

# MASTER PLAN UPDATE 2017

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## *Gaines Township*

GENESEE COUNTY, MICHIGAN

Adopted March 7, 2018

# Gaines Township Master Plan

## Supervisor:

Paul Fortino

## Clerk

Michael Dowler

## Treasurer

Diane Hyrman

## Trustees

Matthew Moros

Lee Purdy

## Planning Commission

Janice DeMoss

Bill Harris

Ken Klungle

Jason Ling

Dave Plumb

Lee Purdy

Sam Stiff

The Gaines Township Planning Commission held a public hearing on February 28, 2018 to take public comment on the Master Plan. The Planning Commission forwarded a unanimous vote to the Township Board to adopt the Master Plan.

On March 7, 2018, the Township Board voted unanimously to adopt the Master Plan.

Assistance provided by:



**TOWNSHIP BOARD RESOLUTION OF ADOPTION:  
GAINES TOWNSHIP MASTER PLAN UPDATE 2017**

**RESOLUTION 2018-07**

The following Resolution was offered by Board Member Lee Purdy and seconded by Board Member Diane Hyrman:

WHEREAS, Gaines Township has established a Planning Commission in accordance with the Michigan Planning Enabling Act, State Public Act 33 of 2008, as amended; and,

WHEREAS, The Township Planning Commission is required by Section 31 of the Michigan Planning Enabling Act, State Public Act 33 of 2008, as amended, to prepare and adopt a master plan as a guide for the physical development of the township; and,

WHEREAS, The Township Planning Commission has worked with the consultants at Wade Trim to oversee a planning process that included public input and investigations and surveys of the existing resources; and,

WHEREAS, The plan was presented to the public at a hearing held on February 28, 2018, before the Planning Commission, with notice of the hearing being provided in accordance with Section 43 of Public Act 33 of 2008, as amended; and,

WHEREAS, The Township Planning Commission did review the proposed plan, consider public comment, and recommend adoption of the master plan update on February 28, 2018, and,

WHEREAS, The Township Board of Gaines Township concurs with the recommendations and proposals contained in the plan pertinent to the future development of the township;


NOW THEREFORE BE IT RESOLVED THAT, The Township Board of Gaines Township does hereby adopt the Gaines Township Master Plan Update 2017 by means of the passing of this resolution, hereby adopted this 7<sup>th</sup> day of March, 2018.

AYES: Michael Dowler, Diane Hyrman, Lee Purdy, Matt Moros and Paul Fortino

NAYS: None

ABSENT: None

I, Mike Dowler, Clerk of Gaines Township, do hereby certify the foregoing to be a true and correct copy of a resolution that was adopted by the Gaines Township Board at their regular meeting held on March 7<sup>th</sup>, 2018.

  
\_\_\_\_\_  
Michael Dowler  
Gaines Township Clerk

**PLANNING COMMISSION RESOLUTION RECOMMENDING ADOPTION  
OF THE GAINES TOWNSHIP MASTER PLAN UPDATE 2017  
RESOLUTION 2018-03**

The following Resolution was offered by Board Member Lee Purdy and seconded by Board Member Dave Plumb;

WHEREAS, Gaines Township has established a Planning Commission in accordance with the Michigan Planning Enabling Act, State Public Act 33 of 2008, as amended; and,

WHEREAS, The Township Planning Commission is required by Section 31 of the Michigan Planning Enabling Act, State Public Act 33 of 2008, as amended, to prepare and adopt a master plan as a guide for the physical development of the township; and,

WHEREAS, The Township Planning Commission has worked with the consultants at Wade Trim to oversee a planning process that included public input and investigations and surveys of the existing resources; and,

WHEREAS, The plan was presented to the public at a hearing held on February 28, 2018, before the Planning Commission, with notice of the hearing being provided in accordance with Section 43 of Public Act 33 of 2008, as amended; and,

WHEREAS, The Township Planning Commission did review the proposed plan and consider public comment;


NOW THEREFORE BE IT RESOLVED THAT, The Planning Commission of Gaines Township does hereby recommend adoption of the Gaines Township Master Plan Update 2017 by means of the passing of this resolution, hereby adopted this 28<sup>th</sup> day of February, 2018.

AYES: Jan DeMoss, Ken Klungle, Jason Ling, Sam Stiff, Dave Plumb, Lee Purdy, Bill Harris

NAYS: None

ABSENT: None

I, Karen Hawkins, Secretary of the Gaines Township Planning Commission, do hereby certify the foregoing to be a true and correct copy of a resolution that was adopted by the Gaines Township Planning Commission at their regular meeting held on February 28, 2018.

  
\_\_\_\_\_  
Karen Hawkins, Secretary  
Gaines Township Planning Commission



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# Introduction

Gaines Township is located in the southeastern portion of Michigan's Lower Peninsula, Genesee County, approximately ten miles southwest of the City of Flint. The Township's urban form is consistent with other rural communities on the fringe of urban areas. It is a place where people have chosen to live, work, and play and, therefore, is a place where certain services and facilities are required. Police, fire protection, parks, religious institutions, government centers, retail shops, meeting places, and a host of other facilities are woven together by physical infrastructure and communication routes.

In support of these regular operations, the Township has created a number of commissions, including the Planning Commission. As one of its many duties, the Planning Commission has oversight responsibility for the creation and maintenance of the Township Master Plan. In part, Michigan State statutes provide that the purpose of a Township Master Plan is to: promote the public health, safety, and general welfare; encourage the use of resources in accordance with their character and adaptability; and consider the character of the Township and its suitability for particular uses judged in terms of such factors as trend in land and population development. The Township Master Plan includes narrative, maps, charts, and graphic material that provide a basis for the Planning Commission's recommendations for the future development of the Township. The Township Master Plan is the legal basis for the Township Zoning Ordinance. The Township Zoning Ordinance is the regulatory mechanism through which the usage of land is governed.

This document consists of the 2017 update to the Master Plan for Gaines Township. The intent of this Master Plan is to serve as a guide for the future growth and development of Gaines Township which will, in turn, promote the health, safety, welfare, and convenience of the people who live and work in the Township. It is both a realistic assessment of current conditions, and an expression of the future goals and vision of the Township, defining the form and character it seeks to achieve. The plan will provide guidance to both the public and the private sectors regarding a range of topics, including future land use, and economic and residential growth decisions. Finally, the plan will be responsive to the changes that occur within the Township. The development of land can be dynamic and alter significantly over time. Therefore, the plan must be flexible to these changes while still advancing the goals and aspirations of the community. This new Master Plan will replace the Township's previous Master Plan, adopted in 2007.

## Chapter 1



## AUTHORITY

The Township derives its authority to Master Plan from Public Act 263 of 2001, which was recently adopted by the Michigan State Legislature to amend the 1959 Public Act 168, which provides townships with the ability to plan their community. Public Act 263 states:

*“The township planning commission shall make and approve a basic plan as a guide for the development of unincorporated portions of the township.”*

The master planning process is cooperative and public. Input from the public and various governmental entities are gathered throughout the planning process. Public Act 263 requires the Planning Commission to hold a public hearing before the final adoption of the Master Plan. Also, Public Act 263 requires review of the Master Plan after a five-year period but allows for change at any time. However, a public hearing is required if the Planning Commission wishes to alter or amend the Master Plan after its original adoption. This process offers the Planning Commission the opportunity to analyze and address any significant changes to the Township that may result in needed modifications to the plan. It also provides the opportunity to ascertain progress in implementing the goals and objectives outlined in the plan.

## **PURPOSE**

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

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

## **PUBLIC INVOLVEMENT**

The process of developing a master plan which is both meaningful to the community and feasible in its implementation must enjoy the participation of a larger stake-holding group. In order to garner this needed input, direct communication between the Planning Commission, community stakeholders, Township residents, and the plan authors must occur. Knowledge regarding the concerns of the community is gained through multiple meetings, and a public workshop and forum. This type of direct interaction with stakeholders allows for a more complete framework of the concerns and needs of Gaines Township community members.

## **PLAN ORGANIZATION**

In order to communicate the most complete and accurate picture of the existing conditions within Gaines Township, as well as its goals for the future, the Master Plan is divided into multiple sections. These sections detail the existing conditions of population characteristics, land use, transportation, natural features, and public facilities. Additionally, the future character of the Township will be articulated through description of its goals and objectives and future land use choices. So as to supplement textual descriptions, visual representations of data are included; these consist of photos, maps, and other graphics. These sections represent the history and future of development within Gaines Township and, therefore, provide a guide for its continuing growth and evolution in the coming years.





# Regional Analysis

## REGIONAL LOCATION

Gaines Township is located along the western edge of Genesee County, in the southeastern portion of Michigan's Lower Peninsula. Two municipalities are located within Gaines Township, the City of Swartz Creek in the northeast corner and the Village of Gaines in the southwest corner. Four townships border Gaines including Argentine Township to the south, Mundy Township to the east, Clayton Township to the north, and Vernon Township, in Shiawassee County, to the west. **Map 1, Regional Location** shows the location of Gaines Township in relation to the surrounding communities and region.

Genesee County is the fifth largest county by population in the State of Michigan, with more than 400,000 residents. The City of Flint, located in the center of the county, is its largest community with a population just under 125,000. Over the years, urban and suburban development has slowly extended outward from Flint spreading into the adjoining communities including the City of Burton, Flint Township, Genesee Township, and Mt. Morris Township. More recently, development pressure from the Detroit metropolitan region to the south has been at work transforming the landscape of Genesee County, particularly its southernmost communities. Between 1990 and 2000, all of the fastest growing communities in Genesee County were found along the southern border including the Village of Goodrich (47.7% growth), Argentine Township (40.2%), Atlas Township (30.7%), Fenton Township (29.0%), and the City of Fenton (25.3%).

In spite of all the growth that has occurred, many of the outlying communities of Genesee County, including Gaines Township, have retained their predominantly rural and agricultural character. Increasingly, however, these communities are struggling to deal with the pressure of suburban-type development.

## REGIONAL TRANSPORTATION

Gaines Township is well served by a network of major transportation arteries. Several freeways are located just outside of the Township including I-69, U.S. 23 and I-75. Running east-west, I-69 connects Lansing and Port Huron. Running north-south, I-75 is one of the most heavily traveled corridors in the state connecting the metropolitan area of Detroit with Northern Michigan. U.S. 23 also runs north-south and provides access to metropolitan Detroit and Ann-Arbor. Other state highways providing access within the region include M-52, M-71, M-13, M-21, M-57, M-54 and M-15 (see **Map 1**).

These major transportation routes effectively connect Gaines Township and Genesee County with the rest of the State and entire Midwest. Driving times and distances to major destinations are provided below:

| Destination      | Approximate Distance | Estimated Driving Time |
|------------------|----------------------|------------------------|
| Saginaw, MI      | 42 Miles             | 43 Minutes             |
| Lansing, MI      | 49 Miles             | 47 Minutes             |
| Ann Arbor, MI    | 57 Miles             | 54 Minutes             |
| Detroit, MI      | 73 Miles             | 1 Hour, 10 Minutes     |
| Grand Rapids, MI | 106 Miles            | 1 Hour, 36 Minutes     |
| Cleveland, OH    | 226 Miles            | 3 Hours, 34 Minutes    |
| Chicago, IL      | 263 Miles            | 4 Hours, 7 Minutes     |
| Toronto, ON      | 258 Miles            | 4 Hours, 21 Minutes    |

*Source: Mapquest driving times and distances from Swartz Creek, MI to selected destinations, August 2005. [Http://www.mapquest.com](http://www.mapquest.com)*

## PLANNING IN LOCAL COMMUNITIES

The adopted plans of surrounding communities may directly impact the future development of Gaines Township. Therefore, it is important to recognize such plans and to evaluate their importance to the development of the Gaines Township Master Plan. The long range planning efforts of adjacent communities are described below and are illustrated in **Map 2, Adjacent Future Land Uses**.

### Argentine Township

Argentine Township, with an approximate population of 6,500, is adjacent to Gaines Township to the south. The Township has a Master Plan that was adopted in April of 2005. Along Argentine's northern border with Gaines Township, two land uses are planned: agricultural and rural residential. The dividing point is Seymour Road, as lands to the west are planned for agricultural use while lands to the east are planned for rural residential use. Higher intensity urban residential, waterfront residential, and multiple-family residential uses are all planned in the southern and southeastern portion of the Township. Most of the non-residential uses such as commercial and industrial are planned along Silver Lake Road in the southeastern portion of the Township.

In 2017, Gaines Township inquired but was not able to obtain updated information related to more recent Argentine Township planning efforts.

## Clayton Township

Clayton Township, with a 2000 population of 7,500 citizens, is located to the north of Gaines Township. The Clayton Township Master Plan was adopted in January of 1990. According to the Township's Future Land Use Map, the eastern half of the Township is planned to accommodate suburban residential development, while the western half is planned mainly for agricultural uses. Planned non-residential uses such as industrial, commercial, and office are scattered throughout the Township, typically at the major road intersections.

Miller Road constitutes the border between the two Townships. In the southwestern corner of Clayton Township, north of Miller Road between Sheridan and Duffield Roads, lands are planned for Rural Estate. Along the north side of Miller Road between Duffield and Van Vleet Roads, lands are planned for agricultural uses. Between Van Vleet Road and the City of Swartz Creek, lands along the north side of Miller Road are planned for a mix of local commercial, office, and general commercial uses.

Gaines Township obtained an updated Future Land Use Map for Clayton Township from its 2010 Master Plan. The planned land uses along the southern township border (the north side of Miller Road) remain similar to that which was planned back in 2000.

## Village of Gaines

The Village of Gaines is a small community located in the southwestern corner of Gaines Township. The Village adopted a Master Plan in 1996. According to the Future Land Use Map, the majority of the Village is planned for single-family residential. This designation includes lands along the western border of the Village, adjacent to Gaines Township. Along the Village's northern and eastern borders, also adjacent to Gaines Township, lands are planned for agricultural uses except for a single-family area on the south side of Duffield Road as it enters the Village. Commercial uses are planned at the corner of Genesee Avenue and Walker Street. Fringe commercial/restrictive industrial uses are planned on the north side of Walker Street. Planned multi-family residential, park, and public/semi-public lands are scattered around the Village.

In 2017, Gaines Township inquired but was not able to obtain updated information related to more recent Gaines village planning efforts.

## Mundy Township

The Charter Township of Mundy, with a population of just over 12,000 citizens, is adjacent to Gaines Township to the east. In April of 1997, the Mundy Township Planning Commission adopted a Master Plan. According to the Future Land Use Plan of Mundy Township, the western and southern edges of the Township are planned for low density residential/agricultural uses. These low density areas are not intended to be served by public utilities, and have recommended minimum lot sizes of three to five acres. In the extreme northwestern portion of the Township, east of Elms Road and south of Maple Avenue, mobile home park uses are planned. Much of the central and northeastern portion of the Township is planned for one family residential. High-



er intensity commercial, industrial, and research uses are planned in several areas in the Township including the Hill Road corridor near U.S. 23 and I-75, at the Grand Blanc Road/U.S. 23 interchange, and west of Bishop International Airport.

Gaines Township obtained an updated Future Land Use Map for Mundy Township, dated 2010. Similar to the 1997 Master Plan, the western and southern edges of the Township remain planned for low density residential/agricultural uses.

### City of Swartz Creek

The City of Swartz Creek has a population of around 5,000 citizens and is located within the northeastern portion of Gaines Township, and also extends into Clayton and Flint Townships. The City of Swartz Creek Master Plan was prepared and accepted by the City Council in November of 2003. Generally, the highest intensity commercial and industrial land uses are located along Miller Road, Morrish Road, and at the two I-69 interchanges. Outside of these areas, a mix of low, medium and high density residential uses are most prevalent. The following uses are planned along the borders with Gaines Township. The residential neighborhoods to the east and west of Seymour Road are planned for low density and medium density single-family residential uses. The permitted density for the low density single-family residential district is up to 3.9 units per acre, while the medium density residential district permits up to 7 units per acre. Lands on the east and west side of Morrish Road adjacent to Gaines Township are planned for light industrial.

Gaines Township obtained an updated Future Land Use Map for the City of Swartz Creek, dated 2015. The future land use allocations are generally similar to those from the 2003 Master Plan, with commercial and industrial land uses planned along Miller Road, Morrish Road, and at the two I-69 interchanges, and a mix of low, medium and high density residential uses elsewhere in the City.

### Vernon Township

Vernon Township is located west of Gaines Township in Shiawassee County. In 2004, the Township adopted a new Master Plan. According to the Future Land Use Plan, the majority of the Township has been designated in the agricultural district. This includes all of the lands along Sheridan Road adjacent to Gaines Township. The desired density for the agricultural district is one dwelling unit per every 40 acres. As stated in the Plan, this density is necessary to ensure that parcels are large enough to contain a viable agricultural use. Higher intensity residential, commercial, and industrial uses are found in the central portion of the Township, adjacent to the two communities of Durand and Vernon, and at the I-69 interchange.

In 2017, Gaines Township inquired but was not able to obtain updated information related to more recent Vernon Township planning efforts.

# Socio-Economic Profile

The purpose of this analysis is to describe the social characteristics of Gaines Township, which is an essential element in determining the short- and long-term planning goals of the community. Social characteristics include the size of the population, age, gender, race, ethnicity, socioeconomic levels, employment, and housing value, tenure and unit age. Compiling and examining data on these elements will help guide Township Officials in determining future land use needs.

## POPULATION PROFILE

### Historical Population Growth

Population growth is the most important factor influencing land use decisions in any community. Simply put, if the population of a community is growing, there will be a need for more housing, commerce, industry, parks and recreation, public services and facilities, or roads.

Population trends for Gaines Township and its neighboring communities are presented in **Table 1**. Gaines Township experienced a 19 percent population increase between 1990 and 2000. However, the Township's population increase between 2000 and 2010 was only 10.2 percent. Similarly, while Argentine Township experienced a large population increase between 1990 and 2000, it only saw a moderate population increase between 2000 and 2010 (5.7 percent). While most surrounding communities experienced continued a downward trend in population, some communities such as Swartz Creek and Mundy Township saw significant population increases between 2000 and 2010 (11.4 percent and 19.2 percent respectively).

Genesee County as a whole saw a population decrease of 2.4 percent between 2000 and 2010. This is consistent with the population decline experienced by most communities within the County between 2000 and 2010. However, the loss in population within the County during this period is primarily due to the significant population decreases found in the City of Flint. The State of Michigan also experienced a population loss during this period.

Overall, the figures for Gaines Township and the surrounding communities indicate a decline in growth.

### Population Projections

Data in **Table 2** shows population projections for Genesee County and Gaines Township through 2040. According to the 2035 Genesee County Long Range Transportation Plan developed in 2005 by the Genesee County Metropolitan Planning Commission, the population in Gaines Township is expected to grow modestly, adding

**TABLE 1: Population Trends: 1990-2010**

| Place                    | 1990      | 2000      | % Change<br>(1990-2000) | 2010      | % Change<br>(2000-2010) |
|--------------------------|-----------|-----------|-------------------------|-----------|-------------------------|
| <b>Gaines Township*</b>  | 4,964     | 6,125     | 19.0%                   | 6,820     | 10.2%                   |
| <u>Genesee County</u>    |           |           |                         |           |                         |
| Village of Gaines        | 427       | 366       | -14.3%                  | 380       | 3.7%                    |
| City of Swartz Creek     | 4,851     | 5,102     | 4.9%                    | 5,758     | 11.4%                   |
| Argentine Township       | 4,651     | 6,521     | 28.7%                   | 6,913     | 5.7%                    |
| Clayton Township         | 7,368     | 7,546     | 2.4%                    | 7,581     | 0.5%                    |
| Fenton Township          | 10,055    | 12,968    | 22.5%                   | 11,746    | -10.4%                  |
| Flint Township           | 34,081    | 33,691    | -1.2%                   | 31,929    | -5.5%                   |
| Mundy Township           | 11,511    | 12,191    | 5.6%                    | 15,082    | 19.2%                   |
| <u>Shiawassee County</u> |           |           |                         |           |                         |
| Burns Township           | 3,019     | 3,500     | 13.7%                   | 3,457     | -1.2%                   |
| Venice Township          | 2,812     | 2,588     | -8.7%                   | 2,578     | -0.4%                   |
| Vernon Township          | 4,989     | 4,980     | -0.2%                   | 4,614     | -7.9%                   |
| <b>Genesee County</b>    | 430,459   | 436,141   | 1.3%                    | 425,790   | -2.4%                   |
| <b>State of Michigan</b> | 9,295,297 | 9,938,444 | 6.5%                    | 9,883,640 | -0.6%                   |

\*Values do not include Census calculation for Village of Gaines  
1990, 2000, 2010 US Census - SF1

roughly 150 to 200 people every five years, resulting in an expected population of approximately 7,305 by the year 2040. This represents a 13.4 percent increase between 2010 and 2040. In contrast, Genesee County is expected to gradually lose population through 2040.

**TABLE 2: Population Projections: 2010-2040**

| Method  | 2010<br>Population | Projections |         |         |         |         |         |         | 2010 to 2040<br>% Change |
|---|--------------------|-------------|---------|---------|---------|---------|---------|---------|--------------------------|
|   |                    | 2012        | 2015    | 2020    | 2025    | 2030    | 2035    | 2040    |                          |
| <b>2040 Woods &amp; Poole Projection</b>                    |                    |             |         |         |         |         |         |         |                          |
| Genesee County  | 425,790            | 421,827     | 421,531 | 421,711 | 422,231 | 422,645 | 422,895 | 423,226 | -0.60%                   |
| <b>2035 Genesee County LRTP Projection</b>                  |                    |             |         |         |         |         |         |         |                          |
| Genesee County  |                    |             |         |         |         |         |         | 473,883 |                          |
| Gaines Township   | 6,442              | 6,436       | 6,460   | 6,592   | 6,736   | 6,900   | 7,086   | 7,305   | 13.40%                   |
| <b>2040 Regional Economic Models Inc. (REMI) Projection</b> |                    |             |         |         |         |         |         |         |                          |
| Genesee County  | 425,790            | 422,722     | 418,132 | 411,712 | 407,617 | 404,881 | 403,049 | 401,784 | -5.60%                   |

Genesee County Metropolitan Planning Commission, 2005 Base Year Population Data, 2040 Population Projections Methodology Report

As with all population projections, however, these numbers are based on past trends and do not take into consideration any significant developments, economic occurrences, or changing personal habitation preferences that may occur in the future. These figures should, therefore, be seen only as a preliminary benchmark for analysis of future population attributes.

### Age Groups

Information on age distribution within a population can assist a community in matching public services to community characteristics and in determining special needs of certain age groups. For example, the younger population tends to require more rental housing units and smaller homes, while the elderly population may have a need for assisted living facilities. Analysis of age distribution may also be used by policy makers to identify current gaps in services and to project future service needs for housing, education, recreation and medical care. It is of equal importance in planning to anticipate which age groups are likely to increase during the planning period. Examples of this are the aging “baby boomers” and their children; both forming waves of population rise and fall as they move through their lifecycles. As shown in Table 3, the median age in 2010 for Gaines Township was 42.2 years. This is a significant increase from 2000 when the median age was 37.9 years, signifying an aging population. In 2010, the median age in Gaines Township was consistent with the median age in surrounding communities. However, Gaines Township continues to have a higher median age than both Genesee County and the State of Michigan (38.5 and 38.9 in 2010 respectively).

The percentage of the population within certain age group categories is found in **Table 3**. Gaines Township closely matches the surrounding communities and the County and State. In 2010, the smallest percentages of the population in Gaines Township were within the Under 5 Years, 15-24 Years and 25 to 34 Years age groups. In sum, 40 percent of the population in Gaines Township was under the age of 24 years old, while 60 percent of the population was over the age of 35 years, with the highest percentage falling within the 45 to 54 years (18 percent) age group. This closely resembles the age distribution found in surrounding communities.

