

Master Plan

*Kimball Township
St. Clair County*

Adopted January 2007

Kimball Township

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Chapter 1

Introduction

Authority

Townships first came into existence in Michigan through the Northwest Ordinance passed in 1787. Townships are typically comprised of 36 sections, each 640 acres (1 square mile), for a total of 36 square miles in area. However, each of Kimball Township's 36 sections are larger than 640 acres in size, with the largest section containing 697 acres. The larger sections result in a total Township area of 23,968.1 acres or 37.45 square miles.

According to Michigan Legislation, there are two forms of townships: General Law and Charter. The biggest distinction between a General Law Township and a Charter Township lies in their ability to levy taxes and their source of revenue. Charter Townships have the ability to levy taxes without the vote of the people. However, General Law Townships are funded mainly through State Shared Revenues and do not have the ability to levy taxes on their residents without the vote of the people. Kimball Township is a General Law Township.

Kimball Township derives its authority to update its Master Plan from the Township Planning Act, Public Act 168 of 1959, Section 6, which states the following:

"The Planning Commission shall make and adopt a basic plan as a guide for the development of unincorporated portions of the township. As a basis for the plan, the Planning Commission is hereby empowered to (1) make inquiries, investigations and surveys of all the resources of the township and (2) assemble and analyze data and formulate plans for the proper conservation and use of all resources, including a determination of the extent of probable future need for the most advantageous designation of lands having various use potentials and for services, facilities and utilities required to equip such lands."

Purpose

The planning process is designed to involve conscious selections of policies relating to growth and development in a community. The master plan serves to promote these policies through the following:

1. Provides a general statement of the Township's goals and provides a comprehensive view of the community's preferred future.
2. Serves as the primary policy guide for local officials when considering zoning land division, capital improvement projects and any other matters related to land development. Thus, the master plan provides a stable and consistent basis for decision making.
3. Provides the statutory basis for the Township's Zoning Ordinance, as required by the Township Zoning Act, Public Act 184 of 1943.
4. Helps to coordinate public improvements and private development activities to assure the judicious and efficient expenditure of public funds.

Planning History

The most recent master plan for Kimball Township was enacted in November of 1986. Planning practice generally states the useful lifetime of a master plan to be between 10 to 20 years, depending on the growth and development of the community. During the past 15 years, from the time of the previously adopted master plan, Kimball Township has experienced a 20 percent growth in population. The residential growth activity and the age of the previous master plan promoted the development of this updated Master Plan.

Master Plan Organization

The Kimball Township Master Plan is comprised of three primary categories: background studies; goals and objectives; and the future land use plan for the Township. The background studies lay the framework for the Master Plan by providing the social, economic and environmental conditions of the Township. The goals and objectives chapter will be utilized as a guidebook for the decision-makers in the Township. Finally, the future land use plan is the vision of the Township, which will be realized through implementing the desired goals and objectives.

Chapter 2

Regional Analysis

Introduction

The adopted plans of surrounding communities and St. Clair County may directly impact the future development of Kimball Township. Therefore, it is important to recognize such plans and to evaluate their importance to the development of the Kimball Township Master Plan.

Kimball Township is located in the east central portion of St. Clair County. The Township is bordered by Clyde Township to the north, Port Huron Township to the east and the City of Marysville to the southeast, St. Clair Township to the south, and Wales Township to the west (see Exhibit A).

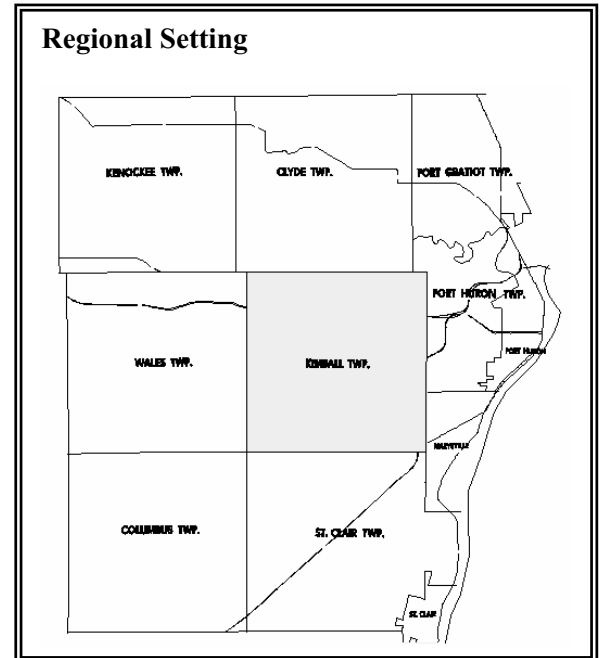
St. Clair County

The St. Clair County Comprehensive Master Plan was completed in 2000, after a three year development process. The Plan was prepared under the auspices of the St. Clair County Metropolitan Planning Commission. The Plan was based on four principal themes expressed by County residents that include: managing growth; protecting and preserving water quality; improving quality of life; and creating a sustainable countywide community.

A series of future land use alternatives were developed for consideration. The preferred Future Land Use alternative was selected because it best met the goals and objectives of the County and its citizens. Within Kimball Township, the Future Land Use Plan recognizes the sensitive environment surrounding the Pine River and offers a higher level of protection through recommending that development be controlled and special design requirements such as buffers and setbacks be implemented. Outside these protection areas, the western half of the Township is generally planned to support rural residential and agricultural uses. Urban development is generally directed to land east of Wadhams Road. Three commercial centers are designated within or near Kimball Township: one near the I-94 and Range Road interchange, the second at the intersection of Wadhams Road and Lapeer Road, and the third located east of Range Road near Gratiot Road.

Clyde Township

The Clyde Township Planning Commission adopted a Master Plan at a public hearing on June 29, 2004. Along the Township's southern boundary, the Township is generally planning for varying densities of single-family residential to develop east of Abbottsford Road. Lands located adjacent to the Black River are planned for Conservation/Open Space uses. Parcels north of Lapeer Road, east of McLain Road, are planned for a mix of commercial and light industrial uses. The density of development generally decreases west of McLain Road. Lands in these areas are planned to support low density residential uses and agricultural uses.



Port Huron Township

The Charter Township of Port Huron Planning Commission adopted a Comprehensive Development Plan in October 1996. The following text describes the planned land uses in the portion of the Township that borders Kimball Township. The source of this information is the Southeast Michigan Council of Governments (SEMCOG) composite Future Land Use map, which was derived from municipal master plans collected through 2001.

The composite Future Land Use map shows that properties along the Lapeer Road corridor are planned for commercial purposes. Medium density residential is planned to occur to the north of the Lapeer Road commercial corridor, south of West Water Street. Land south of Lapeer Road, north of I-69, is designated for low-density residential purposes. South of the I-69 expressway, property is planned for medium density residential purposes, followed by land planned for heavy industry on both sides of Griswold Road. Land surrounding the Range Road interchange with I-94 is planned for commercial development. This commercial designation continues south for properties fronting Range Road up to Ravenswood Road.

As Range Road forms the border between Kimball Township and Port Huron Township, the future land use recommendations of the Range Road Corridor Plan (described below) are also relevant.

City of Marysville

The City of Marysville Planning Commission adopted a Master Plan of Future Land Use in September of 2000. A discussion of the planned land uses in the portion of the City that borders Kimball Township is provided below. This information was obtained through the SEMCOG composite Future Land Use map, which was derived from municipal master plans collected through 2001.

The City of Marysville has designated properties in the vicinity of the Range Road/Gratiot Road/I-94 intersection for commercial uses. Continuing north along Range Road up to Ravenswood Road, properties are planned for medium density and low density residential uses.

Range Road also forms the border between Kimball Township and the City of Marysville. Therefore, the future land use recommendations of the Range Road Corridor Plan (described below) are relevant.

St. Clair Township

St. Clair Township adopted a Master Plan on February 1, 1994. The Future Land Use Map designates properties south of Yager Road for varying densities of residential and industrial purposes. A significant tract of industrially planned land lies along both sides of Gratiot Road (U.S. 25). This planned industrial area is encompassed by planned Low-Medium Density Single-Family Residential development. The recommended development density for this classification is one unit per 1-1/4 acres. An Open Space/Conservation designation follows the Pine River watercourse. To the west of the Pine River, east of Richman Road, is land planned for Low Density Single-Family Residential. This category of land use is intended to provide open area for orderly residential growth, continued agricultural use, and residential activities of a semi-rural character in areas that are presently without public water and sewage facilities, and are likely to remain without such services for an extended period of time. West of Richman Road, in Township Section 6, land is planned for Low-Medium Density Single-Family Residential development.

The Township is currently working on an update to their Master Plan. The update is scheduled to be completed in 2006. According to Township representatives, the overall planning goals for the northern portion of the Township (along the border with Kimball) are expected to remain similar to those laid out in the 1994 Master Plan.

Wales Township

Wales Township adopted its 2001-2020 Land Use Plan on March 19, 2001. The Township, which borders Kimball on its western edge, has three types of land uses planned for this area. The northern edge is planned as single-family residential and open space (adjacent to Sparling and Eckles Roads). The remainder of the border is planned for agricultural and rural residential land uses.

Range Road Corridor Plan

The Range Road Corridor Plan was prepared in 2001 by an inter-municipal committee made up of representatives from each community along the corridor. The plan provides recommendations for improvements to the roadway and development of areas along the roadway over the next 15 to 20 years. The Corridor Plan contains many elements that include a future land use plan, transportation and streetscape plan, building design standards, lot development standards, natural features along the corridor, implementation plan, and an overlay zoning ordinance.

In terms of future land uses, the Corridor Plan designates many of the lands along Range Road for higher intensity uses including neighborhood commercial, regional commercial, office, and industrial. Commercial uses are proposed at the Range Road and Lapeer Road intersection, along Range Road between Griswold Road and Ravenswood Road including the I-94 interchange, and at the Range Road and Gratiot Road intersection. Office uses are planned on the west side of Range Road between Smiths Creek Road and Ravenswood Road. Industrial uses are planned along both sides of Range Road near Griswold Road.

Chapter 3

Existing Land Use

Physical Characteristics

The predominant character of Kimball Township is residential intermixed with agricultural-farmsteads. The smallest residential lots generally surround commercial nodes, whereas larger residential lots are scattered throughout the remainder of the Township.

Orchards, agricultural fields and pastures are an important and defining Township attribute. These lands are primarily broken into large tracts and are found throughout the Township, many taking advantage of unique and prime farmland.

Generally speaking, urbanized areas of the Township (residential, commercial and industrial development) are concentrated in small nodes, such as Sparlingville and Wadhams. Wadhams Road serves as the primary north-south commercial-industrial corridor for the Township. Development taking place east of Wadhams Road is generally of higher intensity than that found west of Wadhams Road.

It is readily apparent that Kimball Township is experiencing a *rural-to-suburban transition*. Much of the agricultural and open lands that lie along Range Road, the eastern boundary of the Township, are quickly being converted to low- and medium-density, single-family residential units, as well as a variety of service-oriented commercial uses. This area abuts the urbanized areas of Port Huron Township and the City of Marysville.

Existing Land Use

The focus of this chapter is an examination of current land use patterns, their distinguishing characteristics and their impact on future land development. One of the most important aspects of a Master Plan study is a firm understanding of the types of land use activities that are currently taking place within the community. A thorough knowledge of existing land use patterns and site conditions furnishes planners and community leaders with basic information by which future residential, commercial, industrial and public land use decisions can be made.

The existing land use map and acreage tabulation chart, provided in the following pages, will serve as key references for Kimball Township officials to utilize in their consideration of land use and infrastructure improvements in the future.

Methodology

A field survey was conducted by Wade-Trim in early October 1999 to gather baseline existing land use data. A member of the Kimball Township Planning Commission accompanied Wade-Trim staff for a significant portion of this survey. In 2005, Kimball Township representatives updated the existing land use data to reflect new changes since the original survey.

Wade-Trim created a property line base map using paper digital map files obtained from the Kimball Township Assessors Office. The most recently available aerial photos (1995), obtained from the St. Clair County Metropolitan Planning Commission, were also used for further land use interpretation. During the existing land use survey, data was gathered for all parcels within the Kimball Township limits. Each parcel of property was inspected in the field and its use characteristics recorded on a 1999 Township base map. The land use field data was then transferred from the field survey notes into a computer-aided drafting (CAD) system. The resulting Existing Land Use map was prepared using ArcGIS software. Acreage tabulations for each land use classification were also calculated utilizing ArcGIS.

Land Use Distribution

Each existing land use was placed in one of 17 general land use categories. The Existing Land Use Map depicts the geographic distribution of the land use classifications.

Kimball Township encompasses approximately 23,968.1 acres or about 37.5 square miles in area. Data provided in **Table 3-1** indicates the total acreage occupied by each land use type and its proportion of total land area within Kimball Township.

Agricultural-Farmstead

For planning purposes, the agricultural-farmstead category includes all parcels utilized for farming and crop cultivation purposes. Generally, lands in this category occupy large-sized parcels, and may include a single-family residence along with several outbuildings that are related to these units. In Kimball Township, the majority of this land is located west of Wadhams Road. Typically, individual parcels occupy between five to ten acres of land. In many instances, these lands are situated so that several contiguous parcels can be combined to form larger croplands.

Lands categorized as agricultural-farmstead occupy 4,339.5 acres, or about 18.1 percent of the total land in Kimball Township.

Single-Family Residential

The single-family residential category includes site-built single-family detached structures used as a permanent dwelling, manufactured (modular) dwelling or a mobile home located outside a designated mobile home park, and accessory buildings, such as garages, that are related to these units. Generally, the Township's single-family homes are scattered throughout the interior area, with frontage along a county road. In a few cases, a common driveway or private road accesses large residential parcels.



Figure A

“Single-Family” housing is defined in many different ways in Kimball Township”

| Land Use Type | Acres | Percent |
|--------------------------------|------------------|----------------|
| Agricultural-Farmstead | 4,339.5 | 18.1% |
| Single Family Residential | 7,222.2 | 30.1% |
| Two-Family Residential | 5.0 | 0.02% |
| Multiple Family Residential | 17.8 | 0.1% |
| Mobile Home Park | 98.2 | 0.4% |
| Commercial | 421.5 | 1.8% |
| Office | 9.6 | 0.04% |
| Light Industrial | 214.6 | 0.9% |
| Heavy Industrial | 2.7 | 0.01% |
| Public | 38.9 | 0.2% |
| Semi-Public | 269.3 | 1.1% |
| Schools and Institutional | 99.1 | 0.4% |
| Parks and Recreation | 1,230.6 | 5.1% |
| Airport | 693.2 | 2.9% |
| Landfill | 234.4 | 1.0% |
| Rivers and Bodies of Water | 225.6 | 0.9% |
| Vacant, Open Space, ROW, Other | 8,845.9 | 36.9% |
| Total | 23,968.10 | 100.0% |

Source: Wade-Trim, Field Survey, October 1999, updated by Kimball Township, 2005.

Single-family dwellings in Kimball Township may be located as part of a subdivision or on an individual parcel. **Figure A** provides a visual representation of the variety of housing types found in Kimball Township.

Land uses categorized as single-family residential development occupy 7,222.2 acres, or about 30.1 percent of the total land in Kimball Township.

Two-Family Residential

The two-family residential category includes all attached housing structures having two separate living units, which are combined under one roof (duplexes). These structures may be located as part of an overall planned community or as single structures occupying an individual parcel.

Specifically in Kimball Township, a group of four, two-family residences are located along Lapeer Road, midway between Wadhams and Allen Roads. Additional two-family units are found in the Whispering Winds condominium development, located on Griswold Road, as well single units on Leland and Dove Streets, near the commercial node of Sparlingville.

Land uses categorized as two-family residential development occupy 5.0 acres, equivalent to 0.02 percent of the total land in Kimball Township.

Multiple-Family Residential

The multiple-family residential category includes housing structures consisting of more than two units that are located on the same site. These may be apartments or townhouses developed individually or in complexes. It also includes related lawn areas, parking lots, and any accessory recreation facilities.

A specific example of multiple-family residential use found in Kimball Township is the Black Forest Apartment complex, located on Lapeer Road, just west of Bartlett.

Multiple-family residential development occupies 17.8 acres, or about 0.1 percent of the total land in Kimball Township.



Figure B

Somerset Meadows Manufactured Home Park

Mobile Home Park

The mobile home park category includes land assembled for the purpose of locating a planned mobile or manufactured home community on the site. Land so classified includes related service and recreational areas.

Two of the three mobile home parks found in Kimball Township specifically cater to manufactured homes (**Figure B**). These parks offer generous amenities including ample open areas for playgrounds, as well as community center facilities for exclusive use by park residents.

The other mobile home park in Kimball Township, Dove Road Mobile Home Estates, caters to more a traditional form of mobile home. No recreational facilities associated with this park were identified.

Mobile home park development occupies 98.2 acres, or about 0.4 percent of the total land in Kimball Township.

Commercial

The commercial category includes convenience stores, comparison shopping centers, and general commercial businesses, as well as communication facilities, transmission towers, and radio transmitting towers.

For examples of typical commercial types in the Wadhams area commercial corridor, please refer to **Table 3-2**.

Convenience stores are commercial establishments which satisfy the day-to-day shopping needs of residents. Convenience uses include food stores, hardware stores, and barber shops.

| | |
|--------------------------|------------------------|
| Car Wash | H&R Block |
| Grace Performance | E&A Credit Union |
| Great Lakes Tire | Weston Transport |
| Gillett Electric | Scoops |
| Richard Construction | Blue Water Tax Service |
| Self-Storage | Farm Bureau |
| Wire Tech | Weston Transport |
| Wadhams Automotive | Fifth Third Bank |
| New Haven Electric | Wadhams Chiropractic |
| Fore Lakes (Flinchbaugh) | M&R Surplus |
| Dept. of Public Works | KOA Campground |
| By-Lo/Speedy Q | Mercy Family Care |
| McDonalds | Ferrellgas |
| USDA Inspection Service | Wadhams General Store |
| Wadhams Video Hut | Country Kitchen |
| Flower Patch | Black River Concrete |
| USDA Agriculture Office | Stemaco Products |
| All State Insurance | Jack White Awning |
| Diamond Valley Homes | Benjamins Motel |

In Kimball Township, most of this type of development is clustered around the node areas of Wadhams and Sparlingville. Many of these establishments take the form of small commercial strip developments (**Figure C**) and local “mom and pop” establishments which are found at major cross streets.



Figure C
The Wadhams Plaza commercial development offers local residents a wide variety of services

General commercial businesses do not require a location in a shopping center; rather, such uses benefit from a location on a major thoroughfare that permits good access. Such uses include gasoline stations, restaurants, automotive sales, light auto repair/service facilities, motels and greenhouses.

For Kimball Township, the majority of these uses are found along primary county roads, such as Lapeer Road, Wadhams Road and Range Road. Many of these establishments garner additional benefit by being located in close proximity to either Interstate 69 or Interstate 94.

