

Solon Township Master Plan

2018

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INTRODUCTION

What is a Master Plan?

This Master Plan has been adopted by Solon Township to ensure that the decisions made regarding the use of land are based on a sound vision for the township that will enhance the quality of life for its residents. This Master Plan is a guide to ensure that the Township's desires regarding future development are translated into action. Deliberative actions and day-to-day decisions by the Township Board, Planning Commission, Zoning Administrator, and other Township officials, guided by the Master Plan, create the future for Solon Township. Public input is an essential component to the Master Plan process, as it is important to understand what township residents think of the issues and what they want. The Master Plan consists of several elements, including an overview of existing conditions, goals, and Future Land Use.

- Existing conditions portray the full extent of land uses, physical characteristics, social characteristics and public improvements.
- Goals define how the Township will deal with identified concerns and protect community character.
- The Future Land Use plan describes what types of new development the Township believes would be most appropriate in the community, and where suitable locations for such development. The Future Land Use Map is an illustration of the long-range land use pattern of the Township.

What Might the Future Hold?

A Master Plan does not "predict" the future. As new residents, new Planning Commissioners and Township Board members arrive on the scene, attitudes about growth, township character, and other Plan elements may change. Even one new major development could alter the Township's future. The Master Plan is intended to set a direction for the Township to follow in the foreseeable future. That direction can have many alternatives and possibilities. The Plan, used properly, will guide the Township through decisions about land use, public services, and a host of other issues. But, the Plan must remain flexible, to consider those changing circumstances that no one can predict.

CHAPTER 1 – OUR PEOPLE

Who Are We?

Solon Township was first settled in 1854. It has been claimed that a Mr. Beals, or a J. M. Rounds, were the first settlers. They were soon followed by John and Martin Hicks, from Indiana; also, Robbins Hicks, from Ohio. J. D. Watkins, settled on section twenty-six in 1855. In 1856 and 1857 the Jewells, Smiths, Roys and Whispels came, followed in 1858 by Ansel Rogers. The township was originally attached to Algoma, and called north Algoma, until 1857, when it was organized as a separate township, under the name of Solon. The first annual meeting was held at the house of Walter Rowe, one mile south of the center (assuming this to mean the intersection of Algoma Avenue and 17 Mile Road (M-46)).

The first officers were Edward Jewell, John E. Roys, and John D. Watkins. The first Justices were Andrew Fluent, Munson Robinson, and Obadiah Smith. For several years the annual township meetings were held at the school house of district No. 2. In 1865, the place of meeting was changed to Cedar Springs.

There were many mills in the Township, which cut a large amount of lumber and shingles. First known is that of George French, of Rockford. He owned a steam mill, capable of cutting 10,000,000 shingles and 2,000,000 feet of lumber per year at the southwest corner of section twelve. Many more lumber and shingle mills were constructed in the 1860's and 1870's, most of them steam operated saw mills rather than water powered.

The first two school districts were organized in 1858 and small frame schoolhouses erected. In 1860 a third school was built, and new schools built again in 1866 and 1869 until there were five schools and five school districts. There were many older townships that erected large churches and other public buildings but failed to do as well for their school interests as the "backwoods" township of Solon.

Population Change

Examining population growth within the township and surrounding communities can help paint a picture both of development trends occurring and those likely to occur in the future. Overall population growth between 1990 and 2000 was the greatest for those communities which US-131

transverses as one heads north from the City of Grand Rapids. Between 2000 and 2014 Solon Township's population grew by 32.0% (see chart below).

	TABLE 1						
Municipality	% Change			Population			
	1980-1990	1990-2000	2000-2014	1980	1990	2000	2014
Algoma Township	24.6%	38.2%	35.40%	4,411	5,496	7,596	10,285
Cedar Springs	-1.8%	21.2%	13.88%	2,615	2,568	3,112	3,544
Courtland Township	20.7%	47.3%	36.53%	3,272	3,950	5,817	7,942
Ensley Township	35.8%	24.7%	6.27%	1,461	1,984	2,474	2,629
Grant Township	12.5%	22.4%	5.02%	2,274	2,558	3,130	3,287
City of Grand Rapids	4.0%	4.6%	-3.57%	181,843	189,126	197,800	190,739
Kent County	12.6%	14.7%	7.15%	444,506	500,631	574,335	615,381
Nelson Township	29.0%	23.1%	16.15%	2,641	3,406	4,192	4,869
Pierson Township	28.0%	31.7%	11.72%	1,701	2,177	2,866	3,202
Sparta Township	24.7%	7.6%	3.31%	3,561	4,442	4,779	9,194
Solon Township	29.9%	27.8%	31.98%	2,809	3,648	4,662	6,153
Tyrone Township	16.7%	14.6%	11.66%	3,220	3,757	4,304	4,806

During this same time frame, only two adjacent communities had populations that grew by a greater percentage. Algoma Township, located directly to the south of Solon Township, grew by

35.4%; and Courtland Township, located directly to the southeast of Solon Township, grew by 36.5% (see chart).

Figure 1 2014 Population Adjacent Township Growth Rates (2000-2014)		
	North	
Grant 3,287 5.02%	Ensley 2,629 6.27%	Pierson 3,202 11.72%
West Tyrone 4,806 11.66%	SOLON 6,153 31.98%	Nelson East 4,869 16.15%
Sparta 9,194 3.31%	Algoma 10,285 35.40% South	Courtland 7,942 36.53%
% = Change from 2000 to 2014		

However, Solon Township is the only community among its neighbors that had a faster rate of growth between 2000 and 2014 than from 1990 and 2000. Although, Algoma and Courtland Townships added more people than Solon Township. Solon Township grew by 1,491 people

between 2000 and 2014, from a population of 4,662 in 2000 to 6,153 in 2014. Between 2000 and 2014, Algoma Township grew by 2,689 people and Courtland Township grew by 2,125 people. The surrounding townships that grew by the smallest percentage between 2000 and 2014 were Sparta, Grant and Ensley Townships.

Table 1 presents a chart of population in surrounding townships from 1980 to 2014. **Figure 1 Adjacent Township Growth Rates** illustrates growth in surrounding townships between 2000 and 2014.

Economic Characteristics - A comparison of income statistics is found in **Table 2**. In 2014, the median household and the median family income for Solon Township were \$60,910 and \$65,744 respectively. These figures are like those of Kent County but significantly higher than the State of Michigan. The percentage of persons and families below poverty level was significantly lower in Solon than Kent County and the State of Michigan.

TABLE 2 INCOME AND POVERTY 2014				
Category		Solon Township	Kent County	State of Michigan
Median	Household	\$60,910	\$69,172	\$49,087
Income				
Median Family Income		\$65,744	\$64,487	\$61,684
Per Capital Income		\$24,987	\$26,436	\$26,143
Population in Poverty		7.9%	10.7%	12.1%
Source: 2014 U. S. Census				

Incomes - According to the U.S. Census Bureau, 2010-2014 American Community Survey 5 Year Estimates, the largest percentage (25.9%) of Solon Township households had incomes within the \$50,000 to \$74,999 range. The next highest grouping was the household income range between

\$100,000 and \$149,999 per year, representing 18.2% of Solon Township households. Next were households within Solon Township earning between \$35,000 and \$49,999 (16.9%) and 14.8% earned between \$75,000 and \$99,999 per year.

At \$60,910, Solon Township's median household income was higher than the State (\$49,087) and slightly lower than Kent County's (\$69,172). Factors that can affect these numbers include the types of housing available, land values, parcel sizes and the locations of communities. For instance, a community with a higher percentage of apartments will often have younger people that generally have lower incomes than people who are more established in their careers, who tend to have higher incomes. Alternately, communities with a higher percentage of newer single-family housing on large lots will generally attract more established families, who generally have higher incomes than younger, unmarried people.

On an area wide basis, poverty can be correlated with the median household income values. According to the 2014 U.S. Census, the proportion of individuals living in poverty in the Township was 7.9%. From a regional perspective, Kent County had 10.7% and Michigan had 12.1% of its population living in poverty. In determining poverty thresholds, the United States Census Bureau examines household size and income levels. The exact household income threshold varies by the number of persons both over and under 18 years of age within a household. (For statistical purposes the United States Census Bureau uses a set of annual income levels, the **poverty thresholds**, slightly different from the federal poverty guidelines. As with the poverty guidelines, they represent a federal government estimate of the point below which a household of a given size has pre-tax cash income insufficient to meet minimal food and other basic needs.)

Education - Within Solon Township, 84.3% of residents have graduated from high school and 15.6% have attained a bachelor's degree or higher. The number of persons graduating from high school is about the same in the township as both the County (84.6%) and State (83.4%). In contrast, the township's percentage of individuals who had graduated with a bachelor's degree or higher was lower than both the County (25.8%) and the State (21. 8%).

Employment - Employment of people who live within Solon Township is heavily focused on manufacturing, representing 801 jobs in the year 2014 or 26.7% of the working population within the township. In comparison, only 21.3% of all of those employed within Kent County and 22.5% of all of those employed within Michigan were employed within the manufacturing sector. The

Township's employment within manufacturing was at 35.9% in 2000. This represents a significant shift away from manufacturing jobs for Solon Township residents. Between 2000 and 2014, the proportion of people employed in the educational, health and social services professions (18.4%) increased within the township to equal the wholesale/retail trade professions (18.4%).

Employment in the transportation/warehousing, utilities and construction professions was much lower in Solon Township than the County and State. In the year 2014, the township had only 2.0% of its population employed within transportation/warehousing and utilities, versus 3.4% in the County and 4.1% in the State.

Agricultural employment has declined in Solon Township along with the State and Nation. In 2014, was just 1.1 percent of township residents were employed in agriculture. "... today, only two percent of the population produces food for the world to consume. That's a large change in the amount of people associated with producing food and making sure that everyone has enough to eat. Farmers use technology to make advances in producing more food for a growing world. Through the use of technology, each farmer is able to feed 155 people today, compared to 1940, when one farmer could feed only 19 people."

AnimalSmart.org, PO Box 7410, Champaign, IL

Also, in 2014, 10.1% of the township's population was employed in the construction profession, versus 4.6% in the County and 4.8% in the State. While only 1.1% of the population was employed in Agriculture, Forestry, Fishing, Hunting and Mining, agricultural land accounted for nearly ¼ of the Township's land area.

TABLE 3									
Employment by Industry, Solon Township, County and State									
By Percent									
	Solon Twp.			County			State		
Industry	1990	2000	2014	1990	2000	2014	1990	2000	2014
Public Administration	1.7	2.5	3.3	2.3	2.0	2.2	3.7	3.6	3.7
Information	0	0.5	2.3	0	2.0	1.7	0	2.1	1.6
Agriculture, Forestry, Fishing, Hunting and Mining	3.2	2.1	1.1	1.4	0.6	1.0	2.0	1.1	1.3
Transportation, Warehousing and Utilities	9.4	7.5	2.0	4.7	3.4	3.4	5.5	4.1	4.1
Professional, Scientific, Management, Admin. & Waste Serv.	1.9	4.5	4.7	6.6	7.8	9.8	5.8	8.0	9.3
Other Services	1.4	4.8	3.7	6.8	4.4	5.0	7.3	4.6	4.8
Finance, Insurance, Real Estate, Rental & Leasing	4.2	3.4	4.2	5.9	6.0	6.1	5.4	5.3	5.5
Arts, Entertainment, Recreation, Accommodations, Food Service	0.5	7.2	5.2	1.1	7.1	8.9	1.2	7.6	9.5
Construction	3.4	10.3	10.1	4.8	5.6	4.6	4.9	6.0	4.8
Educational, Health and Social Services	12.9	17.5	18.4	15.2	18.8	23.3	17.5	19.9	24.1
Wholesale, Retail Trade	23.2	17.3	18.4	25.0	18.6	15.6	22.0	15.1	13.9
Manufacturing	38.2	35.9	26.7	26.2	23.7	18.5	24.6	22.5	17.4

Source: U.S. Census Bureau

Housing - According to the 2014 U.S. Census, 66.1% of the township's residents have moved into new housing between 2000 and 2014. Only 17.7% of residents have lived in the same housing since the 1990's and only 10.9% of township residents have lived in the same housing since the 1980's. In 2014, there were 2,343 total housing units with a 4.7% vacancy rate. Of the 2,233 occupied housing units 1,985 were owner occupied and 248 were rental units. This equates to 88.9% of the occupied housing within the township being used by the owners of the housing, with 11.1% occupied by renters. The average household size in 2014 was 2.63 persons per dwelling unit. Between 2000 and 2014, the number of year-round housing units increased by 779 units or 33.3%.

TABLE 4
HOUSING CHARACTERISTICS
2014

	Number of units	Percent
Total housing units	2,343	100.0
Occupied housing units	2,233	93.6
Households with related children under 18 years	719	32.2
Households with individuals 65 years and over	453	20.3
Owner-occupied housing units	1,985	88.9
Renter-occupied housing units	248	11.1

Based on the U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, 79% of Township residents live in single family homes, and 21% of residents live in mobile homes.

There are no residents living in multi-family housing units. Housing values ranged from less than \$50,000 to \$299,999. Approximately 35% of the housing was valued at less than \$99,999, and 35.9% was between \$100,000 and \$149,999. By comparison, the State of Michigan had 40.7% and 20.1% of its housing within the same categories and Kent County's percentages were 29.3% and 27.2%. **Table 4** shows the general housing characteristics in the township.

Another measure of population and housing is density. For example, Grand rapids has a population density of approximately 4,365 persons per square mile. Kent County has a housing density of 292 homes per square mile. The following table provides the population and housing density for Solon Township.

Table 5

Population and Housing Density (2014)

Population density -----116 persons per square mile

Housing density-----45.1 homes per square mile

Building Permits

The Township has maintained a relatively level number of single-family building permits each year for the past several years. The following table contains the building permits issued for single-family homes since 2008. Building permit trends can be used to predict future growth.

Table 6

Single-family Residential Building Permits

2008	2009	2010	2011	2012	2013	2014	2015	2016
27	17	24	18	26	27	21	28	28

CHAPTER 2 – NATURAL FEATURES

Lakes and Streams - Water features, including lakes, streams and interconnecting wetlands are notable and attractive features of the township. These surface water features are all connected and function as part of a larger “Water Cycle”.

Lake Acreages in Solon Township	
Black Lake	~12
Clear Bottom Lake	26
Gidding Lake	15
Long Lake	46
Lower Lake	~9
Middle Lake	36
No-Ko-Mos Lake	~23
Reed Lake	~5
Upper Lake	31
Cook and White Lake (part)	~26
Ke-wag-a-wan Lake (part)	~26
Lime Lake (part)	~38
Olin Lake (part)	~40

Spring Creek, White Creek, Duke Creek, Frost Creek, Forrest Creek, and Cedar Creek are significant water features in the Township. They are all part of the Grand River Watershed and transport water to the Rogue River and then on to the Grand River.

At any point through the water cycle pollutants may be picked up and passed on to township residents, people within other communities, plants and/or animals by consumption of these waters. Knowing the characteristics of each type of water feature can allow a community to plan for their best use and preservation. Soil erosion, impermeable surfaces (such as parking lots and roofs), soil contamination, and additional recreational pressures can affect the water quality of the township’s lakes and streams.

A combination of poor soils unsuitable for septic systems, a high-water table, and an increasing amount of rural development, may begin to threaten the quality of the area's water supplies. Specific regulations pertaining to soil erosion and sedimentation control practices, protection of wetland areas, increased water body setbacks, the use of greenbelts or buffers and density reductions can assist in protecting water quality (see Section 3.14 of the Township Zoning Ordinance below).

SECTION 3.14 ADDITIONAL SETBACKS FOR STRUCTURES ADJACENT TO TRIBUTARIES OF THE ROGUE RIVER

A. Notwithstanding any other provision of this Ordinance, no dwelling, accessory building, or septic system shall be hereafter constructed, erected, installed, or enlarged within a minimum of one-hundred (100) feet (as measured from the shoreline or ordinary high-water mark) of Duke Creek (tributary of the Rogue River).

B. Vegetative Strip.

1. A strip twenty-five (25) feet bordering each bank of Duke Creek, as measured from the shoreline or ordinary high-water mark, shall be maintained in its natural vegetative state, except for the permitted clearing of dead or obnoxious plants.

2. The Zoning Administrator may allow limited clearing of the vegetative strip, only when required for construction of a permitted building or structure outside the vegetative strip, provided that the land cleared is returned to a vegetative state which is approximately the same quality and extent as that which existed prior to the clearing.

Another element to surface water protection is the need to moderate the effects that recreational activities have on surface waters. Overuse of inland and lakeshore areas can, over time, degrade water quality through small gasoline and oil spills, stirring of lake bottom sediments, and other effects. These activities also influence shoreline erosion, which further contributes to a decline in water quality.

Groundwater - Nearly all the township relies on groundwater for drinking and household activities. With increased housing densities and commercial and industrial uses within the

township the potential for contaminating groundwater increases. Things like abandoned older wells provide direct access for contaminants to enter the drinking water, faulty septic systems can provide gradual contamination and generally increased surface activity can provide miscellaneous access (motor oil, antifreeze, pesticides etc.).

Maintaining appropriate densities of development and proper disposal of potential contaminants are critical factors in ensuring the adequacy and quality of domestic water sources.

The State of Michigan Comprehensive Groundwater Protection Program, published by the Michigan Department of Environmental Quality reports that “Cleanup of groundwater contamination sites is expensive and slow, and often creates hardships for the persons affected”. Land use regulations, land acquisition, and education programs can play a key role in protecting groundwater. Examples of land use control activities include:

- Land use plans which consider groundwater vulnerability.
- Zoning ordinance and site plan review standards related to aboveground secondary containment, interior floor drains, and other topics.
- Public education through public meetings, school-based classroom programs, library displays, cable television videos, public information flyers, and municipal newsletters.

Groundwater Quality – When a community relies on individual wells and not public water, groundwater quality is a major factor influencing development. The aquifer nearest to the surface (15-40 feet) is typically unprotected from contamination by surface sources of pollution due to the porosity of surface soils. It is not known whether there have been cases of well water contamination by septic tank/drain field contamination (nitrates and detergents). It is probable that only the historically rural, low-density nature of development has prevented the wide spread contamination of this aquifer.

Floodplain - Those lands which hold a one percent chance of being flooded because of overflow from an adjacent body of water within any given year during a 100-year period are considered to be in a floodplain.

Coordination of local regulations with those of the state are an important first step towards achieving appropriate and effective floodplain regulations. Part 3108 of Act 451 of 1994, as amended, defines the unlawful occupying, filling, or grading of floodplains, as regulated by MDEQ.

Local governments can regulate floodplains using building codes, zoning ordinances, subdivision regulations, health regulations, and/or use of police powers. Implementation of protective measures should be used with soil and sedimentation, stormwater, and wetland regulations. Currently, no areas in Solon Township have been designated floodplain areas.

Wetlands - Most of the undeveloped areas in the Township either are wooded or wet. Part 303 of the Natural Resources and Environmental Protection Act defines a wetland as:

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

Wetlands contribute to the quality of other natural resources, such as inland lakes, ground water, fisheries, wildlife and Lake Michigan. Wetlands serve as storage areas for excess water and nutrients; controlling floods and the aging of rivers, lakes and streams. In addition, acre for acre, wetlands produce more wildlife and plants than any other Michigan land cover type.

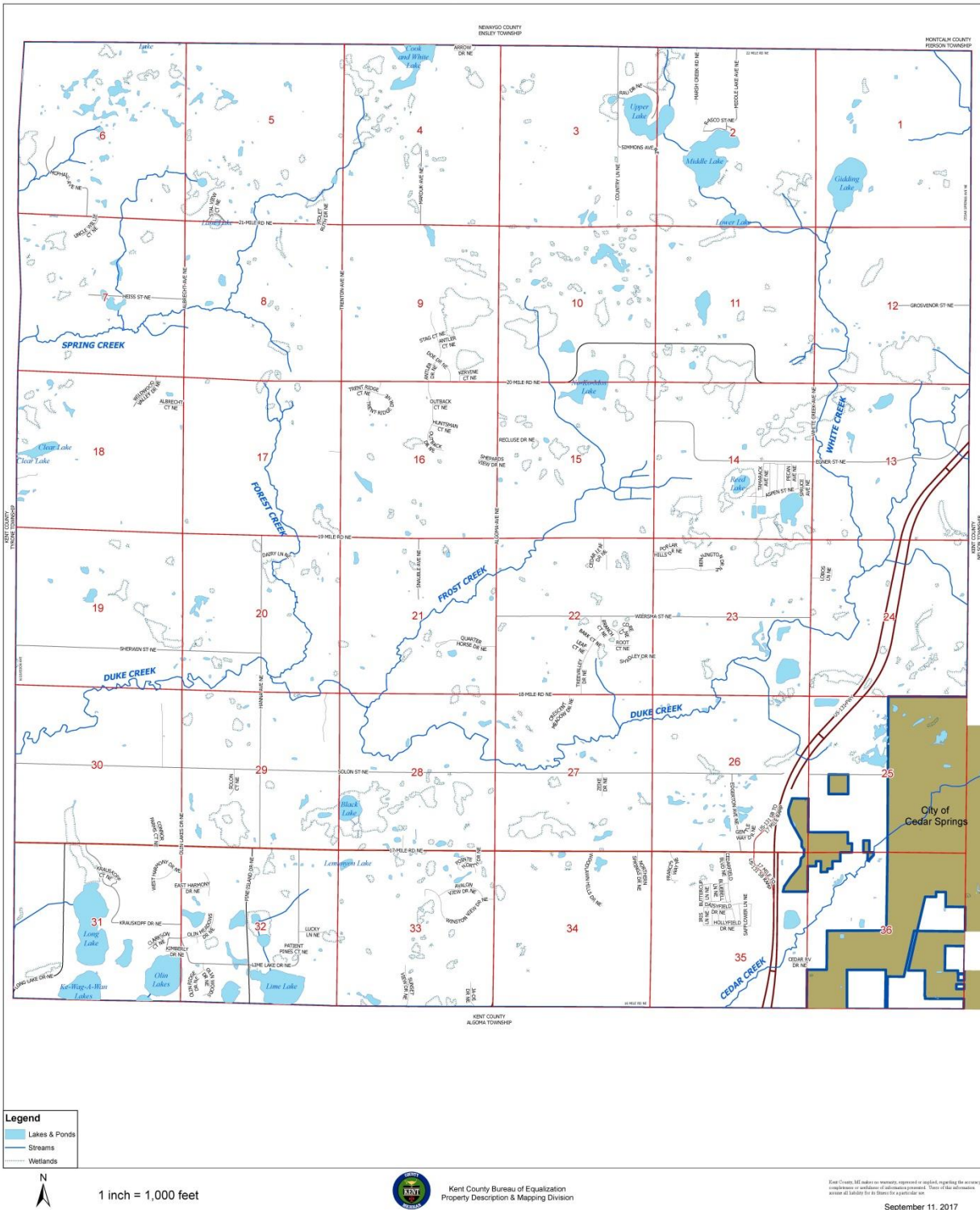
Part 303 seeks to protect wetland resources through regulating land which meets the statutory definition of a wetland, based on vegetation, water table, and soil type. Certain activities on a site which satisfies the wetland definition will require a permit from the MDEQ including:

- Filling or placing of material in a wetland.
- Draining of water from a wetland.
- Removal of vegetation, including trees, if such removal would adversely affect the wetland.
- Constructing or maintaining a use or development in a wetland.
- Dredging or removing soil from a wetland.

