quality of the waters that reach the Bay.

The Chesapeake Bay Nonpoint Source Pollution Abatement Program provides technical, educational and financial assistance to farmers installing pollution control measures. All of Manheim Township is eligible for funding for nutrient controls under the Chesapeake Bay Program. The Agricultural Stabilization and Conservation Service administers a cost sharing effort through the Agricultural Conservation Program. The Soil conservation Service provides technical and planning assistance to interested landowners. The Farmers Home Administration can provide loans for the implementation of farmland conservation practices. The Lancaster Conservation District can assist landowners and municipalities. Federal Watershed Protection and Flood Prevention Act Grants are available to individuals or groups for erosion protection within agricultural watersheds.

Wetlands

In recent years wetlands have been recognized nationally as a valuable natural resources. They are no longer thought

of as disease-ridden wastelands of little value. This recognition has led to increasing public awareness of the environmental benefit of wetlands and increased efforts to preserve and protect wetlands.

The most widely accepted definition of wetlands is currently used by the U.S. Fish and Wildlife Service in association with their National Wetlands Inventory (NWI). The NWI defines wetlands as transitional lands between terrestrial and aquatic systems where the water table is usually at or near land surface, or the land is covered by shallow water. The U.S. Fish and Wildlife Service and the Army Corps of Engineers identify wetlands using three parameters. These are:

- The presence of wetland vegetation
- The area hydrology (saturated soils)
- Identification of hydric soil

The U.S. Department of the Interior, using this three parameter method, has prepared National Wetland Inventory Maps that overlay the United Geological Survey Maps. These maps include Manheim Township and, for planning purposes, are useful in identifying wetland areas.

The Environmental Protection Agency (EPA) utilizes a two parameter approach to identification which provides a larger area of consideration to wetlands by using hydrology and presence of hydric soils. Currently, the Corps and the EPA are working on a compromise identification and delineation methodology. In the interim, Pennsylvania Department of Environmental Resources has adopted the EPA two parameter approach for delineation. Because the State has adopted an alternative methodology to the U.S. Fish and Wildlife Service/Army Corps method, the NWI maps for the Township will only provide a basis for preliminary identification of wetlands. Further delineation of the areas in the Township that qualify as wetlands will be necessary on a site specific basis. It is probable that these wetlands will be larger when applying EPA/DER delineation methodology.

Wetlands are classified as one of two types: tidal (coastal wetlands) and nontidal (inland/palustine). The wetlands of the Township are considered nontidal wetlands. These wetlands may include freshwater marshes and ponds, shrub swamps, and forested wetlands.

The importance of wetlands is outlined in Table 2.5 which provides a listing of socioeconomic, environmental, and wildlife functions and values of wetlands.

Objectives and Policies

Objective:

Coordinate future development with the physical environment, placing a premium upon developing in harmony with existing natural features.

Policies:

- Encourage that natural features to be incorporated and preserved in the design of new developments.
- Promote use of landscaping techniques that incorporate species native to the area.
- Continue to restrict development in floodplain areas that would result in increased flood frequency or increased flood levels.
- Ensure that proposed development complies with State and Federal wetland regulations.
- Encourage the use of existing natural features as buffers.

- Implement land use regulations that protect vegetation and provide buffer areas between developed areas and sensitive wetlands and waterways.
- Restrictions of geologic formations should be utilized as a factor in determining the intensity of land uses in areas that rely upon on-site sewage disposal systems.
- Areas that utilize groundwater for domestic use that are underlain by geologic formations that are characterized by solution channels should be thoroughly and routinely monitored for contamination.
- Educate and encourage the agricultural community to practice sound waste storage and application techniques.
- Minimum lot size requirements should be adequate to assure dilution of effluent for on-lot sewage disposal systems.
- Protect groundwater recharge areas from land uses that generate harmful pollutants.
- Develop, adopt, and enforce a Manure Management Ordinance if not addressed by new state regulations.
- Minimize the potential detrimental impacts of development on restrictive soils.
- Assure compliance with the Pennsylvania Sewage Facilities Act 537 regarding siting and installation of on-lot sewage disposal systems on restrictive soils.
- To the extent possible, future development should be excluded from areas with restrictive soil conditions to minimize environmental degradation and the threat to public health, safety, and welfare.
- Promote land use patterns and practices that will protect water quality while allowing for the accommodation of development.
- Protect surface water from non-point source pollution through methods such as land use regulations, increased soil conservation practices and improved enforcement of erosion and sedimentation control on construction sites.
- Protect surface water from point-source pollution through sewage facilities planning that limits private on-site package treatment plants.
- Manage Township-owned natural areas to maintain and enhance their environmental, scenic, scientific, and educational value.

●

● **Objective:**

Protect prime agricultural lands from encroachment by non-agricultural development.

Policies:

- Foster the continuation of agricultural use of prime agricultural land and protect areas of prime agricultural soils from encroachment by incompatible land uses.
- Develop Township programs, beyond land use controls, that encourage the continuation of farming in areas identified as having prime agricultural soils.

- Accommodate development in designated growth areas and discourage the extension of infrastructure to serve agricultural areas.
- Promote soil conservation practices to sustain soil productive capability and reduce erosion and sedimentation.
- Promote the use of County, State, and Federal programs designed to protect the Chesapeake Bay.

III. Demographic **/Economic Studies**

In order to establish guidelines for planning decisions involving the physical, economic, and social development of the Township, and the allocation of municipal resources, it is important to study the population of the Township. A quantitative analysis of population trends, and qualitative analysis of population composition, are needed to make reasonable projections for future population growth and needs.

Land area requirements for future residential, recreational, commercial, industrial, and other needs, are directly related to the requirements of the population which must be served. Projected population demands for service will also determine the number and scope of future schools, recreation facilities, transportation facilities, and other public infrastructure. The correlation of these elements is vital to ensure the most desirable environment for the current and future residents of Manheim Township.

It is possible to track the actual numbers of people living within Manheim Township in various years. And it is even possible to state some of the US Census bureau's findings on the decennial years (i.e. 1970, 1980, 1990). But the migration levels both into and out of Manheim Township, as well as the change in the population characteristics from one decennial to the next show that changes are constantly occurring. For a better understanding of the make-up of Manheim Township, data from the 1990 U.S. Census is used. But this information must be viewed with additional factors which indicate other significant population characteristics.

Historic Population Growth Trends

Prior to 1980, Manheim Township's growth had outpaced the majority of municipalities in Lancaster County. As a result, with the exception of the City of Lancaster, Manheim Township is the largest municipality in population (28,880 in 1990) in Lancaster County and the 37th largest municipality in Pennsylvania.

The historic growth trends of the Township provide some insight to the anticipated growth of the future. Although the Township population continues to increase, the period from 1980 to 1990 shows significantly less influx than during the previous six decades. In fact the increase in the number of people in Manheim Township from 1980 to 1990 is the lowest since the period from 1940 to 1950.

A comparison of population trends between Manheim Township and Lancaster County shows similar decreases in the rate of growth in the decades from 1950 to 1980. However, Manheim Township did not experience the increase in the rate of growth during the last decade that Lancaster County as a whole has experienced. The comparison of County and Township growth rates is exhibited in Table 2.6.

This decrease in the rate of growth within Manheim Township despite the increase in the growth rate of Lancaster County indicates that although Manheim Township absorbed much of the early suburbanization outside the City of Lancaster, the increase in the rate of county-wide population growth experienced in the 1980's was largely outside of

Manheim Township. This shift in the location of county-wide growth may be a result of municipal services being expanded in other Townships throughout the County, and therefore offering more development opportunities in a greater number of municipalities. Table 2.7 indicates the Township's proportion of the Lancaster County population.

A comparison of the population growth in Manheim Township with adjoining communities can provide an insight to the development influences and pressures that have been realized in the immediate area of the Township. This insight reinforces the magnitude of development pressure experienced during the last decade, and reveals a shift in such pressure. Table 2.8 reports population counts and changes for those municipalities that adjoin Manheim Township.

Manheim Township is a member of the Lancaster Inter-Municipal Committee. The Committee was formed to address issues common to its municipal members. The Committee is comprised of ten municipal members: Lancaster City and the nine municipalities that surround it. Table 2.9 provides a comparison of the population of the total Lancaster Inter-Municipal Committee member area. Table 2.10 then presents the proportion of the Lancaster County population that is represented by the ten municipal members of the Lancaster Inter-Municipal Committee.

Future Population Growth

Assimilating the data provided for: (1) the Township's historic growth rate, (2) the Township's role within the growth of Lancaster County, (3) the Township's position relative to its adjacent municipalities, and (4) the Township relationship to other municipalities who are part of the Lancaster Inter-Municipal Committee, it is now possible to project future growth of the Township.

It is important to realize that no population projection can accurately forecast all of the factors that might cause a particular rate of growth. However, the projection becomes a building block that can be used to forecast future land use and service needs. Therefore, great care must be exercised to assure that the projected growth represents the "best guess" as to how the Township will grow.

Four different population projection techniques were applied to the Township's historic population trends; the results from each of these is discussed below and depicted in Table 2.11.

Method 1 May 1984, is the Lancaster County Planning Commission set of population projections for each of the County's municipalities. The method utilized by the County (Shown in Table 2.1) calculated a Countywide projection (using a cohort-component technique) and then assigned a ratio of the projected growth to each municipality based upon the municipality's proportion of the 1980 County population.

Method 2 of projecting the Township's future population employs an arithmetic extrapolation technique. It forecasts an increase based on past numerical increases. This technique assumes an increase in the same number of persons as the Township experienced in the last decade.

Method 3 utilizes geometric extrapolation technique to project population figures. It forecasts a growth rate based upon historical population trends. This technique assumes that the Township will grow at a rate similar to that of the past. The results of applying the 1980-1990 growth rate to the current Township population figure is shown in Table 2.11.

Method 4 utilizes the same methodology employed by the Lancaster County Planning Commission in 1984, however applying it to United States Census Bureau figures for 1990. These projections would take into account the constant rate at which the County is growing and the decreasing proportion that the Township makes up of the total County population.

Each of the results of these four projections have been plotted along with the Township's historical growth patterns. Graph 2.1 visualizes four growth curves of the Township.

Based on the Township's desire to accommodate manageable growth rather than encourage growth, the third projection method makes use of historical population trends and does not project an accelerated rate of growth. Note that the linear slope of growth for the counts between 1950 and 1980 are continued with the projections through 2010. This consistent slope exhibits an accommodation of growth by the Township rather than an acceleration or

deceleration of growth.

The location and rate of growth within Manheim Township is dependent on Township ordinances and policies of the governing body. The Comprehensive Plan is a guide for predicting and managing growth in the best possible manner. The plan can best serve the Township by controlling the rate of growth and planning for the services which will be necessary to serve increased population levels.

Aside from sheer number, other characteristics of the Township's population have an influence upon the types and quantities of future development and the need for increased levels or additional public services. The following provides a brief summary of these characteristics.

Characteristics of Population

Age Distribution / Sex Composition

A key factor which can affect population growth and determine the type of services required is the distribution of the total population according to the age of the residents. Different age groups have different public service needs that should be specifically considered.

The size and growth rate of people under the age of 18 have implications on the planning for school facilities and programs. The age group ranging from 18 to 44 years of age is most frequently engaged in new household formation and tend to produce the most children. Any decline or imbalance in the number of residents within this age group will affect the birth rate. The age group ranging from 25 to 44 years of age is the basic segment of the population that comprises the local labor force and the group most frequently engaged in home buying or building. This group is also highly mobile and active in community functions.

The various age groups over 45 years of age also form an important segment of the population. The mature labor force, 45 to 65 years of age, tends to be more settled and at the height of their earning power. People 65 years old and older are generally characterized by limited purchasing power, an

increased demand for health and public transit services, and special recreation requirements.

As shown by Table 2.12, the Township's population is aging. The Township has the highest median age (40.7 years old) in Lancaster County, and is higher than the median age for Pennsylvania. The 65 and older age group was the only group to increase its share of the Township population from 1980 to 1990. According to 1990 census data, the 65 and older age group comprises 20.79% of the Township population.

Trends in the upper age groups from ages 65 and over, should be examined closely, for they may reveal a need for housing and community facilities that are specifically suited to the needs of the elderly.

The Table 2.13 outlines the changes in the number of persons within each age category and the change in percent of the total Township population of each category between 1980 and 1990. Table 2.14 compares the median age of Manheim Township with adjacent municipalities for 1980 and 1990.

As stated before, the trends in the over 65 population group, or senior population, should be followed closely so that special needs of this population can be addressed.

Of particular concern is the number and percentage of persons 65 or older that are living alone. According to 1990 Census information 210 male (or 3.5% of the senior population) were living alone . In addition, 951 females (or 15.8% of the senior population) were living alone.

Of the total senior population, 25.1% (or 1,509 persons) are in group quarters. The vast majority are in the various nursing home facilities located in retirement communities. In addition, it can be assumed that a number of others are residents of retirement communities in independent dwelling units. However, it is also significant that 27.4% of the total occupied housing units in the Township are headed by a householder over the age of 65.

The distribution of males and females within various age groups is a determinant of future family formation and

subsequent birth rates. In 1980, 5,633 females were counted in the 15 to 44 age group. Males accounted for 5,282 individuals in this age range. In 1990, the female population in the 15 to 44 age group increased by 2.5% to 5,772. The male population in the same group increased by 0.6% to 5,313 individuals.

Race and Ethnic Composition

The 1990 Census delineates persons by five racial categories: (1) White, (2) Black, (3) American Indian, (4) Asian and (5) Other. There is also an ethnic category counting Persons of Spanish Origin. In 1990, 27,907 (96.6%) white persons, 307 (1.1%) Black persons, 28 (0.1%) American Indian, 524 (1.8%) Asian and Pacific Islander, and 114 (0.4%) Other Races lived in Manheim Township. There were also 301 (1.1%) in the category of persons of Hispanic origin.

Households / Marital Status

In 1990, there were a total of 10,656 households in Manheim Township (See Table 2.15). The majority (66.8%) these households were comprised of married couples. There were 2,259 householders living alone with 1,161 of these being 65 years of age or older. Non-family households comprised 24.7% of the Township's total households.

Manheim Township's average household size in 1990 was 2.55 according to the Census Bureau. This represents a decrease from the 2.72 persons per household reported in the 1980 Census. Excluding the one-person households, the average number of persons per family is 2.97. A comparison of household sizes in adjacent municipalities and the change from 1980 to 1990 is shown in Table 2.16.

Education

Table 2.17 compares years of school completed by Manheim Township residents aged 25 and over for 1980 and 1990.

The educational level of Manheim Township residents is very high. Almost 83% of all persons over 25 years old in 1990 had completed high school. In Lancaster County, this percentage was 70.5%. College education is becoming more common in Manheim Township. The percentage of the population over age 25 that had graduated from college rose from 27.6% in 1980 to 32.6% in 1990.

Employment

Table 2.18 represents the percentages of Manheim Township resident working in labor force categories defined by the U.S. Census in 1980 and 1990.

Employment characteristics in 1990 indicate that Manheim Township has a mix of occupations. The largest occupational category was the managerial and professional group. This group accounted for about 36% of all workers.

Household and Family Income

Closely related to educational achievement and employment characteristics is income. Income provides the relative affluence of the area and its ability to support needed public services on the types of services demanded.

Income statistics are presented in Table 2.19. Families are defined by the U.S. Census Bureau as residents having two or more related individuals. A person maintaining a household alone, or with unrelated persons only, is regarded as a household, but not as a family.

Income statistics are grouped into three main categories:

Per Capita Income - Calculated by dividing the aggregate income for persons 15 years and over by the total number of persons in the group.

Family Income - A median income value representing the family household units.

Household Income - The median income value representing all households, and unrelated individuals.

The high household income levels for Manheim Township reflects the fact that the majority of residents are in the productive age group of 20 to 44 years of age, and the varied occupations held by Township residents.

Population Density

Population density is the total population of Manheim Township in proportion to the total land area of the Township. Table 2.20 outlines the population densities of Manheim Township and surrounding municipalities for 1980 and 1990.

IV. Housing Analysis

Housing type and quality affect the daily lives of all Manheim Township residents. Housing includes the physical structure itself, as well as a variety of other less perceptible characteristics such as the neighborhood in which the dwelling exists, proximity to roads, shopping areas, parks and employment centers, and the quality of the local school system.

Manheim Township can attribute much of its rapid growth over the past several years to a number of housing and housing related characteristics. Manheim Township has offered a range of new and existing dwellings in developments that are conveniently located for access to employment and goods and services. The Township school district has also enhanced the appeal of residing in Manheim Township. Many families have been drawn to the Township by the district's fine reputation and continued growth to serve expanding educational needs.