Comparison shopping centers are developments that offer merchandise, products, or services needed less frequently, but which a customer usually does comparison shopping before buying. Included in this category are clothing stores, furniture appliance showrooms, and department stores.



Figure D
The Horizon Outlet Mall

Township Comparison Commercial uses may be found at the Horizon Outlet Center, conveniently located at the I-94 interchange at Range Road (**Figure D**). This 161,200 square foot regional shopping facility offers a variety of retail shopping establishments. **Table 3-3** provides a representative listing of the tenants found at the Center:

The Horizon Outlet Center has enough retail space to accommodate up to 42 tenants. However, at the time of this study, the facility was experiencing a significant vacancy rate.

Communication uses are establishments furnishing point-to-point communication services, whether by wire or radio, and include radio and television broadcasting stations, as well as towers establishing cellular services. Communication towers in Kimball Township are located at the center of the northwest quadrants of Township Sections 8, 13 and 25.

At the present time, lands occupied by commercial and communication uses occupy 421.9 acres, or about 1.8 percent of the total land in Kimball Township.

Office

The office category includes business, financial, medical, professional offices, and related service establishments. Typical office development in Kimball Township consists of small office buildings located within the commercial core of Wadhams, near the intersection of Wadhams and Lapeer Roads.

Office development occupies 9.6 acres, or about 0.04 percent of the total land in Kimball Township.

| | |
|---------------------|------------------------------------------|
| • Family Apparel: | Bass Company Outlet |
| • Home Furnishings: | Brasswerks, Welcome Home |
| • Men’s Apparel: | Van Heusen |
| • Footwear: | Famous Footwear |
| • Specialty Items: | Paper Factory, Book Warehouse |
| • Women’s Apparel: | L’eggs Hanes Bali Playtex, Dress Barn |

Light Industrial

Light industrial uses include all warehouses, heavy auto repair facilities and non-manufacturing uses which are industrial in character and which may have significant outdoor storage or shipping/receiving requirements.

The most significant number of light industrial facilities in Kimball Township are contained within the campus-like environment of the Air Industrial Park, located just east of the St. Clair County International Airport. Included in the park are a variety of manufacturing facilities including, but not limited to, Classic Aviation LLC, Greater Bay Capital, Jump Industries, Allied Photo Chemical, and PNT Registered Importers.

Additional smaller-scale light industrial uses found in Kimball Township are scattered along major thoroughfares like Range, Wadhams and Lapeer Roads.

Light industrial development occupies 214.6 acres, or about 0.9 percent of the total land in Kimball Township

Heavy Industrial

The heavy industrial category generally includes the most intensive forms of manufacturing, assembling and general fabricating facilities. An example of heavy industry in Kimball Township is the concrete plant, located on Lapeer Road.

Heavy industrial development occupies 2.7 acres, or about 0.01 percent of the total land in Kimball Township.

Public

This category includes all land devoted for public purposes such as municipal offices, fire departments, department of public works, sewage and water treatment facilities and other comparable uses found throughout Kimball Township.

Township administration offices, including the fire department, are located along Allen Road, within the commercial node of Sparlingville. The Township Department of Public Works maintains a maintenance facility located on Wadhams Road. The Township also owns the vacant parcel immediately to the north of this facility. It is anticipated that this property will be used in the future for community facilities expansion.

Public land uses occupy 38.9 acres, or about 0.2 percent of the total land in Kimball Township.

Semi-Public

This category includes structures or areas generally open to the public such as churches, meeting halls, auditoriums, cemeteries and other comparable uses. Specific examples of semi-public uses in Kimball Township include a wide variety of churches, the Chrystal Gardens of Wadhams, located near the corner of Lapeer and Allen Roads and the Fraternal Order of Police Hall, located on West Howard Street. These types of facilities tend to be located at or near centers of population within the Township (Wadhams, Sparlingville, and Smiths Creek), and as such are easily accessible to most residents.

Also included in this category is the rural Caswell Cemetery, located on Burns Road in the west-central portion of the Township. Semi-public land uses occupy 269.3 acres, or about 1.1 percent of the total land in Kimball Township.

Schools and Institutional

Generally, this category includes all lands used for public and private education, hospitals, libraries and other related purposes. Examples of this type of use in Kimball Township include Kimball Elementary School (**Figure E**) and Indian Woods and Sparlingville Elementary Schools (**Figure F**). The Landmark Academy, located on Lapeer Road, and the G. Lynn Campbell Library, located just north of Sparlingville Elementary are also good examples.



Figure E
Kimball Elementary School

Land uses that fall under this category, occupy 99.1 acres, or about 0.4 percent of the total land in Kimball Township.

Parks and Recreation

This category includes lands principally used for recreational purposes. This may include active recreation facilities such as playground equipment, ball diamonds, soccer fields and public and private golf courses. In addition, passive recreation facilities, such as hiking trails, beach and picnic areas, are also included in this category.

Kimball Township has two community parks open from dawn to dusk, seven days a week, for public use. Community Park No. 1 (**Figure G**) is located on Howard Road and has the following recreational elements:

1. Three Little League ball diamonds with a centralized concession stand.
2. A generous playground area complete with playscape activity structure.
3. A large fishing pond with two docks and beach areas.
4. Two, 20' x 40' handicap accessible pavilions for picnicking and other social gatherings.
5. Men's and women's bathroom facilities.
6. Ample parking facilities.
7. A tennis court.

Community Park No. 2 is located on Henry Street in Smith's Creek. It mainly provides passive recreational activities and contains a pavilion. During the winter, however, there is an ice rink. Most of the active recreational facilities found in Kimball Township's public park areas are in good to excellent condition.

The Kimball Township residents are fortunate to have a large portion of the Port Huron State Game Area within their borders. Although the majority of this area occupies the southern portion of Clyde Township, approximately 720 acres lie within Kimball Township's boundaries. These lands are available for public use for a variety of outdoor recreational activities, including hunting, fishing, trapping, cross county skiing, hiking, camping and many others.

Also included in this category is the 18-hole public golf course, located off Flinchbaugh Road.

Parks and recreation areas occupy 1,230.6 acres, or about 5.1 percent of the total land in Kimball Township.

Airport

The St. Clair County International Airport occupies approximately 676 acres within southeastern Kimball Township. The airport serves both public and private aircraft activities, and provides hanger storage for a number of private aircraft (**Figure H**).



Figure F
Sparlingville Elementary School



Figure G
The swimming and dock area in Kimball Township Park #1



Figure H
The St. Clair County International Airport Control Center

Landfill

The St. Clair/Smiths Creek Landfill area is located on Smiths Creek Road, occupying the western half of Township Section 32. All communities in the County heavily utilize the landfill. It accepts all types of industrial, commercial and residential refuse, including building demolition material, metal barrels, tree stumps, tires, asbestos material, medical waste and special wastes (sludge, contaminated soils). It also provides recycling for glass and plastic containers.

The St. Clair/Smiths Creek Landfill area occupies 234.4 acres, or about 1.0 percent of the total land in Kimball Township.

Rivers and Bodies of Water

The Pine and Black Rivers represent the most significant bodies of water found in Kimball Township. The northern portions of the Pine River have been developed for residential use, while a considerable amount of the southern reaches of the river have yet to be developed. The banks of Black River have also been sparsely developed. This may be due, in part, to the steep slopes found along its banks. Additionally, there are a number of abandoned gravel pits in the Township, which have, over time, filled with water.

All water bodies, including rivers, streams and gravel pit areas occupy 225.6 acres, or about 0.9 percent of the total land in Kimball Township.

Vacant, Open Space, Rights-Of-Way and Other

All dedicated rights-of-way (highways, roads, and major utility easements) are included in this category. In addition, lands lying fallow, woodlands, and vacant land for which no specific use was identified are included. Vacant lands are interspersed throughout the entire Township.

This is by far the largest land use category in Kimball Township accounting for approximately 8,845.9 acres, or about 36.9 percent of the total land.

Chapter 4

Natural Features

Background

One measure of a community's "quality of life" can be found in its natural features. Natural features include a variety of elements such as wetlands, woodlands and bodies of water. The amount, type and location of these features help to establish the character of an area, while also providing vital habitat for a variety of wildlife (**Figure I**).

Activities such as excavation, filling, clearing, grading and construction which take place during the development of a site can significantly affect a community's natural features.

Citizens have become increasingly aware of the sensitive nature of their environment and the extent to which it affects the quality of their lives. The level of importance placed on the environment and environmental issues was apparent in a recent poll commissioned by the National Wildlife Federation. Results of the poll found that 62 percent of American voters were in favor of strong environmental protection, while only 18 percent were opposed to such measures¹.



Figure I
The Pine River lends special natural beauty to the Kimball Township landscape.

Another study, conducted in 1992, identified and ranked the State of Michigan's most pressing environmental issues. The results of the study showed that land use planning procedures that fail to consider a community's natural features and the integrity of their ecosystems pose one of the greatest risks to the quality of the environment in the future².

For these reasons, and many others, special attention should be given to the preservation of natural and *environmentally sensitive* areas in long-range planning initiatives. Environmentally sensitive areas are lands whose destruction or disturbance will immediately affect the life of the community by either one of the following:

- Creating hazards such as flooding or slope erosion;
- Contaminating important public resources such as groundwater supplies or surface water bodies; or,
- Misuse of lands with significant productivity characteristics and renewable resources.

The purpose of this chapter is to identify important natural features that exist within the Kimball Township planning area. Community leaders will then have a better idea as to where development *should* occur in the future, while also preserving the integrity of these vital ecosystems.

¹ Michigan Department of Natural Resources, Office of Great Lakes Activity Report, February 1995. (Poll conducted by Peter D. Hart Research Associates for the National Wildlife Federation.)

² Michigan Relative Risk Analysis Project. Michigan's Environment and Relative Risk. 1992.

Climate

The following climatic data for Kimball Township was taken from the United States Department of Agriculture, Soil Conservation Service's *Soil Survey of St. Clair County* (1974). The data was recorded at the U.S. Weather Station in Port Huron.

The close proximity of two large water bodies, Lake St. Clair and Lake Huron, tend to moderate lake effect weather patterns in Kimball Township. The most significant lake effect occurs in the form of increased cloudiness observable in late fall and early winter months when prevailing westerly winds move cold surface air across the warmer lake water. However, in spring and summer months, this area experiences five to ten percent more days of sunshine annually than a similar location (in latitude) in the western part of Michigan.

The average maximum temperature for St. Clair County is 57.7°F annually. The average daily minimum temperature in winter is 19.1°F, with January being the coldest month. The average daily maximum temperature in summer is 80.6°F, with July being the warmest month.

Average precipitation (rainfall) amounts to 33.01 inches annually. Snowfall totals for the area amount to 38.4 inches per year. However, total accumulations vary greatly from year to year.

Topography

The geology of Kimball Township generally consists of broad flat plains, gentle slopes and narrow, nearly level flood plains. Elevations range from a high of 678 feet above sea level at the intersection of Lapeer Road and Abbotsford Road, which is located at the northern Township boundary line. A low of approximately 600 feet above sea level is observed at the surface of the Pine River.

Soils

A number of soil types found in Kimball Township possess characteristics which present significant limitations to development. This situation is consistent with all of St. Clair County, where 95-99 percent of soils found are considered severely limited for development.

The following Soil Types Map indicates a total of 23 different soil types or miscellaneous land areas that are found in Kimball Township. Data in the Soil Association Table, **Table 4-1**, outlines the major features associated with some of the more prominent soil types in the Township. It is important to recognize that many of these soil types can be classified as sensitive soils. Sensitive soils have inherent characteristics that may either prohibit or significantly reduce the potential for future development in a particular location. Many of the sensitive soils found in Kimball Township are poorly drained and have high water tables, making them unsuitable for building, street construction and recreational site development. Areas with high water tables also limit their use for septic and waste disposal systems. Basements are difficult to keep dry in these soils. Structures placed on poorly drained soils are susceptible to frost heave and foundation cracking. Other sensitive soils are prone to flooding and are located within the Township's identified flood hazard areas.

The Soil Types Map also shows the location of hydric soils in the Township. Hydric soils are soils with poor potential for development. These soils have high water tables and are often located within the floodplains of creeks or rivers. In total, Kimball Township contains 2,694.1 acres of hydric soils comprising 11.2% of the Township.

Lands with significant slopes (above 12 percent) should also be avoided for building site construction. Steep slopes are subject to earth movement, especially where excavation and deforestation have occurred. Although the amount of movement may be slight, it can result in cracked foundations, tilted basement walls and damaged sewer and water lines. As the Natural Features Map indicates, the majority of these areas lie along the banks of the Black River. There are relatively few instances of steep slopes associated with the Pine River.

**Table 4-1
Soil Associations
Kimball Township, Michigan**

| Symbol | Soil Name | General Description | Good Potential For Use As: | Poor Potential For Use As: | Limitations |
|--------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| AhB | Allendale-Hoytville Complex | Somewhat poorly drained to very poorly drained. Occurs in level to gently undulating lands. Slopes from 2 to 4 percent. | Woodland Habitat Wetland Habitat Cropland Pasture | Building Sites Recreation Sites Streets and Roadways | Wetness. Uniform drainage difficult to obtain. Midsummer droughtiness. Moderate erosion hazard. |
| AIA | Allendale-Latty Complex | Somewhat poorly drained to very poorly drained. Occurs in level to gently undulating lands. Slopes 2 to 3 percent. | Woodland Habitat Wetland Habitat Cropland | Building Sites Recreation Sites Streets and Roadways | Wetness. Uniform drainage difficult to obtain. Midsummer droughtiness. |
| Ata | Allendale-Lenawee-Toledo Complex | Somewhat poorly drained to very poorly drained. Occurs in level to gently undulating lands. Slopes 2 to 3 percent. | Woodland Habitat Wetland Habitat Cropland | Building sites Recreation sites Streets and Roadways | Wetness. Uniform drainage difficult to obtain. Midsummer droughtiness. |
| Au | Alluvial Land | Occupies first bottoms on flood plains of major rivers and creeks throughout the county. Many short, steep slopes along banks and rivers. Drainage ranges from well drained to poorly drained within short distances. | Wetland Habitat Some Cropland Some Pasture | Building Sites Recreation Sites Streets and Roadways | Extreme flood hazard. Broken surface relief. Wetness. Steep slopes. |
| CcB | Chelsea-Croswell Sands | Well drained to moderately well drained. Occurs in nearly level gently sloping and undulating lands. Slopes 2 to 3 percent. | Building Sites Roadways Woodlands | Cropland Pasture | Droughtiness. Low fertility. |
| Lha | Latty Complex | Very poorly drained to somewhat poorly drained. Occurs in level to very gently undulating broad lands. Slopes 0 to 3 percent. | Woodland Habitat Wetland Habitat Cropland | Building Sites Recreation Sites Streets and Roadways | Wetness. High clay content. Very slow permeability. Uniform drainage difficult to obtain. Ponded surface water. |

**Table 4-1
Soil Associations
Kimball Township, Michigan**

| Symbol | Soil Name | General Description | Good Potential For Use As: | Poor Potential For Use As: | Limitations |
|--------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| LJA | Latty Complex, Sandy Subsoil Variant | Very poorly drained to somewhat poorly drained. Occurs in level to very undulating lands. Slopes from 2 to 3 percent. | Woodland Habitat Wetland Habitat Cropland | Building Sites Recreation Sites Streets and Roadways | Wetness. High clay content. Very slow permeability. Uniform drainage difficult to obtain. Ponded surface water. |
| MsA | Minoafine Sandy Loam | Somewhat poorly drained to poorly drained. Occupy second bottoms or terraces along flood plains of major rivers and streams. Areas normally very undulating. Slopes 2 to 3 percent. | Woodland Habitat Wetland Habitat Some Cropland | Building Sites | Wetness and flooding (mostly in early Spring). |
| SpB | Spinks Loamy Sand | Well drained. Occurs in gently sloping, long, low ridges, knolls and gently undulating areas. Slopes 2 to 6 percent. | Building Sites Recreation Sites Cropland Pasture | Streets and Roadways | Droughtiness. Low natural fertility. Moderate erosion hazard. |
| Wda | Wainola-Deford Fine Sands | Somewhat poorly drained to very poorly drained. Occurs in nearly level and very gently undulating lands. Slopes 0 to 2 percent. | Streets and Roadways Croplands | Building Sites Recreation Sites Woodland Habitat Wetland Habitat | Wetness. Uneven surface and fine sandy content difficult to drain. Sandy soils tend to flow when wet. Erosion from water and wind. |

If development on steep slopes is unavoidable, one of the following five erosion control measures may help protect small residential tracts³:

1. Locate driveways, walks and fences on the contour, if possible, or straight across the slope.
2. Grade to make the surface level or gently sloping. The surface layer can be removed before grading and later used as topsoil.
3. Install building diversions that intercept runoff and keep it from flowing over sensitive erosion areas.
4. Construct or improve waterways to prevent the formation of gullies.
5. Drain seepage areas and waterlogged areas with tile or by other applicable means.

It's important to understand that these soil interpretations are *general* in nature. They do not eliminate the need for additional on-site study or testing of specific sites for the design and construction of particular uses. This data can be used to initiate a more formal site investigation and for avoiding undesirable sites for temporary land uses.

Water Bodies/Courses

As the Natural Features Map indicates, the Pine River is the most significant water feature found in Kimball Township. It enters the Township from the northwest, flows through the Township in a general southerly direction, and eventually empties into the St. Clair River near the City of St. Clair.

The river and its tributaries provide drainage for the majority of the Township. The Pine River basin is completely contained within St. Clair County, covering an area of approximately 137,000 acres. The Pine River basin is relatively narrow and flat.

In addition to the Pine River, the Black River passes through the northeastern tip of Kimball Township. The Black River is the largest river basin in St. Clair County, covering an area of approximately 149,000 acres.



Figure J
Typical topography along Black River basin

It begins its journey in Sanilac County, near the Minden City State Game Area. From there it cuts a wide path in a southerly direction, passing from Sanilac County into St. Clair County, becoming the major water course within in the Port Huron State Game Area. From this point, it changes its path slightly, winding its way through the County in a southeasterly direction, eventually emptying into the St. Clair River at the City of Port Huron. The Black River basin is a broad, flat plain bounded on both sides by hills, which range in height from 20 to 100 feet (**Figure J**). Besides the natural aesthetic beauty they lend to the community, these riverine areas also provide essential ecological habitats for the area's diverse wildlife.

The remaining water bodies within Kimball Township consist of several small man-made lakes, which dot its northern and eastern edges. These lakes formed as a result of abandon mineral extraction sites that over time filled with water.

³ United States Department of Agriculture, Soil Conservation Service, Soil Survey of St. Clair County, Michigan (1974), p. 105.