Certain activities are exempt from permit requirements. In general, exempt activities include: fishing, trapping or hunting, hiking and similar activities; established farm activities; and harvesting of forest products.

Wetland areas subject to regulation by the MDEQ include wetlands, regardless of size, which are contiguous to, or are within 500 feet of the ordinary high-water mark of any lake, stream, or pond; wetlands which are larger than five acres and not contiguous to any lake, stream, or pond, but are essential to the preservation of natural resources.

Figure 2
OLON TOWNSHIP
 Lakes, Creeks & Wetlands



Generally, wetlands must be identified through individual site determinations. Accordingly, the low-lying areas or wetlands shown on the Environmental Features map are for planning purposes and represent only indications of where some of these areas may be located. (See Figure 2 Lakes, Creeks, and Wetlands)

Woodlands

Currently a sizeable portion of the Township is covered with woodlands and forests owned by individual property owners, with some woodlands being divided up among multiple property owners and others being owned by one property owner (see Natural Features map). Much of the woodland areas in the Township are within the Rogue River State Game Area. Woodlands provide a multitude of benefits to the Township including:

- Creating rural character
- Providing wildlife habitat
- Providing a wind barrier
- Providing a noise barrier to uses such as roadways
- Providing a visual barrier to unattractive uses or activities
- Serving as areas for water runoff and filtration
- Providing areas for recreation
- Improving aesthetics and creating outdoor “sense of place”

Woodlands can be preserved through different zoning techniques including site plan, planned unit development and special land use reviews, creation of tree ordinances, creation of buffer requirements from water features and creation of open space developments.

Topography and Drainage - The topography of the Township is generally rolling and hilly with a local relief of greater than 500 feet from its highest point of 1,070 feet above sea level in the north of the Township at Fisk Knob, to a low point of 770 feet above sea level at Duke Creek as it enters Tyrone Township in the southwest. The most pronounced variations in landform and most obvious drainage features are the numerous creeks that drain to the Rogue River and then to the Grand River. The township is drained entirely by Rogue River tributaries. There are no portions of the township that are within the designated 100-year Floodplain of the Grand River and its tributaries.

Soils – Much of the Township contains soils that are classified as “prime agricultural soils” by the USDA. The USDA uses three soils classifications consisting of “Prime Farmland” “Prime Farmland if Drained” and “Farmland of Unique Importance”. Because these soils are conducive to farming, these areas often contain the majority of the Township’s active farms. Figure 4 Soil Types illustrates the combination of Prime Farmland soils and currently active farmland.

Figure 3
SOLOE TOWNSHIP
 Elevations

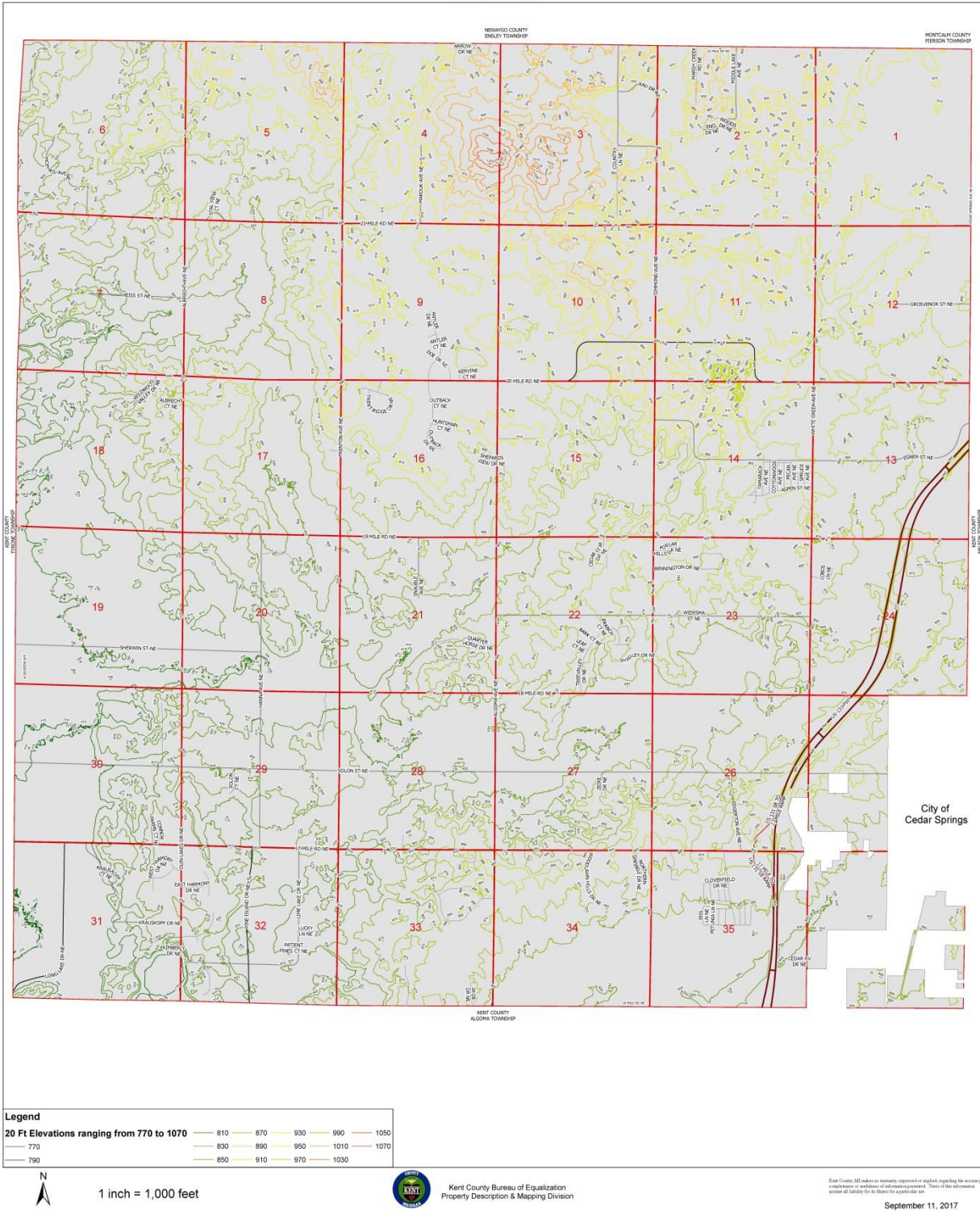
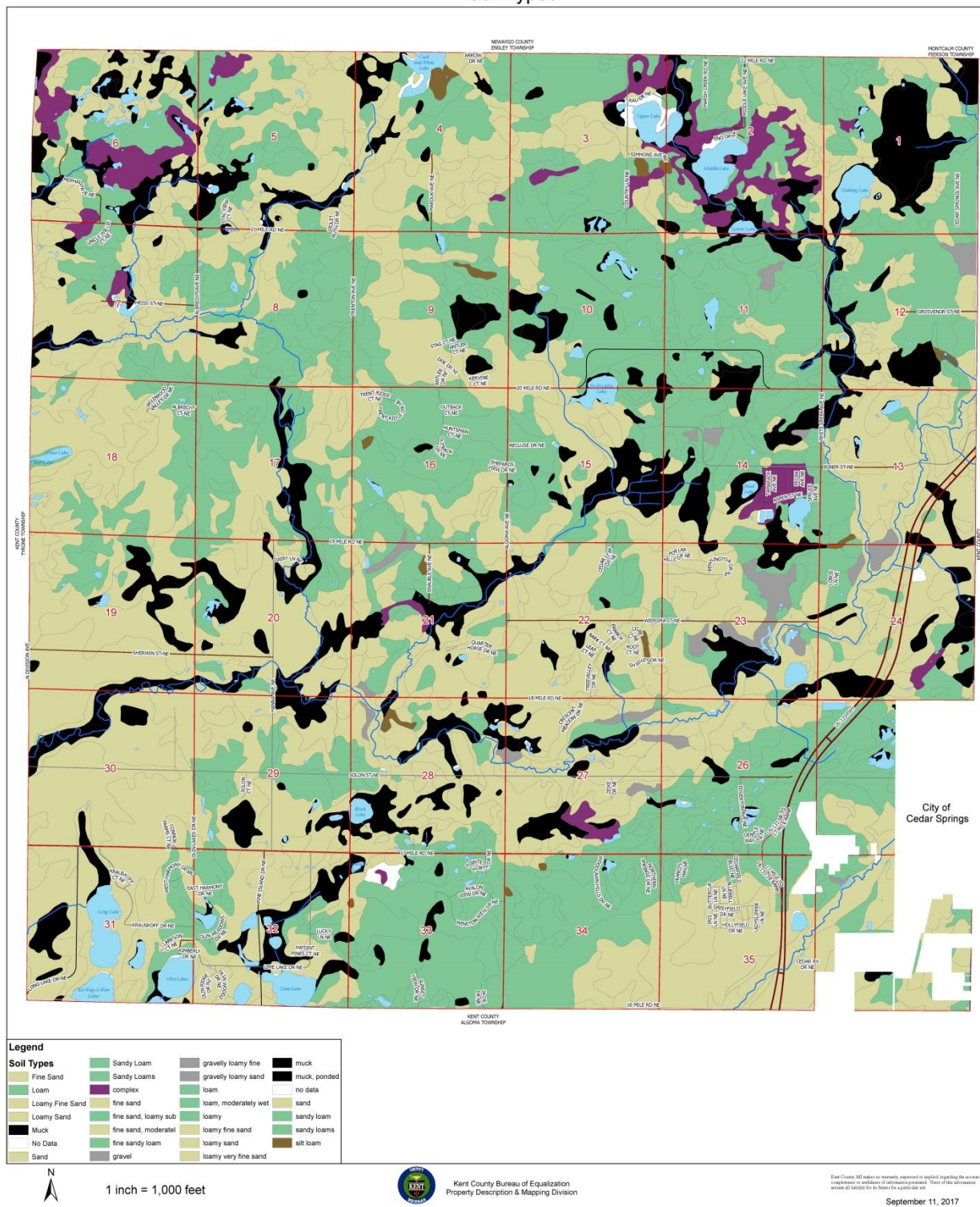


Figure 4
OLON TOWNSHIP
 Soil Types



CHAPTER 3 – LAND USE CHARACTERISTICS AND COMMUNITY SERVICES

Existing Land Use

The reasons that land has developed over time vary widely. Many of the land uses we see today are the result of development before there was zoning. Some land uses were approved by previous planning commissions and township boards with or without the benefit of a Master Plan. Many of these existing areas have stable, active uses that are thriving economically and socially. Others sometimes conflict with one another.

This Chapter provides a descriptive overview of current land uses within the community and will serve as part of the foundation for decisions to be made about the future of Solon Township.

The generalized land use categories evaluated include:

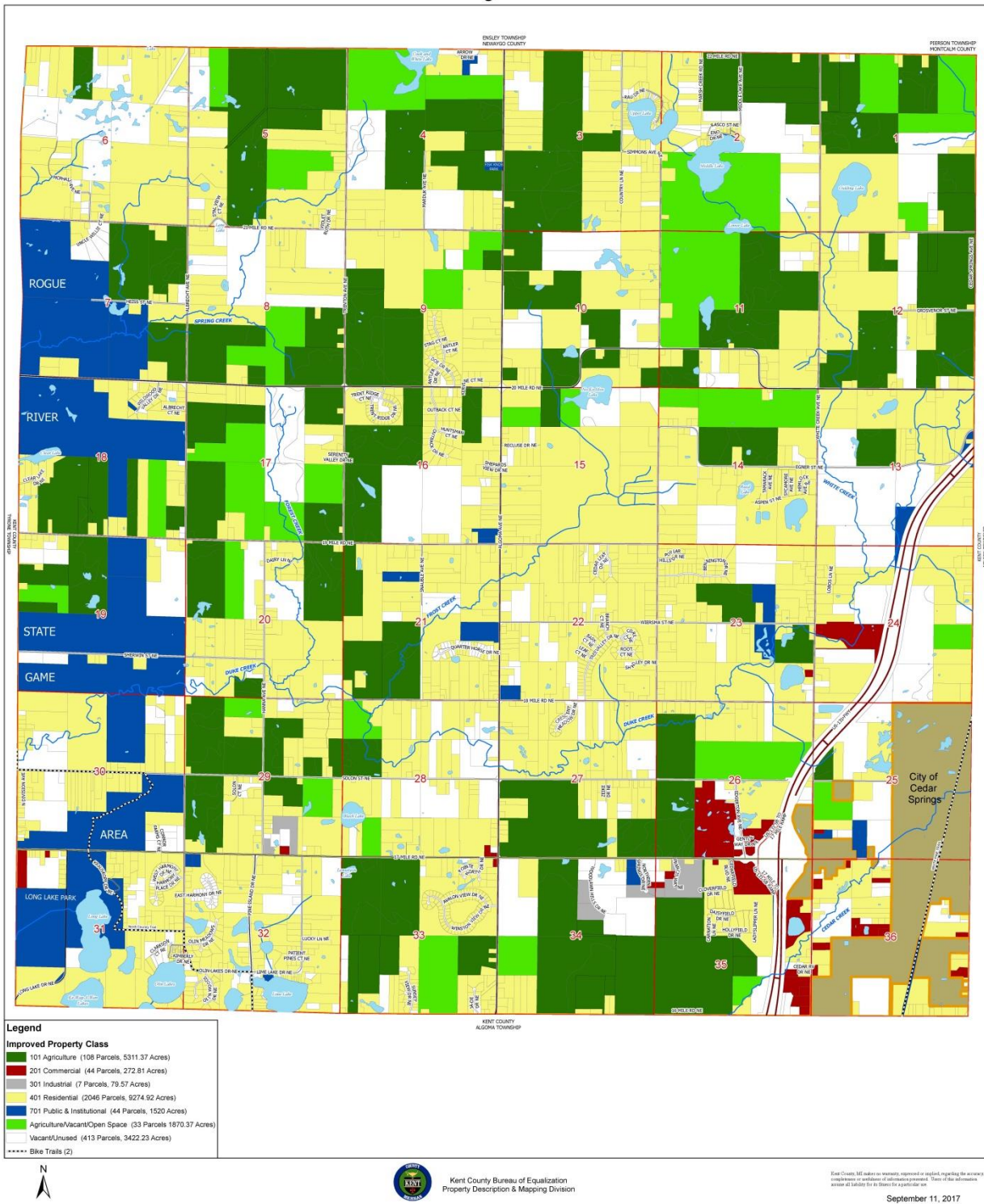
- Agriculture
- Residential (Primarily Single Family)
- Manufactured Home Park
- Commercial
- Industrial
- Public/Quasi-Public
- Lakes
- Vacant undeveloped land

Mapping existing land uses allows for the evaluation of generalized land use patterns that exist in the area. Knowing these land uses is essential in making recommendations that best serve the needs of current and future residents and meet the goals of the Township. (See Figure 5 Existing Land Use)

Agriculture

It is a recognized trend within this state and nationwide that agriculture as an occupation has been dwindling and that agriculture land is being consumed as new development opportunities arise. Solon Township fits right in this trend with various other uses gradually replacing agricultural lands. Several market forces have played a role in the gradual loss of farmland, including proximity to the Grand Rapids metropolitan area with its convenient access to jobs via US-131, availability of land with willing sellers and existence of zoning regulations that allow for residential uses.

Figure 5
SOLOON TOWNSHIP
 Existing Land Use



It is no longer necessarily expected that agriculture will eventually give way to development. Agricultural activity and development can coexist if there is proper planning and an acknowledgement of mutually beneficial community and societal goals. However, there is no specific formula or method for achieving this.

Residential

Older established single family residential uses are typically located on large lots along the existing county road network of the township (roads spaced at one-mile intervals). However, in recent years many housing developments have been added in various locations off 17 Mile Road (M-46) and Algoma Avenue and within the center of the township along 18 Mile, 19 Mile and 20 Mile Roads. These residential developments range in size from a few homes to several dozen homes. They are so dispersed throughout the Township that consolidation of residential development within these areas appears to be creating a focal point of activity within the center of the township. At nearly 43% of the Township, residential land is by far the largest of all land use categories. If land use trends continue in this direction, it may be necessary to plan for parks or other amenities to serve nearby residences to complement the existing government offices and proposed park near 19 Mile Road and Algoma Avenue.

Manufactured Home Park

Manufactured home parks exist in two locations within the township. An older facility exists at the southwest corner of Egner Avenue and White Creek Avenue, surrounded largely by rural land. The second location is a relatively new facility that has been established on the south side of 17 Mile Road (M-46) just west of US-131 and the City of Cedar Springs.

For land use planning manufactured home communities are high density developments and as such consideration should be given to what types of uses would be appropriate near them. For example, commercial development in key locations along 17 Mile Road (M-46) in front of the manufactured home community may promote convenience and walkability for its residents.

Similarly, other higher density, or more intense uses may also be appropriate to take advantage of the larger available population. It will also be necessary to determine how these uses relate to or impact one another. Screening between uses, using berms and evergreen trees, and pedestrian and automobile connections should be provided between sites. Finally, it may be

logical to place other high density residential uses in the same vicinity, at least for the development located south of 17 Mile Road (M-46) to take full advantage of these other amenities.

Commercial

Commercial uses are primarily concentrated adjacent to the US-131 corridor, with other small areas located near a few key road intersections. In both cases commercial uses have developed over time because of road corridors which have brought new residents to the area and travelers through it. The US-131 corridor has brought businesses that have a highway service and community focus such as fast food restaurants and gas stations.

Highway access and a growing concentration of residents has also brought larger regional uses such as larger scale hardware and equipment supply dealers and grocery stores. A great deal of effort has already been spent looking at the core commercial area of the township as it relates to the City of Cedar Springs. A cooperative planning effort, resulting from the City of Cedar Springs/Solon Township 425 Agreement, has proposed further commercial uses along 17 Mile Road (M-46) west of US-131 within the City of Cedar Springs/Solon Township.

A very small area of commercial exists at the corner of 17 Mile Road (M-46) and Algoma Avenue, with a long-standing party store. Commercial uses within this area in the future are not likely to obtain public water and sewer within the time frame of this Plan due to the cost to extend these services. Furthermore, this area is not planned to be served by the City of Cedar Springs/Solon Township 425 Agreement.

Industrial

Industrial uses, which include surface mining operations, a cement facility and small-scale manufacturing, are in several areas of the Township. Surface mining operations (current and former) are in scattered locations. One is located along Trenton Avenue, south of 20 Mile Road and another is located off Egner Avenue west of White Creek Avenue. Manufacturing uses are located closer to US-131 along 17 Mile Road (M-46) and White Creek Avenue to take advantage of the transportation corridors to bring workers to the facilities as well as to receive and ship goods.

Consideration should be given to how the surface mining operations will affect the township as it grows. Questions to consider are whether the operations should be allowed to expand and what

to do with them once they shut down. In other communities where surface mining has occurred in the past, lakes have been created which attract new residential development.

Consideration should also be given to the existence of manufacturing/industrial facilities along 17 Mile Road (M-46). Additional industrial should be allowed to grow around established sites before additional industrial areas are considered. Access to 17 Mile Road (M-46) should also be carefully controlled to avoid truck traffic conflicts with adjacent uses and through traffic.

Public/Quasi-public

Public/Quasi Public uses include such things as churches, governmental offices, a cemetery and part of the Rogue River State Game Area. As discussed under the residential land use category, the Algoma Avenue and 19 Mile Road area, where the Township offices are located, along with a church and cemetery, could be considered the start of a “Township Center”.

The Rogue River State Game Area is located on the west side of the Township and includes land south of 20 Mile Road, north of 16 Mile Road and west of Olin Lakes Drive and Albrecht Avenue. Natural features within this area include Long Lake and Duke Creek. Opportunity may exist to link this area to new residential development through pedestrian paths, starting a chain across the township from project to project. One logical location for a pathway would be along the banks of Duke, Forrest and Frost Creeks. The potential may also exist to connect a pathway between the Township Center, North Country Trail, White Pine Trail and Long Lake Park.

Lakes

Several lakes exist within the township, located in two sub-areas; one sub-area located within the northeast portion and the other in the southwest portions of the Township. The lakes within the northeast portion of the Township include Upper Lake, Middle Lake, Lower Lake, Gidding Lake and No-Ko-Mos Lake. Upper Lake and Middle Lake and Lower Lake are connected to White Creek which connects to Duke Creek, traveling out the west side of the township. Concentrations of residential uses are located around the lakes, primarily on their north, east and west sides. Gidding Lake and No-Ko-Mos Lake have similar concentrations of residential uses around their banks.

The lakes within the southwestern portion of the township include Long Lake, Olin Lakes, Lime Lake, Ke-wag-a-wan Lake and Black Lake. Olin Lakes has the greatest concentration of

residential at its banks. Long Lake and Ke-wag-a-wan Lake have little to no residential uses at their banks, at least partially because of the presence of the Rogue River State Game Area.