Housing issues in relation to comprehensive planning are also diverse. It is important to note that many factors must be examined in developing successful housing policies for Manheim Township. Issues perceived important by some may be deemed insignificant by others. Therefore, issues such as rehabilitation, density increases, location, price, quality, and changing demographic trends should be considered when looking at the future of Manheim Township housing.

Housing Analysis

Housing Inventory

The total supply of Manheim Township's housing stock increased by 17.2 percent (a net increase of 1,619 units) between 1980 and 1990 (See Table 2.21). This rate of increase surpassed the population increase of 10.9 percent for the same time period.

As a result, the average household size in Manheim Township has decreased to 2.55 persons per household in 1990 from 2.72 persons per household in 1980.

This decline represents the declining birth rate, an increase in the number of elderly persons living alone, and increases in the number of single-person households.

The Township continues to have a higher percentage of single family housing units than the Lancaster County average. Table 2.22 depicts housing types in Manheim Township and housing types for all of Lancaster County as shown in Table 2.23. In Manheim Township, 79.8% (8,777 units) are single family detached or single family attached units, while Lancaster County as a whole has 72.8% (113,930 units) within the single family category. The percentage of multi-family housing types within Manheim Township (19.1% or 2,098 units) is comparable with the County-wide percentage (20.4% or 31,986 units).

Occupancy and Vacancy Status

The vacancy rate serves as a measure of the housing market. The homeowner vacancy rate is the number of vacant

units for sale as a percentage of the total number of homeowner units. The rental vacancy rate is the number of vacant units for rent expressed as a percentage of the total number of rental rates.

The homeowner vacancy rate for Manheim Township in 1990 was 0.8%. This rate is below the County-wide rate of 1.0% for 1990. The Township's 1990 rental vacancy rate of 3.7% was also below the County rental vacancy rate of 4.1%

Occupied Dwellings by Tenure

Table 2.24 illustrates occupancy characteristics of housing units in Manheim Township and adjacent municipalities. Of the 11,009 total housing units in the Township, 10,656 were occupied housing units, of which 73.6 percent (7,840 units) were owner occupied units. This is an increase from 1980 in not only total occupied housing units, but the percentage of owner occupied housing units. In 1980, there were 9,091 total occupied housing units, of which 71.6 percent (6,511 units) were owner occupied.

The current percentage of owner occupied units is slightly higher than the average Lancaster County municipality. Table 2.24 shows that in 1990, 69.4% of the total occupied housing units in Lancaster County (1,509,560) units were owner occupied units.

Age of Structures

According to the 1990 Census, 13.0% of the total housing units in Manheim Township were constructed prior to 1940. By comparison 30.2% of the total housing units in Lancaster County were built prior to 1940. The greatest growth rate of new dwellings took place between 1960 and 1980. Table 2.25 shows the age interval of housing units in Manheim Township.

Structural Characteristics

The housing units in Manheim Township are typically larger in number of rooms per occupied unit, or number of bedrooms per housing unit than the Lancaster County average. In addition the number of people per unit, for both owner occupied and renter occupied units, is lower than the county-wide average.

Due to the extent of public infrastructure throughout the Township, the number of housing units lacking public water or public sewer service is significantly low. Public water service reaches 89.1% of the total housing units in the Township, while 94.8% of the total housing units are provided public sewer service.

Although the Census does not evaluate the condition of housing units in terms of structure or physical deterioration, the data does provide some information on housing problems through the enumeration of units which lack complete plumbing facilities for the exclusive use of its residents, enumeration of units which lack complete kitchen facilities, and units which because they have more than 1.01 people per room, are considered to be overcrowded.

Only 0.2% of the total number of housing units in Manheim Township lack complete plumbing facilities, and only 0.3% lack complete kitchen facilities. This compares with 1.0% of the County's total housing units lacking complete plumbing facilities and 0.7% without complete kitchen facilities.

Seventy-five units, or 0.7% of the total number of occupied housing units had more than 1.01 people per room. This is significantly lower than the County-wide figure of 2.1%

Household Size

Household size is important in determining housing needs. Table 2.26 indicates the distribution of household size in Manheim Township. Two people households are the most prevalent in Manheim Township, accounting for 38% of all households. One person households are the next most common household size, followed by three person, then the four person households.

Table 2.26 also indicates the distribution of household size for owner-occupied housing units and renter occupied housing units. As expected, the two person household is the most common size for owner occupied housing units. For renter occupied units, the one person household size is the most common.

Housing Value and Rental Costs

Value intervals for specific owner-occupied housing units and the percentage of total units within each interval is presented in Table 2.27. For comparison, the same value intervals for Lancaster County are presented in Table 2.28.

The median value of owner-occupied housing units in 1990 was \$112,900. This figure represents a \$49,600 (78.4%) increase from the median value reported in 1980 and is \$6,537 greater than the 1990 median value for Lancaster County as a whole (See Table 2.29).

A recent study completed by the Lancaster County Planning Commission analyzed actual selling prices of single family homes in 1990. Based on the 315 real estate transactions recorded in Manheim Township for 1990, the median sales price was \$130,063. Table 2.30 compares the median sales price reported for Manheim Township, adjacent municipalities, and Lancaster County.

In 1990, median contract rent in Manheim Township was \$487. Table 2.31 compares the Township's median contract rent with those in adjacent municipalities and Lancaster County.

Housing Affordability

In January 1992, the Lancaster County Planning Commission completed a study of single family housing price and affordability in Lancaster County. The study was based on single family home sales transactions for all four quarters of 1990. The study considered all existing and newly constructed single family detached, semi-detached and attached home real estate transactions.

In order to assess the affordability of single family housing in Lancaster County, the study computed a housing affordability index for each municipality. The housing affordability index is the ratio of monthly housing income to monthly housing costs. Monthly housing income was defined as 28 percent of gross monthly income, based on an estimated median annual income of households in Lancaster County.

For each municipality, a housing affordability index was computed by dividing the monthly housing income by the total monthly homeownership costs. An index of 1.00 or greater indicated a median income household could afford the monthly costs associated with the purchase of a single family home in that municipality.

According to the study, the affordability index for Manheim Township is similar to a significant majority of the County's municipalities. The median priced single family home, based on sales transactions, is unaffordable to the County's median income household.

Manheim Township had an affordability index of 0.47 in the first quarter of 1990, 0.63 in the second quarter, 0.71 in the third quarter and 0.72 in the fourth quarter. Averaging the monthly housing costs reported in the four quarter of 1990, the affordability index is 0.63. An index of 0.63 means that the median income household in Lancaster County had 63% of the income needed to afford the median priced home in Manheim Township.

The study determined that only 22 out of the 60 municipalities in Lancaster County had an index of 1.00 or greater in the first quarter of 1990. This number of municipalities fell to 10 out of 60 in the second quarter, 9 out of 60 in the third quarter and 10 out of 60 in the fourth quarter.

It should be noted that the study completed by the Lancaster Planning Commission did not use the County's median household income reported by the 1990 U.S. Census. Utilizing this data, the average index for Manheim Township would be 0.67. Based on the average median household income for Manheim Township and adjacent municipalities, the Township average affordability index is 0.74.

The rising cost of housing in Manheim Township, and throughout Lancaster County, may be viewed as supply not keeping pace with demand. However, the supply of housing is a complicated matter subject to a

variety of economic forces. These forces include the cost of land, labor, construction materials, financing, as well as government regulations.

Manheim Township recognizes that government regulations at all levels, Federal, State, County and municipal, will

effect housing costs and therefore affordability to residents of low or moderate income. For example, as the County's Urban Growth Boundaries are implemented, land costs for undeveloped tracts within the Boundary will increase therefore, increasing a significant factor in the housing cost equation.

Through the use of innovative development design alternatives that provide for a range of dwelling types at various densities in compact configurations, Manheim Township will provide developers the opportunity for affordable housing products. This flexibility in design and its efforts towards housing affordability is reflected in a 164 unit development being constructed by the Housing Development Corporation targeted to meet affordable housing needs.

Other methods available to address affordability, such as inclusionary zoning may be needed should trends in affordability continue. Although inclusionary zoning would have application on newly constructed housing provided in the Township it would not address the potentially large stock of existing residential units that may be considered affordable.

Housing For Elderly Population

As seen from the demographic information contained in this Plan, the Township's elderly population grew significantly from 1980 to 1990. The housing needs of the elderly differ from those of the general population. The provision for housing options specialized for the elderly should be considered.

Accessory apartments with family members in a home originally designed as a single-family house or within a detached building such as a garage are one option to address this need. These apartments, typically limited in the number of rooms, provide a separate kitchen and bathroom facility from the existing dwelling. This allows the older person the ability to live close to family members but still maintain privacy and independence. An accessory apartment can furnish the older person with a housing arrangement that is smaller and easier to maintain as well as more affordable than a single-family home.

Building and Housing Codes

The Township's adoption of the Building Officials and Code Administrators (BOCA) Building and Fire Prevention Codes has played a significant role in the quality and safety of new construction and the renovation and rehabilitation of existing structures. These codes address methods of construction, quality of building materials, minimum load tolerances for floors, and other requirements for health and safety.

Although these codes address construction activities, they do little to define minimum standards for existing housing not undergoing improvements. A housing code, also commonly referred to as a property maintenance code, is designed to ensure minimum standards of health and safety for existing dwellings. In addition, such a code helps to prevent the physical and economic decline of neighborhoods, and protects property values.

Objectives and Policies

Objective:

Provide for a range of housing choices at appropriate locations throughout the Township.

Policies:

- Encourage infill housing developments that are compatible with surrounding properties.
- Provide residential development design options that include various housing types.
- Promote high-quality design in all residential developments.
- Continually review Township regulations, codes, and procedures relating to housing development to eliminate unnecessary restrictions, while ensuring safe and proper development.

Objective:

Provide opportunities for housing types which are sensitive to shifting demographic trends.

Policies:

- Consider the use of attached and detached, complete apartments as accessory dwelling units.
- Formulate housing opportunities for Township residents with special needs.

V. Existing Land Use

An important component of any comprehensive plan is an analysis of existing land use. This type of analysis takes a look at the Township at a static point in time, allowing for the examination of past and present development trends and giving light to the positive and negative factors which have shaped the Township into its present form. Hopefully this process will help the Township avoid duplicating past land use problems while capitalizing on those factors which have proven to be successful. The existing land use survey should be consulted in conjunction with other background studies dealing with environmental features, population, economics, as well as the Township's goals, objectives, and policies in formulating a future land use plan for Manheim Township.

The use of a particular parcel of land is determined by the activity or function of the land itself, and/or its improvements. It is important to note that land use relationships do not occur in a vacuum. Alone, the existing land use designation of a particular piece of property is not especially meaningful. However, when the cumulative uses and their relationships are analyzed graphically and statistically, great insight can be gained. Land use incompatibilities are more easily identified and successful land use patterns become more apparent. These factors support the concept that the Township is a dynamic environment with numerous inter-relationships coming into play.

To provide a land use inventory, several informational sources were used. County tax records and recently approved development plans were researched and mapped yielding a base map of individual lots. Following this, a survey was conducted to determine land use on a lot-by-lot basis. The Existing Land Use Map (Map 3) depicts the results of the process on the Township's updated property lines base map. Table 2.32 provides a breakdown of the acreage within the various land use categories. The following describes the categories used to inventory and report these existing land uses.

Existing Land Use

Agriculture

This land use category includes all land areas which are presently being used for agricultural purposes and are not part of a recorded subdivision of lots.

Manheim Township has continued to experience an increase in development that has eroded the percentage of land devoted to productive agricultural use. Although agricultural lands are found in all parts of the Township, most are concentrated in the northeast corner of the Township. Some farms within the Township are surrounded by developments, however, they appear to be operating effectively and provide a pastoral backdrop to many of the Township's residential developments.

Many of the farms contain 19th century structures which have varying degrees of historic architectural significance. Attempts at preserving the agricultural landscape in the Township would also contribute to the historical integrity of these buildings and their environments.

Single Family Residential

This category includes single-family detached and semi-detached dwelling units occupied by a single household. Within Manheim Township, such dwelling units are most frequently found within recorded subdivisions. However, single family units on lots not within recorded subdivisions or associated

with large acreage not used for agricultural purposes were also placed in this classification.

A dominate feature characterizing the location of single-family residences is the lack of concentration of residential areas. Residential developments of single family units have occurred adjacent to, or between, all four major north-south state roads. Densities range from very low density within the northern portion of the Fruitville Pike corridor to higher densities in the older residential neighborhood, concentrated in areas surrounding Lancaster City or early villages in the Township.

Multi-family Residential

This land use category is comprised of single residential structures, usually on one lot, containing two or more dwelling units housing a single family household. This category primarily includes duplexes, condominiums, apartments, nursing homes and elderly housing. In addition, townhouses, although they may be located on individual lots, were included within this category.

During the last decade multi-family residential development has become a vital part of the County's housing stock. Manheim Township has also experienced an increased reliance on this form of residential development to provide housing.

In the past, multi-family housing was considered by many as "undesirable" rental housing. However, recent advantages in design and construction of these units have prompted a rethinking by the public. Furthermore, the ever-increasing cost of housing has fostered a greater acceptance of multi-family units among those who cannot afford the higher cost of a single-family detached dwelling. Demand for housing without the need for extensive and time intensive maintenance has also resulted in a demand for higher-price attached dwellings.

Manheim Township has several existing townhouse and apartment developments. In addition several projects involving duplex and townhouse units have been recently approved, are currently under construction or waiting commencement of construction.

Commercial

This land use designation depicts establishments which engage in retail trade or provide services. This category includes restaurants, shopping centers, convenience stores, auto dealers, gas stations and motels and hotels.

This category of uses is generally concentrated in the southern half of the Township. Commercial development is founded upon the economic principle of maximum customer exposure and accessibility so that the majority of the Township's businesses are located along the four major north-south heavily traveled state roadways.

Included in the commercial category are the major developments of Chelsea Square, Hawthorne Center, Foxshire, Lancaster Shopping Center, and the Golden Triangle Center. Small commercial centers include the Village of Olde Hickory and Fiddlers Green. One commercial center, Bloomfield Square, although approved, has not yet been constructed.

A long and shallow lot configuration provides maximum frontage and visibility to passing motorists. Over the years, highway commercial developments tend to extend a "strip-pattern" along these roads. In turn, conflicting traffic movements occur between customers and commuters, causing traffic congestion and safety problems.

Another feature of highway commercial strip development is its lack of identity as a "sense of place". Highway commercial uses cannot point to one widely known location but must compete with one another for their customers attention. This leads to visual clutter, distractions, and confusion for passing motorists.

Manheim Township does have some village commercial uses which have developed from early village settlements. These centers may contain a service station, a convenience store, a tavern and/or restaurant, and occasionally a bank and primarily target traffic on the major state roads.

Industrial

This land use category includes establishments engaged in wholesale trade, storage or distribution with little or no retail trade or service; and establishments engaged in transforming raw materials into new products, usually for distribution to other regions and not for sale or use on site.

Generally, industrial development can be broken down into either light industrial, or heavy industrial. By far the majority of industrial uses in the Township would be classified as light industrial.

Industrial uses are generally concentrated in two areas of the Township. A variety of industrial uses are located around the interchange of Routes 283 and 72. Some of these industries include: Alumax Aluminum (Route 72); Granite Run Corporate Center (Route 72); and uses in the Flory Mill Road area (Route 283).

The other concentration of industrial uses is located around the Lancaster airport. The area includes the Flyway Business Park; industrial uses along and across Airport Road; and uses located at the intersection of East Oregon Road and Airport Road.

Office/Service

This category includes single and multi-tenant office buildings that may or may not be located within a single development. Tenants within these buildings include establishments involved in management or administrative functions or the provision of finance, insurance, real estate, legal, health, or business services without any manufacturing, warehousing or retailing activities. This category does not include office buildings located in multi-use industrial parks.

There are office-park developments located in various areas of the Township. These developments include Foxshire located on Fruitville Pike, Oregon Commons, and North Pointe Centre located on Oregon Pike, and Northridge Business Center and Sterling Center on Lititz Pike.

The remaining office/service uses are located along major roadways of the Township. The largest concentration of these individual office/service uses is a strip along Oregon Pike from Route 30 to Landis Valley Road and along Lititz Pike south of Route 30.

Recreation

This category includes several public and private parks, and recreation areas.

The public recreation portion of this category does not include recreational or open space areas found with public, private or parochial school site properties. Private areas include those used for active or passive recreation activities and may exist for commercial purposes.

Golf courses dominate the acreage in this category. The Lancaster County Club, the golf course at the Village of Olde Hickory, Bent Creek Country Club and Overlook Golf Course comprise acreage within the majority of this land use category.