The Flood Hazard Map indicates the extent of flood hazard areas as established by the Federal Emergency Management Administration's (FEMA) Flood Insurance Rate Map (FIRM) for the Township. The flood hazard zones depicted in the map identify areas which may be subject to periodic flooding or which lie within the Township's 100-year flood zone. A 100-year flood is defined as a flood event which has a one percent chance of being equaled or exceeded in any given year. As indicated by the map, the majority of these areas lie adjacent to both the Pine and Black Rivers. Wherever possible, future development within these flood hazard zone boundaries should be discouraged.

Port Huron State Game Area

The Port Huron State Game Area encompasses several thousand acres in St. Clair County. Of this, approximately 720 acres are located within the boundaries of Kimball Township. This area occupies lands that lie primarily to the south of Interstate 69 in the north-central region of the Township. The Port Huron State Game Area provides an excellent natural setting for a number of recreational opportunities, including hunting, fishing, trapping, hiking and camping.

PA 116 Lands

In 1974, the Michigan State Legislature adopted the *Farmland and Open Space Preservation Act*. This is now known as *Part 361, Farmland and Open Space Preservation, of Act 451*. The scope of this program is to preserve prime agricultural and open space lands by allowing the land owner to enter into a legally binding document with the state, agreeing not to develop the land for a set period of time. In exchange for not developing the land, the landowner may receive special tax consideration. The legally binding agreements are for a time period of between 10 years and 90 years and are recorded at the County Register of Deeds.

When the Michigan Department of Natural Resources receives an application, the application is evaluated according to criteria established by Part 361 of Act 451. The criteria include a scoring system approved by both the Natural Resources Commission and the Commission of Agriculture. Factors considered in the selection of parcels include a mandate that at least 51 percent of the parcel be devoted to an agricultural use, and that the local governing body with zoning authority over the nominated property must approve all applications. Other factors include consideration of the productive capacity of the farmland, threat of conversion to non-farm uses, complementing *local* farmland preservation efforts, proximity to other similarly protected land, and the availability of matching funds.

According to Township Assessor record, only one parcel of land in Kimball Township is currently associated with the PA 116 Program. It is a 37-acre parcel located along Mayer Road, north of Yager Road and south of the Grand Trunk Western Railroad crossing. The PA 116 designation for this property is due to expire in July 2005.

Wetlands

In simple terms, a wetland is an area that is influenced by water in which certain water tolerant plants are likely to survive and reproduce. This classification may include areas that are seasonally wet, by either a surface or ground water influence, or are permanently saturated or ponded throughout the year⁴.

Wetlands are important because they are a contributing factor to the quality of other valuable natural resources, such as inland lakes, ground water, fisheries, wildlife and the Great Lakes. Wetlands provide places for breeding, nesting and rearing of young waterfowl and other species of birds, mammals, fish and reptiles. They intercept and hold flood or storm waters, naturally dissipating them over a period of time. They also intercept and retain excess nutrients from surface water, generated mainly by human practices such as agriculture or lawn fertilizing, sewage treatment or road salt application. Wetland systems filter these excess nutrients out of the surface runoff, lessening the occurrence of unwanted plant and algae growth in inland lakes and streams⁵.

⁴Source: U.S. Environmental Protection Agency. Wetland Protection. [Online]. Available from <http://www.epa.gov/owow/wetlands/wetland1.html>. Accessed 17 June 1999.

⁵ *Ibid.*

Part 303 of the Natural Resources and Environmental Protection Act, PA 451 of 1994, defines a wetland as:

“Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh and which is any of the following:

- Contiguous to the Great Lakes or Lake St. Clair, an inland lake or pond, or a river or stream.
- Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and more than five acres in size; except this subdivision shall not be of effect, except for the purpose of inventoring, in counties of less than 100,000 population.
- Not contiguous to the Great Lakes, an inland lake or pond, or a river or stream; and five acres or less in size if the department determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment, or destruction and the department has so notified the owner.”

The Wetland Act authorizes the Michigan Department of Environmental Quality (MDEQ) to preserve certain wetland areas. The MDEQ may require permits before altering regulated wetlands and may prohibit development in some locations. Among the criteria used by the MDEQ when conducting a wetland determination are:

- Presence of standing water (at least one week of the year).
- Presence of hydric soil types that are saturated, flooded, or ponded sufficiently to favor wetland vegetation (usually black or dark brown in color).
- Predominance of wetland vegetation/plant material, or aquatic life, such as cattails, reeds, willows, dogwood, elderberries, and/or red or silver maple trees.
- Presence of important or endangered plant or wild life habitat or a rare ecosystem.
- The area serves as an important groundwater recharge.
- Size and Location - minimum size to be state regulated is five acres unless the wetland is contiguous to a lake, pond, river or stream, or is considered to be “essential to the preservation of natural resources of the state.”

The determination that a site contains a regulated wetland can have several consequences:

- The MDEQ may issue a permit to fill the wetland.
- The MDEQ may require mitigation, such as replacing the wetlands. Sometimes this mitigation involves increasing the overall on-site wetland acreage by two or three times.
- The MDEQ may prohibit development in the wetland area if it is determined that there is a “prudent” alternative.

Wetlands and wooded wetlands identified on the Natural Features Map were determined by the Michigan Department of Natural Resources. As the map indicates, wetlands are scattered throughout Kimball Township. The largest concentrations of wetlands are located in the southeastern quadrant of Township Section 23, the southeast and southwest quadrants in Township Section 11 and the southwest quadrant of Township Section 21.

It should be noted that the map identifies significant wetlands, but not necessarily all the wetlands regulated under the State Wetland Act. Where this map or on-site observation indicates the likelihood of a regulated wetland, references should be made to such sources as a soil survey, MDEQ maps or U.S. Interior, Fish and Wildlife map to determine whether the wetland has the physical and biological characteristics that place it under the jurisdiction of the MDEQ.

Although the existence of wetlands may place certain restrictions on future development in the Kimball Township area, the community should develop regulations that promote these areas as amenities that enhance, not as detriments to avoid.

Woodlands

Woodlands are a very valuable natural asset to a community. They provide necessary functions such as: habitat for many wildlife species, climate moderators, watershed protection from siltation and soil erosion caused by storm water runoff, wind and noise buffers, as well as aesthetic and recreational enjoyment. To the extent possible, woodlands should be conserved during all future land development.

Data obtained from the Michigan Department of Natural Resources indicate significant woodland areas in the region of the Port Huron State Game Area, as well as in the majority of Township Sections 16 and 26. There are also a large amount of woodlands that skirt the western boundary of the St. Clair County International Airport property.

Woodlands located in well-drained soils of the uplands (Chelsea-Croswell) consist of deciduous species such as sugar maple, aspen, birch, oaks and beech. Poorly drained soils (Latty complex) consist of soft maple, elm and ash. Well drained, sandy soils (Rousseau, Spinks) contain several different species of pine. There are also a number of well drained to somewhat poorly drained areas that contain significant coniferous forests, consisting of such species as white, red and jack pines, as well as other upland and lowland conifers.

Special Natural Features

The Michigan Natural Features Inventory (MFNI) database is an on-going, continually updated base which identifies plant and animal species which are either endangered, threatened or of special concern at either Federal or State levels.

The presence of threatened or endangered species does not necessarily preclude development, but may require alterations in the development plan. In most instances, an endangered species permit will be required from the Michigan Department of Natural Resources, Wildlife Division, if any threatened or endangered species would be taken or harmed. Species categorized as “special concern” are not protected under endangered species legislation⁶. However, the Wildlife Division may make recommendations regarding their protection. Preserving special concern species will help prevent them from declining to the point of being listed as threatened or endangered.

**Table 4-2.
Special Natural Features
Kimball Township, 1999**

| | Scientific Name | Common Name | Federal Status | State Status ^a |
|----|-----------------------------------------|-----------------------|----------------|---------------------------|
| 1 | Notropis anagenus | Pugnose shiner (fish) | | SC |
| 2 | Trillium undulatum | Painted trillium | | E |
| 3 | Villosa fabalis | Rayed bean (mussel) | | E |
| 4 | Great Blue Heron rookery | | | |
| 5 | Panax quinquefolius | Ginseng | | T |
| 6 | Gentianella quinquefolia | Stiff gentian | | T |
| 7 | Hydrastis canadensis | Goldenseal | | T |
| 8 | Jeffersonia diphyllia | Twin leaf | | SC |
| 9 | Mesic northern forest natural community | | | |
| 10 | Lithospermum latifolium | Broad-leafed puccoon | | SC |
| 11 | Dentaria maxima | Large Toothwort | | T |
| 12 | Pterospora andromedea | Pine-drops | | T |
| 13 | Poa paludigena | Bog bluegrass | | T |

^a Federal and State Status abbreviations:

“E” = Endangered species: Any species of fish, plant life or wildlife that is in danger of extinction throughout all or part of its range.

“T” = Threatened species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant part of its range.

“SC” = Special Concern species: Any species which does not fall into either the “endangered species” or “threatened species” categories, but whose level of existence warrants special concern and continued monitoring.

Source: Michigan Natural Features Inventory (MNFI), 1999.

Special Natural Features **Table 4-2** indicates those wildlife and fauna species that fall into one of the three protective categories listed above and which have been identified in Kimball Township at the present time. Questions regarding specific locations within the Township for these features should be referred to the Michigan Department of Natural Resources, Wildlife Division.

⁶Michigan Department of Natural Resources, Wildlife Division, Part 365, Endangered Species Protection, Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, § 324.36501-324.36507, MCLA.

Chapter 5

Transportation Analysis

Background

The organization of a community's transportation network will have some effect on future land use development. Proximity and accessibility to major highway systems increase a community's economic competitive edge. It also provides an efficient means in which to move commuters to and from centers of employment. Road system mechanics (direction of traffic flow, road conditions, etc.) may dictate the frequency in which a specific road is utilized, as well as the number of accidents that may occur on a particular stretch of road.

Network Hierarchy

Kimball Township's public transportation system is comprised primarily of a three-tier system of roadways: federal highways, county roads and local roads.

Interstate highways are the highest order of roadway found in Kimball Township. These roads are designed to move the largest amount of traffic the longest distances at the quickest speeds. Kimball Township is served by two different interstate routes, Interstate 69, running east-west and Interstate 94, running north-south. These roadways provide important links to larger urban areas and associated centers of employment, industry, commerce and recreation both inside and outside the State, as well as Canada.

The next highest order of roadway found in Kimball Township is county roads. These roadways are the result of early land subdivision methods. Roads were set in a grid pattern at ninety-degree angles, spaced at one-mile intervals and followed designated Township section lines in both north-south and east-west directions. They can be either paved or unpaved as shown in **Figures K and L**.

County-level road systems provide day-to-day transportation access throughout the Township, as well as to larger urban centers like Port Huron, the tri-cities of Flint, Saginaw and Bay City and northern portions of Detroit. They also connect the Township to the interstate highway systems.



Figure K
Typical unpaved county road



Figure L
Typical paved county road

The lowest order of roadway found in Kimball Township is local roads. These roads allow for efficient transportation access between neighborhoods, as well as between local commercial nodes within the Township. Generally, they are used for quick trips (less than one mile) and are designed to handle the fewest number of vehicles.

The Transportation Analysis Map graphically depicts the aforementioned roadway hierarchy.

The Aesthetic Character of Kimball Township's Road Network

Generally speaking, lands in Kimball Township located along section line roads in areas designated by current zoning as "agricultural" (primarily in the western half of the Township) possess deep building setbacks, accentuating the "county-like" setting of the area. Many residences in outlying areas are well-buffered from these roads by strips of cropland, woodlots or fences which front these "country" roads, providing an aesthetically pleasing character to the Township's road network (**Figure M**).

Older residential areas that are closer to commercial nodes, such as Sparlingville and Smiths Creek tend to be situated on parcels with shallow road setbacks, which in turn lends a "small-town" character to the area as well.



Figure M

Kimball Township possesses many aesthetically pleasing "country" roads.

Traffic Controls

Traffic controls are provided at virtually all intersections of Township section line roads. Traffic control devices include the standard traffic signals with green, amber and red lights and flashing signals with red and amber lights. Traffic controls are also provided at most railroad crossings. The majority of the crossings consist of a red crossing signal and crossing gates. Others consist only of stop signs. All railroad crossings in the Township appear to be in good working order.

Safety Issues

As part of the Master Plan process, Wade-Trim conducted a windshield survey of current road conditions for the Township.

From the results of this survey, it appears as though Kimball Township's transportation network is functioning at an adequate level. However, there are instances where lack of road maintenance is a concern. Upon observation, the following roadways were found to be in the most immediate need of maintenance:

- Smiths Creek Road, from CN Railroad track to Mayer Roads.
- Flinchbaugh Road, entire course.
- Ashley Road, between Allen and Range Roads

The following two areas of concern regarding safe travel within the Township were also identified as a result of the survey: 1) obstructed clear vision zones and 2) excessive curb cuts. The following text identifies the specific geographic locations within the Township for these trouble spots and a general description of each safety concern. These areas are also identified graphically by the Transportation Analysis Map.

Obstructed Clear Vision Zones

Obstructed views occur when there is not enough of a clear vision zone to provide an adequate view of the roadway, or of other vehicular traffic at an intersection, along a curve, or in a sloped area. The Transportation Analysis Map identifies the locations of obstructed clear vision zones within Kimball Township.

Areas with significant site vision obstructions were identified at the corner of Atkins and Wadhams Roads. In this particular location, traffic entering Wadhams Road from Atkins Road do so at an odd angle in comparison to the normal linear flow of traffic. In addition, traffic heading southbound on Wadhams Road has little time to react to drivers entering Wadhams Road from Atkins Road. Atkins Road drivers enter on to southbound Wadhams Road from a blind hill access point. In addition, drivers traveling southbound on Wadhams from the Black River Bridge must make quick speed adjustments at this location. The adjustments begin as they ascend the hill to the time they reach the traffic signal located at the intersection of Wadhams and Lapeer Roads, a distance of approximately 1,000 feet. The location is very dangerous when traffic is at its heaviest.

Another roadway intersection that presents obstructed clear vision zones was identified at the corner of Richman and Griswold Roads. Topography is again an issue at this location. Traffic moving westbound on Griswold Road is partially obscured to motorists entering the intersection from Richman Road by a hilltop on the eastern side of the road. Motorists must take extra precaution when entering Griswold Road from Richman Road.

Excessive Curb Cuts

Excessive curb cuts result when driveways, created by residential, commercial or industrial uses are allowed access to a local, collector or minor arterial road in an uncontrolled fashion. This type of access is very dangerous. It allows vehicles to pull out or stop in too many locations, leaving drivers to guess what type of maneuver other drivers may attempt within their path of travel. The Transportation Analysis Map identifies the locations of excessive curb cuts within Kimball Township.

Excessive curb cuts exist most frequently near the nodal region of Wadhams, along Lapeer Road and along Wadhams Road, both north and south of the I-69 freeway interchange. The high numbers of curb cuts are somewhat due to the high-density commercial character of the area. A potential solution to this problem may be the implementation of shared driveways in order to access these properties.

Traffic Counts

Traffic count data for county roads was obtained from the St. Clair County Road Commission for the years 1994 through 1999. In all cases, counts reflect average daily traffic (ADT). ADT refers to the average traffic volume over a 24 hour period, generally calculated anytime between noon on Monday and noon on Friday. Weekend trips frequently contain a different mix and frequency than do those during the week. Traffic counts for selected locations around the Township are shown on the Transportation Analysis Map.

The largest traffic count on a county road was recorded on Wadhams Road, just north of the I-69 highway interchange, with a 24-hour count of 17,553 vehicles. Other significantly traveled county roads are Range and Lapeer Roads.

It is unknown if the Township's current transportation system will be able to handle an increase in future traffic volumes. Much of the transportation infrastructure in the Township was designed at a time when the area was sparsely populated. As the population of Kimball Township continues to grow, it is expected that development will take place in areas that already experience high traffic volumes such as Range, Lapeer and Wadhams Roads. Further, development in these areas will increase traffic volume and may promote congestion along these roads. Likewise, development in the more rural portions of the Township may impose a strain on the local road system.

As much of the Township is currently occupied by large-lot, residential development, it is expected that a large amount of infill development will soon begin to occur, dispersing the anticipated increase in population into pastoral areas, slowly converting these large lots into smaller lots over time. As this process takes place, county roads designed for the less intensive traffic volumes of the past will see increased ADT levels. Many of these roads will need to be modified in such a way to handle the increase in traffic. The future increase in ADT levels will require additional expenditures to make these modifications and maintain the roads that carry this traffic.

Accident Locations

Most accidents in Kimball Township are associated with the more densely populated residential areas and they typically consist of “fender benders.” Data acquired from the St. Clair County Road Commission and the Southeast Michigan Regional Council of Governments (SEMCOG) for the years 1994-1999 was used when analyzing accidents on both county and local roads. As a result of this analysis, a listing of the top ten accident locations for the Township was developed. The results of this analysis are provided in **Table 5-1**. In addition, the top ten accident sites within the Township are displayed in the Transportation Analysis map.

As a result of the analysis, accidents within the Township occur most frequently along Township section line roads, such as Range Road, and primary county roads, like Wadhams Road. In fact, all ten identified high-crash intersections involved either Wadhams Road or Range Road in some fashion. The intersection having the highest crash occurrence was at Lapeer and Wadhams Road with 89 total crashes during the period 1994-1998, which amounts to an average of 17.8 crashes annually.

The highest number of crashes involving Township roadways during the period 1994-1998 were categorized as Personal Damage Only (PDO) crashes, where there were no fatalities or injuries reported, rather, only damage to personal property was involved. With regard to the top ten roadways identified by the SEMCOG survey, the PDO category accounted for approximately 69 percent of all crashes, while crashes which resulted in some form of personal injury accounted for approximately 30 percent of all crashes. Fatal accidents accounted for less than one percent of all total crashes involving the top ten identified roadways.