Lake water quality will be a continuing issue as development continues. Construction of many housing units with individual septic systems around lakes can negatively impact the surface water quality within the lakes. Septic systems will often leak water and human contaminants, such as bacteria, into lakes. Human contaminants will also contribute to the growth of weeds within lakes. Consideration should be given to how to protect these surface water resources. For example, should natural vegetation strips be required along the banks of lakes to serve as nutrient and contaminant filters for water flowing into the lake? This might be achieved either through the recording of easements and deed restrictions on individual properties for the entire subdivisions or through zoning regulations.

As lakefront property continues to be developed, the desire to provide direct lake access to property located off the lakes will continue to increase. Funnel or keyhole development occurs when a lakefront lot is used to provide lake access to a larger development located away from the lake. Funneling allows many individuals to gain access to a lake through a small corridor of property. Unregulated funnel development has the potential to create many problems including land use conflicts; unsafe and inadequate access; excessive noise; lake and shoreline congestion; multi-use conflicts; degradation of the environment; and decreased property values.

Vacant Land

Vacant land includes fallow agricultural land, forest, and wetland areas. This category generally includes some land partially occupied by homes but not kept in a mowed, landscaped state. This category does not include areas within the Rogue River State Game Area nor land within any of the other land use categories described on the preceding pages.

The large amount of vacant land can be looked upon from a preservation standpoint and/or a development standpoint. From the development standpoint, the large amount of vacant land could signify an area ripe for the development of new housing. From a preservation standpoint, the vacant land could be viewed as something to be protected from development.

Existing Land Use - **Table 4** lists the acreage of various land uses in the township. **Table 5** lists the population and housing density in the township and its percentage of the total. A summary of existing land uses in Solon Township for 2016 is shown in **Figure 5**.

The categories of existing land use include:

- **Residential** - Areas and structures for single-family, duplex, multi-family, and mobile home residency are included in this category. Approximately 9,275 acres are devoted to residential use. Residential land uses are found in a scattered fashion Throughout nearly every section of the Township.
- **Commercial** - Areas used predominately for the sale of products and services are included in this category. Such uses consume roughly 273 acres. Most are found along 17 Mile Road (M-46) just west of US-131.

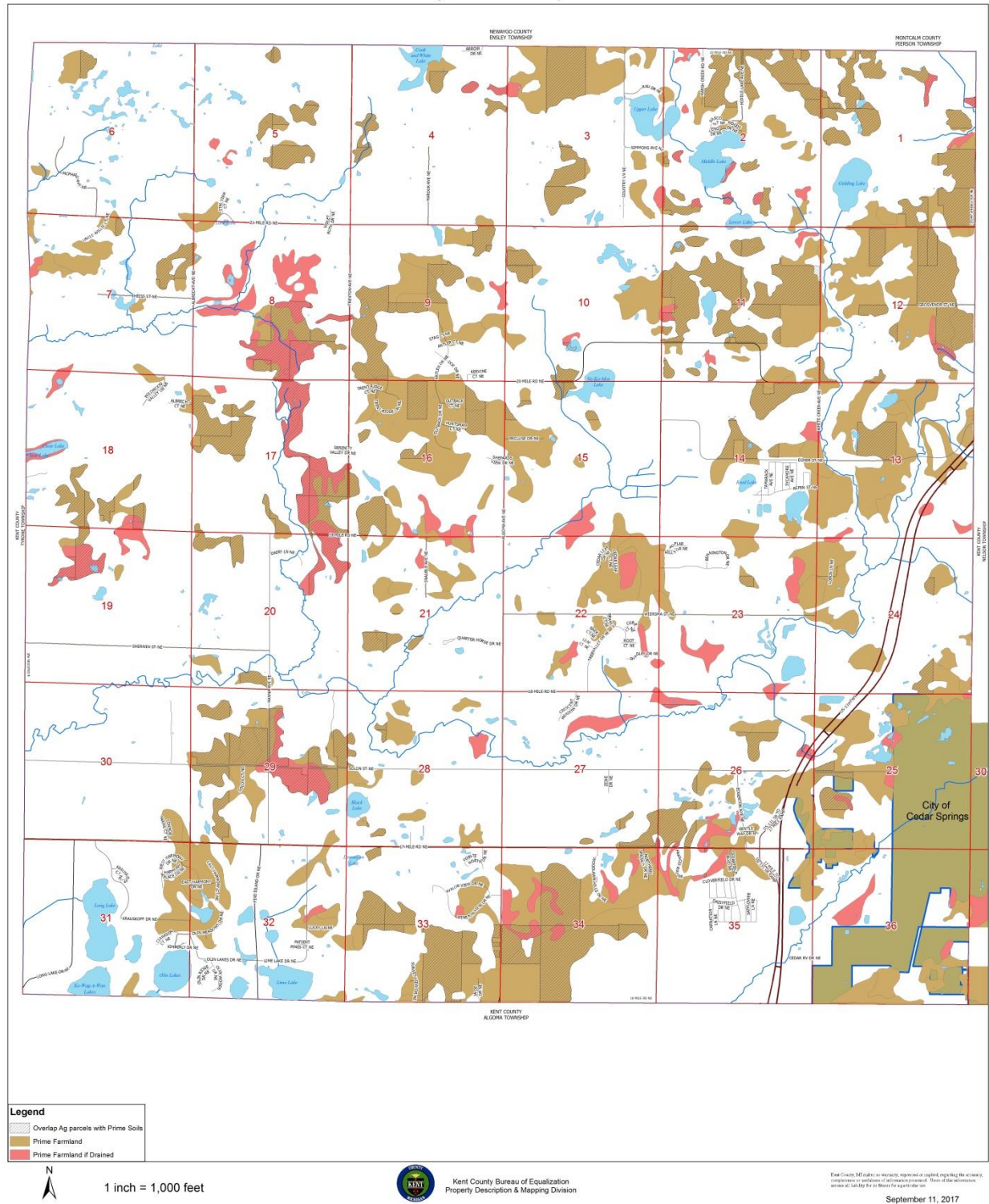
Table 4 Land Use Acreages 2011			
Land Use	Number of Parcels	Acreage	Percent
Vacant / unused	400	3,422	15.73
Agricultural	108	5,311	24.42
Residential	2,046	9,275	42.64
Commercial	44	273	1.26
Industrial	7	80	0.37
Public & Institutional	44	1,520	6.99
Mixed Agricultural, Vacant, Open Space	33	1,870	8.60
TOTAL	2,682	21,751	100.00
Source: Kent County Property Description and Mapping			

- **Industrial** - Light and heavy manufacturing plants and industrial parks are included in this category. Industrial uses include auto parts, trailer manufacturer, log home manufacturer, coffee roaster, plastics, race engine builder, diesel engine development, two junkyards, and several small, specialized industrial facilities. These plus others collectively occupy approximately 127 acres.
- **Agriculture** - Within Solon Township, there are several farming operations. Collectively these farms cover about 5,311 acres of total land. This equates to roughly 16% of the Township's total land area. Of this total, roughly 2,755 acres are in crop land. The major cash crops grown in the Township are corn, hay, soybeans, wheat, asparagus, potatoes, sunflowers, blueberries, and seed corn. Apples are the principal fruit.
- **Woodlands and Open Space** - Undeveloped woodlands cover approximately 30 percent of the Township. Apart from an extensive wooded area in the west central part of the Township, most wooded areas are in conjunction with the wet soils and steep slopes associated with the drainage network. Open space includes scattered stands of undergrowth, saplings and isolated wetland areas adjacent to streams and creeks. The largest expanses of open space are found in the south central and southeast areas of the Township. Roughly 10% of the Township's total land area falls in this category.
- **Recreation** - Recreational lands include both public and private facilities. Among the public recreational facilities are a proposed Township park facility, and Kent County park land surrounding Long Lake and Duke Creek. Long Lake park is well developed with considerable improvements widely used by the public. Private recreational facilities include an RV campground/trailer park. Recreational lands collectively represent over 500 acres of land.
- **Transportation** - The amount of land devoted to transportation totals over 1,200 acres. The majority of this is within road and highway rights-of-way. Other related transportation uses include a private airport, power transmission lines, and a gas pipe line substation.

- **Woodlands and Open Space** - Taken collectively, the existence of very large areas of woodland, agricultural land and undeveloped area as well as land devoted to recreation and transportation, account for much of the Township's total land area. These features give the Township the rural flavor that most residents enjoy.

Figure 6 Agricultural Analysis classifies the soils of the Township that are considered "prime" based on their favorable characteristics for crop production, in combination with active farming activity.

Figure 6
SOLOON TOWNSHIP
 Agricultural Analysis



Significant Township Features

Fisk Knob

Fisk Knob is in section 4 of the Township on Algoma Avenue less than a mile south of 22 Mile road. Fisk Knob is the highest point of elevation in Kent county, at 1,072 feet above sea level. It is located within a small, open 4-acre county park in northeast Kent County. Visitors can use the small parking area just off Algoma Road then hike up the short-gated drive to the peak. As the highest point of Kent County, it has a decent view of the surrounding countryside of western Michigan. A cell tower is a good landmark. Also, for hikers (who might also be county Highpointers), Fisk Knob is located about 4.5 miles east of the North Country National Scenic Trail (NCT), and about 5.5 miles west of the White Pine trail.

City of Cedar Springs

Cedar Springs is a friendly crossroads town, situated at the junction of 17 Mile Road (M-46) and US-131, and only a few minutes from Grand Rapids. Established as a lumber town in 1856, Cedar Springs boasted numerous lumber and shingle mills. The town was the northern terminus of the Grand Rapids and Indiana Railroad for two years and also was the crossing point for the east to west running Toledo, Saginaw and Muskegon Railway, which became the Grand Trunk Western Railroad, built through the town in 1888. The community was named for the fine springs bordered by a cedar grove. Known as "Red Flannel Town," this city is the home of the famed red flannel used by hunters, as well as Santa Claus! It has a diverse business base and is a convenient location for shopping. It is also centrally located near numerous recreational areas, lakes and parks. Cedar Springs has a diverse retail business district and a burgeoning industrial base. The downtown has a variety of businesses including restaurants, micro-brewery, hair salons, car dealerships, and banks, among others. The community has vast possibilities for future growth.

Cedar Springs Public School district which encompasses 110 square miles serves the city and portions of Kent, Montcalm and Newaygo Counties. Cedar Springs Public Schools has a current enrollment of 2,768 students located on a single 100-acre campus near downtown Cedar Springs. The school system is currently completing a \$27 million building and renovation project. Cedar Springs High School has received North Central Accreditation.

Rogue River State Game Area

The Natural Resources Commission dedicated the Rogue River State Game Area (RRSGA) in 1951 for game (wildlife) management and began the land acquisition process. The lands have been purchased with a variety of funding sources, but most of the acreage was purchased with Game and Fish Protection Funds, Pittman-Robertson Funds, and Recreation Bond Funds. The RRSGA is in northwest Kent County. The eastern portions of the RRSGA extend into Solon Township. The State Game Area is primarily a forested area and has been managed for forest wildlife species such as wild turkey, white-tailed deer, ruffed grouse, cottontail rabbit, pileated woodpecker, and other wildlife and the related recreation opportunities they provide. The RRSGA has expanded to 6,202 acres, of which approximately 1,374 acres lie within the boundaries of Solon Township.

The RRSGA consists of smooth, outwash plains with gently rolling, mostly forested land. The second growth upland forests include oak, aspen, and natural pine stands. The lowland forests along the Rogue River, Spring Creek, and Duke Creek floodplains are dominated by maple, ash, and tamarack. Agricultural fields, planted pine stands, and small forest openings complete the landscape. Most of the RRSGA is a contiguous designated unit in northern Kent County.

Long Lake County Park

Long Lake Park consists of 230.8 acres providing a tranquil setting for many group events and offers great opportunities for swimming, fishing and non-motorized boating. The park is open between May 1 and October 31, from 7 am to sunset.

The highlight of the park is Long Lake itself covering more than 50 acres. The park encompasses the northern two-thirds of the lake, with a mile of shoreline featuring forested picnic areas, wetlands, and a public beach. With 2/3rds of its scenic shoreline within the boundaries of Long Lake Park, it's a great place for kayaking and canoeing. The park has a boat launch for non-motorized boats (small electric motors allowed) located off Long Lake Drive NW, just south of the picnic areas on the west side of the lake. Fishing is popular at the park, either from the designated fishing areas along the shore or from a boat on the water. Visitors will find an inviting sand beach at the northeast corner of the lake. Swimming is free and a playground is nearby. There are no lifeguards. Two playground structures are available. One is near the beach and the other is in the wooded picnic area on the west side of the lake, off Long Lake Drive NW.

The Park includes six picnic areas available for group reservations, an open picnic shelter, and an enclosed shelter-house available for picnics and other group events such as weddings, meetings, reunions and parties. These may be reserved for a fee. If picnic areas or the open shelter are not reserved, they are available first-come first-served for no fee. The group reservation facilities at Long Lake Park are found on both sides of the lake. The enclosed shelter on the northeast side of the park is across the main drive from the park's beach. The shelter accommodates up to 150 people and includes a kitchen and restrooms. The park's six picnic areas surround the lake, and each has tables to seat about 125 people. The open shelter also offers an unobstructed view of the lake and is near a playground.

North Country National Scenic Trail

On **March 5, 1980**, Congress passed legislation authorizing the **North Country National Scenic Trail (NCT)**, culminating efforts that began even before the National Trails System Act of 1968, which established the Appalachian and Pacific Crest National Scenic Trails. The authorized route that the NCT follows today differs significantly in many areas from some of the initial proposals. The trail's current route is the direct result of public input received during public meetings.

Spring, summer, fall or winter, the trail offers something for everyone. The North Country Trail is the longest National Scenic Trail in the United States (4600 miles when complete). It is administered by the National Park Service and passes through 12 National Forests.

In Solon Township, south to north, the route follows Pine Island Drive to Olin Lakes Drive, then to Krauskopf Road through Long Lake Park, then continues northeast through the Rogue River State Game Area to Solon Road, then to North Division Avenue and west into Tyrone Township, about 4 miles in total length within the Township.

White Pine Trail - During the 1990s much of the old railroad right-of-way between the north side of Grand Rapids and Cadillac was taken over by the Michigan Department of Transportation. The Michigan Department of Natural Resources purchased the right of way with a grant from the Michigan Natural Resources Trust Fund and the right of way was turned into the White Pine Trail State Park. The Fred Meijer White Pine Trail State Park passes through Solon Township. A new staging area was built in 2010 with more amenities planned for the overall facilities as funding becomes available. The Trail is non-motorized and is first and foremost a trail for the casual user.

Private Campgrounds

Lakeside Campground - A Modern Campground and RV Park located in a convenient suburban setting. Within the park's 35 acres, there are 157 campsites with separate areas for seasonal sites and sites used for daily or weekend camping. Seasonal sites are equipped with full hook-ups while sites used for daily or weekend camping have either full hook-up or water/electric hook-ups. All sites are generally large, and each has its own picnic table and fire ring.

There is something for all ages including summer fun on the sandy swimming beach with an off-shore raft; a lake annually stocked with trout, bass, catfish, perch and pan fish (a fishing license is not required); kayak and paddle boat rental; free Wi-Fi (wireless internet); a large clubhouse and recreation hall with pool tables, ping-pong, video games and an outdoor pavilion; planned activities; horseshoes, basketball, volleyball, an on-site golf practice area and a playground. The Recreational building has tables with seating for up to 80 people and can be used by small or large groups that are camping here. Our camping cabin includes a double bed and 2 single bunks, refrigerator, kitchen table, A/C, outdoor porch, picnic table, and fire pit.

Duke Creek Campground - Spacious camping just 18 miles north of Grand Rapids with heated swimming pool, playground, petting farm and more. 114 sites. There are camper cabins and pets are welcome. The campground features 36 wooded acres, heated swimming pool (Memorial Day through Labor Day), clean restrooms, hot showers, well equipped playground and store, free Wi-Fi, indoor game room, 18-hole Disc Golf, natural woods & stream for exploring and adventure fishing in official trout stream (license required), Basketball, Tetherball, Horseshoes, Volleyball, modern laundry facilities.

Land Use Related Community Services Within Solon Township

The primary infrastructure elements over which the township has some degree of control or influence include Township Park, sanitary sewer, storm sewer, water, transportation and pedestrian systems.

Failure to plan for appropriate infrastructure may be expensive and frustrating for all involved. A good plan can provide many benefits. These include economic and financial advantages, helping to retain community character and reducing public safety concerns related to transportation and environmental contamination.

Residential use can increase local traffic significantly, along with costs for road maintenance. These increases may be tempered by focusing the highest densities of development around easy access to already improved roadways. Pedestrian and recreational use of rural roads is common and should be part of transportation planning for the township.

Sanitary Sewer and Water Services

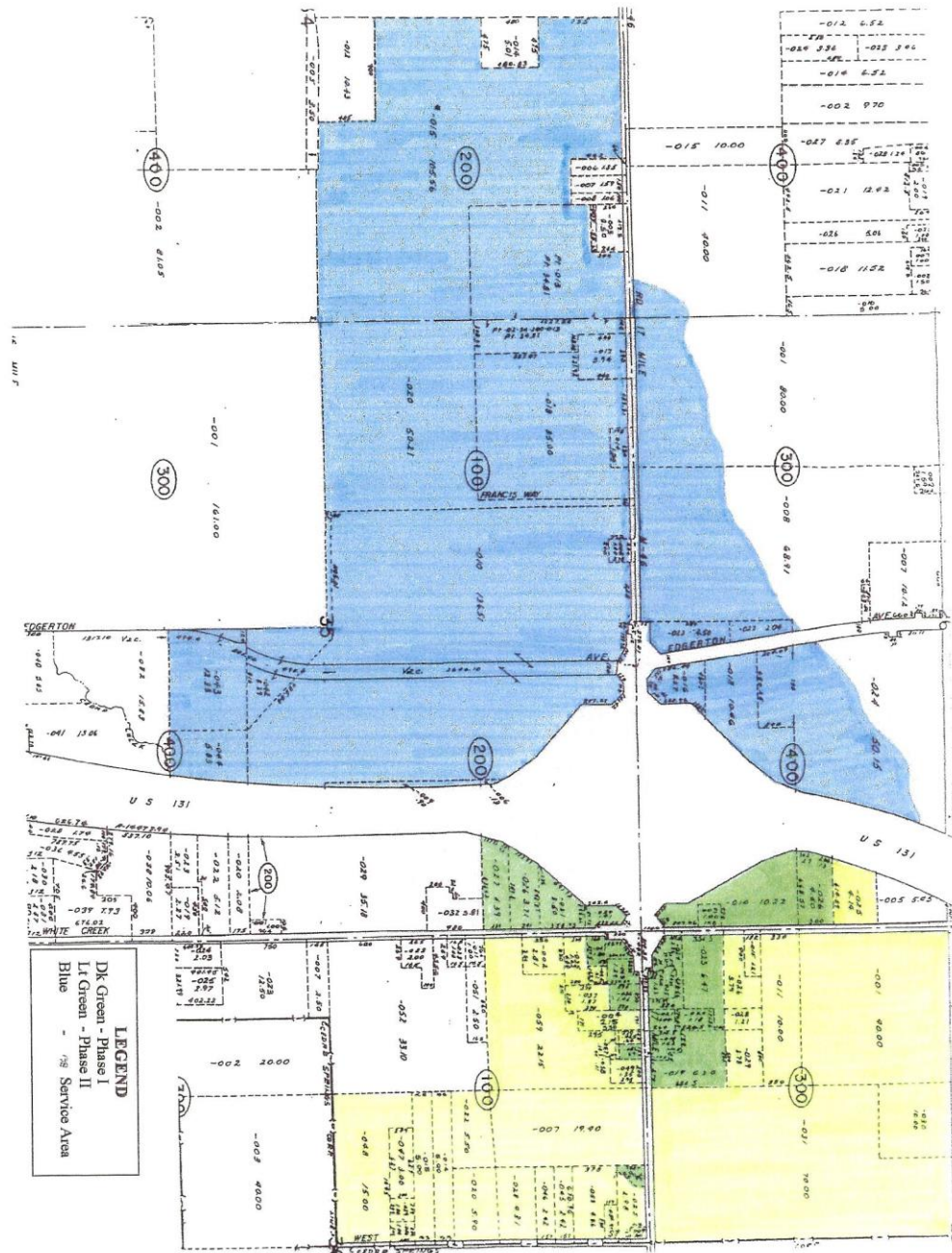
The principal utilities needed for more intensive development are water service and sanitary sewer disposal. These services may be provided in several ways, ranging from individual on-site wells and septic tanks to public water and sanitary sewer utility systems. Each type of land use has its own unique usage level and demand for these utilities.

The majority of Solon Township is rural, being primarily agricultural or residential in nature with densities that are and will continue to be influenced by the lack of public utilities. In these areas, careful attention to the soil structure is needed to ensure that groundwater supplies are protected from contamination by an excessive number of individual septic systems. This does not suggest that public water and sewer should be planned for rural areas.

Public water and sewer facilities are currently available near the US-131 and 17 Mile Road (M-46) interchange in accordance with a 425 Agreement adopted between the City of Cedar Springs and Solon Township adopted in 2001. The 425 Agreement Area is divided into three areas of development as shown within the map below; “Phase 1” consists of approximately 48 acres within the City of Cedar Springs, “Phase 2” consists of approximately 217 acres transferred to the City upon development requests and the “Service Area” of approximately 446 acres intended for sewer extensions provided that the Township pays all construction costs and the proposed extension(s) meet capacity requirements. Under limited circumstances the 425 Agreement also states that water may be extended if warranted. Future water supply construction is dependent upon a demonstrated need and local resident petitions.