Civic

This category includes establishments or areas which provide educational (public/private), governmental, cultural, or social services for the community. In addition the category includes churches, clubs, and organizations which serve smaller portions of the public.

This category includes uses such as public and private schools, municipal offices, fire stations, churches, cemeteries, and any other similar use. These uses are scattered throughout the Township and vary widely in size.

Vacant

This category includes lands that are not improved but are not currently in agricultural use. This would include undeveloped wooded tracts, tracts approved for development but not yet started, and individual lots within developments that have not been built upon. The total acreage within this category is an indication of the large amount of land that remains to be developed from previously approved plans.

VI. Transportation

A community's transportation network affects the daily lives of virtually all its residents. An efficient transportation system is considered vital to a high quality of life, and is a basic requirement for community growth and development. In a thriving community where timeliness is critical, traffic tie-ups create a sense of chaos and can overshadow many of the community's positive attributes.

From a long-range planning perspective, the transportation network is a significant element affecting both how a community grows and its physical design. Manheim Township's early growth was due, to a large extent, to the construction of "pikes" to connect the outlying areas of the county with Lancaster City (Manheim Pike, Fruitville Pike, Lititz Pike, Oregon Pike, and New Holland Pike).

The construction of U.S. Routes 283, 30 and 222 have made Manheim Township an excellent location for commercial, industrial, and residential development. These factors have had major impacts on the Township.

The purpose of this chapter of the Plan is to focus on the impacts of the present and future street system. A complete and thorough analysis of the total transportation system for Manheim Township is not possible in the context of this Plan. The transportation system is a highly complex one which requires substantial data and coordination far beyond this limited perspective. The needed task must incorporate the Township's Capital Improvements Plan; transportation programs for special segments of the population; mass transit; federal, state, and regional transportation plans; school busing; and non-motorized and pedestrian modes of transportation.

Manheim Township has undertaken two extensive Township-wide traffic studies. The first was conducted in 1988, the second was completed in 1991. Both studies defined and evaluated the major components of the Township's transportation network and defined improvements needed to be completed to enable the network to function effectively and efficiently.

The transportation chapter is intended to be used as a guide to how the existing street network will react to and be coordinated with future land uses. The first element of this section is to establish the types of streets and their respective rights-of-way to serve the various types of land uses. Much of the remainder of this chapter will describe the roadway classifications and design standards, highlight findings and subsequent recommendations made within the comprehensive traffic studies, and address how road improvements can be achieved. In addition, an element of this chapter will discuss future transportation alternatives, including mass transit and bicycle/pedestrian options.

Street Classifications

The efficient movement of vehicles within any community is dependent on a balance between all types of street facilities: limited access highways, arterials, collectors, and local streets. This classification system and how it is implemented will determine to a large extent how land will be used adjacent to it. This does not necessarily mean that the land adjacent to major arterials, which provide high mobility and permit high traffic volumes, must be used for non-residential uses. The dominance of this rationale has created the strip commercial development along many arterials and collectors. Rather, the classification system permits a general focus on the needs for mobility and access.

Roads that provide for greater mobility, such as arterials, result in reduced land access. Whereas local roads, that provide for greater land access, result in reduced mobility. This important relationship should always be considered when allocating future land uses along existing or planned roads.

Functional classifications are important in determining and applying design standards (cartway widths, rights-of-way acquisition, curbing, etc.) to roadways being built or improved by developers or the Township. Functional classifications should be as consistent as possible at the local and regional levels.

The Township has followed the classifications recommended by the Manheim Township Comprehensive Traffic Study of 1988. Map 4 depicts the classifications recommended in the Study.

Limited Access Highway

Limited access facilities provide for intra-county or inter-municipal traffic of substantial volumes. Limited access highways are more properly the function of Federal or State control since their main purpose is regional traffic movement.

Arterial Roadways

The main function of an arterial roadway is to move large volumes of traffic from one place to another. Planned access is a secondary function. For that reason the number of access points on an arterial should be held to a minimum. Each access is the friction point which reduces the ability of the

thoroughfare to perform its major function - that of moving traffic.

Collector Streets

The main function of a collector street is to "collect" traffic from the local streets and move it to an arterial roadway at controlled intersections. Property access is a secondary function of a collector. For this reason, the number of lots fronting onto a collector should be held to a minimum in order to reduce the number of driveways or friction points.

Local Streets

The principal purpose of a local street is to provide access to private property. The secondary purpose is that of moving the traffic. In any subdivision or neighborhood most housing units will front on a local street. In these areas there is little concern about limiting or restricting access because, if designed correctly, traffic should be very light and mostly limited to residents who live on that street. The design of subdivisions should discourage a great amount of through traffic so that unnecessary friction points and traffic hazards will not develop.

Current Design Standards

Table 2.33 outlines the right-of-way and cartway width design standards currently required by the Township's Subdivision and Land Development Ordinance and the Planned Residential Development provisions of the Township's Zoning Ordinance.

Regional Traffic Impact

Any analysis of the Township's transportation network and subsequent recommendations to improve the network must take into account that the Township possesses several roads that serve a larger traffic shed than just that of Manheim Township.

First and foremost are the limited access arterial roadways which traverse the Township: US Route 30, PA Route 283 and US Route 222. US Route 30 crosses the southern portion of the Township and serves as a by-pass around the Lancaster metropolitan area. There are six interchanges that directly serve the Township.

The interchange locations for these limited access arterials are significant factors in the congestion in the Township. The interchanges are located at New Holland Pike (PA Route 23), Oregon Pike (PA Route 272), Lititz Pike (PA Route 501), Fruitville Pike (PA Route 4011), Manheim Pike (PA Route 72), and Harrisburg Pike (PA Route 4020). These roadways form the major north-south transportation network within the Township, and serve as important linkages between Lancaster City and areas north of Manheim Township.

The US Route 30 limited access highway is clearly overloaded and currently operates at an unacceptable low level of service. Information provided by the Pennsylvania Department of Transportation indicates that this highway serves nearly 75,000 vehicles per day.

The volume of traffic on this facility exceeds its highway capacities by 20 to 60 percent, particularly during peak hours, resulting in congestion on the mainline, its interchanges, and connecting roads. This traffic congestion makes travel to, from and through the area difficult, time consuming and potentially hazardous. Motorists familiar with the area and its traffic congestion often use local Township roads traversing residential neighborhoods to avoid the U.S. 30 mainline.

The congestion problem resulting from high traffic volumes is compounded by existing roadway deficiencies in the mainline and its interchanges. Most of the existing facilities were constructed in the early 1950's in accordance with the prevailing but now outdated highway design standards, and have not been substantially improved since.

Some of the most significant geometric deficiencies in the corridor are located in the heavily traveled two-mile section in Manheim Township between the PA 283 and the U.S. 222 interchanges. This section was designed in the early 1950's and 1960's and includes short ramp tapers, tight ramp radii, and 11-foot wide through lanes common to that era of highway design.

The Pennsylvania Department of Transportation has initiated efforts to improve the Route 30 corridor to reduce congestion and improve safety conditions. To that end the Department has completed environmental review of the corridor and has publicly revealed alternatives of design for improvements.

The proposed project involves the improvements of approximately 7.5 miles of U.S. 30 and 0.9 miles of PA 283. The project area begins at the U.S. 30 - Rohrerstown Road interchange, located in East Hempfield Township, and extends eastward, terminating at the U.S. 30 - Old Philadelphia Pike interchange in East Lampeter Township. The PA 283 section of the project begins at the PA 283 - Rohrerstown Road interchange, located on the Manheim Township/East Hempfield Township boundary, and extends eastward, terminating at the PA 283 - U.S. 30 interchange located in Manheim Township and Lancaster City.

The proposed actions include widening of the mainline, interchange improvements, and the addition of collector distributor roadways in the heavily congested Manheim Township portion of the corridor.

The mainline U.S. 30 pavement would be reconstructed with proposed widening to three lanes in each direction at Fruitville, Lititz and Oregon Pikes. Between the PA 283 and Fruitville Pike, the mainline would be widened to eight lanes. Four lanes would carry U.S. 30 mainline traffic while the four remaining lanes would carry interchange traffic. Through the Fruitville Pike - Lititz Pike - Oregon Pike section, a parallel collector - distributor roadway system would carry interchange and local traffic separate from U.S. 30 through traffic. Between Oregon Pike and the U.S. 222 interchanges, U.S. 30 would be widened to eight lanes to separate interchange traffic from through traffic.

Preliminary cost estimates to complete the proposed project, utilizing the preferred alternative, is approximately \$145.3 million. Of this cost estimate approximately \$67.2 million, or 46% of the total project cost, is targeted for the two-mile section between the PA 283 at the U.S. 222 interchanges.

Although final design has not been completed for the project, improvements to US 30 within the Township must continue to receive high priority.

A study completed for the Lancaster County Planning Commission in June 1990 focused on north-south truck travel within the Lancaster urbanized area, including Manheim Township. The study identified traffic patterns, with specific interest in truck travel, within the urbanized area and proposed recommendations for improvements or alternative routes that could be used by truck traffic and reduce north-south congestion.

Based on the study of traffic volumes, speed and delay studies, drive through surveys, truck operator and dispatcher interviews and municipal interviews, a series of recommendations were prepared. These recommendations were separated into two categories: relatively low cost short term improvements; and non extensive long-term improvements.

Short-term recommendations provided in the study that would affect Manheim Township included the installation of new traffic signals or the upgrade of existing signals at the Manheim Pike/Fruitville Pike intersection and the Fruitville Pike/Petersburg Road intersection. In addition, short-term recommendations included the study of the Manheim Pike, Lititz Pike and Fruitville Pike corridors to complete traffic signal warrant analyses at major intersections, investigation into providing left turn lanes where possible, traffic signal coordination along the corridors, and preliminary and final design for major roadway improvements.

Long-term recommendations relied primarily on reconstruction of existing roadways, with only a few sections of new roadway alignments. However, the study did not recommend new alignments within Manheim Township.

Along the main corridors, a three lane cross section is generally recommended. This configuration provides for one travel lane in each direction with a center two-way left turn lane.

The study provided two alternatives for radial routes in the north and northwest portions of the 17-municipality study area that incorporated improvements to different corridors. The numbering of the alternatives was not intended to reflect a priority ranking.

Alternative 1 includes the reconstruction of Manheim Pike, Fruitville Pike and Lititz Pike. These corridors would be widened to three lanes where the left turn volumes warrant. Alternative 2 involves reconstruction of Manheim Pike and Lititz Pike to three lanes and the reconstruction of Fruitville Pike to five lanes.

The study included cost estimates for the long-term improvements identified. The cost of such improvements that would benefit Manheim Township are shown on Table 2.34. These cost estimates reflect total project cost and are not limited to work to be completed in Manheim Township.

US Route 222, extends from US Route 30 to the northeast corner of the Township. This 4-lane limited access highway serves as a link between Lancaster and Reading to the north. There is only one interchange within Manheim Township, located at the Village of Oregon, that provides access to and from US Route 30.

PA Route 283, which serves as a connection from Lancaster to Harrisburg, extends from US Route 30 to the Township's western boundary. There is only one interchange that directly serves the Township along PA Route 283.

Due to the regional nature of all these roadways, traffic volumes can increase in short periods of time, due to the ever-changing planning and zoning policies of adjoining municipalities and beyond. No matter how well Manheim Township manages its own growth and the traffic the growth creates, congestion and safety hazards will continue to occur along these major roadways, unless these roadways can be improved to accommodate the regional traffic.

Public Transit

Transit service through Manheim Township accounts for only a small percentage of the total trips on Township roadways. In its current form, transit service provides only a minimal level of relief to the Township's traffic congestion. However, a review of transit service within Manheim Township was conducted to identify areas with and without transit operations. This review served as a basis to determine whether transit service can play a greater role in overcoming traffic problems.

The RRTA bus service is city-based, with all trips emanating outward from Lancaster City to the boroughs and suburban areas in the County and back. Due to the radial routes of the system, travel from one suburban area, such as Manheim Township, to another suburban area, or to another bus usually requires traveling first to Lancaster City to transfer onto another bus to complete a trip.

Manheim Township is within the service area of the Red Rose Transit Authority (RRTA). Five of the system's 16 fixed bus routes serve portions of the Township and are depicted on Map 5.

The Route #3, Park City C/8th Ward route, serves only a small portion of Manheim Township. The loop that connects Lancaster City to the Park City Shopping Mall utilizes segments of Fruitville and Manheim Pikes within the Township and one block of McGovern Avenue, North Queen Street and North Prince Street.

The #5 Route, Grandview Heights/Rossmere, connects the Grandview Height, Rossmere and Homeland areas with downtown Lancaster City. In addition, the loop provides transportation to the Lancaster Shopping Center, and business and office uses located in the Oregon Pike/Butler Avenue area.

Route #10, Lititz route provides a connection from Lancaster City to Lititz Borough by utilizing Lititz Pike.

Route #11, the Ephrata/Olde Hickory route connects Lancaster City and Ephrata Borough by use of Oregon Pike. Within Manheim Township the route leaves the Oregon Pike to serve residential and business uses along Eden Road and East Roseville Road, and also the Village of Olde Hickory.

Route #12, the New Holland route passes through Manheim Township on New Holland Pike. The route, which connects Lancaster City and New Holland Borough, does not leave Route 23.

Route #19, the Manheim route connects Lancaster City and Manheim Borough. Within Manheim Township the route utilizes Fruitville Pike, Granite Run Drive, and the Manheim Pike.

RRTA plans to expand transit service in the near future to create two new routes. The proposed outer loop and Landisville-Park City shuttle will be RRTA's first attempt to provide a loop route that does

not originate in downtown Lancaster City. The loop would serve areas in Manheim Township, East Hempfield Township, and Lancaster Township. Within Manheim Township the loop would include Lititz Pike, West Roseville Road, Fruitville Pike, Granite Run Drive and Manheim Pike. The loop provides access to a number of commercial locations including the Golden Triangle Shopping Center, the Lancaster Shopping Center, K-Mart Shopping Center, Foxshire Shopping Center, Hawthorne Center and Granite Run Square.

Lancaster Airport

The Lancaster Airport, located in the northern section of the Township, east of Lititz Pike, is the largest airport in Lancaster County. It is the County's only public airport and the only airport served by a scheduled airline.

The airport owns approximately 650 acres of land and is therefore, the largest landowner in the Township. Of this acreage, 371 acres are leased for agricultural purposes.

There are two runways at the Lancaster Airport that are 5,400' x 150' and 4,100' x 100' respectively, and are designed to handle single-wheel aircraft loads up to a gross weight of 65,000 pounds. There are currently 21 hanger facilities and a maintenance building that also houses the Airports rescue equipment. The Airports terminal building is 10,410 square feet and contains airline ticketing services, a restaurant, lounge, rental car facilities, a fixed base operator office, gift shops, air carrier hold rooms, baggage claim area and security area. There are also parking facilities for the public, general aviation services, and rental cars. The Federal Aviation Administration operates a control tower that is located at the airport. The airport has a variety of navigational and approach aids to assist pilots in locating and landing at night, or in poor weather conditions.

The Lancaster Airport has greatly expanded its service to include regularly scheduled commuter airline services, as well as, air freight transportation services. USAir provides daily commuter feeder services from the Lancaster Airport to larger regional airports in Philadelphia and Pittsburgh.

Lancaster's proximity to regional airports which provide for greater amounts of scheduled commuter service, most notably Philadelphia, Baltimore and Harrisburg, make it difficult to attract more carriers and service. In addition, the length of Lancaster's longest runway is not sufficient to permit year round commercial jet operations.

Table 2.35 provides commuter airline passenger figure at the Lancaster Airport, from 1980 to 1992. The volume of passengers enplaning and deplaning at the Lancaster Airport has fluctuated significantly through the years, from a low of 59,523 passengers in 1983, to a high of 91,667 passengers in 1987. In the past twelve years, commuter airline ridership at the Lancaster Airport declined 13 percent, from 76,142 passengers in 1980, to 66,524 in 1992.

Nationally, commuter and regional airline passengers have nearly tripled between 1980 and 1990 going from 14.8 million to 42.1 million. The competition from the three nearby regional airports has probably prevented Lancaster's passenger volumes from growing.

Another important component of commuter airline operations at the Lancaster Airport is airmail and air freight transport. Table 2.36 shows the annual number of pounds of airmail and air freight carried by commuter planes, from 1975 to 1992 from the Lancaster Airport to the Philadelphia or Pittsburgh International Airports, for final destination and/or transfer to other airlines. These volumes have been declining after peaking in 1979 and are now at 40 tons per year. Nationally, airmail and air freight volumes have both increased by 50% between 1980 and 1990.

Alternative Transportation Modes

Alternative modes of transportation, such as walking or biking, have gained popularity as a means of recreation and exercise and as an energy saving commuting alternative. Table 2.37 presents 1990 Census data that shows that 86.4 % of Township residents commute by automobile, while 13.6% commuted by other means.