**Table 5-1.
Top 10 High-Crash Intersections
Kimball Township, St. Clair County Michigan
1994-1998**

| Rank | Intersection | | Total Crashes | Annual Average | Crashes Per Year | | | | | Crashes by Severity* | | | | |
|---------------|------------------|-----------------|---------------|----------------|------------------|-----------|-----------|-----------|-----------|----------------------|-----------|-----------|-----------|------------|
| | Road 1 | Road 2 | | | 1998 | 1997 | 1996 | 1995 | 1994 | Fatal | A-level | B-level | C-level | PDO |
| 1 | Lapeer Rd. | Wadhams Rd. | 89 | 17.8 | 18 | 21 | 18 | 16 | 16 | 0 | 4 | 5 | 12 | 68 |
| 2 | Gratiot Ave. | Range Rd. | 62 | 12.4 | 14 | 10 | 9 | 14 | 15 | 1 | 3 | 7 | 8 | 43 |
| (tie) 3. | Lapeer Rd. | Range Rd. | 37 | 7.4 | 8 | 6 | 10 | 8 | 5 | 0 | 1 | 2 | 3 | 31 |
| (tie) 3. | Range Rd. | Dove Rd. | 37 | 7.4 | 7 | 3 | 9 | 7 | 11 | 0 | 5 | 3 | 4 | 25 |
| 5 | EastBound I-94 | Range Rd. | 34 | 6.8 | 8 | 6 | 11 | 6 | 3 | 0 | 0 | 4 | 7 | 23 |
| (tie) 6. | Ravenswood Rd. | Range Rd. | 26 | 5.2 | 4 | 4 | 5 | 8 | 5 | 0 | 2 | 5 | 3 | 15 |
| (tie) 6. | Smiths Creek Rd. | Wadhams Rd. | 26 | 5.2 | 3 | 4 | 4 | 6 | 9 | 3 | 4 | 7 | 4 | 8 |
| (tie) 8. | Range Rd. | Griswold Rd. | 25 | 5.0 | 7 | 5 | 5 | 4 | 4 | 0 | 2 | 1 | 7 | 15 |
| (tie) 8. | Griswold Rd. | Wadhams Rd. | 25 | 5.0 | 4 | 4 | 5 | 7 | 5 | 1 | 0 | 4 | 2 | 18 |
| 10 | Wadhams Rd. | North River Rd. | 23 | 4.6 | 5 | 5 | 6 | 6 | 1 | 0 | 1 | 0 | 4 | 18 |
| Totals | | | 384 | 76.8 | 78 | 68 | 82 | 82 | 74 | 5 | 22 | 38 | 54 | 264 |

***Crash Severity Definitions:**

Fatal - A crash in which the most severe injury sustained by any person involved in the crash was a fatal injury.

A-level - A crash in which the most severe injury sustained by any person involved in the crash was an A-level (incapacitating) injury.

B-level - A crash in which the most severe injury sustained by any person involved in the crash was a B-level (non-incapacitating but visible) injury

C-level - A crash in which the most severe injury sustained by any person involved in the crash was a C-level (possible) injury.

PDO (Property Damage Only) - A crash which resulted in no fatalities or injuries, with a maximum value of \$400.00 as a reporting threshold.

Source: Southeast Michigan Regional Council of Governments (SEMCOG), 1998

Chapter 6

Community Facilities

Police and Fire

Kimball Township maintains two fire station facilities. One is adjacent to the Township administration offices located on Allen Road near the intersection of Griswold Road. The other fire station is located in Smiths Creek along Henry Street.

The Township does not maintain a local police force. Instead, police services are provided to the Township by the St. Clair County Sheriff's Department and the Michigan State Police.

Health Care

The Township possesses one major health care facility within its borders. The Mercy Family Care Center is located at the corner of Wadhams and Lapeer Road. Township residents can also use Mercy and Port Huron Hospitals, which are located nearby in the City of Port Huron. Several clinics and health care facilities are available in the City of Marysville as well.

Utilities

Sanitary sewer and public water supply systems are important not only from a public health and safety standpoint, but also permit higher density development. Public utilities also allow larger scale nonresidential uses to be built.

Sewer Services

Sanitary sewers service a limited portion of Kimball Township. This service is provided by means of the City of Port Huron's Department of Public Works, Utilities Division.

The Port Huron's Wastewater Treatment Plant is a regional facility that serves industrial, commercial and residential customers in the City of Port Huron, and the Townships of Port Huron, Fort Gratiot as well as Kimball. The plant has a design average flow of 20 million gallons per day and is currently treating an average of 12 million gallons per day.

The Utility Locations Map identifies the extent of sewer service in Kimball Township at this time (2005). As the map indicates, sewer service is primarily limited to the centers of population around Wadhams and Sparlingville, in the northeastern portions of the Township. Those not currently served by this system have to rely on individual septic systems for wastewater treatment.

Water Services

Water service is provided to a small portion of Kimball Township by means of the City of Port Huron's Department of Public Works, Utilities Division.

The City of Port Huron obtains its water from the St. Clair River, approximately one-half mile south of the Blue Water Bridge. Water is transferred by means of pipeline to the City's Water Filtration Plant. This plant is a regional facility that provides safe, potable water to residents of the City of Port Huron, and the Townships of Port Huron, Fort Gratiot as well as Kimball.

The Utility Locations Map indicates the extent of water service in Kimball Township at this time (2005). As is the case with sewer service, water service is primary limited to the centers of population around Wadhams and Sparlingville, in the northeastern portions of the Township. Those not currently served by this system must rely on individual well systems to satisfy their water needs.

Gas Service

The Southeastern Gas Company provides natural gas service to the Township.

Electric Service

The Detroit Edison Company provides electrical service to the Township.

Telephone Service

Local telephone service to the Township is provided by two companies, SBC/Ameritech and Verizon. Local calls may be made to all portions of the Township, as well as to the Cities of Port Huron and Marysville and Port Huron Township.

Chapter 7

Socioeconomic Profile

Population Profile - Introduction

An important component in the master planning process is an understanding of the community's social and economic characteristics. This chapter explores current and historical population changes, age distribution, household make-up, housing characteristics, income, education, and employment statistics for Kimball Township. Where significant, Township data is compared to St. Clair County, the State of Michigan, and the nation. The purpose of this chapter is to identify factors that could influence future land use decisions and to assist policy makers with these decisions.

Historic Population Trends

Table 7-1 details population trends for Kimball Township and surrounding communities from 1970 to 2000. It also includes County and State population trends. **Exhibit 7-A** graphically displays these trends.

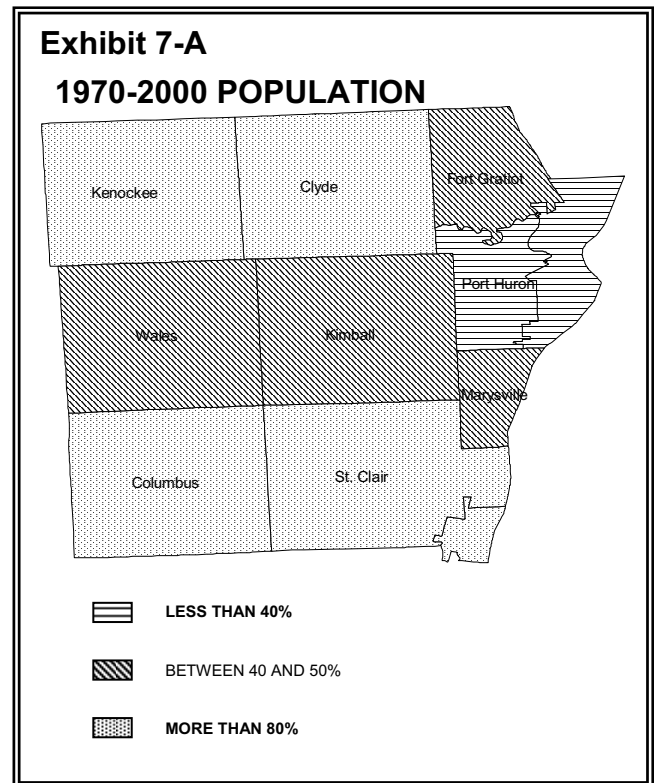
The breakdown reveals that communities within the subject area and the County, with the exception of St. Clair and Wales Townships, experienced the greatest growth during the 1970's, with the exception of the City of Port Huron, which suffered losses. St. Clair Township and Wales Township experienced the most growth during the 1990's.

Kimball Township gained 1,028 residents between 1970 and 1980, an increase of 16.7 percent. This growth continued at a nominal rate (less than one percent) the following decade reaching a total population count of 7,247 in 1990. The total change for the 20-year period amounted to an increase of 1,095 residents, or 17.8 percent. Between 1990 and 2000, Kimball Township continued its steady rate of growth, increasing by 1,381 residents, or 19.1 percent. This represents a 30-year increase in the Township of 2,476 residents, or 40.2 percent

This rate of growth was slightly higher than the County, which increased its population by 36.6 percent between 1970 and 2000. In addition, the Township exceeded the State's growth rate of 11.9 percent during the same timeframe.

Columbus Township, neighboring to the southeast, grew at the greatest rate of surrounding townships (138 percent, or 2,678 people) between 1970 and 2000. St. Clair Township, directly south, followed a similar population trend growing by 107 percent during the same time period.

The City of Marysville posted a 72.6 percent increase in its population count between 1970 and 2000 ending with 9,684 persons. Up the coast from Marysville lies the City of Port Huron, an international connection point to Sarnia, Ontario via the Blue Water Bridge. In 1970, the City held 35,794 residents. This number fell by 3,456 people, or 9.6 percent, over the next 30 years, which left the City with a population of 32,338 in 2000.



**Table 7-1
Historic Population Trends, 1980 to 2000**

| Place | 1970 | 1980 | 1990 | Change, 1980 to 1990 | | 2000 | Change, 1990 to 2000 | | Change, 1970 to 2000 | |
|-------------------|-----------|-----------|-----------|----------------------|---------|-----------|----------------------|---------|----------------------|---------|
| | | | | Number | Percent | | Number | Percent | Number | Percent |
| Clyde Twp. | 2,980 | 4,632 | 5,052 | 420 | 9.1 | 5,523 | 471 | 9.3 | 2,543 | 85.3 |
| Columbus Twp. | 1,937 | 3,097 | 3,235 | 138 | 4.5 | 4,615 | 1,380 | 42.7 | 2,678 | 138.2 |
| Fort Gratiot Twp. | 7,075 | 8,496 | 8,968 | 472 | 5.6 | 10,691 | 1,723 | 19.2 | 3,616 | 51.1 |
| Kenockee Twp. | 1,250 | 1,730 | 1,854 | 124 | 7.2 | 2,423 | 569 | 30.7 | 1,173 | 93.8 |
| Kimball Twp. | 6,152 | 7,180 | 7,247 | 67 | 0.9 | 8,628 | 1,381 | 19.1 | 2,476 | 40.2 |
| Marysville City | 5,610 | 7,345 | 8,515 | 1,170 | 15.9 | 9,684 | 1,169 | 13.7 | 4,074 | 72.6 |
| Port Huron Twp. | 7,635 | 7,886 | 7,621 | -265 | -3.4 | 8,615 | 994 | 13.0 | 980 | 12.8 |
| Port Huron City | 35,794 | 33,981 | 33,694 | -287 | -0.8 | 32,338 | -1,356 | -4.0 | -3,456 | -9.7 |
| St. Clair Twp. | 3,091 | 3,965 | 4,614 | 649 | 16.4 | 6,423 | 1,809 | 39.2 | 3,332 | 107.8 |
| Wales Twp. | 1,970 | 2,368 | 2,294 | -74 | -3.1 | 2,986 | 692 | 30.2 | 1,016 | 51.6 |
| St. Clair County | 120,175 | 138,802 | 145,607 | 6,805 | 4.9 | 164,235 | 18,629 | 12.8 | 44,060 | 36.7 |
| State of Michigan | 8,881,826 | 9,262,078 | 9,295,297 | 33,219 | 0.4 | 9,938,444 | 643,147 | 6.9 | 1,056,618 | 11.9 |

Sources: 1970, 1980, 1990, 2000 US Census, General Population Characteristics

Population Projections

Table 7-2 contains population projections for Kimball Township and St. Clair County from 2005 through 2020 in five-year intervals. County-wide population projections were collected from three sources: the Michigan Department of Transportation (MDOT), the Michigan Department of Management and Budget (MDMB), and Woods & Poole Economics, Inc. The MDOT projections are generated using an employment and transportation regional model. The MDMB projections are based upon the age-cohort survival method. Woods & Poole Economics, Inc., a private demographic and economic consulting firm, based their projections upon an employment and transportation model. All three projections were averaged together and were used to create the Kimball Township population projections in each five-year increment.

Two sets of local projections are generated: Arithmetic and Constant County Share.

The Arithmetic method adds 413 persons to each five-year period and is based upon the average 5-year incremental change in population between 1970 and 2000. The Constant County Share method applies the Township's average share of County population (5.14 percent, 1970-2000) to the average County estimates for each five-year period.

The average of these two methods yields a Township population of 13,111 in Year 2020. This figure will be used as the basis for the development of goals and objectives, as well as future land use recommendations.

| Place | Population ^a | | | | Projection | | | |
|------------------------------------|-------------------------|---------|---------|---------|------------|---------|---------|---------|
| | 1970 | 1980 | 1990 | 2000 | 2005 | 2010 | 2015 | 2020 |
| Kimball Twp. | 6,152 | 7,180 | 7,247 | 8,628 | | | | |
| Arithmetic ^b | | | | | 10,693 | 12,758 | 14,823 | 16,888 |
| Constant county share ^c | | | | | 8,522 | 8,798 | 9,075 | 9,333 |
| Average | | | | | 9,608 | 10,778 | 11,949 | 13,111 |
| St. Clair County | 119,280 | 138,802 | 145,607 | 164,235 | | | | |
| MDOT | | | | | 165,173 | 170,045 | 174,734 | 178,425 |
| DMB | | | | | 168,400 | 174,900 | 181,300 | 187,400 |
| W&P | | | | | 163,820 | 168,530 | 173,630 | 178,860 |
| Average | | | | | 165,797 | 171,158 | 176,554 | 181,561 |

^a Data from Table 1.
^b Each five year estimate increased by 413 persons (average five-year increment from 1970-2000).
^c Average Township share of county population (5.14%).
Sources: Michigan Department of Transportation (MDOT), Economic and Demographic Outlook for the United States and Counties of Michigan to the Year 2020, September 30, 1994; Michigan Department of Management and Budget, (MDMB) Office of the State Demographer, Population Projections for Michigan to the Year 2020, County Projections, 1996; Woods & Poole Economics, Inc., 1998 State Profile, Michigan, Southeast Michigan Council of Governments (SEMCOG), Regional Datasets Forecast, 1997.

Age-Life Cycle

Table 7-3 divides the Township's population into life-cycle categories that generally correspond with stages of human development. Each stage carries common characteristics that can be generally applied when assessing future needs. For example, adjustments in programs and services (elderly/child care, schools, recreation, etc.) may be prompted by changes in the Township's dependent population (generally those persons under 18 and over 65 years of age).

| Age Group | 1990 | | 2000 | | Change 1990-2000 | |
|------------------------------|-------|------------------|-------|------------------|------------------|----------------|
| | No. | Percent of Total | No. | Percent of Total | No. | Percent Change |
| Preschool (0-4 yrs) | 576 | 7.9 | 587 | 6.8 | 11 | 1.9 |
| School (5-19 yrs) | 1,799 | 24.8 | 1,894 | 22.0 | 95 | 5.3 |
| Family formation (20-44 yrs) | 2,957 | 40.8 | 3,243 | 37.6 | 286 | 9.7 |
| Empty nest (45-64 yrs) | 1,297 | 17.9 | 2,015 | 23.4 | 718 | 55.4 |
| Seniors (65-74 yrs) | 442 | 6.1 | 509 | 5.9 | 67 | 15.2 |
| Elderly (75+ yrs) | 176 | 2.4 | 380 | 4.4 | 204 | 115.9 |
| Total | 7,247 | 100.0 | 8,628 | 100.0 | 1,381 | 19.1 |

Source: 1990 U.S. Census, STF 1A.
U.S. Census, Table DP-1, Profile of General Demographic Characteristics: 2000.

The population in Kimball Township is aging, following a state and national trend. The Township's elderly population grew by almost 116 percent (204 people) between the 1990 and 2000 Census while school aged residents only increased by 5.3 percent (95 people). However, the school age population made up approximately 25 percent of the total Kimball population in 1990 but made up only 22 percent in 2000. The elderly, on the other hand, represented 2.5 percent of total residents in 1990 and 4.4 percent in 2000.

Those in the family formation life cycle made up 40.8 percent of the 1990 Township population, representing the largest age segment, which is also true for the 2000 Census. This population group expanded by 9.7 percent, or 286 people, between 1990 and 2000.

Racial Composition

Data in **Table 7-4** shows that the racial make up of Kimball Township's population is relatively homogeneous. In 2000, the Census classification of white made up 96.8 percent of the Township's population. While this is down from the 1990 percent of total, the overall number of white persons is up by 18.6 percent. Racial diversity at the time of the 2000 census has shown relatively little change since the 1990 count. There has been a slight increase in minority populations and more specific gains in those classified as multi-racial. However, because of the changes in Census racial definitions, specific trending is difficult due to the inclusion of multi-racial categories not present in the 1990 Census counts.

Persons with Disabilities

The following data documents the extent of the Township population that was considered disabled, either with a mobility or self-care limitation. The Census collects disability data for three major age groups: those between 5 and 20 years of age, 21 and 64 years of age, and those aged 65 and older. The first age group refers most commonly to youth, the second to the working age population, and the third to the senior and elderly population. Understanding the disability status of Kimball Township's population may assist decision-makers in providing for the special needs of disabled persons in the community.

In 2000, there was a total of 8,053 persons who were five years or older. Of this total population group, 1,408 people (17.5 percent) suffered from some type of disability. Within that disability total, it is important to understand the levels of disability within each of the three population groups. The population group containing people between the ages of 5 and 20 demonstrated a 9.3 percent disability total representing 193 disabled people. Of the working age population (16 to 64 years of age), 810 people were listed as disabled, however, 58 percent of those individuals were employed in 2000. The largest percentage of people classified as disabled were 65 years of age or older, totaling 405 people, or 45.1 percent of that age bracket.

Households

A trend occurring nation-wide, and characteristic of today's population, is the declining size of households. A household includes all persons who occupy a housing unit. A housing unit is defined as a house, apartment, a mobile home, a group of rooms, or a single room that is occupied as a separate living quarters. Despite the nation-wide decline in household size, it is not uncommon for communities to register a net increase in the housing supply. This can occur even if the community is not experiencing a proportional population increase or, in some cases, recording a population loss. This trend has evolved to a large extent, due to the declining size of families. People are marrying at a later age than a generation ago, postponing having children, and having fewer children when they do start a family. Married couple families still comprise the largest group of households, but the number of single parent (male or female) headed households is increasing and expected to grow, contributing to the decline in average household size. Finally, as the baby boom generation ages, they will swell the ranks of single-person, non-family households.

| Place | 1990 | 2000 | No. | Percent |
|------------------|------|------|-------|---------|
| Kimball Township | 2.95 | 2.74 | -0.21 | -7.1 |
| St. Clair County | 2.73 | 2.62 | -0.11 | -4.0 |

*Source: 1990 U.S. Census, STF 3A
U.S. Census, Table DP-1, Profile of General Demographic Characteristics: 2000*

Table 7-5 compares the persons per household for Kimball Township and St. Clair County for 1990 and 2000. In 1990, the persons per household size in Kimball Township was 2.95, declining 7.1 percent, to 2.74, between the 1990 and 2000 Census. This figure is slightly higher than the County 2000 household size of 2.62.

| Race | 1990 | | 2000 | | Change 1990-2000 | |
|----------------------------|-------|------------------|-------|------------------|------------------|----------------|
| | No. | Percent of Total | No. | Percent of Total | No. | Percent Change |
| White | 7,044 | 97.2 | 8,352 | 96.8 | 1,308 | 18.6 |
| Black | 114 | 1.6 | 77 | 0.9 | -37 | -32.5 |
| Amer.Indian, Eskimo, Aleut | 60 | 0.8 | 34 | 0.4 | -26 | -43.3 |
| Asian or Pacific Islander | 7 | 0.1 | 15 | 0.2 | 8 | 114.3 |
| Other Race | 22 | 0.3 | 150 | 1.7 | 128 | 581.8 |
| Total | 7,247 | 100.0 | 8,628 | 100.0 | 1,381 | 19.1 |

*Source: 1990 U.S. Census, STF 3A
U.S. Census, Table DP-1, Profile of General Demographic Characteristics: 2000.
As race definitions were revised for the 2000 US Census, the racial categories in the table were agglomerated to compare population changes across time. Us Census 200 totals for Asian and Native Hawaiian and Other Pacifica Islander were combined. Additionally the Some Other Race and Two or More Races categories were combined to reflect the broader 1990 US Census definitions.