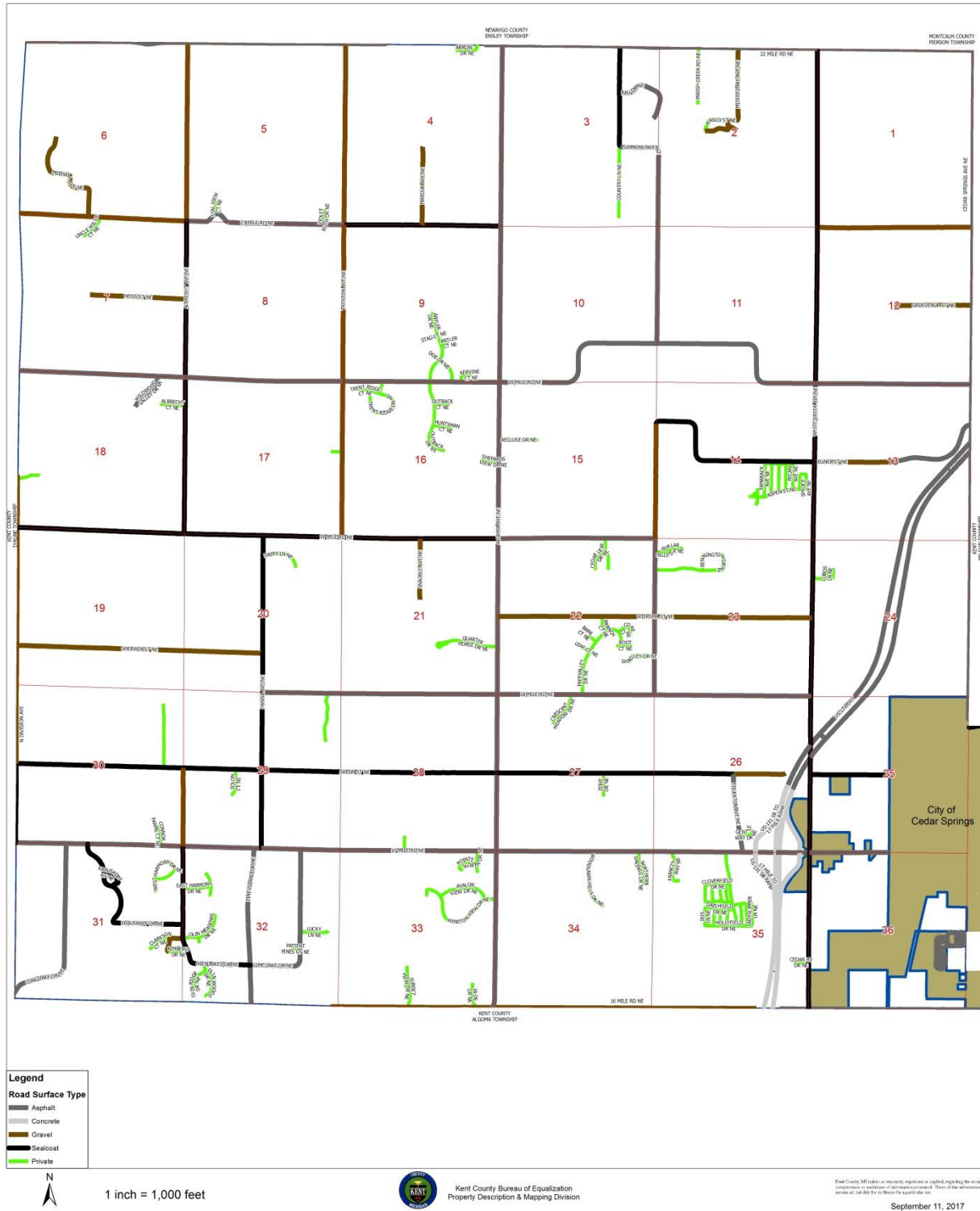
Sandy soils, limited aquifer protection and high-water tables in the Township continue to make groundwater susceptible to contamination from septic tanks and drain fields. These conditions are likely to increasingly limit the future use of septic tanks and drain fields in many portions of the Township.

425 Agreement Area Map



Transportation System – US-131, which travels diagonally through the southeast corner of the Township, is maintained by the Michigan Department of Transportation (MDOT). The average daily traffic volume in 2009 on this highway within the Township was estimated at approximately 32,400 vehicles at the Cedar Springs exit. Also, in 2009, MDOT estimated that 17 Mile Road (M-46) had an average daily traffic volume of 1,855 vehicles near the eastern terminus with US-131.

Figure 7
OLON TOWNSHIP
 Street & Road Classifications



Road and Pedestrian Systems

As development intensifies, new industries, homes, offices, and commercial services create traffic demands on the road system. This is particularly true where new development occurs in areas previously planned for low intensity uses, such as large lot single-family homes.

Solon Township has direct, convenient, access to US-131. In addition to the attraction for commercial uses, convenient highway access also allows commuters from Grand Rapids to continue to move to the Township. As growth continues, increased demands will be placed on the road system. Residents in these areas are particularly sensitive to traffic increases; even small jumps in traffic volumes become noticeable. Residents will often voice concerns about the “heavy traffic” on their road, even though the roadway is easily capable of handling the traffic.

A street hierarchy of highway, arterial, collector and local streets exists within the township. Each street in the Township can be classified into one of these categories based upon its use. Highways are designed for high volumes of traffic at high speeds, generally over long distances. In the case of Solon Township there is one highway, US-131, that borders the Township on the east side. As highlighted in other parts of this document, US-131 serves as a driving force for future growth and development within Solon Township and surrounding communities by allowing convenient access to employment within the Grand Rapids region.

Arterial roads, which are in many cases State trunk lines, provide direct access between cities, villages and other urban areas. Their main function is to collect and distribute traffic to and from collector streets and local streets to carry traffic to destinations and highways. Access management is important along these roadways in developed and developing areas.

17 Mile Road (M-46) is an east–west state trunk line highway between Muskegon and Port Sanilac, terminating near Lake Michigan and Lake Huron on each end. Except for the north–south segment that corresponds with US -131 between Cedar Springs and Howard City, 17 Mile Road (M-46) is practically a due east–west surface highway.

Collector roads, which are often country primary roads are smaller than arterial roads and carry less traffic. They are intended to help distribute traffic from highways and arterials to local streets and individual properties along the roadway. In addition, they can perform similarly to arterial streets in that they can carry traffic to adjacent communities and beyond, but in smaller traffic

volumes and often in disjointed travel patterns (i.e. some country roads may terminate and require travelers to take another nearby roadway to continue a directional trip).

Local streets are designed primarily for access to individual lots and generally discourage through-traffic. In rural areas, some local roads may be dirt or gravel roads and others may be paved cul-de-sac subdivision streets as a community begins to develop. Private Streets must be distinguished from public streets for purposes of maintenance, but all roads serve a network function according to their classification.

Overall as the Township develops and new subdivisions, site condominiums, or other residential projects are considered, it is important to implement a street and associated pedestrian network to ensure that adequate circulation is provided between abutting development projects, keeping in mind the functional purposes of the various streets. More and more, these local streets are not public but private streets. The Township should work towards providing street connections, versus having numerous cul-de-sacs, to better distribute traffic throughout a well-planned street network. Rather than having each development provide singular access to the major public street, project approvals should include provisions for stub streets and stub pedestrian ways to vacant properties that may be available for future development and connections. Street networks improve overall traffic flow by allowing residents to access nearby residential areas without traveling on the main streets of the township. In addition, circulation between projects improves access for emergency vehicles.

Connected pedestrian ways, which may include sidewalks, bike paths or trails provide recreational and transportation opportunities for residents old and young. Young children might use sidewalks and or trails to get to and from a friends or grandparent's house and older adults might use them as a place of recreation and social interaction with neighbors.

Similar to residential areas, new commercial and industrial areas should have interconnected streets to promote accessibility and utility of sites. In addition, utilization of shared driveways and frontage roads should be used to improve access and overall safety along major roadways.

As noted within the Solon Township/City of Cedar Springs 425 Agreements, the consequences of not managing access within heavily used areas include:

1. Potential for loss of efficiency in the roadway system, accelerated deterioration, and traffic and land use conflicts
2. Poorly planned strip commercial development
3. Proliferation in the number of private driveways
4. Potential for more traffic conflicts, crashes and congestion
5. Public investment in Michigan's roadways will be diminished
6. Roads might have to be widened at great public expense to make up for capacity lost to poor traffic operations
7. Inability to provide adequate traffic service
8. Use of neighborhood streets to bypass congested intersections

Common access management techniques include:

1. Consolidating driveways
2. Requiring frontage roads or rear service drives
3. Requiring driveway spacing standards on the same side of the street
4. Requiring opposing properties to have entrances that line up or are significantly separated to limit the possibility of "left turn lock up"
5. Require appropriate spacing of driveway entrances from intersections to provide ample room for access to a site away from the stop and go traffic on the adjacent roadway
6. Requiring deceleration lanes into major sites to allow through traffic to continue and not be stopped or significantly slowed down by turning traffic
7. Require exits of heavily used driveways to have a sufficient "throat" depth at the entrance to allow cars to stack up at an exit without inhibiting the circulation and activity occurring on the site that they are leaving

CHAPTER 4 – LOCAL AND REGIONAL TRENDS

Adjacent township zoning and land use - Land uses in the areas surrounding Solon Township vary from agricultural, rural residential to commercial and higher density residential, which is reflective of the Township's diversity in land uses.

Solon Township's southern border with Algoma Township is mostly intended for future agricultural land use, except for the section just south of Cedar Springs, which is planned residential use, as is the adjacent land in Courtland Township southeast of Solon. To the north of Solon Township are Ensley and Grant Townships in Newaygo County, and Pierson Township in Montcalm County, all mostly planned for agriculture, except for the 22-Mile and US-131 intersection in Pierson Township, that is planned for residential. The west portion of the Township borders Tyrone Township, which has entirely agricultural uses planned along that border, along with Sparta Township in the southwest corner of Solon. The eastern Township border is Nelson Township, entirely planned for residential development.

Population and housing growth trends - **Table 6** presents population projections for Solon Township in five-year increments from 2015 to the year 2035. The projections show a steady, continual population growth. Based on the average growth rate over the last 35 years, growth is projected at 1.32 percent per year. At that rate, Township population is expected to increase by (411) by the year 2020 and by another (1,405) by the year 2035.

Additional population will likely increase the need for commercial establishments. The township should expect increasing demand for commercial and industrial development. However, as has historically been the case, much of this demand will be absorbed in Cedar Springs.

While we can assume that the population projection will be reasonably correct for 2020. As we have seen in the 2010 Census, each home adds approximately 2.59 persons to the Township population. If we assume that the average number of persons per household over the next ten years is 2.5, the township population should increase by approximately 1,250 by the year 2020.

When population projections are compared with neighboring townships, Solon's projected growth rate would fall somewhere in the middle. These growth pressures when added to Solon's expected population increase affords much attention on Township development limitations

(particularly residential sanitary sewage disposal). Population growth has also historically created an increase in local retail and service demands and employment opportunities. The Township must anticipate these demands if it is to maintain the rural setting enjoyed by the most majority of Township residents.

Table 6
Solon Population Trends

	2010	2015	2020	2025	2030	2035
Population	5,974	6,234	6,645	7,084	7,552	8,050
% Increase		4.35%	6.59%	6.60%	6.60%	6.59%
Forecast by the Robert Toland Consulting						

Population forecast based on Single-family Residential Building Permits

	2010	2015	2020	2025	2030	2035
Building Permits			29	33	36	39
			141	157	173	190
Population	5974	6234	6600	7006	7184	7676
Forecast by the Robert Toland Consulting						

Anticipated Development - Solon Township is strategically located within an active regional expansion of the Grand Rapids area. This region is named the Grand Rapids MSA (Metropolitan Statistical Area). Solon Township's proximity to major employment centers within this metropolitan area, coupled with its natural resource assets, and quality school systems provide the ingredients for sustainable and increased growth. Commercial development is anticipated near the US-131 and 17 Mile Road (M-46) corridor.

The proximity of larger regional market places creates opportunities for local residents to commute to places of employment. As the Greater Grand Rapids region continues to grow both in terms of employment opportunities and population, the residual impacts of that growth should result in continued residential development. Recognizing the potential of the local real estate market, the Township should also provide appropriate locations for new retail and office development. The Township should accommodate limited commercial growth and potentially some low impact high tech industrial development.

According to population forecasts it is anticipated that approximately 1,318 new residents will make their homes in Solon Township by the year 2030. This population increase would likely create over 500 new homes based on the average household size for Solon Township, over the next fifteen years. However, there have not been any new residential developments in Solon Township in several years.

Community Context - The question is in what context will this new residential development occur? Will it be in the form of large five and ten-acre residential parcels, or will it take the form of more traditional higher density development reflected in the newer residential developments and subdivisions. Similarly, as new residences are built, new retail uses to satisfy the demand for consumer goods would be expected. It is important that the appropriate location and configuration of these retail areas be determined. Ideally, these new developments should be grouped together to provide linkages between non-residential land uses and adjacent residential neighborhoods.

Regional Real Estate Market - The Grand Rapids MSA is rapidly being viewed as an extension of the Chicago market and the economic hub of Western Michigan. According to recent forecasts this area will become more reliant upon the healthcare and bioscience industry and other developing and expanding technologically advanced industries. These industries are expected to contribute to the overall health of the area. The state of Michigan has plans to invest \$2 billion over the next 10 years in the bioscience sector to spur job growth in this market segment. These monies are aimed at life-sciences, advanced automotive in manufacturing, alternative energy and homeland security.

US-131/17 Mile Road (M-46) Public Utility Capacity - The public utility network, which determines the intensity of land development and ultimately the pace of development, is generally adequate and has capacity to serve the intersection area in the Township. While the water and wastewater systems can serve anticipated development, there are areas that will require an infusion of public/private funding as development increases. Solon Township has an agreement with the City of Cedar Springs to provide water and sanitary sewer service to the intersection area. Beginning in January 2000, Solon Township and the City of Cedar Springs effectuated a 50-year agreement to provide public water and sewer services for certain areas of the Township located west of the City. The agreement is intended to address the issues of City water and sanitary sewer service to parcels outside the city limits in one of three ways:

First, designated property for which City ***water or sanitary sewer*** has been requested is to be immediately conditionally transferred to the jurisdiction of the City (generally, "**Phase 1**").

Second, designated parcels lying east of US-131 are to be conditionally transferred to the City when there is a request for ***public water or sanitary sewer*** services, or, for parcels already utilizing such service, the owners of the properties request transfer to the jurisdiction of the City (generally "**Phase 2**").

Third, designated property lying west of US-131 would be provided ***City sanitary sewer*** service without any transfer (conditional or otherwise) or any annexation (generally, "**Service Area**"). The Township should guide development into this service area as much as possible.

CHAPTER 5 - PUBLIC PARTICIPATION

A significant effort was made by Solon Township as part of the Master Plan update to determine the views of its citizens. One key step was the use of a Community Attitude Survey designed to provide Township officials with direction regarding the Master Plan. The survey obtained information on various planning issues and helped identify common growth and development concerns that they see happening in their community; and a chance to offer suggestions, provide insight; and strengthen the Master Plan through community involvement.

Community Questionnaire – All Township property owners received a postcard inviting them to participate in the on-line survey, and 165 questionnaires were completed. The property owners were asked to describe what they believe is the primary reason residents locate in Solon Township. The top-ranked response to what residents believe is the Township's greatest asset was the “*rural character*”. Next in importance was “*proximity to Grand Rapids*” and third was “*proximity to US-131*”. Also, mentioned in the written responses was affordable housing.

Summary of Questionnaire Responses - Overwhelmingly, as might be assumed, **93%** of respondents own land that is their primary residence. **Eight** percent own agricultural land and **9%** own vacant land. **Forty-three** percent of people have owned their land for 11 to 30 years and **30%** have owned their land for 5 years or less. That is a very high percentage of recent property owners. The highest responses indicating a preference for parcel sizes was, 1.1 acre to 5.0 acres (**43%**) and 1.0 acre or less (**29%**). Respondents are evenly split on their support for the division of land into smaller parcels. It is interesting to note that most respondents (**54%**) would **not** like to see more aggressive enforcement of zoning regulations.

Both drinking water quality and septic systems appear to function very well. In fact, **90%** of the respondents in the Township indicated that their drain field was good. Most respondents (**71%**) also felt that their drinking water quality was good.

Bicycle ridership is about evenly split between riders and non-riders, but **66%** indicated that they currently utilize White Pine Trail. **53%** indicated that they use Long Lake Park but only **30%** utilize the Rogue River State Game Area. A higher number (**73%**) said they **would** use the proposed Velzy Park at the Township Hall property and **58%** indicated they **would** use the proposed North Country National Scenic Trail. With moderate participation rates for local recreation opportunities,

respondents are evenly split as to whether the Township should do more to create traditional recreation opportunities like tennis, basketball and ball fields, and only **42%** feel that the Township should acquire land for future parks and playgrounds. However, **48%** of the respondents would be willing to pay a small millage to provide better recreational opportunities. In fact, **60%** would like to see the Township create more opportunities for biking and hiking and **52%** would like to see the Township create more opportunities for lake and creek access.

Regarding residential zoning in the Township, **63%** favored leaving the one-acre minimum lot size in the AR – Agricultural Residential Zoning district the same as it is. Similarly, for R-1 Residential zoned areas **74%** of respondents favored retaining the minimum lot size of 1 acre. The same for the R-3 Lake Front Residential Zoning District, **76%** of respondents thought that the 15,000-square foot lot size should remain the same.

Regarding environmental issues, **81%** of respondents favored zoning controls to protect surface water quality in rivers and streams. When asked about natural features, **82%** felt that protection of the drinking water supply was most important and **73%** felt that water quality of lakes and streams was important.

Most respondents (**58%**) feel that generally parcel sizes of 1 to 5 acres should be encouraged in the Township, and (**45%**) feel that if the Township were to create a new zoning district for lower density residential development, that lot sizes should be between 1 and 3 acres.

Only **45%** feel Clustering lots to preserve open space is an effective way to protect the rural feel of the Township. The majority (**65%**) believe that large wooded lots is the preferred form of future residential development. Regarding accessory buildings, **69%** would like to see them limited in number and sized proportional to lot sizes.

The greatest perceived need for senior housing is considered by **65%** of the respondents to be a retirement community. A significant percentage (**59%**), feel that an Assisted Living Facility would be appropriate in the Township.

There does not appear to be much of a priority for economic development issues in the area. When asked if a gas station or convenience store would be appropriate in their neighborhood, **71%** responded in the negative.

With the desirability of living in the township increasing, one of the main attractions, “rural character”, is in danger of being lost. Many of the written comments focused on this issue. Specific responses to the 2016 Survey that were aimed directly at some of the issues revolving around rural character and their percentages were as follow:

- 82 percent of respondents felt that protecting ground water (well water) is important.
- 81 percent of respondents support increased controls on development to protect surface water quality (lakes and streams).
- 58 percent thought that residential lots in the township should be larger than 1 acre.
- 55 percent *disagreed* that housing developments with clustered lots was an effective way to preserve rural character.

The desire of people to live within rural areas for quality of life reasons like those expressed by respondents to the Solon Township Community Attitude Survey exists across the United States. According to the 2002 National Family Opinion Survey, conducted by the National Opinion Research Center of the University of Chicago, people have a strong desire to live within rural communities outside of large cities, such as within Solon Township. Since groundwater, lakes and streams, trees and wetlands were identified in the Community Survey as important to rural character, it is worth looking at these components and their characteristics more closely.

CHAPTER 6 – PLANNING DIMENSIONS

Planning dimensions are statements that become the basic framework for the development of the Master Plan. For plans to be meaningful in guiding future growth and development, they must represent the needs and aspirations of the community's citizenry and be realistic within a community's financial capability. This is best accomplished with planning dimensions which set forth both the qualitative and quantitative requirements of the community for the planning period.

Planning dimensions include a general growth policy, goals, population projections, and statements about future needs. In preparing these planning dimensions, the Planning Commission has relied on basic studies that provide a factual background relating to the past development of the Township. These studies are of value in determining the physical limits and opportunities of future development. All this data is reflected in the following planning dimensions.

Growth Policy - It is recognized that Solon Township is an integral part of the northeast Kent County area. Intergovernmental relationships include utilities, transportation (including US-131 and 17 Mile Road (M-46)) recreation, and employment centers. Past and future development of the Township has been, and will continue to be, greatly influenced by these various relationships. The Township, therefore, realizes that it cannot plan for its future development in complete isolation of the needs and growth trends of the balance of the area. Within this general framework, however, the Township also realizes that it is obligated to plan for its future in accordance with the needs and desires of residents. The following brief statements represent the overall growth policy based on recognition of both the Township's area wide responsibilities and responsibilities to the residents and landowners within the Township.

- **The Township recognizes that the potential loss of agricultural lands and unique natural resources to development is an irreversible loss not only to residents but the region, state, nation and future generations. It is therefore the intent of Solon Township to promote the preservation of agricultural lands and the conservation of unique natural resource areas such as wetlands and forests by directing growth and land uses considered incompatible with these resources to those areas of the Township considered to have a higher sustainability for such development.**

- **All development should consider the natural capabilities of the land to support the development and the available services and facilities necessary to assure the continued protection of the public health, safety and welfare of all Township residents.**

Accordingly, one of the challenges facing the community is to preserve wildlife corridors, forests, woodlands, and recreational trail opportunities in each individual development review.

Vision Statements -

- **Solon Township is a place where open space is valued. It continues to exhibit the physical beauty of undeveloped lands.**
- **Residents enjoy the rural atmosphere, appreciate the agricultural community, and value the benefits of hard work, good neighbors, and country living. While residents recognize that change may be coming, they want it controlled. It is important that Solon Township have a plan for growth. The Township needs to ensure that infrastructure needs coincide with specific areas of growth and development.**

Goal Statements -

Housing – provide environment for growth
Economic Development – provide environment for investment
Circulation – improve quality of roads, sidewalks and trails
Community Services – maintain an elevated level of fire protection services
Community Facilities – expand sanitary sewer and public water services
Community Design and Land Use – encourage creativity in residential areas
Natural Resources – preserve wetlands, wildlife habitat and forests
Cultural and Historic Resources – preserve historic sites
Open Space and Recreation – foster a comprehensive park system
Active Farming – maintain agriculture and the importance of farming methodology and practices in accordance with “Generally Accepted Agricultural Management Practices”

Policy Statements and Planning Goals - Planning goals are statements that express citizens' values and long-range desires for the future development of their community. As such, they provide direction for planning activity.