Alternative transportation modes are not used extensively in Manheim Township because most transportation facilities must currently be shared with automobiles. If a road is not safe or sidewalk is not provided, alternative modes of transportation will not be utilized. Pedestrian and bicycle facilities must be developed to achieve the transportation and land use policies recommended in this plan.

Pedestrian

Walking offers benefits such as conservation of energy, reduction in air pollution, and exercise. Walking also provides an ideal setting for social interaction between residents and helps to foster a sense of community.

Pedestrian facilities can be one of the most important features in an area's transportation network. The community has individuals in every age group who do not drive. Therefore, walking is the quickest, least expensive, and often most convenient alternative to driving for many of these individuals. The young and the elderly, in particular, rely on pedestrian facilities.

Past development in Manheim Township has favored the automobile at the expense of the pedestrian. Most of the developments constructed do not provide sidewalks. Pedestrians are forced onto the roadway, and must maneuver through entrance drives and parking lots alongside vehicle traffic.

An extensive pedestrian network should be developed within the areas designated for growth to complement the proposed land use policies. The Township can encourage pedestrian traffic by requiring development to front on streets, forcing large parking areas to be located at the side or rear of buildings, requiring sidewalks or pathways in new developments, permitting mixed use development, and allowing development of greater residential density.

There are several guidelines the Township should follow in developing a pedestrian system. First, an inventory of pedestrian facilities should be taken. Next, a master plan for future facilities should be developed. In some instances paths which do not parallel the roadway are preferable to concrete sidewalk, particularly in areas where there is little development. Paths can provide a more convenient connection between areas of development and can be more aesthetic than sidewalks. These paths should be designed with safety in mind.

Bicycle

When designing bike paths it is important to match the type of facility with the intended users. There are several types of uses, each with their own distinct needs and reasons for riding bikes. For planning purposes it is usually sufficient to narrow the various groups to two categories: recreational riders and commuting riders.

Commuting riders will generally ride on major roads and at higher speeds. Their special needs include wider shoulder widths, possibly marked with striping, a smooth surface, safe grates on drainage inlets, and secure bicycle parking.

Recreational riders usually require less accommodations. Specific needs are lower posted speed limits in neighborhoods, multiple use trails, and the control of vehicle parking, particularly at intersections, in order to provide clear sight distances.

Through a consensus of representatives from law enforcement, public works, parks and recreation, and bicycle clubs, the Township should develop recommendations for potential location of bicycle transportation facilities and the standards required to accommodate such facilities (inlet grates, cartway widths, etc.).

Traffic Management

Increasing capacity of transportation facilities is not always the answer to solving transportation problems. To adequately address transportation problems, there needs to be a development of strategies governing the use of land and the density, arrangements, and functions of buildings.

The development or redevelopment of neighborhoods should be planned with a view to mixing workplaces and housing with shopping, school and other services in a pleasant environment. Such developments reduce the frequency and length of vehicular trips and enhance the possibilities of walking. These semi-independent communities/neighborhoods are connected to limited-access highways or served by a transit system to assure links to other communities and cities in the region.

Manheim Township, like the other major suburban areas of the United States, has experienced rapid growth/expansion which largely consists of isolated housing developments with no shopping or employment opportunities nearby. Therefore residents must rely on vehicular transportation for most needs outside the home. Other single purpose developments located elsewhere include shopping malls/centers, large industries and office buildings, which are generally far removed from housing. One result of this separation of functions can be seen in the miles of backed-up traffic on the arterial roadway system leading in and out of urbanized areas and in the congested traffic accrual at suburban shopping and employment centers. The flood of vehicles continues to outstrip the physical and financial capacity of roadways to meet the traffic demands.

Transportation management and new roadways can help to alleviate the congestion, but relief is also going to depend to a degree on designing communities that combine housing, jobs, and services and limited job opportunities in economically viable packages.

Combining these urban design solutions with traffic management is expected to lesson transport dependence, thus reducing the time and money spent to meet routine transportation needs.

In summary, congestion results in part from the fact that communities get built in compartments: housing, in one place, a shopping mall somewhere else, and jobs often far away. The automobile has made it possible to live with these special handicaps. Therefore little effort has been made to make plans for development more accessible by means other than the automobile. The result has been to multiply the need for mobility. A closer alliance between transportation and planning could alleviate traffic problems by reducing the length and frequency of routine trips.

Objectives and Policies

Objective:

Plan improvements to the transportation system of the Township so that traffic flows are not severely restricted.

Policies:

- Continue to place high priority on completion of improvements to U.S. Route 30.
- Continue to identify and plan street improvements which will increase accessibility throughout the Township.
- Utilize the Capital Improvements Program to establish priorities for transportation improvements throughout the Township.
- Continue to use existing and to explore new methods to fund transportation improvements.

Objective:

Encourage alternative methods of transportation and support a greater regional concept of transportation planning.

Policies:

- Continue to plan and promote a Township-wide non-motorized/pedestrian path system.
- Explore incentives to promote use of car-pooling, mass transit, and specialized transportation services.

Objective:

Coordinate future land use and Township roadway network to reduce traffic congestion.

Policies:

- Protect roadway and pedestrian/bicycle path corridors through right-of-way acquisitions and dedications as development occurs.
- Assure that future developments provide for access designs and locations that minimize traffic congestion.
- Explore use of development designs and land use options that result in an overall reduction in the number of vehicle trips generated and length of vehicle trips.
- Recognize, evaluate and plan for traffic that passes through the Township on a regular basis.

Objective:

Continue to recognize the Lancaster Airport as a significant land use in the Township.

Policies:

- Evaluate potential impacts to the airport that may result from future adjacent incompatible land uses.
- Establish methods to educate future residents regarding potential impacts of the airport.

VII. Community Services & Facilities

Police Protection

Police protection is a service demanded by Township residents and businesses. The traditional role of the police involves three functions: law enforcement, order maintenance, and community service. Law enforcement involves the application of legal sanctions, usually arrest, to persons who injure or deprive innocent victims of life or property. Order maintenance involves the handling of disputes, or behavior which threatens to produce disputes. The third aspect of the police function, and the one most likely to occupy the major portion of the officer's time, varies from community to community according to tradition and local ordinances. These are activities not necessarily related to criminal acts and include such tasks as traffic control, rescue operations, animal control, ambulance and first-aid services, education and other public services.

The Manheim Township Police Department provides police protection to the residents and businesses of Manheim

Township and also to the Borough of East Petersburg under a contractual arrangement since 1977.

The Police Department is located at 1825 Municipal Drive. The Department expanded into the entire building in 1992 following the completion of the new municipal building. Their facilities provide offices for officers and civilian personnel in the department. Other facilities include: photography lab; supply and uniform storage area; secured evidence room; library; polygraph room; interrogation rooms; detention cells; meeting/training room; and a small garage area.

The basement of the police department houses a storage area for unclaimed or confiscated items and a small room for Emergency Management communications equipment.

As the population of The Township continues to grow, so does the demand for public services, including police protection. This demand for additional police protection results in a need for additional police manpower.

However, due to differing service requirements and responsibilities, care should be used when attempting to generalize manpower needs. Adequate personnel can be determined only after a study and analysis of the various conditions affecting service requirements.

Police reports were researched for the past five years to establish any trends in the magnitude, frequency, and timing of particular police demands. Table 2.38 provides a record of total calls/complaints responded to from 1985 to 1992.

As can be seen, the Township Police responded to 3,606 more calls in 1992 than in 1985. This represents a 29% increase in just six years. Equally important is the increase in the number of responses to calls/complaints in East Petersburg Borough. The total calls responded to within the Borough increased from 714 calls in 1985 to 1,199 in 1992.

Emergency Services

Fire Service

Manheim Township currently has three volunteer fire companies which provide fire protection and rescue services in the Township. Since the establishment of the county-wide 911 central emergency communication/dispatch system in 1972, each fire company within the County has identified its own mutually exclusive primary service area. The actual boundaries of these primary service areas are mutually agreed upon by adjoining fire companies, and then described to County Dispatch for future use. The primary service area represents that land area that an individual fire station has "first-call" responsibility for providing fire protection service.

The entire land area of Manheim Township is contained within the three different fire companies' primary service areas. Map 6 identifies the primary service areas and fire stations locations within the Township.

The Southern Manheim Township Fire Company is located on Fruitville Pike within the Glen Moore Circle area of the Township. This company provides service to the densely populated southern section of the Township.

The Eden Fire Company is located on the New Holland Pike and provides fire protection service to the eastern part of the Township.

The Neffsville Fire Company is located on East Oregon Road and serves the northern and western part of the Township.

In addition to these volunteer fire companies, the Lancaster Airport has a primary crash vehicle located at the airport to provide fire and rescue assistance to any incidents at the airport. The Neffsville Fire Company provides primary coverage for any incident at the airport.

The delivery of fire protection services is highly dependent upon manpower. Like most Townships within Lancaster County, Manheim Township's fire departments are staffed entirely by volunteer personnel. Volunteerism, in general, is declining; several local conditions contribute to this decline.

First, young people today have more choices for how they can spend their leisure time than they did in the past. Lack of interest due to participation in other activities or the lack of free time are reasons for the decline in volunteerism.

Second, volunteer interest appears to be diminishing because of the large number of hours that are necessary to conduct fund-raising activities. Constant fund-raising becomes tiresome to the typical volunteer fireman who is interested in training and actual fire-fighting. The increased need and emphasis on fund-raising has diminished the ranks of these companies, and possibly dissuaded new membership development.

Third, the lack of employment opportunities within the Township requires many of the would-be volunteer fire-fighters to commute outside of the Township on a daily basis. This situation results in a lack of manpower during working hours and can lead to increased response times.

As manpower decreases, the response time to incidents lengthens. Since response time is used as a critical indicator to determine the effectiveness of an

emergency service provider, Township officials should continually monitor the three fire companies' response times.

Hazardous Materials Team

Also known as HazMAT, this service is provided by Lancaster County. The vehicle and equipment for this team that serves all of Lancaster County and portions of Chester County is based at the Township garage on Buch Avenue. Equipment for this team includes special suits, monitoring equipment and chemical identification equipment.

Ambulance Service

Ambulance services can be divided into two general types. First, emergency ambulance service involves the pick-up of patients at the scene of a medical emergency. Then patients are expediently transported to local medical care facilities for treatment. The second form of ambulance service is called routine transports. In this instance, patients are transported from one medical care facility to another.

The Manheim Township Ambulance Association, a volunteer organization, was started in June 1971. After utilizing space at the Eden Fire Company, a Neffsville business location, and then a school district garage, the Association entered into a lease agreement with the Township in October 1972 to utilize Township land to build an ambulance station.

Since the formulation of the Association, it has continued to provide 24-hour service to the residents of Manheim Township and the northern part of Lancaster City. Back-up ambulance service to Manheim Township is also provided by neighboring companies. These neighboring companies provide vital assistance when there are multiple emergencies that cannot be adequately served by the Township Ambulance Association. Conversely, the Township Association provides backup service to these adjoining areas under similar circumstances.

Today there are approximately 50 active volunteers that provide emergency ambulance services. Much like the volunteer fire companies, the ambulance association is in constant need of volunteers. To address the need for staffing, the Association currently employs 2 full-time and 5 part-time Emergency Medical Technicians to staff units 24 hours a day.

With the increase in the Township's population, and the increased number of calls, the Association now operates four ambulances plus a MASH unit for medical assistance on mass casualty incidents. This unit carries bulk quantities of medical supplies and a large quantity of oxygen.

Emergency Management

The Township currently maintains an Emergency Operations Center in the basement of the Police Department Building. This center provides total communications for an emergency situation. The Township also maintains a Mobile Command Post. This is a converted bus that can provide essentially the same communication services as those located in the Emergency Operations Center.

Parks and Recreation

As the Township continues to develop and the population increases, the planning for passive and active recreation opportunities and the demand for recreation facilities and programs become more important. Furthermore, the conversion of vacant lands to developed areas reduces the Township's overall open space that can be used for various recreational pursuits.

Parks and open spaces are valuable community facilities. Open space consists of both developed and undeveloped land. Developed open space includes parks and recreational areas. Undeveloped open spaces are areas which reserve land for future recreation, protect streams and stream valleys, forest and woodlands, preserve scenic and historic resources, and act as buffers between developed areas.

Open space serves three basic functions: (1) It satisfies human needs through recreation, by providing: fresh air, sunlight, space for exercise, and psychological relief from stress; (2) It enhances and protects the natural resource base, including air, water, soil, plant, and animals; and (3) it affects economic development factors, such as real estate values and land development patterns.

Recreation experts classify parks into five distinct categories, based upon their size, service population, and intended use.

Regional Parks

First are regional parks which generally contain 100 or more acres and should be located within one-half to one hours driving time from the population served. Accommodating a wide variety of recreational activities, these parks often have a natural orientation with hiking, camping and picnicking facilities; however, regional parks may also have "activity-oriented" facilities.

Overlook Park is considered a 120 acre regional facility that is accessible to a large portion of the urban and suburban population in Lancaster County. This "activity-oriented" park features an 18 hole golf course, activity center, outdoor pool, tennis and volleyball courts. Future expansion of this regional park is to include an additional entrance, parking area, and golf range complex.

The Township Parks and Recreation Plan prepared in 1989, recommends that a minimum of five acres of land be devoted to regional parks for each 1,000 people . Based on the Township population reported for 1990, 144.4 acres of regional parkland is needed to adequately serve the Township.

Community Parks

The second park type is called the district or community park. These parks tend to contain 25 or more acres. The recommended travel distance for people served by a community park is one to two miles. These parks generally involve a fairly high level of improvement with multiple sets of athletic fields and courts. Sometimes swimming pools and indoor recreation centers are situated on these community parks. Finally, larger school sites (usually middle and senior high schools) have facilities that qualify as community parks, and represent valuable recreation resources that can significantly enhance the level of recreation services offered to a given area.

The Township Parks and Recreation Plan also recommends that a minimum of five acres of land be devoted to community parks for each 1,000 people. Based on the Township population reported in 1990, 144.4 acres of community parkland area is needed to adequately serve the Township's population.

Presently the community facilities have a combined developed acreage of 60.62 acres. In addition to the developed acreage, there are approximately 15 acres in Neffsville Community Park which remain undeveloped and all 56.5 acres of Landis Woods which will be retained as a natural woodlands preserve.

Neighborhood Parks

Neighborhood parks are the third park type advocated by recreation experts. These parks are generally between 5 and 25 acres in size.

The recommended service area for these parks is a one-quarter to three-quarter mile radius. The Township Parks and Recreation Plan recommends that a minimum of 3.5 acres of land be devoted to neighborhood parks for each 1,000 people.

As implied by the name, these parks are intended to provide close-to-home areas for limited athletic activities, playgrounds, and passive pursuits. The location and sizing of neighborhood parks are often tied to decentralized elementary school sites that service individual neighborhoods.

Manheim Township has 100.3 acres of park land considered neighborhood park land. In addition, five Township elementary schools act as neighborhood parks.

Play lots/Mini-parks

The fourth park type is the play lot or mini-park. These facilities are provided at the sub-neighborhood level and are meant to serve residents within its immediate vicinity. These parks are generally less than one acre in size, and can be as small as 2,500 square feet. Typically, play lots include several pieces of playground equipment and park benches and are aimed at providing close-to-home play areas for small children.

The Township Parks and Recreation Plan recommends that a minimum of one-half acre of land be devoted to play-lots/mini-parks for each 1,000 people. Jaycee Park and Neffsville Square are the only facilities within the Township that can be considered a play-lot/mini-park.

Linear Parks

Linear parks are another type of park which are quite different from those previously listed, but which will have a significant role to play in the Township. Linear parks involve a wide variety of shapes, sizes and uses. Generally, these facilities are often considered ribbon parks and take the form of bike paths and trails.

The Township Parks and Recreation Plan does not recommend any minimum size per population for linear parks. Instead, it recognizes that these facilities are more dependent upon natural or built corridors that can be easily transferred for such use. For example, stream valleys and their floodplains, abandoned railroad lines, and major utility rights-of-way provide ideal opportunities for the creation of effective linear parks.

The Parks and Recreation Plan did provide a basis for a linkage system of non-motorized paths and bike lanes within the Township. The general linkage system outlined in the Plan was a starting point for a comprehensive effort to identify potential locations for such a system. Following the recommendation of the Plan to review and refine the suggested locations, the Township Parks and Recreation Board, Township staff and representatives from various bicycle clubs have developed the linkage system shown on Map 7. This system of non-motorized linkages will continually be reviewed and updated to reflect opportunities and constraints on implementation.