**TABLE 3: Age Group Comparison: 2010**

| Place                    | Total Population | Under 5 Years |    | 5 to 14 Years |     | 15 to 24 Years |     | 25 to 34 Years |     | 35 to 44 Years |     | 45 to 54 Years |     | 55 to 64 Years |     | 65 and Over |     | Median Age (years) |
|--------------------------|------------------|---------------|----|---------------|-----|----------------|-----|----------------|-----|----------------|-----|----------------|-----|----------------|-----|-------------|-----|--------------------|
|                          |                  | #             | %  | #             | %   | #              | %   | #              | %   | #              | %   | #              | %   | #              | %   | #           | %   |                    |
| <b>Gaines Township*</b>  | 6,820            | 351           | 5% | 1005          | 15% | 772            | 11% | 636            | 9%  | 924            | 14% | 1,210          | 18% | 1023           | 15% | 899         | 13% | 42.2               |
| <b>Genesee County</b>    |                  |               |    |               |     |                |     |                |     |                |     |                |     |                |     |             |     |                    |
| Village of Gaines        | 380              | 23            | 6% | 52            | 14% | 52             | 14% | 50             | 13% | 51             | 13% | 56             | 15% | 50             | 13% | 46          | 12% | 38.5               |
| City of Swartz Creek     | 5,758            | 340           | 6% | 733           | 13% | 653            | 11% | 665            | 12% | 737            | 13% | 747            | 13% | 724            | 13% | 1159        | 20% | 41.0               |
| Argentine Township       | 6,913            | 377           | 5% | 1,098         | 16% | 759            | 11% | 715            | 10% | 1,035          | 15% | 1,308          | 19% | 891            | 13% | 730         | 11% | 40.3               |
| Clayton Township         | 7,581            | 376           | 5% | 997           | 13% | 929            | 12% | 726            | 10% | 931            | 12% | 1,306          | 17% | 1101           | 15% | 1215        | 16% | 43.5               |
| Fenton Township          | 15,552           | 841           | 5% | 2,275         | 15% | 1,636          | 11% | 1,411          | 9%  | 2,150          | 14% | 2,668          | 17% | 2,435          | 16% | 2,136       | 14% | 42.7               |
| Flint Township           | 31,929           | 1,824         | 6% | 4,012         | 13% | 4,492          | 14% | 3,559          | 11% | 3,771          | 12% | 4,750          | 15% | 4,028          | 13% | 5,493       | 17% | 40.6               |
| Mundy Township           | 15,082           | 899           | 6% | 1,965         | 13% | 1,589          | 11% | 1,800          | 12% | 2,007          | 13% | 2,422          | 16% | 2,139          | 14% | 2,261       | 15% | 41.5               |
| <b>Shiawassee County</b> |                  |               |    |               |     |                |     |                |     |                |     |                |     |                |     |             |     |                    |
| Burns Township           | 3,457            | 163           | 5% | 562           | 16% | 429            | 12% | 312            | 9%  | 538            | 16% | 601            | 17% | 427            | 12% | 425         | 12% | 40.5               |
| Venice Township          | 2,578            | 125           | 5% | 350           | 14% | 318            | 12% | 225            | 9%  | 347            | 13% | 428            | 17% | 361            | 14% | 424         | 16% | 43.2               |
| Vernon Township          | 4,614            | 217           | 5% | 602           | 13% | 552            | 12% | 421            | 9%  | 604            | 13% | 803            | 17% | 667            | 14% | 748         | 16% | 43.6               |
| <b>Genesee County</b>    | 425,790          | 27,319        | 6% | 59,622        | 14% | 57,719         | 14% | 50,224         | 12% | 55,060         | 13% | 64,981         | 15% | 52,676         | 12% | 58,189      | 14% | 38.5               |
| <b>State of Michigan</b> | 9,883,640        | 596,286       | 6% | 1,313,000     | 13% | 1,408,671      | 14% | 1,164,149      | 12% | 1,277,974      | 13% | 1,510,033      | 15% | 1,251,997      | 13% | 1,361,530   | 14% | 38.9               |

\*Values do not include Census calculation for Village of Gaines

2010 US Census - SF1



## Changes in Age Structure

**Table 4**, which details the age group trends between 1990-2010, shows significant changes in the age structure of Gaines Township as the trend shows the gradual aging of the population as the younger age groups are declining and the older age groups are increasing. In 2010, decreases across the school age and young adult age groups continue to occur, with the sharpest decrease occurring in the 35 to 44 Years age group. While the 45 to 59-year age groups closely resemble their 2000 levels, increases in the 60 Years and over age groups have increased dramatically.

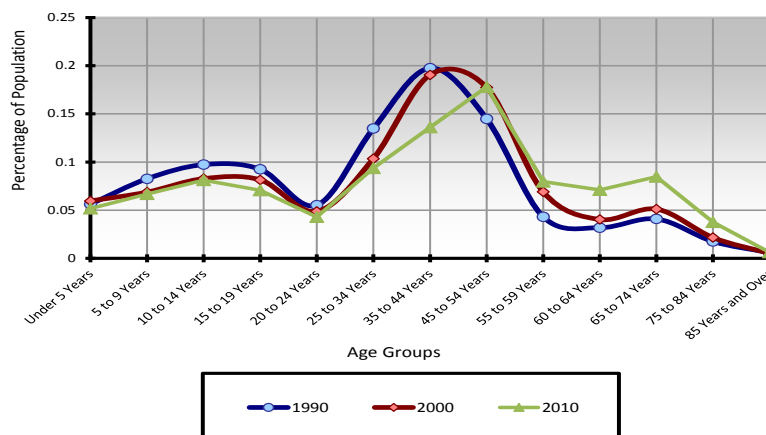
*TABLE 4: Age Group Trends: 1990-2010*

| Gaines Township*<br>Age Groups | 1990         |               | 2000         |               | 2010         |               |
|--------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|
|                                | #            | %             | #            | %             | #            | %             |
| Under 5 Years                  | 279          | 5.6%          | 365          | 6.0%          | 351          | 5.1%          |
| 5 to 9 Years                   | 410          | 8.3%          | 421          | 6.9%          | 453          | 6.6%          |
| 10 to 14 Years                 | 483          | 9.7%          | 507          | 8.3%          | 552          | 8.1%          |
| 15 to 19 Years                 | 459          | 9.2%          | 499          | 8.1%          | 480          | 7.0%          |
| 20 to 24 Years                 | 274          | 5.5%          | 299          | 4.9%          | 292          | 4.3%          |
| 25 to 34 Years                 | 669          | 13.5%         | 634          | 10.4%         | 636          | 9.3%          |
| 35 to 44 Years                 | 980          | 19.7%         | 1,167        | 19.1%         | 924          | 11.8%         |
| 45 to 54 Years                 | 719          | 14.5%         | 1,087        | 17.7%         | 1,210        | 15.7%         |
| 55 to 59 Years                 | 214          | 4.3%          | 423          | 6.9%          | 541          | 17%           |
| 60 to 64 Years                 | 158          | 3.2%          | 247          | 4.0%          | 482          | 7.1%          |
| 65 to 74 Years                 | 203          | 4.1%          | 313          | 5.1%          | 576          | 8.4%          |
| 75 to 84 Years                 | 87           | 1.8%          | 132          | 2.2%          | 256          | 3.8%          |
| 85 Years and Over              | 29           | 0.6%          | 31           | 0.5%          | 42           | 1.0%          |
| <b>Totals</b>                  | <b>4,964</b> | <b>100.0%</b> | <b>6,125</b> | <b>100.0%</b> | <b>6,820</b> | <b>100.0%</b> |
| <b>Median Age (Years)</b>      | <b>33.7</b>  |               | <b>37.9</b>  |               | <b>42.2</b>  |               |

*\*Values do not include Census calculation for Village of Gaines*

*1990, 2000 and 2010 US Census - SF1*

*Age Group Trends: 1990-2010*



## Racial Composition

Another important characteristic of a community is its racial make-up. Understanding the racial composition of a community helps to identify the diverse needs of its population. The U.S. Census Bureau categorizes the population into a number of racial categories. First, the population is broken down into either the One Race category or Two or More Races category. The One Race category is further categorized into the traditional racial groups (i.e., White, African American, Asian, etc.). Additionally, the Census Bureau identifies Hispanic or Latino citizens that may be a part of any other race.

As can be seen in **Table 5**, Gaines Township and most of the surrounding communities are relatively homogeneous, with the majority of citizens classified as White. Flint Township, Genesee County, and the State of Michigan have somewhat lower percentages of citizens falling into the White category and higher percentages of other racial groups, particularly Black or African American.

**TABLE 5: Racial Composition: 2010**

| Place                | Total Population | One Race       |     |           |     |                           |     |                                   |    |         |    |                            |    |                 |    | Two or More Races       |    | Hispanic or Latino (of any Race) |    |
|----------------------|------------------|----------------|-----|-----------|-----|---------------------------|-----|-----------------------------------|----|---------|----|----------------------------|----|-----------------|----|-------------------------|----|----------------------------------|----|
|                      |                  | Total One Race |     | White     |     | Black or African American |     | American Indian and Alaska Native |    | Asian   |    | Hawaiian and Other Pacific |    | Some Other Race |    | Total Two or More Races |    |                                  |    |
|                      |                  | #              | %   | #         | %   | #                         | %   | #                                 | %  | #       | %  | #                          | %  | #               | %  | #                       | %  | #                                | %  |
| Gaines Township*     | 6,820            | 6,735          | 99% | 6,610     | 97% | 58                        | 1%  | 40                                | 1% | 12      | 0% | 0                          | 0% | 15              | 0% | 85                      | 1% | 166                              | 2% |
| Genesee County       |                  |                |     |           |     |                           |     |                                   |    |         |    |                            |    |                 |    |                         |    |                                  |    |
| Village of Gaines    | 380              | 376            | 99% | 372       | 98% | 1                         | 0%  | 2                                 | 1% | 0       | 0% | 0                          | 0% | 1               | 0% | 4                       | 1% | 7                                | 2% |
| City of Swartz Creek | 5,758            | 5,654          | 98% | 5,277     | 92% | 292                       | 5%  | 12                                | 0% | 46      | 1% | 0                          | 0% | 27              | 0% | 104                     | 2% | 130                              | 2% |
| Argentine Township   | 6,913            | 6,827          | 99% | 6,756     | 98% | 19                        | 0%  | 24                                | 0% | 9       | 0% | 2                          | 0% | 17              | 0% | 86                      | 1% | 95                               | 1% |
| Clayton Township     | 7,581            | 7,471          | 99% | 4,068     | 54% | 244                       | 3%  | 39                                | 1% | 52      | 1% | 4                          | 0% | 64              | 1% | 110                     | 1% | 215                              | 3% |
| Fenton Township      | 15,552           | 15,336         | 99% | 15,007    | 96% | 68                        | 0%  | 59                                | 0% | 149     | 1% | 4                          | 0% | 49              | 0% | 216                     | 1% | 285                              | 2% |
| Flint Township       | 31,929           | 30,926         | 97% | 21,700    | 68% | 8,209                     | 26% | 175                               | 1% | 604     | 2% | 6                          | 0% | 232             | 1% | 1,003                   | 3% | 927                              | 3% |
| Mundy Township       | 15,082           | 14,809         | 98% | 13,887    | 92% | 655                       | 4%  | 45                                | 0% | 153     | 1% | 8                          | 0% | 61              | 0% | 273                     | 2% | 360                              | 2% |
| Shiawassee County    |                  |                |     |           |     |                           |     |                                   |    |         |    |                            |    |                 |    |                         |    |                                  |    |
| Burns Township       | 3,457            | 3,428          | 99% | 3,360     | 97% | 6                         | 0%  | 21                                | 1% | 15      | 0% | 7                          | 0% | 19              | 1% | 29                      | 1% | 56                               | 2% |
| Venice Township      | 2,578            | 2,544          | 99% | 2,506     | 97% | 6                         | 0%  | 14                                | 1% | 6       | 0% | 5                          | 0% | 7               | 0% | 34                      | 1% | 70                               | 3% |
| Vernon Township      | 4,614            | 4,550          | 99% | 4,490     | 97% | 8                         | 0%  | 24                                | 1% | 6       | 0% | 0                          | 0% | 22              | 0% | 64                      | 1% | 95                               | 2% |
| Genesee County       |                  |                |     |           |     |                           |     |                                   |    |         |    |                            |    |                 |    |                         |    |                                  |    |
| State of Michigan    | 425,790          | 414,774        | 97% | 317,393   | 75% | 88,127                    | 21% | 2,252                             | 1% | 3,879   | 1% | 79                         | 0% | 3,044           | 1% | 11,016                  | 3% | 12,983                           | 3% |
|                      | 9,883,640        | 9,653,321      | 98% | 7,803,120 | 79% | 1,400,362                 | 14% | 62,007                            | 1% | 238,199 | 2% | 2,604                      | 0% | 147,029         | 1% | 230,319                 | 2% | 436,358                          | 4% |

\*Values do not include Census calculation for Village of Gaines  
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## Household Size

The number of persons per household constitutes average household size. Since the 1970's, the nationwide trend has been a decline in household size. This trend has occurred because of a number of reasons which include: declining number of children per family, higher divorce rates, and a growing number of elderly living alone.

**Table 6** provides the household size trends for Gaines Township, and surrounding areas between 2000 and 2010. During this period, the average household size in Gaines Township decreased from 2.85 to 2.72 or a decline of 5.0 percent. Similarly, all of the other units of government compared in the table saw declines in their average household size. The largest declines occurred in Burns Township (6.0 percent), Gaines Township (5.0 percent), Argentine Township (5.0 Percent), and Vernon Township (5.0 Percent).

*TABLE 6: Average Household Size: 2000-2010*

| Place                    | 2000 | 2010 | % Change |
|--------------------------|------|------|----------|
| <b>Gaines Township</b>   | 2.85 | 2.72 | -5%      |
| <u>Genesee County</u>    |      |      |          |
| Village of Gaines        | 2.56 | 2.47 | -4%      |
| City of Swartz Creek     | 2.27 | 2.25 | -1%      |
| Argentine Township       | 2.82 | 2.67 | -5%      |
| Clayton Township         | 2.72 | 2.61 | -4%      |
| Fenton Township          | 2.66 | 2.59 | -3%      |
| Flint Township           | 2.36 | 2.34 | -1%      |
| Mundy Township           | 2.49 | 2.45 | -2%      |
| <u>Shiawassee County</u> |      |      |          |
| Burns Township           | 2.94 | 2.77 | -6%      |
| Venice Township          | 2.64 | 2.65 | 0%       |
| Vernon Township          | 2.65 | 2.52 | -5%      |
| <b>Genesee County</b>    | 2.54 | 2.48 | -2%      |
| <b>State of Michigan</b> | 2.56 | 2.49 | -3%      |

2000 and 2010 US Census - SF1

Declining numbers of persons per household often is accompanied by an increase in the total number of households and demand for new housing units. This is often true even in circumstances of negative population growth. For example, a population of 1,000 with an average of 4 persons per household requires 250 dwelling units. Following national trends, let's assume that the average persons per household in the community declines to 3. Even if the community declines in population to 900, the smaller household size of 3 results in the need for 300 dwelling units, 50 more units than were required previously.

Based on the average of the Linear and Exponential Extrapolation population projections, Gaines Township's population is projected to increase to 8,982 citizens by the year 2020. Based on the rate of change between 1990 and 2000, the Township's average household size is projected to decrease to 2.61 by the year 2020. If trends continue, the Township will have the need for 3,441 occupied housing units by the year 2020. Currently, the Township has 2,126 occupied housing units, meaning that 1,315 units will need to be added by the year 2020 (see **Table 7**).

**TABLE 7: Persons Per Household Trends and Projections: 2000-2020**

| Gaines Township Category     | 2000  | 2010  | 2020* | % Change<br>1990-2020 |
|------------------------------|-------|-------|-------|-----------------------|
| Total Population             | 6,125 | 6,820 | 8,982 | 80.9%                 |
| Persons Per Household        | 2.85  | 2.72  | 2.61  | -16.0%                |
| Total Occupied Housing Units | 2,126 | 2,502 | 3,441 | 117.5%                |

*\*Total Population is the average value of the Linear Extrapolation and Exponential Extrapolation population projections. Persons per household is a projection based on 1990-2000 data employing an average rate of change. Total occupied housing units is based on total population divided by persons per household.*

### **Special Needs Population**

Special needs populations are not typically examined during the master planning process. However, understanding the statistics of this population group will help the Township better assess and plan for their Community Development Block Grant (CDBG) programs. Each year the Township is designated as a sub-recipient community of Genesee County and, therefore, receives Housing and Urban Development (HUD) funding. An objective of HUD and the CDBG program is to utilize these federal dollars in the support of programs that target populations in need. The specific number of mentally ill or developmentally disabled persons living within Gaines Township cannot be determined with precision as agencies serving these populations do not keep specific counts of those served.

As defined by the Michigan Mental Health code, a developmental disability is generally defined as a severe, chronic condition that is attributable to a mental or physical impairment or a combination of mental and physical impairments. Additionally, this disability is manifested before the individual is 22 years old, and is likely to continue indefinitely. This impairment must also result in substantial function limitations in three or more of the following areas:

- Self-care
- Receptive and expressive language
- Learning
- Mobility
- Self-direction
- Capacity for independent living
- Economic self-sufficiency

While there is no one concrete definition of mental illness, the US Surgeon General explains mental illness as a “term that refers collectively to all diagnosable mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning.”<sup>1</sup>



As a means of determining the number of individuals with “special needs,” data regarding disability status for Gaines Township and Genesee County was reviewed from the 2010 US Census, and is provided in **Table 8**. The Census Data records disabilities for the civilian non-institutionalized population under 18 years, 18 to 64 years, and 65 years and over. It is important to note that some people have more than one disability. In such case, they are counted in all applicable disability categories.

As shown in the table, a total of 840 or 12.0 percent of the civilian non-institutionalized population in Gaines Township have some kind of disability. Of the population under 18 years in the Township, 90 or 5.4 percent have a disability. Of the population 18 to 64 years, 455 or 10.8 percent have a disability. Not surprisingly, the age cohort with the highest number of disabilities was the 65 years and over cohort (33.7 percent) as senior citizens are more likely to have a disability of some type. Disability data for Gaines Township was generally comparable to Genesee County.

**TABLE 8: Disability Status\*: 2010**

| Disability by Age and Type          | Gaines Township |        | Genesee County |        |
|-------------------------------------|-----------------|--------|----------------|--------|
|                                     | #               | %      | #              | %      |
| <b>Total Population</b>             | 6,777           | 100.0% | 422,573        | 100.0% |
| With a Disability                   | 840             | 12.0%  |                | 17%    |
| <b>Population under 18 years</b>    | 1,676           | 100.0% | 105,984        | 100.0% |
| With a Disability                   | 90              | 5.4%   | 6,709          | 6.3%   |
| <b>Population 18 to 64 years</b>    | 4,226           | 100.0% | 259,402        | 100.0% |
| With a Disability                   | 455             | 10.8%  | 36,754         | 14.2%  |
| <b>Population 65 Years and Over</b> | 875             | 100.0% | 57,187         | 100.0% |
| With a Disability                   | 295             | 33.7%  | 22,041         | 38.5%  |

*\*Disability status of the civilian non-institutionalized population*

*Values do not include Census calculation for Village of Gaines*

*2010 US Census - SF3*

## HOUSING PROFILE

Housing is a vital characteristic of any community. Houses are highly visible, relatively permanent, and immobile, and for these reasons serve as great indicators of the well being of a community. The Housing Profile section of the Master Plan describes the housing stock by age, type, value, and tenure for Gaines Township. This analysis will assist the Township in determining its future housing needs based on the characteristics of existing structures.

### Household Type

This section examines households in terms of the relationships among the persons who share a housing unit. Some households are families, consisting of two or more persons related by blood, marriage, or adoption, while others are non-family households composed of persons living alone or with unrelated persons. **Table 9**, Household Characteristics, outlines the total number of households in Gaines Township, surrounding communities, Genesee County, and the State of Michigan, as well as a breakdown of family and non-family households, and other household characteristics.

While the percentage of Families and Married Couple-Family households decreased between 2000 and 2010 (6.3 percent and 7.6 percent respectively), they remain the highest proportion of the population within Gaines Township and consist of one of the highest amongst its neighboring communities. Correspondingly, the number of Non-Family Households, Female-Headed Households, and Householders Living Alone within Gaines Township remain one of the lowest within the area. The percentage of the Households with Individuals under 18 Years Old increased significantly between 2000 and 2010 from 40.7 percent to 65 percent, causing Gaines Township to have the highest proportions of young people in the area.

**TABLE 9: Household Characteristics: 2010**

| Place                    | Total Households | Family Households (Families) |     | Married-Couple Family |     | Female Householder, No Husband Present |     | Nonfamily Households |     | Householder Living Alone |     | Householder 65 Years and Over |     | Households with Individuals Under 18 Years |     | Households with Individuals 65 Years and Over |     |
|--------------------------|------------------|------------------------------|-----|-----------------------|-----|--|-----|----------------------|-----|--------------------------|-----|-------------------------------|-----|--|-----|---|-----|
|                          |                  | #                            | %   | #                     | %   | #                                      | %   | #                    | %   | #                        | %   | #                             | %   | #  | %   | #   | %   |
| <b>Gaines Township*</b>  | 2,502            | 1,963                        | 78% | 1,637                 | 66% | 186                                    | 7%  | 539                  | 22% | 440                      | 18% | 184                           | 7%  | 1,625                                      | 65% | 816   | 33% |
| <u>Genesee County</u>    |                  |                              |     |                       |     |  |     |                      |     |                          |     |                               |     |  |     |   |     |
| Village of Gaines        | 154              | 98                           | 64% | 77                    | 50% | 12                                     | 8%  | 56                   | 36% | 49                       | 32% | 22                            | 14% | 52   | 34% | 39  | 25% |
| City of Swartz Creek     | 2,554            | 1,632                        | 64% | 1,086                 | 43% | 433                                    | 17% | 922                  | 36% | 816                      | 32% | 390                           | 15% | 768  | 30% | 850   | 33% |
| Argentine Township       | 2,566            | 1,930                        | 75% | 1,584                 | 62% | 213                                    | 8%  | 636                  | 25% | 503                      | 20% | 136                           | 5%  | 933  | 36% | 489   | 19% |
| Clayton Township         | 2,897            | 2,198                        | 76% | 1,844                 | 64% | 251                                    | 9%  | 699                  | 24% | 599                      | 21% | 274                           | 9%  | 935  | 32% | 848   | 29% |
| Fenton Township          | 6,011            | 4,499                        | 75% | 3,749                 | 62% | 474                                    | 8%  | 1,512                | 25% | 1,220                    | 20% | 483                           | 8%  | 1,886                                      | 31% | 1,513   | 25% |
| Flint Township           | 13,313           | 8,251                        | 62% | 5,190                 | 39% | 2,367                                  | 18% | 5,062                | 38% | 4,368                    | 33% | 1,852                         | 14% | 3,474                                      | 26% | 3,953   | 30% |
| Mundy Township           | 6,127            | 4,232                        | 69% | 3,355                 | 55% | 641                                    | 10% | 1,895                | 31% | 1,583                    | 26% | 563                           | 9%  | 1,885                                      | 31% | 1,609   | 26% |
| <u>Shiawassee County</u> |                  |                              |     |                       |     |  |     |                      |     |                          |     |                               |     |  |     |   |     |
| Burns Township           | 1,249            | 997                          | 80% | 820                   | 66% | 105                                    | 8%  | 252                  | 20% | 111                      | 9%  | 74                            | 6%  | 472  | 38% | 298   | 24% |
| Venice Township          | 971              | 728                          | 75% | 579                   | 60% | 96                                     | 10% | 243                  | 25% | 92                       | 10% | 91                            | 9%  | 304  | 31% | 298   | 31% |
| Vernon Township          | 1,831            | 1,356                        | 74% | 1,068                 | 58% | 185                                    | 10% | 475                  | 26% | 406                      | 22% | 171                           | 9%  | 563  | 31% | 536   | 29% |
| <u>Genesee County</u>    | 169,202          | 111,620                      | 66% | 73,337                | 43% | 29,048                                 | 17% | 57,582               | 34% | 48,117                   | 28% | 17,296                        | 10% | 56,116                                     | 33% | 42,680  | 25% |
| <u>Michigan</u>          | 3,872,508        | 2,554,073                    | 66% | 1,857,127             | 48% | 511,583                                | 13% | 1,318,435.00         | 34% | 1,079,678                | 28% | 395,437                       | 10% | 1,224,631                                  | 32% | 985,333                                       | 25% |

\*Values do not include Census calculation for Village of Gaines

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In terms of the senior population within Gaines Township, while there was a slight increase between 2000 and 2010 in the percentage of households with a Household-er 65 Years and Over (6.9 percent to 7 percent), the percentage of households with Individuals 65 Years and Over increased significantly from 15.9 percent to 33 percent. While these proportions are consistent with neighboring communities, they signify a change in the household and family dynamics where senior parents and grandparents are not the head of their household and are likely now living in a household with their adult children and grandchildren.