Educational Attainment

The level of educational attainment reached by residents reveals insights into the capabilities of the workforce, income levels, and the overall economic vitality of the community. The U.S. Census compiles data on educational attainment for people aged 25 years and older. It is important to note that the figures are cumulative. For example, if a citizen has a bachelor's degree, that person would be counted in the Bachelor's Degree or Higher Category, as well as the Associates Degree or Higher and High School Graduate or Higher categories.

Table 7-6 displays the educational attainment levels for those people 25 years and older living in Kimball Township and St. Clair County. In comparison, the Township residents have slightly lower educational attainment levels than those living in the County.

In 2000, 78.4 percent of Township residents 25 years old and over graduated from high school. Moreover, 14.4 percent went on to earn an associate's degree while 7.2 percent continued on to receive a bachelor's degree and 3.2 percent finished with a graduate degree.

| Level | Kimball Township | | St. Clair County | |
|--------------------------------|------------------|---------|------------------|---------|
| | No. | Percent | No. | Percent |
| Not a High School Grad | 1,235 | 21.6 | 18,461 | 17.2 |
| High School Graduate or Higher | 4,473 | 78.4 | 89,122 | 82.8 |
| Assoc. Degree or Higher | 820 | 14.4 | 21,863 | 20.3 |
| Bachelor's Degree or Higher | 412 | 7.2 | 13,524 | 12.6 |
| Graduate Degree or Higher | 184 | 3.2 | 4,962 | 4.6 |
| Total | 5,708 | 100.0 | 107,583 | 100.0 |

Source: 2000 U.S. Census, STF 3A

Income

An important determinant of a community's viability and ability to support future commercial, residential, and industrial growth is the income of its residents. Households are the basic consumer unit and supplier of labor to potential businesses. Median household income (that level of income at which half of all households earn more and half of all households earn less) is a broad measure of the relative economic health of a community. At the national level, recessions and inflation have combined to negatively impact upon the spending power of the dollar households earn. In a very real sense, a dollar does not purchase as much as it once did.

Three measures of income (median household, median family, and per capita) are illustrated in **Table 7-7** for the Township, County, and State comparing census data from the last two decades. Income statistics for the 2000 Census reflect information from the 1999 calendar year, and statistics for the 1990 Census are 1989 information. According to data displayed in **Table 7-7**, St. Clair County ranked the highest in two of the three income measures followed by the State and the Township, respectively.

| Place | Median Household Income | | Median Family Income | | Per Capita Income | |
|-------------------|-------------------------|--------|----------------------|--------|-------------------|--------|
| | 1989* | 1999 | 1989* | 1999 | 1989* | 1999 |
| Kimball Township | 40,556 | 47,627 | 44,464 | 52,558 | 16,094 | 19,253 |
| St. Clair County | 41,946 | 46,343 | 48,760 | 54,450 | 18,118 | 21,582 |
| State of Michigan | 42,394 | 44,667 | 50,092 | 53,457 | 19,344 | 22,168 |

**Adjusted for inflation to 1999 dollars
Source: 1990 and 2000 U.S. Census Data, SF 3*

The distribution of households by income levels is presented in **Exhibit 7-B**. Households are considered the standard "consumption" unit for long-range planning. A household represents all the persons who occupy a housing unit. A household may also include one person living alone. The household differs from a family which is defined as a householder and one or more persons who are related to the householder and living in the same household.

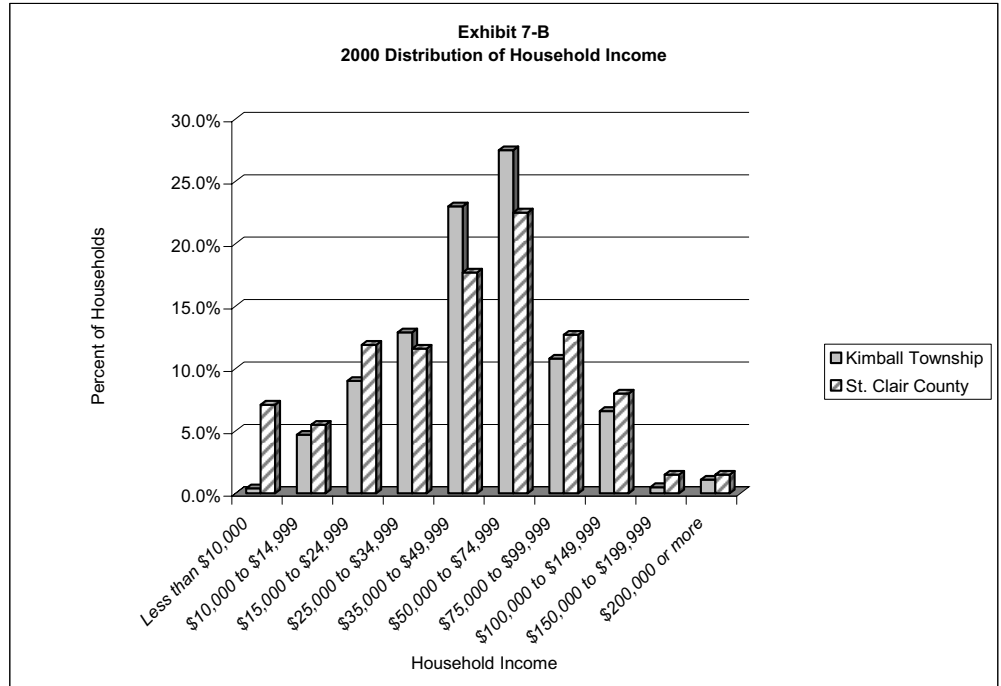
In comparison to the County, Kimball Township generally follows a similar household income distribution. The middle income bracket (\$50,000 to \$74,999) held the highest percentage of households which is just above where the median lies. Less than two percent of households earned more than \$200,000 at the Township and County level. At the other end of the spectrum, 0.4 percent of Township households fell below a household income of \$10,000, which was significantly less than the County (7.1 percent).

Employment by Occupation and Industry

Employment by Occupation and Employment by Industry are two related, yet individually significant indicators of community welfare.

Employment by Occupation describes the trades and professions in which Township residents are employed, such as a manager or salesperson. Employment by Industry quantifies in what field that manager or sales person may be employed. For instance, two sales persons may be present in the "Sales and Office Occupations" category of the Employment by Occupation table, but may be employed in two different fields. That is, a sales person in the manufacturing industry and a sales person in the real estate trade would be categorized within those different classifications in the Employment by Industry table.

Table 7-8 depicts the 2000 employment by occupation for employed residents of Kimball Township and St. Clair County who are 16 years of age and older. Production, Transportation, and Material Moving Occupations ranked the highest of all categories. The second largest group is those employed in the Management, Professional, and Related Occupations. In general, the Township's occupational trends follow those of St. Clair County except within the Sales Occupations where the County is dominant.



| Occupation | Kimball Township | | St. Clair County | | Difference | |
|-------------------------------------------------------------|------------------|---------|------------------|---------|------------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Management, professional, and related occupations | 849 | 20.1 | 18,708 | 24.0 | 17,859 | 3.9 |
| Service occupations | 684 | 16.2 | 11,419 | 14.6 | 10,735 | -1.6 |
| Sales and office occupations | 834 | 19.7 | 18,215 | 23.4 | 17,381 | 3.7 |
| Farming, fishing, and forestry occupations | 20 | 0.5 | 237 | 0.3 | 217 | -0.2 |
| Construction, extraction, and maintenance occupations | 508 | 12.0 | 10,050 | 12.9 | 9,542 | 0.9 |
| Production, transportation, and material moving occupations | 1,331 | 31.5 | 19,337 | 24.8 | 18,006 | -6.7 |
| TOTAL | 4,226 | 100.0 | 77,966 | 100.0 | - | - |

Source: 2000 U.S. Census

Table 7-9 comparatively breaks down employment by industry in Kimball Township and St. Clair County. As with the occupational information, the Township's employment by industry closely follows that of St. Clair County. The top three employing industries for both Kimball Township and the County were Manufacturing, Educational, Health, and Social Services, and Retail Trade.

Table 7-9
2000 Comparative Employment by Industry
Kimball Township and St. Clair County

| Occupation | Kimball Township | | St. Clair County | | Difference | |
|-------------------------------------------------------------------------------------|------------------|--------------|------------------|--------------|------------|----------|
| | Number | Percent | Number | Percent | Number | Percent |
| Agriculture, forestry, fishing and hunting, and mining | 50 | 1.2 | 699 | 0.9 | 649 | -0.3 |
| Construction | 316 | 7.5 | 6,517 | 8.4 | 6,201 | 0.9 |
| Manufacturing | 1,384 | 32.7 | 21,820 | 28.0 | 20,436 | -4.7 |
| Wholesale trade | 148 | 3.5 | 1,792 | 2.3 | 16,44 | -1.2 |
| Retail trade | 484 | 11.5 | 9,497 | 12.2 | 90,13 | 0.7 |
| Transportation and warehousing, and utilities | 265 | 6.3 | 4,260 | 5.5 | 3,995 | -0.8 |
| Information | 77 | 1.8 | 1,436 | 1.8 | 1,359 | 0.0 |
| Finance, insurance, real estate, and rental and leasing | 159 | 3.8 | 2,982 | 3.8 | 2,823 | 0.0 |
| Professional, scientific, management, administrative, and waste management services | 147 | 3.5 | 4,061 | 5.2 | 3,914 | 1.7 |
| Educational, health and social services | 684 | 16.2 | 13,516 | 17.3 | 12,832 | 1.1 |
| Arts, entertainment, recreation, accommodation and food services | 210 | 5.0 | 5,300 | 6.8 | 5,090 | 1.8 |
| Other services (except public administration) | 188 | 4.4 | 3,428 | 4.4 | 3,240 | 0.0 |
| Public administration | 114 | 2.7 | 2,658 | 3.4 | 2,544 | 0.7 |
| TOTAL | 4,226 | 100.0 | 77,966 | 100.0 | - | - |

Source: 2000 U.S. Census

An analysis of the Township's housing stock by type, age, value, tenure, and other characteristics is essential in determining the kinds of new housing which should be built in the Township. To a large extent, it is the characteristics of the existing structures that will determine what can be built and marketed in the future.

Housing Units

Data in **Table 7-10** depict changes in the type of housing from 1990 to 2000. Single-family housing structures remain the predominant dwelling type. The greatest surge in housing construction was among the multi-family units (2-5+ units), growing 87.7 percent during the last decade. A 1.5 percent decrease occurred among mobile home, trailer, and other unit types.

Table 7-10
Type of Housing Structures
Kimball Township, St. Clair County Michigan

| Unit Type | 1990 | | 2000 | | Change 1990-2000 | |
|------------------------------|--------------|--------------|--------------|--------------|------------------|-------------|
| | No. | Percent | No. | Percent | No. | Percent |
| 1-unit | 2,014 | 79.4 | 2,713 | 82.2 | 699 | 34.7 |
| 2-4 units | 73 | 2.9 | 137 | 4.1 | 64 | 87.7 |
| 5 or more units | 41 | 1.6 | 48 | 1.5 | 7 | 17.1 |
| Mobile home, trailer, other* | 410 | 16.2 | 404 | 12.2 | -6 | -1.5 |
| Total | 2,538 | 100.0 | 3,302 | 100.0 | 764 | 30.1 |

*2000 totals include boat, RV, van, etc.
Source: 1990 and 2000 U.S. Census, SF 3

Tenure

According to the U.S. Census Bureau, the national rate of home ownership has grown from 55.0 percent in 1950 to 66.1 percent in 2000. Kimball Township's home ownership rate for occupied housing units in 2000 was 94.5 percent, exceeding the national rate by 28.4 percentage points. Housing occupancy characteristics are illustrated in **Table 7-11**.

Table 7-11
2000 Housing Occupancy Characteristics

| Category | Kimball Township | | | St. Clair County | | |
|----------------------------------------------|------------------|--------------|-----------------------|------------------|--------------|-----------------------|
| | Number | Percent | | Number | Percent | |
| | | Total Units | Occupied/Vacant Units | | Total Units | Occupied/Vacant Units |
| Occupied Housing | 3,120 | 94.5 | 100.0 | 62,072 | 92.5 | 100.0 |
| Owner-Occupied | 2,745 | 83.1 | 88.0 | 49,419 | 73.6 | 79.6 |
| Renter-Occupied | 375 | 11.4 | 12.0 | 12,653 | 18.9 | 20.4 |
| Vacant Units | 182 | 5.5 | 100.0 | 5,035 | 7.5 | 100.0 |
| For Rent | 22 | 0.7 | 12.1 | 941 | 1.4 | 18.7 |
| For Sale | 69 | 2.1 | 37.9 | 860 | 1.3 | 17.1 |
| Rented, Sold, Not Occupied | 24 | 0.7 | 13.2 | 379 | 0.6 | 7.5 |
| For Seasonal, Recreational or Occasional Use | 8 | 0.2 | 4.4 | 1,921 | 2.9 | 38.2 |
| For Migrant Workers | 1 | <0.1 | 0.5 | 1 | <0.1 | <0.1 |
| Other Vacant | 58 | 1.8 | 31.9 | 933 | 1.4 | 18.5 |
| Total Housing Units | 3,302 | 100.0 | | 67,107 | 100.0 | |

Data compiled by Wade-Trim.
Source: 2000 U.S. Census
*Other vacant includes boats, railcars, vans, campers

The Township's overall vacancy rate was 5.5 percent. This value, however, includes vacant property types not immediately available for occupancy, including such structures as seasonal property and migrant housing. About three percent of vacant housing units were for rent or sale, those types of properties immediately available for occupancy. As a general rule, a five percent vacancy rate of these housing types is desirable. Such a vacancy rate permits residents moving into the area a choice of housing options immediately available for occupancy. This low percentage indicates a very restrictive housing market in Kimball Township.

According to **Table 7-11**, St. Clair County had a home ownership rate of 73.6 percent, with the remainder as renter occupied. The vacancy rate was slightly higher at the County level, with a greater percentage being offered for rent. Moreover, 38.2 percent of the vacant housing stock (1,921 units) were used for seasonal, recreational, or occasional use.

Age of Structures

Generally, the economically useful age of residential structures is approximately 50 years. Beyond that age, repairs become expensive and the ability to modernize the structure to include amenities standard for today's life-style is diminished. When a community's housing stock approaches the 50-year mark, the need for housing rehabilitation, demolition, and new construction will begin to increase.

Data in **Table 7-12** identifies the age of year-round residential structures for Kimball Township. As can be seen, the majority of the units (60.1 percent) in the Township were built in the decades prior to 1980. Of those homes, approximately 48.4 percent were built prior to 1970. When taking into consideration the average life span of a dwelling unit, about 39.7 percent of the single-family homes in the Township may be decreasing in utility by the end of the decade in 2010. These homes will require regular maintenance to remain structurally sound.

| Year Built | Number | Percent |
|--------------------|--------------|--------------|
| 1999 to March 2000 | 234 | 7.1 |
| 1995 to 1998 | 451 | 13.7 |
| 1990 to 1994 | 268 | 8.1 |
| 1980 to 1989 | 357 | 10.8 |
| 1970 to 1979 | 386 | 11.7 |
| 1960 to 1969 | 286 | 8.7 |
| 1940 to 1959 | 908 | 27.5 |
| 1939 or earlier | 403 | 12.2 |
| TOTAL | 3,302 | 100.0 |

Source: 2000 U.S. Census –SF3

Recent Residential Construction Activity

In 2003, fueled by an average low interest rate of 5.82 percent and strengthened confidence in the economy, the Southeast Michigan region experienced an eight percent increase in new residential construction, permitting 23,413 housing units in 2003. Single-family housing grew five percent, with 15,346 permits authorized, and two-family housing counted 212 new units. Townhouse/attached condominium construction had 5,360 units authorized and multi-family units recorded 2,495 new permits.

Wayne County led the region with 5,741 new residential permits issued, a 20 percent increase from 2002. Oakland County followed closely with 5,712 permits authorized, a six percent increase. Macomb County was third with 5,269 new units authorized.

The region also had 1,383 new manufactured housing sites in parks, bringing the total number of new housing units authorized to 24,796. By structure type, single -family construction accounted for 62 percent of the total, townhouse/attached condominiums for 22 percent, multi-family units for ten percent, manufactured housing in parks for six percent, and two-family permits for less than one percent. ¹

| Area | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|--------------|
| Single Family | 34 | 31 | 23 | 50 | 71 | 71 | 96 | 65 | 95 | 194 | 104 | 89 | 75 | 92 | 77 | 1,167 |
| Two Family | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 4 | 4 | 0 | 0 | 2 | 4 | 20 |
| Attach Condo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multi Family | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Gross Total Units | 34 | 31 | 23 | 66 | 71 | 71 | 100 | 67 | 95 | 198 | 108 | 89 | 75 | 94 | 81 | 1,203 |
| Demolished Units | 15 | 10 | 8 | 6 | 0 | 0 | 6 | 3 | 0 | 8 | 6 | 3 | 9 | 11 | 6 | 91 |
| NET TOTAL UNITS | 19 | 21 | 15 | 60 | 71 | 71 | 94 | 64 | 95 | 190 | 102 | 86 | 66 | 83 | 75 | 1,112 |

Source: Building Permits 1990 through 2004 from SEMCOG

¹ Southeast Michigan Council of Governments: Residential Construction in Southeast Michigan, 2003, April 1, 2004.

Table 7-13 illustrates recent residential construction trends in Kimball Township. Between 1990 and 2004, there were 1,203 housing units constructed in the Township with the vast majority being detached single-family dwellings. During this same time period, 91 units were demolished. This leaves a net total of 1,112 new units being added to the Township housing stock.