There are currently four areas of the Township with dedicated pedestrian/bicycle paths. Three of these form sections of the designated Township-wide bike route and transverse areas of the school complex in Neffsville, the Landis Valley Farm Museum, and the Settlements of Landis Valley residential subdivision on Hunsicker Road. The other path is located adjacent to Eden Road.

Public Recreation Facilities

Public Facilities - Township

Municipal and open space currently provided by the Township amounts to approximately 318 acres, not including school facilities. These facilities are listed in Table 2.39 with the date acquired and the acreage of each facility.

Public Facilities - School

School-related facilities include the High School, Middle School, Brecht Elementary, Bucher Elementary, Neff Elementary, Nitrauer Elementary, Schaeffer Elementary, and Reidenbaugh Elementary Schools. These areas are usually open to the residents. The school-related facilities are listed in Table 2.40.

Private Recreation Facilities

Private facilities are privately owned and maintained. The use of these areas by the general public ranges from that which is readily available to the public to that which is available by private membership only. Table 2.41 lists these areas and their acreage.

In addition, the Landis Valley Museum is located along Valley Road, between Kissel Hill Road and Oregon Pike. The 100-acre facility is operated by the State Historical and Museum Commission and is open year-round, with an admission fee charged.

Dedication (Or Fee-In-Lieu) Of Open Space

Under the Pennsylvania Municipalities Planning Code, the Township can require developers to dedicate particular areas within the proposed development for recreation purposes. As an option, the Township can allow the developer to make payment equal to the fair market value of the open space, which would have otherwise been required for dedication. Then, this payment is kept in a fund to be used within three years to provide residents with new recreation facilities.

As an alternative to the dedication of land, the Township may collect a fee-in-lieu-thereof equal to the fair market value of such land that would have otherwise been required for dedication.

Regional Park and Open Space Plan

The Lancaster Inter-Municipal Committee (LIMC) has completed a Regional Park and Open Space Plan that addresses its active membership at the time plan preparation was initiated.

The plan has three main purposes: to delineate a network of greenways throughout the LIMC area; to recommend needs and location for other parks within the LIMC area which have regional functions or intermunicipal significance; and to provide each member municipality with a plan which will satisfy planning requirements for grant programs, mandatory dedication programs, and other planning needs.

In addition to addressing the needs and recommendations throughout the LIMC area, the plan provides detailed recommendations for each

member municipality. These recommendations are followed by an action plan that sets priorities for greenways and park and recreation facilities.

The plan recommends that Manheim Township place a short-range priority on establishing and protecting the Conestoga Trail, along the Conestoga River, a mid-range priority on a Little Conestoga Creek greenway and a large-range priority on a Lititz Run greenway. The plan also recommends that other local greenways be identified, acquired and developed with the timing and location of future development.

The short-range priority for facilities recommended in the plan as it applies to Manheim Township focuses on evaluating the feasibility of a joint community park with East Lampeter Township. A longer-range priority is the establishment of four neighborhood parks. The plan suggests the use of mandatory dedication or cluster development provisions as a method to establish these neighborhood parks. However, the plan also places a high priority on obtaining the land should an opportunity arise.

Other Community Services

Community Life Task Force

Formed in 1993, the community Life Task Force is a group of interested persons who live, work or visit in Manheim Township. Members of the group represent themselves as individuals, or they represent an agency, organization, group or segment of the community.

The purpose of the group is to identify issues, concerns, or problems affecting the quality of life within Manheim

Township and then assist in achieving a positive impact on items identified through communication, cooperation and mutual support. The group has started to address issues that have been identified through a number of committees and sub-committees.

The formation of the Community Life Task Force was seen as a mechanism to encourage a partnership among all those within the community to accept a share of the responsibility for addressing and providing solutions to individual problems as well as a share of the responsibility for the overall quality of life in the community.

Libraries

Manheim Township residents have direct access to the Lancaster County Library system through a mini-branch library located in the annexed section of the Manheim Township Police Department building. The mini-branch facility is envisioned as a first step to a fuller branch with a larger collection and extended services.

The mini-branch features picture books, easy readers, and audio cassettes for preschool and elementary age children as well as popular materials collection including best sellers, large print books, and books on cassettes for adults. Those using the mini-branch are able to access information beyond the scope of the collection through a microfiche catalog of the holdings of all the public libraries in the Library System of Lancaster County and are able to reserve books, request inter-library loans, ask reference questions, and reserve films and videos. A delivery service links the main library to the mini-branch.

Churches

Churches of various denominations are located within Manheim Township and are listed in Table 2.42.

Objectives and Policies

Objective:

Provide all residents with adequate police, fire and emergency service.

Policies:

- Encourage and promote a high degree of coordination among police, fire, and emergency services.
- Utilize a combination of crime prevention and law enforcement activities to provide police protection throughout the Township.
- Establish steps to evaluate services dependent on volunteers and funded by public donations.
- Promote public participation in and awareness of public safety plans and programs.
- Promote the installation of necessary water systems and pre-suppression fire equipment in all existing and future non-residential and residential uses and developments.

Objective:

Promote cooperation between the Township and the Manheim Township School District to provide the highest quality education and the greatest educational opportunities.

Policies:

- Expand efforts to exchange demographic, land use and capital improvement information to facilitate projection of Township and School District needs.
- Continue cooperative efforts to provide a variety of recreation areas, programs, activities and events.
- Continue cooperative efforts with the Manheim Township Educational Foundation as a link between the schools and the community.

Objective:

Cooperate to the greatest extent possible with other public, private, and non-profit agencies providing services to Township residents.

Policies:

- Continue to support the Manheim Township Community Life Task Force.
- Continue to support the Manheim Township branch of the Lancaster County library system.
- Encourage private sector support of the Manheim Township branch library.

Objective:

Continually evaluate the Township's Parks and Recreation Comprehensive Plan to identify portions to be updated to assure the most advantageous mix of and locations for recreational areas, facilities, programs, and activities.

Policies:

- Continue to acquire an optimal amount of park land to meet present and future recreational demands.
- Promote the provision of adequate open space to serve future residential subdivisions and the provision of neighborhood parks.

Objective:

Provide ample opportunities for active and passive recreation.

Policies:

- Develop a facilities plan based upon an analysis of need and demand for all age groups and ability levels.
- Promote cooperation and coordination between public agencies and private businesses which provide recreation.
- Continue to develop and implement a Township-wide plan for a bike/pedestrian path system.
- Require the dedication or reservation of park sites and path easements during review of development proposals when considered appropriate and when consistent with adopted recreation plans.

VIII. Community Utilities

Wastewater System

Manheim Township maintains a sewer line collection system which is associated with the Lancaster Area Sewer Authority (LASA) and the City of Lancaster Sewer Authority (CLSA) for sewage treatment. Approximately ninety-five (95) percent of the developed areas of the Township are served by public sewer. The Township's sewer system consists of gravity collection sewers, pumping stations, and interceptors which convey sewage to the two treatment plants.

Manheim Township's collection and conveyance system consists of more than 100 miles of gravity collection and interceptor sewers, seven pumping stations, and force mains. Those portions of the Township which are served by the LASA and CLSA systems are shown on Map 8. Generally, the portion of the Township west of Lititz Pike and north of West Roseville Road is served by the LASA system, with the remainder of the Township served by the CLSA system.

The age of the Township's system varies. In certain areas south of the Route 30 bypass, portions of the system are approximately 50 years old. However, the majority of the system was installed in the late 1950's and early 1960's. Several extensions have been made in recent years to serve a number of developments in the northern areas of the Township.

Manheim Township has a committed capacity allocation in both the LASA and CLSA plants for wastewater treatment. An agreement with LASA to allow connection of Manheim Township sewers to the LASA system established a 2.3 million gallons per day (m.g.d.) capacity reserve for Manheim Township. The recorded average flow to the LASA system from Manheim Township in 1992 was 1.10 m.g.d. LASA bills the Township which in turn bills the individual customers.

All the wastewater sent to the CLSA system is being treated at the South Treatment Plant. The Township has an agreement with that Authority which established a 5.59 m.g.d. capacity reserve for metered flows from Manheim Township. The recorded average flow from Manheim Township to CLSA in 1992 was 3.92 m.g.d. There are areas in Manheim Township that are unmetered and are billed directly to CLSA. Those flows are not included as part of Manheim Township's reserve capacity.

All flows to the LASA system are by gravity. There are six pumping stations throughout the portion of Manheim Township which discharges to the CLSA system. The location of these pumping stations are shown Map 8.

- Village Park - Pulte Road Pumping Station
- Butter Road Pumping Station
- Mondamin Farm Road Pumping Station
- Eden Road Pumping Station
- Fruitville Pike Pumping Station
- Pleasure Road Pumping Station

The two major pumping stations along Eden Road and Pleasure Road provide for the conveyance of sewage from Upper Leacock Township and East Lampeter Township, as well as Manheim Township. The design capacity of the Eden Road Pumping Station is 8.69 m.g.d. and the capacity at the main pumping station along Pleasure Road is 14.24 m.g.d. The other five pumping stations are smaller.

Future flows have been estimated for a 5-year and 10-year planning period in the 1992 update to the Township Official Sewage Facilities Plan. These estimates have been based on the number of

proposed and approved subdivisions, sewer extensions to serve existing dwelling which are currently served by on-lot disposal systems, vacant land which is zoned for Residential, Commercial and Industrial development, and flow directed to the LASA service area through pumping station abandonments. The estimates are for planning purposes only and assume no restrictions on available treatment capacity.

Table 2.43 provides a summary of the existing and projected 5-year and 10-year sewage flow estimates for the LASA and CLSA service areas.

Based on the future flow estimates, it is apparent that Manheim Township has sufficient treatment capacity in the LASA plant and CLSA plant to serve the Township's needs during the 5-year and 10-year planning periods, but not for total build-out of the community. Capacity reserves in the CLSA plant are sufficient to meet the Township future needs and for total build-out based on current zoning regulations.

To address future growth in the LASA service area, the Township should initiate discussion with LASA for 1.5 m.g.d. additional treatment capacity reserves which should be sufficient for the proposed sewer extension projects and designated future sewer service areas within the LASA service area. If negotiations with LASA are unsuccessful, the Township will need to evaluate the feasibility of constructing its own treatment facility.

The Township recognizes that existing on-lot disposal system problem areas represent needs for public sewer. Based on an inventory of developed areas which utilize on-lot systems conducted with the update of the Township's Official Sewage Facilities Plan, eighteen projects were identified to provide public sewer to these areas. The projects are depicted on Map 8 and correspond to the following list.

- Little Conestoga Creek Interceptor
- Extension of Bachman Run to Snyder Road
- Connection of Partridge Lane to Little Conestoga Creek Interceptor
- Extension Across Weaver Road - Abandonment of the Village Park Pumping Station
- Extensions to Bachman Run Interceptor
- Pleasant Valley Extension
- Valley Road Extension
- Kissel Hill Road Extension
- Ruthridge Drive Extension
- Oregon Pike Extension
- Extension along Landis Valley Road
- Extension along Taylor Road
- Kurtz Run Interceptor Extension
- Extension along Oregon Road - Abandonment of the Carriage Hill Pumping Station
- Rockrimmon Ridges Interceptor Extension

- Abandonment of the Butter Road and Mondamin Farms Pumping Stations
- Butter Road Extension
- Lititz Creek Interceptor Extension

The Township system is financed and maintained by revenue from customer billing. The present residential customer billing includes flat rate quarterly billing and a one-time tapping fee. Commercial and industrial customers are billed by metered usage.

Some older portions of the Grandview Heights, north Lancaster, and Rossmere areas are served directly by CLSA and are billed by them. There are several hundred customers in this category.

The Leola Sewer Authority (which serves a portion of Upper Leacock Township) and a portion of East Lampeter Township connect to Manheim Township's interceptor along the Conestoga River to convey their sewage to the CLSA treatment facilities. Manheim Township now bills Leola Sewer Authority based on meter flows and continues to bill East Lampeter on an EDU basis.

The Township can reduce annual operating and maintenance costs of the sewer system by abandoning selected pump stations and replacing them with gravity flow. All future lines should be established utilizing gravity service to eliminate the operating and maintenance costs associated with pumping stations.

Water Supply and Distribution System

The public water supply system in Manheim Township is owned, in part, by the City of Lancaster Authority and, in part by the General Municipal Authority of the Township of Manheim (GMATM), and operated and maintained by the City's Water Department. The extent of the system is shown on Map 9, Water Supply and Distribution Network. The major source of water used in the Township is a reservoir formed behind a four foot dam on the Conestoga River near the northeastern border of the City. The portion of the system originating in the Conestoga plant uses an average of 8,000,000 gallons per day and, when combined with the Susquehanna River plant (9,350,000 g.p.d.), serves Lancaster City and Township, Manheim Township, Manor Township, East and West Lampeter Townships, and East and West Hempfield Townships.

There are two standpipes located in Manheim Township at Blossom Hill and Neffsville. Blossom Hill has a capacity of 250,000 gallons, while Neffsville's capacity is 2,000,000 gallons. This gives a working storage capacity within the Township of 2,250,000 gallons. Total storage capacity of the complete water system is 38,470,000 gallons, which represents more than a day's demand. The location of the standpipes is illustrated on Map 9.

Water usage within the Township is expected to reach to 5.37 m.g.d. by the year 2000 and 6.40 m.g.d. by 2010. This represents approximately 25 percent of the system's utilization for these periods.

A 20 year expansion to the water system by, respectively, the City of Lancaster Authority and, more recently, by the General Municipal Authority of the Township of Manheim, has resulted in a public water supply available throughout the Township with the exception of some areas in the northeast. Current improvements planned for the system include a booster pumping station to serve the Blossom Hill area to increase pressure demands and an upgrading of the emergency pump station on Oregon Road which also serves the Blossom Hill area.

Objectives and Policies

Objective:

Utilize utility extension as a means of coordinating development.

Policies:

- Coordinate Capital Improvements Projects with the Township Comprehensive Plan to provide for the logical extension of utilities within the Township.
- Ensure that utilities are adequately sized to meet the demands of the Township.
- Prohibit the extension of sewer and water facilities to serve areas outside the Urban and Village Growth Boundaries and not planned for additional development.

IX. Adjacent & Regional Planning

The preparation of a comprehensive plan should always consider and, if possible, complement planning policies in effect in adjoining communities. Consideration of adjacent planning would result in a cooperative planning effort of several adjoining municipalities. Such efforts can lead to a regional allocation of land uses that includes a multi-municipal system for the delivery of public services. At a minimum, such consideration should assure that land uses are compatible with planned uses in the adjoining municipalities.

As can be seen on Map 10, a wide variety of planned uses are located along the Township's boundaries.

The following will summarize those land uses planned for each of the municipalities adjoining Manheim Township.

Penn Township

Penn Township adjoins Manheim Township along its northwestern border.

Penn Township jointly prepared its Comprehensive Plan with Manheim Borough and Rapho Township. The Manheim Central Region Comprehensive Plan was adopted by Penn Township on June 28, 1993. The Plan depicts planned Agriculture in areas adjoining Manheim Township.

Upper Leacock Township

Upper Leacock Township abuts Manheim Township to the east across the Conestoga River.

The Upper Leacock Township Comprehensive Plan was written in 1988. The Plan provides for a range of uses along the Township's border with Manheim Township. The northern and southern portions of the common boundary are depicted as agricultural/rural uses. The central portion, however, denotes that the long-term suggested land uses be low density residential and industrial.

The agricultural/rural areas are planned to continue their dominant agricultural heritage while permitting limited rural housing and uses to serve the special needs of plain-sect residents.

The low-density residential area is planned for development beyond the year 2000. The area designated would have an impact on Manheim Township. The Plan proposes that the sewage needs of the area would be served by the Manheim Township system located along the Conestoga River. In addition, due to the location of this future low-density growth area, most of the traffic generated from the area would be drawn to the nearby Route 222 and Route 272 corridors instead of areas within Upper Leacock Township.

Warwick Township

The Comprehensive Plan - Warwick Township was written in 1993. The Plan depicts a wide range of proposed land uses along the Township's border with Manheim Township. The eastern two-thirds of Warwick Township's southern border with Manheim Township is shown as planned for Agricultural uses. A small area of this common border is

shown as Conservation. West of PA Route 501, the plan proposes a large area designated as Airport Industrial and a small area of rural large - lot residential development.

West Earl Township

West Earl Township is separated from the extreme northeast corner of Manheim Township by the Cocalico Creek. This area within West Earl Township is planned for low density residential in the June 1970 West Earl Township Comprehensive Plan. This low density residential use is planned to average three to four dwelling units per acre.