## Type of Structure

Type of structure is the most basic measure of housing that refers to the type of housing units found in a community. **Table 10** shows the distribution of housing units for the Township and surrounding communities.

The Township's housing stock is composed mostly of single-family detached dwelling units. In 2010, 91.8 percent of the housing stock was categorized as one-unit detached structures. Only Burns Township has a higher percentage of single-family detached structures at 94.0 percent. The next largest category of housing units in Gaines Township is mobile home units, which make up 6.1 percent of the total housing stock. Most communities, have slightly lower or significantly higher percentages of Mobile Home units. In general, Gaines Township has a lower percentage of multi-unit structures, especially in comparison to the County and State.

**TABLE 10: Type of Housing Units: 2010**

| Place                    | Total housing units | 1-unit, detached |       | 1-unit, attached |       | 2 units |      | 3 or 4 units |      | 5 to 9 units |      | 10 to 19 units |      | 20 or more units |      | Mobile home |       | Boat, RV, van, etc. |      |
|--------------------------|---------------------|------------------|-------|------------------|-------|---------|------|--------------|------|--------------|------|----------------|------|------------------|------|-------------|-------|---------------------|------|
|                          |                     | #                | %     | #                | %     | #       | %    | #            | %    | #            | %    | #              | %    | #                | %    | #           | %     | #                   | %    |
| Gaines Township*         | 2,600               | 2,388            | 91.8% | 24               | 0.9%  | 19      | 0.7% | 3            | 0.1% | 2            | 0.1% | 6              | 0.2% | 0                | 0.0% | 158         | 6.1%  | 0                   | 0.0% |
| <i>Genesee County</i>    |                     |                  |       |                  |       |         |      |              |      |              |      |                |      |                  |      |             |       |                     |      |
| Village of Gaines        | 144                 | 123              | 85.4% | 1                | 0.7%  | 8       | 5.6% | 3            | 2.1% | 2            | 1.4% | 6              | 4.2% | 0                | 0.0% | 1           | 0.7%  | 0                   | 0.0% |
| City of Swartz Creek     | 2,338               | 1,504            | 64.3% | 235              | 10.1% | 23      | 1.0% | 46           | 2.0% | 203          | 8.7% | 106            | 4.5% | 94               | 4.0% | 127         | 5.4%  | 0                   | 0.0% |
| Argentine Township       | 2,691               | 2,438            | 90.6% | 39               | 1.4%  | 0       | 0.0% | 13           | 0.5% | 62           | 2.3% | 0              | 0.0% | 0                | 0.0% | 139         | 5.2%  | 0                   | 0.0% |
| Clayton Township         | 3,036               | 2,423            | 79.8% | 169              | 5.6%  | 12      | 0.4% | 13           | 0.4% | 108          | 3.6% | 27             | 0.9% | 0                | 0.0% | 284         | 9.4%  | 0                   | 0.0% |
| Fenton Township          | 6,578               | 5,574            | 84.7% | 412              | 6.3%  | 14      | 0.2% | 78           | 1.2% | 109          | 1.7% | 49             | 0.7% | 22               | 0.3% | 320         | 4.9%  | 0                   | 0.0% |
| Flint Township           | 15,113              | 9,068            | 60.0% | 932              | 6.2%  | 225     | 1.5% | 283          | 1.9% | 989          | 6.5% | 1,230          | 8.1% | 1,009            | 6.7% | 1,377       | 9.1%  | 0                   | 0.0% |
| Mundy Township           | 6,476               | 4,487            | 69.3% | 896              | 13.8% | 54      | 0.8% | 81           | 1.3% | 285          | 4.4% | 258            | 4.0% | 112              | 1.7% | 303         | 4.7%  | 0                   | 0.0% |
| <i>Shiawassee County</i> |                     |                  |       |                  |       |         |      |              |      |              |      |                |      |                  |      |             |       |                     |      |
| Burns Township           | 1,264               | 1,188            | 94.0% | 25               | 2.0%  | 14      | 1.1% | 12           | 0.9% | 4            | 0.3% | 0              | 0.0% | 0                | 0.0% | 21          | 1.7%  | 0                   | 0.0% |
| Venice Township          | 1,122               | 948              | 84.5% | 0                | 0.0%  | 1       | 0.1% | 31           | 2.8% | 0            | 0.0% | 0              | 0.0% | 0                | 0.0% | 142         | 12.7% | 0                   | 0.0% |
| Vernon Township          | 2,461               | 1,628            | 66.2% | 19               | 0.8%  | 22      | 0.9% | 8            | 0.3% | 10           | 0.4% | 0              | 0.0% | 0                | 0.0% | 745         | 30.3% | 29                  | 1.2% |
| Genesee County           | 192,240             | 140,334          | 73.0% | 8,409            | 4.4%  | 3,299   | 1.7% | 4,275        | 2.2% | 7,195        | 3.7% | 8,260          | 4.3% | 9,080            | 4.7% | 11,369      | 5.9%  | 19                  | 0.0% |
| Michigan                 | 4,531,958           | 3,256,572        | 72.0% | 209,105          | 4.6%  | 122,169 | 2.7% | 115,877      | 2.6% | 191,396      | 4.2% | 162,630        | 3.6% | 224,222          | 4.9% | 249,148     | 5.5%  | 839                 | 0.0% |

\*Values do not include Census calculation for Village of Gaines  
2010 US Census - SF3

**TABLE 11: Age of Structure: 2010**

| Year Structure Built    | Gaines Township* |               | Genesee County |               |
|-------------------------|------------------|---------------|----------------|---------------|
|                         | #                | %             | #              | %             |
| 2010 or later           | 8                | 0.30%         | 109            | 0.10%         |
| 2000 to 2009            | 323              | 12.40%        | 20064          | 10.40%        |
| 1990 to 1999            | 631              | 24.30%        | 21,863         | 11.40%        |
| 1980 to 1989            | 160              | 6.20%         | 14,461         | 7.50%         |
| 1970 to 1979            | 632              | 24.30%        | 31,605         | 16.40%        |
| 1960 to 1969            | 323              | 12.40%        | 29,679         | 15.40%        |
| 1940 to 1959            | 271              | 10.40%        | 50,717         | 26.40%        |
| 1939 or earlier         | 252              | 9.7%          | 23,742         | 12.40%        |
| <b>Total Structures</b> | <b>2,600</b>     | <b>100.0%</b> | <b>192,240</b> | <b>100.0%</b> |

\*Values do not include Census calculation for Village of Gaines

2010 US Census - SF3

## Age of Structure

The age of a dwelling unit is a factor used to evaluate its structural quality. The average industry standard for the life span of a single-family dwelling unit is generally 50 years. However, this typical life span often depends on the quality of the original construction and continued maintenance of the unit. Using this standard, some homes within the Township constructed prior to 1950 may be approaching the end of their utility.

Data in **Table 11** identifies the age of year-round residential structures for Gaines Township as compared to Genesee County. As can be seen, the largest percentage of housing units in the Township were built between 1970 and 1979 and between 1990 and 1999. In general, approximately

60 percent of the housing units in Gaines Township were built before 1979, compared to 70.6 percent in Genesee County.

## Home Ownership and Housing Occupancy

The home ownership rate is a very important aspect of a community. A high home ownership rate could be an indication that the community has stable and well kept neighborhoods. A higher percentage of rental housing might indicate a more transient population. Owner and renter occupancy rates can also reveal whether the housing stock in the community is affordable. Lower income citizens, who may include single persons, young families, and the elderly, require more affordable housing options including rental housing. A low percentage of rental units could indicate that the community is not providing adequate housing for these groups.

**Table 12** shows home ownership trends for Gaines Township between 2000 and 2010. During the decade, the Township added 175 owner-occupied housing units, decreasing the owner occupation rate from 95.6 percent to 94.0 percent. Renter-occupied housing units increased from 93 units in 2000 to 140 units in 2010. **Table 13** shows home ownership and housing occupancy statistics for Gaines Township from the 2010 Census. As shown in the table, Gaines Township has the highest percentage of owner-occupied units and the lowest percentage of renter-occupied units compared to the County and the State.

**TABLE 12: Home Ownership: 2000-2010**

| Gaines Township*<br>Category         | 2000  |        | 2010  |        |
|--------------------------------------|-------|--------|-------|--------|
|                                      | #     | %      | #     | %      |
| <b>Occupied Housing Units</b>        | 2,126 | 100.0% | 2,348 | 100.0% |
| <b>Owner-Occupied Housing Units</b>  | 2,033 | 95.6%  | 2,208 | 94.0%  |
| <b>Renter-Occupied Housing Units</b> | 93    | 4.4%   | 140   | 6.0%   |

\*Values do not include Census calculation for Village of Gaines

2000, 2010 US Census - SF1

Knowledge of vacancy statistics can be helpful in predicting future growth and housing needs. A high vacancy rate might be an indicator of residential decline, but also shows that in the event of growth, housing units are available. Generally, a five percent vacancy rate is considered necessary to provide an adequate housing selection and to keep home prices from rising faster than inflation. Vacancy rates below five percent indicate a restricted housing market. **Table 13** reveals that Gaines Township has a high percentage of occupied housing units (94.0 percent). In 2000, the vacancy rate in Gaines Township was 2.4 percent, indicating that the supply of housing at that time was restricted and potentially insufficient to meet the sale or rental needs of the local population. By 2010, the vacancy rate had increased to 4.7, indicating a housing market that is more normalized and able to provide an adequate housing selection with prices that are on par with inflation.

**TABLE 13: Home Ownership and Housing Occupancy: 2010**

| Place                               | Total Housing Units | Occupied Housing Units |                          |                              |                     |                               |                     | Vacant Housing Units |                          |
|-------------------------------------|---------------------|------------------------|--------------------------|------------------------------|---------------------|-------------------------------|---------------------|----------------------|--------------------------|
|                                     |                     | Number                 | % of Total Housing Units | Owner-Occupied Housing Units |                     | Renter-Occupied Housing Units |                     | Number               | % of Total Housing Units |
|                                     |                     |                        |                          | Number                       | % of Total Occupied | Number                        | % of Total Occupied |                      |                          |
| Gaines Township*                    | 2,463               | 2,348                  | 95.3%                    | 2,208                        | 94.0%               | 140                           | 6.0%                | 115                  | 4.7%                     |
| Genesee County<br>Village of Gaines | 171                 | 154                    | 90.1%                    | 111                          | 72.1%               | 43                            | 27.9%               | 17                   | 9.9%                     |
| Genesee County                      | 192,180             | 169,202                | 88.0%                    | 118,945                      | 70.3%               | 50,257                        | 29.7%               | 22,978               | 12.0%                    |
| Michigan                            | 4,532,269           | 3,872,535              | 85.4%                    | 2,793,342                    | 61.6%               | 1,079,166                     | 23.8%               | 659,734              | 14.6%                    |

\*Values do not include Census calculation for Village of Gaines

2010 US Census - SF1

## Housing Values

Analyzing housing values and rent could be the best way to determine both the quality and affordability of housing. It is of crucial importance that both quality and affordable housing is maintained to help retain current residents and attract new homeowners to a community.

As illustrated in **Table 14**, in 2015, 33.6 percent of owner-occupied home values ranged between \$100,000 and \$149,999, down from 45.6 percent in 2000. In 2015, nearly one-third of owner-occupied homes were valued at lower than \$100,000, an increase from 2000 when less than 25 percent of owner-occupied homes were valued lower than \$100,000. Similar to 2000, a little more than 30 percent were valued higher than \$150,000 in 2015. In terms of median values of owner-occupied housing units, Gaines Township is the second highest (\$121,800) of all the units of government compared in the table, behind the State.

Rents within Gaines Township increased significantly between 2000 and 2015. In 2000, the majority of rental units (49.3 percent) cost between \$500 and \$749 to rent. By 2015, over half (55.5 percent) of all rental units within Gaines Township rented for \$1,000 to \$1,499. Similarly, while the second highest rent category in 2000 was \$300

**TABLE 14: Housing Values: 2015**

### Owner-Occupied

| Place             | Specified Owner Occupied Units | Less than \$50,000 |       | \$50,000 to \$99,999 |       | \$100,000 to \$149,999 |       | \$150,000 to \$199,999 |       | \$200,000 to \$299,999 |       | \$300,000 to \$499,999 |      | \$500,000 to \$999,999 |      | \$1,000,000 or more |      | Median (dollars) |
|-------------------|--------------------------------|--------------------|-------|----------------------|-------|------------------------|-------|------------------------|-------|------------------------|-------|------------------------|------|------------------------|------|---------------------|------|------------------|
|                   |                                | #                  | %     | #                    | %     | #                      | %     | #                      | %     | #                      | %     | #                      | %    | #                      | %    | #                   | %    |                  |
| Gaines Township*  | 2,205                          | 253                | 11.4% | 431                  | 19.5% | 741                    | 33.6% | 493                    | 22.3% | 227                    | 10.3% | 48                     | 2.1% | 0                      | 0.0% | 12                  | 0.5% | 121,800          |
| Village of Gaines | 124                            | 14                 | 11.3% | 84                   | 67.7% | 12                     | 9.7%  | 10                     | 8.1%  | 2                      | 1.6%  | 0                      | 0.0% | 2                      | 1.6% | 0                   | 0.0% | 71,400           |
| Genesee County    | 114,823                        | 30,953             | 26.9% | 33,517               | 29.2% | 23,915                 | 20.8% | 13,858                 | 12.1% | 8,203                  | 7.1%  | 3,122                  | 2.7% | 870                    | 0.7% | 385                 | 0.3% | 88,500           |
| Michigan          | 2,728,815                      | 428,909            | 15.7% | 663,677              | 24.3% | 536,873                | 19.7% | 434,030                | 15.9% | 384,790                | 14.1% | 202,312                | 7.4% | 62,091                 | 2.3% | 16,133              | 0.6% | 122,400          |

### Renter-Occupied Gross Rent

| Place             | Occupied Units Paying Rent | Less than \$500 (%) | \$500 to \$999 (%) | \$1,000 to \$1,499 (%) | \$1,500 to \$1,999 (%) | \$2,000 to \$2,499 (%) | \$2,500 to \$2,999 (%) | \$3,000 or more (%) | No rent paid | Median (dollars) |
|-------------------|----------------------------|---------------------|--------------------|------------------------|------------------------|------------------------|------------------------|---------------------|--------------|------------------|
| Gaines Township*  | 117                        | 5.1%                | 39.3%              | 55.5%                  | 0.0%                   | 0.0%                   | 0.0%                   | 0.0%                | 41           | \$729            |
| Village of Gaines | 44                         | 20.5%               | 77.3%              | 2.3%                   | 0.0%                   | 0.0%                   | 0.0%                   | 0.0%                | X            | X                |
| Genesee County    | 47,548                     | 17.9%               | 64.6%              | 14.6%                  | 2.0%                   | 0.7%                   | 0.1%                   | 0.1%                | X            | X                |
| Michigan          |                            |                     |                    |                        |                        |                        |                        |                     |              |                  |

\*Values do not include Census calculation for Village of Gaines

2011-2015 American Community Survey 5-Year Estimates



to \$499, representing 32.9 percent of rental units, by 2015, the second highest category was \$500 to \$999 (39.3 percent). The median rent in 2015 was \$729, an increase of \$91 from 2000 (\$638).

## ECONOMIC PROFILE

Economic characteristics comprise a major part of census data. Economic characteristics are important because they help determine a community’s viability and ability to support future commercial, residential, and industrial growth. The economic strength of Gaines Township is related to the number and type of employment opportunities in the labor market area, as well as the level of educational attainment by its residents. Within a labor market, area some communities’ function as major employment centers while others serve primarily as residential communities. According to the American Community Survey 5-Year Estimates, 58.3 percent of Gaines Township residents 16 years of age and older were employed in 2015. The following text identifies educational attainment levels, which industries employ Gaines Township residents, what positions are held, and the wages earned.

### Educational Attainment

Educational attainment is another important factor in analyzing the capabilities of the local work force and the economic vitality of the community. The educational attainment of the citizens plays a major role in determining what types of employment industries are suitable or necessary.

Data in **Table 15** shows the educational attainment of the residents of Gaines Township, Village of Gaines, Genesee County, and the State of Michigan. The table details the percentage of citizens in 2015 that are High School Graduates or Higher and those that have obtained their Bachelor’s Degree or Higher. Gaines Township, tied with the Village of Gaines, had the highest percentage of High School Graduates or Higher, (94.9 percent).

*TABLE 15: Educational Attainment: 2015*

| Place             | Percent High School Graduate or Higher | Percent Bachelor's Degree or Higher |
|-------------------|--|-------------------------------------|
| Gaines Township   | 94.9%                                  | 17.8%                               |
| Village of Gaines | 94.9%                                  | 9.6%                                |
| Genesee County    | 89.3%                                  | 19.3%                               |
| Michigan          | 89.6%                                  | 26.9%                               |

*2011-2015 American Community Survey 5-Year Estimates*

When compared to the other units of government, Gaines Township, at 17.8 percent, is average in terms of the percentage of citizens who have earned their Bachelor’s Degree or Higher. Genesee County, at 19.3 percent, was slightly higher than Gaines Township while the State, at 26.9 percent, was significantly higher.

## Income Characteristics

Studying income and poverty levels is a good way to measure the relative economic health of a community. Three measures of income (median household, median family, and per capita) are recorded by the Census Bureau. Household income is a measure of the total incomes of the persons living in a single household. Family income is a measure of the total incomes of a family unit. Family income does not include non-family units, such as single persons living alone, and for this reason is usually higher than household income. Per capita income is a measure of the incomes of every citizen of an area. Because per capita income is based on all individuals, they are much lower than family or household incomes.

**Table 16** presents incomes and poverty levels for Gaines Township and other units of government between 2010 and 2015. As shown in the table, Gaines Township reported increases in all three income categories between 2010 and 2015, with the Township's per capita income growing at the highest rate of 14.7 percent. Out of all of the government units, Gaines Township had the largest increase in Median Household Income (8 percent) and Median Family Income (10 percent).

*TABLE 16: Income and Poverty: 2010-2015*

| Place             | Median Household Income |          |          | Median Family Income |          |          | Per Capita Income |          |          | % Below Poverty Level** |       |
|-------------------|-------------------------|----------|----------|----------------------|----------|----------|-------------------|----------|----------|-------------------------|-------|
|                   | 2010                    | 2015     | % Change | 2010                 | 2015     | % Change | 2010              | 2015     | % Change | 2010                    | 2015  |
| Gaines Township   | \$58,415                | \$63,101 | 8.0%     | \$65,256             | \$71,781 | 10.0%    | \$24,171          | \$27,714 | 14.7%    | 6.9%                    | 9.7%  |
| Village of Gaines | \$43,438                | \$37,917 | -12.7%   | \$50,875             | \$55,192 | 8.5%     | \$17,933          | \$21,400 | 19.3%    | 7.8%                    | 17.4% |
| Genesee County    | \$43,483                | \$42,327 | -2.7%    | \$54,072             | \$53,333 | -1.4%    | \$22,458          | \$22,957 | 2.2%     | 18.1%                   | 20.9% |
| Michigan          | \$48,432                | \$49,576 | 2.4%     | \$60,341             | \$62,247 | 3.2%     | \$25,135          | \$26,607 | 5.9%     | 14.8%                   | 16.7% |

*\*\*All individuals for whom poverty status is determined*

*2006-2010 and 2011-2015 American Community Survey 5-Year Estimates*

While the Per Capita Income in Gaines Township increased by 14.7 percent, the Village of Gaines experienced the highest increase (19.3 percent) during the time frame. While Gaines Township continues to have the lowest percentage of its population Below the Poverty Level (9.7 percent), the Township experienced an increase from its 2010 level (6.9 percent).

## Employment by Occupation and Industry

Employment by occupation and employment by industry are two related, yet individually significant indicators of community welfare. Employment by occupation describes the trades and professions in which Township residents are employed, such as a manager or salesperson. Employment by industry quantifies in what field that manager or sales person may be employed. For instance, two sales persons may be present in the “Sales and Office Occupations” category of the employment by occupation table, but may be employed in two different fields. That is, a sales person in the manufacturing industry and a sales person in the real estate trade would be categorized within those different classifications in the employment by industry table.

Employment by occupation for Gaines Township, and surrounding areas in 2010 is detailed in **Table 17**. Generally, Gaines Township is similar in the occupation of its residents to those of surrounding communities. In 2010, one-third of the population in Gaines Township was employed in Management, business, science and arts Occupations. Other significant occupations in Gaines Township include Sales and Office Occupations (24.8 percent), Service Occupations (16.2 percent) and Production, Transportation, and Material Moving Occupations (15.4 percent). In the Township, only 9.6 percent were employed in Natural resources, construction, and Maintenance Occupations. This low percentage matches a nationally occurring trend in this employment classification.

**TABLE 17: Employment by Occupation: 2010**

| Place                    | Employed<br>Civilian<br>Population<br>16 Years and<br>Over | Management,<br>business, science<br>and arts<br>Occupations |       | Service<br>Occupations |       | Sales and Office<br>Occupations |       | Natural resources,<br>construction, and<br>Maintenance<br>Occupations |       | Production,<br>Transportation,<br>and Material<br>Moving<br>Occupations |       |
|--------------------------|--|---|-------|------------------------|-------|---------------------------------|-------|---|-------|---|-------|
|                          |  | #   | %     | #                      | %     | #                               | %     | #   | %     | #   | %     |
| <b>Gaines Township*</b>  | 2,711  | 922   | 34.0% | 439                    | 16.2% | 671                             | 24.8% | 261   | 9.60% | 418   | 15.4% |
| <b>Genesee County</b>    |  |   |       |                        |       |                                 |       |   |       |   |       |
| Village of Gaines        | 139  | 24  | 17.3% | 27                     | 19.4% | 35                              | 25.2% | 17  | 12.2% | 36  | 25.9% |
| City of Swartz Creek     | 2,081  | 578   | 27.8% | 366                    | 17.6% | 543                             | 26.1% | 182   | 8.7%  | 412   | 19.8% |
| Argentine Township       | 2,989  | 1,035   | 34.6% | 443                    | 14.8% | 515                             | 17.2% | 432   | 14.5% | 564   | 18.9% |
| Clayton Township         | 3,056  | 845   | 27.7% | 613                    | 20.1% | 831                             | 27.2% | 302   | 9.9%  | 465   | 15.2% |
| Fenton Township          | 7,072  | 2,907   | 41.1% | 846                    | 12.0% | 1,849                           | 26.1% | 499   | 7.1%  | 971   | 13.7% |
| Flint Township           | 12,230   | 3,517   | 28.8% | 2,754                  | 22.5% | 3,015                           | 24.7% | 836   | 6.8%  | 2,108   | 17.2% |
| Mundy Township           | 6,648  | 2,524   | 38.0% | 928                    | 14.0% | 1,573                           | 23.7% | 517   | 7.8%  | 1,106   | 16.6% |
| <b>Shiawassee County</b> |  |   |       |                        |       |                                 |       |   |       |   |       |
| Burns Township           | 1,416  | 342   | 24.2% | 305                    | 21.5% | 316                             | 22.3% | 202   | 14.3% | 251   | 17.7% |
| Venice Township          | 1,108  | 269   | 24.3% | 211                    | 19.0% | 337                             | 30.4% | 127   | 11.5% | 164   | 14.8% |
| Vernon Township          | 1,740  | 454   | 26.1% | 340                    | 19.5% | 520                             | 29.9% | 100   | 5.7%  | 326   | 18.7% |
| <b>Genesee County</b>    | 161,470  | 48,721  | 30.2% | 32,820                 | 20.3% | 41,923                          | 26.0% | 12,282  | 7.6%  | 25,724  | 15.9% |
| <b>Michigan</b>          | 4,269,865  | 1,459,146   | 34.2% | 792,133                | 18.6% | 1,056,849                       | 24.8% | 336,308   | 7.9%  | 625,429   | 14.6% |

\*Values do not include Census calculation for Village of Gaines  
2010 US Census - SF3

Employment by industry for the Township and surrounding areas is detailed in **Table 18**. Again, Gaines is similar in the industry of employment of its residents to those of surrounding communities. The three largest industry classifications for Gaines Township include Manufacturing (26.3 percent), Educational, Health and Social Services (21.5 percent), and Retail Trade (11.4 percent).

