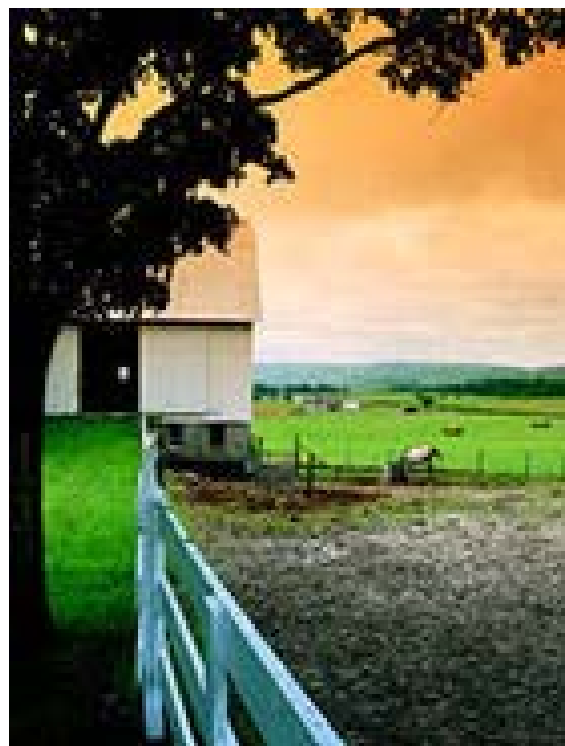


COURTLAND TOWNSHIP

MASTER PLAN



ADOPTED JUNE 6, 2007

Williams & Works

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COURTLAND TOWNSHIP: A COMMUNITY PROFILE REPORT

CHAPTER 1. INTRODUCTION

Planning for the long-term should be carried at a general level that recognizes the potential for change and provides flexibility.

Producing a Master Plan, or Comprehensive Plan, requires a solid foundation of data from a variety of resources. Analysis of this data can reveal trends and conditions that may be obvious, or not so obvious, to the residents of Courtland Township. The data that is gathered in the initial phase of preparing a Master Plan is vital to support future community goals.

The Courtland Township Community Profile is one of several phases in completing an update of the Township Master Plan. The entire process will involve the following elements:

- ◆ A Community Profile
- ◆ A Preferred Future
- ◆ Goal Setting
- ◆ The Comprehensive Plan

In 2000, Courtland Township completed an update of the Township's Master Plan. General planning practice suggests that Master Plans should be reviewed at about five-year intervals and the Township has been fairly diligent in doing so. The 2000 plan reflects many current conditions and trends, so the effort to update it in 2006 will naturally be less burdensome and may enable the community to focus on particular challenges rather than restrict the effort to a more general overview.

Nevertheless, planning for the long-term should be carried at a general level that recognizes the potential for change and provides flexibility. This results in a Master Plan that can be useful well into the future instead of becoming obsolete if or when demographic and economic trends stray from those identified in the Community Profile.

This Community Profile Report provides a "snapshot" of current conditions in the Township with respect to six key aspects of land use planning. Its purpose is to generally define current trends and conditions, and more importantly, to draw some broad conclusions about the implications they will have on the future of the Township. The primary sources for this document are set forth in the bibliography, but the content of this report has been heavily drawn from the Township's 2000 plan and Township representatives.

The key areas of focus for this Community Profile are:

- ◆ Natural and Cultural Features (Chapter 2)
- ◆ Population (Chapter 3)
- ◆ Housing and Economic Development (Chapter 4)
- ◆ Land Use and Development Patterns (Chapter 5)
- ◆ Community Facilities and Services (Chapter 6)
- ◆ Utilities and Transportation (Chapters 7 and 8)

Each section includes an overview of its subject matter along with a brief discussion of the planning trends that are relevant along with implications for the future. Chapter 9 places the conclusions of this document in the context of the larger Master Plan development effort, including a brief discussion of next steps in that process.

SUMMARY

The following paragraphs outline some of the initial impressions that have emerged as this community profile has developed:

- ◆ Courtland Township has experienced relatively strong residential growth and development over the past thirty years. There is little to suggest that this trend will abate. The community's natural features and proximity to the urban portions of West Michigan will continue to draw growth pressures.
- ◆ The current rate and pattern of growth implies that the Township could eventually be home to upwards of 30,000 persons, and within the mid-term future (i.e., about 25 years) the community's population will likely exceed 13,000. These projections have broad implications on housing, traffic, community facilities and land use.
- ◆ The strong prevalence of residential development in Courtland Township is likely to continue and this implies challenges relative to the cost-revenue ratio of certain land uses. Since residential uses typically demand more in services than they provide in revenues, the Township should be prepared for the impact of future service demands and the revenue implications those demands will generate.

- ◆ The proposed new wastewater treatment facility for the North Kent region will enable the community to better control patterns and densities of growth, especially if local control is exercised over the location and timing of sewer extensions.
- ◆ Some of the objectives outlined in the 2000 Comprehensive Plan have been achieved and others have not. All should be reevaluated in light of more current demographic and land use information and in accord with changing local policies.

What is a Master Plan?

As a community matures, a direction for future development is needed to ensure that its desires regarding growth are translated into action. The intent of this Master Plan is to provide the direction needed by Courtland Township to look forward to the 21st Century. The Courtland Township Planning Commission was responsible for the completion and implementation of a Master Plan, with the extensive involvement of the Township Board.

The Master Plan is a guide to be used by the township to help determine the land uses and development policies that will affect its physical development. As a guide, it is not meant to be rigidly administered; changing conditions may affect the assumptions and directions determined when the Plan was originally devised.

Changing conditions do not necessarily mean that the Plan must change. Rather, the Planning Commission must evaluate those changes to determine if the Master Plan remains valid. If it determines that it has retained its validity, its principles should be followed.

Producing a Master Plan, or Comprehensive Plan, requires a solid foundation of data from a variety of resources. Analysis of this data can reveal trends and conditions that may be obvious, or not so obvious, to the residents of Courtland Township. The data that is gathered in the initial phase of preparing a Master Plan is vital to support future community goals.

Township Planning Act, 168
of 1959 Township Zoning
Act, 184 of 1943

These Acts govern the makeup of Planning Commissions and the basic purposes and requirements of Master Plans. Knowing the purpose of a Master Plan is important for a number of reasons:

- Provisions of the Plan must be based upon the Township Planning Act in order to pass careful scrutiny by a court of law.

- The purposes of the Act outline the basic intent of the Master Plan, including the subjects of planning efforts.
- When formulating the Plan, it is important that the community understand the direction in which the Plan is heading; the purposes can provide the basis for future goals and objectives.

This Plan was developed around the principles noted in the Township Planning and Zoning Acts. This portion of the Plan should be considered as the Land Use element of a Master Plan, rather than a complete Plan. Courtland Township may elect, over time, to complete other elements of the Plan as they deem them necessary. This may include such elements as a Transportation Plan, Utilities Plan, Recreation Plan, and others, as needed.

**How do the Master
Plan and Zoning
Ordinance Differ?**

The relationship of the Master Plan and Zoning Ordinance is often misunderstood. Stated concisely, the Master Plan is a *guide* for land use for the future; the Zoning Ordinance regulates the use of land in the present. The Master Plan is not a binding, legal document; the Zoning Ordinance is a law that must be followed by the township and its residents.

**How does the
Master Plan affect
you as a
landowner?**

How the Master Plan affects you depends on your particular situation. If you are a *property owner* you may have several interests, including not only your property but properties that are in a similar land use category. As a *homeowner*, you will be interested in the properties in your immediate neighborhood. You may wish to know what uses are proposed for vacant land in your area. As an *owner of vacant property* you will want to know what land uses are proposed for your property.

As a *township resident* you will be interested in the overall concepts of the Plan, as expressed in the Goals and Objectives. These statements will give you an indication of the Planning Commission's view of the township now, and in the future.

HOW SHOULD YOU USE THIS PLAN?

Again, use of the Plan depends on your interest in the future of Courtland Township, but generally, here is the procedure you should follow.

- STEP #1.** What land use is proposed for your property, or the area surrounding your property?

You will find this information on the Future Land Use map. This map is divided into separate land use categories. Find the category of land use in which your property is located ~ Nearly all of the property within the township falls within the Rural Residential category, which requires a lot size of 2 acres or more. However, the Plan does suggest areas for new commercial development as well.

- STEP#2.** Determine how the Planning Commission views development in your area.

The text of the Future Land Use Plan will indicate to you the general direction of development within.

your area; it may be fairly specific, or it may be somewhat general. The Land Use text is meant to provide a general direction to the Planning Commission as to development within the township.

- STEP #3.** Determine the meaning of the land use designation for your property.

In Step #1 you were asked to determine the land use category into which your property falls. In the Land Use chapter there is a discussion covering each of these categories. Find the one that applies to you (the category in which your property lies) and read the discussion on the meaning of each land use designation.

Depending on the nature of your interest in the Master Plan, this may be as far as you carry your initial investigation. If you have a specific proposal which does not fit the Future Land Use Plan, you may want to investigate the Plan in more detail, beginning with the Goals and Objectives.

- STEP #4.** Determine how the Plan affects your property.

The Future Land Use designation will indicate to you how your property is planned for use in the future. *This does not mean that you cannot continue the use that you currently have.* Land use within Courtland Township is also affected by the zoning for your property. See the Zoning Ordinance or call the township offices for more information.

CONCLUSION

In short, the Master Land Use Plan may have a profound impact on the future of your property, regardless of whether you are a vacant land owner, or a homeowner. As a resident of Courtland Township, the Master Land Use Plan will determine the physical development of the community, including your property. It is important that you become familiar with the Plan and what it may mean to you.

CHAPTER 2. NATURAL FEATURES AND THE ENVIRONMENT

Courtland Township is situated in Northern Kent County, with the City of Rockford to the Southwest. Cannon Township lies to the south, Oakfield Township to the East, Nelson Township to the North, and Algoma Township to the West. Via M-57 there is quick access to US-131 to the West, and the City of Greenville to the East.

NATURAL FEATURES



Although the southern border of Courtland Township has been heavily spotted with residential development, much of the Township remains natural and agricultural land. The largest contiguous portion of Agricultural land is centered at the intersection of 13 Mile Road and Myers Lake Road, although another larger segment may be found on the central and northeastern border with Oakfield Township.

Courtland is characterized by generous natural areas, including woodlands, wetlands, and areas of fallow farm fields. A significant portion of wooded wetlands can be found in the northeastern quarter of the township. The largest portion of herbaceous wetland abuts 13 Mile and Stout Roads.

Lakes and Rivers

There are six lakes in the southern portion of Courtland Township, which have drawn both summer and year-round residents (See Map 4). Big and Little Myers Lakes, Big and Little Brower Lakes, Stoner's Lake, and Tamarack Lake all contribute to the recreational appeal of the area.

Map 1. Location Map

Brower Lakes. Development has occurred around the entirety of the 85-acre Big Brower Lake. It has a maximum depth of 27 feet near the center¹, and most of the shoreline is sandy. Many lots have remained wooded to the point abutting the lake in the front, or pastures to the rear. Little Brower Lake is relatively small at 23.8 acres, with a depth of 12 feet at center.

¹ Institute for Fisheries Research

Myers Lakes. Big Myers Lake has an area of 85 acres and depth of over 40 feet in some areas. Big Myers Lake has been developed almost entirely. Many homes are set back 100 to 300 feet.

Watersheds

A watershed is a region of land that is drained by a particular river or river system. Typically these systems include many smaller tributaries such as creeks and streams that feed into a larger river and are influenced by elevation or the lay of the land. Courtland Township is practically divided in half by two separate sub-watersheds, both of which ultimately flow to the Grand River. The Rogue River sub-watershed is prevalent in the western half of Courtland Township, pulling water from Becker, Stegman, Shaw, and Rum Creeks, and eventually flowing to the Rouge River. The Beaver Dam Creek sub-watershed pulls from the east side of the Township, including the Beaver Dam Creek, Coopers Creek, and Seely Creek (See Map 2). These tributaries move eastward to the Wabasis Creek Corridor.

Insert Map 2 watersheds

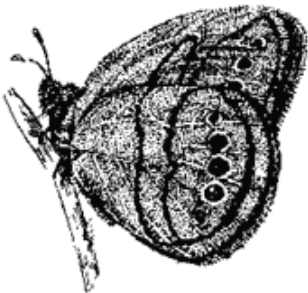
Climate

According to the Midwestern Regional Climate Center (MRCC)² that averaged annual climatic conditions between 1971 and 2001, temperatures in the Courtland Township range broadly throughout the year. Average annual low temperatures are 36.1°F, with the lowest temperatures (12.9°F) occurring in January. Average high temperatures were 57.4°F annually, and 83.7°F in July. Yearly rainfall has averaged nearly 35 inches, and snowfall was just less than 31 inches³. These climatic factors are typical of seasonal change in a mid-latitude climate, and produce fertile grounds for agriculture, woodlands, and wetlands.

Seasonal changes are also conducive to both winter and summer recreation, including skiing, snow mobiling, and ice fishing in the winter, or fishing, golfing and hiking in the summer.

Endangered, Threatened, and Special Concern Species

The alteration and loss of wildlife habitat or an overall increase in human activity can threaten the plant and animal diversity of local ecosystems. According to the Michigan Natural Features Inventory, there are various animals and plant species considered endangered, threatened, or of special interest in Michigan. There are nearly a dozen species listed as threatened or of special interest in the region. In many cases, these animals are often called “indicator species,” which is a plant or animal that is sensitive to changes in an ecosystem. Environmental changes may occur naturally within an area, however, changes are often due to human activity or development.



Mitchell's Satyr

Those species that are found in Kent County include the Blanchard Cricket Frog, the Cooper's Hawk, the Goshawk, the Prairie Warbler, and Mitchell Satyr⁴. While these species may or may not have habitat in Courtland Township, it is clear that patterns of growth in West Michigan may ultimately degrade their habitat and a decline in the diversity of species in an area can bring about a broad range of ecological impacts.

Mitchell's Satyr is a butterfly of dark brown color. The wingspan typically ranges from 1.5 to 1.75 inches. The undersides of the forewing and hind wing are marked with a row of yellow eyespots surrounded by a band of orange.

² Midwestern Regional Climate Center Website and National Climate Data Center, 2001

³ Midwestern Regional Climate Center Website, 2005

⁴ Michigan Natural Features Inventory Website, January 2006. Typically, published information regarding threatened or endangered species is not available at the Township level.

The Blanchard Cricket Frog is a very small (0.6 – 1.5 inches) species of tree frog. It is characterized by an acutely rounded snout and a dark triangular mark on the back of its head.



Spotted Goshawk

The Goshawk is a large forest bird with a long tail, which is rounded on the end. The upper body is brown-gray or slate-gray, and the head is has a distinctive black cap and white eye-line.

The Prairie Warbler is of medium size with a bright yellow under belly. Its upper body is yellowish-green, and black streaks are prominent on the flanks and on the head.

The Cooper’s Hawk is a thin, “crow-sized” bird with short, rounded wings. Ranging in size from 39~ 45 cm, the Cooper’s Hawk has a long, white-tipped tail, rounded at the tip.

Soils

Soil composition is an important feature to classify in the planning process. Some soils are not well suited for individual septic systems and therefore may threaten ground water or surface water quality due to lack of proper filtration. Soils can also produce dramatically differing results when used for agricultural purposes. Determining the stability and suitability for structural development is also dependant on soil composition. A zoning approval can be highly influenced by the type of soil on a particular parcel within the Township.

The U.S. Department of Agriculture, Soil Conservation Service, classifies soils of Courtland Township into five different general soils associations. 1) Oakville-Tedrow-Granby, 2) Plainfield-Spinks-Metea, 3) Marlette-Capac-Spinks, 4) Tekenink-Spinks-Arkport, and 5) Remus-Spinks-Coloma. As seen in Map 3, most of the Township is covered by three large bands of soil type. All three of these soil types – Tekenink-Spinks-Arkport, Marlette-Capac-Spinks, and Oakville-Tedrow-Granby – are considered to be prime soil for farmland.

Insert map 3 soils

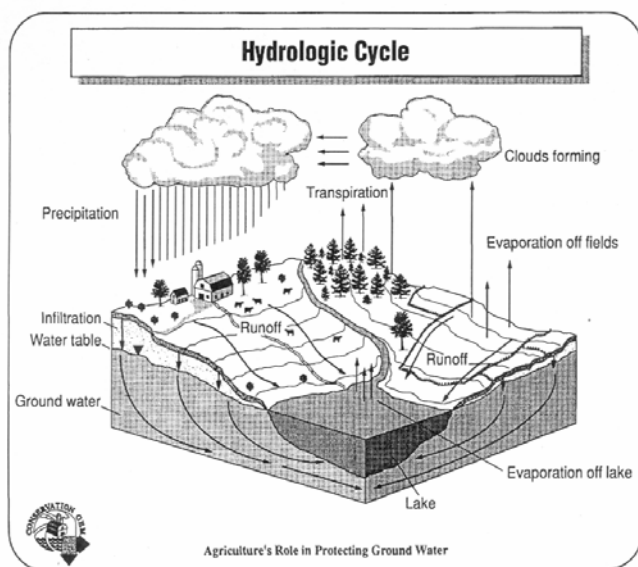
As a part of the Natural Connections project, the Land Conservancy of West Michigan has developed a *Green Infrastructure* Map of Kent County and the surrounding region, including the shores of Lake Michigan. The *Green Infrastructure* is identified as:

“An interconnected network of green space and other environmental assets that conserves the functions of the natural ecosystem and provides associated benefits to people.”⁵

A significant portion of land, six miles west of Courtland Township, has been identified by the Land Conservancy as a *Special Agricultural Zone*. The Land Conservancy recognizes that while developing the *Green Infrastructure* Map, they were without vital information regarding many communities. As a result, the Land Conservancy remains open to the suggestion of preserving other areas of importance, which were not identified by the original charrette planning process. A large portion of land in Courtland Township could be considered for inclusion to the *Natural Connections* project. The Land Conservancy describes a number of options for green infrastructure protection.