East Lampeter Township

East Lampeter Township is located opposite the Conestoga River from the southeast portion of Manheim Township from the U.S. Route 30 bridge over the Conestoga Creek north to Hunsicker Road. The East Lampeter Comprehensive Plan depicts the area adjacent to Manheim Township as low to medium density residential use. The East Lampeter Plan proposes densities up to five dwelling units per acre for these areas.

Lancaster City

Lancaster City is located south of Manheim Township and includes isolated pockets within the Township along the north-south State highways. The Comprehensive Plan adopted by the City in 1993 does not include a traditional future land use map depicting proposed uses within the City limits. The policy based plan acknowledges the limited land resources within the City and promotes the redevelopment and reuse of existing structures and land.

Lancaster Township

Lancaster Township borders Manheim Township in two areas; the extreme southeast and southwest corners of Manheim Township. The Lancaster Township Comprehensive Plan, adopted in 1986, depicts both areas as proposed for low-medium density residential development. The Plan describes this development as predominantly single family detached dwellings with densities up to 5 1/2 dwelling units per acre.

East Hempfield Township

East Hempfield Township is adjacent to Manheim Township along its western border. This extensive common border provides for a variety of land uses proposed by the East Hempfield Comprehensive Plan. The Plan, adopted in 1993, depicts six future land use categories for areas adjacent to Manheim Township.

The Plan proposes the continuation of agricultural uses along the northernmost portion of the border with Manheim Township and in an area between East Petersburg Borough and Quarry Road. These areas are to be protected from conversion from current agricultural use.

Agricultural Holding areas are depicted in three areas adjacent to Manheim Township; between East Petersburg Borough and Manheim Township, in the area between Route 283 and the railroad right-of-way, and the southwest corner of the Township between Route 30 and the railroad right-of-way. These areas are planned as future staged-growth opportunities for times beyond the year 2000. Should these areas develop within the time frame of the East Hempfield Plan, such development should be limited to single family detached residential units.

The Plan also identifies three areas proposed for residential development. High density residential development, with a mix of dwelling types at a density of up to six units per acre, is shown adjacent to the extreme southwest corner of Manheim Township, and in the area between Route 30 and the railroad right-of-way south of Route 283. A small area of Suburban Residential use, with densities up to four units per acre, is also located adjacent to the southwest portion of Manheim Township.

The Plan depicts the area between Route 283 and Route 72 as General Industrial. This land use classification provides for small scale industrial uses on individual lots not part of an overall larger complex or industrial park.

Finally, a portion of the area north of Quarry Road is designated for quarry use. This area encompasses the existing

quarry located in East Hempfield Township.

East Petersburg Borough

East Petersburg Borough adjoins Manheim Township in three areas along the Township's western boundary. The Comprehensive Plan of the Borough of East Petersburg, dated December 1991, depicts these areas as designated for Residential uses. The Borough Plan outlines a Residential goal to provide a cross section of affordable housing which enhances the community as a whole.

Lancaster County Comprehensive Plan

The Lancaster County Planning Commission is currently in the process of updating the County's Comprehensive Plan. To date, the Planning Commission has adopted the Policy Plan, the Growth Management Plan and an Action Plan for Implementation. The intention of the Policy Plan component is to lay the foundation of the overall Comprehensive Plan by detailing various goals and visions of how the County's future is to unfold. The Growth Management Plan, the Plan's second component, will illustrate how Lancaster County's vision for its future can be achieved.

The primary focus of the Policy Plan is to develop a way to regain a balance between the County's urban centers and rural areas. To regain this balance, the location and pattern in which development is occurring today will need to be changed, and the viability of the local agricultural economy enhanced. The Policy Plan proposes that future growth will be directed to urban areas where and when there is a full range of public facilities and services available to support residential and commercial/industrial development. An important component regarding this policy is the delineation of "urban growth boundaries" around these urban areas where urban development will occur and will, conversely, prevent development from continuing to sprawl outward into the rural areas.

Outside the urban growth boundaries, the Policy Plan envisions productive agricultural sectors and natural areas, parks and open space and cultural and historic sites. This rural area will surround the urban areas and form a "greenbelt" throughout the County.

Other key components of the Policy Plan include goals and objectives regarding natural resources, community character, housing and human services, public facilities and services, transportation, the economy, parks and recreation, and energy resources.

In order to implement many of the visions outlined within the Policy Plan, the County has completed the Growth Management Plan. The Growth Management Plan visually represents the land use goals and objectives contained in the Policy Plan and identifies those areas that are appropriate for urban growth and those areas appropriate for agriculture, natural resource, and rural uses.

The Growth Management Plan includes an historical overview of urbanization in Lancaster County; an analysis of future land use and transportation needs; a strategy for managing growth and change; regional growth guidance maps; a County-wide Future Land Use Map and options for governing land use.

The purpose of the Growth Management Plan is to provide a process for municipal officials to follow in guiding and influencing the pattern, location, and timing of growth within their municipalities. The Growth Management Plan proposes the location of Urban Growth Boundaries to separate areas appropriate for urban-level development from areas appropriate for agriculture, rural, and resource uses. The major goal of the Growth Management Plan is to direct growth to existing urban areas - Lancaster City, the boroughs, and adjacent suburban areas and away from the County's agricultural and resource lands.

The Growth Management Plan identifies the preservation of community identity and character, the control of sprawled development patterns, the preservation of prime agricultural lands, predictability in capital improvements planning, tax savings in the efficient provision of public services and facilities, the revitalization of urban areas, and simplified decision making at the urban edge as benefits of Urban Growth Boundaries.

The Growth Management Plan proposes that each municipality meet its own future needs for a 20-year population projection. Growth within Urban Growth Boundaries is encouraged by the County's Plan to occur at an average

density of 4.5 units/acre.

Urban Growth Boundaries are not intended to constitute permanent limits of growth. If necessary over time, the boundary is intended to expand as the population grows. The Lancaster County Planning Commission recommends that each Township, together with the County, reexamine its Urban Growth Boundary approximately every five years, and amend it if needed, utilizing the same process and standards, employed in the establishment of the boundary.

If lands adjacent to and outside an adopted Urban Growth Boundary are proposed inclusion in an urban area, the Township comprehensive Plan would first be amended to reflect the proposed urban use.

The last completed section of the County's new comprehensive plan is an annual Action Plan. The Action Plan will provide an annual framework for ongoing implementation of the Policy Plan and the Growth Management Plan.

The final component of the County's Plan is a series of Regional Plans. The Regional Plans will be issue oriented and based upon County and Municipal cooperation.

The Township has already coordinated efforts with the County Planning Commission to delineate an Urban Growth Boundary. Much of Manheim Township is included in the Lancaster Urban Growth Area. The area generally north of Hunsicker Road and east of Kissel Hill Road to the Conestoga River is designated for continued agricultural activity. In addition, the negotiated boundary includes the designation of a Village Growth Boundary surrounding the Oregon area. In the same way that Urban Growth Boundaries can direct growth into areas with existing and planned services and facilities, so Village Growth Boundaries can direct rural growth into and adjacent to existing villages.

In addition to concurrence regarding the locations of the Urban Growth Boundary and Village Growth Boundary, the goals and objectives stated in the Township Comprehensive Plan and those formulated in the County's Policy Plan are largely parallel and suggest that the resultant Township's future land use designations and policies should coordinate with the County's effort.

Lancaster Inter-Municipal Committee

Manheim Township is an active member of the Lancaster Inter-Municipal Committee (LIMC), a group of municipalities in central Lancaster County which have joined together to cooperate on local government activities. The 1994 membership includes 11 municipalities: East Hempfield Township, East Lampeter Township, East Petersburg Borough, Lancaster City, Lancaster Township, Manheim Township, Manor Township, Mountville Borough, Pequea Township, West Hempfield Township, and West Lampeter Township. The LIMC's member municipalities cover 166 square miles; their 1990 populations totaled 175,837, or 42% of the population of Lancaster County.

In its early years in the 1960's the LIMC was instrumental in establishing the Lancaster Area Refuse Authority (the forerunner of the Lancaster County Solid Waste Management Authority). For a number of years following that, the LIMC provided a forum for municipal officials to meet informally to share information and discuss mutual concerns. The LIMC was inactive in the early 1980's but was reactivated in 1987. In 1989 it acquired staff support for the first time, through an Executive Director. The LIMC has become increasingly active during the 1990's. Monthly meetings and a diversity of work program activities give municipal officials an ongoing opportunity to become better acquainted and share information.

Most of the LIMC's activities have related to sharing of information and services, coordinating municipal activities, advocacy, and planning.

The LIMC has undertaken several major planning related activities. A codes and ordinances project surveyed codes and ordinances relating to development in the LIMC area, produced a composite map of municipal zoning ordinances, developed sample historic overlay district ordinance provisions, and included a compilation of terms and definitions as a basis for standardizing terminology in LIMC area ordinances. A sign regulation project produced

sample sign regulations which have been adopted, either as recommended or with minor modifications, by 7 municipalities, including Manheim Township. Most recently, the LIMC completed a Regional Park and Open Space Plan.

A sampling of other LIMC activities in the last five years includes communicating with legislators and other governmental officials and agencies, the State Transportation Commission, Lancaster County and others regarding important legislation and community issues; sharing information about police contracts; sponsoring workshops for municipal officials and staff; developing a uniform curfew ordinance; maintaining liaison with numerous community groups; and inviting speakers to LIMC meetings to inform local officials about community issues and organizations.

The LIMC continues to consider new areas for intermunicipal cooperation. Current plans for the future include appointing an LIMC Greenway and Park Advisory Board to coordinate implementation of the Regional Park and Open Space Plan, reviewing the sample historic overlay district provisions for possible adoption by LIMC municipalities, investigating potential cooperative activities relating to cable television, and sponsoring a series of technical workshops on roads.

Objectives and Policies

Objective:

Encourage exchange of planning concepts, tools and techniques with other governmental bodies.

Policies:

- Establish avenues for information exchange between Manheim Township and adjacent Municipalities, the Lancaster Inter-Municipal Committee and Lancaster County.
- Actively seek comments from adjacent Municipalities in review of Manheim Township planning activities.
- Participate in the development of cooperative approaches to address land use issues and municipal services (i.e. Lancaster Intermunicipal Committee)

Objective:

Participate in planning activities of the Lancaster County Planning Commission that affect Manheim Township.

Policies:

- Promote the efforts of the Lancaster County Planning Commission to direct growth into appropriate areas of the County.
- Establish, in cooperation with the Lancaster County Planning Commission, an Urban Growth Boundary and Village Growth Boundary that reflects the desires of the Township and accommodates anticipated growth.

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Chapter 3

Future Land Use Plan

I. Community Goals and Objectives

Like any effective planning effort, the preparation of the Township Comprehensive Plan seeks to achieve desired goals and objectives. These goals and objectives seek to address growth and development issues and various social economic aspects of the Township and are statements of purpose and commitment on the part of the Township to achieve desired results. It is hoped that the policies contained in this plan will facilitate the development of action strategies and the revision of zoning and subdivision codes. This process is more thoroughly discussed in the chapter dealing with implementation.

Comprehensive Plan

Goal: The primary goal of this Plan is to continue to make Manheim Township a better place to live and work, by: providing a guide to developing improvements of streets, utilities, and other Township services; promoting quality employment opportunities and a variety of housing options; providing excellent recreational facilities and programs; preserving and enhancing the ecosystem and; encouraging functional and aesthetically pleasing development and redevelopment throughout the community.

Objective:

Base Township policies, budget decisions and administrative actions on the Township Comprehensive Plan.

Policies:

- Incorporate recommendations of the Plan in other Township plans, ordinances, budgets and resolutions.
- Utilize the Plan as a guide for annual work schedules and budget proposals.
- Prepare an annual report describing how goals, objectives, and policies of the Plan are being achieved or implemented.

Objective:

Continually evaluate the Plan to identify portions to be updated as they become out-dated.

Policies:

- Encourage boards and commissions of the Township to identify potential changes needed to the Plan.

Natural Resources

Goal: Protect environmentally sensitive land, water and wildlife resources that present development hazards or serve highly valuable ecological functions by requiring mitigation of adverse impacts or by regulating development in these areas.

Objective:

Coordinate future development with the physical environment, placing a premium upon developing in harmony with existing natural features.

Policies:

- Encourage that natural physical features be incorporated and preserved in the design of new developments.
- Promote use of landscaping techniques that incorporate species native to the area.
- Continue to restrict development in floodplain areas that would result in increased flood frequency or increased flood levels.
- Ensure that proposed development complies with State and Federal wetland regulations.
- Encourage the use of existing natural features as buffers.
- Implement land use regulations that protect vegetation and provide buffer areas between developed areas and sensitive wetlands and waterways.
- Restrictions of geologic formations should be utilized as a factor in determining the intensity of land uses in areas that rely upon on-site sewage disposal systems.
- Areas that utilize groundwater for domestic use that are underlain by geologic formations that are characterized by solution channels should be thoroughly and routinely monitored for contamination.
- Educate and encourage the agricultural community to practice sound waste storage and application techniques.
- Minimum lot size requirements should be adequate to assure dilution of effluent for on-lot sewage disposal systems.
- Protect groundwater recharge areas from land uses that generate harmful pollutants.
- Develop, adopt, and enforce a Manure Management Ordinance if not addressed by new state regulations.
- Minimize the potential detrimental impacts of development on restrictive soils.
- Assure compliance with the Pennsylvania Sewage Facilities Act 537 regarding siting and installation of on-lot sewage disposal systems on restrictive soils.

- To the extent possible, future development should be excluded from areas with restrictive soil conditions to minimize environmental degradation and the threat to public health, safety, and welfare.
- Promote land use patterns and practices that will protect water quality while allowing for the accommodation of development.
- Protect surface water from non-point source pollution through methods such as land use regulation, increased soil conservation practices and improved enforcement of erosion and sedimentation control on construction sites.
- Protect surface water from point-source pollution through sewage facilities planning that limits private on-site package treatment plants.
- Manage Township owned natural areas to maintain and enhance their environmental, scenic, scientific, and educational value.

Objective:

Protect prime agricultural lands from encroachment by non-agricultural development.

Policies:

- Foster the continuation of agricultural use of prime agricultural land and protect areas of prime agricultural soils from encroachment by incompatible land uses.
- Develop Township programs, beyond land use controls, that encourage the continuation of farming in areas identified as having prime agricultural soils.
- Accommodate development in designated growth areas and discourage the extension of infrastructure to serve agricultural areas.
- Promote soil conservation practices to sustain soil productive capability and reduce erosion and sedimentation.
- Promote the use of County, State, and Federal programs designed to protect the Chesapeake Bay.

Land Use

Goal: Achieve a fiscally sound and environmentally safe Township by assuring, to the maximum feasible extent, the orderly and efficient use of land.

Objective:

Encourage and reward innovative site planning which is compatible with adjacent development and reduces costs to the public sector.

Policies:

- Employ use of incentives such as density bonuses for projects which provide additional amenities benefiting the general public.
- Encourage developments that are functional and aesthetically pleasing, contain appreciable green spaces, and will require minimal maintenance on the part of the Township.
- Encourage flexibility in development proposals to vary lot sizes, cluster dwelling units, provide a mix of dwelling types and uses, and provide for open space.
- Encourage the creation of usable open space for aesthetic and recreational purposes.

Objective:

Ensure that future land uses are developed in a compatible fashion with existing land uses.

Policies:

- Require buffering techniques such as landscaping, screening and other appropriate methods to minimize conflicts among different land uses.
- Encourage residential developments to include landscaping with recreational trails and bike paths in the design of all buffers and open space.
- Implement transitional zoning where deemed appropriate to minimize negative effects among different land uses.

Objective:

Preserve and enhance the historic resources of Manheim Township to ensure that the historic and cultural legacy will continue to help shape and define the unique character of the Township.

Policies:

- Provide incentives for the rehabilitation and preservation of significant historic and cultural resources throughout the Township.
- Encourage the training and education of members of Township Boards and Commissions about the value and advantages of regulating and preserving historic resources.
- Consider rehabilitation of historic structures as a means of meeting affordable housing goals of the Township.
- Ensure that Township ordinances, building codes, and other development regulations acknowledge and permit special treatment for historic sites and structures.
- Ensure that public infrastructure improvements are located and designed to encourage preservation, revitalization and rehabilitation of historic resources and discourage destruction of historic resources.

Objective:

Accommodate a manageable rate of growth to ensure that improvements to public facilities, services, and infrastructure can keep pace with development.

Policies:

- Direct future development to areas currently served by a complete range of services.
- Develop policies, procedures and regulations which will foster controlled balanced growth.

Objective:

Provide the appropriate types of commercial opportunities and high quality commercial development which will satisfy consumer demand, while complimenting and enhancing adjacent developments.

Policies:

- Ensure that future commercial developments are feasible, properly planned, and an asset to the Township.
- Continually evaluate the need to identify additional sites for commercial land uses.

