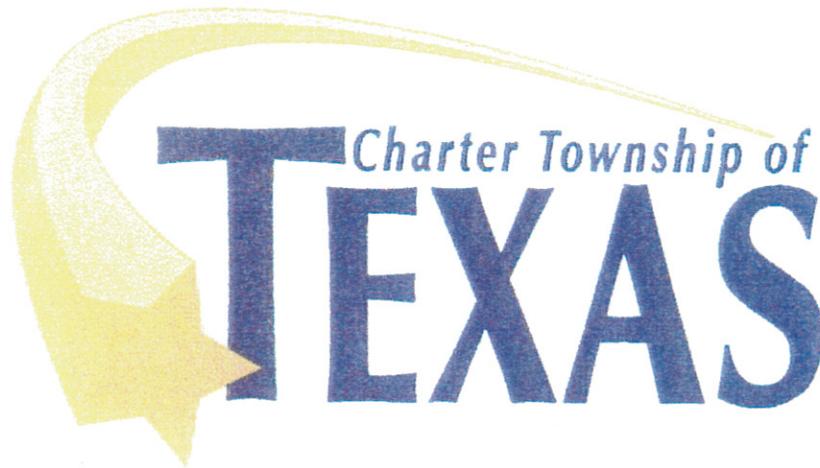


CHARTER TOWNSHIP OF TEXAS

COMPREHENSIVE
PLAN



NOVEMBER, 1999

ADOPTED 11/22/99
LINDA KERR

CHARTER TOWNSHIP OF TEXAS COMPREHENSIVE PLAN

November, 1999



BOARD OF TRUSTEES

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PLANNING CONSULTANT

Williams & Works

Jay Kilpatrick, AICP

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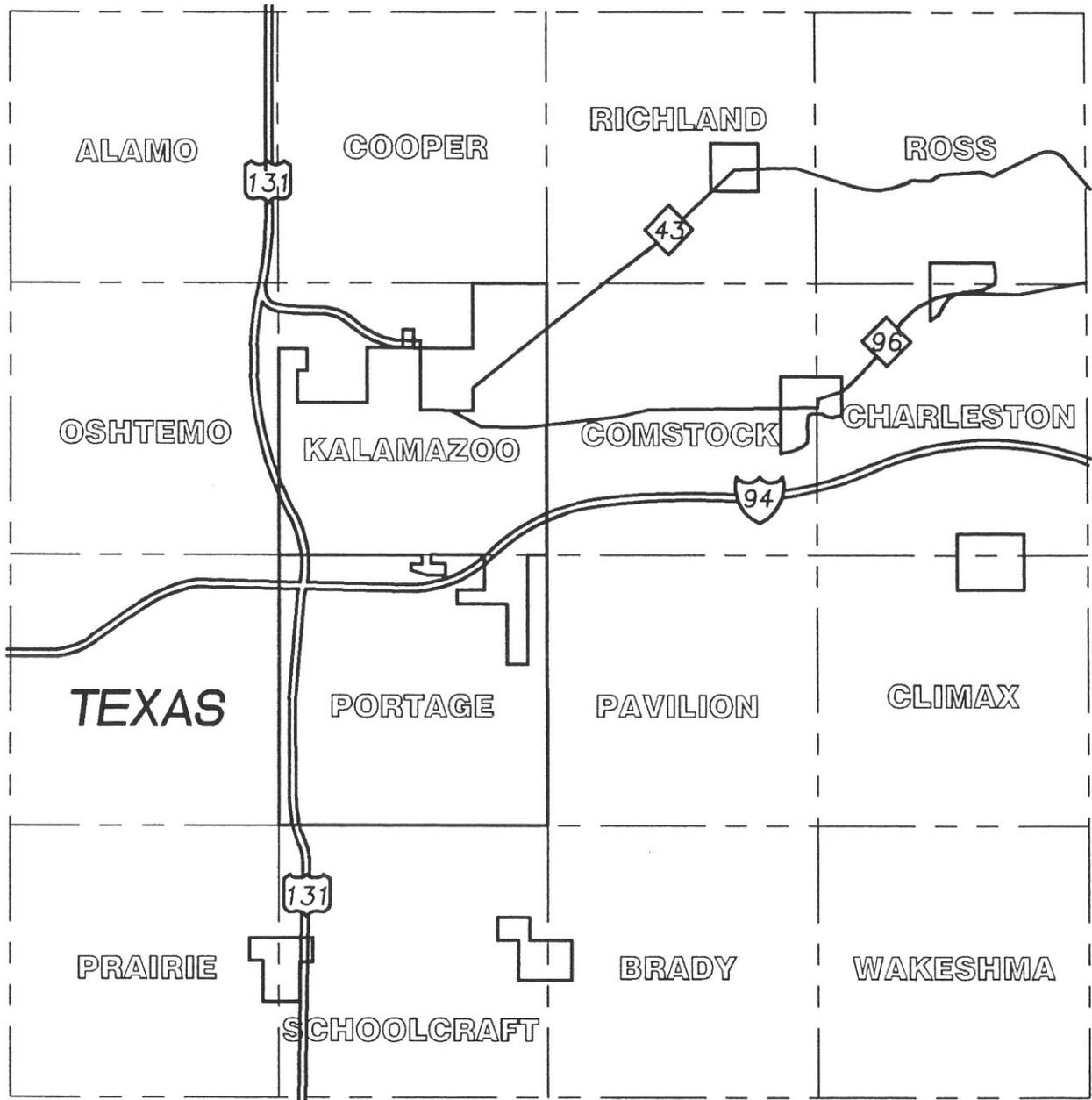
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**MAP 1
 CHARTER TOWNSHIP
 OF TEXAS
 LOCATION MAP**

CHAPTER 1. INTRODUCTION

This Plan reflects the community's deep concern for the rural character of the Township and a strong commitment to retain and strengthen local quality of life.

This Comprehensive Plan represents the culmination of over twelve months work by numerous local residents and local officials. It reflects the community's deep concern for the rural character of the Township and a strong commitment to retain and strengthen local quality of life. The plan outlines the preferred future for the community and a comprehensive plan to realize it. The Plan is appropriately general, recognizing that planning for the future is a delicate blend of art and science and that sufficient flexibility will be needed to respond to the challenges of the future.

The fundamental purpose of the Comprehensive Plan is to enable the Township to establish a future direction for the Township's physical development. The Township Planning Act, Public Act 168 of 1959, as amended, specifically gives a Township Planning Commission the authority to prepare and officially adopt a plan. The Township Rural Zoning Act, Public Act 184 of 1943, as amended, authorizes Townships to adopt and enforce zoning ordinances based upon a plan for the Township as recommended to the Township Board by the Zoning Board. Once prepared, officially adopted and maintained, this Plan will serve as an advisory guide for the physical conservation of certain areas and for the development of other areas.

Because of constant change in our social and economic structure and activities, the Plan must be maintained through periodic review and revision so that it reflects contemporary trends while maintaining long range goals. The Plan will be effective to the degree that it:

- ◆ reflects the needs and desires of the citizens of the Charter Township of Texas;
- ◆ realistically interprets and reflects the conditions, trends and the dynamic economic and social pressures that are brought about by change; and
- ◆ inspires consensus and cooperation among the various public agencies, developers, and the citizens of the Township toward achieving common goals.

THE PURPOSE OF THE COMPREHENSIVE PLAN

When the Charter Township of Texas began the plan preparation process, it had several objectives. First, it was important to achieve an understanding of the scale and scope of growth and development and the likely future trends in the community. Secondly, the Township sought to clearly define community priorities with regard to growth and development and land use. Thirdly, the planning process was seen as an opportunity to build and strengthen a community consensus about the future land use patterns in the Township. Finally, the Township sought realistic and effective mechanisms to achieve the plan's objectives.

This Township Comprehensive Plan accomplishes all these objectives. More specifically, this Plan will serve the Township in the following ways:

1. It provides a comprehensive means of integrating proposals that look years ahead to meet future needs regarding general and major aspects of physical conservation and development throughout the Township;
2. It serves as the official, advisory policy statement for encouraging orderly and efficient use of the land for residences, businesses, industry, and agriculture, and for coordinating these uses of land with each other, with streets and highways, and with other necessary public facilities and services;
3. It creates a logical basis for zoning, subdivision design, public improvement plans, and for facilitating and guiding the work of the Township Zoning Board and the Township Board as well as other public and private endeavors dealing with the physical conservation and development of the Township;
4. It provides a means for private organizations and individuals to determine how they may relate their building and development projects and policies to official Township planning policies; and
5. It offers a means of relating the plans of the Charter Township of Texas to the plans of other communities in the region.

PLAN METHODOLOGY

The planning process involved four inter-related phases:

- ◆ Data Analysis – A Current Assessment.
- ◆ Goals and Objectives – Creating a Policy Foundation.
- ◆ Plan Preparation – Defining the Preferred Future, and
- ◆ Implementation Strategies – Getting There from Here

The first phase of the effort involved a summary review and analysis of available data gathered from local and regional sources. Its purpose was to develop a comprehensive impression of the patterns of growth and the challenges that will impact the Township. This phase culminated in the preparation of a Current Assessment Report. That report served as a technical resource for the Land Use Plan Committee and the consultant and it also represents the essential Community Profile which constitutes Section II (Chapters 2 through 6) of this Plan.

The objective of this second phase was to establish a policy basis for the Township's planning and land use regulations. The Township had already formed a Land Use Plan Committee to as an *ad hoc* entity to guide the planning process and to serve as a sounding board for the consultant throughout the process. A futuring workshop was held to gather public input through a nominal group process. This was followed by a Community Opinion Survey intended to test and broaden the output from the futuring workshop. From these activities, the Committee began the process of defining goals and objectives for the future of the Charter Township of Texas. These are presented in Chapter 7 of this Plan.

The third phase involved drawing together the input from the previous two and preparing a revised Future Land Use Plan which is reflected in Section III of this Plan. The future land use designations and map (Chapter 8) were developed in a series of interactive meetings of the Land Use Plan Committee, including a special public hearing to gather general community input. That process involved several iterations of the draft map and descriptions.

The final phase of the process involved the development of specific implementation strategies to carry out the plan. These are reflected in general terms in Chapter 9. At the conclusion of the fourth phase, a public hearing on the entire plan was held by the Township.

THE ORGANIZATION OF THE PLAN

This Plan is organized into three sections, each consisting of one or more chapters. Section I includes an introductory chapter which outlines the purpose of the plan, the process for its development, and acknowledgements to those involved. Section II, is the Community Profile, which presents an overview description of the Charter Township of Texas from the perspective of:

- ◆ Natural Features, the Environment and Utilities (Chapter 2)
- ◆ Population (Chapter 3)
- ◆ Income, Housing and Economic Development (Chapter 4)
- ◆ Land Use and Development Patterns (Chapter 5), and
- ◆ Transportation (Chapter 6)

Section III constitutes the Comprehensive Plan, which includes the Township's Goals and Objectives (Chapter 7), the Future Land Use Plan (Chapter 8) and the Implementation Strategies (Chapter 9).

The final section of the plan is the Bibliography which outlines all the various resources consulted in the completion of this Plan.

ACKNOWLEDGMENTS

The process to prepare this Plan has involved numerous community residents as well as public officials. The following individuals have provided key input and their contributions are gratefully acknowledged:

David Groendyke	Tacie Draznin	Anthony Badalamenti
Edward Woodhams	Kathy Buckham	Steven Bosch
Del Hambley	Bernie Mein	Ron Commissaris
Linda M. Kerr	Joyce Neubauer	Donald D. Boven
Richard L. Craven	Tom Dykstra	George Sprau
Steven Woollam	Eric Kihm	Wesley Hansen
Donald Noffsinger	Barbara Huber	Ken Block
Wendell C. Buckland	Clare Todd	Thomas Hamming
James Boynton	Sandy Sullivan	

RESOLUTIONS OF ADOPTION

ZONING BOARD MINUTES OF MEETING HELD JUNE 8, 1999

3. LAND USE PLAN REVISIONS

The Zoning Board reviewed the revisions to the draft Land Use Plan which were submitted by Planner Jay Kilpatrick. Mr. Woollam moved to recommend to the Township Board that these changes be incorporated into the Land Use Plan as adopted. Mr. Noffsinger supported the motion, and it carried unanimously.

MINUTES OF TOWNSHIP BOARD MEETING NOVEMBER 22, 1999

Comprehensive Plan Adoption Consideration

Supervisor Commissaris reviewed the final changes made to the Land Use Plan by Williams & Works as requested by the Board at their last meeting.

Moved by Woodhams, seconded by Neubauer, CARRIED unanimously, to adopt the Comprehensive Plan dated November 1999 as presented. Roll Call Vote: Ayes -- Boven, Craven, Commissaris, Dykstra, Neubauer, Woodhams and Kerr. Nays -- None. Absent -- None.

SECTION II COMMUNITY PROFILE

In this section of the Comprehensive Plan, a general profile description of the Charter Township of Texas is presented. This section is not intended as an exhaustive inventory of all the numerous aspects of the community. Rather, its purpose is to give some general impression of the natural features, demographics, land use patterns and infrastructure that make up the Township.

The material in this section has been drawn from *Charter Township of Texas, A Current Assessment Report*,¹ published by the Township as a part of this plan preparation process in March, 1998. That report presented a “snapshot” of current conditions within the Township and recent trends in population and housing. It set the stage for the finalization of plan goals and objectives, the future land use plan and map, and implementation strategies. All of those materials form the actual Comprehensive Plan set forth in Section III of this document.

Each of the following chapters includes an overview of its subject matter along with a brief discussion of the planning trends that are relevant. The material presented in the Community Profile has been drawn from existing research and published texts. No original research was required or desired to prepare the general overview needed for this document. This approach provides an efficient use of the resources of the Township in the completion of the Plan. However, in a few instances, this approach may result in some unanswered questions. Further research or analytical work could be undertaken to find answers to those questions, but extensive refinement of the details at this stage of the process seldom results in large-scale shifts in policy. The Township and the consulting team have found that the limited resources available for the completion of the Plan are best directed at forming the general outlines of land use policy with the intent of refining the details of strategies as implementation proceeds.

¹ Williams & Works in conjunction with the Charter Township of Texas, *The Charter Township of Texas, A Current Assessment Report*, March, 1998.

CHAPTER 2. NATURAL FEATURES, ENVIRONMENT & UTILITIES

It is important to begin an assessment of the community with a description of its natural attributes. This chapter presents a description of the topography, soils, water resources and woodlands which provide the physical basis of the community. Also discussed are the utility systems that protect and utilize its groundwater. Much of the following has been drawn from the Township's 1979 Master Plan as prepared by the Kalamazoo County Planning Department. Where necessary, the information pertaining to natural features has been updated to take into account the effect of the intervening twenty years since the previous plan was prepared. The sections on water and wastewater systems were developed for this Comprehensive Plan report to address the potential impact on groundwater from development.

TOPOGRAPHY

The Charter Township of Texas is located in western Kalamazoo County adjoining the cities of Kalamazoo and Portage. The community is characterized by significant woodlands, rolling hills and farmlands, attractive neighborhoods and several inland lakes. Interstate 94 crosses the northern portion of the Township running east and west, providing community residents with excellent connections to much of the Midwest.

The community is characterized by significant woodlands, rolling hills and farmlands, attractive neighborhoods and several inland lakes.

Texas Township slopes gently from west to east. Elevations range from a high of 1,024 feet in Section 29 to a low of 871 feet at both Atwater Millpond and Paw Paw Lake. The predominate pattern, however, is a mid-elevation plain of between 900-950 feet above sea level. The Kalamazoo Moraine, a thick ridge of glacial deposits of soil and gravel, covers all but the southeastern one-third of the Township.²

The western portion of the Township consists of rolling to rough terrain. Areas of less rugged relief are particularly well suited for residential development. East of Texas Corners, the topography is flatter with the exception of a trough created by the west fork of the Portage Creek. This trough has a high scenic and recreational potential due to its proximity to three small bodies of water.

² Passero, Dr. Richard N., Center for Water Research, WMU, *Geology and Groundwater of Kalamazoo County, Michigan*.

SOILS

Four distinct soil groups characterize soil conditions within Texas Township. Map 2 presents the overall soils in the Township including the generalized classifications discussed below and Map 3 illustrates soils with limitations for septic tank and drainfield construction.

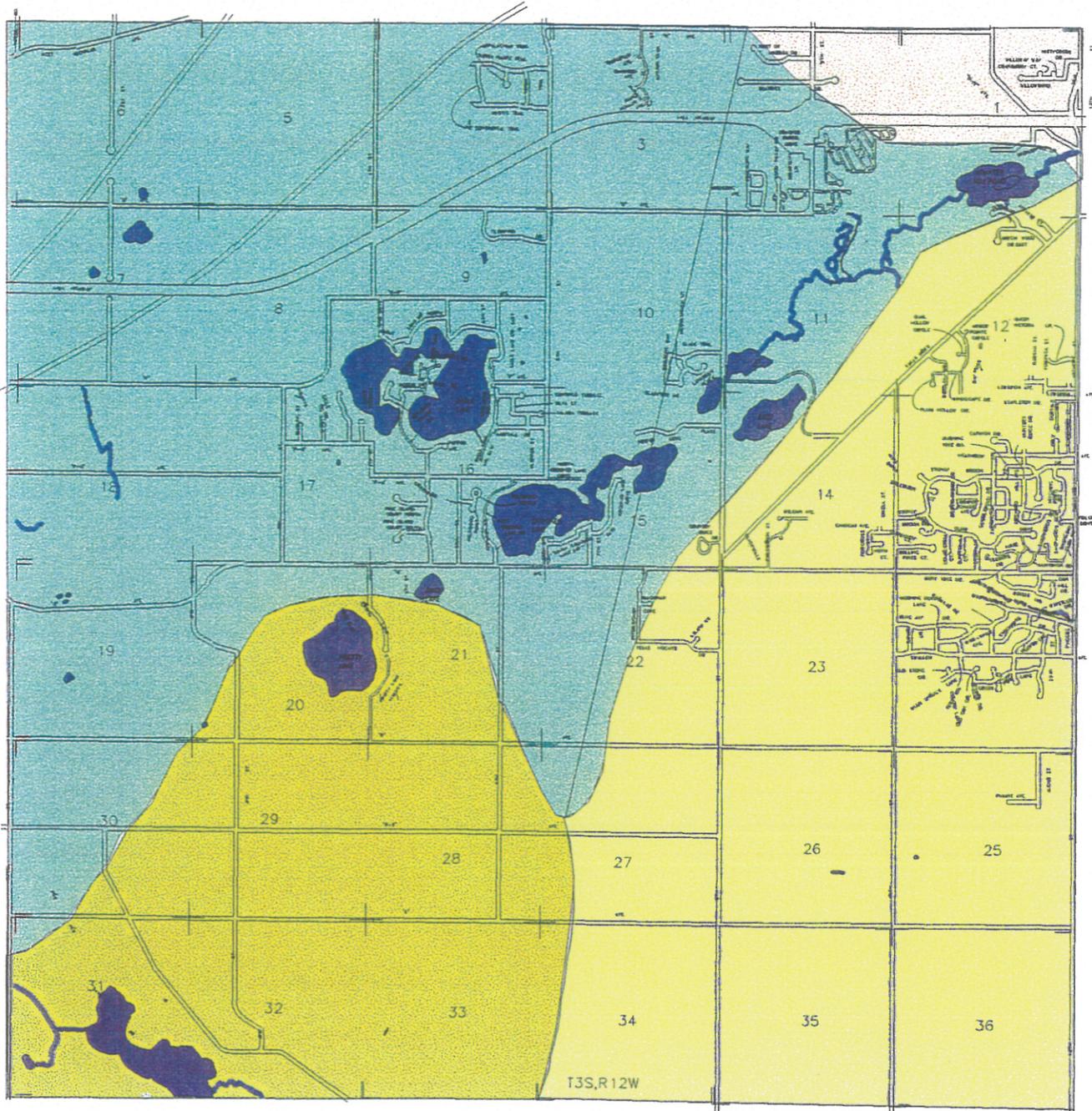
About 43% (approximately 10,030 acres) of the area is underlain with Coloma-Spinks-Oshtemo soils. These which are well drained soils with a loamy sand surface layer over alternate layers of sand and loamy sand. These are nearly level to rolling, somewhat excessively drained soils which are dominated by cropland, some idle grassland, pastures and brush. Although limited by droughtiness and low fertility, these soils are well suited for building and septic tank drainfields. For the most part, these soils are found throughout the northwest and central portions of the Township.