The following goals and objectives are intended to provide a policy roadmap against which decision makers can weigh their decisions. Land use decisions that conflict with or reverse the goals and objectives cannot be taken lightly. Even in the time since the last Plan's adoption in 2004, changes have occurred which were not necessarily expected. However, the directions set by the Township in 2004 remain valid. This is reflected in the fact that the goals and objectives for this 2017 Plan are essentially the same as those adopted in 2004. The establishment of realistic and meaningful goals and objectives is essential to an effective Master Plan.

A GOAL is a destination, a final purpose which a community seeks to attain. A goal should be a general statement.

An OBJECTIVE is a means to accomplish the goal. It may be very specific or detail a future action that should be undertaken.

Goals and Objectives

The following goals and objectives were established to outline a vision for the future of the Township. Additional comments that were reflective of the findings of the 2016 Community Survey are provided as supporting information.

THE ENVIRONMENT: The Township will strive to protect its environmental resources, such as wetlands, lakes, and other natural features, from the negative impacts of new development.		
OBJECTIVES	The natural resources of the township should be identified, classified as to their importance, and protected.	
	The Township should use appropriate ordinances to implement this Goal and determine other methods of maintaining and enhancing the unique natural features of the township.	
COMMUNITY SUPPORT	81% of respondents to the 2016 Survey supported increased controls on development to protect water quality. 82% indicated protection of the drinking water supply was important to them.	

TRANSPORTATION: An efficient and safe road network will be planned to ensure that residents and visitors can travel safely through the township.		
OBJECTIVES		Land use planning along major arterial roads should take into account the possibility of congestion, the need for safety, and the need to limit the number of driveways to maintain roadway efficiency. Primary streets should be preserved for traffic flow and adequate rights-of-way planned for future traffic.
		Intersections of major roads, such as Algoma and 17 Mile Road (M-46), should be protected from the negative impacts of inappropriate land use to preserve safety and efficiency of those intersections.
		The City of Cedar Springs/Solon Township 425 Agreement Plan and its goals and objectives should be utilized for all development proposed within the defined area.
		The Township should work with the Kent County Road Commission and the Michigan Department of Transportation to ensure that the road network is properly planned and maintained.
COMMUNITY SUPPORT		Many written comments were about the condition of Township roads.

LAND USE: Promote a balanced land use pattern with the predominant residential and rural character of the township supported by appropriate amounts of non-residential, commercial and industrial development.		
OBJECTIVES	General Objectives	Development projects should be designed to protect the rural character of the township.
		The potential impacts of new utility lines through the township should be determined.
		Move to larger lot sizes (2-acre minimum) in majority of current AR District, excluding identified areas that may be more suitable for one-acre minimum lot size.
COMMUNITY SUPPORT		45% of respondents to the 2016 Survey supported lot sizes of between 1 and 3 acres. 30% of respondents preferred lot sizes of between 3 and 5 acres.

LAND USE: Promote a balanced land use pattern with the predominant residential and rural character of the township supported by appropriate amounts of non-residential, commercial and industrial development.		
OBJECTIVES	Residential Development Objectives	Residential communities should be planned to provide safe, easy pedestrian access to recreation areas and other residential and public/quasi-public uses. Sidewalks, bike lanes, landscaped berms, traffic calming devices and other safety provisions should be a requirement in any area where vehicular and pedestrian traffic share a common space.
		Residential developments will be designed to preserve natural areas and the character of Solon Township.
	Commercial and Industrial Development Objectives	New commercial and industrial development should be directed to selected areas which have utility services or are planned to receive them.
		The Township should consider the availability of local commercial services in the City of Cedar Springs when planning for new development.
		The Township should discourage strip development along 17 Mile Road (M-46) to minimize traffic problems and unsightly development.
		The Township will strive to improve the visual quality of existing and new businesses within commercial areas and create opportunities for safe pedestrian and bike access to various areas of commercial sites (parking lots, greenspace areas, road frontages, and adjoining properties).
		The potential environmental and economic impacts of new industrial or commercial development should be carefully considered. These impacts may include such factors as noise, traffic, odors, drainage, delivery of services and groundwater pollution.
		Neighborhood Commercial development should be concentrated in selected areas.
COMMUNITY SUPPORT		Encouraging new businesses such as gas stations or convenience stores was not supported by 71% of respondents.

UTILITY SERVICES: The Township will determine the need and location of public utilities in the township.	
OBJECTIVES	Land use and utility services should be coordinated to ensure that greater intensity of growth occurs only where utility services are provided or planned.
	The Township will maintain a positive and cooperative relationship with the City of Cedar Springs to ensure proper coordination of sewer and water service extensions in the future.
	The City of Cedar Springs/Solon Township 425 Agreement Plan and its goals and objectives should be utilized for all development proposed within the defined area.

COMMUNITY FACILITIES AND SERVICES: The Township will provide public facilities and services that are adequate to serve the needs of township residents.	
OBJECTIVES	As the needs of its residents change, the Township should be prepared to respond with appropriate services and facilities.
	New community facilities and services should be placed in locations convenient to the populations for which they were planned.
	As development increases in the township, additional considerations will have to be made regarding safety services, including manpower, equipment, and training needs.

General Planning Goals -

1. It is the goal of Solon Township to encourage most new development to locate in areas where public utilities can be most efficiently provided.
 - a) Maintain the primary agricultural/residential zoning in most of the Township.
 - b) Establish larger parcel sizes in the agricultural areas.

2. It is the goal of Solon Township to accommodate commercial and industrial land uses east of the expressway and primarily commercial along the 17-Mile Road (M-46) corridor.
 - a) Maintain close cooperation with MDOT officials on any development which affects the interchange area or 17 Mile Road (M-46) corridor.
 - b) Encourage shared plan reviews for projects adjacent to the City and the Township.
 - c) Avoid “strip development” by encouraging development in “nodes”.

3. It is the goal of Solon Township to accommodate a wide range of safe, affordable housing in the Township.

- a) Provide adequately zoned land areas to meet community needs.
- b) Enforce zoning rules to eliminate rundown and non-conforming dwellings.

4. It is the goal of Solon Township to promote the preservation of unique natural resources and truly valuable agricultural land uses.

- a) Implement policies in Agricultural areas to discourage residential incursion.
- b) Preserve truly beneficial agricultural lands.

5. It is the goal of Solon Township to limit development of agricultural lands and development in ecologically sensitive areas.

- a) Identify agricultural lands and ecologically sensitive areas and promote zoning which would limit development.
- b) Cooperate with the MDEQ, Kent County Drain Commissioner, and the MDNR to identify and to limit development in agricultural areas and in ecologically sensitive areas.
- c) Protect and preserve existing agricultural lands and natural features of the Township.

Agricultural Preservation Policy -

- Promote the enrollment of viable agricultural land into the Farmland and Open Space Preservation Act (Michigan Public Act 116).
- Preserve farmland in agricultural zoned districts.
- Discourage development within areas containing agricultural land.
- Avoid the extension of water and sewer utilities into agricultural areas.
- Discourage the process of scattered rural housing developments and land fractionalization in agricultural areas.
- Assess agricultural lands for taxation based on their use as a means of assuring that the value of the land is not artificially inflated.
- Strive to have all parcels actively involved in commercial agriculture be zoned agricultural.

Residential Land Use Policy -

- Stabilize property values by protecting residential areas from the encroachment of incompatible land uses.
- Encourage residential development and planned unit developments in areas nearest existing utilities.
- Ensure that the areas intended to support the highest densities of residential development are within reach of existing or planned utility extensions.
- Conventional subdivision or condominium development by PUD or Special Land Use.
- Ensure that the density of residential development considers the natural limitations of the land in terms of the soils ability to accommodate on-site septic systems and the danger of pollution to groundwater supplies.

Commercial Land Use Policy -

- Accommodate a mix of commercial establishments which offer a variety of goods and services to meet the needs of the area's population
- Take advantage of the location of the US-131/17 Mile Road (M-46) interchange area and the ability to attract regional trade.
- Encourage sufficient parking and attractive appearances for commercial buildings and properties in the business district.
- Discourage commercial sprawl and strip development.

Industrial Land Use Policy -

- Accommodate the environmentally sound expansion and growth of existing industrial firms.
- Promote concentrated industrial development in those areas in which the provision of appropriate utilities exists, highway access can be made available, and potential environmental degradation and conflict with other uses can be avoided or minimized.

Environmental Policy -

- Promote the conservation and wise use of the Township's natural resources, including woodlands, water features, and open spaces.
- Prohibit development that encroaches on surface water features and discourage development in other environmentally sensitive areas of the Township to minimize the potential for damage to the environment.
- Minimize air, water, and noise pollution

Recreational Facilities Policy -

- Encourage more recreational opportunities utilizing Solon Township creeks.
- Encourage open space areas and recreational facilities as part of future subdivisions, planned unit development, and other major residential developments.
- Give priority to recreation development in pathways, trails, walking networks and scenic areas.
- Consider expansion of the Fisk Knob highpoint into a regional attraction featuring picnic areas, viewing platform, night sky viewing, trails, toboggan run, etc.
- Encourage cooperation with other units of government and area schools to develop and expand recreational facilities and programs for public uses.

Transportation Systems Policy -

- Direct most road improvements toward areas where growth is desired.
- Ensure that growth areas are adequately served by access to major collector streets and thoroughfares.
- Direct other road improvements to the worst situations first.
- Assess the traffic impacts of all proposed developments and the location of future streets.
- Limit or discourage dead-end streets.
- Ensure the capacity and function of existing roads, minimizing conflicts between through traffic and local traffic by regulating land uses, building setbacks, and driveway openings.

- Cooperate with the Kent County Road Commission and the Michigan Department of Transportation. Solon Township will encourage these agencies to undertake the necessary studies and to take the necessary steps to ensure that problem areas within their jurisdiction are dealt with in a timely and efficient manner.

Public Utilities, Facilities, and Services Policy -

- Provide the necessary public utilities and services to accommodate the growth of the Township's population while minimizing costs to the taxpayer through proper planning.
- Develop Township Design and Construction Standards for improvements such as private streets, ponds, lighting, parking lots, sanitary sewer, storm sewer and public water.
- Support the expansion of sanitary sewer and public water within the 17 Mile Road (M-46) Corridor.
- Promote the existing Township Hall as the municipal focal point for Township residents.
- Maintain the high caliber of fire protection.
- Routinely provide residents with the opportunity for input through public meetings.
- Maintain cooperation with Cedar Springs for the provision of utilities, the sharing of services, and the addressing of common issues and problems as a means of holding down overall costs and expense to the taxpayer while at the same time maintaining local control over the decision-making process.

Natural Resource Protection Policy -

- Promote the use of a Natural Features Overlay to include shorelines, steep slopes, wetlands, floodplains, high value agricultural land, archaeological sites, scenic vistas, and biologically significant sites.
- Strive to maintain substantial open space on all open space developments.
- Encourage Conservation Easements for land protection regulation and involve a land trust when practicable.
- Promote the protection of creeks and surface waters to prevent further degradation by working with watershed groups.

- Reduce severe sedimentation issues by working closely with the Drain Commissioner's office.
- Investigate techniques to reduce extremes in creek flow fluctuations.
- Preserve buffer strips on agricultural land adjacent to creeks and other surface waters.
- Reduce E. coli inputs from septic systems by promoting regular maintenance and inspection of septic systems and expand the use of sanitary sewers in high-risk areas.
- Encourage "Best Management Practices" in farming operations especially in areas adjacent to tributaries.
- Reduce storm water runoff through site plan review and include designated snow removal areas.
- Promote guidelines for reporting illicit discharges to appropriate authorities.

Rural Character Preservation Policy -

- Implement Lighting regulations.
- Limit lot sizes and traditional subdivisions.
- Encourage open space and wooded area preservation.
- Restrict wide spread industrial and commercial use
- Other than Agricultural activities, consider limiting earth-moving and soil disturbances to no more than one acre without a Special Land Use permit.

CHAPTER 7 - MANAGEMENT RECOMMENDATIONS

The goals and policies previously outlined, and analysis of the Township's physical, social, and economic makeup has allowed the formulation of four broad concepts that will be used in the development of this Plan. These include:

1. **Staging of Growth:** There is a fervent desire on the part of residents to preserve the Township's rural character and to promote agricultural preservation. In addition, growth trends and population projections indicate that there will be only moderate development pressure in the near term. It is therefore appropriate to establish development priorities for the various land use areas in the community. The staging of development will promote more orderly and concentrated development versus extensive sprawl development.
2. **Balanced Residential Character:** Varying income levels and life styles of residents, the availability of utilities and physical limitations of the Township, require that a variety of housing densities be provided. These include rural, rural estate, low and medium to high-density residential uses.
3. **Provide for a Variety of Commercial and Industrial Types:** Given the Township's accessibility to regional transportation arteries as well as the employment and shopping needs of residents, a range of both locally and regionally oriented types of commercial and industrial developments should be provided. To accomplish this, diverse types of economic incentives to locate in the areas best suited to meet individual business needs should be encouraged. The deliberate and objective allocation of distinct types of economic development in specific strategic locations will also help to avoid or minimize Future Land Use and traffic conflicts.
4. **Protect Environmental Resources:** Solon Township has a variety of environmental resources. These resources should be protected from development projects and be a part of a project when present. The township should promote the preservation and protection of wetlands and ground water by working with the Michigan Department of Natural Resources and/or the enactment of township ordinances addressing these resources.

Based on these four broad concepts, the following sections provide in detail what activities, actions and decisions can help to create a higher quality of life for all Township residents.

Providing for Housing Choices - It is important that the zoning ordinance provide sufficient options of development density to allow residential developers the ability to deliver a variety of housing styles and pricing. The residential classifications in the future land use plan have been updated to better reflect density and development character. The expansion of the allowable residential densities provides real estate options for working families. It is recommended that the use of Planned Unit Development (PUD) provisions and other innovative land development techniques be employed to achieve a diversity of housing opportunities. Long-range housing forecasts paint a picture much different from today's perspectives. In a publication entitled, "How Changes in the Nation's Age and Household Structure Will Reshape Housing Demand in the 21st Century," published by the Department of Housing and Urban Development in 2003, the character and dynamic of the housing market will reflect more households for singles and families without children. In 1960, 48% of U.S. households had children and in year 2040 this is forecasted to be 27%. Similarly, households without children are forecasted to increase to 30% in year 2040 from a low of 13% in 1960. Household growth between 2000 and 2040 estimates that 87% of new housing units will be without children, and of this amount, 38% will be single-headed households. Another notable trend is the number of persons becoming "senior citizens." In 2017, there were **75 million** baby boomers are on the verge of retirement. For the next twenty years, an average of **10,000 people** each day will reach age 65, which has historically been the retirement phase of life. Between 2000 and 2010, the number of people age 65 to 84 in the U.S. grew by 3.3 million. The number of persons turning 65 years old is expected to jump to 1,400,000 per year as the "baby-boomer" population curve hits their largest age cohort. The changing dynamics of the population will have implications at the local level. Population is forecasted to increase significantly in Kent County and the greater Grand Rapids area, including the US-131 corridor.

The Smart Growth Network, Sustainable Communities, EPA, American Association of Planning, National Home Builders Association and Urban Land Institute have lobbied the ideas and concepts of "Smart Growth" for more than a decade. In February 2007, the Planning and Zoning Center at Michigan State University unveiled a Michigan Smart Growth program to assist local communities with land use decision-making. These tenets should be implemented, including providing a variety of housing, encouraging mixed uses and promoting open space retention.

- 1) Create a range of housing opportunities and choices
- 2) Create walkable neighborhoods
- 3) Encourage community and stakeholder collaboration
- 4) Foster distinctive, attractive places with a powerful sense of place

- 5) Make development decisions predictable, fair and cost effective
- 6) Mix land uses
- 7) Preserve open space, agricultural lands, wildlife habitat, natural beauty, and critical environmental areas
- 8) Consider compact building design in appropriate locations

Connectivity (Linking People and Places) - A highly connected street system linking neighborhoods to schools, retail areas, and community facilities, improves emergency response times and increases the efficient delivery of municipal services. The design of residential neighborhoods has evolved, for better or for worse, from the traditional grid pattern to the curvilinear subdivisions and dead-end streets. The design of new residential developments incorporating curvilinear streets and the use of the “cul-de-sac” has evolved instead of the traditional street grid pattern. Our communities contain large numbers of cloistered neighborhoods with minimal, if any, connections to each other. The result is increased vehicular traffic with its associated congestion and increased car emissions (pollution), greater energy consumption, and reduced pedestrian walking and biking. The contemporary perception is that the use of the cul-de-sac provides a haven for children and an exclusive place to reside. Others conclude that cul-de-sacs create disconnected neighborhoods and reduce the sense of community and place. Overall, there should be a trend to abandon the cul-de-sac in favor of street connections where developments can be feasibly connected. In cases where a proposed subdivision lacks sufficient street connections, the Township should consider pedestrian connections between developments, along with the reservation of stub streets at the fringes of each development that could ultimately connect to adjacent developments in the future.

Further, it is suggested that as properties are developed, defined linear parks for trails and non-motorized paths be incorporated into the subdivision design, providing a pedestrian connection within the context of a broader scope linear greenway. As a means of providing greater seclusion, the use of a “commons” to create small neighborhood parks with larger residential setbacks from the street could be offered as a design solution. The Township should continue support of a community-wide trail and pathway network as the foundation of a walkable community. This network could then connect to a larger regional network.

Parks, Paths, and Trails - Solon Township is fortunate to have a local and regional biking and walking trail in the Township. The West Michigan Strategic Alliance Green Infrastructure Initiative encourages the establishment of these connector routes. There are also several park and

recreation facilities within or adjacent to the Township. Proximity to natural areas provides recreation opportunities for residents and visitors. Based on National Recreation and Park standards the Township should currently have approximately 60 acres of parkland to serve its resident population based on 10 acres of park and open space per 1,000 populations. Although there are several hundred acres of accessible park, game area and open space within the Township, the Township has been seeking to increase its improved park areas, particularly surrounding the new Township center. County and State acreages in the Township should be included in park and recreational inventory. It is recommended that new residential development provide usable open space and parkland or otherwise contribute to development of Township park and open space development.

Regionally, the Green Infrastructure initiative, supports the development of a regional trail system, encourages watershed management and planning, and farmland preservation. These areas of concern are key priorities addressed in this plan. The Township should continue its approach as a partner within the region and work with other municipalities on broader matters such as the regional greenway initiative.

The Township could consider a dedicated millage or alternative funding mechanism in order to create improved trails within the Township. Continued expansion of the trail network will be an investment in the future of the Township and strengthen efforts to connect neighborhoods and activity centers. This Master Plan is not recommending a significant increase of public park and open space acreage, except for the potential acquisition of smaller neighborhood scale park property when it is available, and the procurement or dedication of small parks and plazas along the trail network. Depending on the trail location these areas may include small playgrounds, interpretive areas, or small open spaces. The official Township “Parks and Recreation Plan” should document the locations of the existing and proposed township-wide trail system. It is along these routes that small Township-owned parks could be developed giving pedestrians the opportunity to walk, bike, or jog to these active park areas.

Recreational Development -

- Develop small parks along existing and future trail network
- Continued participation in the North Country Trail network
- Create a payment in lieu of parkland for new residential developments to create a Township acquisition fund
- Require sidewalks/trails/walking paths in all new residential developments

Anticipated Development -

The estimated population increase within the broader “Michigan Corridor” area (I-94 and I-96 corridors between Detroit-Grand Rapids-Niles) is estimated to increase over 1.0 million between 2005 and 2030. In this same period, the number of jobs is forecasted to increase by 1.2 million. As the average household size continues to decline, the number of housing units required to house that population will likely increase. For example, in 1970, the average household size was around 3.2 persons, which equated to 312 housing units per 1,000 people. In 2010, the average household size in Solon Township was 2.59 persons, which equates to 386 housing units per 1,000 residents. In other words, unless development patterns are adjusted accordingly, more people, living more independently, will continue to consume disproportionately more land.

- Up to potentially 1,318 new residents by 2030
- Potential for 527 new housing units at 2.5 persons per household
- Development likely to occur along 17 Mile Road (M-46) and Algoma Avenue corridors
- Forecasted population may demand upwards of 30 acres in commercial, retail, and office acreage
- Public Wastewater system expansion along the 17 Mile Road (M-46) corridor may be necessary to accommodate forecasted development
- Public Water system expansion along 17 Mile Road (M-46) corridor may be necessary to accommodate forecasted development
- Direct new development to areas with existing public water and sewer systems
- Consider whether expanded public water and sanitary sewer systems should be pursued, to enable higher density zoning districts for residential and commercial uses.

Commercial Development to Create Space -

- Establish commercial nodes primarily at 17 Mile Road (M-46) and Algoma and 17 Mile Road (M-46) and US-131
- Implement design and land development guidelines for commercial nodes
- Utilize 17 Mile Road (M-46) commercial overlay district to guide development
- Use the commercial nodes as gateways to the Township
- Encourage mixed-use development within the identified commercial nodes

Encouraging Redevelopment -

- Utilize Corridor Improvement Authority to provide infrastructure funding
- Encourage in-fill development when located within public water and sewer services areas

City/Township 425 Agreement – It is recommended that the Township attempt to re-negotiate the 425-agreement from 2000. There is potential for greater development adjacent to the City that would benefit the City in exchange for extension of water and sewer utilities at reasonable rates to the west side of the expressway. It is logical that extension of utilities west of US-131 may be necessary anyway, eventually, for the entire area to grow. It is important to consider an appropriate balance of land uses in this area in its entirety.

Diversity of Housing - Consider new residential zoning districts, when utility services are available, to decrease the rate of land consumption.