Groundwater and Surface Water

As the population in Courtland Township continues to grow, natural resources will inevitably be impacted. The groundwater supplies in the Township, even though abundant, can be affected as more area becomes impervious and with greater demand placed on groundwater supplies.



According to Dr. Roberta Dow of the Michigan Groundwater Stewardship Program at the Michigan State University Extension in Traverse City, there are many different ways ground water can be polluted. Two primary contributors are application of fertilizer on crops and residential lawns and septic tank drainfield effluent. Proper fertilizer application management and septic tank and drainfield maintenance may help to significantly reduce nitrate levels. Abandoned wells may also be a threat to ground water quality if they have not been properly closed or “capped.” Open wells may expose groundwater supplies to surface contaminants.

Wetlands

Wetlands are crucial to the regulation and movement of water within watersheds. The presence of water above the soil surface, and water

⁵ Land Conservancy of West Michigan

saturation in the root zone are both identifying characteristics of a wetland when present for extended periods of time during the year. Changes in the water table are unique to each wetland type.



The most important functions of a wetland are to maintain the level of the water table and to serve as filters for sediments and organic matter. Without wetlands, habitats for specialized plants and animals are reduced, and areas are prone to flash flooding.

Prior to a zoning approval or site plan approval, the Michigan Department of Natural Resources (MDNR) should be consulted to review the results of a wetlands determination. The impacts of development within wetland areas should be carefully considered, and a permit from the MDNR should always be obtained if regulated wetlands are to be impacted.

Wetlands provide scenic beauty, natural habitats, and serve as important natural cleansers.

“Aquatic habitats are valuable resources for fish and wildlife and people. They are key breeding habitat for our nation’s freshwater and saltwater fisheries. In addition, these habitats are essential to migratory birds in their annual journeys, and they offer recreational opportunities for millions of citizens across the country. They function to slow flood waters, recharge aquifers and protect people and their homes from potentially catastrophic storms. In addition, wetlands assimilate, filter, and neutralize pollutants before they enter our rivers and lakes.”⁶

As illustrated in Map 4, a majority of the wetland areas in Courtland Township are in the Northeast quarter of the township, east of Myers Lake Avenue and north of 13 Mile Road. There is also a notable grouping of wetlands on the western border of Courtland Township, north of 13 Mile Road and west of Shaner associated with Stegman Creek.

Woodlands

While regulations have been developed to protect certain critical environmental areas, woodlands have been relatively ignored, even though their benefits to the public as buffers and moderators of flooding, erosion, and noise and air pollution are important to the township's quality of life. Woodlands are buffers to the sights and sounds of civilization. Woodlands mute the noise from highways and other land uses. Along major roadways, such as Fourteen Mile Road, woodlands can provide visual relief from the monotony of the landscape.

⁶ National Wetlands Inventory website, January 2006

The question should not be whether or not woodlands should be developed; but rather how that development will occur. Clear cutting of woodlands should be prohibited. Of particular concern are the woodlands on private land.

New regulatory tools have been developed to help communities manage their tree resources. Regulations affecting wooded areas are intended to identify the specific benefits woodlands provide to the community and to implement measures to assure that woodland development is compatible with the health of forest resources.

A *tree-protection ordinance* is concerned with preserving as many yard and street trees as possible as land is developed for residential or commercial uses. These regulations may be used to assure that trees are protected and retained to the greatest extent possible. The regulations may also require permits for cutting mature trees.

Tree-protection ordinances should not be adopted without specific regulations relating to the quality of trees protected. Since these ordinances are normally directed at specific building sites, as opposed to large forested areas, some accommodation to development is required. As a result, tree protection ordinances should provide a degree of flexibility and allow for proper management of resources. Certain species of trees may not be worthy of preservation and could be replaced with a much stronger, more compatible type which would better survive a development environment. However, these trees should be generally native to the area.

Through careful site analysis and site planning, quality development can be realized. The objective of incorporating natural features into site development is to allow new uses of land that do not irreversibly damage natural site features and attributes. The result is cost effective development that allows preservation of natural features and systems, creating long term benefits for the environment and the community.

How Development Affects Natural Resources

The landscape is a complex and fragile resource. Landforms, water and vegetation are important elements in the ecology of the township and are all interrelated. Once destroyed, they are most often irreplaceable. In addition, impacts that may be directly visible on one site may actually affect resources for some distance from that site. Groundwater pollution, for example, may result from an activity at one location, but affect groundwater sources miles from that site.

There are two development approaches to natural features: preservation and integration. Preservation measures should be applied to those features which are so sensitive or so valued that any alteration would have negative impacts on the township, both in terms of aesthetic and environmental qualities. In these areas, development should be either prohibited or restricted to those projects which have a negligible effect on the environment. Wetlands and flood prone

areas are examples of lands requiring preservation techniques.

In areas where the natural features are an essential part of the community's character, but where minor changes should have slight impact on the quality of life, integration may be an adequate protection measure. Integration would allow for development as long as it was compatible with the surrounding area. Integration allows natural features to remain as undisturbed as possible.

PLANNING IMPLICATIONS

It is often the beautiful natural features of an area that create its initial appeal. As development occurs some roads are paved, while others are widened. More pavement and more rooftops begins to impact the rate and quality of stormwater runoff, natural habitat is compromised and the man-made environment begins to replace the natural. Eventually, residential development becomes predominant within the community landscape. The natural beauty that attracted the initial residents can be quickly lost. While Courtland Township has not arrived at this point yet, some trends identified in this report begin to suggest such a change in the future. With careful management of growth and development, however, it is possible to mitigate the effects of that growth on the natural environment. (See Chapter 4 for further discussion.)

Insert map 4 wetlands and water

CHAPTER 3. POPULATION

When developing a master plan, population is among the most important measures to express growth and its likely impact on land uses in a community. In order to prepare a meaningful Master Plan, it is imperative that the Township's population and growth trends are understood. In this section, various aspects of Courtland Township's population trends are analyzed and the current and likely future growth trends are discussed.

Historical Population Trends

It is important to determine the overall growth the Township has experienced in the recent past. Over the last thirty years, the rural character of Courtland Township has attracted new residents from nearby Grand Rapids and Greenville. General population has increased steadily, averaging nearly 39% growth per decade since 1970. As a result, the 1970 population of 2,200 has since increased to 5,817 in the year 2000 (an increase of 164%).

Figure 3.1 Population Increase

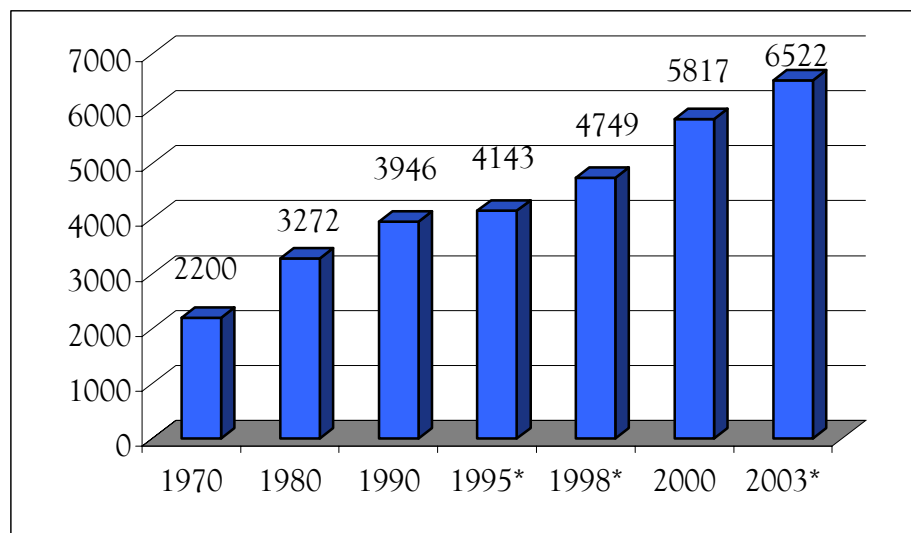
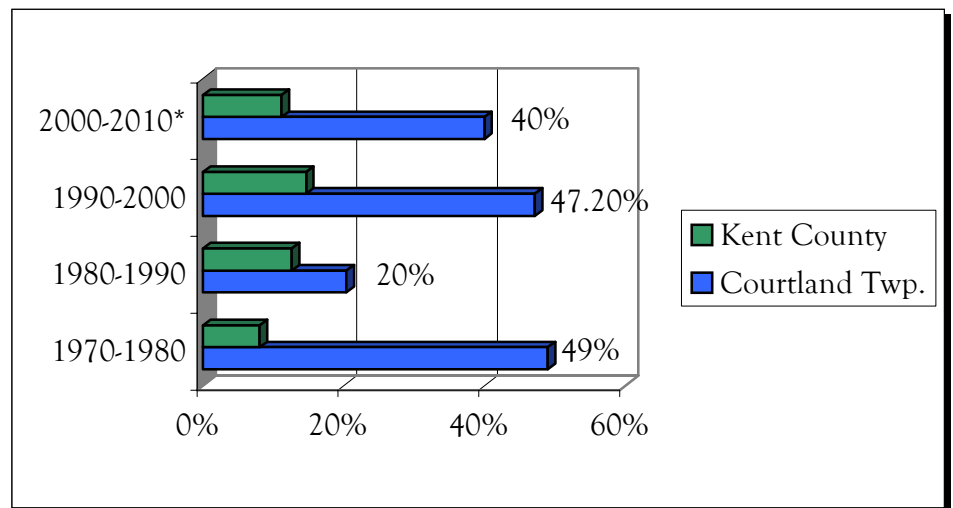


Figure 1: * US Census and State Demographer's Population Estimates

At least since 1970, Courtland Township has been among the fastest growing communities in the area. Figure 3.2 below compares the rate of growth experienced by the Township with that of Kent County. Overall, West Michigan is growing more rapidly than the remainder of Michigan, or many areas of the Midwest. That growth tends to be focused largely in some of the unspoiled areas of the region, and clearly this dynamic is at work in Courtland Township.

Figure 3.2 Comparative Rates of Population Increase



*Population Estimates: Michigan State Demographer

Although the largest percent increase occurred during the decade of 1970 to 1980, the largest influx of population has occurred since 1995. While the 1970 -1980 population increase was just shy of 50%, the net gain was only 1,076 people. The State demographer's estimate for Courtland Township's 1995 population was 4,143, while the 2003 estimate reached 6,522⁷. The population increase from the 1995 estimate to the 2003 estimate (two years short of a full decade) exceeded 2,500.

Population Projections

Statistical averaging techniques were employed to project the Township's likely population growth to the year 2030. These approaches are intended to provide a general sense of growth in the future. In communities such as Courtland, that are just beginning to experience increasing rates of development, future growth trends may not parallel historical trends. These following generalizations are limited in scope and are based on past trends documented by the United States Census Bureau and Township data.

These projections have implications regarding future land use necessities, the demand for various public services and capital improvements, and help to understand the future position of the Township in terms of growth and total population. The following describes the projection techniques.

⁷ Library of Michigan, Department of History, Arts, and Libraries

The Constant Proportion (or ratio) Method of projecting population assumes that Courtland Township will continue to represent the same percentage of Kent County's projected population in the years 2010, 2020, and 2030 that it represents today. In 2000, Courtland Township comprised 1.005% of Kent County's total population. Using the population projections for Kent County as estimated by Woods and Poole Economics,⁸ and extending those trends through 2030, the following illustrates the results of the constant proportion method for Courtland Township.

	<u>2000 Population</u>	<u>2010 Population Projection</u>	<u>2020 Population Projection</u>	<u>2030 Population Projection</u>
Kent County	579,040	694,570	780,960	909,428*
Courtland Township	5,817	6,980	7,849	9,120

* Woods and Poole did not project county population through 2030; this figure results from an extrapolation of the rates of growth projected from 2000 through 2020 for another ten years.

The Growth Rate (or geometric) Method projects future population growth or decline based on the rate of growth in the Township in the past. Using the growth rate method, the following assumes that growth in the future will occur at the same average rate as has occurred annually since 1970. As indicated previously, the Township has experienced considerable population growth annually since 1970, with an average annual increase of 5.46% over this period.

<u>Average Annual Growth Rate 1970-2000</u>	<u>2000 Population</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
5.46%	5,817	8,993	13,903	21,494

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 net increase of 3,617 persons between 1970 and 2000, in Courtland Township, based on U.S. Census figures.

Average

⁸ Woods and Poole Economics data

<u>Increase Each Decade</u> <u>(Number of Persons)</u>	<u>2000</u> <u>Population</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
1,205	5,817	7,022	8,227	9,432

The Building Permit Method may be the most reliable projection technique since it depicts present growth trends based on the actual number of residential building permits issued by the Township. Courtland Township has issued 77 residential building permits on average per year from 1994 to July 2004.⁹ The Township's average household size is 2.89 persons.¹⁰ Extrapolating these figures into the future may project likely population growth, if current trends remain the same. This population projection technique holds that Courtland Township will grow by 223 persons per year.

<u>Average No.</u> <u>Permits/Yr.</u>	<u>Persons</u> <u>Per H/H</u>	<u>2000</u> <u>Population</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
77	2.89	5,817	8,042	10,267	12,492

It is reasonable to project that Courtland Township's population will grow to over 13,000 by 2013.

The table below summarizes the preceding information. By averaging the results of these methods, it is reasonable to predict that the population of Courtland Township will grow to approximately 7,700 persons by the year 2010; roughly 10,000 by the year 2020; and almost 13,200 by the year 2030. The projections summarized here assume that past trends will continue into the future, and are limited in scope by such a supposition. Projections are based on population counts documented by the United States Census and building permit data from the Township.

POPULATION PROJECTION SUMMARY

	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>
Constant Proportion	5,817	6,980	7,849	9,120
Growth Rate	5,817	8,993	13,903	21,494
Arithmetic	5,817	7,022	8,227	9,432
Building Permits	<u>5,817</u>	<u>8,042</u>	<u>10,267</u>	<u>12,492</u>
Average	5,817	7,759	10,062	13,134

While the population projection summary above is limited in its ability to precisely predict the future, it does give a strong sense of where

⁹ Courtland Township data

¹⁰ United States Census Bureau, 2000

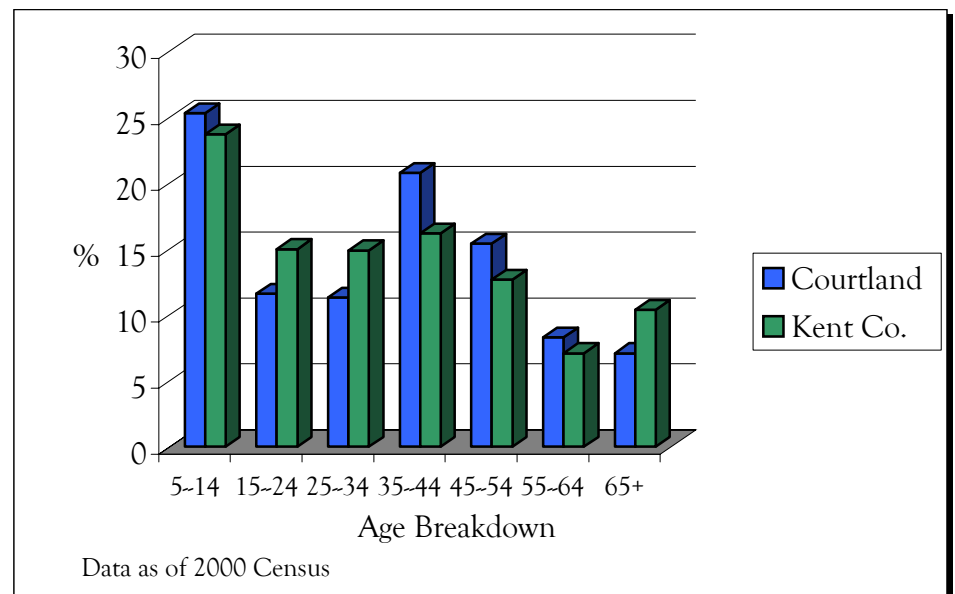
current growth trends may carry the Courtland community in the future. If the economic and social characteristics of Kent County generally remain stable, Courtland should plan for a steady influx of new residents and development. Chapters 4 and 6 discuss the implications of growth in greater depth.

It should be noted, as this plan was being approved in 2007, the Township has experienced a fairly significant decline in building permits issued and new housing starts, which began in 2006. In the year 2006, 50 permits were issued for new residences; and in the first four months of 2007, only 6 permits were issued. It is also estimated that at the time of adoption of this revision, there were approximately 600 single-family lots which had been approved in various developments throughout the Township, but which were currently undeveloped. This data indicates that at the time of approval of a plan, historical trends for population increase and building demand may be delayed or even permanently reduced.