Objective:

Encourage commercial and industrial development which is compatible with the generalized future land use map, public services and facility capacities, and the surrounding environment.

Policies:

- Encourage the expansion of existing businesses to facilitate job opportunities in the Township.
- Promote the use of vacant or under utilized buildings as an alternative to new development.
- Encourage new commercial developments that are desirable to the Township and are sized and located to best serve the residents of the Township.

Objective:

Protect prime agricultural lands from encroachment by non-agricultural development.

Policies:

- Encourage the use of Transferable Development Rights to permanently preserve and protect prime agricultural lands.
- Restrict the expansion of public facilities (sewer, water, major road improvements) into prime agricultural areas.

- Protect agricultural uses from non-farm activities that interfere with, or obstruct, normal farm practices.
- Evaluate options to permit a range of farm-based businesses that may help ensure that farms remain viable.

Objective:

Foster the continuation of agricultural uses on prime agricultural lands.

Policies:

- Support agricultural education programs.

Objective:

Provide an appropriate amount of land for various residential districts and ensure the highest quality living environment.

Policies:

- Locate residential development in areas best suited to accommodate each type of density.
- Protect and enhance established and proposed single family residential areas.
- Encourage the preservation and development of future residential areas by fostering the creation of neighborhood character through the use of architectural or other man-made features.

Transportation

Goal: Provide a safe and efficient transportation network, which facilitates the movement of people and goods within and through Manheim Township.

Objective:

Plan improvements to the transportation system of the Township so that traffic flows are not severely restricted.

Policies:

- Continue to place high priority on completion of improvements to U.S. Route 30.
- Continue to identify and plan street improvements which will increase accessibility throughout the Township.
- Utilize the Capital Improvements Program to establish priorities for transportation improvements throughout the Township.
- Continue to use existing and explore new methods to fund transportation improvements.

Objective:

Encourage alternative methods of transportation and support a greater regional concept of transportation planning.

Policies:

- Continue to plan and promote a Township-wide non-motorized/pedestrian path system.
- Explore incentives to promote use of car-pooling, mass transit, and specialized transportation services.

Objective:

Coordinate future land use and Township roadway network to reduce traffic congestion.

Policies:

- Protect roadway and pedestrian/bicycle path corridors through right-of-way acquisitions and dedications as development occurs.
- Assure that future developments provide for access designs and locations that minimize traffic congestion.
- Explore use of development designs and land use options that result in an overall reduction in the number of vehicle trips generated and length of vehicle trips.
- Recognize, evaluate and plan for traffic that passes through the Township on a regular basis.

Objective:

Continue to recognize the Lancaster Airport as a significant land use in the Township.

Policies:

- Evaluate potential impacts to the airport that may result from future adjacent incompatible land uses.
- Establish methods to educate future residents regarding potential impacts of the airport.

Parks and Recreation

Goal: Provide for a wide selection of recreational facilities and programs to meet the varying needs of all Township residents.

Objective:

Continually evaluate the Township's Parks and Recreation Comprehensive Plan to identify portions to be updated to assure the most advantageous mix of and locations for recreational areas, facilities, and activities.

Policies:

- Continue to acquire an optimal amount of park land to meet present and future recreational demands.
- Promote the provision of adequate open space to serve future residential subdivisions and the provision of neighborhood parks.

Objective:

Provide ample opportunities for active and passive recreation.

Policies:

- Develop a facilities plan based upon an analysis of need and demand for all age groups and ability levels.
- Promote cooperation and coordination between public agencies and private businesses which provide recreation.
- Continue to develop and implement a Township-wide plan for a bike/pedestrian path system.
- Require the dedication or reservation of park sites and path easements during review of development proposals when considered appropriate and when consistent with adopted recreation plans.

Housing

Goal: Provide for safe and affordable housing for all Manheim Township residents.

Objective:

Provide for a range of housing choices at appropriate locations throughout the Township.

Policies:

- Encourage infill housing developments that are compatible with surrounding properties.
- Provide residential development design options that include various housing types.
- Promote high-quality design in all residential developments.
- Continually review Township regulations, codes, and procedures relating to housing development to eliminate unnecessary restrictions, while ensuring safe and proper development.

Objective:

Provide opportunities for housing types which are sensitive to shifting demographic trends.

Policies:

- Consider the use of attached and detached, complete apartments as accessory dwelling units.
- Formulate housing opportunities for Township residents with special needs.

Public Utilities

Goal: Coordinate the provisions of public utilities in a timely and efficient manner to help guide development and adequately serve the demands of the Township.

Objective:

Utilize utility extension as a means of coordinating development.

Policies:

- Coordinate Capital Improvements Projects with the Township Comprehensive Plan to provide for the logical extension of utilities within the Township.
- Ensure that utilities are adequately sized to meet the demands of the Township.
- Prohibit the extension of sewer and water facilities to serve areas outside the Urban and Village Growth Boundaries and not planned for additional developments.

Intergovernmental Cooperation

Goal: Establish and continue a cooperative approach to land use issues with other governmental bodies.

Objective:

Encourage exchange of planning concepts, tools and techniques with other governmental bodies.

Policies:

- Establish avenues for information exchange between Manheim Township and adjacent Municipalities, the Lancaster Inter-Municipal Committee and Lancaster County.
- Actively seek comments from adjacent Municipalities in review of Manheim Township planning activities.
- Participate in the development of cooperative approaches to address land use issues and municipal services (i.e. Lancaster Intermunicipal Committee)

Objective:

Participate in planning activities of the Lancaster County Planning Commission that affect Manheim Township.

Policies:

- Promote the efforts of the Lancaster County Planning Commission to direct growth into appropriate areas of the County.
- Establish, in cooperation with the Lancaster County Planning Commission, an Urban Growth Boundary and Village Growth Boundary that reflects the desires of the Township and accommodates growth anticipated.

Public Services

Goal: Provide public services needed to meet community needs.

Objective:

Provide all residents with adequate police, fire and emergency service.

Policies:

- Encourage and promote a high degree of coordination among police, fire, and emergency services.
- Utilize a combination of crime prevention and law enforcement activities to provide police protection throughout the Township.
- Establish steps to evaluate services dependent on volunteers and funded by public donations.
- Promote public participation in and awareness of public safety plans and programs.
- Promote the installation of necessary water systems, smoke detection and sprinkler systems fire equipment in all existing and future non-residential and residential uses and developments.

Objective:

Promote cooperation between the Township and the Manheim Township School Districts to provide the highest quality education and the greatest educational opportunities.

Policies:

- Expand efforts to exchange demographic, land use and capital improvement information to facilitate projection of Township and School District needs.
- Continue cooperative efforts to provide a variety of recreation areas, programs, activities and events.
- Continue cooperative efforts with the Manheim Township Educational Foundation as a link between the schools and the community.

Objective:

Cooperate to the greatest extent possible with other public, private, and non-profit agencies providing services to Township residents.

Policies:

- Continue to support the Manheim Township Community Life Task Force.
- Continue to support the Manheim Township branch of the Lancaster County library system.
- Encourage private sector support of the Manheim Township branch library.

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II. Future Land Use

The Future Land Use Map for Manheim Township, Map 11, builds upon previous elements of the Comprehensive Plan to recommend general areas for various types of future development. While the Future Land Use Map is not necessarily the most important component of the Comprehensive Plan, it is undoubtedly the most visible. It bridges the gap between existing and future development, utilizing land use principles to guide new projects so they may better blend into the fabric of the community.

The Future Land Use Map should not be considered etched in stone or viewed as law - this is the function of zoning. Likewise, it does not attempt to predetermine the use of every tract of land within the Township for the next twenty years. It instead seeks to establish a logical framework for future development as a general, conceptual guide. It is hoped that this process will minimize conflicts between adjacent land uses, maximize the efficiency of the transportation network, and generally result in a better Manheim Township.

While the Future Land Use Map is only a guide, it should not be forsaken arbitrarily. Changes to and deviations from the Map should not be taken lightly, but should instead be well thought out and pursued in accordance with changes in the community's values or shifts in market trends, and only after thorough review and scrutiny by the Township Planning Commission.

The Future Land Use Map should not be viewed as the only determinant for future development. Numerous ideas, concepts, theories, and values about the future development of Manheim Township have been discussed during the formulation of this Comprehensive Plan. These have been synthesized into the plan's goals, objectives and policies. The Future Land Use Map and the goals, objectives and policies are designed to work hand-in-hand and should complement each other as they assist in the logical development of the community. The Future Land Use Map reflects many of the ideas brought forth within the text and policies of the Comprehensive Plan.

The land use distribution proposed in the 1994 Future Land Use Map represents a change from the distribution projected in the 1987 Township Comprehensive Plan. The differences within the 1987 Plan and this Plan are highlighted in Table 3.1. The proposed changes in land use distribution will assist the Township in implementing this Comprehensive Plan's goals, objectives, and policies.

Future Land Use Map

Urban Growth Boundary

The Urban Growth Boundary, developed cooperatively with the Lancaster County Planning Commission, was

located using the criteria in the County's Policy Plan, Township characteristics contained in this Plan, and the Township's Community Goals and objectives. The Urban Growth Boundary provides a "line" that separates areas appropriate for urban growth from areas intended for agricultural, rural and resource uses.

Lands appropriate for future urban and suburban land uses are within the Urban Growth Boundary. Urban uses are those residential, commercial, industrial, institutional, and recreational uses that require a full range of public services, including sewer and water, because of their generally higher density. The term "urban" does not imply "high-rise" development or a density any higher than that which already exists in the County.

Lands appropriate for future rural uses will be located outside Urban Growth Boundaries. Rural uses include agricultural, resource and limited rural development.

Village Growth Boundary

The Village Growth Boundary, also developed cooperatively with the Lancaster County Planning Commission, serves to direct future rural development into existing village communities. Such development could include residences, small neighborhood-oriented businesses, places of worship, schools, parks and community buildings. The future

development of these land uses should reflect the historical pattern of village growth and be of a scale and character appropriate to the area.

Agriculture

This land use designation includes areas producing livestock, poultry, dairy products, vegetables, grain, fruit, or other crops. These areas include, but are not limited to, soils that are defined as Prime Agricultural Lands, or lands of Statewide Importance in accordance with the Lancaster County Soil Survey.

Like many suburbanizing regions of Pennsylvania, the economic importance of agriculture in Manheim Township has experienced a steady decline. However, agriculture still plays a role in the Township's economy. Most of the farming and agriculture activity in Manheim Township is general in nature (field crops, some livestock, poultry, dairy products, etc.).

Although the farming industry in Manheim Township has diminished in large part due to the conversion of agricultural lands to non-agricultural uses, Manheim Township's agricultural heritage and identity are still evident and recognized by residents. The large concentrated acreage of agricultural lands in the northeast portion of the Township helps to maintain a rural character to the Township. These are qualities which residents appreciate, respect and wish to retain. Agricultural land in Manheim Township is considered a valuable resource which residents have clearly stated their desire to preserve for the use and enjoyment of future generations.

The Township has already taken steps to control the effects of growth on agricultural lands through effective agricultural zoning and a Transferable Development Rights program. This plan proposes the expansion of existing strategies and techniques to preserve farmland and enhance the viability of agricultural land in Manheim Township. Other implementation strategies and techniques that promote more efficient, orderly, and compact development patterns will be undertaken to protect the qualities valued by Township residents.

General Commercial

The General Commercial designation creates and preserves areas of the Township that provide a variety of wholesale and retail goods and services and serve a community or regional market. The primary uses may include retail stores, shopping centers, specialty shops, personal services, and automobile services. Other commercial uses include restaurants, theaters, offices, and other compatible uses that serve the area. The Plan recognizes that a sizable amount of general commercial space has been developed within the Township and therefore efforts should be focused on directing future commercial opportunities into existing areas. Redevelopment and enhancement of existing commercial facilities are encouraged to limit the need for development of additional commercial facilities. Should new commercial areas develop, appropriate design should include adequate buffers from adjacent non-commercial uses and an aesthetically pleasing interior site design that focuses on pedestrian/vehicular circulation

and landscaping.

Neighborhood Commercial

One of the primary goals of this plan is to foster growth and development in the Township's designated growth areas. To fulfill these goals, attempts should be made to form a mix of residential/office/commercial uses which are interconnected and convenient to Township residents in growth areas, and focus interest in land development away from agricultural lands to the growth areas. In an attempt to realize these goals, the Township has established a Neighborhood Commercial planning designation.

These areas propose to implement mixed uses and locate these mixed uses within a suburban "village" setting. The three land uses proposed for these areas are described as follows:

Residential - The residential component for this planning designation is intended to accommodate higher density uses in the form of townhouses, semi-detached and detached dwellings, multi-family apartments and similar types of housing projects. Housing densities should range from 2 to 5 units per acre within a cluster design, special amenities for more dense projects, and development of well coordinated recreation and open space features.

Office - Office uses are intended to be business and professional in nature, well designed, and scaled to fit within the mix of adjacent uses and activities. Planning and implementation approaches to office uses should address low density siting patterns, substantial landscaping, and buffering to minimize conflicts.

Commercial - This land use is intended to provide for more specialized commercial activities to be developed using more stringent performance standards. These standards are to guide commercial design away from "strip" centers. These close to home commercial areas should include small and specialty retail sales, retail services such as dry cleaning operations and hair salons, convenience stores, and day care facilities.

Residential

The Plan attempts to expand housing opportunities by allowing for various densities. It is believed that the variety of housing types possessed by Manheim Township has been an integral part of its tremendous growth and that this mix should be enhanced by the emergence of more development utilizing a mix of dwelling types.

The Plan proposes three residential classifications based on the density of development. The low density and medium density areas would not be limited to the single family detached dwelling unit but would also permit a mix of dwelling types, provided the development meets specific design standards to limit impacts on adjacent existing single family detached development. Densities within residential areas would be based on the design scheme of the development proposed. Alternative designs, such as cluster development, Planned Residential Development, or the purchase of transferable development rights would permit development density to increase above the two to three units per acre proposed for low density areas and the three to five units per acre proposed for medium density areas. High density areas would permit the widest range of dwelling types by right and would allow for densities up to fifteen units per acre.

Although areas on the Future Land Use Map are reflective of densities that can be accommodated in various areas of the Township, the ordinances to implement this Plan may provide for the additional densities only through use of alternative designs compatible with existing surrounding development. An example of such a situation is within the Village Growth Boundary located in the northeast corner of the Township. The medium and high density residential designations should be accommodated but must be sensitive to the existing development of the area and promote the goals, objectives and policies of this Plan.

In addition to providing for a variety of dwelling types for families, the Township should begin to accommodate the potential impact on the housing market of the aging of the Township population. As the population nears retirement age, significant changes in demand for housing will be experienced. A decrease in additional large lot developments, and an increased interest in lower maintenance homes will probably be seen. Alternative housing opportunities, such as accessory apartments or "in-law" living quarters may be requested.

Office - Service

This land use category permits the construction of office complexes that would provide professional and other services in the community. Although these offices complexes, either single building or multi-building, are typically limited to office use without provisions to permit retail sales or services, the ability to develop with a mix of offices, retail services and retail sales uses may be beneficial to efforts to reduce vehicle traffic. Traffic that currently leaves the site and utilizes off-site roadways to reach needed services and conveniences may be kept on-site. Areas designated for Office-Service uses that propose a mix of uses should be analyzed on a site-by-site basis to determine potential impacts on surrounding residential areas.

Industrial

This land use designation includes all types of manufacturing, wholesale business, warehousing, and office uses and provides for limited retail sales and services. This designation seeks to establish a framework for attracting new business and industry to Manheim Township. It is recognized that this effort will create new jobs which will in turn enhance the economic vitality of the community. The Plan encourages this process by identifying large tracts for future industrial development. These areas should be preserved as industrial sites, with no encroachments from incompatible land uses, while providing regulations that limit the impact of industrial uses on the environment and surrounding land uses.

Parks and Recreation

In Manheim Township, park and recreation lands include publicly owned and maintained park and recreational land and land privately held such as country clubs and open space. These areas are an important part of Manheim Township's quality of life. Well planned recreation and open space areas help create order and beauty in the Township. Open space also creates an environment which contributes to the economic value of residences and other properties. Therefore, the development and maintenance of recreational facilities is an important goal of this plan.

The Plan seeks to encourage the development of more parkland within Manheim Township. Park and open space opportunities are deficient in some areas of the Township and should be expanded. Residential development designs that incorporate open space, for both active and passive recreational purposes, is a way to directly meet the need for recreational space of the increasing Township population.

Both neighborhood and community parks are encouraged. The development of an extensive trail and bikeway system along roadways and natural features is also encouraged. Such a system of interconnecting linkages between neighboring communities will be undertaken in cooperation with Lancaster County and the Lancaster Inter-Municipal Committee and will be accessible to all Manheim Township residents.