Kalamazoo-Oshtemo Soils cover about 32% (about 7,315 acres) of the area occupying primarily the eastern one-third of the Township. Soils within this group are nearly level to rolling and well drained. They include a sandy loam surface layer and a sandy clay loam to clay loam subsoil over stratified sand and gravel. These soils are suited for farming and, in most areas, for building site development, sanitary facilities, recreation and woodlands. Droughtiness, erosion and moderate slopes are the main limitations in farming and in most other uses. Limitations are moderate for dwellings, small commercial buildings and local roads and streets. Limitations are severe for excavations since banks may cave.

Nearly 90% of the soils in Texas Township are suitable for septic tank and drainfield wastewater disposal systems, making the groundwater vulnerable to contamination.

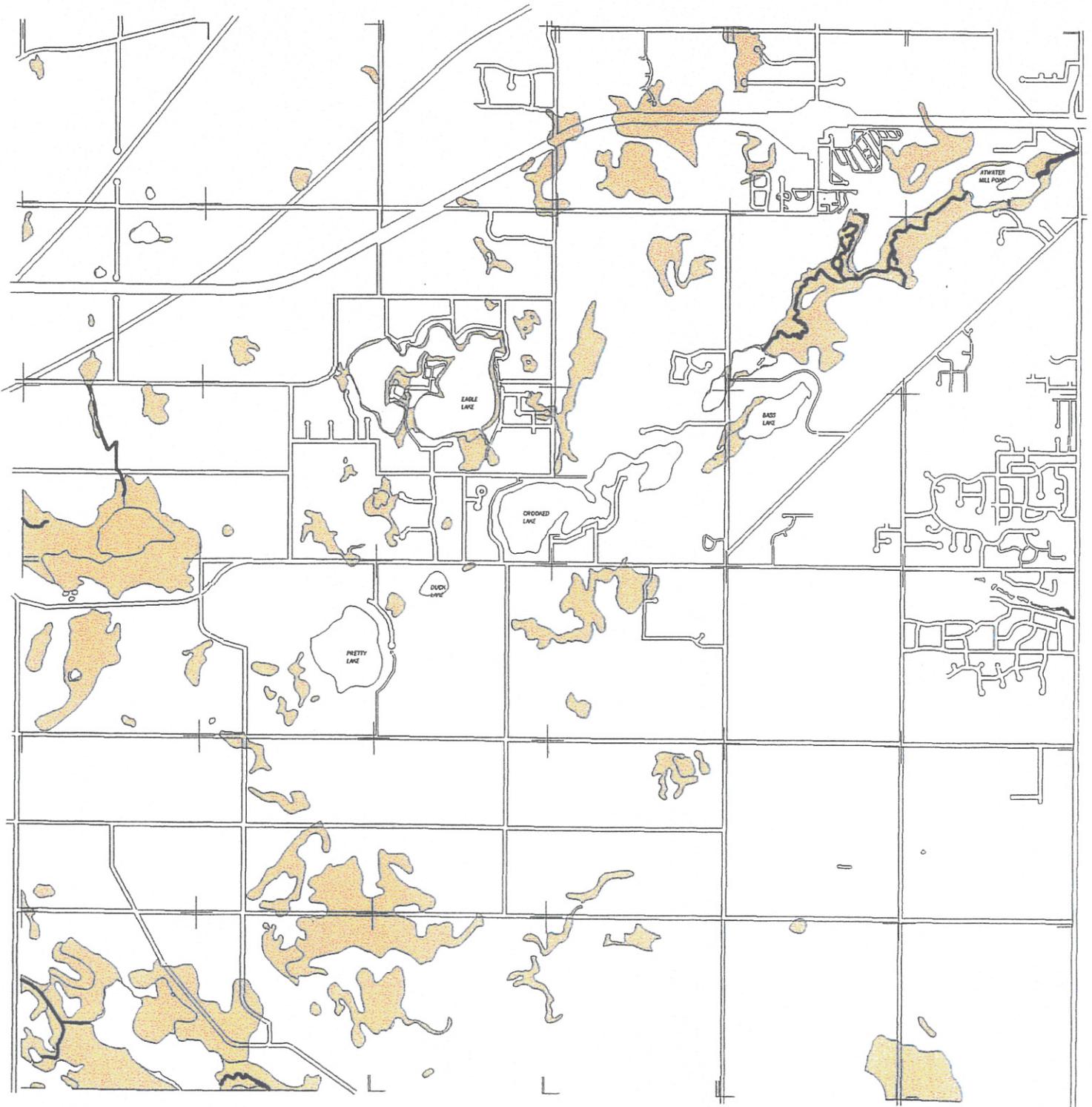
Oshtemo-Coloma, Kalamazoo, the third most prevalent group of soils in Texas Township, is found on about 23% (about 5,215 acres) of the land area. These soils are undulating to steep, well drained to excessively drained with sandy surface and a sandy loam to sandy clay loam subsoil. The quality of these soils for agricultural use is only rated as fair with steep slopes, erosion and droughtiness as the primary limitations. Other than steepness there are no restrictions pertaining to the use of these soils for building purposes or septic tank development. A large part of the south-west quadrant and portions adjoining the West Fork of the Portage Creek are underlain with these soils.

The remaining soils in the Township are muck - or soils characterized by a high water table and very poor drainage. They are found in level and depressional areas or lowlands such as those found around Portage Creek and Mud Lake. Agricultural use is impractical unless drainage is controlled.



-  Kalamazoo-Schoolcraft
-  Kalamazoo-Oshtemo
-  Oshtemo-Coloma,
Kalamazoo
-  Coloma-Spinks-Oshtemo

Map 2
The Charter Township
of Texas
General Soils Map



Map 3
The Charter Township of Texas
Soils With Limitations for Septic
Tank Drainfields

Their use for urban development is definitely not recommended due to the unstable nature of its organic material.

About 20 percent of the Township contains soils of better than average quality for farming, while about 88 percent of the land area is free of any restrictions for building.

WATER RESOURCES

Texas Township is located within three major river watersheds ~ the Kalamazoo, the St. Joseph and the Paw Paw Rivers. The largest area, consisting of approximately 11,200 acres and including all of the northeast quadrant and major lake areas, lies in the Kalamazoo River watershed. Much of the surface water drains into the West Fork of the Portage Creek, which flows northeasterly into the Kalamazoo River.

The Paw Paw River system provides major drainage for the extreme western portion of the Township. Land coverage amounts to about 6,500 acres and includes the area generally west of a ridge formed along the same line as 3rd Street. The remaining area to the southeast drains in a southerly direction toward the St. Joseph River. However, the area's relative flatness and lack of well defined drainage courses tend to restrict surface water flows. Natural impoundment areas such as Mud and Weeds Lakes in Texas Township and Harrison Lake in Prairie Ronde Township probably absorb much of the runoff.

Portions of this aquifer are classified as a unprotected since there is little, if any, clay layer above the water table to protect it from surface contamination

Underlying the Township is a sizable glacial drift aquifer which serves as the domestic water source for Township residents. This system also includes the Al Sabo Well Preserve which is a major source of supply for the City of Kalamazoo municipal water system. Portions of this aquifer are classified as a unprotected since there is little clay layer above the water table to protect it from surface contamination. The Kalamazoo Moraine is a ridge of glacial deposits which covers the western and northern portions of the Township does include some spotty clay deposits. Nevertheless, a recent study of natural protection of the local water table concludes that, overall, the water table in the Township is generally vulnerable to contamination.³

³ The G.E.M. Regional Center, Institute for Water Resources, WMU, *Beyond 2000 - Protecting Groundwater on the I-94 Corridor, Texas Township, Kalamazoo County*, Vol. III, Summary Report, 1995.

LAKES, PONDS AND OTHER WATER BODIES

Eagle and Crooked Lakes cover areas of 224 and 162 acres respectively. These are the largest and most intensively developed lakes in the Township. Other lakes in the Township include Bass, Duck, Pretty, Portage Harrison and the Atwater Mill Pond. These are smaller in size than Eagle and Crooked Lakes and are experiencing varying degrees of residential development along their shorelines. For the most part these lakes provide Township aesthetic and recreational values while also functioning as natural retention and ground water recharge basins.

Three other surface water bodies, Mud, Weeds and Pine Island Lakes were classified in the 1979 Township Plan as wetlands or marshes. While Pine Island Lake has experienced some development in the intervening twenty years, these lakes function primarily as natural retention and ground water recharge basins.

Wetlands and water bodies comprise about 2,760 acres, or 12% of the Township's land area. Wetlands and water bodies are illustrated on Map 8 below. These features provide an important filtering and purification value for surface waters. In addition, they support significant wildlife habitat, which helps to give Texas Township its rural character.

WOODLANDS

Approximately 9,285 acres, or 40% of the Township, were classified in the 1996 MIRIS land cover analysis as open lands or woodland. The portion of these areas that are wood lots consist primarily of deciduous trees occupying both the slopelands and depressional areas of the Township. As such, they provide ground cover, maintain water tables and retard water runoff. Furthermore, these sizable stands of oak, maple and beech are important elements of the rural character of the Township providing wildlife habitat and aesthetic and recreational values for Township residents.

HISTORIC SITES

Texas Township is home to an historic farmstead located south of the corner of "O" Avenue and 9th Street. The 180 acres of land on which the Booth-Dunham Farm Complex sits was deeded in 1854 to William

L. Booth by DeForest and Catherine Manice. Interestingly, the original deed making this conveyance gave the Manices the right to exchange a part of the property for other lands in the event they chose to erect a Mill Dam and raise the water level of the mill pond at Atwater. The Booth-Dunham farmhouse and buildings have been evaluated by the Office of the State Historian and have been determined to be of local significance both for their physical characteristics (i.e., setting, materials, design etc.) and for their association with William Booth and Thoman Dunham, two significant individuals in Kalamazoo County in the 19th Century. On April 1, 1998, the keeper of the national register of historic places added the Booth-Dunham Farm to the national register.

UTILITIES

In a discussion of the natural features of a community, it is appropriate to consider its utility systems. Groundwater in Texas Township is an important resource both for the community itself and for the larger Kalamazoo region. The public water system draws its supply from the underlying glacial drift aquifer. Wastewater collection and treatment facilities help to preserve the quality of the aquifer in those areas of more intense development.

Water

Domestic water supply for Texas Township residents is drawn from groundwater. Individual private wells predominate in the area of the Township west of 8th Street and South of "R" Avenue. A public water system serves the northeast quadrant of the community. Private wells are developed in the glacial drift aquifer systems at depths ranging from 30 feet to 362 feet, with an average depth of 83 feet. Since much of the soils in the Township have relatively high percolation capabilities, most of these shallow water supplies are relatively unprotected from contamination resulting from surface land uses and septic tank drainfield effluent. However, few problem areas have as yet developed. Typically nitrate levels in groundwater become elevated as an initial signal of future risks. The EPA standard of 10 parts per million (ppm) of nitrates is used as a threshold for concern. Of 580 partial chemistry tests of well water in the Township, only twenty (3.4%) showed levels of 10 ppm or greater. "Some of these may be old farmstead sites ... while others may be residences in rural subdivisions and mobile home parks where densities (and water use) are high and some interaction could be occurring between septic systems and nearby water wells." ⁴

Although few problems have developed in the water quality from domestic wells, the vulnerable nature of the aquifer will require careful monitoring of water quality.

⁴ The G.E.M. Regional Center.

The City of Kalamazoo water system owns a sizable well field located in Sections 11 and 12 of the Township.

The City of Kalamazoo water system owns a sizable well field located in Sections 11 and 12 of the Township. Under an agreement between the Township and the City, the City may draw an average of up to 5 million gallons per day from the aquifer at this location. Township residents in the eastern portion of the community are connected to the City's system as retail water customers under an agreement between the City and the Township. Under the terms of that agreement, there are no limitations on the amount of water that may be sold to Township residents or businesses. A small portion of the Township along 12th Street between Milham and I-94 is served by the City of Portage water system. Map 4 illustrates those portions of the Township currently served by public water. However, in older neighborhoods, not all residents have connected to the public system, opting to maintain the old wells as their primary source of supply.

Wastewater

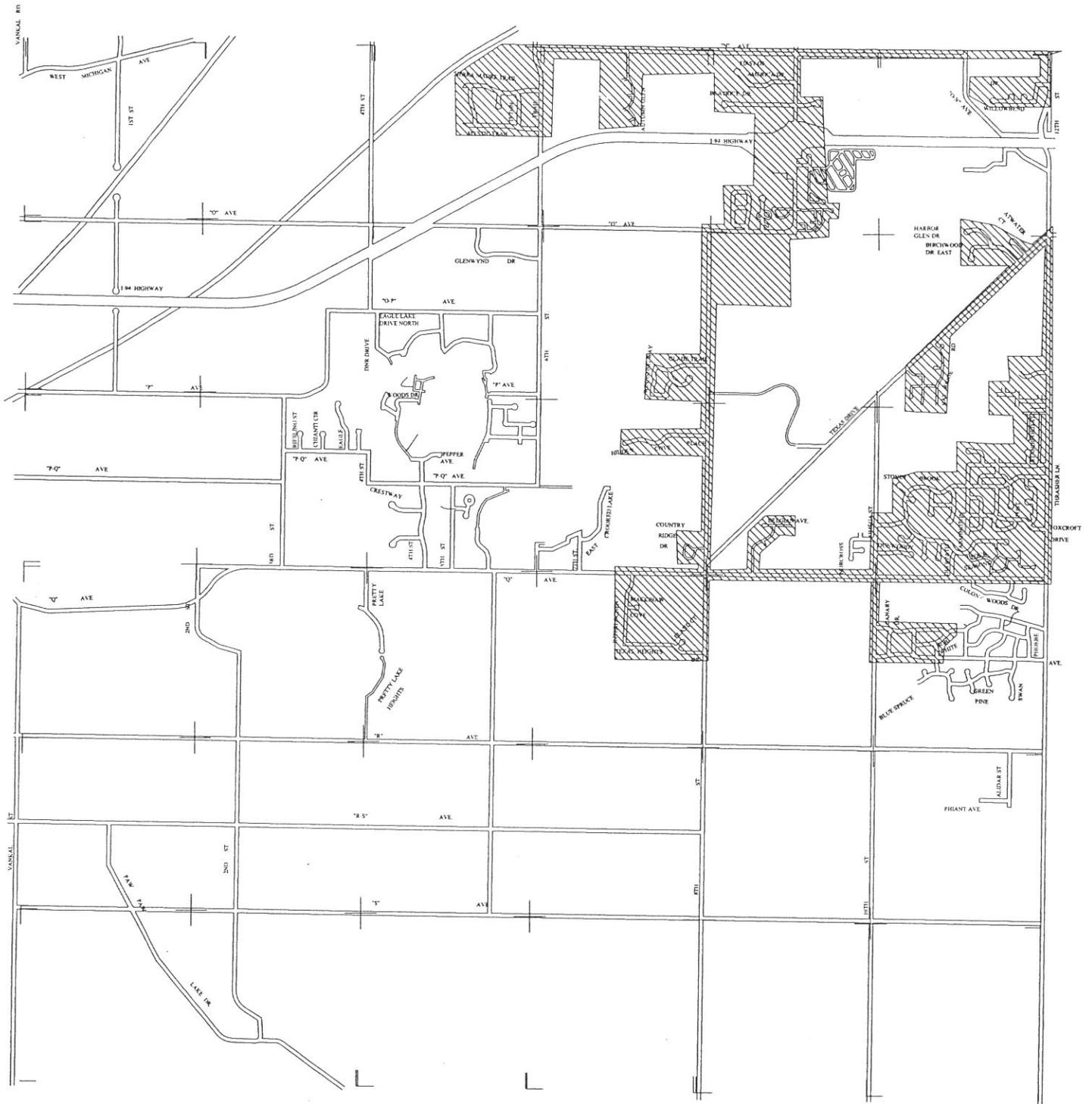
As indicated in the section on soils above, many of the soils in Texas Township are relatively porous with fair to good percolation capabilities. This enables approval of on-site septic tank and drainfield wastewater disposal systems in most parts of the Township. These on-site systems discharge domestic wastewater effluent to groundwater filtered through native soils and provide a very inexpensive approach to wastewater management. In areas of lower population density and in those areas where groundwater is relatively deep, on-site wastewater disposal systems can serve efficiently for extended periods. However, as population density increases, the risk of groundwater impacts from on-site systems begins to increase.

The ability to connect to a new trunk sewer to serve the Village of Mattawan could help to foster further development in the northwestern portion of Texas Township.