Age, Sex, and Ethnicity Characteristics

A comparison of the age distribution of a community's population can provide another opportunity to measure change. This also helps to determine the type of housing demands and recreational facilities that may be needed.

Figure 3.3 Comparative Age Breakdown



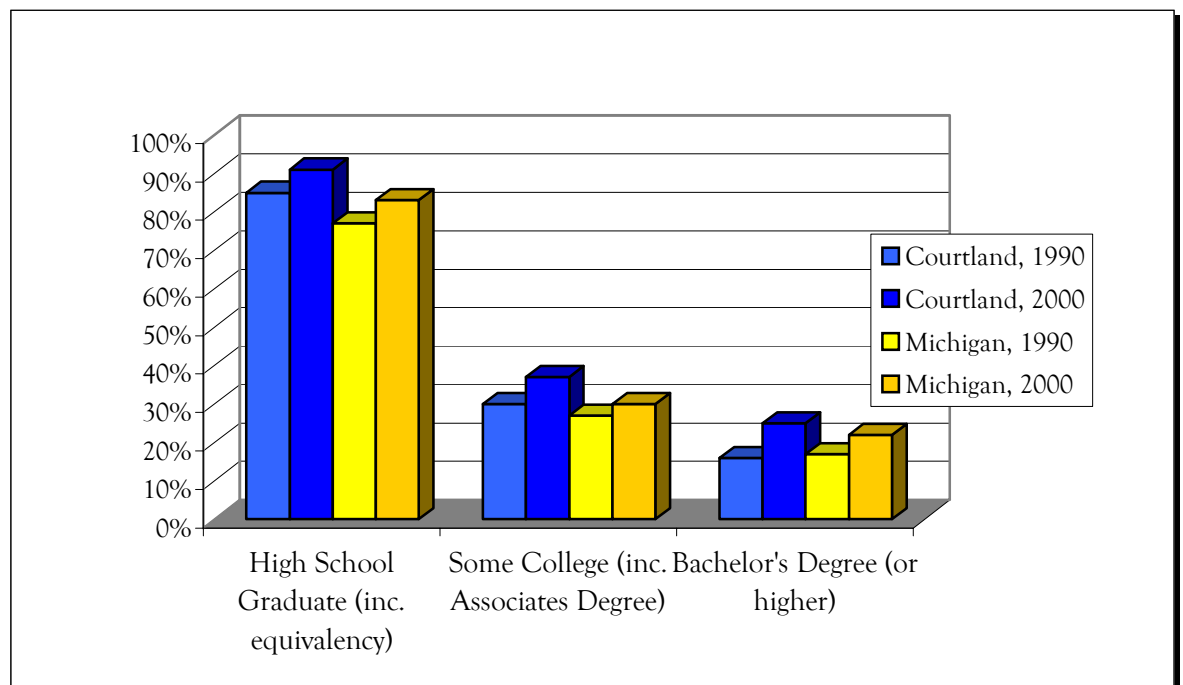
The demographic characteristics of Courtland Township show a strong majority (89.7%) of adults under the age of 65, exceeding the national average by more than 5%. The percentage of children under the age of

five (7.1%) is also slightly above the national average. Interestingly, the median age of the Courtland Township population in 2000 was 35.8 years as compared to 32.5 years for Kent County. This is likely reflective of the transitional nature of the community's population and higher property values suggesting that the population may be slightly older overall as young families may find housing slightly more affordable in other portions of the County.

Educational Attainment

Of the nearly 3,700 adults over the age of 25 in Courtland Township, 91% have earned the equivalent of a high school diploma or greater, and a full quarter of this population has earned a bachelor's degree or higher.

Figure 3.4 Comparative Educational Attainments
Residents over Age 25



Educational attainment in Courtland has outpaced the rest of Kent County by as much as 5% at the high school level in 2000.

PLANNING IMPLICATIONS

Housing Units

The 2000 population of Courtland Township lived in approximately 2,015 housing units, at an average of 2.89 residents per housing unit.

An overwhelming majority (97%) of housing in the Township consists of detached, single-family owner occupied homes. Of the total housing units, 23% percent of residents are considered to live in urban areas, whereas 75% of residents live in rural, non-farm residences. The remaining 2% of the population reside in areas considered to be rural farmland.¹¹

If the population projections above are correct, and the average household size remains at 2.89 persons, Courtland should expect an additional 2,532 housing units by the year 2030. If 75% of those units continue to be developed within current rural-residential zoning parameters of one dwelling for each two acres, 3,798 acres (or nearly six square miles) of the Township will be consumed by this residential development. This figure does not include area for infrastructure and utilities to serve new development.

Car Trips

The national average of car trips per household is 9.57 trips per day.¹² Courtland's housing stock in 2000 (2,015) would suggest approximately 19,283 car trips per day. Considering that this national average has included many urban communities, where public transportation is commonly used by a large portion of the population, the number of expected car trips per day in Courtland Township is likely to exceed any predictions based on national averages.

Again, allowing that the above population projections are accurate, the Courtland population in 2010 would average 25,693, increasing to 43,515 car trips per day in 2030. (Chapter 6 discusses current transportation patterns and the carrying capacity of local roads in greater depth.)

Gallons of Wastewater

The State of Michigan has estimated an average of 250-350 gallons of wastewater are generated by a single household per day. If the estimate is multiplied by the number of households in the township, approximately 500,000-705,000 gallons of wastewater are currently generated within Courtland Township each day. As indicated in Chapter 6, roughly 23% of households in Courtland are serviced by public sewer. The balance, or between 385,000 and 542,000 gallons per

¹¹ Census 2000

¹² Institute of Transportation Engineering, *Trip Generation*, 5th Edition. Note that each a time vehicle leaves a dwelling it is counted as two trips to account for the departing and returning trips.

day, is disposed in on-site systems to groundwater. If these proportions remain constant, by 2030 an additional 487,000 to 682,000 gallons of wastewater will be discharged to groundwater, resulting in well over a million gallons of wastewater discharge per day.

School Age Children

According to 2000 Census data, 31% of Courtland Township's population is of school age (3 yrs.+) and enrolled, and 90% of that population is enrolled in public schools. This amounts to 1,288 students enrolled in K–12 public school systems, 100 students attending K–12 private schools, 155 students attending nursery/preschool, and a remainder of 255 students attending college. After excluding college and nursery school students, as well as those students attending private schools, we have projected these figures into the future (based on Chap. 3 assumptions), signaling a need to accommodate an additional 1,602 children in public schools by 2030.

CHAPTER 4. HOUSING & ECONOMIC DEVELOPMENT

This chapter analyzes the housing and economic development trends within the community. It is useful to compare housing trends with population projections so that housing shortages or surpluses can be estimated. In addition, comparisons of housing and land values against the incomes of current residents can help reveal the relative affordability of the local housing stock for the residents of the community. Finally local job growth and investment in commercial and industrial development provide evidence of the strength and weaknesses in the local economy.

HOUSING QUALITY

In the 2000 census only seven (7) occupied households, out of a total of 2,015, were identified as lacking complete plumbing facilities, kitchen facilities, and telephone service. Nearly half of the current housing stock has aged less than 25 years and 568 new homes have been built since the year 2000.



568 new homes have been built in the Township since 2000.

Housing affordability is also of interest in the completion of this community profile. Affordability is a measure of the percentage of disposable income consumed in housing costs such as rent payments for rental properties and principal and interest expense for homeowners. Typically mortgage underwriters and housing specialists consider housing affordable if rent payments or principal and interest payments fall below 25% to 28% of gross income. Comparing median household incomes with median rents and median mortgage payments indicates that much of the housing in the Township would meet this standard. In 2000, the median household incomes stood at \$64,430. Using the 25% standard, \$16,107.50 (avg.) would be needed annually for housing costs in an affordable market. The census reported that median mortgage payments were \$1,186 monthly, or \$14,232 annually. Median monthly rents were \$792, or \$11,664.

EQUALIZED VALUE GROWTH

Property values are a key measure of economic growth and the financial strength of a community. Property values reflect both investment in new development and the degree of growth in the value of those investments. Annually the Assessors of each jurisdiction report total valuation with their respective jurisdictions. These are broken down by property classification and these reports can provide an illuminating impression of the character of a community.

Table 4.1: Real Property Assessments

Year	No. of Parcels	Assessed Value (SEV)	% Value Increase
1990	1,939	\$54,937,100	¹³
1995	2,320	\$94,433,000	71.89%
2000	2,768	\$166,612,700	76.43%
2005	3,157	\$265,814,600	59.54%

The total SEV¹⁴ for Courtland Township in 1990 was \$54.9 million. Five years later it had increased by over 71% (or about 14.4% annually) to \$94.4 million. By the year 2000, climbing another 76% in five years (15.2% annually), total real property SEV was \$166.6 million. Finally, in 2005, the increase in assessed property values had slowed to 12% per year, reaching \$265.8 million, however, as seen in Table 4.2, the slowed pace of growth can be almost entirely attributed to the recession experienced in 2002.

Table 4.2 below compares the rates of overall SEV growth for Courtland Township with that of other northern Kent County communities experiencing significant growth. Collectively, the communities reflected in Table 4.2 represent slightly more than one-quarter of the total value in the County. Through the latter half of the 1990s, all of the northern county communities except Sparta Township experienced double digit annual rates of growth. Even though the regional and national economies had weakened by 2002, investment and growth in value in the urbanizing parts of the County were still evident.

¹³ No data available prior to 1990

¹⁴ Assessed values should represent about 50% of the actual market value of real property in the community.

Table 4.2 Change in Total Real Property Equalized Values (in million \$)

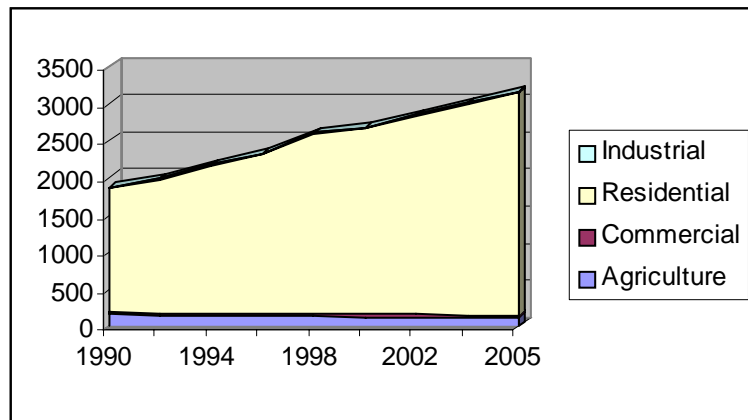
	1994	1999	2002	2003	2004
Ada Township	\$ 266.4	\$ 453.5	\$ 645.8	\$ 669.7	\$ 726.8
Annualized rate of change	n/a	14.0%	14.1%	3.7%	8.5%
Algoma Township	\$ 100.5	\$ 185.5	\$ 298.4	\$ 301.2	\$ 316.3
Annualized rate of change	n/a	13.0%	17.2%	0.9%	5.0%
Alpine Township	\$ 167.7	\$ 275.8	\$ 362.1	\$ 372.4	\$ 388.5
Annualized rate of change	n/a	12.9%	10.4%	2.8%	4.3%
Cannon Township	\$ 203.4	\$ 367.6	\$ 533.8	\$ 525.4	\$ 560.9
Annualized rate of change	n/a	12.6%	13.2%	-1.6%	6.8%
Courtland Township	\$ 82.7	\$ 150.1	\$ 224.2	\$ 226.5	\$ 246.1
Annualized rate of change	n/a	16.3%	16.5%	1.0%	8.7%
Gd. Rapids Township	\$ 292.5	\$ 499.5	\$ 710.7	\$ 722.2	\$ 782.4
Annualized rate of change	n/a	11.3%	12.5%	1.6%	8.3%
Plainfield Township	\$ 466.8	\$ 704.6	\$ 893.6	\$ 962.1	\$ 1,016.6
Annualized rate of change	n/a	8.6%	7.6%	7.6%	5.7%
Sparta Township	\$ 107.4	\$ 159.7	\$ 215.5	\$ 220.4	\$ 236.8
Annualized rate of change	n/a	8.3%	10.5%	2.3%	7.4%
Walker, City	\$ 373.3	\$ 584.5	\$ 786.6	\$ 812.8	\$ 863.7
Annualized rate of change	n/a	9.4%	10.4%	3.3%	6.3%
Kent County	\$ 8,829.9	\$ 13,068.3	\$ 17,673.9	\$ 18,055.5	\$ 19,112.4
Annualized rate of change	n/a	8.2%	10.6%	2.2%	5.9%

Source: Kent County Bureau of Equalization, 2004 Equalization Report, April 22, 2004

The small growth percentage for each township in the county between 2002 and 2003 is highly apparent in Table 4.2. At the time of this writing, data for 2005 and 2006 is not yet available, although the initial estimates appear to reflect such slower rates of growth as have occurred in 2003. Due to economic difficulties in general within the State of Michigan, it is not yet clear whether this trend will continue.

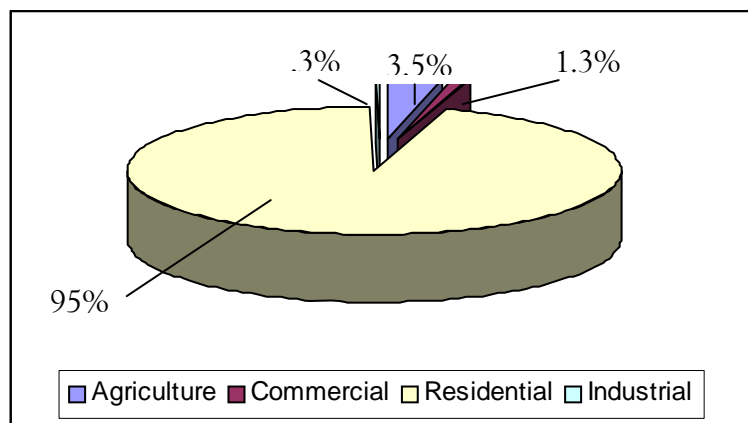
It is also important to further examine property values to consider the breakdown among land use categories (property classifications) and the varying rates of growth in each classification.

Figure 4.1: Change in Mix of Real Property



While the rates of growth in the residential sector have soared since 1990, agricultural land has dropped from 167 parcels in 1990, to 113 in 2005. Commercial property has slowly increased from 18 parcels in 1990, to 40 parcels in 2005.

Figure 4.2: Breakdown of Real Property Mix, 2005



The scale of residential real property values clearly dominates all property in Courtland Township. It is clear from an examination of Figure 4.3 that Courtland Township's tax base is heavily weighted toward residential development. As discussed in Chapter 6, residential property tends to demand a greater portion of services than can typically be provided by the residential tax base.

BUILDING PERMITS

Building permits are a good indication of investment in the community. Nearly 53% of all home construction in Courtland Township has taken place since 1990. During the ten-year span from 1991 to 2000, 766 new homes were constructed at an average of 76.6 homes per year. During the five-year span from 2000 to 2005, another 568 homes were built.

This average of 113.6 homes per year represents a 48% increase in construction activity within the township over a five-year period. Taking into consideration, however, that most of the Township is zoned rural residential (2 acre minimum lot size), this has resulted in an average of nearly 200 acres of development per year since 2000.

In addition to these long term growth trends, it is also important to recognize the short-term trends. As of February 22, 2007, there were 434 vacant development lots which have been approved for residential construction. This represents at least two to three years of historic demand levels for housing within the Township. Due to a significant slow-down in the State and regional economy, residential construction rates have dropped considerably since 2005 and it is uncertain whether this surplus will be consumed in the near future.