**TABLE 18: Employment by Industry: 2015**

| Place             | Employed Civilian Population 16 Years and Over | Agriculture, Forestry, Fishing and Hunting, and Mining |      | Construction |      | Manufacturing |       | Wholesale Trade |      | Retail Trade |       | Transportation and Warehousing, and Utilities |      | Information |      | Finance, Insurance, Real Estate, and Rental and Leasing |      | Professional, Scientific, Management, Administrative, and |      | Educational, Health and Social Services |       | Arts, Entertainment, Recreation, Accommodation and Food Services |       | Other Services (Except Public Administration) |      | Public Administration |      |
|-------------------|--|--|------|--------------|------|---------------|-------|-----------------|------|--------------|-------|---|------|-------------|------|---|------|---|------|---|-------|--|-------|---|------|-----------------------|------|
|                   |  | #  | %    | #            | %    | #             | %     | #               | %    | #            | %     | #   | %    | #           | %    | #   | %    | #   | %    | #                                       | %     | #  | %     | #   | %    | #                     | %    |
| Gaines Township*  | 2,762  | 27   | 1.0% | 218          | 7.9% | 494           | 17.9% | 96              | 3.5% | 288          | 10.4% | 164   | 5.9% | 58          | 2.1% | 144   | 5.2% | 221   | 8.0% | 669                                     | 24.2% | 165  | 6.0%  | 149   | 5.4% | 69                    | 2.5% |
| Village of Gaines | 170  | 0  | 0.0% | 16           | 9.4% | 19            | 11.2% | 0               | 0.0% | 17           | 10.0% | 15  | 8.8% | 2           | 1.2% | 4   | 2.4% | 12  | 7.1% | 43                                      | 25.3% | 18   | 10.6% | 15  | 8.9% | 9                     | 5.3% |
| Genesee County    | 161,750  | 901  | 0.6% | 8,293        | 5.1% | 25,401        | 15.7% | 3,947           | 2.4% | 21,554       | 13.3% | 6,959   | 4.3% | 2,261       | 1.4% | 7,744   | 4.8% | 13,127  | 8.1% | 42,322                                  | 26.2% | 15,345   | 9.5%  | 8,401   | 5.2% | 5,495                 | 3.7% |
| Michigan          | 4,373,518                                      | 55,638   | 1.3% | 212,000      | 4.8% | 776,736       | 17.8% | 106,578         | 2.4% | 498,455      | 11.4% | 181,527                                       | 4.1% | 68,999      | 1.6% | 238,209   | 5.4% | 408,838   | 9.3% | 1,045,010                               | 23.9% | 416,911  | 9.5%  | 207,049                                       | 4.7% | 157,508               | 3.6% |

\*Values do not include Census calculation for Village of Gaines  
2011-2015 American Community Survey 5-Year Estimates

## State Equalized Value

According to Michigan law, the SEV is equal to approximately one-half of the true market value of real property and certain taxable personal property. The taxable value is used for computation of the tax basis for a community.

**Table 19** shows the State Equalized Values, broken down by land uses, for Gaines Township and Genesee County between 2005 and 2017. The total equalized value of real property in Gaines Township was \$216,981,900 in 2017. This represents a decrease of 31.3 percent from the total equalized value of 2005. In all land use categories except residential, the value increased between 2005 and 2017. However, certain land use categories are increasing at faster rates. The equalized value of industrial properties increased by 68.1 percent, by far the largest growth in any category. However, because the total value of industrial properties is so small, the percentage growth is misleading, as this change was probably due to one or two new industrial properties developing in the Township between 2005 and 2010. The total equalized value of agricultural properties grew at the second fastest rate, increasing by 41.3 percent between 2005 and 2017, followed by commercial (9.4 percent).

**TABLE 19: State Equalized Value (SEV): Real Property 2005-2017**

| Place           | Year               | Agriculture |       | Commercial    |       | Industrial  |      | Residential   |       | Developmental |      | Total Real SEV (\$) |
|-----------------|--------------------|-------------|-------|---------------|-------|-------------|------|---------------|-------|---------------|------|---------------------|
|                 |                    | SEV (\$)    | %     | SEV (\$)      | %     | SEV (\$)    | %    | SEV (\$)      | %     | SEV (\$)      | %    |                     |
| Gaines Township | 2005               | 15,782,000  | 7.2%  | 3,046,600     | 1.4%  | 54,600      | 0.0% | 200,892,550   | 91.4% | 0             | 0.0% | 219,775,750         |
|                 | 2010               | 17,858,969  | 9.1%  | 3,272,700     | 1.7%  | 99,400      | 0.1% | 174,812,323   | 89.2% | 0             | 0.0% | 196,043,392         |
|                 | 2017               | 22,305,100  | 10.3% | 3,333,700     | 1.5%  | 91,800      | 0.0% | 191,251,300   | 88.1% | 0             | 0.0% | 216,981,900         |
|                 | % Change 2005-2017 | 41.3%       | -     | 9.4%          | -     | 68.1%       | -    | -4.8%         | -     | -             | -    | -1.3%               |
| Genesee County  | 2005               | 178,734,300 | 1.5%  | 2,253,082,530 | 18.6% | 497,335,570 | 4.1% | 9,161,399,825 | 75.7% | 9,353,100     | 0.1% | 12,099,905,325      |
|                 | 2010               | 190,606,490 | 1.9%  | 2,248,063,780 | 22.2% | 421,919,001 | 4.2% | 7,269,244,631 | 71.7% | 6,735,300     | 0.1% | 10,136,569,202      |
|                 | 2017               | 193,997,600 | 1.9%  | 2,072,265,800 | 20.3% | 271,068,300 | 2.7% | 7,655,357,447 | 75.1% | 0             | 0.0% | 10,192,689,147      |
|                 | % Change 2005-2017 | 8.5%        | -     | -8.0%         | -     | -45.5%      | -    | -16.4%        | -     | -100.0%       | -    | -15.8%              |

State Equalized Value Reports, Genesee County Equalization Department

The total equalized value of residential property within the Township decreased during the time period by 4.8 percent. The decline in residential property valuation was likely due to the occurrence of the 2008 global financial crisis which was considered by economists to be the worst economic disaster since the Great Depression of 1929. This global financial calamity resulted in the near collapse of the global banking system, a credit crisis, the bursting of the U.S. housing bubble, and a recession.

**Footnote:**

<sup>1</sup> “Mental Health and Mental Illness: Points on a Continuum.” Mental Health: A Report of the Surgeon General. U.S. Public Health Service. Department of Health and Human Services. September 29, 2003.

# Natural Features

## INTRODUCTION

The natural environment is a significant factor when planning for future land development. Circumstances such as steep slopes prohibit the construction of a structure, while wetlands may affect the desired layout of a subdivision. Conversely, the natural environment can be impacted by land development. An example would be the increased water runoff and erosion potential caused by clearing vegetation. Thus, when preparing the Master Plan, it is important to examine the natural environment in order to determine where development is best suited, and where it should be discouraged.

In any environmentally sensitive area within a community, development should be prevented. Environmentally sensitive areas are lands whose destruction or disturbance will affect the life of a community by either:

1. Creating hazards such as flooding or slope erosion.
2. Destroying important public resources such as groundwater supplies and surface water bodies; or,
3. Wasting productive lands and non-renewable resources.

Each of these effects is detrimental to the general welfare of a community, resulting in social and economic loss.

The purpose of this chapter is twofold. First, the goal is to identify areas in the Township that are best suited for development. The focus is on areas that will minimize development costs and provide amenities without adversely impacting the existing natural systems. The second goal is to identify land that should be conserved in its natural state and is most suitable for conservation, open space or recreation purposes.

Climate, geology, woodlands, wetlands, topography, soil conditions, and water resources are among the most important natural features impacting land use in Gaines Township. Descriptions of these features follow.

## CLIMATE

The climate of Genesee County is seasonal; the region experiences considerable changes in temperatures and precipitation throughout the year. The average temperature range for Genesee County in January is between 14 and 29 degrees Fahrenheit, in July it is between 59 and 81 degrees Fahrenheit. The average number of days below zero degrees Fahrenheit is 11, while the average number of days above 90 degrees Fahrenheit is 8. The average growing season in Genesee County lasts 152 days. In terms of annual precipitation, the County averages 29 inches of rainfall and 49 inches of snowfall per year.<sup>1</sup>



## GEOLOGY

The geology of Genesee County can be described in terms of quaternary (surface) geology and bedrock (sub-surface) geology. Quaternary geology refers to materials deposited by continental glaciers while bedrock geology relates to sedimentary rocks underlying the glacial deposits. The description below was derived through quaternary and bedrock maps and general summaries of Michigan geology prepared by the Michigan Department of Environmental Quality.



The quaternary (surface) geology of Michigan developed during the Pleistocene age as a result of glacial action. These surface deposits effectively blanket much of the bedrock geology of the State, except in a few instances where bedrock protrudes through to the surface (primarily in the western Upper Peninsula). Glaciers scoured out the Great Lakes, dumped piles of debris (moraines) along their edges and left flat plains of clay rich soils (glacial till) where the glaciers died and melted in place. The glacial meltwaters formed vast rivers that built wide, sandy plains of outwash. Many of Michigan's inland lakes were created when blocks of ice fell off the glacier, became covered by debris and eventually left a hole when the block melted. According to the generalized quaternary geology map of Michigan, Genesee County is composed of a mix of: lacustrine deposits of peat, muck or sand dunes; end moraines or ice contact outwash; and glacial till.

The bedrock (sub-surface) geology of Genesee County, as well as the entire Lower Peninsula of Michigan, is made up of Paleozoic and Mesozoic sedimentary rocks of the Cambrian to Jurassic age. These gently dipping rocks constitute a large regional geological structure known as the Michigan basin. As described above, this bedrock is covered by glacial deposits and, generally, depending upon the thickness of the glacial deposits, is located at depths from 40 to 300 feet below the surface. The Paleozoic rocks of the Michigan basin contain many important resources such as petroleum, limestone, dolomite, shale, salt and gypsum.<sup>2</sup>

## WOODLANDS

Woodlands information for Gaines Township was partially derived from the Michigan Resources Information System (MIRIS) 1978 Land Use Cover Data provided by the Michigan Geographic Data Library (MiGDL). The MIRIS land cover data depicts general concentrations of various land uses including residential, commercial, institutional, agricultural, wetlands and woodlands. The MIRIS land use data further separates woodlands into several categories of which three are found in Gaines Township: Central Hardwood, Lowland Hardwood, and Northern Hardwood.

Because the MIRIS land use data was developed in 1978, Wade Trim utilized 1998 aerial photography to update the woodlands information. The 1998 aerial photography digital images for Gaines Township were also obtained through the MiGDL. By superimposing the 1978 MIRIS data on top of the aerial photographs, Wade Trim was able to make modifications to the woodlands information. Typical modifications included the reduction of woodland areas due to recent urban development, and modifying the more general MIRIS coverage to better represent actual woodlands as depicted on the aerial photographs.

Lastly, because the MIRIS information is more general in nature, several woodland areas in Gaines Township, clearly shown on the aerial photos, were omitted. In order to correct the omission, a new category called Miscellaneous Woodlands was added. This new category does not cover all woodlands in the Township (for example, residential landscaping or narrow tree rows along property lines), but does encompass significant woodland concentrations such as those found along the drains and creeks of the Township. By including this new category, a much more accurate picture of the actual woodland coverage in Gaines Township is portrayed.

**Map 3, Environmental Resources** shows the locations of woodlands in Gaines Township. In general, woodland areas are isolated in small concentrations and are scattered throughout the Township. All of the Township's sections have multiple groupings of woodland areas, typically ranging in size from 5 to 100 acres. Of all the woodland types, central hardwoods are the most prevalent in Gaines Township. In total, central hardwoods, comprise 2,348.3 acres or 10.5 percent of the Township, and are scattered throughout the Township. Miscellaneous woodlands comprise 418.7 acres or 1.9 percent of the Township. These woodlands are typically found along the creeks and drains located in Gaines, as well as in a large concentration south of Swartz Creek. The other two woodland types, lowland hardwood and northern hardwood, each comprise less than 100 acres of the Township.

In total, woodlands comprise 2,901.9 acres or 13.0 percent of Gaines Township. Because of the many benefits associated with wooded areas, these woodlands should be seen as a real asset to the Township. For human inhabitants, forested areas offer scenic contrasts within the landscape and provide recreational opportunities such as hiking and nature enjoyment. In general, woodlands improve the environmental quality of the whole community by reducing pollution through absorption, reducing the chances of flooding through greater rainwater infiltration, stabilizing and enriching soils, moderating the effects of wind and temperature, and providing habitats for wildlife.

## WETLANDS

Wetlands are often referred to as marshes, swamps or bogs. The US Army Corps of Engineers defines wetlands as “those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Residents of Michigan are becoming more aware of the value of wetlands. Beyond their aesthetic appeal, wetlands improve water quality of lakes and streams by filtering polluting nutrients, organic chemicals and toxic heavy metals. Wetlands are closely related to high groundwater tables and serve to discharge or recharge aquifers. Additionally, wetlands support wildlife, and wetland vegetation protects shorelines from erosion.

Wetland information was provided by the National Wetlands Inventory, U.S. Fish & Wildlife Service, and was obtained through the MiGDL. The National Wetlands Inventory classifies wetlands into three categories: emergent wetland, forested wetland and scrub-shrub wetland (see **Map 3, Environmental Resources**). Generally, wetlands are scattered throughout all areas of the Township. In fact, wetlands are found in every section of the Township except Section 2. In total, wetlands comprise 866.1 acres or 3.9 percent of the Township.



## TOPOGRAPHY

Topography, the configuration of varying elevations of land, has very important planning implications. Land uses and their required maintenance depend to a large degree on slope, although today there are fewer restrictions on development in steep slope areas due to better construction and engineering techniques. Still, while steep slope

can provide attractive views and recreational opportunities, building development can be adversely impacted.

Generally, the topography of Gaines Township is flat. Within the Township, only minor topographical features, such as creek beds and gently rolling hills, are found. **Map 4, Topography and Floodplains** shows the topography of Gaines Township through the mapping of 33 foot (10 meter) contour lines. The map also utilizes a graduated color scheme digital elevation model to show topography. The lowest elevations in the Township are shown in dark green while middle elevations transition to orange and the highest elevations transition to dark red. Both the contour lines and digital elevation model were obtained from the MiGDL.

A community with steep slopes and significant topographical features will be represented by a large number of tightly spaced contour lines. As can be seen by the map, the 33 foot (10 meter) contour lines in Gaines Township are not found in any tight concentration, but rather are fairly spread out. The graduated color scheme of the digital elevation model better illustrates the topography of Gaines Township. As is clear, the primary topography shaping agents of the Township are its creeks and drains. The lowest elevations (below 787 feet) are found in the northern portion of the Township, along the creek beds of the West Branch Swartz Creek and Webb Creek. The other water features of the Township, such as Alger Drain, Jones Creek and Spillane Drain, also feature creek beds at lower elevations than the surrounding lands. The highest elevations (above 853 feet) are found along the southern border of Gaines Township.

Aside from the sloping areas along the creek beds, the generally flat topography that characterizes the majority of the Township poses few constraints to land development.

## FLOOD PRONE AREAS

The Federal Emergency Management Agency (FEMA) Mitigation Division manages the National Flood Insurance Program, which is intended to provide communities and citizens protection from flood hazards by flood insurance and other flood mitigation programs. The program also maintains Flood Insurance Rate Maps which define areas that may be at risk for flooding, categorized as Special Flood Hazard Areas (SFHA). Digital information for Special Flood Hazard Areas at the county level is made available through the MiGDL.

A Special Flood Hazard Area is defined as:

*“An area of land that would be inundated by a flood having a one percent chance of occurring in any given year (previously referred to as the base flood or 100-year flood).”*

The term 100-year flood is further defined as:

*“The flood elevation that has a one percent chance of being equaled or exceeded each year. Thus, the 100-year flood could occur more than once in a relatively short period of time... A structure located within a special flood hazard area shown on a National Flood Insurance map has a 26 percent chance of suffering flood damage during the term of a 30-year mortgage.”<sup>3</sup>*

Currently, Special Flood Hazard Areas are found along many of the creeks and drains of Gaines Township (see **Map 4, Topography & Floodplains**), including Webb Creek, West Branch Swartz Creek, Alger Drain, Lum Drain, Spillane Drain, and Jones Creek. In total, Special Flood Hazard Areas have been designated for 1,914 acres or 8.6 percent of the Township.

## SOIL CONDITIONS

When planning for types and intensity of future land uses, the condition of soil is one important factor that determines the carrying capacity of land. Soils most suitable for development purposes are well drained and are not subject to a high water table. Adequate drainage is important to minimizing storm water impacts and the efficient operation of septic drain fields. Adequate depth to the water table is necessary to prevent groundwater contamination from septic systems or other non-point source runoff. Soils located on steep slopes increase construction costs and could lead to increased erosion when land is cleared. The construction of roads, buildings and septic systems on poor soils requires special design considerations. In addition, costs for developing these sensitive areas are greater than in less constrained parts of the landscape. If developed improperly, the impacts to natural resources can be far reaching.

Hydric Soils information is obtained through the Soil Survey Geographic (SSURGO) Database, which is essentially the County Soil Survey prepared by the Natural Resource Conservation Service (NRCS) in digital format. The SSURGO soils data was made available through the Michigan Geographic Data Library (MiGDL) website. Hydric soils are soils with poor potential for development. These soils have high water tables and are often located within the floodplains of creeks or rivers. The locations of hydric soils within Gaines Township are shown on **Map 5, Soil Conditions**.

In total, hydric soils comprise 6,088.5 acres or 27.3 percent of Gaines Township. These soils are most prevalent along the creeks and drains of the Township, particularly Webb Creek and the West Branch Swartz Creek. Other significant concentrations of hydric soils are found in sections 1, 12, 26, 35, and 36 of the Township. Smaller areas of hydric soils are found scattered throughout the Township.



In addition to wet or hydric soils, soils located on steep slopes merit special consideration and are a major constraint to the development of land. The location of steep slopes is derived using the digital elevation model for Gaines Township, obtained through the MiGDL. Using the elevation model, areas within the Township having slopes greater than ten percent can be mapped. These steep slopes are shown on **Map 5**. Generally, few areas in Gaines Township feature slopes in excess of ten percent. These steep slope areas are found along creek and drain beds.

While soil constraints discussed in this section can be used as general guides for the planning process, it should not be used for development of specific sites. Detailed on-site investigations should be conducted prior to development.

**Footnotes:**

<sup>1</sup> *Genesee County Profile*. Michigan Economic Development Corporation, 1995 climate data. <http://medc.michigan.org/miinfo/places/GeneseeCounty/?section=all>.

<sup>2</sup> Various Sources.

*Geology in Michigan*, Michigan Department of Environmental Quality. August 2005. [http://www.michigan.gov/deq/0,1607,7-135-3311\\_3582-,00.html](http://www.michigan.gov/deq/0,1607,7-135-3311_3582-,00.html)

<sup>3</sup> *Flood Hazard Mapping*. Federal Emergency Management Agency (FEMA). August 2005. [http://www.fema.gov/fhm/fq\\_term.shtm#frequent5](http://www.fema.gov/fhm/fq_term.shtm#frequent5)





# Existing Land Use

## INTRODUCTION

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

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

## METHODOLOGY

The primary source of information for the existing land use data comes from a field survey conducted by Wade Trim in November of 2005. Using a blank base map showing the most recent parcel boundaries, existing land uses were recorded for every parcel within the Township. (Gaines Township parcel information for 2005 was provided by the Genesee County Equalization Department.) For reference and verification purposes, the existing land use map from the previous Gaines Township Master Plan and 1998 aerial photographs of Gaines Township were utilized during the field survey.

The completed land use field data was then transferred from the field survey notes into a Geographic Information System (GIS). The resulting Existing Land Use Map was prepared using ESRI ArcGIS software. Acreage tabulations for each land use category are presented in **Table 20**.

The entire Township encompasses 22,306.8 acres, or about 34.9 square miles of land. However, existing land use percentage values were calculated against a total of 21,553.5 acres. This acreage value describes the total Township land minus the acreage for existing road and railroad rights-of-way.

*TABLE 20: Existing Land Use Statistics, 2005*

| Land Use Category                              | Acres           | Percent    |
|--|-----------------|------------|
| 1. Agricultural                                | 6991.9          | 31.3       |
| 2. Agricultural with Farmstead                 | 6279.0          | 29.1       |
| 3. Single-Family Residential                   | 7102.0          | 33         |
| 4. Manufactured Home Park                      | 27.0            | 0.1        |
| 5. Local Commercial                            | 1.8             | <0.1       |
| 6. Office                                      | 2.9             | <0.1       |
| 7. Industrial                                  | 36.6            | 0.2        |
| 8. Public/Semi-Public                          | 80.0            | 0.3        |
| 9. Vacant/Open Space                           | 1032.0          | 4.8        |
| <b>Sub-Total</b>                               | <b>21,553.5</b> | <b>100</b> |
| Road and Railroad Rights-of-Way                | 753.3           | --         |
| <b>Total Township Acreage</b>                  | <b>22,306.8</b> | <b>--</b>  |
| Water Bodies (Overlaid on Land Use Categories) | 87.4            | --         |

*Source: Wade Trim Field Survey of November, 2005.*

## LAND USE DISTRIBUTION

Each existing land use was placed in one of nine general land use categories. **Map 6, Existing Land Use** depicts the geographic distribution of the land use classifications. A description of each land use category is provided below.

### Agricultural

Any related land use devoted to farming or farming related uses. Such lands may include those utilized for field crop production, orchards, tree farms, and livestock grazing. Agricultural lands may also include farm related structures such as barns, silos, and elevators. (It is important to note that several properties primarily utilized for agriculture in Gaines Township also feature cellular or other telecommunication towers. However, such properties are still considered agricultural.)



This land use occupies 6,991.9 acres or 31.3 percent of the total land area of the Township. Agricultural lands are not concentrated in any one area of the Township, but rather are found throughout the Township. Most commonly, Gaines Township's agricultural lands are utilized for field crop production.

### Agricultural with Farmstead

The Agricultural with Farmstead is similar to the Agricultural category in that it is comprised of lands devoted to agriculture. However, the Agricultural with Farmstead category includes lands devoted to agriculture that also feature a farmstead on the property. In this way, we are able to classify the lands primarily devoted to agriculture, but that also have a single-family home on the same property. Presumably, this single-family home is occupied by the farmer's family. As with the agricultural category, barns, silos, and other related farm structures may also be located on the property.