Housing Values

A comparative measure of the housing stock is housing value. Data in **Table 7-14** shows the 2000 distribution of housing values for both owner-occupied and rental units at the Township and County level. In 2000, the median value of owner occupied housing units in Kimball Township was \$100,500. This figure is \$24,700 less than the median value of homes in St. Clair County.

In 2000, the median contract rent in Kimball Township was \$543, approximately 1.1 percent greater than the County median contract rent of \$537.

| Financial Characteristics | Kimball Township | | St. Clair County | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|------------------|---------|
| | No. | Percent | No. | Percent |
| Owner-occupied units ^a | 1,934 | 100.0 | 36,652 | 100.0 |
| Less than \$50,000 | 54 | 2.8 | 1,502 | 4.1 |
| \$50,000 to \$99,999 | 908 | 46.9 | 10,750 | 29.3 |
| \$100,000 to \$149,999 | 602 | 31.1 | 11,916 | 32.5 |
| \$150,000 to \$199,999 | 208 | 10.8 | 6,681 | 18.2 |
| \$200,000 or more | 162 | 8.4 | 5,803 | 15.8 |
| Median | \$100,500 | | \$125,200 | |
| Renter-occupied units | 364 | 100.0 | 12,337 | 100.0 |
| Less than \$200 ^b | 24 | 6.6 | 1,369 | 11.1 |
| \$200 to \$299 | 7 | 1.9 | 602 | 4.9 |
| \$300 to \$499 | 120 | 33.0 | 3,458 | 28.0 |
| \$500 to \$749 | 166 | 45.6 | 5,280 | 42.8 |
| \$750 to \$999 | 47 | 12.9 | 1,368 | 11.1 |
| \$1,000 or more | 0 | 0.0 | 260 | 2.1 |
| Median contract rent | \$543 | | \$537 | |
| ^a Specified housing units include only one-family houses on less than 10 acres without a commercial establishment or medical office on the property. | | | | |
| ^b Includes no cash rent | | | | |
| Source: 2000 U.S. Census | | | | |

Chapter 8

Market Assessment

Introduction

The following section assesses the market potential for future residential, commercial, and industrial uses within the Township based on nationally recognized planning and design standards. This information will be used to determine the amount of each land use that can reasonably be required in Kimball Township by 2020.

Residential Needs Analysis

The characteristics of the existing structures will largely determine the type of housing that will likely be constructed during the planning period. Housing unit projections are based upon existing and projected demographic patterns, as well as existing housing characteristics. Demographic characteristics analyzed include projections of the total population and persons per household. Housing characteristics analyzed include the ratios of year round, seasonal housing, vacancy rates, and recent residential housing unit construction.

The Socioeconomic Profile chapter revealed that the population in Kimball Township is projected to reach 13,111 (average) by the end of the planning period (2020). At the same time, the average household size is expected to be 2.45 (SEMCOG).

After estimating for the impacts from population and household size it is also necessary to calculate how much of the total housing stock in the plan year will be vacant for sale or rent. Generally, five percent of a community’s habitable housing stock should remain vacant to provide diversity in housing selection, permit housing rehabilitation or replacement activities, and to ensure that asking prices for housing are indicative of actual market conditions, while at the same time protecting private investment. Vacancy rates below five percent demonstrate a restricted housing environment, affording little opportunity for potential households to be absorbed by available units. In calculating future housing needs, it is assumed that this vacancy rate will be five percent.

Data in **Table 8-1** summarizes the projected changes to population, persons per household and housing stock through 2020. Based on this analysis, it is anticipated that an additional 2,331 year-round dwelling units will be needed by 2020 in order to house the projected population.

| Category | 2000 | 2020 | Change 2000-2020 | |
|-----------------------|-------|--------|------------------|---------|
| | | | Number | Percent |
| Total Population | 8,628 | 13,111 | 4,483 | 52.0% |
| Persons per Household | 2.74 | 2.45 | (0.29) | (10.6%) |
| Total Occupied Units | 3,120 | 5,351 | 2,231 | 71.5% |
| Vacancy Rate (%) | 5.5 | 5.0 | -- | -- |
| Vacant for Rent/Sale | 91 | 282 | 191 | 209.9% |
| Total Housing Units | 3,302 | 5,633 | 2,331 | 70.6% |

*Data compiled by Wade-Trim
Source: Tables 3-2, 3-4, 3-10 (see Socioeconomic Profile Chapter).*

It is important to note that by the end of the planning period, 1,597 housing units in Kimball Township will be 50 years old or more. It is estimated that 50 percent of these homes, or 799 units, will be eliminated during the planning period due to their age, deteriorated condition, or the associated expense for repair. The housing unit projection of 2,331 year-round dwellings by year 2020 does not factor in replacements of these homes.

Commercial Needs Analysis

Commercial development is an important part of a community's economy. Commercial establishments provide goods and services to consumers, promote economic stability, and generally enhance the quality of life for area residents. If commercial districts are not suitably located and carefully planned, they can be a disruptive element and ultimately detract from the community. The following analysis details the existing commercial base found in Kimball Township and projects the likely amount of commercial land that will be consumed by the end of the planning period according to commercial land use standards.

Existing Commercial Base

Consistent with **Table 3-1** found in the Existing Land Use chapter, 422.2 acres in the Township are devoted to commercial development. Moreover, 9.6 acres are used for office purposes. Commercial and office land uses are principally concentrated in the northeast quadrant of the Township along Lapeer Road, west of the C&O railroad crossing, and around the I-69 Interchange at Wadhams Road. This quadrant is influenced greatly by its proximity to the City of Port Huron and Port Huron Township. Growth generators within the Port Huron area include the convergence of the I-94 and I-69 expressways, the new railroad tunnel, the second span of the Blue Water Bridge, the expansion of utilities, and the increase of urbanization pressures.¹

The commercial development pattern found along Lapeer Road in Kimball Township extends east in a linear fashion into Port Huron Township, then culminating in the City of Port Huron.

Feeding into this commercial corridor, is the I-69 interchange with Wadhams Road. Wadhams Road is a north/south primary county road that runs the full length of the Township. Aside from the interchange area, Wadhams Road supports intermittent general commercial development primarily south of the G.T.W. railroad crossing.

There are two I-94 interchanges in Kimball Township; Gratiot Road and Range Road. Both interchanges contain commercial development. The largest development project is the 187,467 square foot retail outlet center (Horizon) at the I-94 interchange with Range Road. The Horizon Outlet Center offers comparison shopping for the surrounding region.

To a lesser extent than those areas mentioned above, commercial development has sprouted at mile intervals along Griswold road at county road intersections.

Table 8-2 details major retail development projects in St. Clair County from 1990 to 1996. The Horizon Outlet Center represents the single major retail development to be constructed in Kimball Township during this time period. Recent estimates, however, indicate that only 12 of 45 retail spaces are currently occupied.

| Community | Amount of Retail Space Constructed ^b | | Number of Buildings | |
|-------------------------------|-------------------------------------------------|------------------|---------------------|-----------|
| | 1990-1996 | Total | 1990-1996 | Total |
| Algonac | 0 | 58,760 | 0 | 1 |
| Fort Gratiot Twp. | 1,170,277 | 1,431,059 | 5 | 7 |
| Kimball Twp. | 187,467 | 187,467 | 1 | 1 |
| Marine City | 0 | 147,339 | 0 | 1 |
| Marysville | 0 | 239,786 | 0 | 3 |
| Port Huron | 158,200 | 363,200 | 1 | 3 |
| Port Huron Twp. | 342,000 | 580,330 | 1 | 3 |
| St. Clair | 0 | 136,020 | 0 | 1 |
| Total St. Clair County | 1,857,944 | 3,143,961 | 8 | 20 |

Source: "Major Retail Centers Within Southeast Michigan, 1996", SEMCOG Memorandum, July 18, 1997.

^aRetail facilities 50,000 sq. ft. or more in gross retail space.
^bIn square feet

Fort Gratiot Township, located to the northeast of Kimball Township, saw the greatest increase in retail development (1,170,277 square feet) between 1990 and 1996, and holds the largest total amount of major retail space (1,431,059 square feet) in the County. The City of Port Huron and Port Huron Township, west of Kimball Township, also saw tremendous growth. This is largely attributable to the regional access provided by I-69 and I-94 and Blue Water Bridge crossing into Canada.

¹Comprehensive Development Plan, Charter Township of Port Huron, St. Clair County, Michigan, January 1994.

Since this period in the 1990's retail development has continued within Kimball Township; however, totals for new retail square footage have not matched this earlier trend. From 2001 to 2004, for example, Kimball Township added 85,170 sq. ft. of retail space. Again, the majority of this retail space stemmed from the Horizon Outlet Center (Phase II), 75,600 square feet in 2002.

Commercial Land Use Standards

There are four primary types of planned shopping environments: neighborhood centers, community centers, hyper-centers and, regional centers. Data in **Table 8-3** present the market base standards for these four types of commercial centers.

| Center Type | Site Size | Composition | Population Base | Service Area |
|--------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| Neighborhood Center | 3-15 acres | Supermarket as the principal tenant with other stores providing convenience goods or personal services. Typically GLA of 30,000 to 150,000 square feet. | Trade area population of 3,000 to 40,000 people | Neighborhood, 5-10 minute drive time, 1.5 mile radius |
| Community Center | 10-40 acres | Junior department store or variety store as the major tenant, in addition to the supermarket and several merchandise stores. Typically GLA of 100,000 to 450,000 square feet. | Trade area population of 40,000 to 150,000 people | 10-20 minute drive time, 3-5 mile radius |
| Regional Center | 30-100 acres | Built around a full-line department store with minimum GLA of 100,000 square feet. Typically GLA of 300,000 to 900,000 square feet. | 150,000 or more people | 20 minute drive time, 8 mile radius |
| Hypercenter^a | 50-70 acres | Single store with multiple departments that offers large selections of fast moving general merchandise and food products and relies on its lower prices to draw customers from a wide reaching market area. Typically 175,000 to 330,000 square feet. | Trade area population figures not available. | 25-30 miles |

*Urban Land Institute, *Shopping Center Development Handbook*, (Washington, D.C.), 1977, 1999.
^aUrban Land Institute, *Development Trends*, March 1989.
 NOTE: GLA represents gross leasable area.

Neighborhood centers generally require a site between three and 15 acres in area. Such centers often have a supermarket as the principal tenant with other stores providing convenience goods or personal services. The typical gross leasable area is 30,000 to 150,000 square feet. The required trade area population ranges between 3,000 and 40,000 people living within a 1 to 1-1/2 mile radius or six-minute drive of the center.

Community centers generally require a site that is ten to 40 acres in area. Such centers often have a junior department store (K-Mart, WalMart, etc.) or variety store as the major tenant in addition to a supermarket and other retail stores. The typical gross leasable area is 100,000 to 300,000 square feet. The required trade area population ranges between 40,000 and 150,000 people living within a three to five-mile radius.

Regional centers are typically constructed on a site of 30 to 50 acres in area. Such centers are built around a full-line department store with a minimum gross leasable area of 100,000 square feet. Regional centers may have a total gross leasable area of 300,000 to 900,000 square feet. The required trade area population is 150,000 people or more living within an eight-mile radius.

Hypercenters range in size from 50 to 70 acres. They typically consist of a single store with multiple departments with large selections. They rely on low prices to draw customers from a wide reaching market area of 25 to 30 miles from the center. Store sizes typically range from 175,000 to 330,000 square feet.

Not every commercial use is sited within pre-planned shopping centers. Attention must also be given to uses which occupy freestanding structures or which are part of strip commercial areas. Most of these uses are considered highway-oriented businesses, since much of their trade results from exposure and accessibility to passing motorists.

Estimated Commercial Land Use Needs

Based upon the available land area and the projected 2020 population, Kimball Township could support up to four neighborhood centers totaling approximately 66 acres.

Data in **Table 8-3** presents the market base standards for many of these types of uses. For land use planning purposes, it is recommended that ten acres per 1,000 people be allocated for such development. Thus, by 2020, approximately 131 acres of non-center commercial development may be required by Kimball Township residents for general business purposes.

Data in **Table 8-4** also documents the population base necessary to support different types of office development (doctors, real estate, accounting, travel agencies, legal offices, and banks). To provide for office development, three acres per 1,000 people is the recommended guide. Thus, by the end of the planning period, approximately 39 acres of office development will be needed to support the Township population.

Based upon these standards, the commercial needs analysis predicts that Kimball Township will require approximately 236 acres of commercial development (66 acres for neighborhood commercial centers, 131 acres for non-centers, and 39 acres for offices) by 2020 to serve its growing population. Currently, the existing land use analysis reveals that the Township has approximately 432 acres of commercial and office land use. Therefore, according to the planning standards, the supply of 432 acres

of commercial land uses in Kimball Township exceeds the predicted local demand by 196 additional acres. This supply surplus may be attributed to the high degree of regional access provided by I-69 and I-94 to serve a larger population base.

| Store or Service Use | Population Base | Market Penetration | Rental Revenue Potential | Typical Building Size in Square Feet |
|-----------------------------------|---------------------|--------------------|--------------------------|--------------------------------------|
| Food Stores | 4,000 | low | low | 20,000 |
| Drug Stores | 9,000 | high | medium | 5,400 |
| Liquor Stores | 3,100 | high | high | 2,000 |
| Restaurants & Taverns | varies | low | high | 3,300 |
| Laundries (coin-operated) | 12,400 ^a | high | low | 1,600 |
| Dry Cleaners | 3,000 | high | low | 1,300 |
| Beauty Shops | 2,100 | high | medium | 1,200 |
| Barber Shops | 3,300 | high | medium | 750 |
| Television Repair | 5,300 | medium | low | 1,400 |
| Real-Estate Offices | n/a | high | high | 1,000 |
| Branch Banks | 4,500 | low | high | 4,000 |
| Accounting Offices | n/a | n/a | n/a | n/a |
| Nurseries | 16,200 | high | medium | 1,300 |
| Travel Agencies | varies | high | high | 800 |
| Women's Apparel Stores | 6,000 | low | medium | 2,500 |
| Sporting-Goods Stores | 18,000 | medium | medium | n/a |
| Books & Stationery | 6,500 | low | medium | 2,000 |
| Furniture & Home Furnishings | 6,200 | low | medium | 10,200 |
| Camera Stores | 55,100 | medium | medium | 2,000 |
| Automotive Service Stations | 2,800 | low | high | varies |
| Hardware, Paint & Building Supply | 8,700 | medium | medium | 5,700 |
| Convention Hotels | b | varies | n/a | varies |
| Bowling Alleys & Billiard Parlors | c | c | c | c |
| Doctors Offices | 1,000 | low | high | 1,000 |
| Legal Offices | 6,000 | low | high | 800 |
| Stock-Brokerage Offices | 15,000 | low | high | 800 |

Note: Population base refers to the number of actual customers each store or service requires for its support. Market penetration is each one's relative ability to withstand competition; a store with low penetration needs a greater number of residents in the area than one with the same population base and high penetration. Assume a 3:1 site to building size ratio to determine total land area need.
Source: Darley/Gobar Associates, Economic, Real Estate, and Marketing Consultants, as published in House and Home Magazine, 1973.
^aFigure is approximate, depending on whether residents have their own machines.
^bNot applicable; does not depend on residential population.
^cCurrent figures not available. Popularity is declining.

Industrial Needs Analysis

The quantity of developed industrial land a community will need in the future is dependent upon its current employment base, infrastructure capacity, local political philosophy, as well as a myriad of other factors industries consider when choosing a new facility location. Data in **Table 8-5**, Industrial Location Criteria, list some of the more important location criteria industries analyze when selecting a site.

This chapter assesses the current supply and location of industrial land within the Township and estimates the amount of industrial land that will likely be needed to support the local tax base. Further, recommendations are made on the type and location industrial development should occur based upon local objectives and need.

Existing Industrial Base

Emerging global markets, heightened competition for market share, and customer demand for faster product delivery are all contributing to transportation as a key factor in site selection. According to a recent survey of executives, transportation is second only to labor availability and cost when selecting the right site for a new or expanded facility.² The emphasis on transportation, highway accessibility in particular, reinforces a continuing trend of executives seeking effective transportation links with both suppliers and customers. “Just-in-time” delivery requirements, reduced inventories, and reduced costs of materials on hand are driving this requirement.³

²Hess, Robert J., *Assessing Transportation Factors with Dispatch, Area Development*, July 1997.

³Canup, C.R. (Buzz), *Manufacturing Executives Evaluate the Key Factors of Site Selection, Area Development*, December, 1995.

Air Industrial Park Tenants

- Dorzel Aviation Services Co.
- Classic Aviation LLC
- Marque Properties Inc.
- I T C Molding
- Kimball Plastics
- Marysville Propeller
- Greater Bay Capital
- S C C International Airport
- Jump Industries
- Corson Fabricating
- PRJ Investments LLC
- Allied Photo Chemical
- Pioneer Financial Funding
- Sage Capital Corp.
- AP Ventures LLC
- Evans Air Corp
- Williams Aviation
- St. Clair Airport Prop. LLC.
- Banking Forms Supply Co.
- St. Clair Flight Academy
- Triple J. Enterprises
- PNT Registered Importers U
- Port City Fulfillment
- Colien Enterprised
- Lawrence Fabricating
- PMR Industries

**Table 8-5
Location Criteria Used by Industry**

| | |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Availability of Adequate Sites | The trend is to one-story plants with adequate space for parking, loading, a reserve for expansion, and, if the industry abuts a residential area, a landscaped buffer strip. |
| Reasonable Tax Rates | Two of the more frequently stated reasons for an industrial move are the lack of an adequate site or the lack of a reasonable tax rate. |
| Location of Production Material | Improved methods for moving bulk products are lessening the importance of this factor. |
| Power | Electric power is the type most often required today, and there should be no local problems in this respect. |
| Water | Many industries require large quantities of water, either raw or treated, in their manufacturing process, and some find it desirable to have water as a means of cheap transportation. |
| Waste Treatment Facilities | A prerequisite to industrial operations locating in a particular area is its ability to handle the disposal of wastewater. Either public utilities with readily available access to or on-site waste treatment facilities with sufficient capacity to meet operational requirements have become integral location criteria, requiring careful consideration. |
| Industrial Fuel | Industries requiring gas are limited as to their potential locations. If coal is required in large quantities, the industry should be located along railroads or waterways. |
| Transportation Facilities | The importance of rail sites has diminished for some industries. Many rely solely on major highways as the means of bringing in production materials and distributing the finished product. |
| Favorable Competitive Pattern | Certain industries are finding it worthwhile to establish branch plants and to decentralize in order to maintain competitive advantages. |
| Living Conditions | An industry will also investigate a community's resources in terms of educational and recreational facilities, housing, availability of professional services, nature of shopping facilities, and public attitudes. |
| Compatible Laws | Up-to-date industrial thinking recognizes the desirability of sound zoning, building, and other codes. |
| Site Characteristics | Such things as soil and topography, amount of grading required, drainage conditions, waste disposal service, etc., are important to certain industries. |
| Labor | The cost of labor as a factor of production is important to industries where added costs cannot be shifted to the consumer without sacrificing competitive advantage. |

Compiled by Wade-Trim.