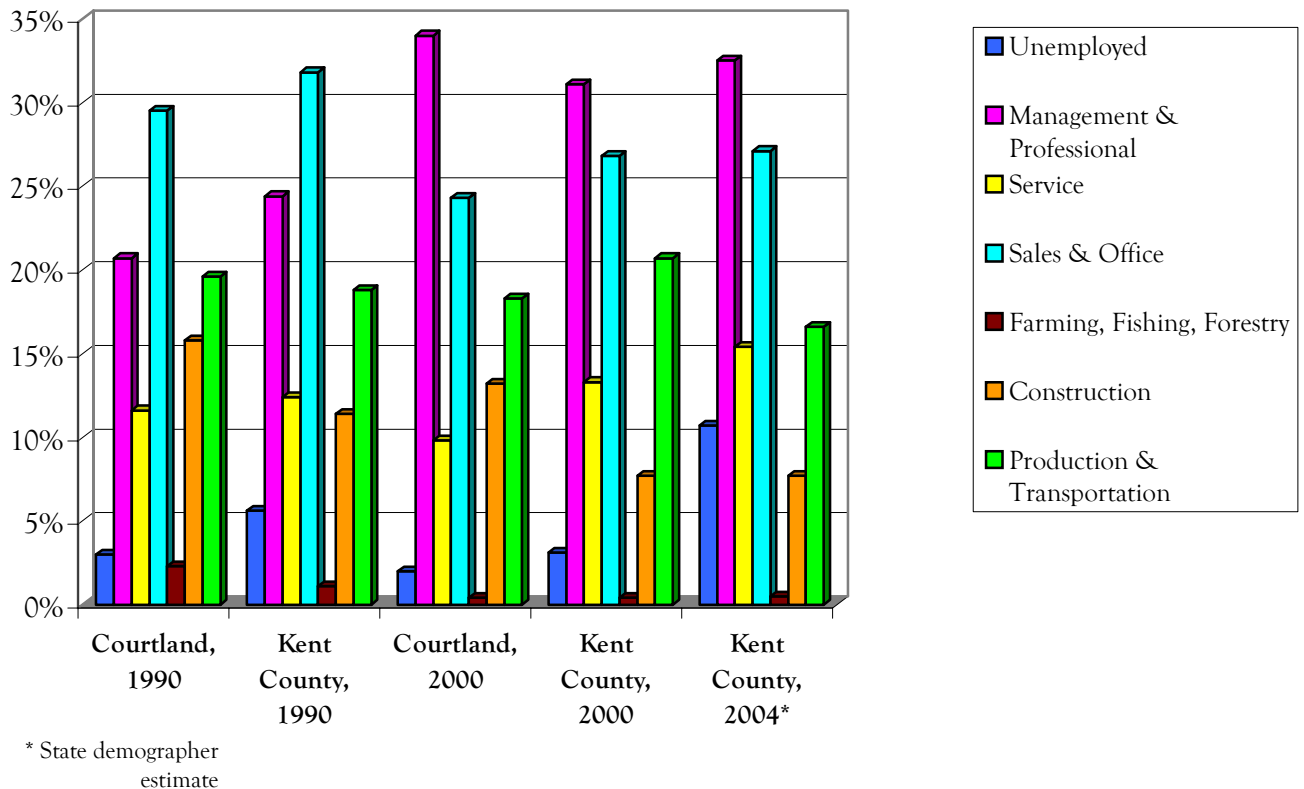
According to Township records, about 30% of all new homes built in have been built near the southern border of the Township, accessible to 10 Mile Road. Further, more than 80% of new construction within the Township took place west of Young Ave. It is assumed that these development trends show a desire for lake access, accessibility to shopping needs, and highway access. Those demands will continue to be prevalent in location choices for new development.

EMPLOYMENT

The turn of the century has marked a shift in employment patterns. While there are little drastic changes in the graph in Figure 5 below, it is apparent that both Kent County and Courtland Township are following national trends away from manufacturing and construction, and toward professional or management careers. Especially significant to Courtland, careers related to farming have dropped by 475% (2.3% in 1990, and .40% in 2000)¹⁵. While the share of agricultural careers among the total workforce has not been significant for decades, this is yet another indicator of the declining occupational need for rural land and the possibility of increased development as agricultural lands cease production and convert to residential uses.

¹⁵ US Census Bureau, 1990 & 2000

Figure 4.3 Employment Trends



Incomes

Median household income in Courtland Township reported in the 2000 U.S. Census was \$64,430. This may be compared to \$44,667 in Kent County and \$41,994 for the State of Michigan. Thus, Courtland Township residents enjoy a significantly higher standard of living than their neighbors in other areas of the county or the state. This simple measure of prosperity suggests a bright and growing future for the community.

PLANNING IMPLICATIONS

The decline in farming as an occupation will also mark a decline in agricultural land use. Office professionals and service workers will soon impose a greater demand for residential uses than farmers can impose for agriculture. As property development gives way to market demands, this will be another challenge to preserving the rural character of Courtland Township. Higher income households typically demand (and can pay for) higher levels of service from their local government and from their schools. As rural communities change, it is not uncommon

for this dynamic to generate tensions within the community between the “old” residents and the new arrivals.

The strong reliance on a residential tax base in the Township may also play a role in this change. Typically residential development requires more in services than it provides in revenues. A more diverse tax base tends to spread the requirements of local services on a broader range of land uses. However, there may be resistance to a fundamental or large-scale change in land uses as it could also result in a more rapid change in the character of the community.

CHAPTER 5. LAND USE & DEVELOPMENT PATTERNS

LAND COVER

A majority of the Township has remained either agricultural land or open woodland areas and fallow fields. However, over the past 10-15 years, the southernmost sections of Courtland have experienced extensive residential development. Much of the land adjacent to the 10 Mile Rd corridor has been developed into single-family homes on 1-4 acre lots. The density around Myers and Brower Lakes is often much greater.

As depicted in Map 5, the northeastern quarter of the Township is dominated by deciduous forest and wooded wetland with the remainder of land occupied by row crops and pastureland. To the northwest the pattern is reversed. Much of the northwestern quarter of the Township is dominated by pastureland and row crops, although, there is a substantial belt of wetland and forest along Stegman Creek, just north of 13 Mile Rd.



Agriculture continues to play an important role in the Township

In the southern half of the Township there remains a substantial amount of open space and natural areas, however, much of what was once continuous forest or pastures has been broken into smaller parcels through the development of low to medium density residential construction. Areas surrounding the Brower and Myers lakes have the greatest population density in the Township, neighbored by a number of large-lot residential developments along 10 Mile Road.

LAND USE

Land use in the Township is dominated by agriculture and rural single-family development patterns. As shown in Map 6, the northeastern and central sections of the Township are almost entirely agricultural in use. It is important to note that as growth occurs, large minimum lot sizes, characteristic of rural zoning, are often a key contributor to the loss of farmland, as large portions of former farms become yards for new homes. Very low-density residential development may appear to be “rural” by design, but this type of sprawling land use absorbs farmland quickly, and spreads development out further.



Soils in parts of Courtland Township are highly conducive to farming.

Land use around the City of Rockford is more intense than in other areas of the Township. A significant portion of residential development has occurred along 10 Mile Rd east of Northland Drive, and development has increased near 11 Mile and Whittall. Also contributing to the draw of this area are Myers and Brower lakes as discussed in Chapter 1. Residential development has occurred adjacent to these lakes, and often is fairly dense. Large water bodies typically provide recreation and quality of life amenities, and therefore act as magnets for residential growth. The extent to which these lakes are served by sewer as opposed to individual septic systems may have also attracted new development. Map 6 reflects current land use and has been developed from Township information with recent updates by Williams & Works based on an informal windshield survey.

ZONING

There are currently five zoning categories in Courtland Township. The practice of zoning is intended to separate land uses in order to preserve the current character of an area while still allowing land improvements. Generally, zoning will guide growth toward specific areas and away from others.

The primary zoning category in the Township is Rural Residential, where the minimum lot area is 2 acres. Generally, this type of zoning district is intended to enhance and preserve prime agricultural areas, to avoid conflicts among farm and non-farm uses, and to provide for low density, rural living environments.

Insert Map 5: Land Cover

Insert Map 6: Land Use

Table 5.1 Comparative Zoning District Analysis

Abbreviation	Category	Min. Lot Size	Min. Floor Area
R-R	Rural Residential	2 acres	960 sq. ft.
R-1	Single Family Residential	2 acres w/o public sewer ~ 13,500 sq. ft. w/ public sewer	960 sq. ft.
R-2	Multi-Family Residential	2 acres per 1 st four units 2,500 sq. ft. / ea. Additional unit	750 sq. ft. per unit

The M-57 (14 Mile Road) corridor may pose some unique problems for development. Algoma Township to the west has allowed for commercial growth along M-57 to capitalize on the high traffic volume. In Courtland Township, however, most of 14 Mile remains zoned for rural residential. These conflicting land uses are not yet problematic, however, as growth persists throughout the Township, increasing traffic flow along M-57, the demand for commercial land use will increase as well. In addition, Algoma Township has permitted commercial development along Northland Drive, whereas Courtland's zoning remains rural residential along most of this corridor. Some Courtland residents have views of auto body shops and parking lots from their front windows as a result. While development continues, land use conflicts will grow increasingly apparent. Demand for residential property in Courtland Township will likely decline drastically along Northland Drive, while commercial demand will simultaneously increase.

Difficulties may arise as residential development intrudes upon agricultural land

Of major concern is allowing traditional strip commercial in a predominantly rural area. Large parking lots and banner signs are neither attractive nor conducive to preserving the current aesthetic appeal of Courtland Township. However, careful planning and zoning can allow for controlled growth with strict guidelines over development patterns and standards.

Another future difficulty may arise as residential development intrudes upon agricultural land. There are currently a number of different strategies for preserving farmland in Michigan, however, most of them require a section of land greater than 40 acres to be preserved in order to use both land and subsidies most efficiently.

REGIONAL PERSPECTIVE

Courtland Township is bordered by Oakfield Township to the east, Algoma Township to the west, Nelson Township to the north, Cannon Township to the south, and, perhaps most significantly, Plainfield Township to the southwest. Positioned only six miles north of the City of Grand Rapids, Courtland is currently on the fringe of the metropolitan area. As Plainfield Township approaches the limits of development capacity, growth will undoubtedly creep northward. Northland Drive, the western boundary of the Township, is shared with Algoma Township. Some land conflicts (as noted above) are becoming increasingly apparent along this route.

Courtland has experienced a 47% population increase between 1990 and 2000, while the neighboring townships have experienced an average total 29% population growth since 1990.

Regional and economic growth has undoubtedly sprawled at least as far north as Courtland Township already. It is typical that central cities in the Midwest gain little if any population during growth periods, and due to transportation patterns and economic and social stimuli, most population growth occurs in the surrounding townships and villages. Areas at the southern and eastern edges of metropolitan Grand Rapids seem to be absorbing a substantial portion of regional growth, however, Courtland has experienced a 47% population increase between 1990 and 2000, while the neighboring townships have experienced an average total 29% population growth since 1990. As Plainfield Township has grown to more than 31,000 residents, Courtland should expect area suburbs to continue steady migration into and beyond the Township.



Land in Michigan is developed 8 times faster on average than the rates of population growth

It is important to note that in Michigan, the Land Use Leadership Council has determined land in Michigan is developed 8 times faster on average than the rates of population growth.¹⁶ This is often termed “sprawl.”

“If land is being consumed at a faster rate than population growth, then a metropolitan area can be characterized as ‘sprawling.’ If population is growing more rapidly than land is being consumed for urbanization, then a metropolitan area can be characterized as ‘densifying.’”¹⁷

The Brookings Institute Study revealed that most metropolitan areas in the United States are adding urbanized land at a much faster rate than they are adding population. Between 1982 and 1997, the amount of urbanized land in the United

¹⁶ Michigan Land Use Leadership Council, *Michigan’s Land, Michigan’s Future*, 2003

¹⁷ Brookings Institute Center on Urban and Metropolitan Policy, *Who Sprawls Most? How Patterns Differ Across the U.S.*, July 2001.

States increased by 49%, from approximately 51 million acres in 1982 to approximately 76 million acres in 1997. During this same period, the nation's population grew by only 17%. This is a rate of land consumption that is about 2.75 times the rate of population growth. Consider Courtland's population has been growing at an average rate of 54% per decade, 3 times the national rate. Therefore, the effect of sprawl in Courtland is expected to be much greater than that of the United States in general. These patterns of development are known to greatly contribute to local traffic congestion, increased auto related CO₂ emissions, and declining air and environmental quality.

PLANNING IMPLICATIONS

If current trends in population growth and land consumption continue, Courtland will experience excessive rates of sprawl.

Although Courtland has successfully retained its rural character to this point, demand for housing has begun to outpace the demand for agricultural land, and rural preservation will grow increasingly difficult. Most importantly, Courtland should consider small pockets of density to satisfy the commercial and affordable housing needs of local residents. Congregating many needs in one area will leave the remainder of the Township with the freedom to preserve its agricultural heritage and natural features while satisfying demand for large-lot residential growth.

Related to this is the impact that additional residential growth can have on the local active farmlands. Agriculture is a difficult and economically challenging activity under the best of circumstances. However, as more residential development encroaches on areas of active agriculture, conflicts are inevitable. It is true that the Right to Farm Act protects farmers from being treated as nuisances for the routine activities associated with farming (i.e., dust, noise, sprays, odors, etc.). However, the logistical challenges of farming become even more difficult when farmers must move field equipment along county roads that are increasingly used by commuters. In addition, as the number of active farming operations diminishes, the various support services they need dwindle, as well. These services can cover a broad range of activities, from farm equipment dealers, seed, feed and fertilizer, large animal veterinarians, etc.

CHAPTER 6. COMMUNITY FACILITIES AND SERVICES

Community facilities play a significant role in preserving quality of life, augmenting civic engagement, sponsoring cultural events, and promoting town pride. In tandem with important networks of recreational areas, public schools and civic buildings provide local spaces for interaction, learning, and community building. Elementary schools, middle schools, high schools, and even police and fire facilities, often serve as the heart of a small town – especially for children and youth.

This chapter of the Community Profile begins with a brief look at higher education opportunities within the region, and describes school enrollment. In addition, parks and recreation areas are discussed. Finally, the chapter touches on public safety services and facilities.

PUBLIC SCHOOLS

Higher Education. Regional opportunities for extended education are helpful tools in fostering economic sustainability and regional growth. Schools located in and near Grand Rapids include: Grand Valley State University, Aquinas College, Calvin College, Cornerstone University, and smaller schools, such as Davenport University and Grand Rapids Community College. Michigan State University, in East Lansing, is the largest facility for higher education in the state, and is located about one hour's drive to the east.

Courtland Township is serviced by two public school systems, although neither system has facilities located within the Township. Both districts also serve communities in neighboring townships, and are a part of the Kent Intermediate School District (KISD).

The Rockford Public Schools District serves families in the southern area of the Township. The Administration Building is located at 350 N. Main, within the City of Rockford. Primarily, the district covers portions of Courtland Township South of 13 Mile Rd. Meadowridge Elementary School serves the southwestern portion of the Township, including Myers and Brower Lakes, while Lakes Elementary School serves the southeastern portion of the Township. Secondary school bus routes extend as far north as 13 Mile Rd and Shaner. Total enrollment within the entire district is 7,795.

The Cedars Springs School District serves families to the north of 14 Mile Rd. Total enrollment for the district is 3,369, with just over 1,000 students enrolled at the high school level. The district has no plans to

expand in the near future due to the recent completion of construction on a new elementary school. Enrollment is currently steady, however, local public opinion is beginning to show less bias toward the Rockford Schools and an upswing in enrollment in the Cedar Springs district is possible. All public school facilities are located outside of Courtland Township.

PUBLIC SAFETY SERVICES & FACILITIES

Police, fire, and hospital services are necessary for any community, as they protect the general welfare, help alleviate crime, and give medical treatment when needed. Due to the relatively small population in the Township, many public safety services are shared with surrounding communities.

Police

Courtland Township is a beneficiary of the Township Patrol Program, run by the Kent County Sheriff's department. There are 33 County deputies, each of whom is assigned to one of nine participating townships. Each township receives between 16 and 24 hours of patrol per day.

In addition to the Township Patrol Program, Courtland benefits from the near proximity of the State Police department in the City of Rockford, which can provide support in emergency situations.

Fire

Courtland Township shares a professional Fire Chief with Oakfield Township and operates a paid-on-call volunteer fire department through its Main engine house on 14 Mile Rd, adjacent to the Township offices, and the Fire Substation located at 9535 Myers Lake Ave.

Hospital

The City of Grand Rapids is home to four major medical hospitals, and dozens of specialized clinics. A majority of medical situations taking place in Courtland Township are directed to facilities in Grand Rapids, ten miles to the southwest. There is also a hospital in the City of Greenville, ten miles to the east.

Parks & Recreation

There is a small County park located at the north end of Big Myers Lake. The park provides pedestrian access to the lake. The only public boat launch for any of the lakes in the Township is located on Big Brower Lake.



CHAPTER 7. UTILITIES

Public utilities are an important element in a growth management plan. Through the delivery of reliable and plentiful water and the safe and efficient disposal of wastewater, communities can achieve an improved quality of life for local residents. Utility systems also have the potential to aid in growth management by enabling greater densities in selected locations. Finally, and most importantly, public utility systems give the community the ability to provide effective stewardship over such important natural features as groundwater and surface water features.

PUBLIC WASTEWATER SYSTEMS

Through the delivery of reliable and plentiful water and the safe and efficient disposal of wastewater, communities can achieve an improved quality of life for local residents.

The North-Kent Sewer system has been extended to provide services to the Myers Lake, and Brower Lake communities at the south end of the Township. Extensions from lift stations on each side of Myers Lake were recently granted to new developments adjacent to Myers Lake, just north of 11 Mile Rd. There is some additional capacity available for new growth in the area.

Under an agreement with the City of Grand Rapids, which expires in late 2008, sewer service is available to a defined service district. The district may not be changed without consent of the City of Grand Rapids. The North Kent Sewer Authority is allotted a fixed number of Residential Equivalency Units (REUs)¹⁸ that it may discharge to the city treatment system. Residents and businesses pay sewer fees to the City of Grand Rapids on a quarterly basis at rates determined by the City's utility rate board, which is comprised of representatives of the City and all the suburban jurisdictions that depend on City wastewater treatment. In the recent past, the trunk sewer conducting sanitary sewer flow to the City was upgraded to handle additional capacity.