In total, lands classified as Agricultural with Farmstead comprise 6,279.0 acres or 29.1 percent of the Township. These Agricultural with Farmstead properties are scattered throughout all areas of the Township.



When the Agricultural and Agricultural with Farmstead categories are combined, they total 13,300.6 acres or 61.7 percent of the Township. Since both categories represent agricultural uses, it can be said that agriculture comprises the largest percentage of lands in the Township.

### Single-Family Residential

This category includes single-family detached homes used as a permanent dwelling along with accessory structures, such as garages, that are related to these units.

Single-Family Residential lands comprise a significant amount of land in the Township at 7,102.0 acres or approximately 33.0 percent. Although there are several single-family subdivisions within Gaines Township, the vast majority of single-family homes are located along the section line roads. Commonly, concentrations of five or more homes



adjacent to each other are found along the section line roads. Many of these homes are on smaller lots ranging from one half to one acre in size, with larger agricultural parcels found behind the row of homes. However, many single-family homes are also located on large parcels ten acres or more in size.

Suburban style single-family homes within larger subdivisions are predominantly located in the northern portion of the Township, west of the City of Swartz Creek. This area features single-family lots ranging from one quarter to one half acre in size. A new single-family subdivision is under construction in Section 12 of the Township, off of Morrish Road.

One single-family attached condominium development is currently found in the Township, on Van Vleet Road south of Miller Road. Although only one such development is found in Gaines Township, they are becoming more popular across Michigan. Attached single-family condominium units are often more affordable and require less upkeep because maintenance is usually provided by the condominium association.

### Manufactured Home Parks

Areas containing groups of manufactured homes, and their related service and recreational areas are designated as Manufactured Home Parks. Currently, only one manufactured home park is found in Gaines Township, the Silver Creek Village Manufactured Home Park, located in the northeast corner of the Township. This facility comprises 27 acres or 0.1 percent of the Township.

### Local Commercial

This land use category includes the land area occupied by uses providing retail and service facilities that accommodate the day-to-day convenience needs of Gaines Township residents. Examples of such convenience commercial uses in Gaines Township include party and/or convenience stores. Because none are found in Gaines Township, this category does not include commercial uses that cater to a larger population such as restaurants, supermarkets, and shopping centers.







Two local commercial uses are found in the Township. The K & M Party Store is located at the corner of Grand Blanc Road and Duffield Road while Isaac's Grocery is located at the corner of Grand Blanc Road and Morrish Road. In total, these uses occupy 1.8 acres. A more extensive selection of commercial uses is found just outside of the Township in the City of Swartz Creek.

### Office

Office uses include financial institutions, medical institutions and professional service establishments. In total, three office uses are located in the Township comprising only 2.9 acres. All three of these office uses are located on the south side of Miller Road, just west of the City of Swartz Creek. These include a Genesys Health System medical office, chiropractic office, and an office building housing a tax and lawn care service.



### Industrial

This category includes land areas occupied by both light and heavy industrial facilities. Uses in this category may include manufacturing facilities, automobile salvage and repair, warehouses, and storage and leasing facilities. Currently, there are four industrial establishments in Gaines Township, comprising 36.6 acres or 0.2 percent of the Township.

### Public/Semi-Public

This land use category was established to embrace all public and semi-public lands in Gaines Township. Public lands include those owned by various governmental agencies such as schools, parks, police

stations, post offices and municipal offices. Semi-public lands are those which are privately owned, but can be used by the public. Such uses may include churches, fraternal organizations, cemeteries, and private utility providers.

Public/semi-public land uses occupy 80 acres or 0.3 percent of the total land area of the Township. These uses include the Gaines Township Hall and Fire Department, Calvary Baptist Church, Swartz Creek Church of the Nazarene, Jerusalem Missionary Baptist Church, Duffield United Methodist Church, St. Joseph's Cemetery, several utility properties, and property owned by the township along the west side of Morrish Road/south of Grand Blanc Road..



### Vacant/Open Space

This land use category includes all lands which are presently unused, including undeveloped lots or lots with vacated buildings. There are 1,032.0 acres of land, comprising 4.8 percent of the Township, classified as vacant/open space.



# Transportation Analysis

## INTRODUCTION

One of the most critical components in the overall development and viability of a community is mobility. Mobility gives residents the ability to enjoy and function within the community, plays a significant role in the success of businesses and industries, and allows for outside investment and attracts visitors to the community. Mobility is linked to many other key planning elements, such as sustainability, demography and economy. A solid, efficient transportation network accommodating a variety of modes forms the structure around which settlements are arranged. Transportation is intrinsically linked to land use and regional issues as well. For instance, will the development of industrial land uses in a previously agricultural area have significant impacts on the surface streets surrounding the area? Would the expansion of a major state trunkline affect what land uses a community plans adjacent to it? Can a community accommodate a diverse collection of residents from across age, economic or ethnic groups if the only forms of transportation available are private automobiles?

Transportation networks play as crucial a role in urban and rural development as land use, natural features, public utilities or any other factor. It is crucial, for instance, to ensure that a community accommodates pedestrian and other non-motorized travel,



such as bicycles, in addition to automobiles, to ensure that seniors and young people can access public amenities and requisite goods and services. If warranted by the size and regional position of the community, bus networks or other forms of public transit also become necessary to meet these goals. It is for reasons such as this that we include in the Master Plan an analysis of the transportation network to ensure that future improvements and land use decisions complement the needs and goals within the community for continued and improved mobility.

## TRANSPORTATION NETWORK

### National Functional Classification (NFC)

**Map 7, Transportation Network**, shows the National Functional Classification of Gaines Township's roads. The National Functional Classification (NFC) is a federal classification system for all public highways, roads, and streets. This classification system provides the basis for federal aid eligibility of roadways (United States Code, Title 23). In Michigan, MDOT has the primary role in cooperation with appropriate local agencies in updating and revising the NFC. Updates and revisions are subject to Federal Highway Administration approval.

Roads are classified first as rural or urban, dependent on their location within or outside the federal aid urban/rural boundary. As shown on Map 7, the northernmost portion of Gaines Township is classified as urban, while the rest of the Township is designated as rural.

The two primary considerations in classifying highway and street networks functionally are access to property and travel mobility as defined by trip travel time or operating speed. For example, local roads provide access to property, but would be rated low in mobility.

The basic classifications for the functional systems are:

- Arterial highways, which generally handle longer trips and operate at higher and more uniform speeds,
- Collector roads, which collect and disperse traffic between arterials and the local roads.
- Local roads, streets, and other public ways, which serve the land access function to the residential areas, businesses, individual farms and other local areas.



Several road segments in Gaines Township are classified as the highest level of road: arterial. There are two types of arterials, principal arterials and minor arterials. Principal arterials generally carry long distance, through-travel movements between cities, and provide access to important traffic generators, such as major airports or regional shopping centers. Minor arterials are similar in function to principal arterials, except they carry trips of shorter distance and to lesser traffic generators. There are several urban minor arterial roads within Gaines Township. These urban minor arterials include: Sheridan Road north of Lansing Highway, Lansing Highway, Miller Road, Morrish Road north of Hill Road, Elms Road north of Hill Road, and Hill Road east of Morrish Road. Minor arterials constitute routes, the design of which should be expected to provide for relatively high travel speeds and minimum interference to through movement.

Three collector road designations are found within Gaines Township, urban collector, rural major collector and rural minor collector. Collector roads tend to provide more access to property than do arterials. Collectors also funnel traffic from residential or rural areas to arterials. Two urban collector road segments are found

in Gaines Township, Seymour Road south of Swartz Creek, and Hill Road between Seymour Road and Morrish Road.

Several road segments are classified as rural major collectors including all of Grand Blanc Road, the majority of Seymour Road, Duffield Road south of Grand Blanc Road, Elms Road between Hill and Grand Blanc Roads, and a small segment of Ray Road east of the Village. Rural minor collectors include Duffield Road north of Grand Blanc Road, Ray Road, Baldwin Road east of Seymour Road, and Morrish Road between Hill and Grand Blanc Roads.

The rest of the roads in Gaines Township are classified as rural or urban local roads, or uncoded roads. The local road system, in comparison to collectors and arterial systems, primarily provides access to land adjacent to the collector network and serves travel over relatively short distances.

### Road Ownership and Classification

**Map 7, Transportation Network** also shows the ownership and classification of the roads within Gaines Township. The roads are broken into the following three categories: county primary, county local, and other roads (private).

The majority of the roads in Gaines Township are under county control, administered by the Genesee County Road Commission. The county primary roads in Gaines Township include: Miller Road, Duffield Road, Grand Blanc Road, Seymour Road, Sheridan Road north of Lansing Highway, Ray Road west of Seymour Road, Baldwin Road east of Seymour Road, Morrish Road north of Grand Blanc Road, Hill Road east of Seymour Road, and Elms Road north of Hill Road. The majority of the rest of the roads in Gaines Township are county local roads. As shown on the map, there are only a few private roads in Gaines Township.

### Railroads

Currently, two rail lines travel through Gaines Township. One rail line, owned by Canadian National Rail, runs through the northern half of Gaines Township. This rail line, which is also utilized by Amtrak for passenger transportation, connects Chicago and Port Huron, with the nearest passenger stations at Durand and Flint. The second rail line, also owned by Canadian National Rail, travels through the southwestern corner of Gaines Township connecting Durand to the west and the Detroit area to the southeast.

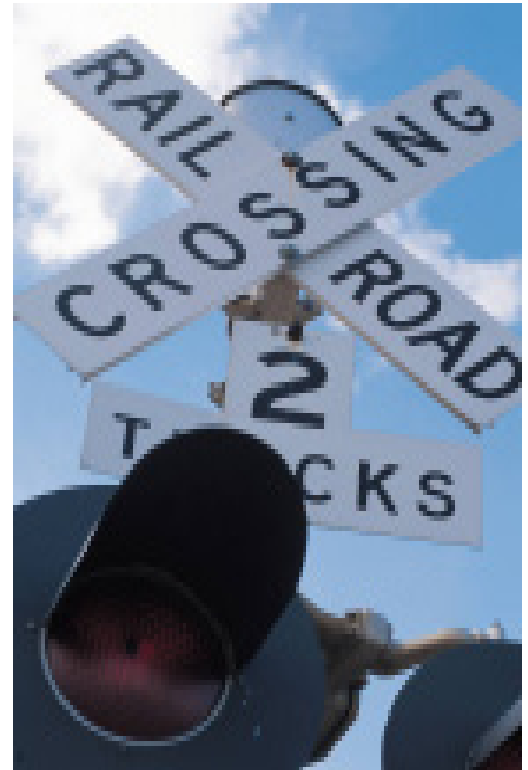
### Mass Transit

Public transportation in Genesee County is provided by the Mass Transportation Authority (MTA). Currently, no primary bus routes extend into Gaines Township. However, Gaines Township residents are served by the MTA which offers other public transportation alternatives.

One such alternative is the “Your Ride” program, which is a curb-to-curb service designed for those who do not have access to fixed bus routes. Your Ride service is provided through local service centers, one of which is located in Swartz Creek. Gaines Township citizens can call the Swartz Creek service center to arrange a ride within Genesee County.

The MTA also provides a “Regional Transportation” service. This service departs from the Customer Service Center in downtown Flint and connects with designated points in greater Genesee County, as well as certain destinations in Livingston and Oakland Counties. MTA also provides “Specialized Services” designed to accommodate the elderly and persons with disabilities. This service includes taking clients to and from agency appointments, as well as to personal appointments such as medical exams.

As mentioned above, passenger rail service through Amtrak is available to Gaines Township residents. The nearest stations are located in the City’s of Durand and Flint. Additionally, several intercity bus lines operate out of MTA’s transportation complex in Flint.<sup>1</sup>



## Air Travel

The nearest commercial passenger airport to Gaines Township is Flint Bishop International Airport. This airport is located on Bristol Road in Flint, a short ten minute drive from Gaines Township. Several airlines operate out of Bishop International including: Allegiant, American Airlines, Delta, Southwest and United. According to the Bishop International Airport website, daily direct connections are provided to/ from numerous cities including Minneapolis, Chicago, Atlanta, Tampa, Fort Meyers and Orlando.<sup>2</sup>

Other major airports within a one to two hour drive from Gaines Township include Capital Region International Airport, outside of Lansing; Detroit Metropolitan Wayne County Airport, outside of Detroit; and, Gerald R. Ford International Airport, outside of Grand Rapids.

## **TRAFFIC VOLUMES**

**Map 8, Transportation Analysis** displays 24 hour Average Daily Traffic (ADT) counts for selected road segments within Gaines Township. These traffic counts were obtained from the Genesee County Road Commission Traffic Engineering Department. The Genesee County Road Commission conducted these traffic counts in 2004.

A graduated color scheme (purples to greens to reds) has been used on the map in order to depict the highest and lowest traveled roads in the Township. As shown on the map, the two highest traveled road segments in Gaines Township (over 6,000 ADT) are Hill Road between Elms and Morrish, and Miller Road between the City of Swartz Creek and Van Vleet. The actual counts for these segments were 10,914 ADT for the Miller Road segment and 8,774 ADT for the Hill Road segment.

Several road segments featured significant traffic counts ranging between 4,500 and 6,000 ADT. These road segments included: Grand Blanc Road in the eastern half of the Township; Seymour Road, Morrish Road and Elms Road north of Hill Road; Miller Road between Duffield and Van Vleet; and Sheridan Road north of Lansing Highway.

Moderate traffic counts ranging between 3,000 and 4,500 ADT are shown in dark green on the Transportation Analysis Map. Portions of Hill Road, Seymour Road, Morrish Road, Grand Blanc Road, and Miller Road feature average daily traffic volumes within this range.

The lower traffic volumes within Gaines Township (below 3,000 ADT) are shown in the light green and light purple colors on Map 8. Roads featuring these traffic volumes are found in the southern and western portions of Gaines Township.



# ROAD CONDITIONS

## Road Condition Rating

The Flint-Genesee County 2025 Long Range Transportation Plan, prepared by the Genesee County Metropolitan Planning Commission in September of 2001, provides an assessment of pavement conditions within the County. As stated in the Long Range Transportation Plan, the pavement conditions data was compiled as part of the Highway Performance Monitoring System (HPMS) street and highway inventory of state selected segments. This system is mandated by the Federal Highway Administration (FHWA) and requires that Metropolitan Planning Organizations collect and provide pavement



condition and other road data to the state for reporting purposes. Once compiled, the resulting information is utilized by the FHWA to assess the national roadway system in regard to length, use, condition, performance and operating characteristics of the roadway infrastructure. This data is also used to determine the national funding apportionments and allocations within function classification systems and various federal funding sources. Within the Long Range Transportation Plan, pavement condition information is displayed in a county-wide map that classifies roads into four categories based on the predicted pavement condition of the roadway. The four categories are: excellent, good, fair and poor.

The road condition information found in the County's Long Range Transportation Plan provides helpful insight in regard to the state of Gaines Township's principal paved roads. Therefore, this information has been re-created for the Gaines Township Master Plan and is shown on **Map 8, Transportation Analysis**. As can be seen on the map, none of the roads in Gaines Township that were rated as part of the road condition assessment were classified as "poor." There were only a couple road segments that were classified as "fair." These included Hill Road between Seymour and Morrish, and Ray Road starting about one quarter mile east of the Village of Gaines and extending west to Seymour Road. Four road segments were classified as "good" including: Seymour Road and Morrish Road north of Hill Road; Grand Blanc Road between Seymour and Morrish Road; and Ray Road just east of the Village of Gaines. In contrast to the limited number of roads rated as good or fair, the majority of the roads in the Township were classified as "excellent." This provides evidence that, except for a few road segments, the major roads in Gaines Township will not require significant improvements in the near future.

## Paved and Unpaved Roads

As mentioned above, all of the roads that were given a road condition rating as shown on the Transportation Analysis Map are paved roads. In addition to those paved roads, there are many other roads in the Township that are paved, but were not given a rating. Generally, these roads are paved residential streets that are found in close proximity to the City of Swartz Creek. In total, paved roads comprise about one-half of the total road system of Gaines Township based on road length.

Unpaved roads are spread throughout Gaines Township but are most common in the rural southern and western portions of the Township. These unpaved roads are mainly section line roads that provide access for a limited number of homes and the adjacent agricultural lands.

### **Footnotes:**

<sup>1</sup> *Mass Transportation Authority (MTA) Website.* June 2017. [Http://www.mtaflint.org/](http://www.mtaflint.org/)

<sup>2</sup> *Bishop International Airport Authority Website.* June 2017. [Http://www.bishopairport.org/](http://www.bishopairport.org/)





# Community Facilities

## GOVERNMENT FACILITIES

The Gaines Township Hall and Fire Department complex is the only government facility located in Gaines Township. The Township Hall and Fire Department are found on the south side of Grand Blanc Road in the center of the Township.

## EMERGENCY SERVICES

Police protection is provided by the Michigan State Police, Genesee County Sheriff's Department, which is headquartered in the City of Flint, the Township Police within the Township, and the Village of Gaines Police who patrol the Village of Gaines. Fire protection service for the Township is provided by the Gaines Township Fire Department which consists of two stations. Station 1 is centrally located next to the Township Hall on Grand Blanc Road and Station 2 is located in the Village of Gaines. The Gaines Township Fire Department also provides emergency medical response services. Both fire and police emergency services can be reached via 911 emergency response.

## EDUCATIONAL FACILITIES

Currently, no schools are located within the limits of Gaines Township. However, three school districts cover territory within Gaines Township: Durand Area School District, Linden Community School District, and Swartz Creek Community School District. The largest percentage of Gaines Township falls within the boundaries of the Swartz Creek Community School District. This district encompasses lands in the northeast, central, and southwest portions of the Township. Residents in the northwest corner of Gaines Township belong to the Durand Area School District, while residents in the southeast corner of the Township belong to the Linden Community School District.

The Durand Area School District features a total of four schools including two elementary schools, one middle school, and one high school. According to the National Center for Education Statistics (NCES) for the 2013-2014 school year, the District had a total of 1,518 students and 94.3 classroom teachers for a student to teacher ratio of 16.1 to one. Most of the schools in the district are located west of Gaines Township. With the closure of the Doyle Knight Elementary School in Lennon, all of Durand's schools are located in the City of Durand (refer to Location Map).

The Swartz Creek Community School District educates 3,981 students in five elementary schools, one middle school, one academy school (grades 9-12), and one high school. According to the National Center for Education Statistics, the district employs 209.4 teachers for a student to teacher ratio of 19.0 to one. An elementary school is located in the Village of Gaines, while the other schools are scattered around and within the City of Swartz Creek.

The Linden Community School District has a total of five schools including three elementary schools, one middle school and one high school. All of the schools are located southeast of Gaines Township near or within the City of Linden. According to the NCES, the district educates 2,933 students and employs 145.9 teachers, for a student to teacher ratio of 20.1 to one.

## RELIGIOUS INSTITUTIONS

A total of four churches, listed below, are located within the Gaines Township limits. The locations of these institutions are shown on **Map 9, Community Facilities**.

- Calvary Baptist Church
- Duffield United Methodist Church
- Swartz Creek Church of the Nazarene
- St. Joseph Catholic Church

One cemetery, St. Joseph's Cemetery, is located in the southwestern corner of Gaines Township on Baldwin Road.



Two churches are located within the limits of the Village of Gaines. The locations of these institutions are shown on **Map 9, Community Facilities**.

- Gaines United Methodist Church
- Faith Church

## COMMUNITY FACILITIES OUTSIDE OF GAINES TOWNSHIP

Given Gaines Township's small population and predominantly rural character, it is understandable that it only features a small number of community facilities. Therefore, the citizens of Gaines Township must rely on surrounding communities for public services, recreation and entertainment. Many of these services and facilities, such as a post office, library, senior center, and parks, can be found within the City of Swartz Creek. Major community facilities, such as hospitals, colleges, museums, and entertainment venues can be found near or within the City of Flint.

## UTILITIES

Several utility structures are found within the limits of Gaines Township. These include an electric sub-station and a small property that features equipment related to underground gas lines. Additionally, two properties in Gaines Township feature telecommunications towers that are shown on **Map 9** located in the Appendix. **Map 10** provides the locations of existing utilities within the Township and the proposed sanitary sewers are shown on **Map 11**.

### Sanitary Sewer

Currently, the majority of the Township residents and business establishments have private on-site treatment systems (septic tanks and drain fields). The exceptions are the Silver Creek Manufactured Home Park located in the extreme northeast corner of the Township, as well as the densely developed residential subdivision located immediately west of Swartz Creek. The Village of Gaines also has its own sanitary sewer system. These systems are connected to the Genesee County Drain Commissioner's (GCDC) sanitary sewer collection system via gravity sewers or are pumped through a pressurized force main. The sewage is ultimately treated at the GCDC's Anthony Ragnone Treatment Plant in Montrose Township.

Although Gaines Township has a very limited sanitary sewer system, there are plans to expand the current supply from Genesee County into Gaines Township. The GCDC is reviewing options for the final location of the proposed Western Trunk Extension Sewer (WTES), Phase II project located within the Township. This 48-inch diameter interceptor sewer will have a positive impact on the future planning and development within the Township. According to the GCDC's Phase II Route Study report completed in 2004, it is anticipated that Gaines Township will contribute up to 9.4 cubic feet

per second (cfs) into the WTES system. However, the GCDC's policy is to utilize the available capacity in the proposed interceptor while further defining specific allotments for each community based on agreed upon future needs.

The proposed sewer capacity that will be available to Gaines Township after the WTES is developed will have a major impact on the future growth of the community requiring careful planning. Contributing 9.4 cfs into the system equates to approximately six million gallons per day (gdp). When determining sewer capacity for a single-family subdivision, an estimate of 100 gdp per person is utilized. This figure is then multiplied by a 3.5 peaking factor and the number of units within the development. For example, the average household size within Gaines Township is 2.69 persons, multiplied by 100 gdp within a subdivision of 100 units, taking into account the peaking factor, equals 94,150 gallons per day. To understand what this means in possible new single-family units, the six million gdp is divided by the persons per household, the average gallons per day for the single user (100), and the 3.5 peaking factor. This equates to a maximum development capacity of about 6,350 new single-family homes. However, this number should be tempered with the possibility of other types of development tapping into the sewer system and utilizing the available volume, as well as the GCDC's policy regarding agreed upon future needs.

The **Proposed Sanitary Sewer Map (Map 11)** found in the Appendix indicates the preliminary route of the WTES, as well as potential future sewer laterals and service districts to provide public sanitary sewers to the entire Township.

The GCDC contracts operation and maintenance of its sanitary sewer system and treatment facilities. It is assumed that GCDC would continue to contract this service for future facilities and their operation and maintenance. This is dependent heavily upon negotiations related to sanitary sewer service and the Township's decision to pursue expanded sewerage services.

Further investigation regarding the Township's sanitary sewer service area indicates that the majority of the Township can be serviced through gravity sewers while connecting into the WTES system in the northeast part of the Township, near Morrish Road and Hill Road. The exception to this service area is parts of Township Sections 4, 5, and 6 located in the northwest part of the Township. This area would ultimately connect into the County's existing sanitary system near Miller Road and Seymour Road.



## Water Distribution

Gaines Township does not operate a public water supply. Currently, the residents and business establishments in Gaines Township rely primarily on water from on-site wells. The Genesee County Drain Commissioner's (GCDC) water distribution system currently extends into the Township in the northeast corner, along Morrish Road and along Elms Road via a 10-inch water main. The proposed source of water for expanding the Township's system would be from the GCDC. The Division of Water and Waste Services is responsible for the administration, operation, maintenance, and construction of infrastructure and treatment facilities for the communities located in Gaines Township. The GCDC supply is purchased from the City of Flint, who in turn purchases the water from the City of Detroit. This water is treated and disinfected and does not have the high mineral levels which may have an impact on aesthetic quality. By using a distribution system instead of private wells, it eliminates the potential problems associated with failing private well systems.