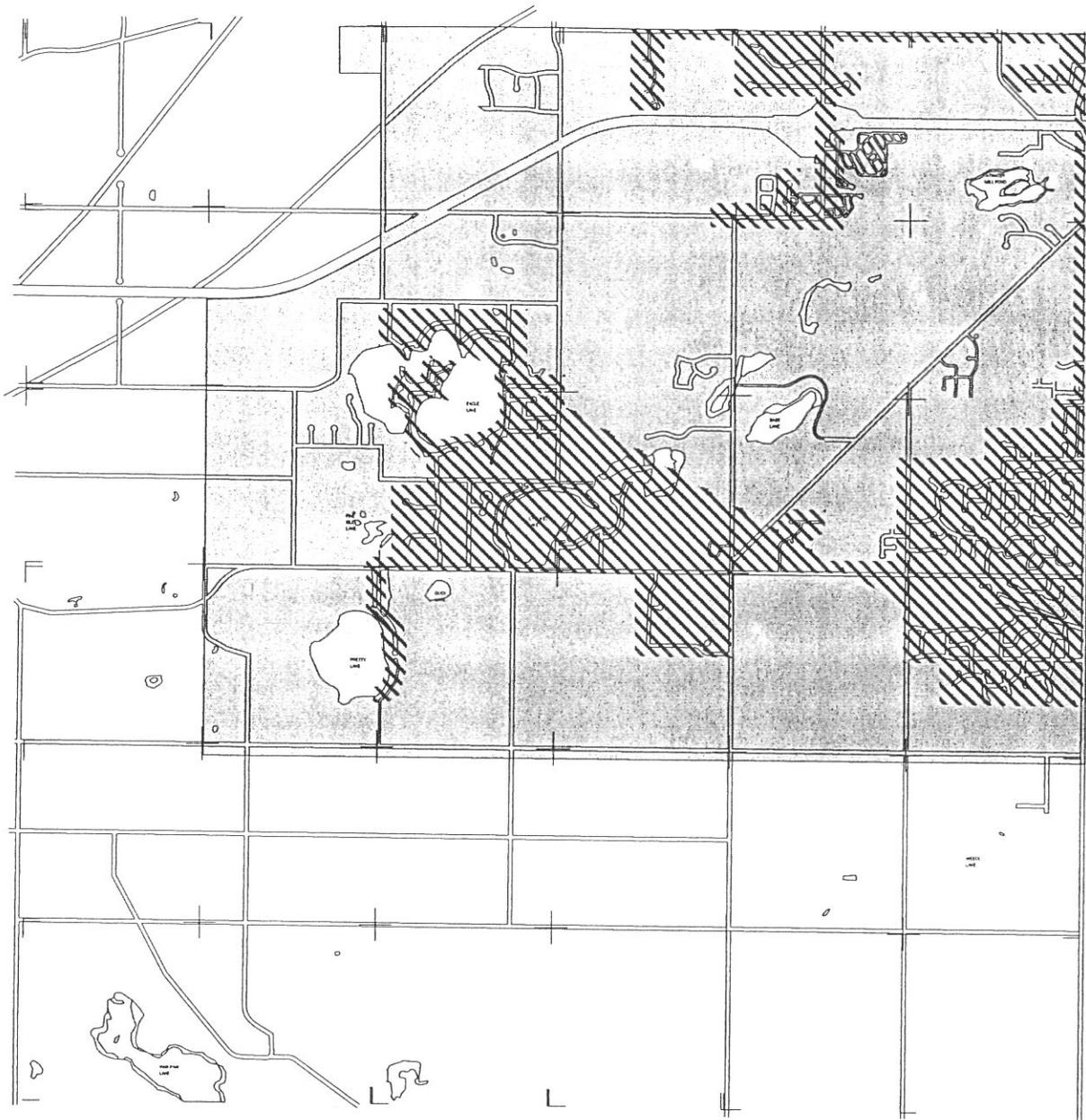
As illustrated in Map 5, the public wastewater collection system extends through much of the northeast and central portion of the Township including Eagle Lake, Crooked Lake and the eastern side of Pretty Lake. The wastewater system discharges through the City of Portage ultimately to the City of Kalamazoo Wastewater Treatment Plant and Township residents and businesses are served as retail customers. An agreement between the City of Kalamazoo and the Township requires the prior written approval of the City of Kalamazoo prior to extending sewers within the Township. In addition, the Village of Mattawan in Van Buren County and the City of Kalamazoo have recently entered into an agreement for service to Mattawan via a trunk sewer which will bisect Texas Township, generally along the I-94 right-of-way. The Township has agreed to cooperate in this arrangement in exchange for the ability to discharge wastewater into this trunk sewer. This will enable further

development, and potentially higher density development, in the northwest part of the Township.

The Charter Township of Texas and ten other units of local government have formed a regional Water and Sewer Commission. Its purpose is to begin a regional effort to coordinate utility planning and the impact of utilities on growth in the region.



Map 4
 The Charter Township of Texas
 Public Water Service Area



Map 5
The Charter Township of Texas
Public Sanitary Sewer Service Area



Existing Service
 Area



Proposed Service
 Area

Williams & Works

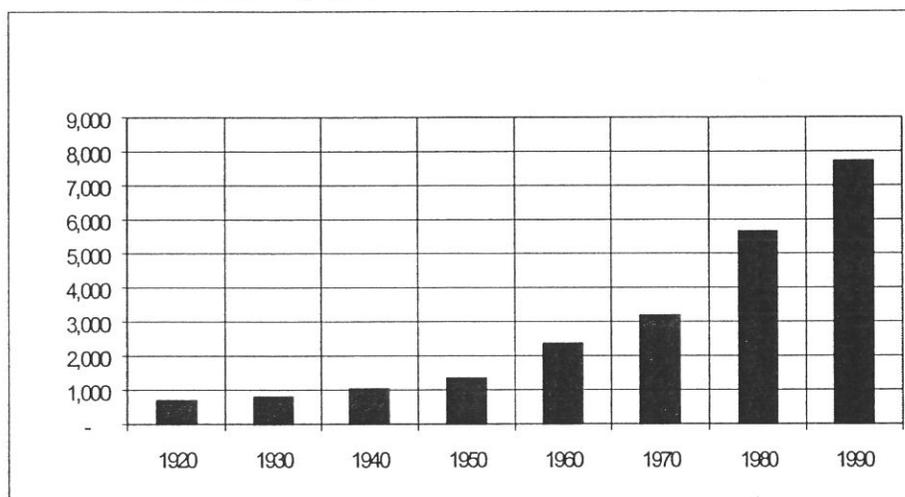
CHAPTER 3. POPULATION

Population is among the most important measures to express growth and its likely impact on land uses in a community. Therefore, it is vitally important to achieve an understanding of the Township's population and its growth trends in order to prepare a meaningful and realistic Comprehensive Plan. In this section, the population of Texas Township is analyzed and the current and likely future growth trends are discussed.

To begin with, it is appropriate to determine the overall growth the Township has experienced in the recent past. From its relatively rural beginnings with a population of less than 700 persons in 1920, the Township has grown to nearly 10,000 by 1997.⁵

**Texas Township's
population has grown by
nearly 200% since 1970.**

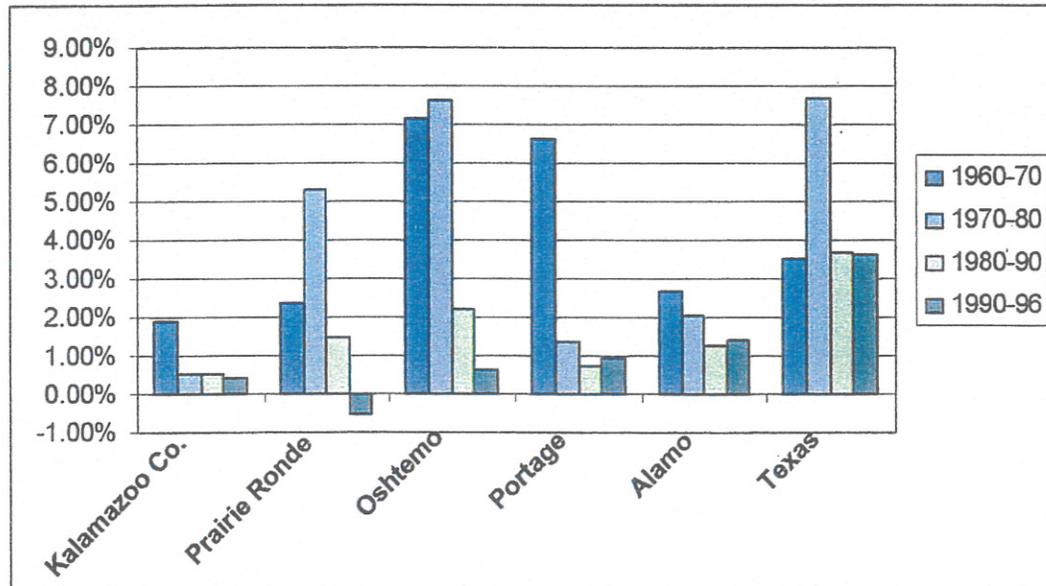
**Figure 1. Charter Township of Texas
Historic Population Growth**



To put this rate of growth in perspective, it is also appropriate to compare the community with its neighbors. Figure 2 compares the 25-year population growth history in Texas Township to that of other communities in western Kalamazoo County. The figure shows that all of the communities in western Kalamazoo County are growing at rates significantly greater than the county as a whole.

⁵ The mid-decade population for the Charter Township of Texas was estimated by the U.S. Census Bureau to be 9,975.

Figure 2. Comparative Rates of Population Growth



Of more significance for this analysis, is the fact that the Township's rate of growth has continued to be strong in the first half of the 1990's

During the 1970s, all of the communities in western Kalamazoo County experienced rapid growth with Oshtemo and Texas Townships leading the way. Specifically, Texas Township's population has grown by over 200% since 1970. This represents an increase of over 6,700 persons in about twenty-seven years. In the 1980s, the pace of growth abated somewhat, but Texas Township still outpaced all other jurisdictions in the county.

Of more significance for this analysis, is the fact that the Township's rate of growth has continued to be strong in the first half of the 1990's, according to the estimates of the U.S. Census Bureau. While Kalamazoo County's rate of population increase since 1990 has been less than 1/2% per year, the population of Texas Township has grown at an annual rate of 4.2% - a rate far above any other community in the County. Thus while the overall county has continued to experience modest growth since 1990, Texas Township has added nearly 2,264 persons. In fact, the rate of growth for Texas Township during the seven-year period from 1990 to 1997 is greater than its 10-year rate of growth from 1980 to 1990 (4.2% per year versus 3.66% per year, respectively). At the same time, the previously rapid rate of growth in Oshtemo Township has slowed significantly.

Regionally, Kalamazoo County as a whole grew by 5.37% or by 10,828 persons in the 1970s. Interestingly, Texas and its surrounding communities represented combined growth of 12,679 persons or 117%

of the County's growth during 1970s, since some other portions of the County lost population. During the 1980s, the western portion of the County grew by 7,912 persons, accounting for 73% of the total growth in the County. In the first half of the 1990s, Kalamazoo County has grown by an estimated 5,597 persons while the western Townships and the City of Portage have grown by 4,713 persons, again accounting for about 84% of all growth in the County.⁶ Perhaps most significant for the purposes of this report is the fact that the Charter Township of Texas alone has accounted for nearly 30% of the net population growth in the County since 1990.

Projections

For the purposes of this Plan, statistical averaging techniques were utilized to project the Township's population growth to the year 2020. These approaches are adequate to give a general sense of growth trends but they have limitations especially in areas of rapid growth or decline that may run counter to statistical trends. Nevertheless, they help give a sense of scale to future land use requirements as well as the demand for various public services and capital improvements. The following summarizes the projection techniques.

The Charter Township of Texas alone has accounted for nearly 30% of the net population growth in Kalamazoo County since 1990.

The **Constant Proportion** (or ratio) method of projecting population assumes that Texas Township will continue to represent the same percentage of Kalamazoo County's projected population in the years 2000, 2010, and 2020 that it represents today. Using the population projections for Kalamazoo County prepared by the national econometrics firm, Woods & Poole Economics, Inc.,⁷ the following illustrates the results of the constant proportion method for Texas Township.

⁶ Kalamazoo County Planning Department, *Kalamazoo County: A Planner's Profile*.

⁷ Woods & Poole, Economics, Inc., *Kalamazoo County, Michigan 1997 Data Pamphlet*, January, 1997.

CONSTANT PROPORTION METHOD

	1997 Population *	2000 Population Projection	2010 Population Projection	2020 Population Projection
Kalamazoo County per Woods & Poole	230,850	234,870	248,110	262,950
Texas Township	9,975	10,099	10,669	11,307

Percent of County's total 1997 estimated population residing in Texas Township = 4.3%.

The **Growth Rate** (or geometric) method projects future population growth or decline based on the rate of growth in the Township in the past. Utilizing the growth rate method, the following assumes that growth in the future will occur at the same average rate as has occurred annually between 1980 and 1997. According to the Census data, Texas grew 4.51% annually between 1980 and 1997.

GROWTH RATE METHOD

	Average Annual Growth Rate <u>1980-1997</u>	<u>1997</u>	<u>2000</u>	<u>2010</u>	<u>2020</u>
Texas Township	4.51%	9,975	11,386	17,699	27,513

The **Arithmetic Method** is similar to the growth rate method in that population projections are based on growth that occurred in preceding decades. This method, however, bases population growth on the overall average increase in the number of persons per year, rather than on growth rates. The following projections are based on the average increase of 255 annually between 1980 and 1997 in Texas Township.

ARITHMETIC METHOD

	Average Annual Increase (Number of Persons)	1997 Population	<u>2000</u>	<u>2010</u>	<u>2020</u>
Texas Township	255	9,975	10,740	13,290	15,840

The **Building Permit** method may be the most reliable projection method because it portrays the growth based on current building permit

data. Texas Township has issued residential building permits for an annual average of 165 units over the last ten years (1988-1997).⁸ Assuming that building activity will continue at this rate, this method utilizes The Township's average household size of 2.94 persons (1990 U.S. Census data), to calculate the growth in population. In other words, this method says that Texas will increase by about 485 persons per year.

BUILDING PERMIT METHOD

Average No Permits/Year	Pph	1997 Population	2000	2010	2020
165	2.94	9,975	11,430	16,280	21,130

The anticipated population levels for the Township using each of the population techniques are summarized below. By averaging the results of these methods, it is reasonable to predict that the population will approach approximately 10,449 persons by the year 2000, 13,417 by the year 2010, and almost 17,100 by the 2020.

Each of the projection techniques illustrated here assumes that the Township will continue past patterns of growth. However, growth in housing and population in Texas will be impacted by many factors. These include the types and quality of housing permitted or encouraged within the Township, the image of the Township as a desirable place to live, the public school system, the quality and quantity of commercial and industrial development, and the overall economic health of West Michigan.

SUMMARY POPULATION PROJECTION SUMMARY

	1997	2000	2010	2020
Constant Prop.	9,975	10,099	10,669	11,307
Growth Rate	9,975	11,386	17,699	27,513
Arithmetic	9,975	10,740	13,290	15,840
Building Permits	<u>9,975</u>	<u>11,430</u>	<u>16,280</u>	<u>21,130</u>
Average	9,975	10,914	14,484	18,947

⁸ Texas Township Building Department, *Construction Activity for the Charter Township of Texas, 1988-1997*, January, 1998. This includes single family, duplex and multifamily, condominium and manufactured housing permits.

It should be noted that the Kalamazoo County Planning Department has undertaken a similar exercise to project population at the local and County level through the year 2010.⁹ The County Planning staff used the constant proportion and growth rate to project population through 2010 and then struck an average of the two methods. That document indicates the population of Texas Township in 2000 to be 9,323 and 11,465 in 2010. However, these projections do not take into account the more rapid growth that has occurred in the Township since 1990 since the geometric projection is based on the rate of growth from 1980 to 1990.

Age Characteristics

Comparing the age distribution of a community over time provides another opportunity to measure change. Also, an age breakdown of a community's residents helps to determine the type of housing demands and recreational facilities that may be needed. In 1990 the median age of Texas Township residents was 35 years compared to the median age for the county overall of 31.0 years. The median age represents the midpoint in the range of all ages within the Township and County with one-half of the population younger and one-half of the population older than the median. Typically, the median age is viewed as an appropriate measure of the overall age of the population.

The median age for the Township increased from 30.0 years in 1980 to 35.0 years in only ten years

Paralleling national trends, the population of Kalamazoo County Township is aging. In 1980, the median age of the County was 27.4 years. By 1990, it had risen to 31.0 years and it is expected to reach 34.9 years by the year 2020.¹⁰ By way of comparison, the median age for the Township increased from 30.0 years in 1980 to 35.0 years in only ten years. A part of this increase in median age may be accounted for by the higher home values in the Township. Higher income population groups tend to be more established in their careers and, therefore, somewhat older than the rest of the population.