Kimball Township's transportation facilities play a major role in industrial development patterns. The Township's industrial base has capitalized on its highway interchanges, the airport, and rail line. Specifically, industrial uses are found at the I-94 interchange at Gratiot Road, and near the St. Clair County International Airport in the Air Industrial Park. Numerous other industrial uses are scattered throughout the Township along the major roadways.

Heavy industry in the Township is confined to Township Section 2 (north of the I-69/Wadhams interchange and just east of the Wadhams Road intersection with Lapeer Road).

Industrial Land Use Planning Standards

For land use planning purposes, it is necessary to estimate the amount of land that can reasonably be expected to develop for industrial uses. This enables capital improvements to be planned and programmed in advance, and that an ample supply of land is available to support local employment opportunities.

Three methodologies commonly used for calculating future industrial land needs are employment/density ratio method, land use ratio method, and population ratio method. These are summarized in **Table 8-6**, Estimating Industrial Land Use Requirements.

The employment/density ratio method is considered the most accurate predictor of industrial land use demand. If employment by industry can be projected, a worker density factor can be applied. This will result in a total acreage requirement for three distinct intensities of industrial land use. Intensive industries include electrical equipment and supply; printing and publishing; apparel and textile products; transportation equipment; and similar uses. Intermediate extensive industries include lumber and wood products; furniture and fixtures; food and kindred products; chemicals; and similar uses. Finally, extensive industries include tobacco products; petroleum and coal products wholesale trade; and similar uses.

Land use ratios can be used as a benchmark to estimate the future need for industrial land uses. By developing an inventory of the amount of land devoted to industrial uses in other communities, an average can be calculated and used as a standard for planning purposes. It is important to note that the percent of industrial land use is based on developed land area, not total land area (which includes vacant land and agricultural land area.) The third methodology is similar in that it uses a benchmark ratio as a standard, but the ratio uses population as the base for comparison.

Employment Density Ratios

Initial future employment patterns were estimated using a 1994 SEMCOG Regional Development Forecast (RDF) for Kimball Township, as it was the best available information at the time. In order to account for new employment projections (detailed by SEMCOG in 2002), acreage totals were adjusted. According to SEMCOG in 2002, manufacturing employment in Kimball Township in 2020 will be 291 persons. Wholesale trade, which is considered an extensive industry is projected to be 214

| Employment Density Ratios | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <i>Industry</i> | <i>Average Number of Employees Per Net Site Acre</i> |
| Intensive Industries ^a | 30 |
| Intermediate Extensive Industries ^b | 14 |
| Extensive Industries ^c | 8 |
| Land Use Ratios | |
| <i>Community Size</i> | <i>Percent Industrial Land Average</i> |
| Small Cities and Towns (under 42,000) | 8% |
| Population Ratios | |
| <i>Category</i> | <i>Ratio</i> |
| Total gross land required for all industry | 12 acres per 1,000 population |
| Land required for light industry | 2 acres per 1,000 population |
| Land required for heavy industry | 10 acres per 1,000 population |
| Source: Urban Land Institute, Industrial Development Handbook, 1975; American Planning Association, PAS Memo: Land Use Ratios, May 1983; Joseph DeChiara and Lee Koppleman, Planning Design Criteria, 1969. | |
| ^a Industries include electrical equipment and supply; printing and publishing; apparel and textile products; transportation equipment; and similar uses. | |
| ^b Industries include lumber and wood products; furniture and fixtures; food and kindred products; chemicals; and similar uses. | |
| ^c Industries include tobacco products; petroleum and coal products; wholesale trade; and similar uses. | |

| <i>Employment Ratio Technique</i> | | | |
|-----------------------------------|------------------|--------------------|--------------------|
| <i>Category</i> | <i>Net Acres</i> | <i>Gross (4:1)</i> | <i>Gross (5:1)</i> |
| Intensive | 3.0 | 12 | 15 |
| Intermediate | 13.4 | 53.6 | 67 |
| Extensive | 24.1 | 96.4 | 120.5 |
| Total | 40.5 | 162 | 202.5 |
| Source: Calculations by Wade-Trim | | | |

persons. Using the employment density ratios, summarized in **Table 8-7**, the potential range of land area that may be required for industrial land uses would range between 3.0 net acres for intensive industries and 24.1 net acres for extensive industries. It should be noted, however, that these are estimates of net developed acres for industrial land uses. Taking this into account and adding additional space for setbacks, access, internal site circulation and parking would increase these estimates by four or five times. It is anticipated that the maximum amount of industrial land needed, using the employment ratio technique, will be 202.5 acres in year 2020.

Industrial Land Use Ratio

According to the industrial land use ratio projection technique, eight percent of the Township's developed land area should be utilized for industrial development. Developed land area totals 9,326.5 acres when agricultural land, parks and recreation, rivers and bodies of water, and vacant, open space, rights-of-way, and other land uses are subtracted from the total land area of 23,968.1 (see **Table 3-1, Existing Land Use**). This yields an estimated 746 acres for future industrial land use. This is 3.4 times the existing amount of land used for industrial purposes. Considering the Township's residential character and large geographic area encompassed by its boundaries, a standard requiring the Township to have eight percent of its developed land area devoted to industrial uses is unwarranted.

Population Ratio Technique

A third technique uses population ratios to determine acreage requirements. Data in **Table 8-6** indicate that 12 acres of industrial land are required for every 1,000 people. The 2020 Township population of approximately 13,111 people would, therefore, require approximately 157 acres of industrial land. The Existing Land Use analysis revealed that 217.3 acres of Township land area are currently utilized for industry. According to this model, Kimball Township currently has an excess of 60.3 acres of industrial acreage. Given the regional draw of Port Huron, however, additional acreage beyond the current inventory should be planned for industrial activity.

Chapter 9

Goals & Objectives

Introduction

Before a community can actively plan for its future growth and development, it must first set certain goals and objectives that define the boundaries of its needs and desires. This establishes a basis for the future land use plan formulation. These goals and objectives must reflect the type of community that is desired and the kind of lifestyle its citizens wish to follow, given realistic economic and social constraints. The following information outlines the goals, which are the ultimate intent of the Kimball Township Master Plan. It also describes the objectives to help the Township achieve its goals.

Planning Process

To devise the goals and objectives for the Kimball Township Master Plan, several steps were taken. The master plan process began with a resident survey devised by the Kimball Township Planning Commission, which was conducted in October of 1998. The goal of the survey was to garner pertinent information from Township citizens regarding what makes Kimball Township a "great place to live."

Then in February of 2000, the Planning Commission along with the Planning Consultant conducted an "Open House" to allow Township residents the opportunity to discuss and give input into the Master Plan. An issues identification exercise was conducted with the residents to discuss the strength, weaknesses and elements that threaten or could improve the quality of life in Kimball Township.

The next step in the Master Plan process was to get a "vision" of how the Township will develop in the next ten to 20 years. To accomplish this goal, Township residents were asked to participate in a "visioning workshop" which was held in July of 2000. The workshop participants were placed into small groups where they created a visual representation of their vision for the future of Kimball Township.

After time spent reviewing and re-working the Master Plan, while at the same time focusing on other planning projects, the Township resumed the master planning process in 2005. An additional community workshop was held by the Planning Commission in October of 2005, with the intent of reconfirming the "vision" for development in the next 20 years.

Action Plan

The results of these two workshops and the resident survey are the basis for the "action plan" for the Township. The Planning Commission compiled the information gained from the planning process to create the goals and objectives for the Township, as well as the Future Land Use Plan. The following information outlines the Master Plan goals and objectives for Kimball Township.

Community Goals and Objectives

Kimball Township adopts the following goals to guide future development and enhance the quality of life in Kimball Township.

Kimball Township will:

1. Maintain a high quality of life for both present and future Township residents.
2. Preserve the physical, social, and environmental characteristics of the Township.

3. Guide new development in a manner that conserves natural features, protects environmentally sensitive areas, and meets the long-term needs of the community.
4. Balance the rate of land development with the availability of public facilities and services such as roads and utilities. Encourage development where infrastructure currently exists.

The above stated goals can be achieved if Kimball Township utilizes the following objectives and related strategies.

Objectives Related to Agricultural Land Use

- Retain productive agricultural lands through available mechanisms such as open space and farmland agreements, conservation easements, and Township zoning incentives.
- Maintain an agricultural zoning district that discourages the development of non-agricultural land uses, including non-farm single-family residential units in the most prime agricultural areas.
- Discourage the rezoning, development, or expansion of infrastructure into prime agricultural area for non-farm related uses through the Township Zoning Ordinance.

Objectives Related to Residential Land Use

- Guide the development of housing towards densities that relate to natural and manmade features.
- Direct higher density housing to locate on land that has or is planned to have the infrastructure capacity to support such development.
- Develop local incentives to encourage residential development that complements the Township's rural character, retains open space and balances the needs of the agricultural community with the interests of the non-farm residents.
- Consider the impact new developments will have on the Township's public facilities, infrastructure, and ecosystem.
- Encourage the incorporation of existing vegetation, topography, and other natural features into the design of new residential developments.

Objectives Related to Commercial Land Use

- Provide reasonable opportunities for the establishment of commercial uses that meet the demonstrated market needs of Township residents.
- Focus commercial development in locations where compact and coordinated development can occur, preferably near areas of existing or proposed residential development, to promote pedestrian travel and land conservation.
- Discourage strip commercial development and isolated commercial uses.
- Promote commercial development in areas that are planned to have the infrastructure capacity to support such development.
- Require the establishment of transitional uses, landscape screening, and/or related buffering techniques between commercial and residential, agricultural, or open space land uses.
- Consider the impact new developments will have on the Township's public facilities, infrastructure, and ecosystem.
- Use locational advantage to attract higher quality development.

Objectives Related to Industrial Land Use

- Discourage industrial development that will negatively impact environmentally sensitive areas or require substantial changes to natural systems.
- Require the establishment of transitional uses, landscape screening, and/or related buffering techniques between industrial and residential, agricultural, or open space land uses.
- Consider the impact new developments will have on the Township's public facilities, infrastructure, and ecosystem.

Objectives Related to Public/Semi-Public Land Uses

- Provide for public and semi-public use areas offering a variety of opportunities.
- Supply public facilities and encourage private community facilities in size, character, function, and location suitable to their user populations.
- Solicit citizen participation and utilize professional expertise to determine needed and desired public and semi-public improvements.
- Research alternative methods of providing public and semi-public services and choose those options most conducive to citizen needs and desires, considering sound budgetary practices.
- For Township provided facilities; plan, locate, and provide public areas based on a long-range general plan, short-range project plans, and capital improvements programming.

Objectives Related to Community Facilities and Infrastructure

- Plan for the efficient location of public facilities and delivery of public services.
- Work cooperatively with other public agencies to facilitate the improvement of public facilities and services, especially road maintenance and improvements.
- Require that adequate public infrastructure be installed concurrently with the initiation of any new residential, commercial and/or industrial land development.
- Consider the construction or extension of public utilities only to those areas where existing population densities and natural resource conditions require such facilities to protect public health.
- Allocate costs of infrastructure improvements to those receiving the direct benefit of the services.

Objectives Related to Natural Features

- Maintain the Township's scenic and rural character by minimizing the impacts of development on environmental features such as wetlands, woodlands, and scenic views.
- Encourage the retention of important farmlands, forestlands, and open space areas.
- Protect Township residents and property from natural hazards associated with development that infringes on natural systems.
- Maintain undisturbed natural buffers around wetlands and other sensitive environmental systems.

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- Foster the stewardship of privately owned forestlands, wetlands, and other environmental systems.
 - Include parks, bicycle and pedestrian linkages and open space areas in conjunction with new and established developments.
 - Ensure that all county, state and federal environmental regulations are adhered to in the development of land.

Summary

The goals and objectives outlined above are guidelines for the future development of the Township. To ensure the success of the planning program and the desired growth of the Township, it is essential that these goals and objectives be seriously considered. However, these statements are suggested as a starting point for local officials. As the planning process progresses, the goals and objectives may be altered and new ones formed. Thus, these recommendations are flexible and need constant attention. It is recommended that the goals and objectives be reviewed and updated, as the Township Planning Commission believes necessary.

Chapter 10

Future Land Use

The Future Land Use Plan identifies the desired pattern of land development in the Township for a period extending approximately 20 years. This chapter describes the formulation process and the intended character of each land use classification. A future land use plan is general in nature. Boundaries between land use classifications are not intended to be parcel specific or prescribe specific land uses for legally described property. Rather, a future land use plan is a flexible document that describes a desirable pattern of future development within Kimball Township.

Formulation Process

The Future Land Use Plan evolved from a close examination of existing conditions described in the background studies and through consideration of the desired growth pattern expressed by the Township citizens.

The primary factors shaping the planned development pattern are the carrying capacity of the land, the presence of natural features, proximity to existing public utilities, population growth patterns, and access to regional transportation routes. Land within the Township has been planned for one of 14 different future land use types (two categories, rivers and bodies of water and rights-of-way are not considered future land use categories). The future land use acreage distribution is summarized in **Table 10-1**.

| Land Use | Acreage | Percentage |
|----------------------------|-----------------|---------------|
| Agricultural/Farmstead | 10,174.5 | 42.5% |
| Rural Estates | 4,436.8 | 18.5% |
| Single-Family Residential | 3,094.6 | 12.9% |
| Multi-Family Residential | 20.4 | 0.1% |
| Mobile Home Park | 57.5 | 0.2% |
| Public/Semi-Public | 312.7 | 1.3% |
| Parks and Recreation | 1,307.8 | 5.5% |
| Office | 157.7 | 0.7% |
| Local Commercial | 206.4 | 0.9% |
| General Commercial | 795.2 | 3.3% |
| Regional Commercial | 306.2 | 1.3% |
| Light Industrial | 245.5 | 1.0% |
| Landfill | 250.1 | 1.0% |
| Airport | 686.4 | 2.9% |
| Rivers and Bodies of Water | 225.7 | 0.9% |
| Rights-Of-Way | 1,690.6 | 7.1% |
| Total | 23,968.1 | 100.0% |

Range Road Corridor Plan

In addition to the traditional future land use planning process, Kimball Township's Future Land Use Map also reflects the results of the Range Road Corridor Plan. The Range Road Plan is a multi-jurisdictional plan depicting the preferred development pattern for the corridor for the next fifteen to twenty years. As well as land use recommendations, the Range Road Plan also establishes a desired character for the area and provides strategies for enhancements and development of this image. The inclusion of the Range Road Plan adopted land uses further substantiates Kimball Township's future land use process as reflective of not only Township, but regional issues as well.

Future Land Use Categories

Agricultural/Farmstead

The Agricultural/Farmstead category generally includes land that is being used for farming and crop cultivation purposes. Generally, lands in this category occupy large-sized parcels, which may include a single-family residence. Also, this land use type allows several outbuildings that are related to the agricultural type uses.

Agriculture should remain the predominant use in these areas, however, non-farm uses may be considered acceptable if designed to conform to the rural atmosphere found in the surrounding area. Architectural design of non-agricultural uses should draw upon the bulk, styling, and proportions of traditional farm buildings wherever possible.

Uses that may blend in with the countryside include value-added industry such as cabinet, gazebo, and furniture making. Other non-farm uses that may be considered compatible include kennels and veterinary facilities, noncommercial wind energy and conversion systems, and possible tourist oriented business, etc. Permitting uses such as those identified above will assist in the preservation of farmland by allowing property owners the option for a second income, permitting them to continue practicing farming in all economies.

Rural Estates

The Rural Estates category is intended to provide for the development of rural residences on land that was previously agricultural. Rural Estates accommodate both the protection of agricultural lands and the development of new residential areas. Rural Estates will also provide open space areas that will offer a suitable transition between the agricultural and higher density uses.

Generally acceptable land uses include residential development at an average development density of one dwelling unit per 2.5 acres and other community-oriented uses such as day care and adult foster care facilities, churches, as well as public and private recreation facilities. Home-based businesses may also be permitted under limited conditions.

Single-Family Residential

The Single-Family Residential category is intended to provide a transition from an urban to rural setting. This category would include site-built single-family detached structures, manufactured (modular) dwellings located outside designated mobile home parks, and accessory buildings, such as garages, that are related to single-family uses. Single-family dwellings in the Township may be located as part of a subdivision or on individual parcels.

Generally acceptable land uses include residential development at an average density of two dwelling units per acre where Township sewer services are available, or 1.1 units per acre (following St. Clair County Health Department standards) where on-site sewer/septic systems must occur. Open space planning or cluster housing developments are design options for the creation of common open space within new residential neighborhoods. Home-based businesses should be carefully regulated in this area to prevent negative impacts on adjacent homes and the residential character of the area.

Multi-Family Residential

The Multi-Family Residential classification is intended to provide opportunities for housing styles, which are an alternative to traditional subdivision development. Multi-family developments may serve as a transitional land use that buffers single-family homes from more intensive land uses or the impacts associated with major transportation corridors. An important component of multi-family developments is that they must be served adequately by essential public facilities. These facilities include services such as water and sewer, storm drainage, and refuse disposal. Due to the higher density and trip generation potential of multiple-family developments, these uses are sited so that ingress and egress is provided directly from a major thoroughfare or collector street.

Permitted uses within this district are garden apartments, townhouses, multi-family upscale condominium developments and convalescent or nursing homes. This type of development is encouraged to locate in areas well served by the existing transportation network and where the amenities of urban living may be best provided. However, the undue concentration of any one type of housing in a single area is to be discouraged.

The recommended residential density of a multi-family development is 10 to 15 units per acre, depending on the dwelling unit type. It is important that these developments are well designed and include characteristics such as:

- Adequate distance between structures within the development;
- Appropriate height limitations, served with open space;
- Utilities;

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- Access only to paved streets with safe and efficient egress and ingress designed to minimize congestion and interference with normal traffic flow;
 - Adequate drainage; and,
 - Greenbelts designed to buffer the development from single-family residential districts or any developed non-residential district.

Mobile Home Park

The purpose of mobile home parks is to encourage a suitable environment for persons and families who, by preference, chose to live in a mobile home rather than a conventional stick-built structure. The Mobile Home Park land use classification includes lands assembled for the purpose of locating a planned mobile or manufactured home community. Development should be in a subdivision design with related service and recreational areas.

Public/Semi-Public

This category includes all public lands devoted to a public purpose such as schools, municipal offices, police and fire departments, department of public works, sewage and water treatment facilities, electrical substations, libraries and other comparable uses. Additionally, this land use classification identifies semi-public uses that are privately owned, but are generally open to the public. These uses would include churches, meeting halls, auditoriums, cemeteries and the like.