PARCC-Side Clean Water Plant

The current wastewater agreement with the City of Grand Rapids will expire in 2008. The members of the North Kent Sewer Authority have been in negotiations with the City regarding sewer rates for several years in advance of the agreement expiration. The members of the authority include Plainfield Charter Township, Alpine Charter Township, Cannon and Courtland Townships and the City of Rockford. Many representatives of the authority have come to the conclusion that it will not be possible to come to a balanced agreement with the City. In

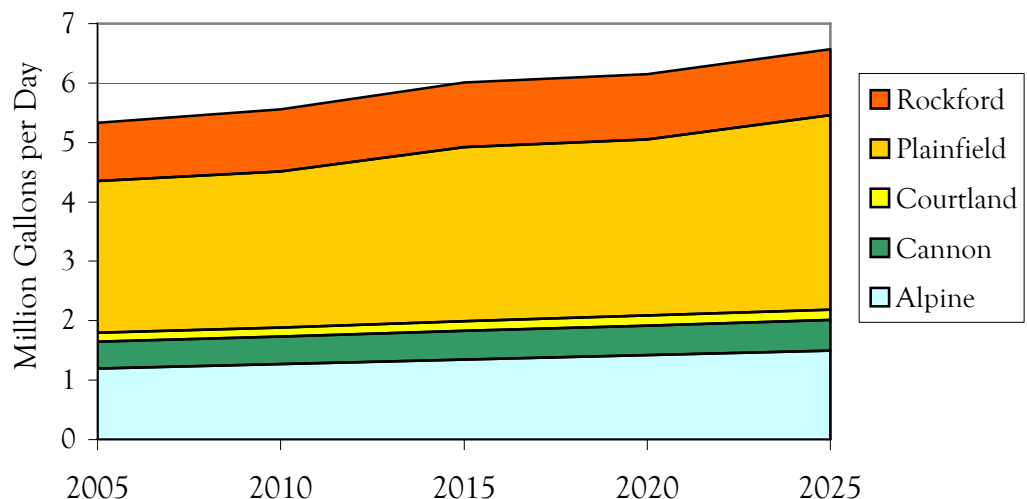
¹⁸ An REU is considered the approximate amount of wastewater generated by a single family home on a daily basis; normally 250 to 300 gallons per day.

February 2003 the decision was made to proceed with the development of a new wastewater treatment plant and allow the current agreement with the City to expire.

The PARCC-Side Clean Water Plant will be located adjoining Lamoreaux Park in Plainfield Township. The facility will have a design treatment capacity of 8 million gallons per day (MGD) and will be expandable to 12 MGD. The design will incorporate state-of-the-art treatment technologies utilizing a synthetic membrane bioreactor. According to the Plainfield Township engineer, this treatment technology is superior to more conventional processes and will result in less odor from the facility, a smaller facility overall and cleaner effluent to the Grand River. Current cost estimates indicate the facility will cost about \$48 million for design and construction and about \$2.4 million annually to operate.

Based on an analysis by the North Kent Sewer Authority, the PARCC-Side Clean Water Plant will eventually need to treat about 6.56 MGD by the year 2025. Figure 7.1 illustrates the projected rate of growth of the flow to the proposed facility.

Figure 7.1 Projected North Kent Wastewater Flow



Private Systems

A private, freestanding community wastewater collection and treatment system currently serves the Courtland Crossings manufactured housing community, adjacent to 14 Mile Rd. and Ritchie. Such systems are permitted by the Department of Environmental Quality and maintained

privately. The intended capacity of the Courtland Crossings system is much greater than the number of homes currently being served.

Public Water Systems

A public water system serves the City of Rockford. Currently, this water system is unavailable to a majority of Courtland Township, with the exclusion of eight households adjacent to the city border. The wellhead protection area for the City's well fields does not extend into Courtland Township

UTILITIES & GROWTH MANAGEMENT

Utilities can be an effective tool for growth management if coordinated with other land use procedures and policies within a community. As discussed above, if water and sewer facilities are available to a particular site or area, a variety of development options can be contemplated. In



Utility Installation

many cases, it may be in the interest of a landowner to maximize the potential of a site and, if water and sewer services are available, it is likely that this may result in increasing the residential density or applying commercial and industrial land uses.

Clearly, water and sewer facilities can be, and should be, part of the equation when determining future land uses. For example, if a community decides that an area should be preserved for agriculture, it would obviously be counterproductive to encourage the extension of water and/or sewer into this designated area. Thus, decisions to extend water and sewer services need to be carefully coordinated with the Master Plan and the Zoning Ordinance to be most effective.

Individual Septic Systems & Wells



A large majority of the population utilizes on-site, individual septic tank and drainfield systems.

The North-Kent Sewer System serves some of Courtland Township, however, a large majority of the population utilize on-site, individual septic tank and drainfield systems, and individual household wells. The 1990 census data indicated that of the 1,362 housing units in the Township, more than three quarters were using individual septic tanks or cesspools for their sewage disposal. The 2000 census did not survey water and sewer services, although 25% of all growth within the Township, between 1990 and 2000, took place within an area accessible to the North-Kent Sewer System¹⁹. As of 2005, nearly 30% of the 2,517 homes in Courtland Township are concentrated within this area.

¹⁹ Township Sections 27, 28, 33, & 34

PLANNING IMPLICATIONS

A single public wastewater treatment system serves only a portion of the Township due, in part to current limitations on capacity. However, with the expanded capacity promised by the PARCC-Side Clean Water Plant, wastewater service offers a unique growth management tool. The effort to update the Master Plan creates an opportunity to use these major public investments to aid the growth management process. For those communities with available wastewater capacity, the pattern and form of new land uses will likely be defined, in part, by the availability of sewer service. It is also important to note that there are existing areas of dense residential development in the Township that may desire to have sewer services extended in an effort to correct existing groundwater issues. Such expansions must be carefully considered because they may also foster further growth and development while addressing groundwater impacts. Further, as existing systems are improved to have more capacity, clear priority areas for new service should be defined within a plan.

CHAPTER 8. TRANSPORTATION

Major transportation elements in Courtland Township include state highways, County primary roads, County local roads, municipal roads, and private roads. Sidewalks, safety and bicycle paths, and other pedestrian oriented forms of transport have less of an influence on land use and social interaction in Courtland Township due to its current rural characteristics.



There are plans to reconstruct and widen Northland Dr. between 12 Mile and M-57

The Kent County Road Commission operates 1,959 miles of roadways.²⁰ The Michigan Department of Transportation is responsible for maintaining the state trunk lines in the County, and these state highways serve as the main connectors to metropolitan regions through west Michigan. There is only one state highway traveling through Courtland Township: M-57.

M-57 provides transport to and from US highway 131 and Greenville in the immediate area, extending east to north of the city of Flint. M-57 serves as a major thoroughfare for local residents commuting to Grand Rapids, the area's most densely populated area. US-131 also provides connections to I-96, traveling west to Muskegon, and east to Lansing.

Myers Lake Ave., 10 Mile Rd., 12 Mile Rd., Northland Dr., and Peterson St. all function as County Primary Roads. These serve as arterial connectors to County Local Roads and private roads, and often carry more traffic.

ROAD IMPROVEMENTS

According to the Kent County Road Commission, there are plans to reconstruct and widen Northland Dr. between 12 Mile and M-57. Phase 1 of this plan is set to take place in 2007, when Northland Dr. will be widened to five lanes between 12 Mile and 13 Mile Rd. Phase two is currently planned for 2008, when the road will be widened to five lanes up to 14 Mile Rd (M-57). Eventually, the Road Commission plans to extend the reconstruction to the City of Cedar Springs, most likely widening the road to three lanes.

In addition to the Northland Dr. reconstruction, there is also a plan to reconstruct Myers Lake Avenue in order to comply with current weight bearing standards. There is a 10-year plan to reconstruct the four-mile section of Myers Lake Rd. between 10 Mile Rd and 14 Mile Rd.

²⁰ Kent County Road Commission website

TRAFFIC VOLUME

Increased traffic congestion is usually a direct result of a growing population. The Michigan Department of Transportation performs traffic counts for all the state highways throughout Michigan (see Map 7). This is helpful data when assessing future roadway capacity, and when determining when certain roadway enhancements need to be done. Table 8.1 and Map 7 illustrate traffic counts on M-57, Northland Dr., and 10 Mile Rd. between 2000 and 2002. Counts include traffic traveling both ways.

Table 8.1 County & State Road Traffic Counts

Roadway	Segment		Count	Year
	From	To		
Northland	14 Mile	15 Mile	15,239	2001
Northland	12 Mile	13 Mile	12,793	2001
10 Mile	Long Acre Dr.	Myers Lake Ave	8,534	2001
M-57 (14 Mile Rd.)	Myers Lake Ave.	Farland Ave.	14,000	2000
M-57 (14 Mile Rd.)	Northland Dr.	Richie Ave.	14,375	2002

Two-lane roads have the capacity to carry up to about 20,000 vehicles per day, under ideal conditions and if designed properly. Much of Northland Dr., however, was designed to carry only 13,600.²¹ Table 8.1 reflects all road segments as falling below nominal capacity maximums. However, it should be understood that these counts are daily levels and do not account for peak-hour demand which may result in localized areas of congestion. As growth continues throughout the Township and Kent County, there will be a greater demand placed on roadways due to increases in the number of commuters, and increased commercial development in neighboring townships.

²¹ GVMC Regis system

Insert Map 7: Traffic Volumes

PLANNING IMPLICATIONS

As development increases in Courtland Township, it will be necessary to improve the quality of some local and County roadways. However, careful planning requires acknowledging the cycle often perpetuated by road improvements. In most communities, when roads are widened to allow for greater traffic flow, ease of travel becomes an incentive for further development. As development increases, road capacity will again be tested, requiring further improvements. This cycle can seem to continue in perpetuity without careful planning.

Transportation needs are frequently viewed as an impediment to effective land use planning. Until residential densities reach upwards of eight dwelling units per acre, typical mass transit systems are not economical. Furthermore, as a “bedroom” community, commuting patterns in Courtland Township would normally not lend themselves to any form of mass transportation model, as residents are likely to need transport to a broad range of locales. Therefore, effective integration of land use and transportation decisions will be necessary to optimize the goals of the Township’s plan.

CHAPTER 9. CONCLUSIONS AND NEXT STEPS

The Community Profile Report provides a brief “snapshot” of Courtland Township and the forces that are apparent. An in-depth analysis of those forces is not intended, but the challenges that are facing the community today and those that will materialize in the future are outlined. This report is intended as a “work book” for the Planning Commission as it proceeds in its efforts to update the Township Master Plan.

**This report is
intended as a “work
book” for the
Planning
Commission.**

As a subsequent step to the finalization of this report, the Township intends to undertake a community-wide meeting, or futuring workshop, to better define the issues and priorities of Courtland residents. The results of the workshop will help the Planning Commission determine the appropriate next steps in completing the Master Plan. Alternative approaches may include a community opinion survey, sub-area planning and the formation of specific interest committees to study particular issues in the community and present recommendations for the final plan document.

With the benefit of community input, the Planning Commission will re-examine the goals, objectives and strategies outlined in the 2000 Plan and identify trends, policies and patterns that either conflict with that Plan or are consistent with it. Based on that analysis, updated goals and objectives will be developed.

The new Township Master Plan will incorporate the data and information found in this Community Profile Report. It will be founded, in part, on the input received from the futuring workshop and other research that may be generated following that meeting. Finally, it will be founded on a new and revised set of goals and objectives. Properly developed and ~ more importantly ~ broadly endorsed, the new Master Plan will help to guide and direct growth and development in the Township to balance the challenges of change and the quality of life goals of local residents.

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Woods and Poole Economics Data

GOALS & OBJECTIVES

Future Directions

As a community matures, a direction for future development is needed to ensure that its desires regarding growth are translated into action. The intent of this Master Land Use Plan is to provide the means by which Courtland Township may look forward to the century. In order to set a direction for this period, the Planning Commission and Township Board established a series of goals and objectives covering the primary elements of the Master Plan.

To produce these goals and objectives the Planning Commission and Township Board took into account other planning policies which have evolved from Planning Commission actions, and a number of current and probable future issues which they were able to identify.

Goals and Objectives

In order to direct the future growth and development of Courtland Township in a logical and orderly fashion, a series of broad goal statements, each supported by more specific objectives, are laid out below. This plan is founded on the policies outlined in the following statements. The goals are intended to describe a desirable end state or 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 goals statements are the policy foundation for this Master Plan and they define the values and visions the Plan must support and achieve. As such, goal statements need to be as clear as possible and stated in compelling terms to inspire action. The most effective goal statements will:

- Define a desired end;
- Be stated in positive terms;
- Be bold, but realistic; and,
- Reflect a viewpoint of the community

Courtland Township has crafted the goal statements in this section with these standards in mind.

If a goal is thought of as a desired destination, objectives may be thought of as key milestones along the way.

Objectives support goals. If a goal is thought of as a desired destination, objectives may be thought of as key milestones along the way. They are essentially the key tasks and accomplishments that must be achieved to reach the goal. However, since goals are by nature general statements of desired policy accomplishments, it is natural that some objectives support more than one goal. Therefore, in the following pages, some of the objectives described are repeated with a parenthetical reference if they duplicate previous statements.

The following statements set forth the fundamental goals of the Master Plan and they describe the community that Courtland seeks to become in the next twenty to twenty-five years.

NATURAL FEATURES

Goal

1. Courtland Township will protect, preserve, and enhance large tracts of natural and agricultural areas deemed to be environmentally and aesthetically important to the community. These natural areas will include mature and emerging woodlands and wetlands, active agriculture, as well as open meadows and stream corridors, amounting to at least 2,500 acres of mostly interconnected land.

Objectives:



- a) Build and foster a constituency in support of land preservation within Courtland Township.
- b) Prepare an inventory of important natural features and prime agricultural land.
- c) Adhere to the utility plan (Goal 9) by concentrating development where access to utilities currently exists or is planned for in the future.

- d) The potential environmental impacts of new development should be carefully considered. These impacts may include such factors as noise, traffic, odors, drainage, and groundwater pollution.

Goal:

- 2. Agriculture, both commercially viable farming and leisure/hobby activities, will be an important element of the Township's character. Sustainable, environmentally healthy operations based on traditional and progressive agricultural techniques will characterize Courtland Township farms.

Objectives:

- a.) Review and adjust the zoning ordinance to enhance flexibility and adaptation to traditional and modern agriculture related activities.
- b.) Explore the possibilities of Transfer Development Rights (TDR), and implement this process where viable.
- c.) Consult local farmers in order to best meet the needs of those currently invested in agricultural property.
- d.) Participate in State and County Purchase of Development Rights (PDR) programs.
- e.) The Township will establish a forum for dialogue with the City of Rockford and Algoma Township in order to explore TDR and PDR options and opportunities in the future.

RESIDENTIAL

Goal:



- 3. Courtland Township will include a diverse range of housing densities, and high-quality styles, with an emphasis on greater density in those areas of the Township with the infrastructure to support it, and less intense development north of 13 Mile Rd and east of Myers Lake Rd.

Objectives:

- a) Design standards for high-quality housing will be included in the zoning ordinance.

- b) Develop and adopt a utility policy to support the zoning ordinance and master plan (Goals 1 & 9).
- c) Modify standards for lot sizes in varying residential districts to reflect desired densities.

Goal:

- 4. Neighborhoods and open spaces or natural areas in the Township will be interconnected. Pedestrian pathways, traffic calming measures, and recreational trails will be incorporated to promote walkability and community within a neighborhood setting. Specific focus will be placed on connecting residential uses with open space and natural areas.

Objectives:

- a) A trails and recreation plan will be developed.
- b) Revise standards for Open Space Developments to require connectivity from one development to the next where possible.
- c) Standards will be written to require the connection of new trails with pre-existing trails.
- d) Zoning regulations for the R-1 district will be written to require inclusion of sidewalks in all future development projects.

COMMERCIAL

Goal:



- 5. In order to promote the character and identity of “place” in a rural atmosphere, commercial development will be attractively signed and well-landscaped, enabling viable businesses to flourish in unique and inviting settings.

Objectives:

- a) Site design standards will be added to the existing ordinance to include building placement, and architectural standards.
- b) The existing landscape standards for commercial

districts will be strengthened to require landscape buffers between parking lots and the road right of way, as well as between parking lots and buildings.

Goal:

6. Along Northland Drive-between-12 Mile and 13 Mile Roads- adjoining Algoma Township, commercial development will be designed to take advantage of traffic volumes while minimizing traffic disruption through the use of careful access management techniques.

Objectives:

- a) Current access management standards will be evaluated and strengthened where necessary.
- b) Large planned development forms will be encouraged wherever possible within this section of the Township.

Goal:

7. The Township will establish specific nodes for commercial development along M-57 to encourage the clustering of development and preservation of a scenic corridor.

Objectives:

- a) Evaluate appropriate uses to be incorporated into a commercial district without detracting from the rural character or small-town feel.
- b) Revise the zoning ordinance to reflect desired standards for parking, lighting, landscaping and signage.
- c) Develop design standards for new development in order to promote architecture, building materials, and building placements that are compatible with the desired character of the commercial node.

INDUSTRIAL

Goal:

8. Planned industrial developments of modest size will be established in the vicinity of Northland Drive at the City of Rockford border.

The Township will institute measures to preserve the natural beauty of the community by requiring industrial and office uses to be screened from the road with natural and designed landscape.

Objectives:

- a) Standards for a commerce park will be drafted and included in the zoning ordinance.
- b) Landscape and design standards will be modified to ensure new development is in character with the community (Goal 7).

Goal:

- 9. Extensions of sewer and water utilities within the Township will be planned to initially focus on the areas directly adjacent to the City of Rockford, Myers and Brower Lakes, and the Northland Drive Corridor, in order to promote greater density in these areas, and preserve the rural lifestyle in the remainder of the Township. Future expansions will be directed by a utilities policy that supports and compliments this plan, resulting in rational and sequential growth patterns.