- Establish a stronger sense of place
- Encourage mixed-use development opportunities and provisions in the Zoning Ordinance
- Promote compact design where water systems and sewer service will support higher densities

Residential Development and Densities - A shift in public policy to permit higher residential densities will move Solon Township toward the vision of a walkable, family-oriented and vibrant community with areas preserved for open space and natural features. Many of the tenets and guidelines associated with Smart Growth programs and the recently released LEED Neighborhood (Leadership in Energy and Environmental Design) rating system promote more compact living adjacent to community and educational facilities within an environmentally sustainable development. Higher density housing goes together with available public water and sanitary sewer systems.

Trends that should be evaluated for incorporation into future zoning regulations include:

- Increased demand for leisure facilities and park amenities.
- Demand for modest maintenance housing, such as a condo community or a Planned Unit Development, appears to be increasing.
- Housing options for seniors need to be readily available and affordable. The housing options can vary from simply an independent retirement community with similar age

groups, assisted care units, to complete care facilities. The key goal of these housing options needs to encompass the idea of non-exclusion from the rest of the surrounding community. Potential expansion of the sanitary sewer system increases the locational opportunities for multi-family housing including senior citizen facilities.

- Senior housing options providing easy access to major services such as health care, transportation options, recreation facilities, community centers, public utilities and near a centralized area, thus creating a sense of connection to the community is vital.
- Communities that provide “life cycle” housing opportunities have stronger social networks and give aging residents the opportunity to live near families and friends.
- Many people consider a close-knit community as the focus in purchasing a home.
- People with children may consider the availability of a wide variety of diverse activities to be advantageous. New residential developments should be in a centralized area that is accessible to all families and located near existing schools to promote walking. Residential developments should also be near park and recreation facilities, and if possible, libraries and community centers to promote continuous education and creative activities.
- Natural features such as wetlands and woodlots can be better preserved when developers are offered the ability to cluster homes using open space PUD techniques.

Recreation Areas - The Township should consider securing properties suitable for future recreation or open space to serve an ever-growing population. Areas where land should be acquired for future parks and recreation are identified in the illustration denoting “Recreation Deficiency Areas” [*from recreation plan*]. These recreation areas were identified after reviewing the location and density of children under the age of fifteen, and areas, which are currently undeveloped and will likely be developed into residential neighborhoods. These new park facilities should be designed to provide adequate and useable open space for neighborhood residents and be within ½ mile of 90% of the resident population base. When opportunities arise to purchase riparian property with access to a navigable Township Creek or tributary, the Township should utilize applicable federal and state grant programs to assist with the acquisition.

Open Space Preservation - Solon Township should reserve the option to preserve lands that contain fragile natural features such as wetlands, and flood plains. Open space areas for passive recreation can be valuable especially in areas near the existing and proposed non-motorized trails throughout the Township. Preservation of open space can be achieved through regulatory and/or financial incentives. Regulatory incentives could include purchase of development rights (PDR's), conservation subdivisions and/or cluster housing. Conservation subdivisions allow the property

owner to maintain the same build-out potential of a piece of property by developing the units on smaller more compact lots and dedicating the balance of the property as open space. A financial incentive used by property owners desirous of preserving natural features and open space on their property is the use of a conservation easement through a land conservancy, such as the Land Conservancy of West Michigan. Property can either be acquired through the organization or gifted whereby the property owner receives certain tax benefits.

Road Connections - The Township is served by a network of principle and minor arterials including 17 Mile Road (M-46), Algoma Avenue, White Creek Avenue, 22 Mile Road, and 20 Mile Road. As development occurs, the Township should plan for an interconnected road system to maintain efficient traffic flow. Except for situations where there is extreme site topography and/or natural features, the extended use of cul-de-sacs should be limited in favor of a more traditional and functional network. Potential locations for new road connections to access to land-locked parcels and/or increase connections between existing roadway segments should be identified. The construction of these new road segments should be accomplished as part of the land development process by the developer, with an emphasis on further development of cross Township routes. It is recommended that new road segments providing network connections to other public roads are dedicated as public right-of-way.

Corridor Access Management and Corridor Improvement Authority - When development occurs haphazardly along a transportation corridor, the result is usually less than desirable. Unplanned development often leads to traffic congestion and the typical “strip commercial” appearance currently seen along many state and county roads. Access management provides safe and efficient traffic flow along a roadway corridor while allowing reasonable access to adjacent properties. Access management also improves traffic flow within parcels as well as between adjacent parcels. Once implemented, access management also improves internal circulation on existing and future sites and facilities, increases customer safety and resident access to parcels with minimal driver distractions and reduced potential for crash points between vehicles.

The development of driveway design and layout criteria is a foundation for effective access management policies. Significant interferences are caused on most roads by vehicles entering, leaving, or crossing at intersecting streets and driveways. To minimize accidents and to ensure the overall use of the road by the public, it is necessary to regulate vehicle movements in and out of abutting developments and cross streets.

The Michigan Department of Transportation (MDOT) and other transportation agencies say that effective access management programs:

- Can accommodate for potential future improvements
- Set the stage for future capital improvements
- Reduce crashes and crash potential
- Preserve roadway capacity and the useful life of roads
- Decrease travel time and congestion
- Improve access to properties
- Coordinate land use and transportation decisions
- Improve air quality
- Maintain travel efficiency and related economic prosperity

Access management is particularly important along arterial roadways such as 17 Mile Road (M-46) due to the required balance between access to adjacent properties and the relatively large volume of through-traffic. Affording local property owners safe and efficient access to their properties and maintaining the capacity necessary to move traffic between US-131 and Algoma Road, are the significant goals underlying the recommendations found in this document. The planning of future land use control and access points is essential for preserving the efficiency of 17 Mile Road (M-46) well into the future. Future access management improvements along 17 Mile Road (M-46), as well as the improvement of 17 Mile Road (M-46) itself, must be planned now for the future efficiency of the corridor.

Reducing access points along 17 Mile Road (M-46) serves to reduce potential conflict points between vehicles. It also directs traffic to alternate access points that more efficiently preserve the flow of traffic and protect drivers entering and exiting the roadway. Curbs and landscaping can be constructed to direct drivers to new access points.

The allowable density for driveways along a roadway can have a significant impact upon the number of conflict points and crashes. Limiting the number of driveway and conflict points has been proven to decrease the number of automobile crashes. Smaller lots, such as those 80 feet in width, can add around 132 driveways to a roadway per mile. Because each driveway causes an increase in conflict points and crashes along main roads, the need to limit drives through lot width regulation is a priority.

Adequate driveway separation is important in preserving the flow of traffic, and in preserving the safety for drivers pulling onto and off 17 Mile Road (M-46). Separating driveways and other conflict points directly relates to decreasing the difference in speed between traffic entering onto 17 Mile Road (M-46).

Corner clearance, or the distance between a driveway and an intersection, must be adequate to decrease conflict points, and to lessen the opportunity for driveways to be blocked by traffic waiting at intersections. Corner clearance can be regulated with ordinance language that creates large frontage lots at intersections, or that limits direct access to small corner lots through the implementation of shared access with adjacent properties.

Sight distance is the basis for adequate driveway and sign placement. “Sight Distance” is the distance needed by drivers to verify that the road is clear before turning, and “Stopping Sight Distance” is the minimum space needed for a driver to stop their vehicle, depending on the road speed. Sight distance issues involve the study of local topography, vegetation and road curvature, and maintaining a clear view for drivers.

Driveway offset pertains to the alignment between two driveways that face one another on opposite sides of a road. A straight-across driveway or a slightly offset driveway can cause traffic conflicts when drivers cut across the main road. Inadequate offsets can also lead to left-turn lock ups on the main arterial. To optimize safe and dependable traffic flow, driveways should be offset from one another by manageable distances.

Frontage roads, service drives, and rear access drives eliminate the need for multiple driveways while offering drivers safe access between adjacent parcels. Rear access roads are most beneficial for delivery vehicles, while frontage roads are most efficient for residential and commercial parcels. Service, rear, and frontage drive requirements can be implemented during local site plan review. In some instances, connected parking lots can be a safe and effective method of moving vehicles without having to re-enter the primary roadway.

Commercial Nodes versus Sprawl - The primary commercial development node is identified at the Algoma Avenue and 17 Mile Road (M-46) Intersection. This node effectively compartmentalizes commercial development into this single key intersection of the Township and creates a commercial and potentially mixed-use development area. This commercial node is located near existing residential areas and is intended to serve the day-to-day needs of residents such as gas stations, restaurants, grocers, cafés, dry cleaners and other services needed on a

regular basis. In the event public water systems and sanitary sewer facilities become available, adjacent higher residential densities may be considered to complement these commercial areas. The strategy of using commercial development nodes should significantly reduce commercial sprawl in the Township and consolidate commercial development into integrated and definable sites. Future benefits of this form of development include a reduction in traffic congestion, more efficient traffic movement, less negative air quality impact, and enhanced opportunities for walkable and non-motorized connections. Another feature associated with this form of land development is the ability to create a definable place and in the case of the US-131 and 17 Mile Road (M-46) intersection, a gateway into the community. When planned in conjunction with existing or new residential development these commercial districts become focal areas for community events such as festivals, farmer markets, activity centers, and places for entertainment.

Business and Industry - White Creek Avenue south of 17 Mile Road (M-46) is expected to support the demand for non-retail types of business development. The Township should support businesses that sustain a strong work force and stable tax base for the Township. The Township currently has a variety of industrial land uses and buildings in this area. The Township should undertake an inventory of industrial developed and vacant properties to assess their economic development potential.

Community Gateways - Improvements to the gateways into the Township could be considered to more effectively announce arrival and communicate the sense of pride and the character that is Solon Township. Opportunities exist to develop primary gateway entrances into the Township primarily along 17 Mile Road (M-46) at the US-131 interchange. This entrance could employ a variety of features including landscaping, signage and lighting to define the edge of the community and develop a strong identity for the Township. This area could be visually and aesthetically improved with wayfinding signage and improved streetscaping. The interchange improvements will require significant planning and guided development.

Clustering/Open Space Development - This technique provides for the clustering of dwellings (within a residential development) on lots smaller than those normally allowed under existing zoning, usually with the provision that the land that is saved be set aside permanently as open space. This technique encourages grouping dwellings in those areas of a development site that are best suited for development.

Cluster subdivisions generally conform to a zoning district's "gross density" requirement (measured by the number of dwellings per acre relative to the total area of the site). Clustering may increase the site's "net density" (measured by the number of housing units per acre relative to the buildable area of the site), by reducing lot sizes and concentrating development on a smaller portion of the available site.

Open space/cluster option provisions are becoming more common in zoning ordinances as a means of varying the usual pattern of development. Clustering/open space development is known under a variety of names such as "Open Space Development", "Clustering or Cluster Development", "Conservation Development", "Open Space Zoning", "Open Space PUD", or "Rural Clustering."

The object of clustering is not to increase the development density permitted by the individual district, unless incentives are provided to do so, but to limit the amount of land disturbed by structures, lawns, and drives. The gross density must still fall into the requirements of the Zoning Ordinance. It allows only that the development that would be permitted under conventional zoning regulations but allows that development to be placed on a smaller portion of a site. Often large parts of a site are permanently protected open space, protected by a restoration covenant or, in some instances, deeded to a non-profit land trust or the township.

This technique generally applies to developments that contain unique natural or cultural features, such as wetlands, floodplain, mature trees, steep slopes or significant historical features. Density bonuses may be granted to encourage this type of development, but are not necessarily needed since clustering can reduce a developer's construction costs for road paving, grading, etc.

In Michigan, this technique is required by Act No. 110 of the Public Acts of 2006, known as the "Michigan Zoning Enabling Act." The Act states that the township must provide in its zoning ordinance that land zoned for residential development may be developed, at the option of the landowner, with the same number of dwelling units on a smaller portion of the land than specified in the zoning ordinance, but not more than 50%, that could otherwise be developed, as determined by the local unit of government, if all the following apply:

- (a) The land is zoned at a density equivalent to two or fewer dwelling units per acre or, if the land is served by a public sewer system, three or fewer dwelling units per acre.
- (b) A percentage of the land area specified in the zoning ordinance, but not less than 50%, will remain perpetually in an undeveloped state by means of a conservation easement, plat dedication, restrictive covenant, or other legal means that runs with the land, as prescribed by the zoning ordinance.
- (c) The development does not depend upon the extension of a public sewer or public water supply system, unless development of the land without the exercise of the option provided by this subsection would also depend upon the extension.
- (d) The option provided under this subsection has not previously been exercised with respect to that land.
- (e) After a landowner exercises this option, the land may be rezoned accordingly.

Chapter 13A of the Township Zoning Ordinance currently provides guidelines for Open Space Preservation developments, and Chapter 13 provides guidelines for open space planned unit developments.

Lot Averaging (Density Target) - Lot averaging allows one or more lots in a subdivision to be undersized, providing an equal or greater number of lots in the same subdivision is oversized. Lot averaging is not currently authorized in the Township. However, it could be considered, perhaps as a “scaled down” version of clustering to address situations that may not warrant requiring the submission of more extensive cluster plans.

Lot averaging has applicability to headwaters areas, especially in communities with large lot zones. Lot averaging is a technique that may be used with land divisions to offer a more simplified version of clustering. Allowing lot sizes to be averaged over an entire site offers flexibility to adjust lot sizes where resource protection goals are met. Providing the incentive of downsizing certain lots should be coupled with certain requirements for open space protection.

Planned Unit Development - Planned Unit Development (PUD) regulations give developers an increased level of flexibility in the overall design of residential projects in exchange for a higher quality of development. The PUD process offers greater latitude in locating project elements on the development site. PUD elements can include housing, streets, open space, recreation areas, buildings, mixing various housing types and densities (single- and multi-family), and land uses

(including some neighborhood commercial uses), and commercial/office uses into a functional unit that is integrated with the natural features of the site, and in some cases, grant density increases over those normally allowed in the zoning ordinance. PUDs are generally characterized by:

- Flexible zoning standards (lot size, setbacks, street frontage, etc.)
- Focus on overall project design rather than traditional lot-by-lot zoning
- Encouragement of innovative site design and housing types
- Provision for on-site amenities (e.g., open space and recreational facilities)

PUDs are currently regulated as separate zoning districts in the Township.

PUD's allow for developer creativity while meeting overall density and land use goals. PUD's can allow for a mix of land uses, reduction of lot size, increase in height, or other waivers from conventional zoning regulations in exchange for some public benefit. PUD's have been used to promote environmental preservation, preserve open space, natural features, and other community goals. It enables local municipalities to creatively work with developers in order to establish a compatible relationship between the built and natural environment.

Flexibility is a major key to successful PUD projects. Creating incentives such as reducing minimum land area requirements for PUD's can encourage greater use of this development technique.

Development Agreements - Development agreements can be used to restrict some future uses of property and are generally developed prior to the approval of a site plan. Development agreements ensure that ordinance requirements and other mutually agreed-upon items are enforced and may include the following: architectural character, maintenance agreements, and other natural and built environmental issues. Development agreements may also be associated with subdivisions and site condominium developments which require formal recording of the agreed upon issues within deed restrictions.

Site condominium and subdivision development agreements/deed restrictions may include various reasonable restrictions as part of the development approval process.

Hazard Mitigation – The Township should consider hazard mitigation needs and concepts. Having hazard related strategies in place can help mitigate a variety of potential threats. The Township should consider:

1. Emergency Notification System – Develop actions to strengthen and maintain emergency notification systems and coordinate as needed to bolster the dependability of emergency communication systems.
2. Severe Weather Preparedness – Address warning system needs in the Township and determine whether extreme weather conditions could warrant consideration of community shelters and warming centers.
3. Infrastructure Strengthening – Identify potential improvements or projects to strengthen the area’s infrastructure to increase hazard resistance.
4. Wild Fire Preparedness – Consideration of additional fire related public awareness and training activities. Assess and/or address any possible shortfalls in fire mitigation actions, regulations, supplies, firebreaks, staffing, and risk assessment details.

CHAPTER 8 – FUTURE LAND USE

Future Land Use

The form and vitality of any community is defined largely by how its citizens see the way land is used and how that use relates to their daily life. As a result, the way the land is used is linked directly to the quality of life within Solon Township. As growth continues, the Township will have to address difficult zoning issues brought on by the pace and increasing complexity of development plans by residents and property owners. The need to provide flexibility, coupled with Solon Township's desire to maintain some degree of control, may create the need for modifications to zoning and other land development regulations.

The Community Attitude Survey was also used, in part, to make decisions regarding future land uses. For example, issues regarding growth had the following responses:

- ◆ An overwhelming 81% of residents support increased controls on development to protect water quality in rivers and streams.
- ◆ 69% would like to see accessory buildings limited according to lot size.
- ◆ 65% responded that their preference for future residential development is having large wooded lots.
- ◆ 65% of residents would like to see a senior citizen retirement community in the Township.
- ◆ 58% indicated that new single-family housing should be on lots of between 1 and 5 acres.
- ◆ 55% felt that preserving open space using clustering was not a promising idea.

Limitations to higher density residential development – Figure 8 illustrates the factors that contribute to the difficulty of higher density residential development.

Proposed Residential Development – Residential development should provide a range of housing choices and parcel sizes, as well as varied living arrangements. Therefore, the plan is to maintain a relatively low density throughout most of the Township. However, where subdivisions, site condominiums and open space developments currently exist on relatively small lots, the status quo may be preserved. Closer to Cedar Springs where potential utilities may be available in the future higher density housing such as apartments and senior housing could be provided. It is proposed that the Agricultural and Residential areas generally be maintained at no less than 2-acre parcel sizes except for certain more developed areas where 1-acre minimum lot sizes

reflect existing land use trends. Other areas where higher density housing might be provided could allow up to 5 or 6 units per acre depending on the connection to public utilities.

Proposed Commercial Development - By its very nature, Neighborhood Commercial areas may be appropriate within neighborhood areas, not simply in the areas designated on the Future Land Use Map. Small areas of Neighborhood commercial which serve a community may be appropriate in several areas of the township, whether shown on the future land use map or not.

Many residents of Solon Township consider the Algoma Avenue/17 Mile Road (M-46) intersection, the center of the Township but depend on Cedar Springs, Rockford, and Grand Rapids for shopping and social experiences. The issue confronting the community is how 17 Mile Road (M-46) will be developed. The Master Plan addresses the use of frontage along these corridors.

Along 17 Mile Road (M-46), access management should be achieved through a combination of appropriate site design and land use planning techniques. From a traffic management viewpoint concentrating similar uses is preferred over elongating and spreading the same building mass and usage over a lengthy distance. From a land use perspective concentrating a similar mix of land uses in concentrated nodes creates economically viable and sustainable centers. It is recommended that proposed commercial nodes be encouraged in the following:

- US-131 and 17 Mile Road (M-46) interchange: 10-14 acres
- Algoma Avenue and 17 Mile Road (M-46) intersection: 10-14 acres

Commercial development at the Algoma Avenue and 17 Mile Road (M-46) intersection could be distributed to all four corners and extend about ¼ mile in each direction and eventually to the US-131 Expressway. The Future Land Use map illustrates this type of commercial development.

Commercial development at the US-131 and 17 Mile Road (M-46) intersection would be considered the primary gateway to the Township. Thus, this commercial area should be managed with design guidelines focusing on building materials, signage (ground and projecting), landscaping, rear and side parking lots, pedestrian walkways and amenities. The variety of uses allowed here would include restaurants (sit down and drive-through), fuel stations, banks, convenience centers, retail and service businesses, and professional services. Elimination of objectionable uses and strict regulation of uses such as outdoor storage and aggregate

stockpiling should be immediate priorities. Implementation of the commercial node concept may benefit from a change in zoning to provide land development and comprehensive building design guidelines.

Well defined commercial nodes can become the cornerstone for mixed-use walkable community centers. Proposed mixed-use areas could include higher density residential (5-7 dwellings per acre) developments supplemented with parks, community facilities, such as schools, and commercial areas. In some communities, the development of “lifestyle” centers assume this role. However, the retail element in these developments can exceed several hundred thousand square feet of leasable area and are occupied by national retail chains. The proposed mixed-use areas for Solon Township envision less of an integrated development and more of a collection of independent developments constructed under a consistent set of land and building regulations. The use of a 17 Mile Road (M-46) overlay zoning district coupled with specific design guidelines is recommended. This combination of land uses linked together with design and land development standards will establish a definable place. Commercial nodes should be considered pedestrian-oriented commercial districts reflecting the scale and diversity often associated with downtown areas. Buildings would be located near the property lines with parking preferably in the rear or along the side of the buildings using pedestrian scale streetscapes. Commercial areas outside of the nodes would be vehicular-oriented commercial districts accommodating banks, dry-cleaners, auto related businesses, professional offices, and errand-based service businesses.

Land Use Relationships

The development character for areas planned for highway service are to a large part automobile oriented, however, high density residential uses are planned to surround uses within this land use category. While access management is important to the overall utilization of the sub-area it is important that planned uses respect residential areas that develop behind them.

Commercial Development Guidelines

Access Management

Along with the high traffic volumes and increased intensity of uses within the commercial land use categories is the need to manage access to these sites. Uses should be allowed only if they work towards the achievement of access management through the utilization of such things as shared driveways, frontage roads, cross access between parking lots, rear service drives, alignment or

appropriate spacing of drives on the same and opposing sides of 17 Mile Road (M-46) and contributing to the installation of new streets at key locations.

(For further discussion of access management, see the City of Cedar Springs/Solon Township 425 Plan and the Management Recommendations in this Plan.)

Site Design

Sites should utilize design practices that shield unsightly areas from adjacent residentially planned properties. Pedestrian access should also be created and encouraged by installing such things as pedestrian walkway lighting, canopy trees and benches along connections to residential areas. Pedestrian walkways that transverse automobile areas should be well marked and directed to allow convenient access of pedestrians to the commercial site(s). Building design should be sympathetic to the area and incorporate a theme or general image that fits into Solon Township. Streetscapes should also be recognized as important, along with automobile access, pedestrian design and building design issues. A lack of a unified streetscape can result in a disjointed image of the community along the roadway. Overall, streetscapes can provide a unifying element to uses that develop along the corridor (i.e. street trees, grass front yard and similar sign designs) creating an aesthetically pleasing visual environment and character.

One unifying method is to provide a “build-to” line for main buildings along the street. Parking is then provided either in side or rear yards. This has the added effect of slowing traffic as the sight lines for drives is restricted to a narrower space. Unifying design elements should be repeated from site to site, such as decorative light fixtures with or without community related banners, and attractive building designs and/or materials.