Figure 3 below illustrates the age of Township residents by gender currently and projected into the future to the year 2020. This projection was prepared based on independent projections¹¹ for Kalamazoo County adjusted by the Township's ratio of the County population. This methodology is imprecise for detailed demographic projections. However, for the purposes of this Comprehensive Plan report, it does provide a general sense of the scope of population change that will

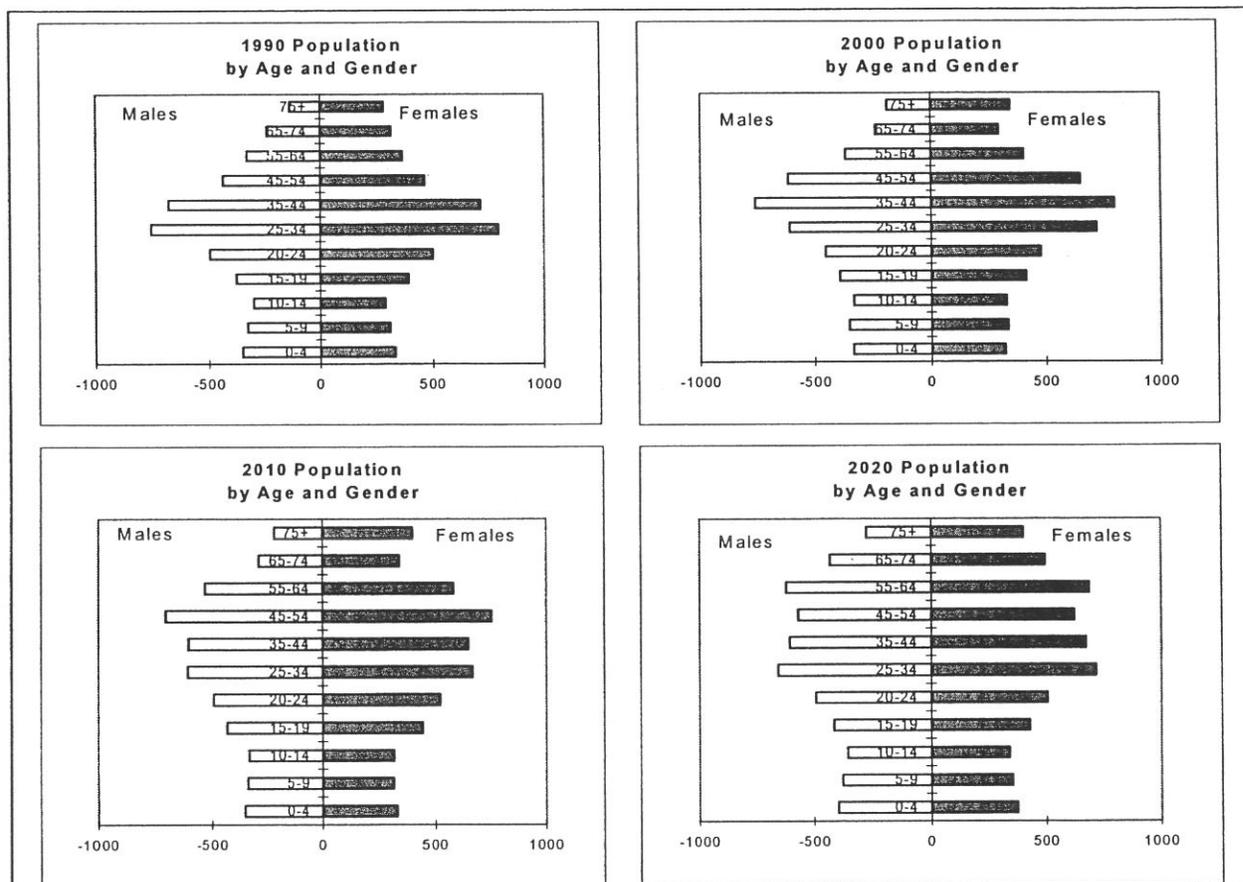
⁹ Kalamazoo County Planning Department, *Kalamazoo County: A Planner's Profile*.

¹⁰ Woods & Poole Economics, Inc.

¹¹ Woods & Poole Economics, Inc.

impact the Township and it will be useful for general projections of land and housing use demand into the future.

Figure 3. Texas Township Population Age Projections



Source: Woods & Poole Economics, Inc., *Kalamazoo County, Michigan, 1997 Data Pamphlet*, with Township Age Projections prepared by Williams & Works using the ratio of Township population to the larger County. Note that the age cohorts from 0 to 24 years are in five-year increments while older age cohorts are expressed in ten-year increments.

In general, it is possible to identify more uniformity in the age distribution as the population ages. The aging of the “baby boomer” generation (26 to 46 year-olds in 1990) is clearly evident and as the children of that generation continue to mature and have children, there is less variance in the numbers of individuals from one cohort to the next. This greater uniformity suggests a slowing in the rate of natural growth of the Township’s population after the year 2020. Of course, growth through in-migration will likely continue and at least partially offset this trend.

A relatively high percentage of the population in the 25 to 54 years range translates into family formations, the need for single-family housing stock, recreational facilities, future increases in the under 5, and 5 to 19 years age groups, and increases in retail trade.

The 20 to 54 years age group is important as it represents the prime wage earning population as well as the principal child rearing group. About 53% of the population falls in this age group in Kalamazoo County. A similar percentage (54.1%) of the Township also falls into this category. This relatively high percentage of the population translates into family formations, the need for single-family housing stock, recreational facilities, future increases in the under 5, and 5 to 19 years age groups, and increases in retail trade.

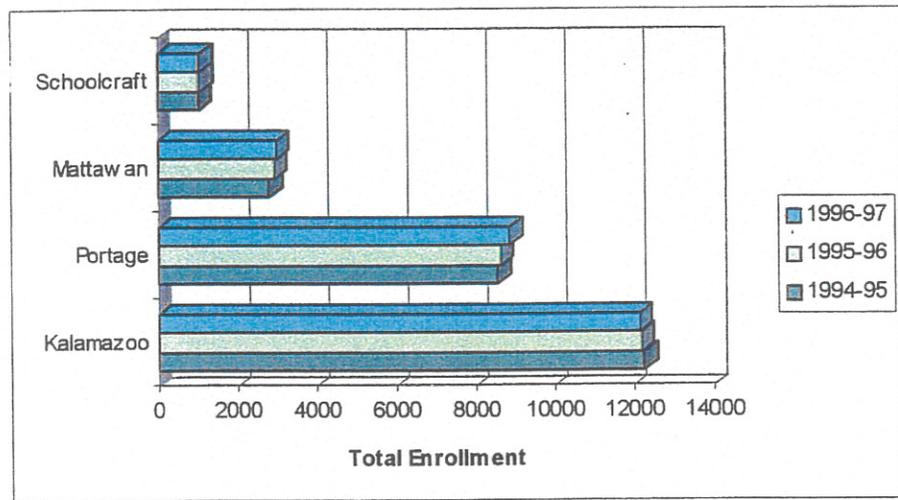
The “empty nesters” group (55 to 65 years) comprises over 9% of the Township’s residents. Persons in this age group typically have reached their peak earning potential and have higher disposable incomes. The age group of 65 and older represented over 6% of the Township’s population in 1990 and it comprised about 10.6% of the population in the county. By 2020, this group is expected to account for over 9% of the Township’s population and nearly 15% of the County, overall. Thus, while the Township’s population is aging, it is not aging as fast as that of the county.

School Districts

The quality of the local school system is generally an important consideration for families choosing a place to raise a family. In Texas Township, residents are served by four public school systems: Kalamazoo, Portage, Mattawan and Schoolcraft. Map 6 on page 27 illustrates the boundaries of each district within the Charter Township of Texas. Most of the heavily populated portions of the Township are served by the Portage Public Schools, while the Mattawan Public Schools incorporates most of the Township’s area including the neighborhoods around Eagle and Crooked Lakes.

Figure 4 below presents the enrollment of all four districts over the past three school years.

Figure 4. Student Enrollment



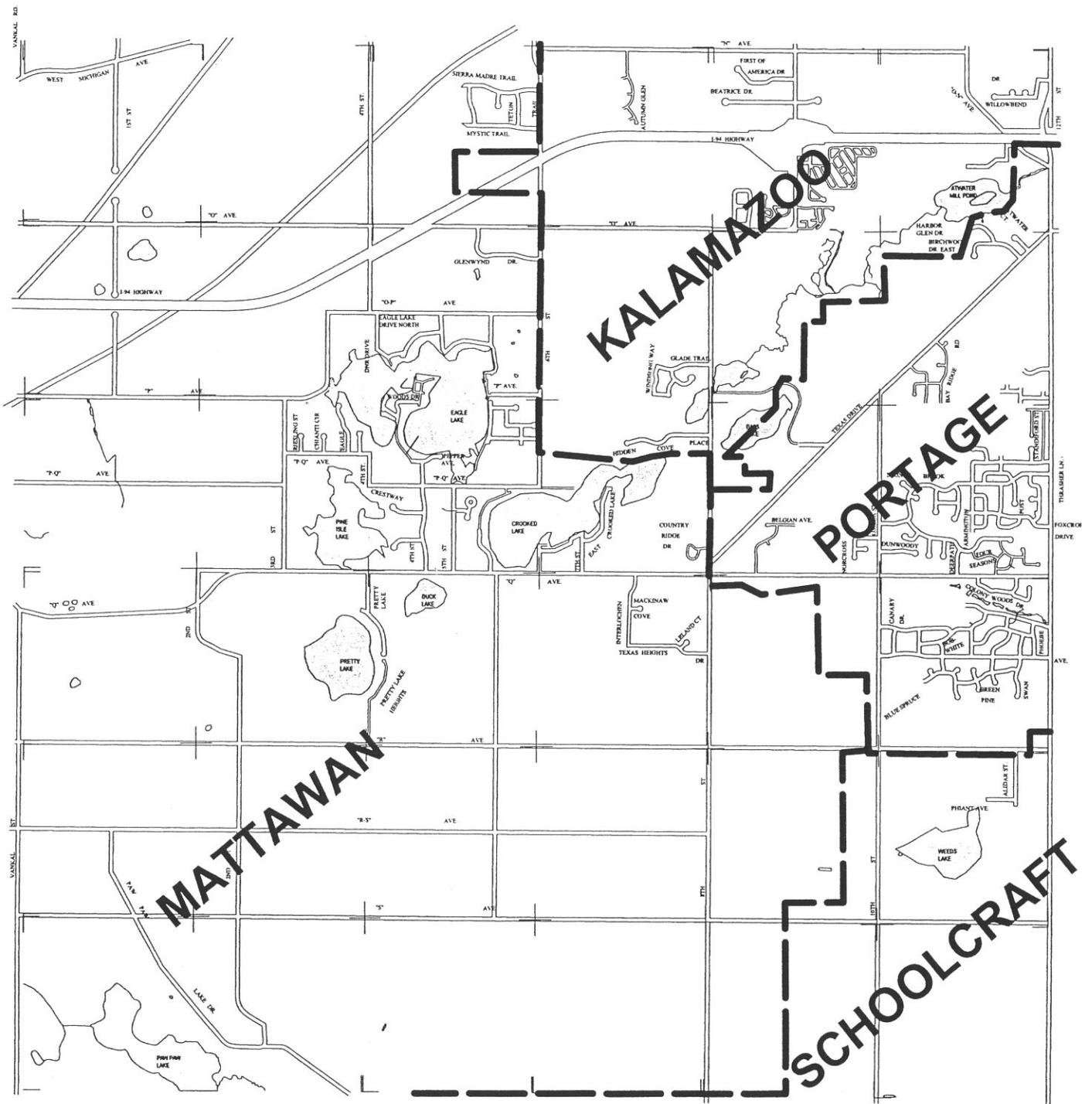
Educational Attainment

The table below compares the educational attainment of residents of Texas, Kalamazoo County, and the State. As shown, the residents of Texas Township (25 years and older) rank much higher in the percentage of high school graduates and especially in persons with a bachelor's degree or higher than the County or State as a whole. These significant levels of educational attainment typically indicate a community of professionals that attain better paying jobs. This is verified in Chapter 3.

Education Attainment
Texas Township, Kalamazoo County, and the State of Michigan
1990

	High School Graduate (%)	Bachelor's Degree or Higher (%)
Texas Township	93.1%	42.7%
Kalamazoo County	83.4%	27.1%
Michigan	76.8%	17.4%

Source: U.S. Census Bureau



Map 6
 The Charter Township of Texas
 School District Map

CHAPTER 4. INCOME, HOUSING & ECONOMIC DEVELOPMENT

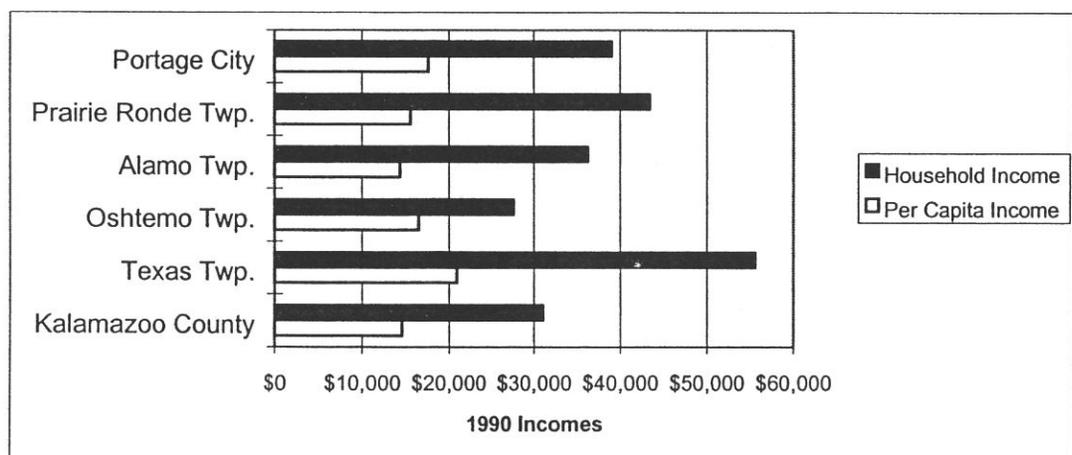
This chapter reviews current indicators of growth in the Township relating to housing values, income and economic development. Housing growth generally parallels the expansion of the local population, however housing values continue to increase more rapidly than incomes. In terms of economic development, job growth and investment in new plants and equipment among local industries continue to be strong. A primary challenge to the Township will be the impact of current growth on infrastructure, roads and the local quality of life.

Incomes

The median household income in the Township in 1980 was \$27,381 and by 1990 it had more than doubled to \$55,592, placing Texas Township at the top of all jurisdictions in the County in terms of family income. For perspective, these figures should be compared to the Kalamazoo County as a whole. In 1980, the median household income in the County was \$18,634 and by 1990 it had risen to \$31,060. Not only did incomes in the Township remain the highest in the County, but the 10.3% average annual rate of increase significantly exceeded the county's 6.7% rate. Therefore, the gap between household income in the Township and the county widened from 1980 to 1990. Figure 5 illustrates median household income and per capita income in the Charter Township of Texas as compared with that of the county and other jurisdictions in the western part of the county.

Median household income in the Township more than doubled from 1980 to 1990, placing Texas Township at the top of all jurisdictions in the County.

Figure 5. Comparison of Median Household and Family Incomes



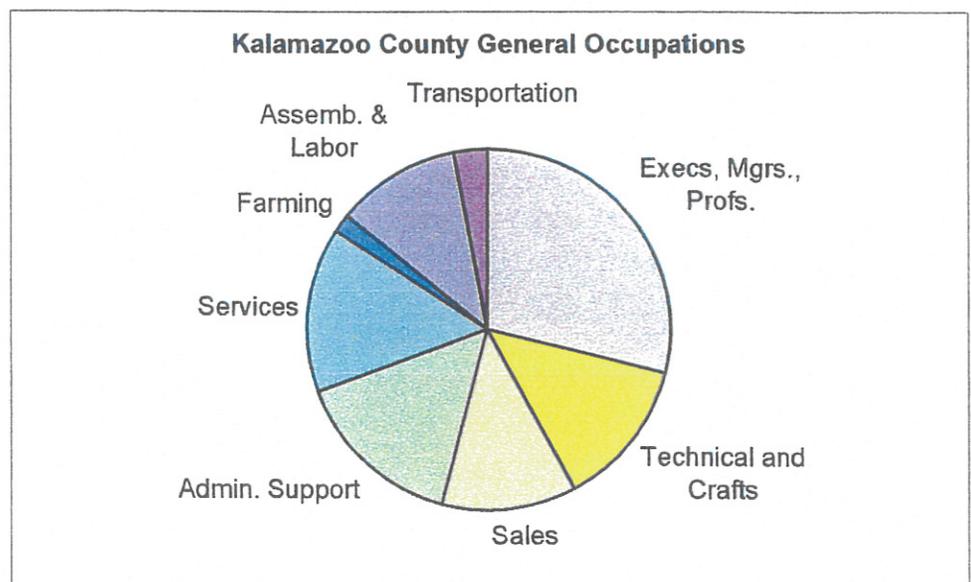
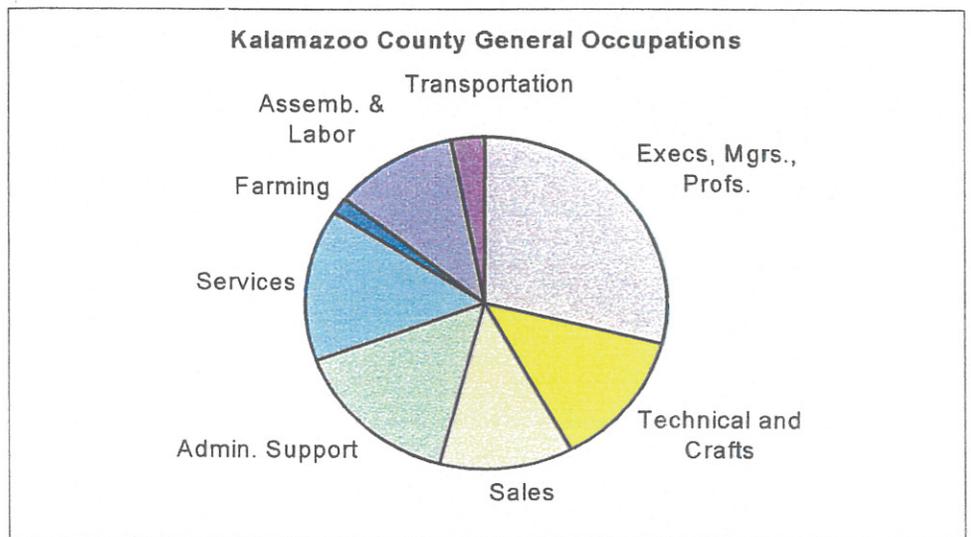
Source: Kalamazoo County Planning Department, A Planner's Profile

Employment

Consistent with the income levels in the Township, occupations among its residents tend to fall most heavily in the “white collar” professions and technical crafts. Positions in these categories tend to be slightly higher paid. This is also consistent with the higher education levels found in the community as compared to the balance of the County.

Figure 6, below compares the mix of occupations in the Township to those found in the larger community in Kalamazoo County.

Figure 6. Comparison of Occupations

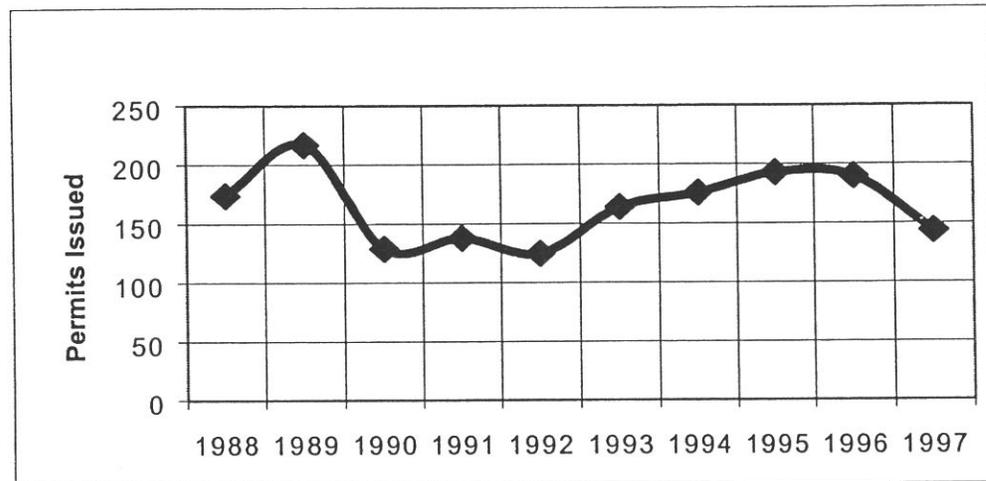


Source: U.S. Census, 1990

Housing

The attractiveness of Texas Township is evident in the pace of new home construction within the community. This includes homes in platted subdivisions and condominiums and on scattered parcels in rural areas. Residential building permit activity in the Township has risen steadily for the past ten years. Figure 7 reflects the trends of the past ten years, indicating a total of 1,078 new single family residential building permits, for an annual average of about 108 permits per year. However, in recent years, (i.e., 1994 through 1997) the pace of new development has increased, averaging 117 permits per year.