Parks and Recreation

The Parks and Recreation land use category of the Master Plan refers to those lands principally used for recreational purposes. This may include active recreation facilities such as playground equipment, ball diamonds, tennis courts, soccer fields, and public and private golf courses. In addition, passive recreation facilities, such as hiking trails, beach and picnic areas, are also included in this category.

Office

Generally acceptable land uses within the Office land use classification include professional offices, including medical, dental and veterinary clinics, business offices, and personal service establishments.

Local Commercial

The Local Commercial land use classification is intended to provide locations for small businesses established to meet the day-to-day convenience shopping and service needs of neighborhood residents. Generally acceptable uses within the Local Commercial area include retail businesses, personal service establishments, and restaurants. Individual businesses within the Local Commercial area should not exceed 5,000 gross square feet and commercial buildings for multiple tenants should not exceed 10,000 gross square feet. The purpose of the floor area restriction is to ensure that the Local Commercial area remains focused toward serving the day-to-day needs of the local neighborhood market area rather than expanding to service a regional market area. Local Commercial uses should be encouraged to provide shared access points, screened parking, and screened loading areas. Building architecture and signage should be compatible with surrounding uses, including residential uses.

General Commercial

General Commercial uses are those which are comprised of a single structure or group of structures having a large amount of floor space and a variety of commercial and service establishments. They typically offer products and services needed less frequently, which draw comparison shoppers. Often these uses are found in a community or regional shopping center. Uses included in this category are general merchandise stores, apparel and accessory shops, grocery stores, and furniture and appliance establishments.

Regional Commercial

The Regional Commercial district is designed for uses that do not require location in a shopping center. Rather, such uses typically benefit from a location on a major thoroughfare that permits good access. Uses included in the Regional Commercial category are larger retail strip developments containing two or more retail/commercial anchors, discount supermarkets, automotive sales and service, commercial lodging, large super center retail stores, eating and drinking establishments, and landscape or building material outlets.

Light Industrial

The Light Industrial classification is generally intended to accommodate low impact light industries that have comparatively high acreage requirements. Smaller scale, low impact light industrial uses and manufacturing or services that do not require heavy truck traffic such as repair and welding shops or light assembly businesses are encouraged to be developed. Often these types of uses may have significant outdoor storage or shipping/receiving requirements. Buffering devices should be used, where appropriate, to mitigate industrial uses from adjacent residential properties.

Future industrial development should incorporate sound industrial site design principles. The main elements of high-quality light industrial site design include: controlled and convenient access; service areas located at the sides and rear of buildings; visitor parking and on-site circulation; screening of outdoor storage, work areas, and equipment; and emphasis on the main building entry and landscaping. A variety of building and parking setbacks should be provided in order to avoid long monotonous building facades and to create diversity.

Landfill

This land use category includes lands that accept and or process all types of industrial, commercial, and residential refuse, including building demolition material, metal barrels, tree stumps, tire, asbestos materials, medical waste, and special waste (i.e., contaminated soils).

Airport

The Airport classification includes land that serves both public and private aircraft and aircraft related activities.

Chapter 11

Implementation

The completion of this Future Land Use Plan is but one part of the community planning process. Realization or implementation of the recommendations of the Plan can only be achieved over an extended period of time and only through the cooperative efforts of both the public and private sectors. Implementation of the Plan may be realized by actively:

- Assure community wide knowledge, understanding, support, and approval of planning activities;
- Audit, analysis, revision, and adoption of existing and new Township ordinances or regulations pertaining to continued development and redevelopment within the area, including but not limited to, zoning controls, subdivision regulations, building and housing codes, and farmland and open space preservation practices;
- Support and ensure enforcement and consistent administration of in-place policies, ordinances and regulations; and,
- Provide a program of capital improvements and adequate, economical public services to encourage continued community growth.

Public Support of the Master Plan

Citizen participation and understanding of the general planning process and policies of the Plan are critical to the success of the Township's planning program. Kimball Township should develop a methodology that makes its citizens more aware of the planning process, and the day-to-day decision making which affects implementation of this Master Plan. Lack of citizen understanding and support could have serious implications for the eventual implementation of planning proposals. Failure of the public to understand and back possible bond issues, as well as taxation concerns, special assessments, zoning decisions, and development proposals are some of the results of public misunderstanding and rejection of longrange plans. On-going programs of discussion, education and participation will, therefore, facilitate the Township's efforts with regard to Plan implementation.

Towards this end, Kimball Township must again emphasize the necessity of, and reasons for, instituting the planning program. Accordingly, the Township Planning Act (Act 168 of 1959 as amended), Section 10 states that the Township Planning Commission "shall promote public understanding of an interest in the Plan and shall publish and distribute copies of the Plan and of any report, and may employ such other means of publicity and education as it determines necessary."

The Township may wish to prepare a Plan summary brochure for public distribution upon its adoption as a strategy to implement this goal. In addition, the development of a handout which contains the Goals and Objectives, as well as the Future Land Use Map and associated text is a beneficial tool for the Township. Residents and applicants tend to be more concerned with these sections of the Plan as they have a more direct bearing on their interests and property within the Township.

Land Development Codes

Zoning Ordinance

Zoning regulations are adopted under the local police power granted by the State for the purpose of promoting community health, safety, and general welfare. Such regulations have been strongly supported by the Michigan courts, as well as by the U.S. Supreme Court. Zoning consists of dividing the community into districts, for the purpose of establishing density of population and regulating the use of land and buildings, their height and bulk, and the proportion of a lot that may be occupied by them. Regulations with the various zoning districts may be different. However, regulations within the same district must be consistent throughout the community.

Zoning is employed as a means of protecting property values and other public and private investments. The intent of zoning is to support a community's Master Plan to help ensure the orderly development of land. It is an effective tool not only for the implementation of the Plan, but it also benefits individual property owners. Zoning protects homes and investments against the potential harmful intrusion of business and industry into residential neighborhoods or agricultural areas; requires the spacing of buildings far enough apart to assure adequate light and air; prevents the overcrowding of land; facilitates the economical provision of essential public facilities; and aids in conservation of essential natural resources.

A stable, knowledgeable Planning Commission is critical to the success of the zoning process. The Commission's responsibilities not only include long-range plan formulation but the drafting of appropriate, reasonable zoning ordinance regulations designed to implement Plan goals and objectives. Adoption of a zoning ordinance by the legislative body then provides the legal basis for enforcement of zoning ordinance provisions. The ultimate effectiveness of the various ordinance requirements, however, is dependent upon the overall quality of ordinance administration and enforcement. If administrative procedures are lax, or if enforcement of regulations is handled in an inconsistent, sporadic manner, the result will be unsatisfactory at best.

There are a variety of zoning approaches and techniques which may be employed to help assure that Kimball Township remains an attractive community in which to live, work, and play. These techniques acknowledge the critical role of both Township officials and staff in enforcing the provisions of the local zoning ordinance. Three key tools available to Township officials seeking to assure quality development are special approval use procedures, performance guarantee provisions, and zoning agreements (commonly referred to as contract zoning) as established by PA 577 of 2004.

Special Approval Uses

Some land uses are of such a nature that permission to locate them in a given district should not be granted outright but should only be approved after assurances that the use will meet certain specified conditions. These types of land uses are called special approval, conditional approval, and/or special exception uses. The Township currently uses this flexible zoning process to permit uses of land by following special procedures, including a public hearing and site plan review, to ensure the compatibility of the use within the vicinity in which it is to be located. This technique is based upon discretionary review and approval of special land uses. The site development requirements and standards upon which these decisions are made are specified in the ordinance as required by State law. However, the Township may wish to consider a review of these conditions to ensure that they are meeting the needs of the community. Additional reasonable conditions may be attached, including provisions that would conserve natural resources and measures designed to promote the use of land in an environmentally, socially, and economically desirable manner.

Performance Guarantee

To ensure compliance with a zoning ordinance and any conditions imposed under the ordinance, a community may require that a performance guarantee, cash deposit, certified check, irrevocable bank letter of credit, or surety bond, acceptable to the Township and covering the estimated cost of improvements on the parcel for which site plan approval is sought, be deposited with the Clerk. This performance guarantee protects the Township by assuring the faithful completion of the improvements. The community must establish procedures under which rebate of cash deposits will be made, in reasonable proportion to the ratio of work completed on the required improvements, as work progresses.

Conditional Zoning

As a third means of affecting the development process, Kimball Township should investigate and consider the addition and potential use of zoning agreements as specified in PA 577 of 2004. This Act provides for specific action on the part of the applicant within the rezoning process, specifically:

- (1) *An owner of land may voluntarily offer in writing, and the Township may approve, certain use and development of the land as a condition to a rezoning of the land or an amendment to a zoning map.*
- (2) *In approving the conditions under subsection (1), the Township may establish a time period during which the conditions apply to the land. Except for an extension under subsection (4), if the conditions are not satisfied within the time specified under this subsection, the land shall revert to its former zoning classification.*

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- (3) *The Township shall not add to or alter the conditions approved under subsection (1) during the time period specified under subsection (2).*
 - (4) *The time period specified under subsection (2) may be extended upon the application of the landowner and approval of the Township.*
 - (5) *A Township shall not require a landowner to offer conditions as a requirement for rezoning. The lack of an offer under subsection (1) shall not otherwise affect a landowner's rights under this act, the ordinances of the Township, or any other laws of this state.*

Due to the recent nature of this Act, no case law exists to understand how the courts will react to this type of development. While traditional zoning has been strongly supported by the Michigan courts, as well as by the U.S. Supreme Court, conditional zoning is too new. Still, this is a land development tool available to the Township and its use should be considered when presented by a land owner. However, great care should be taken to ensure the zoning contract meets the needs of the Township and that it can be supported by the Master Plan and local ordinances.

Review of Existing Zoning Code

Zoning Ordinances are not static documents and thus must be strategically amended to reflect changes in community needs, conditions and/or Township policy. Unfortunately, isolated text amendments often are made without fully assessing their relationship to other critical portions of the text. The end result is troublesome regulatory gaps, or worse, conflicting regulations.

After a cursory review of the current Kimball Township Zoning Ordinance, there suggests a need to address the following issues:

- Review of existing residential zoning classifications to evaluate pertinent differences between and among districts; specifically with regard to overall definitions, lot sizes and development densities.
- Give consideration to the addition of some new districts and to the possible refinement of others, specifically:
 - ◆ Review possible amendments to Agricultural District and how they can support the Agricultural and Rural Estate Districts outlined in the Plan;
 - ◆ Review possible amendments to the Single-Family Districts to ensure their locations on the Zoning Map correspond with the desired growth pattern of the Township; and,
 - ◆ Review possible inclusion of a new commercial districts that will support the three distinct Commercial Districts within the Plan.
- Review of existing development standards such as signage, landscaping, screening, building materials, lighting, parking, etc., to ensure the ordinance language is still meeting the needs of the Township.

Subdivision Regulations

To date, a fully developed sewer and water system is not available in the Township. These services are predominately found in the eastern portion of the Township, east of Wadhams Road. Therefore, the construction of large subdivisions is not prevalent throughout most of the Township. However, with the advent of private sewer and water systems that can support this type of development, sizeable subdivisions are not outside the realm of possibility. Therefore, it is important for the Township to plan for this type of use. When a developer proposes to subdivide land, he or she is, in effect, planning a portion of the Township. The Future Land Use Map outlines some specific areas within the Township where more dense single-family developments are desired.

Several direct benefits accrue from the regulation of subdivisions by a local unit of government. By requiring the subdivider to install adequate utilities and improved streets, purchasers of the lots are not later burdened with unexpected added expenses. A subdivision without adequate physical improvements is detrimental not only to itself, but it also reduces the opportunity for reasonable development of adjacent parcels. In addition, long-range economy in government can be realized only when adequate improvements are provided by the subdivider.

As a part of its review of proposed subdivisions, the Planning Commission will need to focus on such features as the arrangement and width of streets, the grading and surfacing of streets; the width and depth of lots; the adequate provision of open space; and the location of easements for utility installations. The Planning Commission's role within the subdivision review process is to ensure the protection and implementation of the goals and policies outlined in the Master Plan.

Farmland and Open Space Preservation

Kimball Township, through its Goals and Objectives, has demonstrated a commitment to the promotion and conservation of local agricultural resources, and the continuation of farming activities and related agricultural uses. So as to more concretely affirm and instill these practices, the Township may wish to employ, on its own or in joint partnerships, any single, part, or all of the following measures:

- Land trusts - A nonprofit organization that, as all or part of its mission, works with the Township to conserve land by undertaking or assisting direct land transactions-primarily the purchase or acceptance of donations of land or conservation easements.
- Purchase of Development Rights (PDR) – A program under which a governmental agency buys “development rights,” or a conservation easement that permits it to prohibit practices, uses and development of the land in violation of the terms of the development right document. The program does not give the government agency the right to develop the land. It simply permits it to extinguish those rights in return for appropriate compensation. Land owners retain full ownership and control of their land (AFT Farmland Information Library, 1996).
- Conservation easements - A conservation easement is a voluntary agreement that allows a landowner to limit the type or amount of development on their property while retaining private ownership of the land. The easement is signed by the landowner, who is the easement donor, and the Conservancy, who is the party receiving the easement. The conservancy accepts the easement with understanding that it must enforce the terms of the easement in perpetuity. After the easement is signed, it is recorded with the County Register of Deeds and applies to all future owners of the land.
- State of Michigan's farmland protection program (specifically Farmland Development Rights Agreements) - A temporary restriction on the land between the State and a landowner, voluntarily entered into by a landowner, preserving their land for agriculture in exchange for certain tax benefits and exemptions for various special assessments.(commonly known as PA 116).

(State) Purchase of Development Rights: A permanent restriction on the land between the State and a landowner voluntarily entered into by a landowner, preserving their land for agriculture in exchange for a cash payment for those rights.

Agricultural Preservation Fund: A fund established to assist local units of government in implementing a local purchase of development rights program.

Local Open Space Easement: A temporary restriction on the land between the local government and a landowner voluntarily entered into by a landowner, preserving their land as open space in exchange for certain tax benefits and exemptions for various special assessments.

Designated Open Space Easement: A temporary restriction on specially designated lands between the State and a landowner voluntarily entered into by a landowner, preserving their land as open space in exchange for certain tax benefits and exemptions for various special assessments.

Enforcement

The ultimate effectiveness of the zoning, subdivision, and other regulations depends on the effective administration and enforcement by the community. If administrative procedures are lax, or if enforcement of regulations is handled in an inconsistent sporadic manner, the result will be unsatisfactory at best. The Building Inspector is often responsible for carrying out zoning/development related functions, including building inspections, ordinance administration, and community/developer liaison. Each of these functions requires a substantial investment of time. If sufficient time is not made available to carry out these critical functions, they may only be accomplished in a cursory manner. Therefore, the Township should continue its in-place review and administration procedures so that these essential day-to-day functions will receive the professional attention they require.

Capital Improvements Program

The term “capital improvements” is generally intended to embrace large-scale projects of a fixed nature, the implementation of which results in new or expanded public facilities and services. Such items as public building construction, park development, sewer installation, waterworks improvements, street construction, land acquisition, and the acquisition of certain large-scale pieces of equipment (graders, sweepers, trucks, etc.) are included in the Capital Improvements Budget.

Few communities are fortunate enough to have available at any given time sufficient revenues to satisfy all demands for new or improved public facilities and services. Consequently, most are faced with the necessity of determining the relative priority of specific projects and establishing a program schedule for their initiation and completion. The orderly programming of public improvements is to be accomplished in conjunction with long-range planning.

In essence, the Capital Improvements Program is simply a schedule for implementing public capital improvements, which acknowledges current and anticipated demands and which recognizes present and potential financial resources available to the community. The Capital Improvements Program is a major planning tool for assuring that these projects proceed to completion in an efficient manner. The Capital Improvements Program is not intended to encourage the spending of additional public monies but is simply a means by which an impartial evaluation of needs may be made. The program is a schedule established to expedite the implementation of authorized or contemplated projects.

Long-range programming of public improvements is based upon three fundamental considerations:

1. The proposed projects must be selected on the basis of community need;
2. The program must be developed within the community's financial constraints and must be based upon a sound financial plan; and,
3. Program flexibility must be maintained through the annual review and approval of the capital budget.

The strict observance of these conditions requires periodic analysis of various community development factors, as well as a thorough and continuing evaluation of all proposed improvements and related expenditures. It is essential that, in the process of preparing and developing the program, the Planning Commission be assigned a role in reviewing project proposals to assure conformity with Kimball Township's Master Plan and to make recommendations regarding priority projects and appropriate methods of financing.

Planning Education

Planning Commissioners should be encouraged to attend planning and zoning seminars to keep themselves informed of current planning issues and learn how to better carry out their duties and responsibilities as a Planning Commissioner. These seminars are regularly sponsored by the Michigan Association of Planners (formerly the Michigan Society of Planning), Michigan Township Association, and the Michigan State University Extension Service and are valuable resources to the Planning Commissions in the State.

Revisions to the Plan

The Plan should be updated periodically. Any extension, addition, revision, or other amendment to a basic Plan shall be adopted under the same procedure as a Plan or a successive part of a Plan under the procedures stated in Michigan Public Act 263 (2002). However, for an amendment other than a revision of the Plan, both of the following apply:

1. The 65-day comment period otherwise provided for a planning commission, regional, planning commission, or public utility shall be 40 days.
2. The 75- to 95-day period otherwise provided for county planning commission or a county board of commissioners shall be 55 to 75 days.

At least every five years after adoption of the Plan, the Planning Commission, under the Public Act, is required to review the Plan and determine whether to commence the procedure to amend the Plan or adopt a new Plan. These reviews are necessary in order to be responsive to changes in growth trends and current community attitudes on growth and development within the Township.

Appendix

Map 1: Existing Land Use

Map 2: Soils

Map 3: Natural Features

Map 4: Flood Hazard

Map 5: Transportation

Map 6: Utilities

Map 7: Future Land Use



Central Region

**Cleveland, OH
216.363.0300**

**Indianapolis, IN
317.829.5881**

**Omaha, NE
402.345.3900**

**Pittsburgh, PA
412.454.5566**

Southern Region

**Asheville, NC
828.687.9500**

**Daytona, FL
386.274.1600**

**Palm Coast
386.437.5994**

**Key Largo
888.499.9624**

**Palm Bay
386-437-5994**

**Tampa, FL
813.882.8366**

Northern Region

**Bay City, MI
800.322.4500
989.686.3100**

**Detroit, MI
313.961.3650**

**Flint, MI
810.235.2555**

**Gaylord, MI
800.968.4440
989.732.3584**

**Grand Rapids, MI
616.363.8181
800.931.9135**

**Livonia, MI
734.432.3100**

**Taylor, MI
800.482.2864
734.947.9700**

**Traverse City, MI
800.968.6660
231.947.7400**