Environmentally Sensitive Areas

The Environmentally Sensitive category is intended to recognize areas of the Township that contain natural features such as lakes, streams and wetlands. These areas are intended to be protected from encroachment. Large areas of Environmentally Sensitive land are located within the northeast and southwest portions of the township, surrounding two groups of lakes. Other areas are linear in shape following the banks of creeks that transverse the township.

Development that does occur should be designed to minimize negative impacts upon the environment and natural features. Land uses within these areas should emphasize low density

residential uses, including the use of open space or cluster development to offer protection of environmentally sensitive features.

While protection of these features should be a priority, opportunity exists to utilize these areas for recreational purposes such as natural trails and environmental education for area schools and the public. It is the intent of this land use category to allow for reasonable development that preserves the character and environmental quality of these environmentally sensitive areas. Techniques to preserve their quality, such as utilization of natural vegetation buffer strips at the edge of waterbodies and utilization of small scale water control measures for run-off from impermeable surfaces such as roofs and pavement, should be utilized in development proposals.

Future Land Use Categories

Solon Township has been divided into Future Land Use categories intended to guide future development decisions, which include zoning. As a guide, the Future Land Use categories are not to be viewed by themselves as complete recommendations. It is necessary to also review the Township's vision, goals and objectives, Future Land Use Map and Future Land Use Character Map to gain a complete understanding of the expectations for future development. The categories are described on the following pages and include:

1. Agriculture/Residential 2 ac.
2. Agriculture/Residential 1 ac.
3. Lake Front Residential
4. High Density Residential
5. Neighborhood Commercial
6. Highway Commercial
7. Commercial/Light Industrial Mixed Use
8. Environmentally Sensitive

Figure 8

SOLON TOWNSHIP

Development Limitations

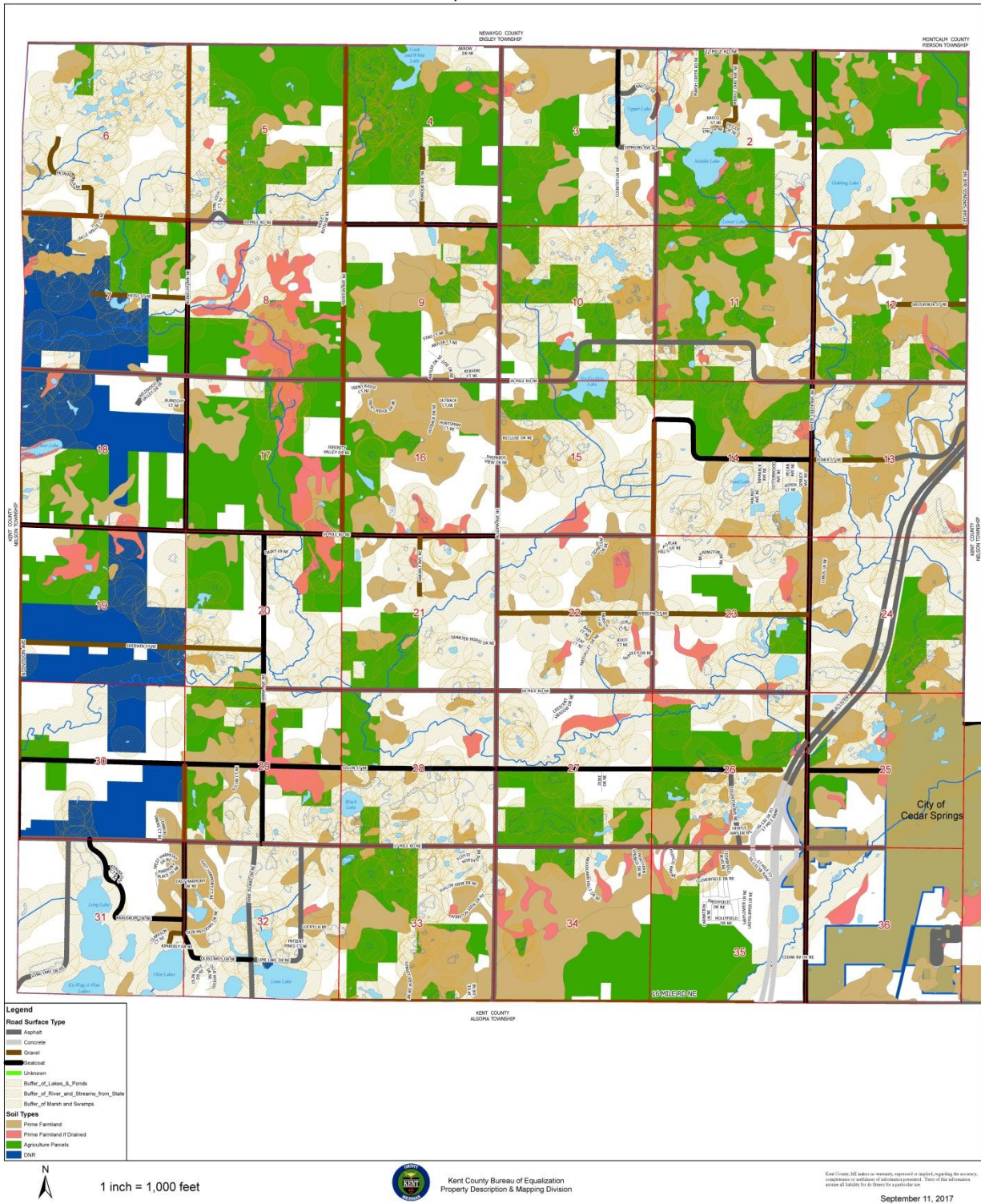
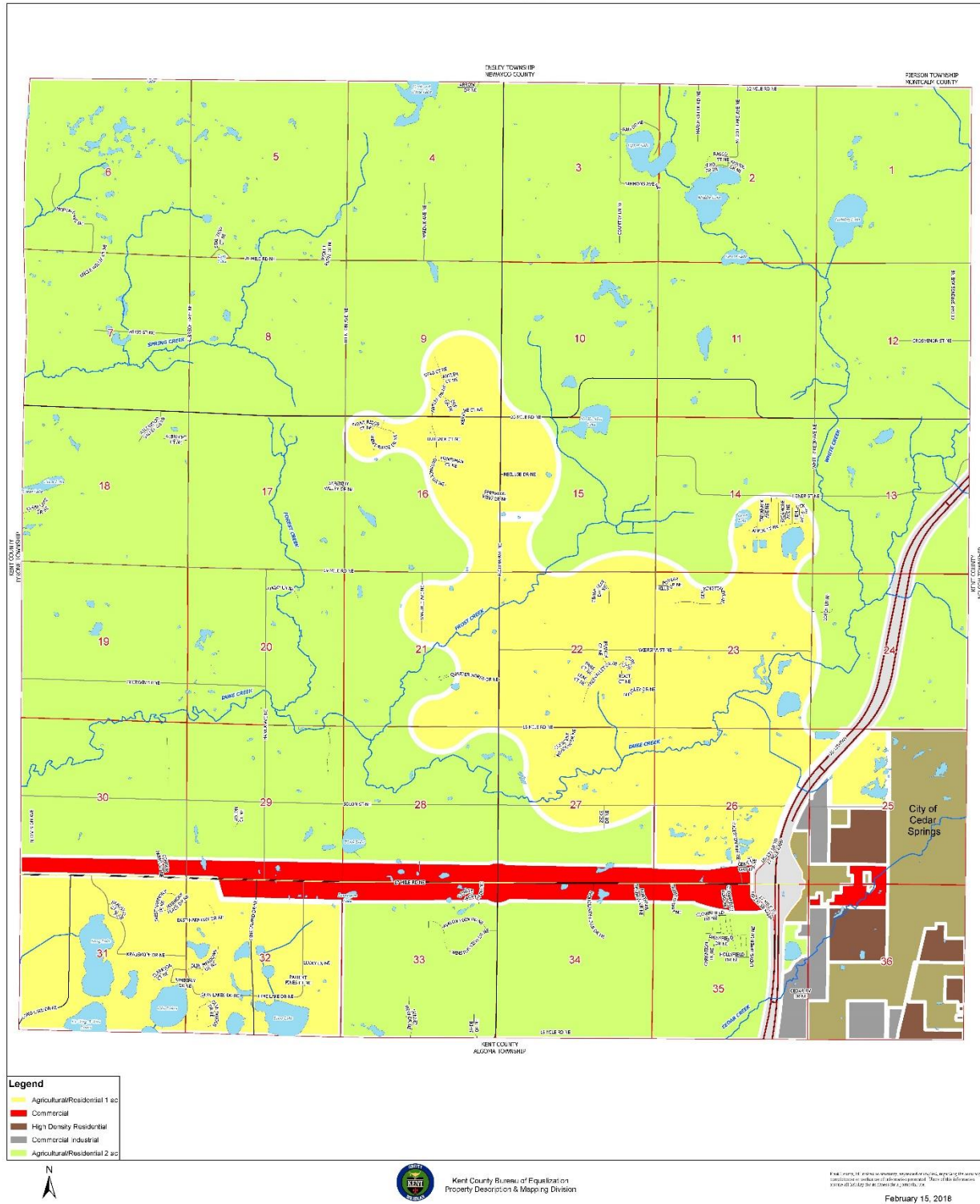


Figure 9
SOLOON TOWNSHIP
 Future Land Use



CHAPTER 9 – ZONING PLAN

Future Land Use Categories

Solon Township has been divided into Future Land Use categories intended to guide future development decisions, which include zoning. As a guide, the Future Land Use categories are not to be viewed by themselves as complete recommendations. It is necessary to also review the Township's vision, goals and objectives and Future Land Use Map to gain a complete understanding of the expectations for future development. The proposed zoning district categories are described on the following pages and include:

1. Agricultural/Residential 2 ac.
2. Agricultural/Residential 1 ac.
3. Lake Front Residential
4. High Density Residential
5. Neighborhood Commercial
6. Highway Commercial
7. Commercial/Light Industrial Mixed Use
8. Environmentally Sensitive

1. **Agricultural/Residential 2 ac.**

The intent of this category is to provide areas for larger lot residential development to meet the desires of the residents of the township as expressed through the Community Attitude Survey. Township residents who responded to the survey preferred allowing large lots as well as preserving natural features. A preponderance of small lots could cause the township to lose its rural character. Larger lot zoning is the desired method of preserving the rural character of neighborhoods, reducing the danger of fire hazards, protecting natural features and open space, and avoiding pollution from improper sewage disposal.

Eighty-eight percent of those who returned surveys agreed that lots should be no less than one (1) acre in size. The Planning Commission studied many factors in determining the appropriate size of parcel for the Agricultural/Residential category. Reasons for increasing the minimum lot size from 1 acre to 2 acres include:

- (1) Areas include or are near productive agricultural lands
- (2) The development trend is toward dwellings located on larger lots

- (3) The road system in the area is limited
- (4) Public water systems are not readily available to serve the area and water aquifers and systems are limited
- (5) Public sewer systems are not readily available to serve the area and septic system capacity is limited in the area
- (6) The capacity of existing drainage courses to handle runoff from a large-scale development is limited
- (7) Waterways, woodlands, wetlands and other natural resources or wildlife corridors are present

Density-control mechanisms help to prevent the overcrowding of land, preserve open space, lessen congestion on public roads and facilitate the eventual provision of municipal services, which are all legitimate governmental interests. Larger lots are particularly appropriate where: (1) the property can be used as farmland or has significant natural features; or (2) the township's zoning restrictions are a reasonable way to avoid overcrowding and infrastructure problems.

A variety of factors were studied to determine the appropriate parcel size for the Agricultural/Residential zoned areas of the Township. Among them:

1. Review current lot sizes (particularly of recently-developed residences) to identify discernable trends toward large lot development in certain areas.
2. Identify areas where low-density requirements are necessary to protect existing, productive farmland. Larger lot zoning can be beneficial not only in preserving valuable farmlands, but also to isolate residential uses from the noise, dust, and over-spray which can result from farming.
3. Concentrate on the need for low-density development to promote traffic safety, preserve groundwater, and prevent erosion. It is important to focus on specific factors such as the existing quality of roads serving rural areas, poor sight distances because of steep grades or sharp curves, and areas where porous soils, grades, and high-water table conditions combine to pose a pollution risk from the use of private septic systems.
4. Attempt to provide for relatively higher densities in some areas (where conditions are appropriate) and low densities in others to allow a range of development opportunities.

Therefore, larger minimum lot sizes are proposed for substantial areas within the Township where public utilities are not available; where smaller land divisions have not already occurred; where larger lots are the predominant residential land use type; or where other factors, such as soil or road conditions, dictate that somewhat larger lot sizes would serve the public health, safety and welfare.

Much of the township has been planned for the Agricultural/Residential category. This category anticipates lot sizes not less than one (1) acre in some areas and not less than two (2) acres in other areas, with widths of at least 200 feet. The two-acre minimum is currently anticipated as more appropriate for a large portion of Township lands. Useable amenities, such as trails and connecting pathways should be included within residential subdivision design.

2. Agricultural/Residential 1 ac.

Somewhat smaller lot sizes should be retained in areas where utilities are or will be available, and in areas where smaller lot development has already occurred. These areas have been identified as suitable for continuation of spacing that consists of minimum lots of one acre or less. The intent of this category is to provide areas for moderately sized residential lots comparable with existing densities in areas of the Township already significantly developed. Many condominium developments and traditional subdivisions exist in select areas where lot sizes average between ½ acre to 1 or 2 acres. However, there are still ample acres of vacant land available for infill development. These consolidated areas provide smaller lots and higher densities for those that desire more affordable home sites. Cluster housing that is developed with the intent of protecting large areas of natural features and agricultural land may be developed with smaller lot sizes. Useable amenities, such as pathways, passive open space and recreational areas, should be included within an open space residential design.

Township residents who responded to the survey preferred keeping some small lots as well as preserving natural features. Therefore, select areas of the township have been planned for this category. Since small lot zoning is the desired method in these areas of the Township, this category anticipates lot sizes not more than one (1) acre with lot widths of not less than 200 feet.

3. Lakefront Residential

Historically many small lots have developed around lakes within the Township to be used for seasonal cottages and cabins. In recent years, more and more of these seasonal cottages and cabins have become permanent residences. It is the intent of this category to recognize this

historical pattern of development while at the same time allow for the redevelopment of these lots for more permanent housing on lots or consolidated lots no less than 15,000 square feet in area with lot widths no less than one hundred (100) feet.

Combined with the need to allow residential lots near lakes is the need to protect the lakes that attract residents. According to the Master Plan Attitude Survey, 81% of residents supported increased controls on development to protect the quality of groundwater and surface water. It is the intent of this land use category to provide restrictions on the use of property near surface water features. In areas not yet developed and on lots that are redeveloping, land use buffer strips should be utilized to filter pollutants from entering the water bodies and drainage should be controlled to minimize impact on water quality.

4. High Density Residential

High Density Residential is generally limited to areas planned for public sewer and water within the southeast portion of the township adjacent to Cedar Springs. Typical higher density residential development includes apartments, townhouses, manufactured housing communities, senior housing and continuing life centers, and small lot single-family dwellings. High density residential areas are intended to allow for densities not exceeding 4 to 5 units per acre.

Development design should be such that it fosters unity and social and recreational opportunities. Developments should include useable open space, such as playground areas, a community square, and recreational trails and sidewalks that connect to existing and planned adjacent uses (commercial and residential). Sensitive natural areas otherwise available for development (i.e. not in a floodplain and not a wetland regulated by the State) should be preserved through designs which incorporate those features as attractive elements of the development.

5. Neighborhood Commercial

This land use category is intended to serve as a focal point for neighborhood services and activity. For instance, a neighborhood commercial area may have such uses as gas stations, convenience stores, drugstores, and smaller offices/services (doctor's office, insurance, dentist, etc.), barber shops, cafes, small grocery stores, and other businesses compatible with rural areas, involving lower traffic volumes. As such, neighborhood commercial development could be located in neighborhoods anywhere in the Township.

However, Neighborhood Commercial areas are often going to be located at the cross section of large roads, such as the intersection of Algoma Avenue and 17 Mile Road (M-46). Future neighborhood commercial areas should be designated in a manner that is consistent with the township's rural character. This includes consideration of:

- Shared driveways and parking areas.
- Consistent site elements, such as landscaping and lighting.
- Roadway improvements, including turning lanes, deceleration lanes and others.
- Signs that are consistent with the neighborhood and rural character of the township.

Development in commercial areas must also be sensitive to existing and planned residential development in the neighborhood. Consideration must be given to the locations of buildings and parking areas, lighting, noise and other potential nuisances, and location of activity areas, such as loading and trash collection.

Generous setbacks, sign limitations, reduced lighting levels, and landscaping are necessary to ensure that these uses fit within the neighborhood in which they are located. Driveways will be located as far from intersections as possible to minimize traffic conflicts, generally not less than 150 feet from the intersection. In most situations a single driveway will be permitted unless a professional traffic study determines that a second drive is needed to accommodate higher volumes of traffic or to facilitate the safe, effective flow of traffic.

6. Highway Commercial/General Commercial

Commercial uses are planned along 17 Mile Road (M-46) east of US-131 and west of US-131 approximately $\frac{3}{4}$ miles, as well as the areas north and south from 17 Mile Road (M-46) on White Creek Avenue. This land use category is intended to accommodate a wide range of traditional commercial, retail, office and other general commercial uses that cater to the larger Solon Township community and travelers along US-131. Uses within this category rely partially on freeway traffic, such as those uses allowed within the Highway Service (425 Plan) land use category. Uses within this category are also intended to be in greater quantity and often larger in size than those uses allowed within the Neighborhood Commercial land use category.

It is intended that these areas be compatible with the City of Cedar Springs Highway Commercial zoning district which is "...designated on the western city limits near the interchange. Uses are

intended to be primarily auto-oriented, including drive-through facilities, automotive service, large scale retail, restaurants, hotels, and other intensive uses not well suited along Main Street.”

Effective access management, streetscape design, building design and pedestrian connections should be included in the review of development proposals. Building/tenant spaces would be wide ranging and not limited by square feet. Generally, parcel sizes should be no less than 1 acre. Development should be accomplished with consideration of corridor management techniques recommended in the Management Recommendation section of this Plan. Consideration must be given to the locations of buildings and parking areas, signage, lighting, noise and other potential nuisances, and location of activity areas, such as loading and trash collection.

7. Commercial/Light Industrial Mixed Use

Commercial/light industrial areas could include non-retail commercial as the predominant use but would also allow limited industrial uses as well as office businesses. It is the intent of this area to accommodate industrial establishments that are generally incompatible with pedestrian movement and which are not engaged primarily in retail sales or providing services to the travelling public.

Commercial/light industrial development is planned for areas which are already served or could potentially be served by public utilities. This area should provide for a mix of industrial, commercial and office use. Uses intended for this category include facilities that do not rely on heavy traffic volumes and the accessibility and convenience associated with being located adjacent to a freeway. The initial planned locations are (1) an existing business park on the south side of 17 Mile Road (M-46) to the east of a manufactured home community, and (2) along White Creek Avenue near the US-131 interchange between 16 Mile Road and US-131. Low key industrial uses with limited negative impacts are encouraged in this area. Adverse effects caused by these proposed uses should be mitigated by requiring generous setbacks, screening and buffering, and by carefully regulating land uses that may create noise, odors, dust, smoke or other adverse effects for neighboring properties.

Appropriate screening and buffering is anticipated between industrial uses and surrounding properties. Industrial uses would be low key uses with limited negative impacts of a type that would benefit from proximity to the interchange such as light manufacturing, warehouses and research and development. Industrial uses would be located along the southern portion of the site closer to 16 Mile Road. Site development standards would need to ensure that the buildings and

other site improvements such as lighting and truck movements have minimal impact on adjacent uses. New zoning regulations may need to be prepared and put into place along with a rezoning of the property to accomplish this proposed zoned area.

Typical non-retail commercial uses could include indoor recreation facilities, personal service businesses, and similar uses. Other business types that might fit into this classification include distribution and warehousing, sales or service of trucks, boats, trailers, recreational vehicles, farm implement sales and service, outside storage and sales, transport and trucking services, contractor's yards, veterinary hospitals and kennels, heavy equipment sales and service, landscapers, self-service storage facilities, sign fabricators, assembly of finished parts, etc. and similar non-retail commercial and light industrial uses. Office uses are also appropriate for this site, especially along the White Creek Avenue frontage. Because most of these properties are not included in the previously adopted Highway Service (425 Plan), a renegotiated agreement would be required for much of this area to obtain public sanitary sewer and water.

Lot sizes should be a minimum of 20,000 square feet with a minimum lot width of 100 feet. Generous side and rear yard setbacks and buffering should be required when adjacent to a residential use. Additional site design issues should also be determined by appropriate site plan review.

8. Environmentally Sensitive

The Environmentally Sensitive category is intended to recognize areas of the Township that contain natural features such as lakes, streams and wetlands. Large areas of Environmentally Sensitive land are located within the northeast and southwest portions of the township, surrounding two groups of lakes. Other areas are linear in shape following the banks of creeks that transverse the township.

Development that does occur should be designed to minimize negative impacts upon the environment and natural features. Land uses within these areas should emphasize low density residential uses, including the use of open space or cluster development to offer protection of environmentally sensitive features.

While protection of these features should be a priority, opportunity exists to utilize these areas for recreational purposes such as natural trails and environmental education for area schools and the public. It is the intent of this land use category to allow for reasonable development that

preserves the character and environmental quality of these environmentally sensitive areas. Techniques to preserve their quality, such as utilization of natural vegetation buffer strips at the edge of waterbodies and utilization of small scale water control measures for run-off from impermeable surfaces such as roofs and pavement, should be utilized in development proposals.

Zoning Strategy

As with any Master Plan, the planned areas should be implemented over time. A zoning strategy will be used to integrate future zoned land as needs and time dictate.