Figure 7. Single Family Construction Activity



Source: Construction Activity for the Charter Township of Texas, 1988-97

New single-family home values have risen steadily, as well. While the overall rate of inflation (as measured by the consumer price index) from 1995 to 1996 was 3%, the mean value of a new site built home in Texas Township increased by 13.2% from \$181,400 in 1995 to \$205,380 in 1997. The table below summarizes the number of permits issued by home values.

Texas Township - Comparison
New Home Valuation Range, 1995 - 97
(site built homes)

Valuation Ranges	1995	1996	1997
	New Homes	New Homes	New Homes
\$100,000 or less	5	5	0
\$100,001 - \$150,000	39	18	21
\$151,000 - \$200,000	28	42	44
\$200,001 - \$250,000	25	35	27
\$251,000 - \$300,000	9	15	16
\$301,000 or greater	6	3	13
	112	118	121

Source: Texas Township, Building Official. Note the above values are not adjusted for inflation.

Since 1990, the housing stock, including single family, multi-family, condominiums and manufactured housing, in the Township has increased by about 5.9% per year. At the same time, the population of the Township is estimated to have increased by about 4.2% per year. A

The trend toward smaller household sizes (i.e., persons per household) will require that the housing stock increase faster than the population

comparison of the rates of growth for the housing stock and the population would suggest that the supply of housing is exceeding the demand. However, the trend toward smaller household sizes is evident in Texas Township (declining from 3.47 persons per household in 1970 to 2.93 in 1990) and this will require that the housing stock increase faster than the population, as is evident from the figures above.

Finally, it is appropriate to compare the growth in housing values with overall income growth in incomes in the Township. From 1980 to 1990 (the most recent year for which income information is available), median household income in the Township increased from \$27,381 to \$55,592, for an average annual growth rate of 10.3%. By way of comparison, the value of the housing stock in the Township has increased at an annual rate of nearly 19% in recent years. While the periods of comparison are not consistent due to different reporting periods, it is clear that housing values in Texas Township are growing faster than incomes.

In addition to a comparison of the rate of housing growth, it is useful to compare the various proportions of property types in the Township with those in neighboring jurisdictions in the county. The following table provides such an analysis for the Charter Township of Texas, its urbanized neighbors and Kalamazoo County, as a whole:

Comparison of 1997 Real Property Valuation¹²

Jurisdiction	Agricultural		Commercial		Industrial		Residential	
	SEV (millions)	% of Total						
Texas Twp.	\$5.514	2%	\$26.173	8%	\$5.849	2%	\$267.310	88%
Oshtemo Twp.	\$1.937	<1%	\$119.419	35%	\$6.738	2%	\$217.528	63%
Portage City	\$1.019	<1%	\$209.751	20%	\$122.393	12%	\$692.465	68%
Kalamazoo Co.	\$99.528	2%	\$858.843	20%	\$315.406	7%	\$3,041.6	70%

It is evident from this table that most of the tax base in the Charter Township of Texas is residential in nature. In fact, of all the jurisdictions in the County, only Cooper and Ross Townships have a greater share of total valuation comprised of residential properties.

¹² Kalamazoo County Equalization Department, 1997 *Kalamazoo County Equalization Report*.

Economic Development

Despite its proximity to the intersection of US-131 and I-94, the Township has not dedicated significant land areas commercial or industrial land uses.

A relatively modest share of the land in Texas Township is dedicated to industrial and commercial land uses. Despite its proximity to the intersection of US-131 and I-94, the Township has not dedicated significant land areas to such uses. In addition, while many of its neighbors have made extensive use of tax abatement provisions and the Industrial Facilities Tax available under P.A. 198 to attract industrial investment, Texas Township has provided only one such abatement to spur industrial development.

Since 1990, industrial property values in the Township have barely increased from \$5.2 million (SEV) to \$5.8 million, an average annual rate of increase of only 1.6% - roughly comparable to the rate of inflation. At the same time, commercial properties have grown from \$6.0 million to \$26.2 million, an average annual rate of increase of over 48%. Among the larger commercial property improvements over the past seven years were the following:

- ◆ National City
- ◆ TLC
- ◆ Total Petroleum
- ◆ Cracker Barrel
- ◆ Citco Petroleum
- ◆ Saturn Dealership
- ◆ Fairfield Inn

All of these most significant investments have been made in the vicinity of the I-94 interchange at 9th Street, confirming the advantage of access to the highway system for most large-scale commercial or industrial development.

Although the Township has not witnessed significant commercial or industrial development, the Kalamazoo region is well poised for further growth. In a report published in 1997 by the Kalamazoo County Overall Economic Development Program, the area's advantages are clearly summarized. They include higher education through Western Michigan University and the Technology Applications Center at Kalamazoo Valley Community College in Texas Township. In addition, the proximity to the major markets of the Midwest via I-94 and US-131 and the overall quality of life in the region are discussed. One of the challenges facing the region, according to the report, is the lack of larger (i.e., 40+ acres) "site-ready" parcels for industrial development with full utility services and good access to the highway network. The report also points out that the region is handicapped by a lack of a "high-quality industrial park

which could accommodate the expansion of existing businesses..."¹³ Despite this perceived weakness in the region, the Charter Township of Texas successfully attracted a new research and educational facility involving Kalamazoo Valley Community College and the Dana Corporation. This development may spur further investment in high quality job creation and research facilities in the community.

Kalamazoo County lacks larger site ready parcels for industrial lands and a "high quality" industrial park.

One advantage available in Texas Township is the relatively low rate of taxation. These could be an important asset in attracting further investment, should the Township choose to do so. The following table summarizes the rates of taxation in the four school districts in the Township:

Millage Rates (rate x \$1,000 in Taxable Value) *		
<u>School District</u>	<u>Homestead</u>	<u>Non-Homestead</u>
Kalamazoo	25.8374	43.8774
Mattawan	29.9253	47.9253
Portage	21.3136	40.3136
Schoolcraft	27.6874	45.6874

* Of these amounts, the Charter Township of Texas levies .9238 mills.

Although there is little commercial or industrial development in the Township, the community does include some significant employers. Large-scale employers have an important impact on land use, environmental and traffic considerations. The following table presents the top employers in the community and their product or service:

<u>Company</u>	<u>Product or Service</u>	<u>Approximate No. of Employees</u>
Kalamazoo Valley Community College	Community College	805
National City	Banking - Corporate Office	2,000
United Parcel Service	Delivery Service	160
Total Logistics Control	Trucking/Warehousing	119
Cracker Barrel	Restaurant	60
Saturn	Auto Dealership	25

Although a significant share of the land in the Township is dedicated to agricultural uses, farming accounts for a relatively small and declining

¹³ Kalamazoo County Overall Economic Development Program Committee, *The 1997 Economic Information Book*, June 1997.

percentage of total employment. In 1970, farming itself generated 116 jobs and by 1990 total farming employment had fallen to 50. Of course, these figures do not include earnings from food processing manufacturing or marketing. Furthermore, agricultural employment is only a partial measure of the impact of this industry on the local economy.

In terms of income to farm proprietors, agriculture in the County accounted for about \$87.6 million in total sales in 1992 (the last year for which figures are available). However total production expenses amounted to about \$73.2 million, leaving about \$14.4 million in net income. That figure, distributed over the 745 active farms in the County (in 1992), results in average net cash income from operations of about \$19,300 per farm. Of course, some farms provide sizable incomes for their proprietors, but a significant number (approximately 51%) reported a total sales of less than \$10,000 in 1992.¹⁴

¹⁴ U.S. Bureau of the Census, *1992 Census of Agriculture*

CHAPTER 5. LAND USE AND DEVELOPMENT PATTERNS

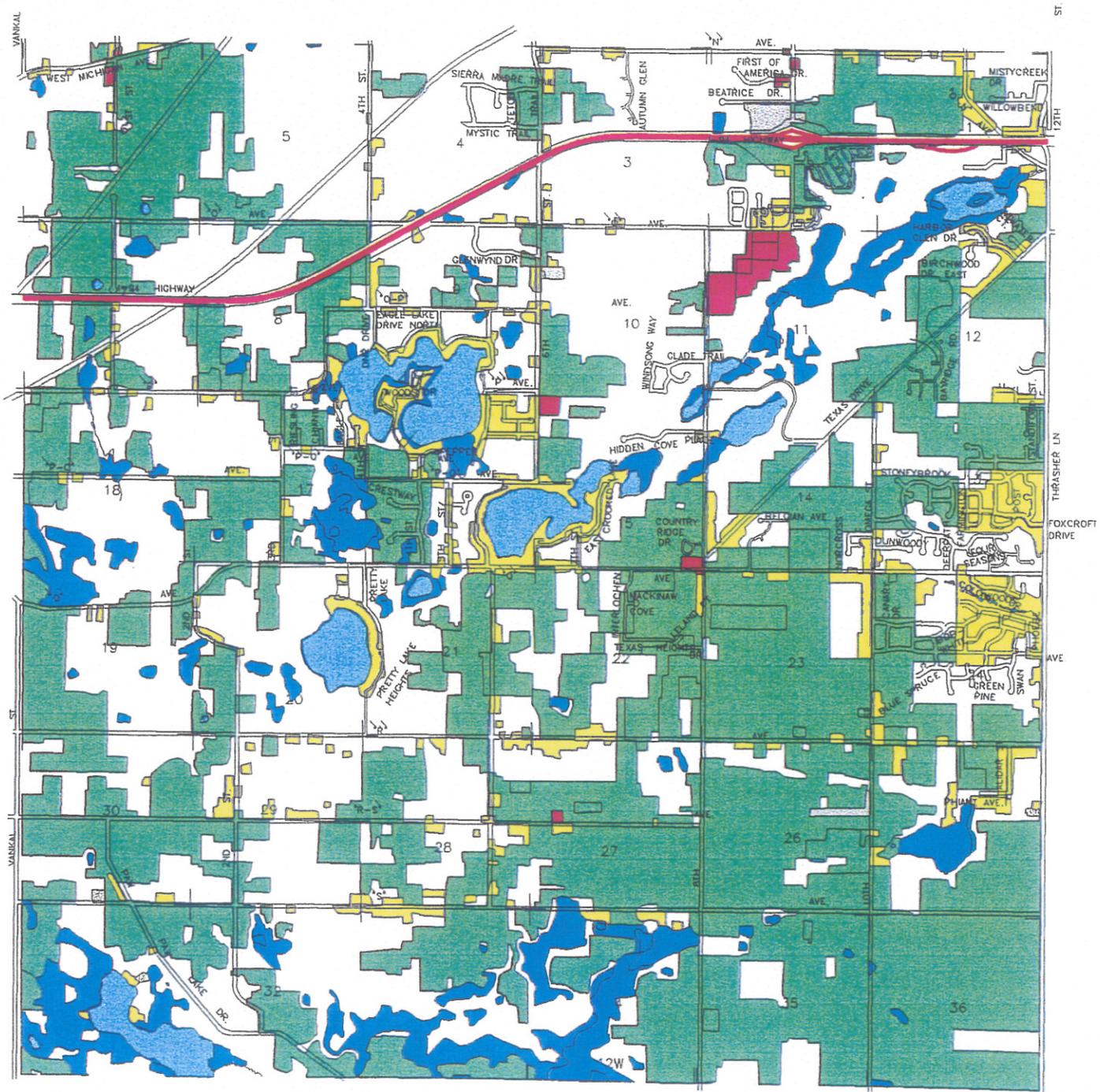
The total land area of the Charter Township of Texas is about 36 square miles or 23,040 acres. Texas Township is located in west-central Kalamazoo County adjoining Antwerp Township in Van Buren County and the Townships of Oshtemo and Prairie Ronde and the City of Portage in Kalamazoo County.

Land Use

The land uses in Texas Township are reflected in Maps 7 and 8. Map 7 reflects the land uses in 1978 as prepared by the Michigan Resources Information System (MIRIS). Map 8 is an Existing Land Use map based on computerized mapping prepared by the Western Michigan University G.I.S. Research Center, as updated in January, 1998 by Township officials. It is important to note that both Maps 7 and 8 were prepared from aerial photography and reflect composite groupings of land uses categories. In addition, Map 8 was manually adjusted following input from local officials.

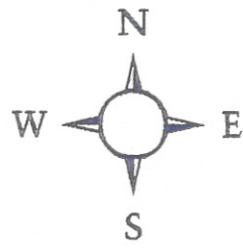
The land uses in the Township have been consolidated into seven categories. The allocation of the acreage for each category is estimated from mapping provided by the WMU G.I.S. Research Center:

LAND USE CATEGORY	
<u>CLASSIFICATION</u>	<u>LAND USE DESCRIPTION</u>
Residential (4,416 acres, 19%)	Including single- and multi-family dwellings
Commercial (64 acres, <1%)	Neighborhood scale commercial and highway commercial areas
Industrial (128 acres, <1%)	Industrial, utilities, assembly manufacturing
Institutional (96 acres, <1%)	Colleges, schools
Agricultural (5,184 acres, 23%)	Cropland, orchards, permanent pasture, other agriculture
Water/Wetlands (2,400 acres, 10%)	Lakes and streams
Open/Wooded (10,752 acres, 47%)	Fallow fields, woods, camps and park lands



Map 7
 The Charter Township of Texas
 1978 Land Use Map

- Residential
- Vacant / Wooded
- Commercial
- Industrial
- Agricultural
- Lakes/Wetlands



The shift in land uses is due to the combined effects of increased development for housing and the continued decline of small-scale agriculture common in southern Michigan

The most predominate current land use (Map 8) is wooded and open lands followed by approximately equal amounts of residential and agricultural lands. It is noteworthy that in Map 7, which reflects land uses in 1978, agricultural lands predominated, followed by open lands and then residential lands. The shift in land uses over the intervening twenty years is due to the combined effects of increased land development for housing and the continued decline of small-scale agriculture common in much of southern Michigan. As a result, much of the lands involved in active farming in 1978 have witnessed some residential development, either in subdivisions or in metes-and-bounds land divisions. Large portions of formerly tilled lands have been permitted to return to meadow, presumably awaiting development in the future.

Residential development predominates in the eastern portion of the Township and around Eagle and Crooked Lakes. Large-scale, high quality subdivisions - such as Rudgate in the Woods, Rudgate Farms, Birchwood Hills and Colony Woods - are found in Sections 2, 13 and 24. In addition, much of the shoreline of Eagle Lake, Crooked Lake and parts of Pretty Lake have become fully developed with residential land uses. The frontage along most arterial roads in the Township has been developed into larger acreage single family home sites, typically ranging from 5 to 20 acres. Housing development in Texas Township tends to be directed toward middle and upper income home buyers. Mobile and modular homes and apartment developments are found in the far northeastern portion of the Township.

In the southeast portion of the Township (sections 23, 25, 26, 27, 35 and 36) significant tracts of farmlands remain in Texas Township. These areas adjoin comparable agricultural acreage in the northeastern portion of Prairie Ronde Township, to the south. Much of this farmland is characterized by Dowagiac (DoA), Kalamazoo (KaB) and Oshtemo (OsB) soils types which typically offer higher crop yields than many of the other soils types in the Township. Properties in the Township enrolled in the Farmlands and Open Space Preservation Act (P.A. 116) are also concentrated in the southeastern portion of the Township. A total of about 1,480 acres of farmlands are currently enrolled in this program.

Commercial land uses are found in two locations in the Township. The Texas Corners settlement at the intersection of "Q" Avenue, Texas Drive and 8th Street includes smaller convenience retail and commercial services. In addition, this area also includes service commercial and contractor warehousing facilities. The frontage on 9th Street at the I-94 interchange includes the majority of the Township's commercial land

uses. These include such highway commercial land uses as a restaurant, motel and automobile related businesses including a new car dealership.

Industrial land uses are found north of I-94 and west of 9th Street. The largest of these uses are trucking, delivery and warehousing operations. Also found in this area are the regional offices of First of America Bank.

The Charter Township of Texas is home to several institutional land uses. Kalamazoo Valley Community College is located in Section 11 on "O" Avenue, between 8th and 9th Streets. The building and its campus adjoin the Al Sabo preserve north of Portage Creek. Immediately south is the Boy Scout Camp on Bass Lake in sections 11 and 14. This facility includes camp and recreational facilities for the use of Boy Scout troops throughout southwestern Michigan. The City of Kalamazoo well field and wellhead protection area extends from Bass Lake to the northeast to the Atwater Mill Pond in Section 1. Adjoining the western lakeshore of Pretty Lake in section 20 is the Pretty Lake private vacation camp. This facility includes camping and recreational facilities.

ADJOINING LAND USES

It is important to consider existing and future land uses in Texas Township in the larger context of the western Kalamazoo County region. This is true since patterns of growth and development frequently "spill over" from one jurisdiction to the next. This section examines the future land uses proposed for Oshtemo Charter Township to the north, the City of Portage to the east and Prairie Ronde Township to the south. Antwerp Township in Van Buren County to the west is in the process of developing a Comprehensive Plan and has provided a draft of its Master Plan for reference in the preparation of this Plan. The draft provided does not, however, provide a map to illustrate the future land use plan.

Patterns of growth and development frequently "spill over" from one jurisdiction to the next.

The City of Portage.

The City of Portage updated its Comprehensive Plan in 1996. Portage and Texas Township share 12th Street as a common boundary. The future land use map for Portage illustrates a range of uses along 12th Street including low, medium and high density residential land uses, office, local business commercial land uses. At the intersection of 12th Street and "Q" Avenue, there is a potential for some conflicts between the City and Township as Portage is planning for office development on the east side of 12th Street adjoining the US-131 right-of-way, while existing land uses in the Township are either residential or open lands.