Objectives:

- a) Develop a utility policy and phasing plan for extensions.
- b) Develop financing alternatives to implement the phasing plan.
- c) Develop a policy to regulate community wastewater systems (Goal 2) .

FUTURE LAND USE

THE RELATIONSHIP OF PLANNING TO ZONING

The relationship between land use planning and zoning is an important one. Planning is guiding land uses from a policy standpoint, while zoning is the act of regulating the use of these lands by law or ordinance. The Michigan Zoning Enabling Act (Act 110 of 2006) require that a community engage in land use planning activities, including the preparation of a Comprehensive Plan or Master Plan, prior to the initiation of a zoning ordinance in a community.

Land Use Planning

Land use planning is the process of guiding the future growth and development of a community. Generally, the Master Plan addresses the various factors relating to the growth of a community. Through the processes of land use planning, it is intended that a community can preserve, promote, protect, and improve public health, safety and general welfare. Additional considerations include comfort, good order, appearance, convenience, law enforcement, fire protection, preventing overcrowding of land, facilitating the adequate and efficient provision of transportation, water, utilities, conservation, and utilization and protection of natural resources within the community.

Zoning

Zoning is one of the instruments, along with capital improvements programming, utility policies and the administration of local subdivision regulations, which implement the goals and policies of a Master Plan. The enactment and administration of the Zoning Ordinance are legislative and administrative processes, conducted by local units of government, relating to the implementation of the goals and policies of the Master Plan. Zoning Ordinances accomplish the management of land use by creating different zoning districts within a community. Each zone district has a listing of standards that usually include setbacks, lot coverage standards, permitted and special uses, lot size requirements, and structural standards. A Zoning Ordinance also includes general

requirements pertaining to parking, site plans, special processes, general land use rules, and landscaping.

FUTURE LAND USE DESCRIPTIONS

The following paragraphs describe the future land use designations as illustrated on Map 8. Each Future Land Use category is intended to foster a character distinctive of that district. Furthermore, it is intended that as the community develops over the next twenty to twenty-five years, a significant share of the natural features existing today will have been preserved. Note that the future land use designations on Map 8 are to be viewed as general, with indistinct edges. Along the margins, where two or more designations adjoin, either land use class may be appropriate.

AGRICULTURE

Courtland Township has an established tradition of agricultural productivity. Much of the land in the central and northeastern portions of the Township has remained high quality agricultural soil as designated by the USDA (see Map 3, Soils Map). Maintaining the tradition of agriculture is of high priority, and preserving large and contiguous tracts of productive land is essential to that goal.



A number of areas within Courtland Township are considered prime agricultural soil by the US Department of Agriculture.

The land designated as Agriculture amounts to 4,872 acres, or approximately 20% of total land area within the Township. This land use is intended to preserve agricultural productivity and viability within the Township by allowing for enough land to support industry services and economies of scale. The largest portion of this land use is centered near the intersection of Young Ave. and 13 Mile Rd. with a smaller portion near the City of Cedar Springs along Ritchie Rd.

The most important factors informing the decision to designate particular parcels of land as Agriculture are (1) the United States Department of Agriculture's classification as prime agricultural soils. These are soils that are considered to "produce the highest yields with minimal inputs of energy and economic resources, and farming it results

in the least damage to the environment.²²” Some of the soil classifications within the designated portion of Courtland Township are considered to be important to the national needs for “food and fiber”. (2) The relative size and contiguity of highly productive soil classifications within the designated land area creates the opportunity for greater economies of scale in agricultural production, as well as for the suppliers of agricultural goods and services.

A PDR program allows the Township to preserve farmland while property owners capitalize on the value of their development rights.

One very important step toward the preservation of this land use designation as a strictly Agricultural area is for the Township to develop and adopt a development rights ordinance. This ordinance will allow the purchase of the development rights of private property owners via funds collected through grants, donations, bonds, special assessments, or general appropriations. Likewise, landowners will have the option to sell their development rights (calculated as the difference between the agricultural value of the land and the fair market value) to a public entity. Under PA 570, this ensures that the land will be preserved for Agriculture use and open space, while, in exchange, landowners may continue to farm their own land, rent the land to another farmer, or sell the land for the remaining agricultural value.

In addition to the Purchase of Development Rights (PDR) program, the zoning standards must reflect the Township’s desire to protect local farmland from excessive development. There are a number of techniques available to the Township that will help to preserve the character and productivity of the Agriculture land use designation while still providing property owners with options for some development (see Chapter __ Implementation Strategies).

RURAL PRESERVE

Courtland Township is characterized by some important natural features, including stream-corridors, inland lakes, wetlands, wildlife habitat and forestlands. These natural features contribute an important aspect to the quality of life in the Township. The preservation of this rural identity in Courtland Township is an over-arching focus of this Plan so that future generations may continue to enjoy the benefits of a well-preserved natural environment.

²² Soil Survey of Kent County, Michigan. P. 90



The preservation of a rural identity is of high priority for Courtland Township.

The lands designated as Rural Preserve represent 1,457 acres of Courtland Township, or about 6.3% of total land area. This land use category is intended to preserve wetlands, wildlife habitats, and stream corridors throughout the Township. Nearly half of this land use focuses on the Becker, Stegman, and Shaw Creek corridors, all of which are direct tributaries to the Rogue River. An additional area of about 80 acres is found in the southeast portion of the Township, to the north of Brower Lake. This portion has already been

protected as part of the holdings of the Land Conservancy of West Michigan.

Lands not in public ownership may experience very low-density development integrated with the key natural features. Conservation design mechanisms should be utilized as development occurs, with conservation easements encouraged to assure the perpetual protection of key natural areas. Public utilities currently extend to small portions of the Rural Preserve area. However, the existence of water and wastewater services should not be regarded as inviting higher intensity land uses. On the contrary, utility service within the Rural Preserve areas will be intended to enable low density development that is the least disruptive of natural areas.



Vegetative buffers along lakes and streams help filter runoff and preserve wildlife corridors.

Uses in the Rural Preserve areas may include single-family dwellings, resource conservation, and natural resource based recreation. In general a very low-density development pattern of one unit in two to three acres is desired. However, individual parcel sizes may vary

significantly and pockets of higher density are likely, depending on local conditions. The primary consideration when considering proposals for development within the Rural Preserve future land use area will be the degree such proposals advance and support the objectives of this Plan. Thus, measures to protect and enhance wildlife habitat, natural features, ecological corridors and rural character are more important than simple residential densities.

COUNTRY RESIDENTIAL



These areas are characterized generally by rolling meadowlands and wooded hillsides

This land use designation is intended primarily to address the desire for scattered single-family development in relatively rural and low-density patterns. This land use consists of 11,892 acres within the Township, or nearly 52% of total land area. These uses are positioned where natural features are less vital than in the Rural Preserve districts, and a conventional lot split or large lot subdivision would not negatively impact environmental quality. Much of the lands in this area consist of former farm fields that have been fragmented into parcels ranging from 2 to forty acres, although a few parcels remain at upwards of 100 acres. Also included are parts of the stream corridors in the Township. The primary land use in this district will include single-family detached residential development in large lot patterns or in conservation cluster developments. In addition, so-called hobby farms and some field crop production may be expected in this area.

The Country Residential future land use designation occupies a significant portion of the northern half of the Township, as well much of the east border shared with Oakfield. These areas are characterized generally by rolling meadowlands, fallow fields, and wooded hillsides with larger lots and residential land uses at densities of one unit in two to five acres. This Master Plan anticipates a continuation of this pattern accompanied with conservation design subdivisions that may preserve key natural features and views while providing low-density development opportunities consistent with the character of the area.

In addition, where property abuts the Northland Drive and M-57 corridors, the Township recognizes that the most practical land uses may ultimately include limited commercial development. It is expected that the long-term demand for these corridors will ultimately create some high-pressure growth areas where the Township will have discretionary authority to reevaluate the most practical and beneficial land use. However, rather than foster a haphazard pattern of scattered commercial development along these corridors, this plan seeks a rational and sequential expansion of commercial uses in well planned nodes. Decisions regarding proposals to permit commercial growth to occur within the Country Residential designation, along Northland Drive and M-57, will include consideration of a number of factors, including:

proximity to or contiguity with existing commercial development, the applicant's ability to meet Township design standards, lot size and road frontage, safety of possible access points, and the possible impacts on adjacent land uses.

LOW DENSITY RESIDENTIAL

This district recognizes a growing trend in the Southern portion of the Township favoring suburban style development, and will facilitate an orderly and sequential transition from rural area to attractive and functional neighborhoods. Areas designated Low-Density Residential represent 3,979 acres of the Township, or 17.3 percent of total land area.

This land use category is collected in a single land area to the east of the City of Rockford and north of 10 Mile Road, extending as far east as Young Ave. and Parmeter Road and as far north as 12 Mile and Peterson Roads.



A balanced mix of housing types will strengthen existing patterns.

The neighborhoods in this region should be developed at densities and with amenities to encourage family living, including walkable streets, convenient access to schools, services and shopping and with a range of housing values to encourage a balanced mix of housing types. Some developments may be formed in traditional subdivisions and/or in conservation design patterns intended to protect key natural features or to provide open space.

Within each of the areas in Low Density Residential designation, overall densities will vary based on existing patterns and will range from one to four units per acre, although it is likely that pockets of higher and lower densities will emerge to accommodate natural features and to fulfill the other objectives of this Plan. All areas within this designation will ultimately be served with public utility systems. Developments occurring on lands classified as Low Density Residential should have direct access to a paved roadway, and should accommodate public utilities. Innovative storm water runoff detention and treatment will be encouraged to protect water quality and features.

All areas within the low-density residential designation will eventually be served with public utility systems

Playgrounds and sitting areas to provide recreational opportunities should be incorporated in new development. Developments should

include pedestrian walkways, and street layouts should be designed to connect with future developments as they occur. Pedestrian facilities should be incorporated into new developments and should be positioned to join with walkways within future developments.

Waterfront development and redevelopment along Myers and Brower Lakes should be scaled and designed taking into account the health of the natural ecosystem as well as the character of the neighborhood. Efforts should be made to blend new housing into the current fabric of residential development.

MODERATE DENSITY RESIDENTIAL



Development will typically take the form of low-rise buildings, townhouses and duplex units.

The Moderate Density Residential designation is intended to accommodate residential options for people of varying age and income levels formed in inviting communities. For example, this designation is expected to serve as more affordable single-family homes on smaller lots or townhomes and duplexes in a congregated setting. The future land use map designates two key areas that are dedicated to moderate density residential. The second area is a half mile north of the City of Rockford and accessed via Northland Drive.

Overall residential densities within the moderate density residential area will range from three to six units per acre and development will typically take the form of low-rise buildings, townhouses and duplex units. This classification comprises 190 acres, or about 0.8% of the Township's land area. Development types may include senior living facilities, single-family detached homes or multi-unit buildings developed in clusters, depending on the availability of utilities. Within this relatively intense development form, flexible conservation design mechanisms will be encouraged, as appropriate, to establish open space preserves and neighborhood recreational facilities.

Playgrounds and sitting areas to provide recreational opportunities should be incorporated in new development. Developments should include pedestrian walkways, and street layouts should be designed to connect with future developments as they occur. Pedestrian facilities

should be incorporated into new developments and should be positioned to join with walkways within future developments.

MANUFACTURED HOME COMMUNITY

As a result of a court ordered settlement in 2000, this land use designation is located at the northeast corner of the intersection of 14 Mile Rd. (M-57) and Richie Ave. comprising a total of 196 acres. The desired use in this designation will be quality, affordable, manufactured housing that will offer approximately four to six units per acre depending upon the environmental conditions.

The judgment provides for up to 691 manufactured housing units, served by on-site private community sewer and water systems. This will satisfy the Township's obligation to provide manufactured housing for the planning horizon, and no additional lands have been set aside for the manufactured home community designation. Natural vegetative buffers around the manufactured home park will protect less intense land uses and will be designed to retain the significant natural features, including rolling topography and tributaries. Greater road frontage setbacks will be encouraged to keep country roads scenic.

COMMERCIAL



These areas will be characterized by regional scale development to provide shopping and employment for Township residents and the larger community.

The Commercial future land use designation is intended to provide for employment, professional services, and retail goods to serve the broader community including and extending beyond Courtland Township. This area is comprised of about 125 acres, or about 0.5% of the Township's total land area. Two key areas are identified in this future land use plan, both of which are located along high traffic corridors.

As the precedent for commercial use along Northland Drive has been set by traffic flow and previous development in both Algoma Township and Courtland Township, there will be two planned nodes of commercial development in this area. In order to preserve efficient traffic flow and to avoid a pattern of extended strip commercial along Northland Drive, the commercial nodes

are limited to properties adjacent to the intersections of 13 Mile Rd. and 14 Mile Rd. (M-57) and the immediate vicinity along Northland Dr. These nodes of development should have limited access from Northland Drive, and will preferably be developed as a Planned Unit Development²³. The second key area designated for commercial development is located along 14 Mile between Myers Lake and Berrigan Rd. The proximity to the Township offices and Fire station could provide the opportunity for a cultural center near this intersection, integrating a recreational park with a commercial PUD.

In addition, the residential properties located along 10 Mile Road between the entrance to Hillview Apartments and Courtland Drive are designated for possible future commercial development. However, because of the small size of the lots under individual ownership, any rezoning would be dependent upon a developer assembling ownership of these parcels and presenting a comprehensive plan for development of the entire area. The area is best suited to low intensity commercial uses, such as are in the Township's current Light Commercial (LC) zoning district.

While the Township recognizes the long-term future will likely include greater areas of commercial development than are illustrated in the Future Land Use Map along Northland Drive and 14 Mile, this Master Plan has established districts for commercial development in the near future. The districts illustrated should be given priority over the next five to ten years. Only as build-out begins to occur within those districts, or as important opportunities are presented, should the Township begin to consider commercial development outside of these districts. The Township seeks to avoid "hop-scotch" patterns of development in which scattered properties are put to commercial use, without a design for future development.

There are two parcels in the Township, one on the northwest corner of 10 Mile Road and Myers Lake and the second at the NE corner of 13 Mile and Myers Lake Road, which are currently in a commercial zoning designation for historical reasons. It is not the intention of the Township to allow additional commercial development as an extension

²³ Large property parcel, containing more than one building or use, designed to function cohesively with the characteristics of the surrounding area.

of those areas. The Township may, at some point, consider rezoning those properties to be consistent with the Master Plan.

All of the areas within the Commercial Land Use designation will primarily serve as retail and professional centers for Courtland Township residents and surrounding neighbors, positioned to capitalize on traffic flow while preserving the rural aesthetic of these corridors. It is recognized that modern, regional commercial and office facilities must accommodate considerable vehicular travel, but the Township will continue to stress pedestrian accommodation, efficient access controls, and attractive landscaping to soften the development presentation and make these centers more inviting (see Appendix A for further commercial standards). This may be accomplished with landscape standards, building placement requirements, and site and building design requirements that work to balance the vehicular and pedestrian circulation patterns with aesthetic considerations and the realities of the marketplace. The Township will strive to achieve a higher standard in commercial and office design to help foster attractive, community based developments that continue to remain functional and vibrant throughout the term of this plan.

INDUSTRIAL/ OFFICE

Industrial development provides investment in the community and jobs for local residents. While some industrial uses may generate objectionable off-site impacts, many newer manufacturing operations in the region have not presented significant problems for neighboring uses.



Industrial development provides investment in the community and jobs for local residents

The land area near the southern border of the Township, adjacent to the City of Rockford and Northland Drive, is intended to provide for an industrial/office park or Planned Unit Development. This would serve as an opportunity for increased investment within the Township, while providing a controlled environment for such growth.

In a planned industrial or office park, development can be efficiently arranged while remaining unobtrusive to the surrounding residential community. Landscape requirements and buffers will be required where residential property abuts the Industrial land use area and along the Northland Drive corridor.

INSERT FUTURE LAND USE MAP

CHAPTER 11. 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 Courtland Township will need to cooperate in order to fully implement this Plan. The Township's role is that of facilitator for some of the strategies listed in this Chapter.

Primary responsibility for implementing the Plan rests with the Courtland Township Board, the Planning Commission, and the Township staff.

Primary responsibility for implementing the Plan rests with the Courtland Township Board, the Planning Commission, and the Township staff. In order for the Future Land Use Plan to serve as an effective guide for continued preservation and growth in Courtland, it must be implemented. This is done through a number of methods. These include ordinances, programs, and administrative procedures which are described in this Chapter. Some of the implementation strategies require significant public and private investment. Some are small enough to be implemented immediately. Others will take time. All are important, as they contribute individual elements that will help build the overall vision expressed by the Plan.

1. EVALUATE AND REVISE THE ZONING ORDINANCE

Description. The Zoning Ordinance is the primary implementation mechanism for this Plan. This strategy suggests an evaluation of many segments of the Ordinance in light of the community's goals, objectives, and Future Land Use Plan. This will include a revision of the Zoning Map, as appropriate, to better support the future land use map, and a revision of some zoning classifications to better conform to the future land use designations in this plan. In addition, the Ordinance should be evaluated for flexibility to address innovative development techniques, including Purchase of Development Rights, and for its ability to control inefficient development patterns. This strategy must be executed carefully, and may be a long-term assignment. Evaluating and revising the Zoning ordinance should be achieved with broad community support, and developing consensus on certain matters may be a challenge

for the Township. The following paragraphs describe many of the changes that will be needed in the Zoning Ordinance.