Civic - Community Facilities

These areas are intended for public or semi-public facilities such as schools (public/private), churches, fire stations, government, civic and community buildings, and utility buildings and facilities. The category includes clubs, and organizations which serve smaller portions of the public. The category includes uses developed either by public or private funds which may be public or may be restricted, as in the case of private clubs, but in both cases, a large number of people use the facility and the use is essentially public in nature.

The Plan continues to recognize that Civic/Community Facilities will be scattered throughout the Township. The construction and expansion of facilities and services should be coordinated with existing and proposed land uses. Needs should be based on resident desires, public safety requirements, and the character of the area (growth area, agricultural area) where the expansion of facilities and services is planned. In the growth areas of the Township adequate community facilities and services to support higher development densities should be provided. However, in areas not targeted for growth, community facilities and services should be provided at levels adequate to service low density uses, but not expanded to stimulate pressure for development and promote the loss of areas planned for the continuation of agricultural uses.

Design Standards

Manheim Township recognizes the need for improved development design and construction. Comments from residents in response to the resident survey, and at public meetings, and comments from elected and appointed officials and other sources identified the need for more quality design and construction throughout Manheim Township.

Good designs can occur with active participation, cooperation, and understanding between Township officials and developers. The Township recognizes the economic factors affecting developers in planning and constructing a well-designed development project. However, Township concerns related to health, safety, welfare, logical use of facilities, efficiency, historical and environmental preservation, adequate public facilities, and quality of life are equally legitimate.

The Township views the design and development review process as a time when the developer and the Township have an opportunity to cooperate and exchange ideas. This should be done to ensure development projects meet the Township design guidelines and also satisfy the requirements of the developer. For this to be successful, the following must occur.

- The Township is committed to developing clear and understandable design standards that are acceptable to the community and consistent with the goals of this plan.
- The Township and developer should meet and discuss proposed projects early in the planning stages.
- Design standards will be applied consistently.

Development Patterns

The Township desires development in growth areas that encourage interaction between individuals while remaining sensitive to the Township's natural environment. To achieve this type of community four general design guidelines should be followed.

- Future development should be designed to encourage safe and coordinated pedestrian, non-motorized and vehicular transportation. This can be achieved by encouraging the construction of a well designed system of multi-purpose streets, greenways, bike paths, and sidewalks.
- The Township intends to provide for a variety of housing types of various densities to encourage affordability and accessibility of housing to a broad socio-economic segment of the population.
- A mix of residential, commercial, industrial, civic and public uses will be encouraged in growth areas.
- Open space design will be promoted for new development projects that can serve residents for community events, recreation activities, and as a means to preserve and protect natural and historic features.

Site Design and Layout

The Township recognizes that successful development projects are typically characterized by a sense of internal cohesiveness and compatibility with their surroundings. Each development design and layout should be responsive to the site's surroundings and features. Strong visual or natural features such as stands of trees, stream corridors, and rock outcroppings should be enhanced. Land on sites that may be unsuitable for development or environmentally sensitive should be protected by open space planning and orienting structures away from sensitive areas.

Open Space

Portions of sites that include water courses, wetlands, floodplains, areas of mature stands of trees and historic structures and sites, should remain open and undeveloped. The Township should encourage development design that incorporates open space that meets the goals of this plan.

Circulation System

The circulation system is the pattern of pedestrian and vehicular movement within the Township and/or development site. Streets, sidewalks, paths, bikeways, and trails comprise the circulation system.

Circulation systems are a basic and vital component of site design and community development. The circulation system must be safe and efficient. The Township should, at a minimum, ensure that the following design principles are part of the development review process.

The design of the pedestrian and street circulation should be completed with consideration of the site characteristics. Topography, site drainage, aesthetic enhancements, and natural features should be considered in designing and reviewing project proposals.

- The circulation system design should meet the functional needs of Township residents, drivers, and pedestrians. Future development projects should be encouraged to put pedestrians at a level equal to or above the automobile.
- Sidewalks and paths should be incorporated into new development projects where needed. Depending on the site, sidewalks or paths may be separate from the street for access to open space and recreation areas. These facilities offer residents places to travel throughout the neighborhood or development and between development projects. Sidewalks often provide for areas of social interaction for all residents of the neighborhood.
- Neighborhoods, parks, commercial areas, and other social centers should be linked. Where pedestrian systems cross roadways and are closely related to the road system, safe crosswalks and other measures to minimize conflicts, such as striping, lighting and reflectors, curbs, and other barriers should be developed.
- Street systems should be designed to encourage the efficient flow of traffic by reducing overall street lengths, ensuring efficient connection of new roadway to existing streets, and reducing the number of intersections.

Landscaping

The Township recognizes landscaping as a basic design element and intends to use the various functions of landscaping in all aspects of community development.

- **Aesthetic Function** - Creating a more pleasing environment within the development is the most common function of landscaping. Plantings and other landscaping elements can make a project more attractive, provide screening, and buffer from undesirable views and/or conflicting land uses. Landscaping can also compliment the design of buildings by adding texture and color.
- **Architectural Function** - Landscaping is useful in defining spaces by forming barriers. Spaces may be concealed, highlighted, and activity directed and/or contained using landscaping materials.
- **Engineering Function** - Landscaping may be incorporated in site engineering to control soil erosion, reduce noise, remove or minimize pollutants from the air, control glare, and reduce the effects of wind.

Off-Street Parking

Parking areas are necessary to accommodate the needs of businesses and residents in accomplishing their daily needs. However, these areas must be constructed in a manner that avoids conflicts between pedestrians and motorists while creating a visually attractive and natural appearance in and around the site. Several factors should be considered in the development of parking areas.

- Parking areas should be located conveniently near their respective use with a sufficient number of parking spaces to serve the building(s).

- Parking lots should be designed with sufficient space for maneuverability in and around the lot.
- Traditional open and wide masses of asphalt for parking is not an adequate approach to parking lot design. Lots should be broken into smaller areas and/or separated with the use of trees and landscaped islands.
- In general, parking areas should be located toward the rear and sides of building's to avoid the negative visual effects of impervious masses in front yards.

Adequate exterior lighting should be provided within parking lots. Emphasis should be placed on lighting at entrances, exits, and physical barriers. All lighting should be positioned to minimize glare and illumination beyond the development.

III. Implementation

It has been stated throughout this Comprehensive Plan that planning is a continuous process. As such, it is important to realize that this document is by no means an end in itself. In fact, standing alone it is merely a source of data, capable of accomplishing very little. It must be consistently scrutinized to ensure that its goals, objectives, and policies continue to reflect community attitudes. Likewise, great care should be taken to ensure that its policies are continually reflected in the future land use map. And perhaps most importantly, it must be brought to life through a dynamic implementation framework.

An aggressive yet realistic framework for implementing this Plan should be developed so that it will be utilized by the entire community. Implementation tools which most often come to mind, include the zoning ordinance, subdivision regulations, and the Capital Improvements Plan. It is anticipated that these items will be reviewed and updated periodically so that the goals, objectives, and policies may be put into action.

Other factors such as street improvement and utility extension policies may be utilized as well. It is important to note, however, that successful implementation of this Plan relies on many non-traditional resources. A series of "actions" are presented. These are specific steps which should be taken to better implement the Plan. They may call for the formation of a new committee, or identify the need for a specific study. While not legally binding like zoning and subdivision regulations, they are still tremendously important to the Plan's successful implementation, and are vital supplements to its objectives and policies.

Perhaps the most important method of implementing the Comprehensive Plan comes from the day to day commitment by elected and appointed officials, Township staff members, and township residents. It must be perceived by these parties as being a capable tool in directing the community's future. It should continually be referenced in planning and zoning reports as well as informal discussion situations. It is this high visibility that will make this Plan successful, dynamic, and a powerful tool for guiding Manheim Township's future growth.

Proposed Actions

General Land Use:

- **Immediate/On-Going:** Evaluate current zoning and subdivision ordinances to ensure that regulations adequately implement the Township's goals, objectives, and policies regarding future development.

The plan identifies areas of the Township appropriate for various uses and provides guidelines for such uses. In addition, areas designated for future growth within the Township have been identified in this plan through the use of Urban Growth Boundaries. The Township should identify and prioritize the changes needed in the current land use ordinances to implement this plan and undertake those changes most important.

- **Long-Term:** Develop a process to evaluate development impacts on the transportation and utilities systems of the Township.

A development impact analysis provides an estimate of the effects development has on the Township. The information contained in a development impact analysis should provide a base of information to evaluate rezoning proposals, including those proposed by the Township, and developments of significant size and intensity.

Agricultural Land Use:

- **Immediate:** Initiate appropriate procedures to rezone tracts shown as planned for continuing agricultural use on the Future Land Use Map.

The Future Land Use Map proposes an expansion of the area of the Township planned for the continued use as agriculture. To ensure the protection of those areas from the conversion to non-agricultural areas, these tracts should be rezoned to agriculture upon adoption of this plan.

- **On-Going:** Continue to promote the use of Transferable Development Rights within the receiving areas of the Township as a method of permanently protecting planned agricultural areas.

The success of the Township Transferable Development Rights Program is dependent a great deal on the efforts of the Township to promote its use. The Township should develop, and provide to potential developers, a data base of property owners in the sending areas of the Township and the number of rights allocated to sending properties. In addition, the Township should continually evaluate land use ordinances to identify potential incentives, beyond density bonuses, for developers to utilize Transferable Development Rights in new development.

- **On-Going/Long-Term:** Continue to evaluate opportunities to participate in the preservation of lands planned for agricultural use through existing Township, County and private programs.

The Township has already taken an active role in preserving prime agricultural lands through effective agricultural zoning regulations, the implementation of a Transferable Development Rights program, and the purchase of development rights. However, other agencies such as the Lancaster County Agricultural Preserve Board and the Lancaster Farmland Trust, are often an integral factor in efforts to preserve farmland in Lancaster County. The Township should promote and support the efforts of these agencies and encourage landowners to participate in their programs.

Residential Land Use:

- **Immediate:** Evaluate current residential zoning regulations to determine the need to continue the use of four residential zoning districts.

The Township will continue to provide for a wide range of residential development options within all residential zoning districts. This overlapping list of dwelling types and development standards has resulted in the softening of the differences between the four residential districts. The ability to reduce the number of districts to three may aid in the administration of the ordinance and the understanding of the ordinance by residents, developers, builders, and others.

- **Immediate/Short-Term:** Determine amendments needed to Township ordinances to address the aging of the Township population.

As indicated in 1990 population information, the population of the Township has shifted dramatically toward retirement age. A review of the needs of this segment of the population, particularly housing options, should be evaluated and addressed. Potential use of "in-law" quarters and detached accessory dwellings should be evaluated as housing alternatives.

- **On-Going:** Continue to provide developers with the opportunity to construct a range of housing types at varied densities in areas designated to accommodate future growth.

As development continues within the areas of the Township targeted to accommodate growth, the Township should continue to track and evaluate the range of dwelling types and development designs proposed. The failure of

developers to fully utilize the residential options should be evaluated to determine if such failure is a result of a failure to clearly articulate the options in the Township zoning ordinance, is a result of other ordinance deficiencies, or a result of market choices made by the developer.

Commercial Land Use:

- **Immediate:** Evaluate the potential of utilizing the existing Transferable Development Rights program in commercial applications.

The Township Transferable Development Rights program may be enhanced by providing for the transfer of rights for commercial uses. Should this option be pursued, such an amendment should address uses permitted and should include the introduction of performance standards, such as the ratio of maximum allowable building floor area to lot size for office and retail districts.

- **Immediate:** Develop standards for neighborhood/ neighborhood commercial regulations that reflect current conditions and the accommodation of compatible commercial or residential uses.

The Township should determine the uses suitable for this land use category and should incorporate standards into the Township zoning ordinance. Such regulations may be made applicable to an existing business district or to a new district designation. Areas shown on the future land use plan should be closely evaluated to determine current uses and should be rezoned to the appropriate business district.

- **Short-Term:** Conduct an analysis of existing retail and office space within Manheim Township.

The completion of an analysis of the existing commercial space, and occupancy information, will help to better determine the type, scale, and location of future commercial development. In addition, the information collected can be provided in response to inquiries regarding vacancies and potential uses of existing building space to encourage reuse of buildings.

Industrial Land Use:

- **Short-Term:** The Township should explore potential incentives to encourage development in planned industrial parks.

The Township, in cooperation with industrial developers working in Manheim Township, should identify the strengths and weaknesses of marketing development in existing industrial parks. This evaluation would determine potential incentives, refinements and general market information needed to encourage future development.

Parks and Recreation:

- **On-Going** Future recreation sites should be evaluated and planned while potential sites are undeveloped.

The Township should continue to expand recreational opportunities for residents through efforts to provide recreational sites and programs throughout the Township. This effort should go beyond the fee-simple acquisition of land to include the promotion of development design that incorporates open space or recreational facilities and mandatory dedication of land in residential developments,

- **Immediate/On-Going:** Support a Township-wide bicycle/pedestrian linear park system by efforts to acquire necessary rights-of-way and easements for its implementation.

The Township has already begun to plan for and implement a Township-wide network of bicycle/pedestrian paths for recreation and transportation. For this effort to become a reality, the Township must address areas currently developed, identify solutions for the location of paths through these areas, and provide resources needed to secure rights-of-way and easements.

- **Long-Term:** Periodically review and update the Township Parks and Recreation Plan.

The Plan should be evaluated to ensure compliance with the Pennsylvania Municipalities Planning Code, particularly with respect to the dedication of land or payment of recreational fees by developers. Updates to the Plan should determine whether the needs for recreation facilities and programs are being adequately met in the Township and should update the inventory of existing public and private recreation facilities.

Transportation:

- **Immediate/On-Going:** Continue to utilize the Township Capital Improvements Plan and the Transportation Impact Fee Capital Improvements Plan to prioritize traffic improvements throughout the Township.

Input into the identification of projects and the prioritizing of projects should include, as practical, staff, Boards and Commissions, and Township residents. When identifying and prioritizing road improvement projects, factors such as safety, future development potential, available funds, and economic and environmental impacts should be considered.

- **Short-Term:** The Township should evaluate the benefit of adopting an Official Map as a means to identify and protect rights-of-way for future roadways.

The Pennsylvania Municipalities Planning Code provides the Township with the opportunity to design and reserve rights-of-way for future public use, particularly for roadways, through the adoption of an Official Map. The Township should explore the use of this provision and, if deemed appropriate, take the steps needed for adoption.

Natural Resources:

- **Long-Term:** The Township should evaluate the potential of appointing a Township Environmental Advisory Council.

Act 148, the Environmental Advisory Councils Law of 1973 provides the Township with the opportunity to appoint an Environmental Advisory Council to address environmental issues at a local level. The Council's major tasks could be to identify environmental problems and suggest solutions, and to identify natural resources to be protected. In addition, the Council could advise the Township Planning Commission and Board of Commissioners on the environmental effect of any proposed projects and programs.

- **Immediate/Short-Term:** Promote development and construction that retains and enhances existing natural features on building sites.

Township land use ordinances should be reviewed and amended, as needed, to encourage development designed to fit into the natural environment. Potential amendments include permitting innovative stormwater management design, landscaping requirements to encourage use of species native to the region, and other design standards to minimize negative impacts on development.

Cultural Resources:

- **Short-Term:** Evaluate current zoning regulations regarding historic resources identified in the Manheim Township Historic Sites Survey completed by the Historic Preservation Trust of Lancaster County.

The Township has initiated efforts to provide protection of historic resources identified in the Manheim Township Historic Sites Survey through its zoning regulations. The Lancaster Inter-Municipal Committee (LIMC) has developed a model Historic Overlay District ordinance that extends in scope beyond the current Township regulations. The Township should play an active role in the final development of the LIMC ordinance and evaluate the applicability of the ordinance to Manheim Township.

Utilities:

- **Immediate/On-Going:** Coordinate the capital improvements program with the future land use plan in an

effort to provide for the extension of utilities only in areas appropriate for future development.

In accordance with Section 303 of the Pennsylvania Municipalities Planning Code, future public sewer and water improvements should be reviewed by the Township Planning Commission to determine whether such projects are in accordance with the Township's adopted Comprehensive Plan. The extension of facilities to serve areas not planned to accommodate growth should be prohibited.

Redevelopment:

- **Immediate:** Create a neighborhood revitalization action plan for the Lititz Avenue/North Lime Street area of the Township.

The Township should serve as the lead agency in developing an action plan to address the Lititz Avenue/North Lime Street area of the Township. The plan should involve residents and property owners in the project area, promote public/private partnerships, identify existing conditions and problems, suggest alternative solutions, and seek funding sources.