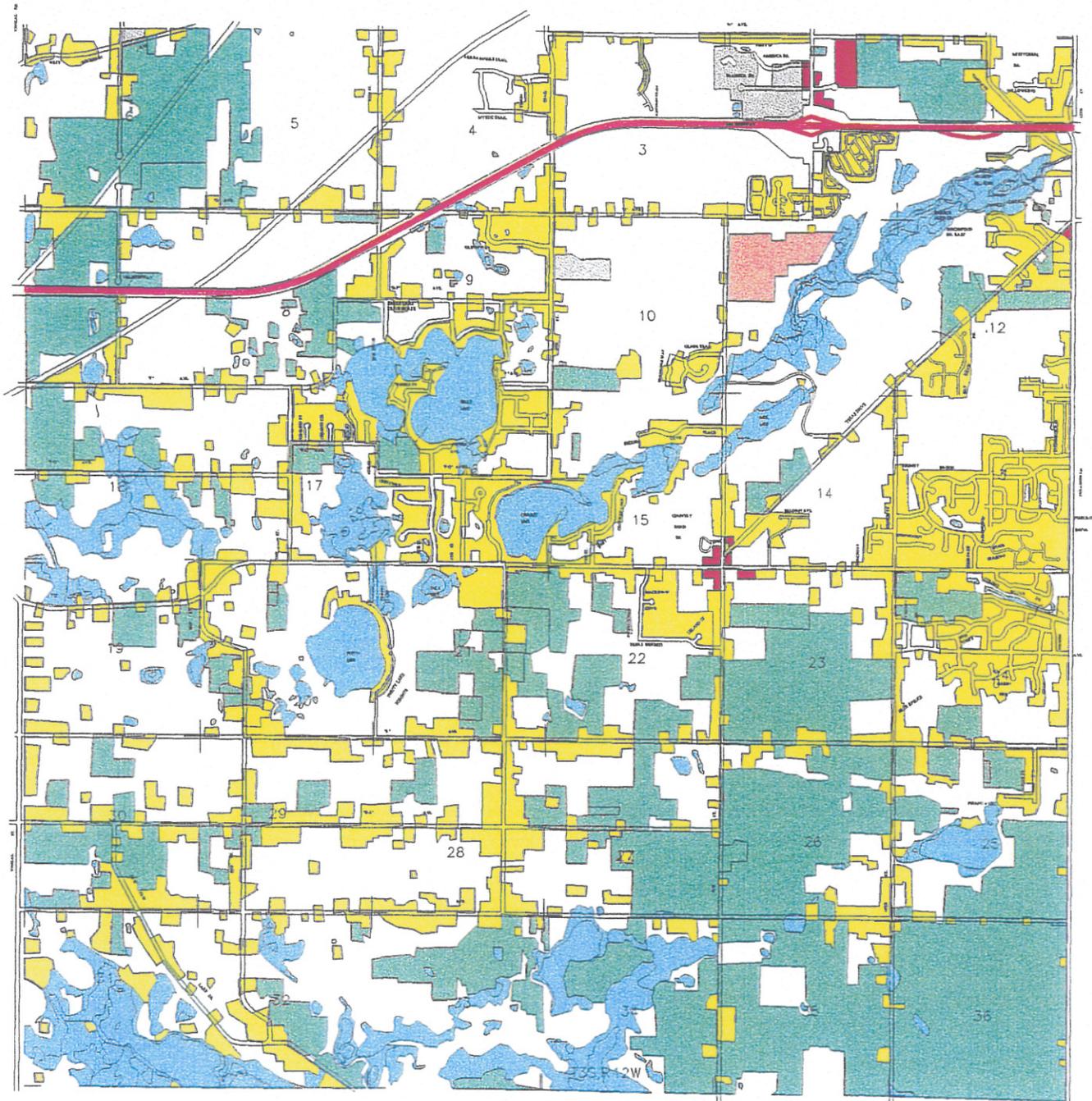
Oshtemo Charter Township

Oshtemo Township recently updated its Comprehensive Plan and the future land use map illustrates rural residential land uses along most of the Texas/Oshtemo interface along "N" Avenue. However, at the southeastern portion of Oshtemo Township, a potential exists for some conflicts, based on the Texas Township current Plan and the updated Oshtemo future land use map. In sections 35 and 36, the Oshtemo Plan reflects industrial land uses with a "focus area" covering section 36. The industrial area is illustrated as west of 9th Street and north of "N" Avenue, which is fairly proximate to the industrial areas in Texas Township, south on "N" Avenue. The effect of this pattern of development will be to leave the residential properties that front on "N" relatively isolated.

In addition, the "Genesee Prairie" focus area encompasses all the land area located in Section 36 of Oshtemo Township. This area is also referred to as the Parkview/11th Street "focus area." The objectives of the focus area include efforts to promote open space development at low and medium densities, promote the development of greenway connections and preservation of the Colony Farms Orchard property as a regional asset. Nevertheless, given the intensity of some land uses adjoining US-131 in this vicinity, there is a potential for conflicts in the north east portion of Texas Township, since the current plan illustrates low density residential land uses in this area.

Prairie Ronde Township

The Township's existing Master Plan was adopted in 1982 and has been used to guide development ever since. The future land use map illustrates agricultural land uses or woodlands running the entire width of the Township along the Texas/Prairie Ronde interface. One exception to this pattern is the gravel mining operation located in Sections 3 and 4 of the Township. Such facilities generally are compatible with agricultural land uses, although gravel trucks may travel north and south from this facility through Texas Township past residential areas. Other than this use, the pattern of land use in Prairie Ronde Township appears to be very consistent with the pattern established in the Charter Township of Texas.



Map 8
 Charter Township of Texas
 1996 Land Use Map



- Residential
- Vacant/Open/Wooded
- Commercial
- Industrial
- Agricultural
- Lakes/Wetlands
- Institutional

Source: 1996 Land Cover Layer
 WMU-GIS Research Center
 as updated by Texas Township

Williams & Works

CHAPTER 6. TRANSPORTATION

CONNECTIONS

Transportation linkages between Texas Township and the remainder of the community are quite good. The arterial road network is laid out in a traditional grid pattern on section and half-section line intervals, with collector and local streets adjoining as appropriate. Internal circulation within subdivisions and residential neighborhoods is generally accomplished on paved and fully improved streets. Most of the county arterial roads in the Township are paved.

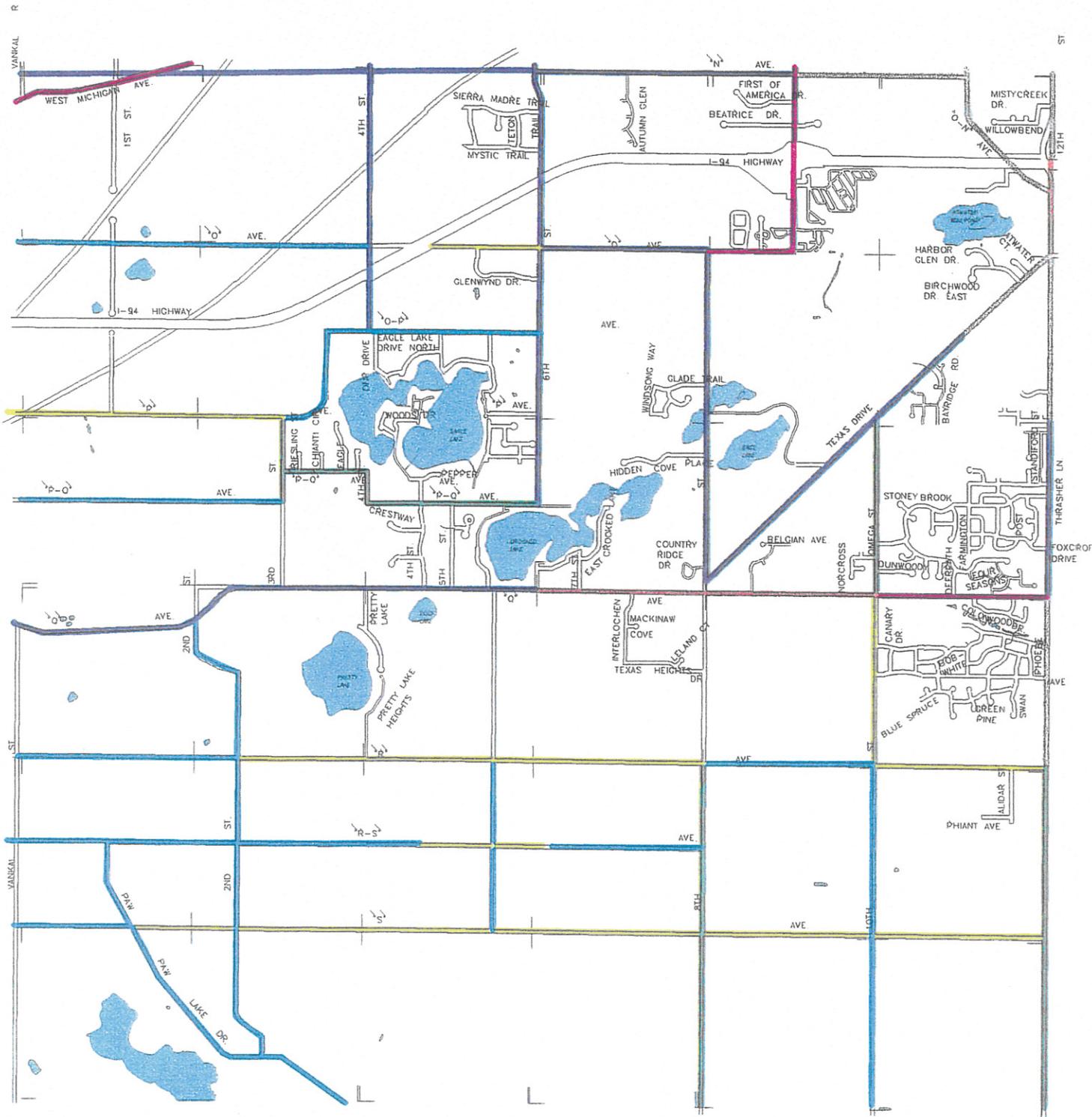
The community lies immediately west of the I-94/US-131 interchange, one of the most heavily traveled interchanges in the state. I-94 is the primary connection between the Chicago and Detroit metropolitan areas and US-131 currently exists as a limited access north-south expressway from Cadillac to Schoolcraft with improvements in planning that would ultimately provide connections from the Mackinaw Bridge to the Michigan-Indiana border. The 9th Street interchange with I-94 lies within the Township and the Centre Street interchange with US-131 lies just east of the Township limits in the City of Portage.

TRAFFIC

Traffic volumes are an important indicator of growth and development. Map 9 reflects the volumes on key streets within the Township. These are reported as two-way average daily traffic (ADT) counts as reported by the Kalamazoo County Road Commission. These counts were taken in 1997 and are felt to reflect current traffic volumes. Of course, as development increases in the Township, these volumes are likely to be somewhat greater.

The most heavily traveled street segments are 9th Street north of I-94 (21,199, ADT) and 9th Street south of I-94 (12,530, ADT). Higher volumes are found along the eastern portion of "Q" Avenue and along much of 12th Street, as well.

It should be understood, that ADT volumes are averaged for a 24-hour day and a more detailed analysis of peak-hour traffic flow would be required to gain a complete understanding of traffic volumes. For the purposes of this Plan, however, ADT volumes are felt to be an



Map 9
 The Charter Township of Texas
 1997 Traffic Counts

- Less Than 500
- 501 - 1000
- 1001-2000
- 2001-4000
- 4001-6000
- 6001-8000
- More Than 8000

adequate measure of volume despite the fact that they may mask some localized or periodic congestion problems. A more detailed analysis will likely reveal “rush-hour” peak loads in some locations that are beyond road capacity.

Increased volumes of traffic along arterials may be anticipated with further expansion of the housing stock. A typical single family residence generates about 9.55 trips per day.¹⁵ The population of the Township will increase by about 8,900 persons by 2020, and sources project that an average household in 2020 will consist of 2.42 persons.¹⁶ With these simple “rule-of-thumb” standards, it is obvious that over 35,000 additional car trips per day will be generated in the Township. These estimates do not take into account additional trips emanating from outside the Township and either passing through to destinations elsewhere or destined for local facilities.

MASS TRANSIT

The Charter Township of Texas is served by the Kalamazoo Metro Transit system, with service limited to the vicinity of 9th Street in the vicinity of Kalamazoo Valley Community College. This system provides fixed-route public transit services over 17 scheduled routes including over 250 miles of roadway in the Kalamazoo County. The County’s Car-A-Van system also serves the Township with demand-response transportation services.

Air transportation is available through Kalamazoo/Battle Creek International Airport located at 5239 Portage Road in Kalamazoo. Commercial air service is provided by seventy-five arrivals and departures on seven commercial air carriers. Over 500,000 passengers used the airport in 1998 which provides turbo-prop and jet service to regional hubs in Detroit, Chicago, Pittsburgh, Cincinnati, Cleveland and Minneapolis.¹⁷

¹⁵ Institute of Traffic Engineers, *Trip Generation*, 5th Edition, 1991.

¹⁶ Woods & Poole Economics, Inc., *Kalamazoo County, MI 1997 Data Pamphlet*, 1997

¹⁷ Kalamazoo-Battle Creek International Airport, Website,
<http://www.kalcounty.com/azo>

SECTION III. COMPREHENSIVE PLAN

This section of the Plan is the culmination of the entire planning process. It includes the overall goals and objectives of the Township as development through the futuring process and the Community Opinion Survey and ultimately as expanded in the preparation of this plan.

It also sets forth in Chapter 8 the future land use plan and map for the Charter Township of Texas. Finally, in Chapter 9, the Comprehensive Plan offers a framework for the implementation of the Plan.

CHAPTER 7. GOALS AND OBJECTIVES

As a part of the effort to develop this plan, the Land Use Plan Committee undertook a community-wide effort to establish a broadly-held consensus about the preferred future of the community. In addition to the Committee itself which included nine members, representing various interests in the community, a community futuring session was held to identify and rank the various land use “opportunities and threats” facing the Township. Using the input from the futuring session, the Committee fielded a community opinion survey intended to test the futuring process. The Committee members used the results of the survey, the futuring session and their own experience and perspectives to prepare the goals and objectives in this Chapter.

The result is a series of ten broad goal statements each supported by more specific objectives. This plan is founded on the policies outlined in the following statements. The goals are intended to describe a desirable end state or the condition of the Township about twenty-five years into the future. They are intentionally general but all are felt to be attainable through concerted effort. The objective statements tend to be more specific and may be regarded as milestones in the journey to achieve the larger goal.

1. NATURAL FEATURES AND ENVIRONMENTAL PROTECTION.

The essential natural features in the Charter Township of Texas will be preserved and protected. Such features as important wetlands, open lands, woodlands, lakes, groundwater and the aquifer help to define the character of the Township and contribute to the community’s rural quality.

Objectives

- A. Develop an inventory of important natural features.
- B. Prioritize features for protection.
- C. Develop measures to limit population density in areas of important natural features.
- D. Develop measures to protect surface water, such as stream corridor filter and buffer requirements, lake setbacks and wellhead protection measures.

- E. Adopt policies that encourage public water and wastewater systems for new development.
- F. Foster the use of nature conservancies to protect natural areas in perpetuity.

2. UTILITIES, INFRASTRUCTURE, POLICE AND FIRE PROTECTION AND OTHER PUBLIC SERVICES.

Public facilities, including utilities and roadways, will be located to complement the Township's land use plans and designed to serve the public safety needs. Such services and facilities will effectively guide and direct growth in support of this Comprehensive Plan.

Objectives

- A. Foster and maintain effective and cooperative working relationships with the Kalamazoo County Road Commission, the Michigan Department of Transportation, Kalamazoo County and the cities of Kalamazoo and Portage and other adjoining communities.
- B. Evaluate police and fire protection needs in conformance with this Plan.
- C. Adopt policies that encourage public water and wastewater systems for new development to be located in conformance with this Plan.
- D. Evaluate the Zoning Ordinance and other development guidance mechanisms to serve as implementation tools for this Plan.

3. PLANNING, CODE ENFORCEMENT AND REGIONAL COOPERATION.

The Township and its residents will work cooperatively to achieve property maintenance standards that reflect the community's values in terms of health and safety. Land uses will be planned and developed in accord with the Comprehensive Plan to provide effective buffers and transitions between uses while providing opportunities for complementary mixed uses, where appropriate. The Township will work cooperatively with other units of local government in the region while balancing local interests.

Objectives

- A. Develop an inventory and geographic information system database of important land uses.
- B. Periodically evaluate and update ordinance standards to reflect Township values as appropriate to particular neighborhoods.
- C. Work to maintain and strengthen the Council of Governments
- D. Evaluate the Township Comprehensive Plan in terms of the County land use plan.
- E. Evaluate the Township Comprehensive Plan in terms of the land use plans of surrounding communities.

4. PARKS AND RECREATION.

In keeping with the Township's rural character, Texas Township will offer a network of natural areas developed in cooperation with the private sector and area institutions. The active, or programmed, recreational needs and facilities of the community will be addressed in conjunction with the public schools, the City of Kalamazoo and the Kalamazoo Valley Community College.

Objectives

- A. Inventory and map existing and potential greenway connections.
- B. Establish, or foster the establishment of, a land acquisition and stewardship fund and/or conservancy.
- C. Foster the dedication of private lands for public or private greenways
- D. The Township will facilitate programmed recreational services by identifying resources, coordinating with other service providers and promoting the services available.

5. AGRICULTURE AND RURAL PRESERVATION.

The Township will retain its rural character through the use of voluntary measures to encourage agriculture in those areas with the most suitable soils, operating farms and the appropriate natural features to support it. Effective buffers and appropriate transitional land uses will insulate

higher intensity land uses from the effects of customary agricultural practices. Growth and development will be guided through the Comprehensive Plan in a rational and sequential manner to protect open lands that contribute to the rural character of the community while protecting and preserving the rights of private property owners.

- A. Develop an inventory of existing and potential farmland areas.
- B. Survey the interests of existing farmers with regard to farmland preservation
- C. Preserve important rural corridors
- D. Develop mechanisms to implement purchase and transfer of development rights and agricultural security areas.
- E. Develop cooperative approaches for farmland preservation in conjunction with surrounding communities and the County.

6. ECONOMIC DEVELOPMENT AND MUNICIPAL FINANCE.

Land uses in the Township will be balanced to achieve the goals of the Comprehensive Plan to help provide sufficient revenues to support an appropriate level of public services. The community will take careful advantage of its prime location on regional transportation corridors to promote high quality job-creating land uses.