- a. **Alternative Agricultural Uses.** The Ordinance should be revised to include zoning regulations to permit a broader range of agricultural enterprises, and adjust zoning provisions in commercial areas to encourage agricultural support businesses. This strategy is intended to augment agri-tourism and retail opportunities for local farmers.
- b. **Purchase of Development Rights (PDR):** Language should be included in the Zoning Ordinance, which encourages purchase of development rights in Courtland Township. This language should target agricultural areas, rural preserve, and country residential as areas for preservation. These are areas where the preservation of farmland is critical, with the following criteria: 1) The parcel must be greater than 50% prime or unique soils as defined by the USDA NRCS, and 2) The parcel must be greater than 20 acres in size.
- c. **Cluster Development.** The Zoning Ordinance should be strengthened, adding to the standards of open space development and conservation cluster development (PUDs). These land uses should be emphasized as the preferred use in all residential districts. It is the intent of the Township to create an environment in which flexible open space development and conservation cluster developments become the norm in the Township as opposed to the traditional subdivision of land that may frustrate natural resource protection and rural character. Conversely, the traditional subdivision should be treated as a special land use with the onus on the applicant to demonstrate how the development form supports the intent of this Plan.

Access control standards would include restrictions on curb cuts, shared access easements, frontage drives, throat length requirements, and acceleration/deceleration lanes.

Included in the PUD ordinance should be provisions for non-contiguous PUDs, which preserve open space in areas of the Township which are not necessarily adjacent to the development site. Additionally, where conservation cluster developments occur, a top priority will be placing preserved open space adjacent to other pockets of preserved land in the Township, thereby creating large tracts of contiguous open space over the long term.

- d. **Interconnectivity.** The Zoning Ordinance should be revised to include stipulations for the connectivity of individually developed

subdivisions and PUDs. These regulations would oblige new developments to take adjacent property into consideration, and where possible, would require new developments to connect pedestrian and vehicular pathways to existing developments or provide for future expansion or connection with future development in the surrounding area. These regulations, which would primarily apply to development in residential districts, would better achieve pedestrian friendly transportation networks, and would augment the sense of community in the Township.

- e. **Access Control.** The Township Zoning Ordinance should be modified to include access management standards for arterial roadways in the Township. These access management standards will effectively protect the flow of traffic and the safety of motorists on existing or emerging through-corridors, and in places along a roadway where commercial or industrial development is anticipated. The standards should include stipulations such as: restrictions on curb cuts, shared access easements, frontage drives, throat length requirements, and acceleration/deceleration lanes.
- f. **Design Guidelines.** To realize the goals set forth in the future land use narrative, it will be appropriate to establish design standards for commercial districts which may include regulations pertaining to building placement, landscaping, parking, lighting, site utilization, and building form.

In addition, design standards for residential dwellings should also be modified to reflect the Township's desire to include a greater variety of housing options. As an abundance of single-family "starter" homes have recently been approved and built, possible changes to the zoning ordinance could include: increased minimum dwelling unit floor area in some residential districts, approved building façade materials, and required architectural articulation surrounding exterior window and door frames.

Responsibilities. The Planning staff and the Planning Commission may implement this strategy. This is an extensive task with multiple elements – each with unique challenges that may require each activity to be addressed independently – and it is likely that outside support will be needed. Any resulting amendments to the Ordinance will require the review of the Township's attorney and ultimately adoption by the Township Board.

2. DEVELOP UTILITY POLICY AND ORDINANCE

Description. Policies that direct the location of public water and sanitary sewer services are an important growth control mechanism. The Township should investigate current capacity, impacts, and sustainability of existing utility practices by conducting a Sewer Needs Study. The Study would identify areas where groundwater may be threatened by a lack of utility services, and areas that may grow more efficiently with utilities. It would recommend improvements, and would identify feasible financial approaches for implementation. This will include an evaluation of alternative wastewater treatment mechanisms, such as negotiation of an extension of the North Kent system within the framework of the North Kent Sewer Authority agreement, a freestanding municipal system, and/or a series of private community systems.

Sewer and water facilities will place the Township in the strongest position to guide and direct growth.

In addition, the Township should create a new utility ordinance and modify existing community wastewater policies to reflect the recommendations of the Study. A new utility ordinance would outline standards with regards to wastewater and potable water, and would include regulations concerning time of sale septic tank and drainfield inspections. It is likely that the Study would suggest wastewater and water systems be developed in those areas experiencing or projected to experience higher density residential development.

By encouraging new development located in proximity to existing or proposed sewer and water facilities, the Township will be in the strongest position to guide and direct growth. For this technique to be effective, the Township must conduct the Sewer Needs Study and continually monitor the effectiveness of the mechanisms to manage the placement of utilities and infrastructure in the community.

Responsibilities. The Planning Commission and Township Board should work in conjunction with one another to implement this strategy.

3. CONTINUE COMMUNITY EDUCATION

Description. Planning processes are persistently changing with shifting social and economic concerns, and unique land use challenges. Attitudes of residents toward growth, economic development, traffic, protection of natural resources, and other pertinent land use issues will likely differ from person to person depending on their personal circumstances. It is vitally important for Township officials to continue to seek educational opportunities for residents to inform them of the issues of highest priority.

An element of this strategy includes, first and foremost, the continued education of Township officials. In addition, the Township should endeavor to educate the public on current planning trends and the benefits of implementing the goals and objectives in this Plan. Every public meeting, including those hosted by the Planning Commission and Township Board, should be instructive for the public. Further, Township officials should encourage the establishment of committees, to which some of the responsibilities for achieving the goals of this plan can be delegated. Two committees likely to greatly assist the Township in actively pursuing its goals would be an Open Space/Farmland Preservation Committee, and a Trails & Recreation Committee.

Responsibilities. The Township Board, Township Planning Commission, and staff will need to be responsible for seeking and attending seminars and conferences on current planning topics, as well as establishing new community organizations to which the roles developing and promulgating educational brochures and posting information on the Township website can be delegated.

4. INCREASE THE SCOPE OF THE RECREATION PLAN

Description: The Township is currently in the process of devising a parks and recreation plan, specifically geared toward the development of a large park adjacent to the Township offices. Included in this plan should be guidelines for establishing a local committee responsible for the maintenance of current facilities and gathering support for new facilities in the Township. The scope of this plan should not be limited to a single park at the center of the Township, but should also include

plans for recreational trails connecting residential neighborhoods with schools, parks, local shopping, and regional trail networks. As the State begins to create incentives for the “Safe Routes to School Program” throughout Michigan, Courtland will have an opportunity to apply for funding for such trails leading to nearby elementary and secondary schools. Working in concert with Cannon Township may offer a number of benefits for residents of both communities.

Responsibilities: The Township Board and Planning Commission will be responsible for the establishment of a Parks & Recreation Committee, which in turn will be responsible for the planning, development, and maintenance of parks and trail-ways.

5. COORDINATE WITH REGIONAL MUNICIPALITIES

Description: Some of the goals in this plan will not be achievable without the cooperation of the neighboring municipalities to Courtland Township. The cities of Rockford and Cedar Springs should be directly involved with the PDR program and possibly the creation of a TDR (Transfer of Development Rights) program. Maintaining relationships with larger economic players in the regional community will increase the amount of viable sending zones to assist in the preservation of farmland and natural features in Courtland. In addition, local committees charged with the responsibility of gaining support for farmland and open space preservation or trails and recreation programs will find helpful allies in neighboring communities.

Responsibilities. The Township Board, Township Planning Commission, and staff will need to be responsible for advocating seasonal or bi-annual meetings with governing bodies in neighboring communities.

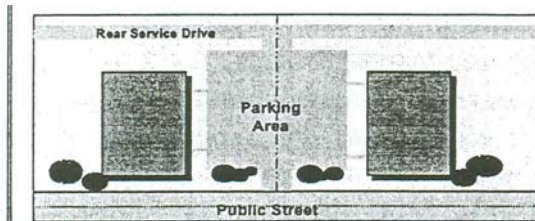
APPENDIX A

COMMERCIAL DEVELOPMENT STANDARDS

Any commercial development in the township will be subject to the Commercial Development Standards noted in the following discussion.

ACCESS MANAGEMENT

Preserving the traffic carrying capacity of a roadway is another way to prevent costly improvements. Transportation studies have consistently shown that the number, design, and location of driveways can have a great affect on the ability of a road to safely move traffic and provide access for adjacent land uses. The number, design, and location of driveways in commercial areas will affect traffic flow, ease of driving, and accident potential. Every effort should be made to limit the number of driveways and encourage access from side streets, service drives, frontage roads, and shared driveways.



The most effective means of ensuring proper access management is the site plan review process, enforced through the zoning ordinance. However, in order to properly administer site plan review, the Township should oversee the implementation of Future Land use along the corridor. It would be preferable to complete a joint land use plan between all affected communities along the roadway.

NUMBER OF DRIVEWAYS

Access to individual parcels should consist of either a single two-way driveway or a pair of one-way driveways. Certain developments generate enough traffic to consider allowing more than one driveway along a major street. Where possible, these second access points should be located on a side street or shared with adjacent uses.

For parcels with frontages of at least 300 feet, a second driveway may be allowed; more than two driveways should only be considered following a traffic impact study which demonstrates the need for additional driveways. Finally, where parcels have frontage on both an arterial and a side street, access should be provided from the side street. For parcels

with at least 100 feet of arterial frontage, a right turn in/right turn out only driveway along the arterial could be allowed.

DRIVEWAY SPACING AND LOCATION

Driveway spacing from intersections should be measured from the centerline of the driveway to the extended edge of the travel lane on the intersecting street, unless otherwise noted. The minimum distance between a driveway and an intersecting street should be:

1. 100 feet along major arterial roadways;
2. 250 feet from any existing signalized intersection or location designated for a future traffic signal
3. 75 feet for driveways designed and signed for right turn ingress only, excluding tapers or parallel lanes
4. 75 feet along non-arterial streets which intersect an arterial street at locations not designated for future traffic signals
5. If the amount of street frontage is not sufficient to meet these criteria the driveway should be constructed along the property line furthest from the intersection to encourage future shared use, and/or a frontage road or rear access service drive should be developed.

Changes to these guidelines should only be considered if it can be demonstrated by a traffic impact study that the driveway operation will not result in conflicts with vehicles at the adjacent intersection.

Minimum and desirable driveway spacing requirements should be determined based on posted speed limits along the parcel frontage. At 55 miles per hour spacing between driveways should be at least 350 feet apart, although 875 feet is desirable. The "Desirable" values are based on sight distance necessary to allow an egressing vehicle to enter the arterial traffic stream without causing oncoming traffic to decrease their speed by more than 10 mph, and should be required, to the extent feasible, where parcel size permits.

The "Minimum" values are based on the distances required to avoid conflicts between vehicles turning right or left from adjacent driveways. In order to prevent left turn conflicts, where possible, driveways should

be aligned with those across the street or offset a sufficient distance from driveways across the street to avoid the possibility of turning conflicts.

In the case of expansion, alteration, or redesign of existing development where pre-existing conditions prohibit adherence to the minimum driveway spacing requirements, driveways may be located closer than the minimums, but in no case should driveway spacing of less than 60 feet be permitted.

SHARED DRIVEWAYS, FRONTAGE ROADS, AND SERVICE DRIVES

Sharing or joint use of a driveway by two or more property owners should be encouraged. This will require a written easement from all affected property owners during the site plan approval process. Where a future shared access is desired, the developer should indicate an easement which will be provided to future adjacent uses.

Road Commission or the MDOT, access to individual properties should be provided by alternative access methods (frontage roads, service drives) rather than by direct connection to the arterial. No individual driveways from residential subdivisions should be permitted direct access to any major road.

In the case of existing, proposed or recommended rear service drives, additional access to individual properties may be allowed through a direct connection to the adjacent arterial street, provided that movements at these driveways are restricted to right turns into and/or out of the site, and are appropriately spaced.

In areas where frontage roads or service drives are proposed or recommended but adjacent properties have not yet developed, the site should be designed to accommodate a future drive, with access easements provided. The Township may grant temporary direct access for individual properties to the arterial street until the frontage road or service drive is constructed. This access point should be closed when the frontage road or service drive is constructed.

Frontage road and service drive intersections at the arterial street should be designed according to the requirements of the Kent County Road Commission and/or MDOT. A frontage road can be delineated through a parking lot by raised islands separating parking from the traffic lane.

AESTHETICS

Most of the major corridors in the township reflect a rural residential character, with commercial sites scattered along M-57 and Northland Drive. Portions of the roadside have agricultural fields, woodlots, and wetlands. While aesthetics alone should not dictate the full extent of improving development in commercial areas, attention to details, such as parking setbacks, landscaping, and signs, will help manage that development and contribute to preserving some of the township's rural character.

LANDSCAPE DESIGN

Another important element of any development is landscaping. Landscaping can perform a number of vital functions including screening, micro-climate control, improving aesthetics, and preserving the natural environment. Landscaped setbacks for nonresidential uses can improve aesthetics and, if properly designed, help define the locations of driveways. Another advantage of roadside landscaping is narrowing the perception of the driver, which has a tendency to slow traffic speed.

LOT DIVISIONS

Presently, there is a significant number of lot divisions occurring within the township. Many of these divisions fall into one of two categories. Smaller (1-2 acre) parcels are being divided from larger, agricultural lots. These lots are being offered for sale by the farm owner as a source of extra income, or, in some cases, provided for relatives. The other category of lot divisions include those being split from moderate sized parcels, usually less than 40 acres, from which 5-10 acre lots are being created.

The Planning Commission must continue to evaluate this trend, particularly after revisions are made to the Zoning Ordinance to accommodate this Plan. It would be useful for the Commission to prepare a map at the end of each year to indicate where lot splits have occurred and at what size.

REZONING REQUESTS

As the transition occurs, the Planning Commission will receive requests for rezoning for such projects as site condominiums, small subdivisions, largelot developments, etc. Although each request must be evaluated in accordance with its compliance with this Plan, the Planning Commission should monitor them to determine if a trend is occurring which indicates an increase in the demand for lots smaller than provided for in the Zoning Ordinance. If the trend shows a marked increase in requests for more residential development, the Planning Commission may have to reevaluate its future land use.

VARIANCE REQUESTS

Where zoning for lot sizes is greater than desired by individual land owners, the township may receive requests for variances from the required lot sizes. Except in unusual circumstances, such as steep slopes, poor soils, or other condition related to the ability to physically develop the property, these variances should not be approved.

However, the number and locations of requests should be monitored to determine if a pattern is occurring. If the volume of requests becomes excessive, the Planning Commission should consider discuss the issue with the Zoning Board of Appeals determine the best method for reducing the number of requests.

APPENDIX B

FARMLAND & RURAL CHARACTER PRESERVATION

BACKGROUND

The future of farmland in Courtland Township is a critical issue to many township residents. The concern about farmland and the impact of development has been expressed through several discussions by the Planning Commission and township residents. Courtland has struggled with various methods and programs to protect its farmland resources; over thirty outstanding Public Act 116 (the Farmland and Open Space Preservation Act) parcels exist in the township.

Preserving farmland, however, involves many individuals and agencies, beginning with the property owner or farmer, and ending with the developer (or property owner) who wishes to make the farmland "productive" for the community. In between is the local, county, and state government with their programs and technical assistance to communities and property owners.

The most important link in a program to preserve agricultural resources is the property owner. The pressures on small, local farm enterprises come from many sources:

- Land speculation, which drives up values and taxes;
- Urban sprawl, bringing new residents who want to live in a "rural" environment; Economic conditions, which manipulate market conditions for the crop being produced; Complaints about noise, dust, and odors from nearby non-farm residents, who, in many cases, moved to the area well after the farm operations were established;

Also, older farmers, reaching the age of retirement, may see their farmland as retirement income, and cease farming operations and seek development for their property.

Therefore, the key to farmland preservation is the cooperation of the property owner, either through participation in preservation programs, or through the commitment to continue to use the land for agricultural

production. Accordingly, any farmland preservation program must provide the proper incentives and motivation for the property owner to continue to use the land for farming.

One of the most important considerations regarding agricultural preservation is the need for a change in attitude regarding farmland. In many communities, farm operations are viewed as an interim use until new residential, commercial, or industrial development can be constructed. In some cases, this may be appropriate, where public utilities, land prices, and growth pressures have made continued farming difficult; concentrating development where adequate services can be provided can help to preserve farmland elsewhere.

But, in Courtland Township it is important that agriculture be viewed as part of the local economy; not for what may be built on it in the future, but for what is produced by farming. Farming is as much an industry as manufacturing. Certainly, the tax benefits and employment base are not the same, but farming does provide jobs and a product for sale in the marketplace. Therefore, viewing agriculture as an industry can have a profound effect on the programs developed for its preservation and continuation.

FARMLAND CLASSIFICATION

The term generally used to classify farmland is "Important Farmland. It As used by the U.S. Department of Agriculture, Important Farmland encompasses four levels of farmland quality: Prime, Unique, Statewide Important, and Local Important.