Currently, GCDC contracts operation and maintenance of its water distribution system and facilities. It is assumed that GCDC would continue to contract this service for future facilities and their operation and maintenance. This is dependent heavily upon negotiations related to water distribution and the Township's decision to pursue expanded water services.

Besides extending the existing water main southerly on Morrish and Elms Road, other future connections to the GCDC's system may be identified based on the Township's growth and development. Potential connections along the Miller Road corridor, as well as "looped" connections with water systems in adjacent Townships, including Mundy Township to the east and Clayton Township to the north, may be feasible options.

It is anticipated that the Township will work closely with GCDC officials to further develop their plans for extensions of the water system. Coordinated planning efforts for extensions of these public utilities will effectively promote infrastructure growth within the Township.

## Gas Line

A major transmission gas line is located in the northern sections of Gaines Township. It is a 26 inch line located within a 300 foot easement which is owned and maintained by Michigan Gas Storage. The gas main enters Gaines south of Hill Road and runs east and west through the entire Township (**see Map 10**).

## **HISTORICAL SITES**

Another important aspect of Gaines Township are the historical sites found throughout Gaines. Located within the Township are 2 historical sites which are registered nationally, as well as with the State of Michigan along with one in the Village of Gaines.

The Crapo Farm, a historic site in Gaines Township, is off of Hill Road, just west of the Swartz Creek city limits. Governor Henry H. Crapo purchased the 1,100 acres that originally comprised this farm from the State of Michigan in 1860, which was pre-dominately swamp land. The Crapo Farm is significant for its innovative advances in agricultural technology and production. H. H. Crapo's agricultural model showed that former swamp land could be profitably drained and developed for agricultural use, thus aiding Michigan's development greatly. In addition, the farm was one of the first to engage in the raising of Hereford cattle in Michigan, and was largely responsible for the introduction of the breed throughout the rest of the state.

The other historic site in Gaines is the Bloss Farm House located at 8380 Reid Road. In 1883, Frank and Eunice Bloss purchased 40 acres along Reid Road in Gaines Township. In 1893, they increased their land holdings to 105 acres and constructed their elaborate Queen Anne home. The farm has remained in the Bloss Family and continues as a cattle and dairy operation.

On August 25, 2008, 30 volunteers cleaned up and began the restoration of a Chippewa Burial Ground west of Seymour Road and south of Hill Road. Several prominent Native Americans are buried there including Kaw-ge-ke-zhick (father of Chief Wabanness) and Madison Fisher, who served in the Civil War. This site was a part of the Crapo Farm at one time. By October 2010, the site was restored and was deeded back to the Chippewa tribe.

Within the Village of Gaines is the Genesee Avenue/Walker Street Historic District. The Village of Gaines is unique in its features as a significant small town in Genesee County that can trace its origins and purpose to the railroad. The Village was planned on an unusual tilted grid aligned or referenced to the railroad line. Railroad financier Henry N. Walker platted "Gaines Station" in 1859 for the coming of the Detroit and Milwaukee Railroad. By 1875, when its development peaked, the Village of Gaines had become a key shipping and market center for the surrounding agricultural area of Gaines Township. Though the last passenger train passed through Gaines in 1958, the depot and associated buildings in the Genesee Avenue/Walker Street Historic District still stand along the village's wide main street, which evoke the feeling of a typical, late nineteenth-century main street in a small Midwestern town.

In addition to these historical sites, Gaines has many centennial farms located throughout the Township. A centennial farm is one that is over 10 acres in total area and has been owned by the same family for over 100 years. Through research conducted with the Michigan Historical Center, sixteen certified centennial farms, as well as one certified sesquicentennial farm, were located within the limits of the Township and are indicated on **Map 9, Community Facilities**.



# Market Assessment

Future land use decisions within Gaines Township should be couched with a sound understanding of potential markets within the community. An examination of these existing and potential markets for residential, commercial, and industrial land uses will assist in forecasting possible demand. The Township can then respond accordingly in the development of the Future Land Use Map. The analysis will be based upon data collected in our 2005 land use survey and figures provided by the Urban Land Institute that offer recommendations for land use mixes. Any and all recommendations or projections should be further couched, however, in the economic trends of the larger regional economy inclusive of Gaines Township, as well as other demands, including infrastructure pressures and building densities.

The following assesses the market potential for future residential, commercial, office, and industrial uses within the Township based on nationally recognized planning and design standards. This data will be used to determine the amount of each land use which can reasonably be expected to be required in Gaines Township by 2040.

## RESIDENTIAL NEEDS

Residential land uses, including Single-Family, Agricultural with Farmstead family units, and Manufactured Home Park, comprise 59 percent of the total acreage in Gaines Township.

A variety of factors weigh in on current housing trends. Typically in American communities, households are getting smaller. Today's families are not having as many children and the senior population is rising as the baby boomer generation is approaching retirement age. The combination of these factors will impact the demand for housing throughout society, and Gaines Township is no exception. The goal of the future land use plan, with respect to housing, is to promote a diversity of lot sizes, housing types, and housing prices. This will ensure that current and prospective residents have home choices within the Township favorable to their changing economic status and situation.

Data in **Table 21** summarizes the projected changes to population, persons per household and housing stock through 2040. The Population Profile of Gaines Township predicts that the Township's 2040 population to be approximately 7,305 people. Based on this analysis, it is anticipated that an additional 292 dwelling units will need to be constructed by 2040 in order to house the projected population. The need for new housing within Gaines Township can be predominately attributed to the projected increase in population. However, the continual decline in household size plays a contributing factor.

In addition to estimating the projected need for new housing units, it is important to calculate how much of the total housing stock during the planning period will be vacant, for sale, or rent. According to the

Urban Land Institute (ULI), generally five percent of a community's habitable housing stock should remain vacant to provide diversity in housing selection, and allow for housing rehabilitation or replacement activities. Vacancy rates at or near the recommended five percent ensure that asking prices for housing are indicative of actual market conditions, while protecting private investment. Vacancy rates below five percent demonstrate a restricted housing environment, affording little opportunity for potential households to be absorbed by available units.

The total vacancy rate for Gaines Township reported in the 2010 Census was 5 percent or 132 housing units. This vacancy rate is in line with the ULI's recommended rate. However, when we examine Township-wide vacancy rates by owner or renter occupied units (as defined by the US Census), an interesting picture emerges. Rental vacancies averaged 6.5 percent, which is slightly higher than the recommended rate. This would indicate that the existing supply of rental units is sufficient to meet the current demand, as well as being able to absorb some of the future need. The home owner vacancy rate, however, was only 1.5 percent, thus demonstrating a tight owner occupied housing market. The projected need for an additional 292 housing units, based solely on past population trends, may not meet the future demand within the Township.

Existing residential land use comprises 13,417.80 acres of the Township (including the Agricultural with Farmstead, Single-Family Residential, Manufactured Home Park), or 62.2 percent of the total land area. Currently, a total of 1,031.96 acres of land are vacant within the Township. Of this available land, 735.76 acres or approximately 71 percent are zoned for residential uses. Based on the projected number of housing units needed within the Township by 2040, a density of 2.5 units per acre is calculated. In order to meet this potential demand while still maintaining the predominately rural and agricultural character of the Township, a variety of housing styles and densities will need to be encouraged.

**TABLE 21: Housing Projections: 2010-2040**

| Category                      | 2010  | 2040  | % Change |
|-------------------------------|-------|-------|----------|
| Total Population              | 6,820 | 7,305 | 7.11     |
| Persons per Household         | 2.72  | 2.61  | -9.2     |
| Total Occupied Housing Units* | 2,507 | 2,799 | 11.6     |

*\* Based on total population and persons per household.*

*2010 US Census DP-1 Demographic Profile Data; Genesee County 2040 Population Projections*

## COMMERCIAL NEEDS

Commercial uses dictate or significantly impact transportation patterns, residential development patterns, employment levels, and tax base. Commercial development is also an essential element of a township's economic base. Commercial establishments provide goods and services to consumers, promote economic stability, and generally enhance the quality of life for area residents. However, if commercial districts are not suitably located, and carefully planned, they can become a disruptive element that ultimately detracts from the larger community. The following analysis details the potential commercial base (as delineated by projected population), as well as the likely amount of commercial land that will be consumed by the end of the planning period according to commercial land use standards.

| Typical Shopping Center Standards   |              |   |   |   |
|---|--------------|---|---|---|
| Center Type   | Site Size    | Composition   | Population Base                                   | Service Area  |
| Neighborhood Center   | 3-15 acres   | Supermarket as the principal tenant with other stores providing convenience goods or personal services. Typically GLA of 30,000 to 150,000 square feet.                       | Trade area population of 3,000 to 40,000 people   | Neighborhood, 5-10 minute drive time, 1.5 mile radius |
| Community Center  | 10-40 acres  | Junior department store or variety store as the major tenant, in addition to the supermarket and several merchandise stores. Typically GLA of 100,000 to 450,000 square feet. | Trade area population of 40,000 to 150,000 people | 10-20 minute drive time, 3-5 mile radius              |
| Regional Center   | 30-100 acres | Built around a full-line department store with minimum GLA of 100,000 square feet. Typically GLA of 300,000 to 900,000 square feet.   | 150,000 or more people                            | 20 minute drive time, 8 mile radius                   |
| <i>Note: GLA represents Gross Leasable Area</i><br><i>Source: Urban Land Institute, Shopping Center Development Handbook, (Washington D.C.) 1999.</i> |              |   |   |   |

## Commercial Land Use Standards

There are many factors that dictate selection of sites for commercial development. In many cases, they respond to preexisting conditions, such as the location of other large retail centers, industrial or residential development, primary transportation corridors, or within central business districts. Communities, however, have an important opportunity through the planning process to direct commercial development and concentrate it in those areas most suited for new development or redevelopment. The following criteria are some of the primary methods by which commercial developers select sites:

### **Site Selection Criteria<sup>1</sup>**

- Access (left turns into and out of the site, proximity to traffic lights and/or stop signs).
- Visibility (storefront and store signage from main access routes).
- Traffic volume and traffic character (local versus through traffic).
- Street network characteristics.
- Proximity to demand generators. A demand generator is something that provides a motivation or reason for potential shoppers to be in a particular location.
- Population/household characteristics.
- Economic characteristics.
- Lifestyle trends and purchasing preferences and habits.
- Availability and cost of existing space.
- Availability and character of appropriately zoned land.
- Availability/capacity of infrastructure.
- Local business climate.
- Competitive environment (store type, location, quality and pricing of merchandise, sales volume).

<sup>1</sup> Derived from Real Estate Development Research, LLC. 2002

Also, there are three primary types of shopping environments: the neighborhood center, community center, and regional center. The standards associated with each center are presented in the **Typical Shopping Center Standards Table**.

There are currently 1.8 acres of land designated as Commercial, which equals less than 0.1 percent of the total acreage within the Township. Therefore, the majority of the commercial service needs of the Township residents are being met by larger communities outside of Gaines, for example the City's of Flint, Fenton, and Grand Blanc.

Of the available vacant land, a total of 15.93 acres is zoned for a commercial use. According to the above mentioned standards, Gaines Township, based upon current and projected populations and geographic size, is a viable location for one neighborhood center. A neighborhood center is defined as a retail center, typically with a supermarket as the principal tenant and other stores providing convenience goods or personal services. The required trade area population ranges from 3,000 to 40,000 people, living within a 1.5 mile radius, or a 5-10 minute drive of the center.

With projected population and housing increases, Gaines Township should explore the possibility of expanding its' commercial inventory. Decisions will need to be made as part of this planning process whether to expand existing commercial nodes or develop new areas for retail development.

## OFFICE NEEDS

The pattern of office development in metropolitan areas has changed dramatically in the last 20 years. It has shifted away from a focus on downtown areas to a regional "multiple-nuclei" structure of competing centers. Today, for example, Auburn Hills and Troy represent the prestige locations that are capturing new office development. The reasons for this transformation vary. To a certain extent, it has followed the out-migration of population away from the large city centers. Developers also sought less expensive building sites, which offered regional accessibility and on-site parking convenience for tenants. It also is a reflection of meeting unmet demand, as our local economy continues to change from a manufacturing-base economy to a service oriented economy.

Not unlike commercial development, there is a set of very specific standards that make sites of various sizes and locations desirable to different potential office development. The chart below illustrates some of these criteria.

### Office Location Factors<sup>1</sup>

- Easy access to customers or clients.
- Cost and availability of appropriately experienced/trained labor in the area.
- Cost, functionality, and expandability of available office space (or land suitable for office development).
- State and local business climate.
- Quality of life for employees.
- Access to higher education.
- State and local income and property tax costs, and proximity to cultural and entertainment facilities and shopping (for employees).

<sup>1</sup> Lousi Harris & Associates, Business American Real Estate Monitor, Cushman & Wakefield, Inc. 1988

According to the existing land use survey, there are currently 2.9 acres designated as Office lands in Gaines. This comprises less than 0.1 percent of total acreage within the Township. Currently, there are no vacant lands zoned for Office uses. The combination of these factors indicates a small market demand for this type of land use. In addition, the majority of the criterion utilized to decide whether to develop an office use is subjective in nature. Thus, they are used as comparisons when considering the Township's existing ability to meet these standards against other local population centers that are already providing these services. Based on all of these dynamics, it is likely that any future office development within the Township will be of a personal service type that caters to the immediate needs of the local community.

## INDUSTRIAL NEEDS

There are 36.6 acres, or 0.2 percent, of the Township currently in use for industrial purposes.

The quantity of developed industrial land a community will need in the future is dependent upon its current employment base, infrastructure capacity, local political philosophy, as well as a myriad of other factors industries consider when choosing a location for a new facility.

### Industrial Location Factors<sup>1</sup>

- Easy access to domestic markets as well as suppliers.
- Availability of sites with existing electricity, water, sewage and roads suitable for year-round truck traffic.
- Cost, availability, and skills of labor in the area, and the extent of labor/management problems for unionized labor force.
- Easy access to raw materials.
- State and local business climate.
- Utility costs and capacities.
- Access to higher education.
- State and local income and property tax costs, and proximity to cultural and entertainment facilities and shopping (for employees).

<sup>1</sup>Lousi Harris & Associates, Business American Real Estate Monitor, Cushman & Wakefield, Inc. 1988

The following information will summarize three methodologies commonly used in estimating future industrial land area needs. They are population, land use, and employment density ratios.

The first method, population ratios, represents acreage requirements as a proportion of the total population. Data in **Table 22** indicates that a total of 12 acres of industrial land are required for every 1,000 people. The Township's population in the year 2020 of 8,982 persons would, therefore, require 107.8 acres of industrial land. The standard then continues to break down this requirement by light and heavy industry. The population ratio method determines that the light industrial type would require two

acres per 1,000 population or a total 17.9 acres. Heavy industry, at ten acres per 1,000 people, would account for 89.8 acres. When examining the present total of developed industrial land, by this methodology, Gaines Township is deficient in total industrial lands.

**TABLE 22: Population Ratios for Estimating Industrial Land Use**

| Category                                       | Ratio                     |
|--|---------------------------|
| Total gross land requirement for all industry: | 12 acres/1,000 population |
| Land requirements for light industry:          | 2 acres/1,000 population  |
| Land requirements for heavy industry:          | 10 acres/1,000 population |

Joseph DeChiara and Lee Kopplemand, *Planning Design Criteria*.

Estimating needed acreages of industrial land use can also be accomplished by employing land use ratios. By surveying the amount of land devoted to industrial uses in other communities, an average can be calculated and used as a standard for planning purposes. Using this standard, as seen in **Table 23**, eight

percent of the Township's land area should be utilized for industrial development. This equates to approximately 1,784.5 acres. This eight percent value is valid up to a small city or town population of 42,000 people. By this methodology, Gaines Township could feasibly develop an additional 1,747.9 acres of industrial land. This method should also be examined, however, in terms of the Township's development character. As Gaines Township is not as densely developed as a typical small city or town, a more accurate figure would employ a ratio to scale the percentage to population size. This yields a value of approximately 260 acres, or approximately 224 more acres than currently present.

The most accurate means of determining future aggregate industrial land use need is achieved through the application of employment/density ratios. This methodology requires extensive, business specific, employment data records, as well as total employment data over time. The ratios of employees per acre per industry site are calculated, and then all ratios of each industry type are averaged. The value produced is the average number of employees per net site acre. This procedure is repeated over time (usually in ten year increments). The increase in employment over a specified time period, divided by the density equivalent for the industry group, equals the amount of land that is required to meet the new (industrial) employment needs. In simpler terms, this ratio compares employment density trends overtime in order to project future needs. Due to the extensive scope of this estimation procedure, the aggregate employment by industry values were derived from historical US Census trends, and applied to the above procedure. By this process, Gaines Township would need approximately 52.80 acres of additional industrial land than currently present in the Township (**Table 24**).

**TABLE 23: Community Size for Estimating Industrial Land Use**

| Community Size                               | Percent Industrial Land Coverage |
|--|----------------------------------|
| Small Cities and Towns (under 42,000 people) | 8%                               |
| Large Cities (over 200,000 people)           | 12%                              |

American Planning Association, *PAS Memo: Land Use Ratios*, May 1983.



*TABLE 24: Employment/Density Ratios for Estimating Land Use*

| 2000 Existing Industrial Acreage | Employment 2000 | Employment Density Employee/Acre | 2020 Employment <sup>1</sup> | Estimated Additional Acreage |
|----------------------------------|-----------------|----------------------------------|------------------------------|------------------------------|
| 36                               | 884             | 24.55                            | 1296.34                      | 52.8                         |

<sup>1</sup> Analysis by Wade-Trim: Projection based on 2000 employment data from US Census Bureau  
 Urban Land Institute, Industrial Development Handbook

Presently, only 36.6 acres of Township property are utilized for industrial purposes and there are no vacant lands zoned for an industrial use. As described in the three methodologies above, Gaines Township has the potential to support anywhere from 53 to 224 additional acres of industrial land. These figures, however, should be examined in terms of the employment of the existing population, as well as in terms of the future development aspirations of the Township. As described previously, there are a myriad of factors effecting industrial location, including local development philosophy.

# Goals and Objectives

Before a community can actively plan for its future growth and development, it must first set certain goals and objectives that define the boundaries of its needs and aspirations. These goals and objectives must reflect the type of community desired and the kind of life-style its citizens wish to follow, given realistic economic and social constraints.

In order to appropriately administer goals and objectives, and implement the strategies of each, it is important to understand the role of goals, objectives, and strategies and their relationship to one another. To this end, the following definitions shall apply:

## GOALS

A basic statement that sets a critical path, provides direction, and describes to the organization what the desired outcome should look like. Goals are a critical component of the planning process in that they are flexible, defining for the community, and timeless. Goals stay with the municipality until they are achieved. Goals are ambitious and general. They address issues and specific needs or challenges, but they are grand in scope and speak to fundamental change and directly serve the mission of the community.

## OBJECTIVES

These are the means to achieve a goal. An objective is a plan of action that sets a more specific task within a goal, assigns responsibility, and gauges success. Objectives must meet the following criteria:

- An objective must be specific.
- An objective must be measurable, that is, there must be no question that the objective was begun, carried out, and completed and that a tangible result can be produced as a result.
- An objective must be assigned to a responsible party who will ensure that it will be carried out. There should be no confusion as to who should answer for the results of the objective.
- An objective must be trackable, or easy to follow. Each objective must be carefully monitored and its status must be known at all times.

## STRATEGIES

A strategy is a statement that sets forth the specifics for accomplishment of an objective. An objective that requires a series of specific activities to be completed may, therefore, have multiple strategies. For instance, an objective relating to single-family residential development may include activities detailing types of structures, ordinance regulations, transportation options, beautification, etc.

## PUBLIC PARTICIPATION

The process of developing goals, objectives, and strategies for the Gaines Township Master Plan involved multiple steps. The planning process for the 2007 Master Plan update included a community workshop, which was facilitated to allow for citizens to voice their opinions about current and future Township issues and concerns. The major themes that emerged during this workshop included, but were not limited to:

- Preserving the rural and agricultural character of the Township
- Encouraging increased density near existing communities
- Improving roads and infrastructure
- Promoting small local businesses

The process for the 2017 Master Plan update was led by the Planning Commission and allowed for citizen participation at numerous public meetings. In particular, a Planning Commission work-study session held in April of 2017 and featured a focused discussion and evaluation of the Township's currently adopted future land use map. This work-session provided direction to the project team in updating the goals, objectives and strategies, as well as the future land use plan.

# Gaines Township Master Plan Update

## Planning Commission Community Workshop

**Township Hall**  
**9255 Grand Blanc Road**  
**Wednesday, March 29, 2006**  
**7:30 p.m.**  
 (lasting approximately 90 minutes)

PLEASE COME AND SHARE YOUR VISION FOR  
GAINES TOWNSHIP

During this meeting, a summary of the background studies drafted for the Master Plan update will be presented. Participants will be broken down into small teams and an interactive process will help teams identify their core values and the values of the Township as a whole. At the conclusion of the workshop, participants will help prioritize issues, concerns, hopes, goals and objectives for the Township. The input from this forum will be utilized to create the next chapters of the Township's Master Plan.



## GOALS, OBJECTIVES, AND STRATEGIES

The following text represents the set of goals (the ultimate purposes or intent of the plan), objectives (means of attaining community goals), and strategy statements (which establish the who, what, when, where, and how of specific actions) that were prepared by the above-mentioned community driven process. This process offered decision-makers an opportunity to understand and address values about their community and, at the same time, establishes the parameters around which the Future Land Use Plan will be designed.

### Goals

- √ Encourage future land uses and development outside of prime agricultural land areas which provide long-term benefits to the community.
- √ Promote the conservation of local agricultural resources and the continuation of farming activities and related agricultural uses.
- √ Maintain a community environment that provides for the lifelong living needs of both present and future Gaines residents that will meet their physical needs, offer variety, choice, opportunity for change, and individual growth.
- √ Encourage economic development initiatives that service locally oriented business development without compromising the Township's rural character.
- √ Balance the rate and density of land development with the carrying capacity of the land and the Township's ability to provide public facilities and services.

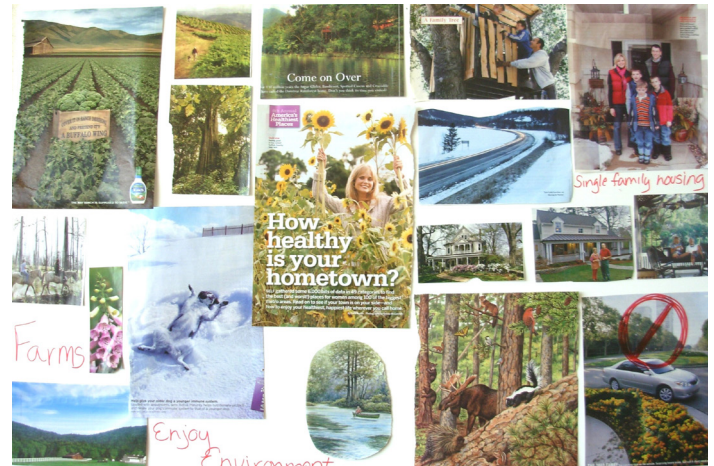
### Agricultural Land Use

#### Objectives:

- Encourage retention of the best soils and most productive lands in agricultural production.
- Protect agricultural lands from fragmentation and the negative impacts of residential encroachment through new zoning initiatives.