Objectives

- A. Improve community understanding of the value of appropriate and compatible economic development in the form of commercial and industrial land uses.
- B. Develop and adopt a sub-regional plan for Texas Corners including preferred land uses, landscape and architectural standards, circulation plan, cross-access standards and access management requirements.
- C. Complete cooperative plans with Oshtemo Township along I-94 and with the City of Portage along US-131.

7. HOUSING.

The Township will encourage attractive and creative neighborhood forms that provide efficient and aesthetic use of the land in response to the requirements of the marketplace.

Objectives

- A. Implement a planned unit development process to encourage flexible and creative development forms.
- B. Establish other creative development mechanisms consistent with the goals of this Comprehensive Plan.
- C. Encourage a diversity of housing types.
- D. Evaluate the housing programs of the Township within the context of regional housing needs and adjust as appropriate and in conformance with the goals of this Comprehensive Plan

8. SENSE OF COMMUNITY AND QUALITY OF LIFE.

The Charter Township of Texas will take its identity from its high quality and safe neighborhoods, its rural character and its active and involved citizens. The community will develop a central focal area that further defines the community and serves its residents.

Objectives

- A. Establish and implement a sub-regional plan for neighborhood commercial development at Texas Corners
- B. Foster the development of one or more community meeting spaces and senior activities centers.
- C. Establish and carry out programs to strengthen community identity with the Charter Township of Texas.
- D. Encourage the establishment of safe pedestrian and bicycle connections between and within neighborhoods.
- E. Seek to preserve the historic resources of the Township.

9. COMMUNITY SERVICES AND INSTITUTIONS.

Social and cultural services commensurate with the fiscal capability of the community will be provided by others and located in accord with the Comprehensive Plan.

Objectives

- A. Encourage the development of community schools within the Township
- B. Foster the establishment of appropriate activities and facilities for young people within the Township.
- C. Evaluate the need for a community library and resource center within the Township.
- D. Foster the provision of improved health care facilities within the Township including nursing and trauma care.
- E. Foster the provision of senior congregate care facilities within the Township.

10. TRAFFIC AND TRANSPORTATION.

The system of roads and walking and bicycle trails within the Township will safely serve motorists, pedestrians and bicyclists and the needs of special populations while providing safe and efficient connections within and through the Township.

Objectives

- A. Develop an inventory of portions of the Township requiring improved non-motorized connections.
- B. Encourage the establishment of safe pedestrian and bicycle connections between and within neighborhoods.
- C. Encourage development patterns that are consistent with current and potential public transit forms.
- D. Where appropriate, encourage widened pavement shoulders for bicycle and pedestrian use.
- E. Encourage sidewalks and walking and bicycle trails within new and existing neighborhoods.
- F. Develop and implement standards to foster pedestrian friendly forms of commercial development.
- E. Evaluate the traffic and transportation needs and programs of the Township within a regional context and adjust as appropriate and in conformance with the goals of this Comprehensive Plan

CHAPTER 8. FUTURE LAND USE PLAN

This Future Land Use Plan seeks to promote efficient and aesthetic growth within an area of concentrated growth while promoting the preservation of open lands, farmlands and the rural character of the community outside of this area

The Charter Township of Texas Comprehensive Plan establishes general patterns of land use to guide growth and development for the next twenty to twenty-five years. The over-arching intent is to foster efficient patterns of development that preserve the community's important natural features and rural character while accommodating growth anticipated to reach about 3,000 additional housing units by the year 2020. To this end, this Plan establishes a concentrated growth area which is defined by the Township limits on the east and north, "R" Avenue on the south and 3rd and 4th Streets on the west. This Future Land Use Plan seeks to promote efficient and aesthetic growth within this area while promoting the preservation of open lands, farmlands and the rural character of the community outside of this area. This area includes about 10,200 acres, or slightly more than 40% of the land area in the Township. It adjoins the more heavily developed portions of the City of Portage and Oshtemo Township.

To further the Township's objectives for efficient, human-scale development, this future land use plan also contemplates the development of a more detailed sub-area plan in the Texas Corners area at 8th Street and "Q" Avenue. This will be a more detailed plan for a mix of uses including neighborhood commercial, single family and potentially multifamily development.

By encouraging relatively intense development within the growth area and in the vicinity of Texas Corners, it should be possible for the Township to continue to protect and preserve significant tracts of important natural features and to promote high quality residential development in a form that complements those features. The following describes each of the future land use designations as illustrated on Map 10.

RESOURCE CONSERVATION

The Charter Township of Texas is blessed with large tracts of land offering important wetlands, wildlife habitat, forest lands and lakes. These lands are a vital part of the community's identity and, with careful planning, they may be preserved and protected so that future generations may continue to enjoy an unspoiled natural environment. The overall purpose of the areas designated as Resource Conservation is to foster the

protection of these natural features with as little disturbance as possible. Much of the area designated is in public or quasi-public ownership and efforts should be directed to maintain and provide more public stewardship. Those lands that are not in public ownership may see low intensity development similar to rural residential or conservation cluster development incorporating careful measures to limit the impact on natural features. Such techniques as conservation easements and planned unit development (PUD) should be encouraged. Extensions of public utilities and roads into these areas should be avoided.

Development in the Resource Conservation areas should be limited to quasi-public uses and single family housing limited to very low density or conservation cluster design that preserves natural areas and limits overall densities to one-half (1/2) unit per acre. Furthermore, overlay zoning districts may be developed to identify unique resource areas that may require special protection. These may include sensitive stream corridors, wildlife corridors and groundwater recharge areas.

Where conservation cluster developments are proposed, the Township will utilize its PUD mechanism to implement a development that is consistent with this Plan. The first step would be to conduct a site analysis to identify those features on the site that should be preserved and those portions that may be developed without impact. A set of performance measures will be developed to measure possible impacts. These may include buffer/filter strips from stream or wildlife corridors, tree protection and other appropriate techniques. To the extent development can be accommodated within a portion of the site without impact on the important features, some additional density may be permitted. Conservation easements should be strongly encouraged as a part of such a development to assure that the undeveloped portions of the site remain in a natural state.

AGRICULTURE

The Township has a limited amount of high quality agricultural lands remaining in production. Crops include field crops (i.e., corn, wheat, alfalfa, etc.) and grapes. These areas help to give the community its rural character and the farming activity remains an important element of the local economy. The overall purpose of the Agriculture land use designation is to promote the continued use of quality farmlands for agricultural purposes and to minimize the potential for conflict with more intense land uses.

The primary use in this area should be farming and related activities. Field crops, orchards, vineyards and livestock operations may be permitted. In addition, residential development associated with farming operations should be anticipated. Other single family housing may be permitted either in very low densities or conservation cluster design that preserves quality farmlands areas by limiting overall densities to one-half (1/2) unit per acre.

The Township's PUD mechanism may be used to implement a development that is consistent with this Plan. The first step would be to conduct a site analysis to identify those portions of the site that are unsuited to agricultural use by virtue of soil types, terrain, adjoining land uses, or other factors. A set of performance measures will be developed to measure possible impacts of potential development on those portions of the site with strong agricultural potential. These may include buffer distances to isolate agricultural effects from residences, road connections to minimize conflicts with farm vehicles, minimum parcel size standards for agricultural purposes and other appropriate techniques. To the extent development can be accommodated within a portion of the site without impact on the agricultural areas, some additional density may be permitted.

RURAL RESIDENTIAL

This land use designation is intended primarily to address the need for scattered single-family development in relatively rural and low density patterns. These areas are not intended to be served with large-scale public utility systems that would promote greater densities. Field crops, vineyards and orchards will also be anticipated in these areas. No animal feeding operations will be permitted.

The primary land use within this area will be single family homes developed on lots of 2 acres, or more; or in conservation clusters that result in the preservation of significant open lands and overall densities of less than one-half (1/2) unit per acre.

LOW DENSITY RESIDENTIAL

A significant portion of the Township lends itself to suburban style single family neighborhoods. These communities are relatively homogenous in form and land uses, scaled primarily for passenger car travel and developed primarily for families with small and school-age

children. The primary land use within this area will be single family homes developed in density patterns ranging from 1/2 to 3 dwelling units per acre or in conservation clusters that result in the preservation of significant open lands and overall densities of 3 units per acre, or more. In all cases, every effort will be made to incorporate public or properly licensed private utilities in all sub-divisions in the low density land use designation.

In keeping with a desire for relatively low density patterns of development while accommodating the anticipated growth in population, the Township will encourage forms of development that preserve open lands and the rural character of the community. While the preference will be for lower densities, higher densities of up to 3 dwelling units per acre will be considered as further growth occurs and as this Plan matures. The Township will monitor conditions within the low density land use designation. When considering potential developments with densities of one unit per acre, or more, the Township will take into account the availability of public utilities, the form and density of adjacent uses, the natural features on a site and in the immediate area, the capacity of the transportation network and other factors.

MEDIUM DENSITY RESIDENTIAL

In proximity to more intense land uses and community facilities, the Township will encourage medium density residential developments. These may be single family, two-family or multi-family homes configured for families with children or for “empty-nester” families. Conservation design techniques will be encouraged, where appropriate, to establish small pockets of natural lands within this development form. These communities are scaled for public transit or for passenger car travel with good pedestrian connections to commercial and institutional land uses nearby. In all cases, public or properly licensed private utilities will be required in all developments in the medium density land use designation.

The primary land use within this area will be single family, two-family and small scale multi-family homes developed in density patterns ranging from 3 to 4.4 dwelling units per acre or in conservation clusters that result in the preservation of significant open lands and somewhat greater overall densities.

An area of Medium Density Residential is illustrated along “N” Avenue east of 9th Street. A shift in land uses in this location is contemplated given the trends toward more intense uses to the south and west and in Oshtemo Township. Thus, a shift to Medium Density Residential land use in this area is appropriate, if it occurs in a rational pattern over the life of this plan. As more intense land uses become established along 9th Street and eventually along “N” Avenue, both in Texas Township and in Oshtemo Township, consideration may be given to implementing this element of the Plan. Such a change should occur in conjunction with or following similar shifts on adjoining lands, but not in anticipation of those shifts. In addition, the Township’s goal to encourage single family housing should be reflected to the greatest extent possible as this shift in land uses occurs.

HIGH DENSITY RESIDENTIAL

A primary goal of this Master Plan is the preservation of the Township’s natural features by promoting high quality and aesthetic forms of development that increase density while creating a very attractive living environment for residents. The high density residential designation is key to this goal. The primary purpose of this designation is to establish human scale, walkable neighborhoods in close proximity to commercial and recreational services with good amenities and design that works with the area’s natural features. These communities are scaled for public transit or for passenger car travel with good pedestrian connections to commercial and institutional land uses nearby. In all cases, public or properly licensed private utilities will be required in all developments in the high density land use designation.

The primary land use within this area will be single family detached and attached homes developed in clusters or in multi-unit buildings. Conservation design techniques will be encouraged, where appropriate, to establish small pockets of natural lands within this relatively intense development form. Innovative design techniques will be considered to accommodate mixed uses that complement one another. Overall residential densities of up to 8 dwelling units per acre will be achieved.

NEIGHBORHOOD COMMERCIAL

This land use designation is intended to provide goods and services primarily to meet the needs of the immediate neighborhood. Facilities

will be developed in harmony with the area's natural features and in a scale and form to encourage pedestrian access and to minimize auto-pedestrian conflicts. Innovative techniques will be encouraged to include a mix of office and residential uses with commercial land uses in the Texas Corners sub-area plan.

In those locations where mixed commercial and residential can be accommodated effectively consistent with the goals and objectives of this Plan, overall residential densities of up to 5 units per acre will be permitted.

REGIONAL COMMERCIAL

This land use designation is intended to provide goods and services to meet the needs of the larger Southwestern Michigan Region, including jobs for residents and goods and services for residents and the visitors. Facilities will be developed in harmony with the area's natural features and in a scale and form to promote smooth traffic access to I-94 and US - 131 and to the other portions of the community.

BUSINESS AND TRAINING

This specialized land use designation seeks to broaden the Township's role in economic development and training in the region by fostering clean industries and job training for area students and residents. The Township's location along the important I-94 corridor and its commitment to rational and balanced growth will work together in support of this use. The area proposed for this designation is within the area planned to accommodate most of the Township's growth and may be served with utilities. Furthermore, its location along the I-94 right-of-way provides it with attractive visibility. This portion of the Township includes significant woodlands and rolling topography. It also adjoins both low and medium density residential areas. Therefore, the land uses planned for this portion of the Township should be fully compatible with both the natural surroundings and neighboring uses. Training and educational facilities, office and research facilities are the primary land uses contemplated. Significant natural area buffers will be incorporated and developments that work in harmony with the natural features of the land will be encouraged.

INDUSTRIAL, RESEARCH AND DEVELOPMENT

This land use designation is intended to provide employment for area residents and manufactured goods and services to meet the needs of the larger Southwestern Michigan. Facilities will be developed with appropriate utility and transportation connections and in harmony with the area's natural features. Industrial uses to be promoted will include manufacturing and transport operations with minimal impact on the environment or on surrounding community.

INSTITUTIONAL

The Institutional land use is intended to recognize the needs of the Kalamazoo Valley Community College, its students and faculty. The purpose of this land use category is to provide academic and technical training for area residents to foster the economic development of the community.

TEXAS CORNERS

The area surrounding the five-legged intersection of "Q" Avenue, 8th Street and Texas Drive presents the community with important challenges and opportunities. A sub-regional plan is suggested for this area, incorporating a mix of commercial and residential land uses planned to complement one another and to manage the relatively heavy traffic through this intersection. This sub-regional plan will include access management and cross access standards to manage the impact of more intense development patterns on traffic flow. In addition, the plan will incorporate complimentary architectural and design standards as well as pedestrian linkages.

SCENIC BEAUTY ROUTES

Portions of "O" and "R" Avenues and 8th Street are designated as natural beauty roads. These routes are likely to experience greater traffic volumes through the life of this Plan, but the natural quality of their cross section supports the desired rural character of the community. In support of efforts to maintain that rural character, this Plan recommends the designation of natural beauty scenic areas along selected segments of these roadways. These may be established through deeper front yard setback standards (e.g., 100 feet as opposed to 40 feet elsewhere in the

district) and/or through voluntarily obtained easements. To the greatest extent possible, the lands and vegetation within these areas would be left undisturbed to screen the more intense development patterns that are anticipated within the area of concentrated growth.

CHAPTER 9. IMPLEMENTATION STRATEGIES

The following strategies are established to implement the goals and objectives and land use recommendations of this Plan. It is recognized that many strategies will be long-term in nature and that many entities in addition to the Charter Township of Texas will need to cooperate in order to fully implement this Plan. In many instances, the Township's role is that of facilitator for some of the strategies listed in this Chapter.

This Chapter presents the action strategies for the Comprehensive Plan. Each strategy is numbered sequentially and the relevant Goals and Objectives statements are identified by their outline designation from Chapter 7. In some instances, a strategy may relate directly to more than one objective statement. A general description of each strategy is provided along with a suggestion of the roles and responsibilities of one or more agencies in carrying it out and a general timeframe for implementation.

1. EVALUATE AND REVISE THE ZONING ORDINANCE

Description. The Zoning Ordinance is the primary implementation mechanism for this Plan. However, the Zoning Ordinance is intended to regulate current land uses while this Plan addresses future land uses. In many of the strategies, reference is made to evaluations and updates of the Ordinance to conform with this Plan. This strategy contemplates a complete evaluation of the entire Ordinance including all of the other, more specific, recommendations included in this Comprehensive Plan. The purpose of this evaluation will be to identify regulatory mechanisms that may be implemented to further the goals, objectives and strategies of this Plan. In some instances, this may include a revision of the Zoning Map to support the future land use map or a revision of some zoning classifications to better conform to the future land use designations in this Comprehensive Plan. In other areas, it may only be necessary to evaluate the zoning districts against the future land use plan and determine what future events may trigger rezonings (e.g., extension of utilities). In addition, the Ordinance should be evaluated for flexibility to address innovative development techniques and for measures to control inefficient development patterns.

However, in some areas, amendments to the Zoning Ordinance and zoning district boundaries need not be implemented until owner interest

materializes which is consistent with this Plan. Therefore, a primary purpose of this strategy will be to identify areas of the Township where re-zonings could be considered consistent with the Plan, but the willingness of the property owners to support the re-zoning currently is unknown.

Timeframe. Following adoption of this Comprehensive Plan, the evaluation and revision of the Zoning Ordinance should take place in 2000.

Responsibilities. This strategy may be implemented by the Zoning Board and recommended to the Township Board for adoption. This is an extensive task and it is likely that outside support will be needed. Any resulting amendments to the Ordinance will require the review of the Township's legal staff and ultimately the adoption of the Township Board.

Support and Funding. In house staff support activities may be completed with in-kind resources. If outside consulting support is utilized an appropriation estimated at about \$10,000 to \$15,000 would be needed.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-C & D, 2-C & D, 3-B, 5-E, 6-B, 7-A & B, 8-A, 10-B, C, E & F.

2. REVISE AND EXPAND PLANNED UNIT DEVELOPMENT (PUD).

Description. Clustered housing developments require innovative and flexible zoning and site plan review techniques. Furthermore, housing developers typically are reluctant to experiment with new types of housing development when their economic returns are in doubt. To offset these problems, the Township will review and revise as necessary its Zoning Ordinance provisions related to Planned Unit Developments (PUD). The existing PUD should be evaluated for ways that it can aid in accomplishing the objectives of this Plan. Issues of overall density, conservation easements, required Property Owners' Associations and the mix of housing types and commercial land uses (if desired) should all be addressed. The objective of this review will be to expand the flexibility of the review standards and to permit innovation that results in high-quality and affordable development.

Timeframe. A comprehensive review and revision of the Township's Zoning Ordinance should be undertaken following adoption of the Comprehensive Plan. This is anticipated to occur in 2000 and the evaluation of the PUD section may be conducted concurrently.

Responsibilities. This activity will be completed through the Zoning Board recommending adoption to the Township Board.

Support and Funding. In house staff support activities may be completed with in-kind resources. Modest appropriations will be required if private consulting services are used.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-E, 2-C & D, 3-B, 4-C, 6-B, 7-A, B & C, 8-D, 10-B, C & F

3. INVENTORY KEY NATURAL FEATURES

Description. A key aspect of the Township's Comprehensive Plan is the preservation of the natural beauty and important features of the community. Some of these features are addressed by state legislation and/or by local ordinance. Others, however, are identified in this plan within the Resource Conservation land use classification, but only in general terms. The purpose of this strategy is to prepare an inventory of important natural features and to identify the likely trends or conditions that may threaten them. This may include surface features as well as groundwater and possible surface impacts on groundwater. Using automated or manual mapping, the Township may develop a set of mapped exhibits that would serve as a guide to future land use decisions. The Michigan Natural Features Inventory will serve as a good point of beginning with field verification and evaluation to be conducted on a sequential basis as the inventory develops. In some areas, it may be appropriate to develop overlay zoning or other preservation mechanisms.