The purpose of this strategy is two-fold. First, the intent is to ensure that adequate zoning exists for commercial uses that are necessary both for the greater area and as related to the traveling public. At the same time, care must be taken to ensure that an oversupply of land is not made available to avoid haphazard development, marginal uses with high turnover rates, and land uses that do not rise to the level of quality desired by the stated goals of this Plan.

Second, the zoning strategy is intended to avoid development that does not permit the use of proper access management techniques, such as access points, shared driveways, shared parking lots, and other techniques. It is also intended to improve the quality of development through consistent application of landscaping requirements.

Before new land areas are rezoned, the following conditions should be considered by the Planning Commission and Township Board in reviewing rezoning requests or for site plans related to zoned areas.

- Except for Neighborhood Commercial uses, the area proposed for rezoning should usually be contiguous to, or near similarly zoned areas, particularly for Highway Commercial and Industrial. For new commercial uses which have available public sewer and/or water facilities, exceptions may be appropriate.
- Planning for service drives or street extensions to serve adjacent properties should be encouraged, and in some instances, required. Where service drives are impractical due to topographic or other physical conditions related to the property, shared drives should be considered.

CHAPTER 10 – IMPLEMENTATION

The Master Plan as a Guide

As a guide, the Master Plan is not meant to be rigidly administered, as changing conditions may affect the assumptions used when the Plan was originally conceived. Changing conditions may call for the Plan to be adapted. The Township Planning Commission must examine those changes and decide if the principles on which the Master Plan was based are still valid.

As growth occurs it will be necessary for the Township to address difficult zoning issues brought on by the pace and increasing complexity of development sought by residents and property owners. The need to address sometimes conflicting land use influences will also be a driving element of the Plan. It will also be important for the Plan to be used consistently. A plan which is not actively followed and implemented may erode future benefits the Plan seeks to achieve.

Likewise, consistent, vigorous use of the Plan will lend credibility to community attempts to implement tough decisions on rezonings or other zoning actions. The courts of the State of Michigan find there is credibility in actions which are supported by careful planning.

Finally, it is critical that the Plan be read in its entirety. Rather than attempting to isolate individual statements that may appear to support one position or another regarding the Future Land Use for the Township, the Planning Commission must consider the intent of the Plan. This requires a careful reading of the Plan to ensure that all the Plan's considerations are included in the evaluation of any change.

The Plan will not be fulfilled overnight; as a look at the future, it is intended to guide decisions made, one day at a time. Accordingly, the Plan is intended to be flexible so that changing conditions can be accommodated.

On the other hand, while the Plan needs to be a flexible instrument, its recommendations should not be taken lightly. Adjustments should be made only when necessary and justified by changing conditions or shifts in community philosophy. The Planning Commission should regularly review the Plan to ensure that the Township remains on the right track to achieve the future it desires. Overall, the Master Plan is based on many township characteristics, each of which must be

considered by the Planning Commission and Township Board as the Plan is implemented and updated. These characteristics include:

☐ **Community Character**

The Plan's goals describe the character desired by the community. The strong emphasis placed on maintaining rural character, for example, is reflected in the Future Land Use element.

☐ **Capability of Land**

Environmental constraints must also be considered. Is the land itself able to accommodate planned uses? Are soils and water resources capable of accommodating the density of planned development where public utilities are not available? How will decisions affect wildlife and natural features?

☐ **Community Needs**

What uses are needed in the community? Identified needs can be addressed by providing appropriate land uses in desirable locations.

☐ **Available Services**

Through issue identification, goals, and data collection, information is obtained about the status of community services. Are services capable of handling planned development? What kind of strain would new residential development place on the ability to provide adequate fire protection? What road improvements may be required?

☐ **Existing Development**

How will the planned land uses affect existing uses? Are there some areas that the Township would like to rezone for different uses in the future? How will planned future uses affect those existing uses already established?

☐ **Regional Planning**

The Township does not exist in a vacuum. There are other regional issues, such as transportation, environmental, and utility plans, that also need to be considered. These include the on-going cooperative planning with the City of Cedar Springs and other neighboring municipalities on issues of regional concern.

The Master Plan should be used as a guideline for making future land use decisions in the Township. One of the primary goals of the plan is to provide an orderly and rational process of

growth. The basic intent of the plan is to provide for economic development within the Township, while maintaining a high quality and attractive residential environment.

This will be accomplished by separating higher-density residential, commercial and industrial activities from lower-density, single-family uses wherever possible. Where this is not possible, the plan recommends adequate buffer requirements be established. The future land use map sets aside adequate land for commercial and agricultural land uses during the planning period. However, much of the Township is reserved for residential land uses.

Land use changes should be consistent with the plan. If changing circumstances make certain types of development desirable that are not in accordance with the present plan, the plan should be reviewed prior to construction of the development to determine if a revision to the Master Plan is appropriate.

Implementation Techniques

The purpose of the Master Plan is to establish a coordinated approach to land use and development and to promote the general health safety, convenience, welfare, economy, and efficiency of the Township. However, the plan must be implemented so that the benefits of the planning process can be realized. The plan will be most successful if it is continually used in the decision-making process of the Township.

1. The Master Plan and Zoning Ordinance

The primary means for implementing the goals and objectives expressed in the Master Plan is through a zoning ordinance. The relationship between the Master Plan and Zoning Ordinance is often misunderstood. Stated concisely, the Master Plan is a guide for land use for the future, whereas the Zoning Ordinance regulates the use of land in the present. The Master Plan is not a binding, legal document, but the Zoning Ordinance is a law that must be followed by the Township and its residents. The plan itself has no legal basis to restrict or encourage development. Rather the plan serves as the basis for the rational development and administration of a zoning ordinance that is specifically designed to accomplish the goals and objectives expressed in the plan.

Adopting or changing a Master Plan does not directly affect the zoning for any property. However, it is contemplated that future changes to the zoning map will be reflective of the planned uses shown by the Master Plan. Although certain areas are designated for commercial, those areas are currently used in large part for Agricultural/Residential uses and this will continue. Only as

areas develop, in some cases with water and sewer, will the areas become ready for commercial uses and re-zoning. In the meantime, continued Agricultural/Residential uses and zoning will still be permitted. The need for other uses and the expectation that development will be gradual is more evident on the western end of 17 Mile Road (M-46). It is expected that the township will continue to permit Agricultural/Residential zoning and development along 17 Mile Road (M-46) without such uses being inconsistent with the master plan.

2. **Subdivision Controls** - While zoning regulates the use of land, various State laws regulate the division and subdivision of land. Subdivision regulations are designed to ensure that each development is compatible with the community, that adequate public facilities are provided, and that all applicable regulations are met. Subdivision regulations typically consider such elements as streets, drainage, public services, natural amenities, street lighting, and off-street parking.

The planning commission plays an instrumental role in the subdivision review process. It has been given the authority and responsibility to meet with the developer throughout the review process, to provide an adequate public hearing, and to present its recommendations of either approval or disapproval to the Township Board.

3. **Capital Improvement Programming** - A third means of implementing the Plan is through a capital improvement program (CIP). The CIP is a 6-year capital improvement budget for the Township enabling it to plan for needed improvements on an orderly basis within its capabilities. For example, the Township may determine a need for improvements in certain areas (public infrastructure, such as sewer, water, and roads) or can encourage diverse types of development through the expenditure of public funds.

The advantage of a CIP is that attention can be focused on the community's needs and objectives and the methods of implementing them. In addition, the administration of the Township can be improved, thereby, optimizing its tax revenues.

4. **Public Cooperation** - Solon Township residents can and should provide comments and discussion regarding development in the Township. As representatives of its citizens, the Township Board and planning commission welcome input from the public. Prior to making any major land use changes and prior to making modifications to this plan, a public hearing will be

held to allow all interested and affected citizens to express their opinions and have their interests considered by the decision-making body.

The Township should work and cooperate with surrounding townships to help ensure compatible, neighboring land uses for the betterment of the entire community. The planning commission will make copies of this plan available to interested parties and welcomes input concerning plan implementation.

The Master Plan will be most successful if Township residents are involved in the drafting of the plan and support its goals and recommendations. This involvement must also be encouraged during the implementation of the plan. An informed and supportive public may be the crucial link to the successful implementation of this plan.

Maintaining the Plan

The plan serves as a guide for the decision-making process of the Township. To be a functional, decision-making tool, the plan must remain current. By recording land use activities on a regular basis, the plan can be continually updated to reflect current conditions. This will also help identify development trends that are not in accordance with the objectives of the plan and may identify concepts that should be incorporated into the plan. Recording the following information will help maintain the Master Plan:

- Locations of new buildings.
- Parcel splits.
- Zoning requests.
- A description of any development that would be noteworthy in assessing the growth of the Township.

Narratives should be prepared summarizing the annual activity in the Township. A review should then be made of the year's activity to assess its compliance with the development plan. If necessary, modification should be made to the plan.

The Michigan Planning Enabling Act provides that every 5 years the plan should be reviewed. In that review, the Planning Commission will compare the development that has occurred with the policies of the plan. The plan should be updated to reflect the current character of the community.

The goals and objectives of the Township should also be reassessed considering any changed conditions.

Using the Plan

The Planning Commission and Township Board should continuously strive to:

Refer to the Master Plan in All Zoning Decisions

One principal benefit of having an adopted Master Plan is the foundation provided for sound zoning decisions. Just as the Plan is the policy guide for land use, zoning is the principal legal enforcement tool. The two should work together to support each zoning decision and to assist in defending legal challenges to those decisions, should they occur.

Encourage Other Decision-Making Bodies to Use the Master Plan

The Master Plan should help guide every-day decisions, from the capacity of improved roads to new schools. The Township should use the Master Plan to make policy decisions in the Township. Working with other parties that can affect land use patterns in the Township, such as the County Road Commission, School District, and even adjacent townships, can help Solon Township in the implementation of the Master Plan.

Keep the Plan Current

The Planning Commission should regularly review the Plan to ensure that it is kept current. Community goals should be updated and zoning decisions that affect the direction of development should be incorporated. Where uses have been approved contrary to the Plan, the Plan should be amended to reflect these changes. By routinely following this procedure, the Master Plan will continue to be an up-to-date, reliable planning tool.

Mandated Review

The Michigan Planning Enabling Act indicates that the Master Plan should be reviewed every 5 years. While this does not mandate that the Plan be changed, it at least encourages a thorough review to determine if the directions set forth are still valid.

How does the Master Plan affect landowners?

How the Master Plan affects you depends on your situation. A property owner may wish to know what uses are proposed for your property and for land in your area.

Township residents may be interested in the concepts of the Plan, as expressed in its goals. These statements will indicate the Planning Commission's view of the township now and in the future.

How Should the Plan be Used?

Use of the Plan depends on your interest in the future of Solon Township, but generally, here is the procedure you could follow.

Step #1 What land use is proposed for your property and the area surrounding your property?

You will find this information on the Future Land Use map. The map is divided into separate land use categories. Find the category in which your property is located.

Step #2 Determine how the Planning Commission views development in your area.

Although the text of the Future Land Use Plan will indicate to you the general direction of development within your area, it may be specific, or it may be somewhat general. The Future Land Use text is meant to provide a general direction to the Planning Commission and property owners regarding future development within the township.

Step #3 Determine the meaning of the land use designation for property.

In the Future Land Use chapter, there is a discussion covering each land use category. If you have a specific proposal which does not fit the Future Land Use portion of the Plan, you may want to investigate the Plan in more detail, beginning with the goals.

Step #4 Determine how the Plan affects property.

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

The Master Plan may have a significant impact on the future of your property. As a resident of Solon Township, it is important that you become familiar with the Plan and what it may mean to you.

Conclusion

The Planning Commission and Township Board of Solon Township have assumed their responsibility to look beyond today's zoning issues and provide long term guidance for land use and development through the adoption of this Master Plan. The Township hopes that the Plan will provide tangible benefits in improved quality of life, efficient use of financial and other resources, a cleaner environment, and an economically healthy community. The degree to which the Township and its citizens follow the Plan and keep it current may dictate how effectively the Plan goals are realized. It is demanding work; but the rewards offer to make the effort well worthwhile.

Questionnaire Text Responses

Stop the housing developments

No more housing developments!!!!!!!!!!!!!!

Enforce dog leash law don't let them run also keep cats under control

New subdivisions need several neighbor's approval. If the people wanted to live near a subdivision, they would have chosen to live in one.

SOLON TWP....

MY OPINION IS TO SEE LESS RULES AND REGUALTIONS PUT ON PROPERTY OWNERS AND GIVE THEM MORE RITES AND FREEDOM TO DO WITH THERE LAND WHAT THEY WISH TO, OF COURSE PARCEL SIZE AND CERTAIN LOCATIONS WOULD HAVE TO HAVE LIMITS, LET THEM BE ABLE TO OPEN UP LITTLE SHOPS ON THERE PROPERTY, 9 TIMES OUT OF 10, YOU WILL SEE THE PROPERTY OWNERS CONTINUOUSLY MAKE IMPROVEMENTS TO THEIR PROPERTY AND COMMUNITY, WICH WOULD MEAN MORE TAX DOLLARS TO THE TWP, WITH HIGHER APPRAISALS AND ASSESMENTS, WE HAVE M46 WICH IS A STATE HIGHWAY GOING FROM SAGINAW TO MUSKEGON, WITH BUSINESSES PLACED ALL ALONG THE WAY, IT RUNS FROM ONE END OF THE TWP TO THE OTHER, LETS START TO ENCOURAGE BUSINESSES TO OPEN UP WITH LESS ZONING RULES AND REGULATIONS, EVEN IF ITS LAND OWNERS WANTING TO OPEN UP BUSINESSES IN THEIR HOUSES OR GARAGES, ANTIQUES SHOPS, VARIETY SHOPS, AUTOMOTIVE RELATED, SPECIALTY SHOPS, HOBBY SHOPS, ETC... ETC..... ,,ALGOMA AVE WOULD BE ANOTHER IN OPPORTUNITIES TO DO THIS FROM END TO END, WITH A HIGH AMOUNT OF TRAFFIC ON THAT ROAD WOULD BE ANOTHER GREAT OPPORTUNITY TO SEE COMMERCIAL RELATED BUSINESSES, SMALL BUSINESSES, HOME BUSINESSES, UP AND DOWN ALGOMA. LET'S HAVE LESS ZONING RESTRICTIONS TO ALLOW LANDOWNERS TO IMPROVE THEIR PROPERTIES, WITH OF COURSE RULES TO FOLLOW. IF DONE RITE IN DIFFERENT TOWNSHIPS IN MICHIGAN THIS WORKS, GIVING HOMEOWNERS, THAT OTHERWISE COULDN'T AFFORD TOO, MORE OPPORTUNITES TO HAVE THEIR TALENTS OR HOBBIES ALLOWED ON THEIR PROPERTIES.....

We have been here 53 years so most of this is not for us to say. We are 88 and 84.

In the last decade, I've seen numerous PUDs go up around me within a mile radius. It's no longer the character of neighborhood I desired when I moved here. It makes me want to keep moving north to escape it. That being said, if this kind of development is going to continue, I want to see the highest QUALITY of development possible, the true voice of the people upheld, and hold the developers strictly to the ordinances. I would like to see less trash in front of homes on 17 Mile.

Less restrictions on quality building projects. More restrictions on properties and activities that bring down property value in the township.

I would like to see the natural/rural character of Solon Township retained. I do not want any big-box retail stores, fast food chains, or additional auto part or dollar stores in Solon Township.

Many people move to Solon Township to escape the big cities, so please do not allow the characteristics of the big city to encroach into Solon Township. I would like to see an emergency Medical facility in Solon Township.

Enforce the rules of the Township, and Crack down on people who maintain a trash dump in their yards.

Looking forward to the new park and market pavilion. I encourage more of the community events.

Too many people don't care about how their junk, noise and run-down property effect the reputation of the community and home values. Since personal responsibility can't be legislated, enforcement of zoning rules is the most important aspect of living peacefully in a community. Solon Township leadership has, and continues to do a very poor job at this aspect of township management.

stop using crushed lime instead of gravel...lime is more destroying our vehicles and concrete pads

It would be nice to see the vacant land that has been for sale for so long along White Creek between 17 and Solon roads be developed. We need more business that cater towards the actual residents of this township and not just the passer byes. With the addition of Meijer, I thought we'd get a decent sit-down restaurant maybe a clothing store or two. We have enough auto parts stores, gas stations, dollar stores and fast food. I've lived in this township for 30 years and I don't like seeing all the developments. I would like to see more homes built on larger pieces of land. Solon Twp. is losing its rural feel and it feels like it's more urban with the developments with houses being on such small lots.

I moved to Cedar Springs almost 25 years ago because I've heard a lot of the people here wanted the town to stay small and be more rural and or country. That is what drew me here. Already I think the town has grown a little too much for me. I used to see more wild life in my yard when I first moved up here and now there isn't much at all anymore. There are too many cats and dogs running around. I am most concerned for the wild animals. Their land is being taken from them.

A lot of homes need to pick up their yard clutter. Seeing house furniture on a porch is disgusting. The Solon Cemetery could trim the grass along the fence. The trailer park in Cedar is disgusting also.

I bought a new home here because it is nice as it is. Don't mess it up changing a bunch of stuff or make it all high and mighty for only rich people can afford it.

It would be nice to have a walking/hiking path that connects to the White Pine Trail thus one would be able to walk into Cedar Springs for the library, bank, post office, etc.

I'd assume this is a Kent County Road Commission issue, but I'd like to see a street light at the corner of 20 Mile and Algoma to illuminate the intersection, several accidents there (should have lights as well at 18 and 19 Mile while I'm at it).

It would be nice if Wiersma Street could be turned into a paved road.

Would not like to see accessory buildings limited in size any further than they already are.

Would encourage commercial development and growth in appropriate areas.

The last thing I need is another park or anything else that increases my property taxes. Please keep your ideas out of my wallet.

I live on Lime Lake Dr. walk to the lake 3 times per week. I have picked up trash about 20 full trash bags this year.

This survey seems to be for pro-developments and I could not answer all the questions because of that. What about a look at the impact of the developments already in the township? What about a millage to keep farm land away from developments?

I want the Township to stand up. Admit a "mistake" was made. This thinking is an ugly side of humans. I see good men and women making unwise decisions. Is this what a community aspires to?

Beautiful area

Solon has a lot of good zoning on the books, it would be a shame to see it change much.

The township needs to slow down the development of open spaces for houses. We've had enough.

This survey has not addressed the quality of our roads. The survey asks about several kinds of township improvements but does not consider the quality of the roads we travel, White Creek Ave. in particular.

No

We are very unhappy with what Sable is doing to our township with all his developments. We are concerned for our quality of drinking water with all his new homes.

We just moved here 1 month ago from Indiana. We chose this area due to rural setting, proximity to Grand Rapids and lower taxes. The number of parks and the way they are maintained is much better than the area we have lived in the past 45 years. We enjoy the number of parks and lakes. Can't wait until spring to really enjoy what Solon Twp has to offer. I left several answers blank because I did not have enough information to answer. Is there a map and history of the Twp. that help us become more familiar? I was on the plan commission for the small town in Indiana that we moved from. We just completed our master plan last year. It had been over 20 years since the previous one was done. It was a lot of work.

I think pole barns should be allowed closer to the street than your home, if approved in advance by neighbors.

more lighting for roads

With regards to the master plan the inclusion of a fenced-in dog park would be a wonderful addition to the community. (small dog and large dog separated).

No!

We moved here for the rural feel. If people want the conveniences of a city, then they should move there. No sidewalks, street lights or housing developments. No big government in Solon. Property's should be no less than 3-5 acres. Sick of the housing parks that are always being built, then my taxes go up for these huge homes in these parks. Why do we have to pay for a home that is twice or larger than ours. Would also like to see a speed limit sign posted on Wiersma street at 40. So many people in the area now and they fly down our road like there's no tomorrow. No more tax increases would be great!!

you have too much authority now you seem to interpret the law any way you seem to want to rather than going by the law and enforcing it accordingly.

Not at this time.

Would like Solon Twp. residents to support the library mileage to give access to Kent District Library.

Burn permits are not easy to acquire on the day conditions are just right to burn brush. By the time permission is finally granted can be days later and the burning conditions have deteriorated. Therefore, residents often ignore trying to even get a permit before burning.

Question #24- Most people would require an explanation as to what "low density residential" means. I had to google it.

None

Put pressure on people to keep up their property. No trash, abandoned vehicles, over grown grass, weeds etc.

Taxes seem to be getting out of hand already without adding more to them.

Removal of junk cars and equipment MUST be enforced. We have a neighbor with numerous cars and car bodies, boats and trailers, car parts and assorted equipment, that is very unsightly. Zoning should prohibit that and be enforced throughout the township.

Solon Twp. is doing a great job. I am happy I live here.

Did not like how several of the questions were worded as the answers provided lead to a pre-determined conclusion without actually getting my input on the question!!!!

I would like to see natural gas north of 20 Mile.

I would like to see more type of different stores like in Rockford.

I love this area. I am not a big fan of developments. I would like to be able add on to my 28x40 pole barn.

Solon township taxes are very high compared to other townships. We have lived in Solon Township for 10 years and our house has gone up in value, but our taxes have not gone down so we plan to sell our home and leave Solon Township because of the high taxes. Also, we think Bob Ellick is a great Township Supervisor. We will miss you when we are gone.

No.

We also need to attract more businesses in the Meijer area. Go after restaurants like Applebee's or something as well as more big box stores like Target so people do not have to go to Alpine all the time.

You don't enforce much now, you spend too much of my money and tax me too much. Do something different and save for a while.

Happy to see the proactive approach you are taking & appreciate the opportunity to participate.

road improvement. White Creek is in sad shape.

Blacktop on Middle Lake Avenue.

Please repave 18 Mile from Algoma going East to Tree Valley. I'm tired of straddling the center of the road to avoid the deteriorating pot hole patches.

Limiting division of land parcels to 4 acres or more is what I would like to see with number of developments being limited. Also, township should pave the roads that have developments!! The gravel roads turn to crap. That should be required by township.

enforce clean-up of properties with vehicles and equipment.

Need stronger laws regarding junk, trash, lawn care, etc. We don't live in West Virginia or even Montcalm County. Also, larger home sizes, no more trailers outside of Trailer Parks, and so forth.