The Prime Farmland category is based largely on soil conditions, with the term applying to those soils which, in their natural condition, have the highest capacity for crop production. Nine factors are used to evaluate soils classified as prime: climate, drainage, alkalinity, water table depth, flooding, slope, soil temperature, permeability, and coarseness. Unique Farmland is land that is scarce and used for the production of certain specialty food and fiber crops. Unique classification depends less on soils and more on topographic and climatic conditions.

Farmland classified as Statewide Important is based not only on soil conditions, similar to the Unique category, but on the economic importance of the crop to the state economy. For example, this category includes larger dairy and other livestock operations. Local Important

Farmland includes soils that have fair to **good** productivity, especially when assisted by irrigation, tile drainage, or other methods used to enhance production.

This classification system is not the sole source of identifying lands that are valuable to a community for agricultural operations. There are other areas in the township that may be either too small for detailed classification, or are actively used for agricultural production, even where the soils are generally not favorable for crop production. The policies of the township will govern the value placed on these farmlands as a land use. These policies must take into account whether or not a priority will be established for certain classifications of farmland.

PRESERVATION TECHNIQUES

The discussion regarding farmland preservation techniques will be divided by those policies which require a legal or formal instrument, and those which can be accomplished through land development techniques.

PURCHASE OF DEVELOPMENT RIGHTS (PDR)

PDR Programs are typically used as economic development tools geared toward the preservation of Farmland. The Michigan PDR program is administered via the County, which is empowered to receive State and Federal funding on behalf of local landowners. A PDR program is a voluntary program that compensates owners of agricultural property for their willingness to accept a permanent deed restriction on their land that limits future development of the land for non-agricultural purposes. A fair market value is determined by first assessing the current, full-market value of the property as compared to other similar property which has recently sold in the area. The agricultural value of the property is then determined, and subtracted from the full-market value. The remainder is the fair-market value of the development rights.

Simple Example: \$5,000 per acre = value of land sold for development
— \$2,000 per acre = value of land sold for farming

\$3,000 per acre = payment for development rights

Once an easement is in place, the landowner may still sell the land on the open market as farmland. All private property rights will remain

intact, excluding only the right to development beyond normal agricultural uses.²⁴

While the initial and most direct benefit of PDR programs is the preservation of active farmland, this type of program can also help to stem urban sprawl into rural areas, preserve wildlife corridors and habitats, protect watersheds, and preserve the rural character and scenery of local communities while promoting a sustainable and viable urban-rural community interface.

TRANSFER OF DEVELOPMENT RIGHTS (TDR)

Although as of this writing the state has not issued the legal authority for TDRs, legislative authorization is being considered. The principle behind the TDR is that each parcel of land has an established capacity for development. However, local policies for the preservation of farmland, or regulations that restrict development at less intensive levels, may dictate that the development of that property not take place to its fullest capacity. TDR permits the transfer of that development capacity to another property which is capable of accommodating that growth, and which meets the community's goals and regulations for development.

The "rights" to develop a property worthy of preservation are then permitted to be moved to another parcel, which the community has identified as being capable of supporting development. This development potential is then added to the rights present on the developable parcel to raise the overall intensity of development. The property from which the rights were transferred are then permanently restricted by covenant from further development.

Although the procedures and requirements are somewhat complicated, the practice of TDR offers some opportunity for a community to set aside lands for agriculture. In a companion program to TDR, the legislature is considering authorizing the purchase of development rights through general financing or through a special assessment district.

²⁴ Kent County website, www.accesskent.com

FARMLAND AND OPEN SPACE PRESERVATION ACT,
P.A. 116 of 1974

The Farmland and Open Space Preservation Act, P.A. 116 of 1974, offers tax reductions for landowners who agree not to develop agricultural land. This Act enables a landowner to enter into an agreement with the state that are designed to ensure that the land remains in farmland, or a particular open space related use or uses, for an agreed upon period; the minimum enrollment period is 10 years. In return for maintaining the land in a particular use, the land owner is entitled to certain income or property tax benefits.

Interested landowners file an application with the local governing body. The application is then required to be reviewed and commented on by the Regional Planning Commission, where applicable, and Soil Conservation Service.

Property may be released by the state, upon the request of the property owner, provided that the credits forwarded to the owner as a result of the agreement are reimbursed (through the payment of a lien), with interest, for the period beginning at the time of the approval of the application.

CONSERVATION EASEMENTS

Conservation easements can be used to transfer certain rights and privileges concerning the use of land to a non-profit organization, governmental body, or other legal entity without transferring title to the land. In Michigan, Public Act No. 197 of 1980, the Conservation and Historic Preservation Easement Act, (M.C.L.A. 339.251 et. seq.) authorizes the creation of voluntary conservation easements.

A conservation easement under Act 197 can provide limitations on the use of, or prohibit certain acts on, a parcel of land or body of water. The interest can be in the form of a restriction, easement, covenant, or a condition contained in either a deed, will or other instrument. The easement should require that the land or body of water be retained or maintained in its natural, scenic, or open condition, or in a specific, non-intensive use such as agriculture, open space, or forest land.

The easement is enforceable against the property owner even if the party seeking enforcement was not a party to the original conveyance or contract. The easement is considered a conveyance of real property and

must be recorded with the register of deeds in the county to be effective against a subsequent purchaser of the property who had no notice of the easement.

The granting of a conservation easement may have tax implications so persons considering granting a conservation easement should contact an attorney or accountant for an analysis of possible tax benefits, as well as their local government for information about zoning, etc.

LAND PLANNING AND DEVELOPMENT PRACTICES

LAND USE PLANNING

One of the obvious starting points for the community to plan for agricultural uses is through the Master Plan. The Plan can be an effective means of support for community policies to preserve agricultural land. The first step to establishing this support is to clearly state the importance of agriculture as an industry. This is accomplished by a declaration of the community through the Plan's goals and objectives. The goals of the Plan should clearly indicate that agricultural uses are important to the well-being of the community, region, and the state.

Another important Plan ingredient is the documentation of the value of farmland to the area. This can be accomplished through the collection of data indicating which farmlands are considered "Important," as defined earlier. Statistics on such indicators as the amount of land protected through P .A. 116, total land in production, average farm size, and other data can help establish the value of agriculture to the community.

It is also useful to examine the threat to the community posed by current land use practices, which may encourage land to be taken out of production, or allow unlimited use of farm land by nonfarm uses. In Courtland Township, new residents are purchasing larger parcels of land for a single family home; sometimes that land was once part of an active farm. Farmers are now being offered prices unimaginable just 20 years ago. The temptation to take advantage of the higher prices and split off parcels of land for other uses is often too great to resist.

The Land Use element of the Plan must take these factors into consideration and use the appropriate classifications for agriculture, not

as a holding zone for other uses, but as a viable use itself. An Agricultural land use classification should be thoroughly described, to include the reasons for the designation of specific areas (important farmland, presence of large parcels, etc.) and to establish the overall value of farming to the values of the community.

Other classifications will have to take into account the trend toward large parcel development. Since Courtland Township continues to be attractive to urban dwellers who now look toward rural areas for an improved quality of life, a balance will have to be established between those families and the desire to preserve farmland, where possible.

PLANNED UNIT DEVELOPMENT (PUD)

The Township Rural Zoning Act authorizes the consideration of planned unit developments in zoning ordinances. The Zoning Act describes PUDs as permitting, "flexibility in the regulation of land development; encouraging innovation in land use and variety in design, layout, and type of structures constructed; achieve economy and efficiency in the use of land, natural resources, energy and the provision of public services and utilities; encourage useful open space; and provide better housing, employment, and shopping opportunities particularly suited to the needs of the residents of this state. "

PUD provisions take a number of forms. The zoning ordinance may elect to have the PUD as a separate mapped zone district, or it can be applied to existing zone districts through special land use approvals or separate development regulations, known as "floating" or "overlay" districts. An overlay district does not appear on the zoning map and can be applied in any existing zone.

The flexibility of PUD provisions can also take several forms. The zoning ordinance may be very specific, to the level of detail where specific uses are allowed with appropriate development restrictions. On the other hand, the ordinance may allow a considerable degree of flexibility by allowing virtually all uses, the development of which are tied to an approved plan submitted to the local government.

CLUSTER DEVELOPMENT

PUDs may be useful in preserving open space and, to some degree, farmland, by permitting a greater degree of flexibility in the layout of the

proposed uses. One example of the use of PUDs in preserving land from development is the use of clustering. A cluster development provides for a concentration of density in a limited area of a site. Generally, development will be concentrated in the area closest to the road by which the proposed uses will derive access.

Allowing cluster development through the use of PUDs provides the opportunity for the community to ensure that the land kept free from development will be permanently restricted from future construction. Apart from being a requirement of the PUD, the open space can be deeded in equal parts to the property owners of the cluster with restrictions on individual sales, requiring approval of a majority (or greater number) of the remaining owners.

Except for large parcels, the use of cluster provisions will have a fairly limited impact on the preservation of farmland, since a portion of the property will be developed for other uses. On large parcels, the remaining acreage may be useful for farming, provided that the ownership or control of the area to be used is established.

NON-CONTIGUOUS PUD

The non-contiguous PUD has many of the same advantages as a TDR program, although functions somewhat differently. Whereas the TDR option requires the sending and receiving of development rights, a non-contiguous PUD functions just as a cluster development would, however the preserved portion of land is typically on a parcel which is not adjacent to the parcel being developed. The greatest advantage of this development form to the Township is its ability to promote growth in a specific area of the Township while ensuring a greater degree of preservation in another area of the Township as one parcel is developed entirely while the other is entirely preserved. Essentially the non-contiguous PUD increases the likelihood that the Township will maintain large, connected tracts of preserved farmland or open spaces without hindering development in areas planned for growth.

APPENDIX C

ACCESS MANAGEMENT GUIDELINES

Fourteen Mile Road and Northland Drive require special attention to the management of access and the quality of development. Access management along these roadways will help to preserve its traffic carrying capacity, increase safety, and assist in the efficient movement of traffic through the township. Development Guidelines will help ensure that unattractive, haphazard development does not occur. These Guidelines should be used whenever a site plan is evaluated by the township. They are meant to be flexible, to take into account special situations, but their application in most circumstances should be consistent

NUMBER OF DRIVEWAYS

Access to a parcel should consist of either a single two-way driveway or a pair of one-way driveways

Certain developments generate enough traffic to consider allowing more than one driveway along a major street. Where possible, these second access points should be located on a side street or shared with adjacent uses

For parcels with frontages of at least 300 feet an additional driveway may be allowed; additional driveways should only be considered following a traffic impact study, which demonstrates the need for additional driveways.

Where parcels have frontage on Fourteen Mile or Northland and a side street, access should be provided from the side street. For parcels with at least 100 feet of Fourteen Mile or Northland frontage, a right turn in/right turn out only driveway along the Fourteen Mile or Northland could be allowed.

SHARED DRIVEWAYS, FRONTAGE ROADS, AND SERVICE DRIVES

- A. Sharing or joint use of a driveway by two or more property owners should be encouraged. This will require a written easement from all affected property owners during the site plan approval process. Where a future shared access is desired, the developer should indicate an easement, which will be provided to future adjacent

uses.

- B. In areas within 1/4 mile of a future signal location, as indicated by the Kent County Road Commission, or the MDOT, access to individual properties should be provided by alternative access methods (frontage roads, service drives) rather than by direct connection to the Fourteen Mile or Northland Drive.

In the case of existing, proposed or recommended rear service drives, additional access to individual properties may be allowed through a direct connection to Fourteen Mile or Northland Drive provided that movements at these driveways are restricted to right turns into and/or out of the site, and are appropriately spaced, as discussed later.

- C. In areas where frontage roads or service drives are proposed or recommended but adjacent properties have not yet developed, the site should be designed to accommodate a future drive, with access easements provided. The township may temporarily grant individual properties a direct connection to the Fourteen Mile or Northland Drive until the frontage road or service drive is constructed. This access point should be closed when the frontage road or service drive is constructed.

APPENDIX D

SITE DEVELOPMENT AND LANDSCAPE GUIDELINES

PURPOSE

The primary objective of these Site Development and Landscape Guidelines is to ensure high quality development that respects the natural environment and maintains the township's rural character. These guidelines will contribute to an improved quality of life for those living and working in Courtland Township by improving aesthetics and providing specific functions such as:

- Creating a high-quality image and appearance
- Reducing peak stormwater runoff volumes
- Providing windbreaks, shade and temperature-moderating influence
- Providing cover for wildlife

Landscaping and on-site screening provides a visual buffer between highly traveled roadways, such as Fourteen Mile Road, and lend a sense of identity and unity to the area.

LAND FORMS

Existing topographical variations in the township should be respected and utilized to the advantage of the development of a specific parcel. Wholesale grading should be unnecessary and individual building sites should be allowed to blend into the existing topographic patterns of the site. Grading should be restricted to that necessary for the requirements of the building, parking, and other constructed areas of the site.

Where natural topographic variation does not exist, berms may be used to provide variety and interest, soften the impact of buildings and paving and screen objectionable views.. Care should be taken in reviewing grading plans to ensure proper site drainage yet provide pleasing aesthetics, adequate buffers and sufficient screening.

ARCHITECTURE

The building mass and shape should "fit" the natural characteristics of the site. Sites that are wooded are most successful with less massive and informal structures that can be integrated into the existing landscape. Further, building placement should be conducive to both pedestrian and vehicular traffic patterns.

NATURAL FEATURES PROTECTION

Significant natural features, such as woodlands and wetlands, should be preserved because of their functional importance to the regional ecology as well as for ability to lessen infrastructure demands, and their contribution to the visual character of the site. Rather than viewing existing natural features as preventing development, they should be viewed for their opportunity to provide innovative site and building integration that use existing site features as building amenities. (See Chapter 2 - Natural Features.)

PARKING AND CIRCULATION ZONES

The purpose of landscaping in off-street parking lots is to screen (but not necessarily hide) parking lots and improve traffic circulation and safety. An illustration of greenbelt and off-street parking landscaping standards and a typical off-street parking landscaped area are shown in the attached illustrations. The following factors should be considered for the study area:

- Parking areas along Fourteen Mile or Northland Drive should be screened by plant material, berming, or a combination of both.
- Parking areas should be set back from the roadway to permit use of landscaping in a buffer area between parking lot and road.
- Curbed and landscaped "islands" should be used, especially near site entrances, to help organize traffic movements and slow speeds through the lot. In most cases, landscaped islands should be 12 - 15 feet wide to provide adequate opportunity for vegetation's survival.

- Parking and circulation routes should be designed to follow the dominant contour lines. Functionally this does not "force" a separate drainage pattern on the site.
- Trees should be incorporated into parking areas and roadways to reduce their visual impact and provide instant shade to reduce glare and heat radiation. Additionally, it is cheaper to preserve an existing tree when taken into account early in the design phase than to install new nursery stock. Selective cutting of existing vegetation should be allowed only for the health of the overall vegetation by reducing competition.

GREENBELTS ALONG STREET FRONTAGE

The primary purposes of landscaping of the street frontage are to soften impact and screen development, as well as highlight and define entries.

- Primary emphasis should be on larger scale plants (deciduous or evergreen trees).
- Shrubs and flowers can be used but should be massed or clustered to be effective.
- Planting should highlight site access and circulation.
- Grass, flowers, and shrubs should be encouraged over non-living materials (such as stone or wood chips) for aesthetic reasons.

BUFFER ZONES

Buffer zones are the areas between two uses of varying intensity. The purpose of buffer zone landscaping is to minimize negative impacts between adjacent unrelated uses by screening views, reducing noise, and containing windblown debris. Buffers are further intended to preserve and enhance the aesthetic qualities, character, privacy and land values of the township. A buffer zone can be comprised of plants, berms, walls or a combination of these. The type and intensity of the buffer zone should be based on the zoning districts or land uses it is separating.

SERVICE AREAS

The purpose of screening service areas is to minimize unsightly views, reduce vandalism, and eliminate blowing debris.

- All dumpsters, utility pads, and loading areas should be screened on at least three sides with evergreen trees and shrubs, screen walls, sight-obscuring fences, and/or berms.
- Service facilities, such as loading areas/docks, should not be in yard along a street, and should be screened from street traffic and adjacent residential or office uses.

STORMWATER DETENTION

Where possible, stormwater detention areas should be designed with gentle slopes, native wetland plant species, and shallow water levels to reduce danger/liability and increase the opportunity to establish a natural ecosystem. If existing wetlands are not present on or adjacent to the site, man-made detention areas should be designed with these guidelines in mind.

INSTALLATION AND MAINTENANCE

Zoning standards should mandate minimum sizes of plant materials to be installed. Minimum plant sizes at the time of installation should be shown on the site plan. Standards which should be considered for inclusion in the Zoning Ordinance are as follows:

Deciduous canopy tree	2 1/2 inch caliper
Deciduous ornamental tree	2 inch caliper
Evergreen tree	6 foot height
Deciduous shrub	2 foot height
Upright evergreen shrub	2 foot height
Spreading evergreen shrub	18 to 24 inch spread
Ground cover	1 foot spread

The Township zoning ordinance should specify that all landscaping be maintained in a healthy, neat and orderly state free from refuse and debris.

SUMMARY

Through careful site analysis and site planning, quality development can be realized. The objective of incorporating natural features into site development is to allow new uses of land that do not irreversibly damage natural site features and attributes. The result is cost effective development that allows preservation of natural features and systems, creating long term benefits for the environment and the community.