## Strategies:

- Review lot splits proposed in agricultural areas to assure well designed land divisions and prevent unnecessary land fragmentation.
- Encourage residential development to be located away from farming operations, and sited to conserve agricultural lands and the rural character of the Township.
- Review and amend the Township zoning ordinance to ensure that new residential development incorporates existing, desirable landscape elements, whether natural or manmade, such as farmland, scenic views, open space, wetlands, stream corridors, and steep slopes.
- Consistent with the Future Land Use Map, encourage farm and agricultural-related businesses, as well as locally oriented service establishments, to be located within strategic nodes or hamlets within the Township. Specifically, these nodes shall include Grand Blanc Road at Duffield Road and Grand Blanc Road at Morrish Road.
- Encourage and promote agricultural tourism within the Township, at an appropriate scale and intensity that limits impacts to adjacent properties, public services and the natural environment.
- Encourage the retention of productive agricultural lands through available mechanisms such as land trusts, purchase of development rights (PDRs), transfer of development rights (TDRs), Michigan's farmland protection program (PA 116), Michigan's centennial farm program, and local zoning initiatives.
- Allow and encourage small-scale farming activities and the keeping of horses or other livestock within the Township.
- Support the existence and expansion of the local foods movement within the Township, through the allowance of farmers markets, food stands and food cooperative facilities.



Front Photograph: Team #2

Wish you were here:

- NEW PAVED ROADS (THROUGH OUT TWP)!
- PRESERVE HISTORICAL FARMLAND
- PARK - (BERLIN- FERRO) BIKE & WALKING PATHS
- PRESERVE NATURAL FEATURES
- NEIGHBORHOOD COTTAGING (SMALL SCALE)
- STREAM WATER MANAGEMENT ! IMPROVE DRAINAGE !
- MAINTAIN RURAL CHARACTER
- DEVELOPMENT FOCUSED MORE TOWARD SWANEE CREEK & VILLAGE OF SHANES
- NO URBAN SPRAWL
- KEEP RAUBINGER RD BRIDGE OPEN

TO: PAUL FORTINO, TOWNSHIP SUPERVISOR

## Residential Land Use

### Objectives:

- Provide locations for higher density residential development in areas suitable for growth while limiting densities elsewhere to preserve rural character.
- Provide for a range of housing options to meet the changing needs of Township residents.
- Encourage innovative development design that maintains Gaines Township's rural character and conserves open space.

### Strategies:

- Encourage residential development patterns that enhance natural features, rural character, and provide dedicated open space areas such as cluster housing.
- Review and amend the Township zoning ordinance to ensure that new residential development incorporates existing, desirable landscape elements, whether natural or manmade, such as farmland, scenic views, open space, wetlands, stream corridors, and steep slopes.
- Provide for higher density residential developments in the northeastern portion of Gaines Township surrounding the City of Swartz Creek. This shall specifically include the allowance for new lifestyle housing choices such as townhomes, rowhouses, live-work units, stacked ranches, and/or apartments.
- Promote the development and/or redevelopment of single-family residential areas by offering a myriad of living locales, environments, and options.
- Review the Township's approval and enforcement processes for new developments to insure efficient and accurate completion.
- Review the Gaines Township Zoning Ordinance and Map to ensure that appropriate transitions are being made with regard to single-family residential lot sizes and densities.

## Commercial Land Use

### Objectives:

- Allow commercial development to occur in the Township in a limited, controlled, and responsible manner, while meeting the changing needs of current and future area residents.



- Encourage site and facility design characteristics associated with commercial establishments that are compatible with the Township's rural aesthetic.

#### Strategies:

- Recognize downtown Swartz Creek as the primary commercial destination within the community and promote its standing as a local and regional destination for commerce, culture and entertainment.
- Consistent with the Future Land Use Map, encourage commercial development in locations where compact and coordinated development may occur without impacting agricultural and residential land uses. These locations specifically include the Miller Road and Morrish Road corridors adjacent to the City of Swartz Creek.
- Limit new commercial development to those types of business that serve the needs of Township residents.
- Consistent with the Future Land Use Map, encourage farm and agricultural-related businesses, as well as locally oriented service establishments, to be located within strategic nodes or hamlets within the Township. Specifically, these nodes shall include Grand Blanc Road at Duffield Road and Grand Blanc Road at Morrish Road.
- Require transitional uses and/or landscape screening between commercial and other land uses, including planned open space areas. Use vegetative windbreaks and/or visual screens in place of man-made materials.
- Consider the adoption of rural design guidelines for non-residential land uses, which would outline guidelines pertaining to building architecture, materials, signage, and other site amenities. Such guidelines shall be specifically developed to reflect the Township's rural agrarian lifestyle, rather than a suburban, "anywhere USA" style.
- Review existing zoning ordinances, review processes, and enforcement procedures to ensure compatibility with Master Plan goals and objectives.
- Require all proposed commercial rezoning to be justified in terms of neighborhood, community, and market area needs, as applicable.

### Industrial Land Use

#### Objectives:

- Provide opportunities for local employment and increased tax base.

- Encourage limited light industrial development with attractive sites which will strengthen the tax base and provide a place of employment for area residents without degradation to adjacent land uses, natural resources, and overall community character

Strategies:

- Recognize the role of neighboring communities for their contribution to the regional market with regard to the type, character and amount of industrial lands.
- Promote development and redevelopment of industrial uses that are adequately served by public facilities and services.
- Direct industrial investment to vacant or underutilized properties before development of greenfield sites.
- Locate industrial areas where they have reasonable boundaries and are not subject to encroachment by incompatible land uses.
- Discourage industrial development that will negatively impact established residential areas, environmentally sensitive areas, or will require substantial changes to natural systems or infrastructure.
- Review the zoning ordinance to ensure that home-based businesses and home occupations are allowed in the Township, with appropriate regulations to ensure compatibility with residential character. Further, ensure that the administrative review process for the establishment of home-based businesses and home occupations is streamlined.

### Community Facilities

Objectives:

- Provide necessary facilities and services that will meet the needs of Township residents and property owners in a fiscally responsible manner and consistent with the Township's rural character.
- Encourage the development of recreation and open space systems that conserve the Township's unique natural features, as well as meet the needs of Township residents.

- Support the development, and continued maintenance, of an area-wide multi-modal transportation systems reflective of current and future Township access needs.

#### Strategies:

- Coordinate with regional entities and neighboring municipalities in the provision of recreational facilities to serve local residents.
- Require inclusion of parks, bicycle and pedestrian linkages and open space areas in conjunction with new and established developments.
- Review the zoning ordinance and consider incentivizing and/or requiring the inclusion of parks, bicycle and pedestrian linkages, and open space areas in new residential development.
- Develop and keep current a 5-year Parks, Recreation Plan and Open Space Plan as a guide for the development of public and private recreation facilities which are needed to serve Township residents and visitors. Further, seek and secure outside funding to support new recreational facility development.
- Consider improvement to or development of area utilities only to those areas where measurable existing population densities and natural resource conditions require such facilities to protect public health.
- Coordinate with the County in the implementation of the Genesee County Regional Non-Motorized Master Plan to support local and regional non-motorized networks and connections.
- Consider adopting a complete streets policy for Gaines Township to ensure that local roadway improvements are consistent with local context and needs.
- Coordinate with Genesee County on access management concerns, specifically with regard to the number of curb cuts permitted on County Roads.
- In conjunction with Genesee County Road Commission, develop a road improvement plan that will outline a maintenance schedule for the improvements to Township roadways.

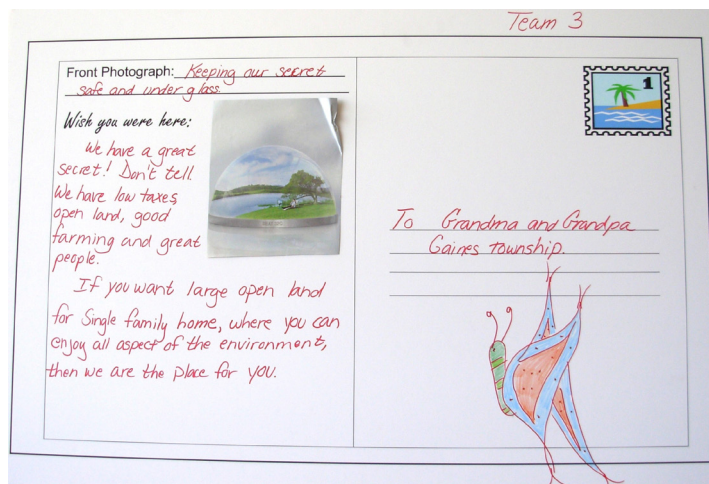
#### Natural Environment

##### Objectives:

- Preserve and enhance the natural and environmental resources of the Township for all current and future Township residents.

#### Strategies:

- Review and amend the Township zoning ordinance to ensure that new residential development incorporates existing, desirable landscape elements, whether natural or manmade, such as farmland, scenic views, open space, wetlands, stream corridors, and steep slopes.
- Review the Township zoning ordinance to eliminate barriers to the use of stormwater best management practices in new development. The Township may also consider the adoption of incentives to encourage the use of stormwater best management practices.
- Encourage the use of native plant species and naturalized landscape designs, where appropriate, to enhance the Township's existing character.
- Continually ensure that all county, state and federal environmental regulations are adhered to in the development of land.
- Consider impervious surface ratio limitations on private land development to reduce storm water runoff and to improve water quality.
- Develop and keep current a 5-year Parks, Recreation Plan and Open Space Plan as a guide for the protection of environmentally significant open spaces and natural corridors. Further, seek and secure outside funding to support the acquisition of environmentally significant land for public conservation purposes.



# Future Land Use Plan

## DESCRIPTION

The Future Land Use Map is the physical result of the Master Plan development process. In a workshop on July 26, 2006, Gaines Township residents worked with Planning Commissioners, and other community stakeholders to develop draft recommendations to be used in the development of the Future Land Use Map. The July workshop consisted of group discussions where participants were asked to debate categories of future land use, as well as their locations on the Future Land Use Map.

The Future Land Use Map equips Gaines Township Planning Commissioners and elected officials with a literal depiction of the desired land uses throughout the community. The Future Land Use Map, derived from the Goals and Objectives, and created through public comment, represents the vision Gaines Township has established for itself. The Map will be a useful tool on which to base zoning and capital improvements decisions, and will allow for consistent and sound planning in the community. The following text describes the categories found on the Future Land Use Map.

## FUTURE LAND USE CATEGORIES

### Agricultural

The Agricultural future land use classification is used to represent those areas intended to preserve and be used exclusively for agriculture, horticulture, or agribusiness support uses, as well as farmsteads and related agricultural buildings located near the principal dwellings on those farmsteads. The Agricultural future land use classification also includes areas intended to maintain agricultural character of the Township while still providing for rural single family residential development opportunities. Land uses within this category would include agricultural uses with residential development at a density of one dwelling unit per 10 acres. These areas are concentrated in the southeast corner of the Township where the planned future expansion of public utilities is limited and these properties provide a buffer between agricultural uses and more suburban residential development.

Additionally, public, semi-public, and utility service uses, such as parks, places of worship and utility substations, may be appropriate within this category. The typical parcel size in the Agricultural classification should be a minimum of 20 acres.



Significant portions of the Township are categorized as Agricultural land. The vast majority of lands west and east of the Van Vleet/Grand Blanc intersection are planned for agricultural uses. A total of approximately 13,460 acres, or about 58 percent of the Township, is planned for the continued preservation of agricultural uses.

The decision to preserve these areas of the Township for farmland was made based on a variety of factors. The current development pattern within the Township indicates that much of this land is presently farmed. In addition, these lands are considered either prime farmlands or prime farmlands if drained based on Map 12, Prime Farmlands. Finally, these areas of the Township were designated under the Agricultural future land use category after a thorough public involvement process. As was indicated, a community workshop was held to specifically address the Township's Future Land Use Map. This input was vital to the development of the Map which created a clear indication of lands to be preserved for agricultural purposes.

A common theme that was heard throughout the community process for the development of this Master Plan was the protection of the rural character of the Township. Through the preservation of farmlands, the rural character of Gaines can be protected, as well as the sense of open spaces essential to the quality of life for residents. The primary reason many of the residents of Gaines gave for living in this community is the appreciation of the natural setting and open spaces offered by the Township. The community sees a direct relationship between farming and the attractiveness of Gaines Township as a place to live.

Through the preservation of farming, the Township has the ability to direct development to those areas of the community with existing services that are more suited for this type of land use. For example, the Commercial and Suburban Residential future land use categories are planned for areas of the Township that is served by either water and/or sewer or infrastructure can be easily extended. In addition, the Future Land Use Map provides for expansion of new development to meet the needs outlined in Chapter 8, Market Assessment, while still preserving important farmlands.

Finally, land is a limited commodity and the preservation of farmland provides a valuable resource for future generations. This resource is not only related to the preservation of land but in the ability to generate future sources of farm income. The Township's base of both small and mid-sized farms provides a foundation for exploring new opportunities for added-value ventures and niche businesses. These resources can offer the residents of Gaines economic potential for their future.

Although the predominate land use within this category should be agriculture, flexibility should be exercised to accommodate other uses if properly harmonized with the surrounding environment. The Township should consider the development of a set of performance standards that demand sensitivity to rural design and impact on environmental features.

There are various techniques which have been implemented throughout the state of Michigan to assist in the protection of farmland from encroachment by development. These initiatives include land trusts, purchase of development rights, the State's farmland protection program (PA 116), and local zoning initiatives. These techniques should be considered to implement the Townships Goals and Objectives related to agricultural land preservation and will be reviewed in the Implementation Chapter of this Plan.

### Rural Residential

While this designation allows limited farming opportunities, it is intended for residential activities on parcels of five acres or greater. Single family residential development at this density will also serve as a buffer between agricultural uses and the more dense suburban residential uses. Open space developments should be considered in the Rural Residential designation to preserve the rural character while discouraging the further parcelization of road frontage.

A total of approximately 5,555 acres, or about 24 percent of the Township, is planned for rural residential.

### Suburban Residential

The Suburban Residential designation serves as a transitional area between the Township and the City of Swartz Creek. This area was chosen for the continued development of more suburban residential densities because of its proximity to Swartz Creek, the current land development pattern in the area, and the possibility of public infrastructure being developed. More dense residential development is allowed with a recommended minimum lot size of one acre. Planned residential, open space and cluster developments should be encouraged to again preserve the rural character of the Township and to prevent the parcelization along main roadways. Additionally, public, semi-public, and utility service uses, such as parks, places of worship and utility substations, may be appropriate within this category.

A total of approximately 3,510 acres, or about 16 percent of the Township, is planned for suburban residential.

### Multi-Family Residential

This land use designation is intended to provide opportunities for more affordable housing and alternatives to traditional subdivision development. Multi-family development may serve as a transitional land use; one which buffers single-family units from more intensive land uses or the impact associated with transportation corridors

Multi-family land uses include such things as stacked ranches, multi-family apartment structures, and other group living quarters, in addition to traditional attached single-family development types like townhouses, condominiums, duplexes, and manufactured, mobile, or modular homes, and other group living quarters. Additionally, public, semi-public, and utility service uses, such as parks, places of worship and utility substations, may be appropriate within this category.

The Future Land Use map locates this development type south of Baldwin Road and west of Duffield Road, just north of the Village of Gaines. A total of approximately 95 acres, representing less than one percent of the Township, is planned for multi-family residential.

### Mobile Home Park

Areas containing groups of mobile and manufactured homes, and their related service and recreational areas are designated as manufactured home parks.

A total of approximately 70 acres, representing less than one percent of the Township, is planned for mobile home park use.

### Commercial

This land use includes those areas of the Township that are intended to be occupied by retail and service related facilities that provide day-to-day convenience shopping. These commercial areas, thoughtfully designed and oriented, will accommodate the commercial needs of established residential areas within Gaines Township. This designation also provides for the logical expansion of the commercial areas located adjacent to the City of Swartz Creek, as well as providing local commercial needs at the Duffield/Grand Blanc and Morrish/Grand Blanc intersections.

A total of approximately 100 acres, representing less than one percent of the Township, are planned for commercial development.

### Mixed Use

The newly created Mixed Use future land use category is intended to reflect an area in the Township that has the opportunity to transition from predominately residential use to limited office and service use. These properties are generally located on Miller Road, between Van Vleet Rd. and the City of Swartz Creek boundary. Office uses include financial institutions, medical and professional service establishments. These uses can provide services for Township residents, as well as surrounding communities.

A total of approximately 60 acres, representing less than one percent of the Township, is planned for office use.

## Industrial

This land use category is characterized by properties with high tech uses and functions, including light-manufacturing, telecommunications, with office roles. In addition, industrial land use areas are categorized by the existence of wholly enclosed wholesale activities, warehouses, and industrial operations whose external physical effects are restricted to the site and do not have a detrimental effect on the surrounding areas. It is not the intent of this land use category to encourage manufacturing, assembling, and fabrication activities whose physical effects could potentially impact surrounding development.

The only areas planned for industrial land use are located in the northwest corner of the Township along Lansing Highway. A total of approximately 45 acres, representing less than one percent of the Township, is planned for industrial use.

## Summary

The distribution of land, as delineated in the Future Land Use Map, helps to more clearly define the development vision and goals for Gaines Township by working toward the following:

- The Future Land Use Map ensures stability and balance of land uses: residential areas, natural and agricultural areas, community facilities, and commercial and industrial land uses;
- Facilitates controlled local economic development through agricultural preservation, residential and nonresidential growth; and,
- Solidifies and protects the Township's identity as a rural, agricultural based community.

# ZONING PLAN

The Gaines Township Zoning Ordinance, No. 101-96 of the Code of Ordinances, is a regulatory tool that guides land use and development within the Township. As stipulated by the Michigan Zoning Enabling Act, Public Act 110 of 2006, the Zoning Ordinance must be based upon a Master Plan. Therefore, this Master Plan, by setting forth the long-term vision of Gaines Township, provides the basis for the Township Zoning Ordinance, which contains the rules that govern the path to that vision. As required by the Michigan Planning Enabling Act, the following is an explanation of the relationship between the future land use categories presented in this Master Plan and the zoning districts established in the Gaines Township Zoning Ordinance.

## Existing Zoning Districts

The Gaines Township Zoning Ordinance has established a total of 10 Zoning Districts as follows:

- AG-1, Prime Agricultural District
- AG-2, Agricultural Estate District
- RR, Rural Residential District
- RS, Residential Suburban District
- RM, Multiple-Family District
- MHP, Mobile Home Park District
- C-1, Office Commercial District
- C-2, Neighborhood Commercial District
- C-3, General Commercial District
- M-1, Light Manufacturing District

## Relationship Between the Future Land Use Categories and Zoning Districts

As outlined above, the Gaines Township Master Plan has established a total of eight Future Land Use Categories:

- Agricultural
- Rural Residential
- Suburban Residential
- Multi-Family Residential
- Mixed Use
- Mobile Home Park
- Commercial
- Industrial

### Agricultural

The long-term implementation of the Agricultural future land use category outline in this Master Plan will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the AG-1, Prime Agriculture and AG-2, Agriculture Estate zoning districts, as established in the Gaines Township Zoning Ordinance.

### Rural Residential

The long-term implementation of the Rural Residential future land use category will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the RR, Rural Residential zoning district, as established in the Gaines Township Zoning Ordinance.

### Suburban Residential

The long-term implementation of the Suburban Residential future land use category will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the RS, Residential Suburban zoning district, as established in the Gaines Township Zoning Ordinance.

### Multi-Family Residential

The long-term implementation of the Multiple-Family Residential future land use category will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the RM, Multiple Family zoning district.

### Mobile Home Park

The long-term implementation of the Mobile Home Park future land use category will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the MH, Mobile Home zoning district.

### Mixed Use

The newly created Mixed Use future land use category is intended to reflect an area in the Township that is transitioning from predominately residential use to limited office and service use. These properties are generally located on Miller Road, between Van Vleet Rd. and the City of Swartz Creek boundary. To ensure the long-term implementation of the Mixed Use future land use category in terms of height, area, bulk, location and use, we suggest the establishment of a mixed use zoning district. The C-1, Office Commercial district may, as an alternative to a new mixed use district, be considered as a district which could accomplish the Mixed Use future land use category.



## Commercial

The long-term implementation of the Commercial future land use category will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the C-1, Office Commercial, C-2, Neighborhood Commercial and C-3, General Commercial zoning districts.

## Industrial

The long-term implementation of the Industrial/Extractive future land use category will generally be accomplished, in terms of height, area, bulk, location and use, by the specific requirements outlined in the M-1, Light Manufacturing zoning district.

## **ZONING AMENDMENTS**

It is strongly recommended that a comprehensive audit and potential update of the Township Zoning Ordinance be conducted to better reflect the vision and recommendations of this Master Plan. In terms of zoning districts, it is recommended that a new mixed use district be established to regulate properties within the new mixed use future land use classification. A zoning audit and amendments would also need to identify changes that are necessitated by recent changes to the Zoning Enabling Act, as well as other changes to state laws.

# Implementation

## INTRODUCTION

The Gaines Township Master Plan contains many land use recommendations that function as benchmarks and provide basic guidelines for making development decisions. The completion of this Master Plan is but one part of the community planning process. Realization or implementation of the recommendations of the Plan can only be achieved over an extended period of time and only through the cooperative efforts of both the public, private and nonprofit sectors. Implementation of the Plan may be realized by actively pursuing a myriad of topics. These include, but are not limited to, the following action items:

1. Continuing public involvement processes;
2. Regulating the use and manner of development of property through up-to date and reasonable zoning controls, subdivision regulations, building and housing codes, and farmland and open space preservation practices;
3. Supporting and ensuring enforcement and administration of in-place ordinances and regulations;
4. Auditing, analyzing, revising, and adopting existing or new Township ordinances or regulations pertaining to continued development and redevelopment within the Township; and,
5. Continuing planning education activities.

## PUBLIC INVOLVEMENT PROCESSES

Citizen participation and understanding of the general planning process and policies of the Plan are critical to the success of the Township's planning program. Gaines Township developed this Master Plan through a process of continual public interaction ranging from regular Planning Commission meetings to public forums. This methodology has been successful in developing a Plan which represents the Township's hopes and its vision for the future.

In order to provide for this type of continued support, Gaines Township should develop a methodology that will continue to make its citizens aware of the planning process, and the day-to-day decision making which affects implementation of this Master Plan. Lack of citizen understanding and support could have serious implications for the eventual implementation of planning proposals.

Toward that end, Gaines Township must again emphasize the necessity of, and reasons for, instituting a planning program. Accordingly, Section 9 of the Township Planning Act (Act 168 of 1959 as amended) states that the Township Planning Commission “shall promote public understanding of and interest in the Plan, shall publish and distribute copies of the Plan and of any report, and may employ such other means of publicity and education as it determines necessary.” Due to the changes in community development programs brought on by increasingly tight municipal budgets, shifting developer attitudes, and improved citizen awareness, the Township may wish to institute a plan of action to accomplish this task. Typical actions may include:

1. The preparation of a Master Plan summary brochure for public distribution upon its adoption;
2. Periodic educational questions and answer forums specifically relating to development issues within the Township;
3. Frequent and consistent meetings that are open to the citizens, neighborhood and business organizations, private sector interest (including developers, real estate professionals, and financial lenders), non profit organizations, etc; and,
4. Coordination with regional authorities for local input.

Open, coherent, and cohesive public processes allow for effective citizen and stakeholder input and ultimately, increased public understanding and support. Thus, the various endeavors of the Township such as bond issues, special assessments, zoning decisions, and development proposals are more likely to be accepted by the public.

## **SUBDIVISION REGULATIONS**

When a developer proposes to subdivide land, he or she is, in effect, planning a portion of the Township. To assure that such a development is in harmony with Plan objectives, the subdivision or re-subdivision of residential or nonresidential land must be guided by the Township in accordance with the Land Division Act (formerly the Michigan Subdivision Control Act, Public Act 288 of 1967, as amended).

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

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

## **FARMLAND AND OPEN SPACE PRESERVATION**

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

### *Land Trusts*

A nonprofit organization that, as all or part of its mission, works with the Township to conserve land by undertaking or assisting direct land transactions-primarily the purchase or acceptance of donations of land or conservation easements.