Timeframe. This strategy may be implemented beginning in 2000. The inventory should be updated periodically to monitor the progress made in protecting important features.

Responsibilities. The Zoning Board should take the lead in preparing the inventory. Outside support will be needed in structuring a consistent approach to completing the inventory.

Support and Funding. The support and direction of the Zoning Board and staff will require a minimal in-kind contribution. Fees for outside specialists may be expected to fall in the \$1,500 to \$3,000 range, alternatively, the staff and students of the Western Michigan University may be called upon to assist.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-A & B, 3-A, 4-A, B & C, 5-C, 8-E, 10-A.

4. SURVEY OF FARMLAND OWNERS

Description. A comprehensive and objective survey of the owners of farmlands should be completed within the Township. The objective will be to determine the interest of farmers in preserving their lands for agriculture versus permitting limited development or total development. The survey should be comprehensive in scope and objective in format to assure that it truly reflects the opinions of the current land owners. It should also include enough background information so that respondents will understand that preservation of farmlands need not mean a total ban on development and, by implication, the inability to realize any non-farm return from their lands.

Timeframe. Planning for the survey should begin upon adoption of the Comprehensive Plan with a survey format established within 90 days and implementation in early 2000. Results should be reported by mid 2000.

Responsibilities. The Zoning Board should take the lead in conducting the survey. Since the number of farmland owners is small, this survey may be undertaken by the members of the Zoning Board and or by Township staff. Outside support will be needed in structuring the survey format, designing the survey instrument and tabulating the results.

Support and Funding. The support and direction of the Zoning Board and staff will require a minimal in-kind contribution. Fees for outside survey specialists may be expected to fall in the \$500 to \$1,500 range.

Related Goals and Objectives. This strategy supports the following goals and objectives: 5-A - E.

5. DEVELOP FARMLAND PRESERVATION PROGRAMS.

Description. Once the views of farmland owners are established, a series of programs and techniques may be implemented to assist in the preservation of agricultural lands. The following is a listing of proven techniques that have worked effectively elsewhere and may be implemented in the Charter Township of Texas.

- a. **Exclusive Agricultural Zoning.** Establish within the Zoning Ordinance an exclusive agriculture zone to be applied to as much as possible of the farmlands identified for preservation. These should be those areas identified within the Agriculture Land Use Classification in the Comprehensive Plan or other lands that may be identified through the survey of farmland owners. In the Exclusive Agriculture Zoning District, agriculture and the homes of farmers and their workers are the only permitted land uses. Agricultural processing operations, such as grain elevators, slaughterhouses, equipment repair, etc., may be permitted as Special Land Uses. Concentrated animal feeding operations may only be considered where off-site impacts are properly mitigated.
- b. **Agricultural Security Areas.** The State of Michigan is considering enabling legislation that would permit farmers to voluntarily band together and petition local government to establish Agricultural Security Areas. In these areas, property taxes could be abated, special assessments for infrastructure that does not benefit agricultural uses would be suspended, special protections would be provided against nuisance suits and properties would be eligible for purchase and transfer of development rights. This program has not yet been enacted, but Texas Township should remain actively involved in its evaluation and consideration for area farmers.
- c. **Residential Clustering.** Greater densities may be achieved in carefully designed cluster developments. Zoning authority should be provided to enable the use of a Planned Unit Development approach to clustered residential development. This technique would enable developers and land owners to achieve greater densities than would otherwise be permitted in exchange for the permanent retention lands for agriculture and/or for conservation. Such developments may be considered within the zoning districts located within the Agriculture and Rural Residential land use classifications in the Comprehensive Plan.

Timeframe. Work to revise the Township Zoning Ordinance may begin immediately upon adoption of the Comprehensive Plan. Of course, some of the zoning districts may not be completely delineated until some of the other strategies suggested are implemented and efforts to revise the ordinance with regard to farmland preservation may be contingent upon the results of the farmland owner's survey.

Responsibilities. The Zoning Board should lead this strategy. If needed, private consulting and legal support may be sought to complete the drafting of key ordinance provisions.

Support and Funding. The support and direction of the Zoning Board and staff will require a minimal in-kind contribution. Fees for consultants, if needed, will require an appropriation of Township resources.

Related Goals and Objectives. This strategy supports the following goals and objectives: 5-A - E.

6. PROMOTE THE PURCHASE OF DEVELOPMENT RIGHTS (PDR).

Description. Under Acts 569, 570, and 571, the State of Michigan has now established a Purchase of Development Rights (PDR) program which enables farmers to realize the value of their lands for development purposes without taking that land out of production. However, implementation of the program will require ongoing financial support from the State. In addition, it is possible for the local units of government to expand the program by supplementing the appropriation for local PDR applications. A program for screening applications for the PDR program must be developed and keyed to the identification of farmlands for preservation. Development rights should be valued based on the current development potential of the lands.

Timeframe. An effort to promote the PDR program should not be implemented until the farmlands identified for preservation have been determined. Therefore, this strategy should be implemented in 2000 - 2001 following the survey of farmland owners. In the interim, the Township may need to decide on applications for the state PDR program and the new Comprehensive Plan will provide guidance for agricultural land uses.

Responsibilities. The Township Zoning Board may implement this strategy. Since funding is likely to be limited, a predictable and systematic approach for processing PDR applications should be developed. This may be done in-house or through the services of private consultants.

Support and Funding. The support and direction of the Zoning Board and staff will require a minimal in-kind contribution. Any supplement to the state's PDR fund for use in Texas Township will require an appropriation of Township or County resources.

Related Goals and Objectives. This strategy supports the following goals and objectives: 5A - E.

7. COORDINATE CAPITAL DECISIONS WITH THE PLAN

Description. Public infrastructure availability is an important factor in any location decision by industry including adequate capacity in water and wastewater systems and efficient, well-maintained and modern roadways. These facilities are well within the scope of responsibility of County and local government and, with concentrated efforts and good planning, can become a strong inducement to economic development. Although capital decisions with respect to utilities and roadways are seldom coordinated with one another, under the Township Planning Act, if a Planning Commission were established, it would be responsible for review and comment on public expenditures under the Comprehensive Plan. Since the Township does not conduct its planning or zoning under that statute, this capability is not available in the Charter Township of Texas. Nevertheless, the primary purpose of this strategy will be to gain acceptance from utility and road planners for higher priority treatment for those areas in which the Comprehensive Plan seeks to advance economic development and job creating land uses. In addition, or in the alternative, the Township may, where possible, work to develop feasible alternatives for utility services that it may pursue with its own resources and under its own authority. The most effective mechanism for this will be through the Township's Capital Improvement Plans (CIP) and the comparable plans of the Kalamazoo County Road Commission and the local utility service providers.

Timeframe. The Township's CIP is usually prepared and adopted as a part of the annual budget preparation process. The first step will be to evaluate the CIP against this Plan and later enhance coordination with the Road Commission and the Cities of Kalamazoo and Portage. This can begin in 2000.

Responsibilities. This strategy must be accomplished by a consortium of local and County agencies. The County Road Commission must be heavily involved as well as the utility departments of the cities.

Support and Funding. The planning work associated with this strategy can be undertaken by local personnel on an in-kind basis. Of course, funding to meet the capital needs of the resulting prioritized plan will be derived from the available state, federal and local sources.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-E, 2-A & C, 10-C & E.

8. DEVELOP SEWER POLICY TO GUIDE DEVELOPMENT

Description. Policies that direct the location of public sanitary sewer services may be an important growth control mechanism. A local policy that encourages new development to connect to existing or proposed sewer lines will generate greater development interest in those locations where those services currently are available. It will also improve the likelihood of development in proximity to existing sewer lines. In those areas where sewers are not reasonably available, the Township should consider a requirement that a properly licensed community collection and treatment system be installed, and/or that sufficient funding be escrowed to cover the connection to a public system when it is eventually extended. Finally, to assure that on-site wastewater systems continue to function properly, the Township could consider requiring periodic inspections. Some communities require that drainfields and septic tanks be inspected for proper operation at time of sale. Such inspections are already required for federally-insured financing programs such as FHA or VA.

Timeframe. This policy may be implemented in 2001 and 2002 following the revision of the Zoning Ordinance.

Responsibilities. Lead responsibility for this policy may be placed with the Township staff. The County Health Department may be asked to assist in the inspection of on-site disposal systems.

Support and Funding. This policy should require little funding. Following development of the policy itself, construction of sewer extensions may be supported by developers. Inspections of on-site

disposal systems may be supported by inspection fees levied upon real estate transactions.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-E, 2-A, C & E, 7-A.

9. ESTABLISH A NATURAL AREA CONSERVANCY

Description. A natural area conservancy is a non-profit entity funded by a combination of resources. Its primary purpose is to accept and hold title to lands and easements over natural areas. Such an entity is often needed to serve as the recipient of lands set aside as open space within larger developments. Another alternative, of course, is a condominium or home-owners' association. There are several conservancies in existence in Michigan and it may not be necessary for the Township to create another. Rather, contact with existing conservancies may generate sufficient interest to preserve important natural features. This strategy should be coordinated with the natural features inventory, the non-motorized connections strategy and the Recreation Plan, since all relate to the preservation and protection of the Township's natural features and rural character.

Timeframe. This strategy should be implemented in 2000 in conjunction with the natural features inventory. In addition, since it will be an important tool in implementing the non-motorized connections strategy described below, its implementation should be coordinated with that strategy, as well.

Responsibilities. The Township administration and the Township Board may work with existing conservancies, the MSU Extension and/or Western Michigan University to implement this strategy.

Support and Funding. Assuming one of the existing organizations will not serve the purposes of the Township, some investment will be needed to form and capitalize the conservancy. Some of the Michigan-based foundations have expressed interest in assisting local conservancies.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-A, B, C & F, 3-A, 4-A - C, 5-E.

10. PREPARE A SUB-AREA PLAN FOR TEXAS CORNERS.

Description. The intersection of “Q” Avenue, 8th Street and Texas Drive serves as the community’s center. The land uses in the vicinity of this intersection are changing and more intense commercial pressure may be anticipated. In addition, all three streets function as important traffic arteries and with expanding commercial uses at “the Corners” their carrying capacity may be limited. A “village center” has been proposed at Texas Corners to include some commercial development, the Township offices, potentially other public or quasi-public uses and more concentrated housing. Some of these uses are in place and others are planned. The intent is to establish a walkable and human scale development with its own identity and good non-motorized connections to the remainder of the community. This strategy would call for a detailed land use plan to be developed cooperatively by the Zoning Board and the local property owners located within an area about ½ to 1 mile in diameter. This process would also include opportunities for input from the broader community. Such a plan would include general agreement on land use types and intensity, some architectural guidance (i.e., façade treatment, signage, lighting and landscaping), circulation patterns, and well-defined and controlled vehicular access points.

In the event the Township does not develop a sub-area plan for the Texas Corners area, it will be necessary to adjust this Comprehensive Plan to address the future land uses for this key part of the community. Most of the area denoted for the Texas Corners sub-area plan may be expected to develop in low density residential patterns. Furthermore, limited neighborhood commercial land uses fronting on 8th Street and extending north to Texas Drive and fronting on “Q” Avenue and extending east and west about 1,000 feet from 8th Street may be expected. Further commercial expansion beyond this area will be discouraged.

Timeframe. Such a sub-area plan would require four to six months to prepare and implementation should be timed for the off-season to heighten local participation. The fall and winter of 2000-2000 would provide the first such opportunity.

Responsibilities. The Zoning Board will take the lead in implementing this effort. The Road Commission and all property owners should participate. To maintain the momentum of the effort, outside consulting support should be considered.

Related Goals and Objectives. This strategy supports the following goals and objectives: 2-A, 4-A & C, 6-B, 7-C, 8-A & D, 9-A ~ E, 10-B, C, E, F & G.

11. DEVELOP A PLAN FOR NON-MOTORIZED CONNECTIONS

Description. A Trails Plan is needed to connect the Texas Corners area with nearby neighborhoods and with the Township's natural areas. The designation of trails, extended shoulder walking and bike paths, sidewalks and related facilities will require the cooperative efforts of the Township, the Road Commission and private property owners. Therefore, the nature of this strategy is to develop a plan for specific connections within the existing and planned activity areas and natural features of the Township.

This strategy conforms well to the priorities expressed in the Community Opinion Survey and in the Recreation Plan. Furthermore, as the natural features inventory is developed, a set of non-motorized connections may be planned using the recommended GIS mapping capabilities of the Township to identify possible alignments for these connections.

Timeframe. This strategy must be implemented incrementally over a number of years. The initial step would be a general trails and greenways plan which may be developed in conjunction with the natural features inventory. As roads are re-paved, the shoulders may be widened and/or a separate trail may be added. Off-the-road trails, such as within the Al Sabo preserve, may be implemented as grant or bequest funding is obtained. Non-motorized routes will be incorporated into the Texas Corners sub-area plan (strategy 10).

Responsibilities. Within Texas Township, responsibility for implementation will rest with the Township Board. However, it will be important to coordinate with the Road Commission and private property owners to broaden the impact of the strategy.

Related Goals and Objectives. This strategy supports the following goals and objectives: 2-A, 4-A & C, 6-B, 8-D, 10-A, B, D, E, & F.

12. DEVELOP A GEOGRAPHIC INFORMATION SYSTEM (GIS).

Description. As the Township continues to grow and expand, the Zoning Board and Township staff will be challenged to review and evaluate the pace and form of growth. A set of automated maps tied to a land use database will enable the Township to identify growth trends and to better guide growth. A set of base maps has been developed as a part of this planning process and these may form the basis of a digital

inventory for the Township. In addition, the Township has available to it fairly extensive mapping capabilities through the resources of Western Michigan University.

Timeframe. This strategy is not as critically important in the short run as some of the others. However, the sooner this mapped database is available, the deeper and more complete the Township's understanding of the changes occurring in the community. Completion of the GIS system should be targeted by 2003.

Responsibilities. Lead responsibility for this policy may be placed with the Township staff. The mapping and geographic capabilities of Western Michigan University will be important resources to draw upon.

Support and Funding. If the Township elects to build its own in-house mapping capabilities, it may need to invest in hardware, software and some data. In addition, some on-going staff support will be needed to maintain the system. Outside consulting support may reduce the burden on Township personnel with both initial fees and on-going maintenance fees.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-A, 3-A, 4-A, 5-A, 10-A.

13. IMPROVE PUBLIC UNDERSTANDING OF GROWTH MANAGEMENT BENEFITS

Description. Prepare a program of public service announcements, speaker's bureau and school curriculum on the importance of the careful management of the Township's open lands, natural areas and farmlands and the need to achieve a balance of land uses to support desired services. The theme may be directed at explaining that it is possible and desirable to have both development and rural character, but effective management is needed. The speaker's bureau would periodically target service clubs, neighborhood and community organizations, and other interest groups.

Timeframe. This strategy must be viewed as long-term in nature to be carried out over the life of the plan. It will not be possible to achieve much impact on market preferences and that should not be the goal. Instead, this strategy is intended to continuously reinforce the message

about the importance of careful land use planning and careful guidance of growth to achieve the broader objectives of the community.

Responsibilities. The Zoning Board and the Township Board may provide some leadership in carrying out this strategy. In addition, it may be possible to utilize the resources of KVCC and Western Michigan University to conduct training workshops and similar activities.

Support and Funding. Most of the work associated with this strategy may be undertaken with in-house resources. If support materials or media are needed, some expenditure may be required.

Related Goals and Objectives. This strategy supports the following goals and objectives: 1-C, D & E, 2-C, 4-B & C, 5-E, 6-A & C, 7-C & D, 8-C.

BIBLIOGRAPHY

The following sources were consulted in the preparation of the Comprehensive Plan for the Charter Township of Texas. Where conclusions or specific data was drawn from a source, it is noted in parentheses or in footnotes within the text. In all instances, the reader is encouraged to consult the sources noted below.

- Department of Community Development, City of Portage, *Municipal Comprehensive Plan Update: Master Plan*, August, 1996.
- Groundwater Education in Michigan (GEM) Regional Center, Institute for Water Resources, Western Michigan University, *Beyond 2000 - Protecting Groundwater in the I-94 Corridor, Texas Township, Kalamazoo County*, Vol. III, Summary Report, 1995.
- Institute of Traffic Engineers, *Trip Generation*, 5th Edition, 1991
- Bureau of Transportation Planning, MDOT, Southern Sub State Area
Preliminary Alternative Transportation Plans
- Kalamazoo ~ Battle Creek International Airport, Website,
<http://www.kalcounty.com/azo>
- Kalamazoo County Equalization Department, 1997 *Kalamazoo County Equalization Report*.
- Kalamazoo County Overall Economic Development Program
Committee, *The 1997 Economic Information Book*, June, 1997.
- Kalamazoo County Planning Department, *Kalamazoo County: A Planner's Profile*.
- Oshtemo Charter Township, *Oshtemo Township Master Land Use Plan*
- Passero, Dr. Richard N., Center for Water Research, Western Michigan University, *Geology and Groundwater of Kalamazoo County, Michigan*.
- Prairie Ronde Planning Commission, *2002 Land Use Plan*, Prairie Ronde Township, Kalamazoo County, Michigan, December, 1998.
- Soil Conservation Service, U.S. Department of Agriculture, *Soil Survey of Kalamazoo County*, Reissued, December, 1993.
- Texas Township Building Department, Bruce D. Derby, *Construction Activity for the Charter Township of Texas, 1988-1997*, January, 1998
- Texas Township Zoning Board and the Kalamazoo County Planning Department, *1995 Land Use Plan for Texas Township*, March, 1978.

- Thomas, Holly L., *The Economic Benefits of Land Conservation*, Planning & Zoning News, January, 1993.
- U.S. Bureau of the Census, *1990 Census of Population and Housing*, Summary Tape File 3A, Texas Township, Kalamazoo County, Michigan.
- U.S. Department of Commerce, *1992 Census of Agriculture*, Volume 1, Michigan State and County Data.
- Wilkins & Wheaton, *Facilities Plan for the Kalamazoo Metropolitan Area*, Volume 16 Texas Township Plan.
- Woods & Poole Economics, Inc., *Kalamazoo County, Michigan 1997 Data Pamphlet*, January, 1997.
- Wyckoff, Mark A., AICP, *The Fiscal Impacts of Growth*, Planning & Zoning News, January, 1993.
- Geographic Information Systems Research Center, Western Michigan University, *Electronic Mapping in MapInfo*