### *Purchase of Development Rights (PDR)*

A program under which a governmental agency buys "development rights," or a conservation easement that permits it to prohibit practices, uses and development of the land in violation of the terms of the development right document. The program does not give the government agency the right to develop the land. It simply permits it to extinguish those rights in return for appropriate compensation. Land owners retain full ownership and control of their land. Section 507 of the Zoning Enabling Act (Public Act 110 of 2006) authorizes townships to establish a PDR program.

### *Conservation Easements*

A conservation easement is a voluntary agreement that allows a landowner to limit the type or amount of development on their property while retaining private ownership of the land. The easement is signed by the landowner, who is the easement donor, and the Conservancy, who is the party receiving the easement. The conservancy accepts the easement with understanding that it must enforce the terms of the easement in perpetuity. After the easement is signed, it is recorded with the County Register of Deeds and applies to all future owners of the land.

### Michigan's Farmland and Open Space Preservation Program

The Farmland and Open Space Preservation Act enables a farm owner to enter into a development rights Agreement with the State. The Agreement is designed to ensure that the land remains in an agricultural use for a minimum of 10 years and ensures that the land is not developed in a non-agricultural way. In return for maintaining the land as agricultural, the land owner may be entitled to certain income tax benefits, and the land is not subject to special assessments for sanitary sewer, water, lights or non-farm drain projects.

Farmland eligibility is governed by the size of the farm and in two instances by the income of the farm. The following are the qualification requirements to enroll land in a Farmland Development Rights Agreement. A parcel may be enrolled if one of the following items is true:

- The farm is 40 acres or more in size, and at least 51 percent of the land is in active agriculture.
- The farm is less than 40 acres in size but is at least 5 acres in size, more than 51 percent of the land is in active agriculture, and the agricultural land produces a gross annual income in excess of \$200 per tillable acre.
- The farm has been designated as a specialty farm by the Michigan Department of Agriculture, is at least 15 acres in size, and has a gross annual income in excess of \$2,000 per year.

This program consists of six methods for preserving farmland and open space:

1. Farmland Development Rights Agreements. A temporary restriction on the land between the State and a landowner, voluntarily entered into by a landowner, preserving their land for agriculture in exchange for certain tax benefits and exemptions for various special assessments (commonly known as PA 116).
2. Conservation Easement Donations. A permanent restriction on the land between the State and a landowner, voluntarily entered into by a landowner, preserving their land for either open space or agriculture.
3. Agricultural Preservation Fund: A fund established to assist local units of government in implementing a local purchase of development rights program. The following are the qualifications and criteria for farms and local units of government to qualify for this program.

Prior to applying for a grant, the local unit of government (county or township) must be qualified to be eligible to make a grant application. In order for Gaines Township to qualify the following minimum standards must be met:

- The local unit of government has adopted a Purchase of Development Rights (PDR) ordinance that is consistent with Part 362 of the Michigan Natural Resources and Environmental Protection Act (MCL 324.36201 to 324.36207), and the Michigan Zoning Enabling Act (MCL 125.3101 to 125.3702), and the policies established by the Board. The ordinance must contain all the items outlined in the Michigan Zoning Enabling Act, including:
  - √ A method to determine the value of the development rights,
  - √ An application procedure, and
  - √ A scoring system (may be assigned to local board to develop).
- The local unit of government has a comprehensive land use plan that has been adopted within the last 10 years and reviewed and/or updated within the last 5 years. [See Part 362 of the Natural Resources and Environmental Protection Act (MCL 324.36201 to 324.36207), Township Planning Act (MCL 125.321 to 125.333), and County Planning Act (MCL 125.101 to 125.115)]. The comprehensive land use plan must contain an agricultural preservation component, consisting of:
  - √ The areas intended for agricultural preservation are clearly depicted on the future land use map.
  - √ A description of how and why the preservation area was selected.
  - √ Goals for farmland preservation.
  - √ Language indicating why farmland should be preserved in the community (cost of services studies, economic benefit to the community etc.)
  - √ Text describing the strategies intended to be used in order to preserve the agricultural land, including Purchase of Development Rights (PDR) but should also include other techniques.

(The local unit of government may also be covered by a regional plan that has the agricultural preservation component described above, unless local unit of government has a PDR ordinance, then the comprehensive plan that is approved must be the plan on which the zoning ordinance based.)



- A monitoring and enforcement plan for the farmland conservation easements has been established.

This Master Plan, through the Future Land Use and Goals and Objectives Chapter, covers the requirements to establish an Agricultural Preservation Fund. However, if the Township wishes to move forward with this tool, a Purchase of Development Rights Ordinance would need to be created as well as a monitoring plan established.

4. Local Open Space Easement. A temporary restriction on the land between the local government and a landowner, voluntarily entered into by a landowner, preserving their land as open space in exchange for certain tax benefits and exemptions for various special assessments.
5. Designated Open Space Easement. A temporary restriction on specially designated lands between the State and a landowner, voluntarily entered into by a landowner, preserving their land as open space in exchange for certain tax benefits and exemptions for various special assessments.
6. Purchase of Development Rights. A permanent restriction on the land between the State and a landowner, voluntarily entered into by a landowner, preserving their land for agriculture in exchange for a cash payment for those rights.<sup>1</sup>

## ENFORCEMENT

The ultimate success of a community's zoning ordinance, subdivision regulations, or other regulations depends on effective administration and enforcement. If administrative procedures are lax, or if enforcement of regulations is handled in an inconsistent or sporadic manner, the result will be unsatisfactory at best. The Gaines Township Zoning Ordinance states that enforcement shall be the responsibility of the Building Official or his deputies. The Building Official is, therefore, responsible for carrying out zoning/development related functions, including building inspections, ordinance administration, and community/developer interactions. Each of these functions requires a substantial investment of time. If sufficient time is not made available to carry out these critical functions, they may only be accomplished in a cursory manner. Therefore, the Township should continue to assertively support its in-place review and administration procedures so that these essential day-to-day functions will receive the attention they require.

## CONTINUING PLANNING EDUCATION

Planning Commissioners should be encouraged to attend planning and zoning seminars to keep themselves informed of current planning issues and learn how to better carry out their duties. These seminars are regularly sponsored by the Michigan Association of Planning, Michigan Townships Association, and the Michigan State University Extension Service and are valuable resources to the Planning Commissions in the State.

## REVISIONS TO THE PLAN

This Master Plan should be reviewed and updated periodically. Any addition, revision, or other amendment to the Master Plan shall be adopted under the same procedure as the original Plan as outlined in the Township Planning Act, Public Act 168 of 1959.

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

### Footnotes

<sup>1</sup> *The Farmland and Open Space Preservation Program*. Michigan Department of Agriculture. State of Michigan website, accessed October 2006. [http://www.michigan.gov/mda/0,1607,7-125-1567\\_1599\\_2558-10301--,00.html](http://www.michigan.gov/mda/0,1607,7-125-1567_1599_2558-10301--,00.html)



# Mapping

**MAP 1 REGIONAL LOCATION**

**MAP 2 ADJACENT FUTURE LAND USES**

**MAP 3 ENVIRONMENTAL RESOURCES**

**MAP 4 TOPOGRAPHY AND FLOODPLAINS**

**MAP 5 SOIL CONDITIONS**

**MAP 6 EXISTING LAND USE**

**MAP 7 TRANSPORTATION NETWORK**

**MAP 8 TRANSPORTATION ANALYSIS**

**MAP 9 COMMUNITY FACILITIES**

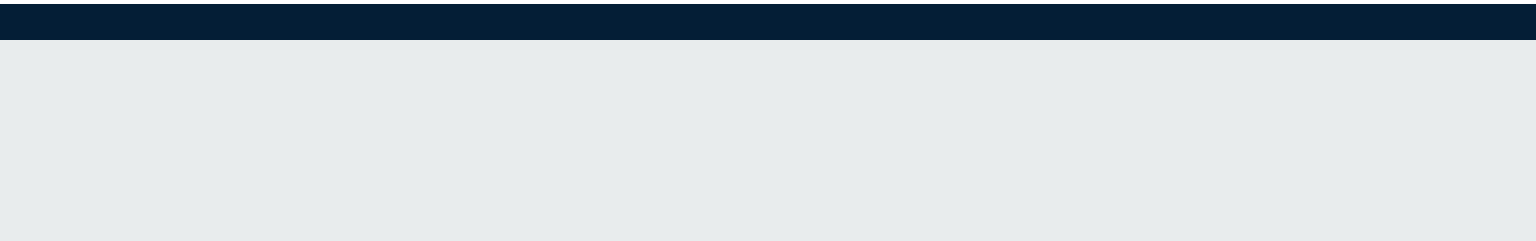
**MAP 10 EXISTING UTILITIES**

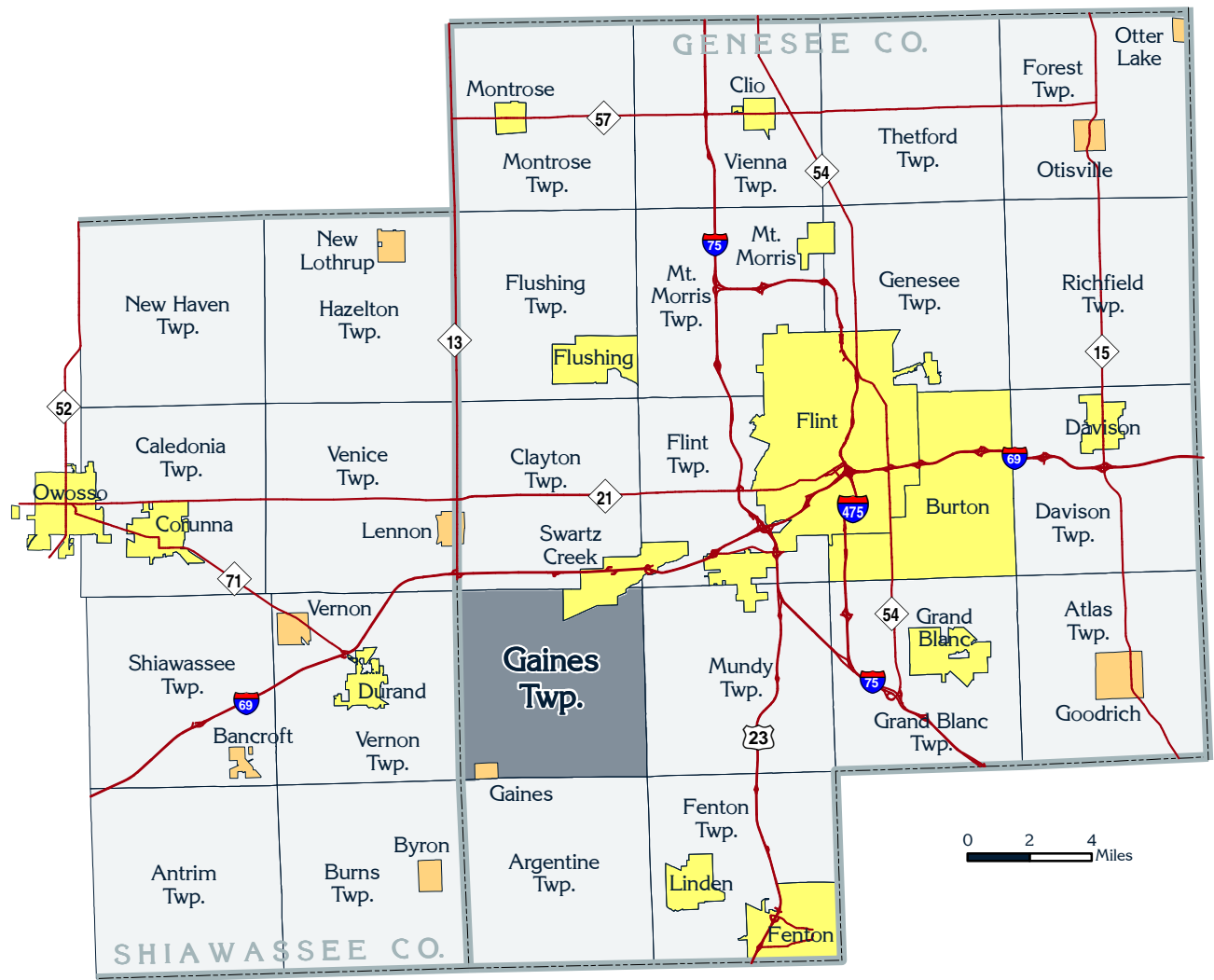
**MAP 11 PROPOSED SANITARY SEWER**

**MAP 12 PRIME FARM LAND**

**MAP 13 FUTURE LAND USE**

# Appendix





## Map 1 Regional Location

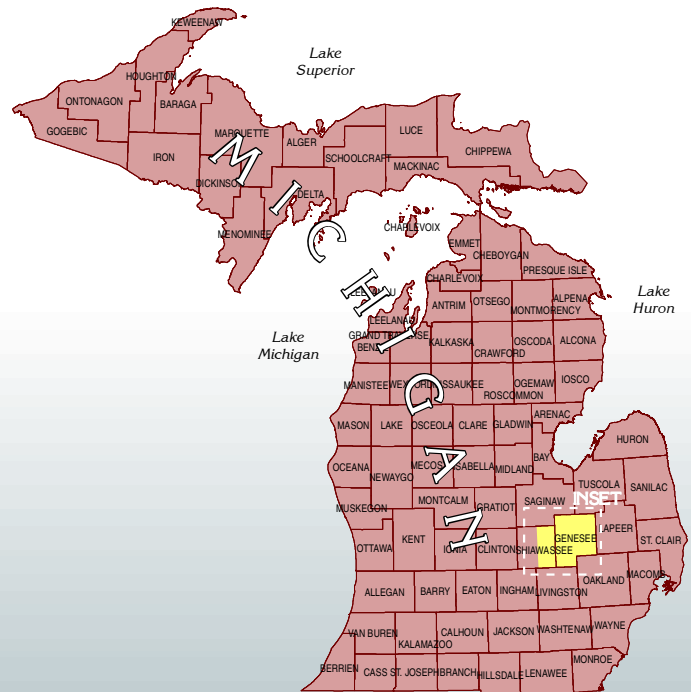
### Legend

- State or U.S. Highways
- County Boundary
- Villages
- Cities
- Townships

Source: Michigan Geographic Data Framework Base Files.

Data Obtained through Michigan Geographic Data Library.

Map Date: May 2007

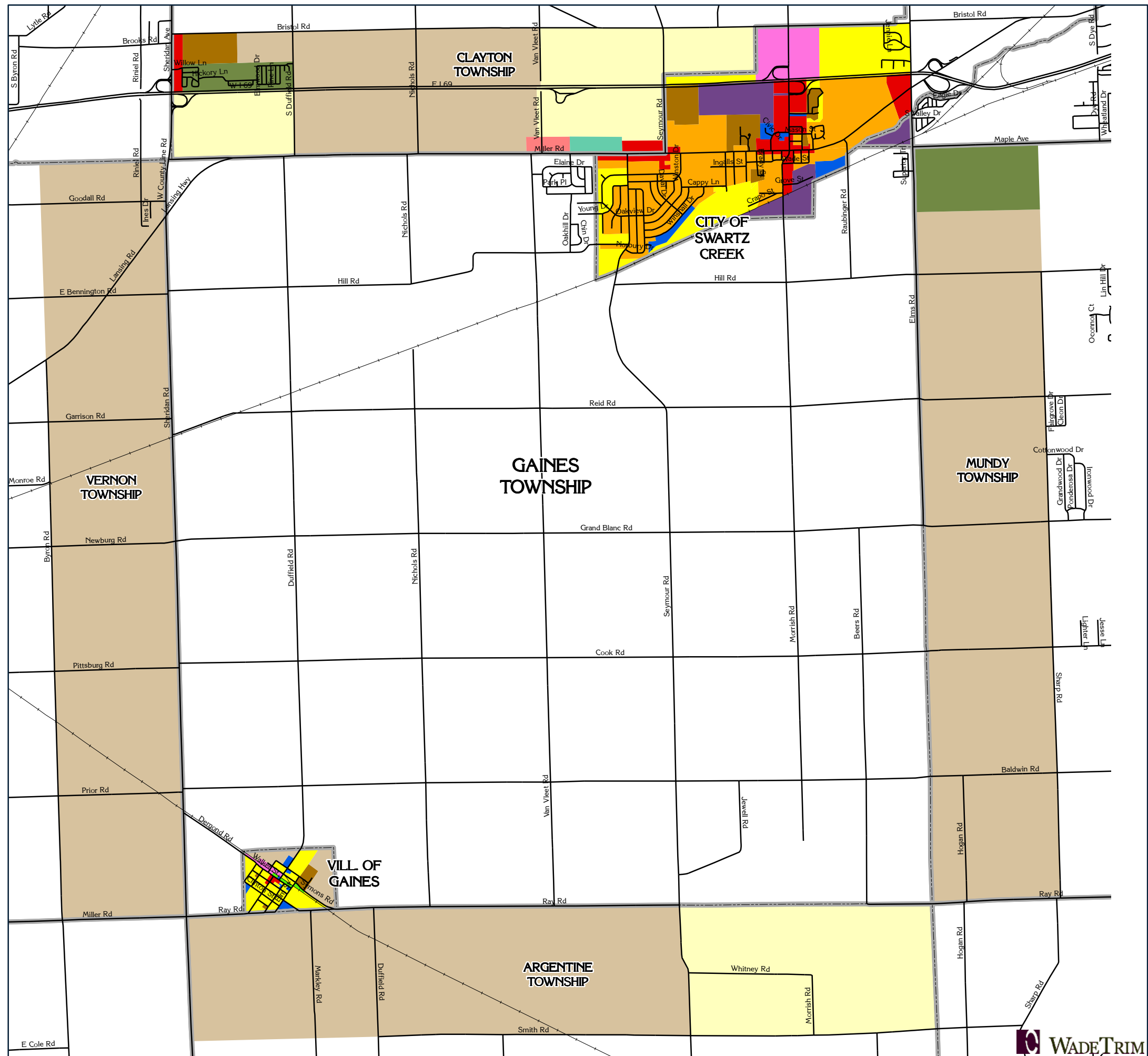


## Master Plan Update

*Gaines Township*  
Genesee County, Michigan







# Map 2 Adjacent Future Land Uses

## Legend

- Mundy Township**
  - Residential/Agricultural
  - Mobile Home Park
- Argentine Township**
  - Agricultural
  - Rural Residential
- Clayton Township**
  - Agriculture
  - Rural Estate
  - Multiple Family
  - Mobile Home Park
  - Local Commercial
  - General Commercial
  - Office
  - Industrial
- Village of Gaines**
  - Agricultural
  - Single Family Residential
  - Multi Family Residential
  - Commercial
  - Fringe Commercial/Restrictive Industrial
  - Public/Semi-Public
  - Park Land/Open Space
- City of Swartz Creek**
  - Low Density Single Family Residential
  - Medium Density Single Family Residential
  - High Density Residential
  - General Business
  - Mixed Use
  - Light Industrial
  - Public
- Vernon Township**
  - Agricultural



0 1,500 3,000 6,000  
Feet

Source: Master Plans of Adjacent Communities.  
Map Date: May 2007.




## Master Plan Update

# Gaines Township

Genesee County, Michigan

# Map 3 Environmental Resources

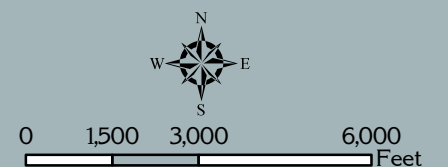
## Legend

|                      |  |
|----------------------|--|
| Woodlot              |   |
| Central Hardwood     |   |
| Lowland Hardwood     |   |
| Northern Hardwood    |   |
| Emergent Wetland     |   |
| Forested Wetland     |   |
| Scrub-Shrub Wetland  |   |
| Roads                |   |
| Railroads            |   |
| Creeks and Drains    |   |
| Water Bodies         |   |
| Parcel Lines         |   |
| Municipal Boundaries |   |
| Cities and Villages  |  |

Source: Michigan Resource Information System, 1978 Land Use Coverage, updated by 1998 Aerial Photography, National Wetlands Inventory, U.S. Fish & Wildlife Service, 1979-1994.  
Data Obtained through Michigan Geographic Data Library.

Basemap: Genesee County Equalization Department, 2005.

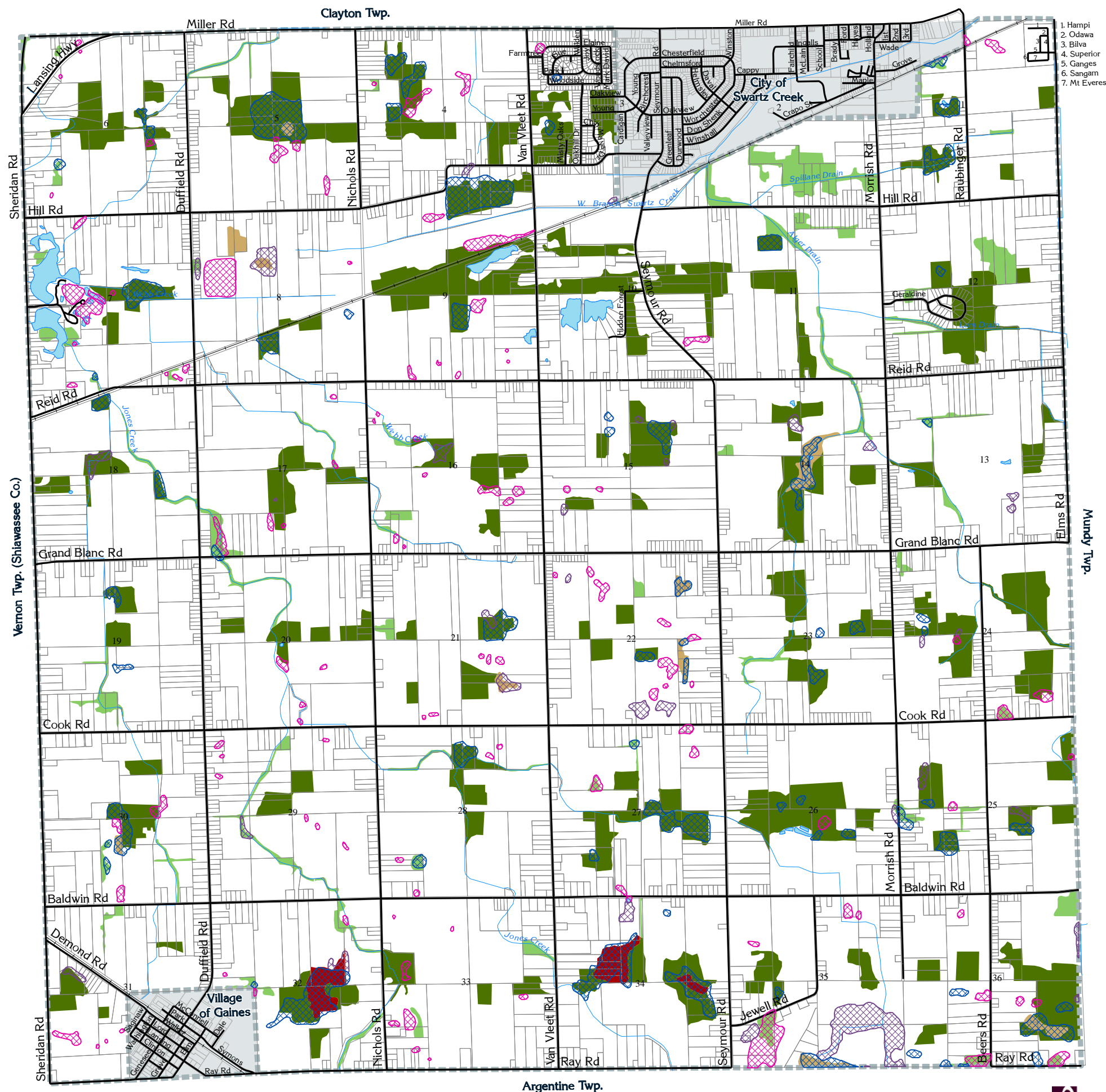
Map Date: May 2007.



## Master Plan Update

# Gaines Township

Genesee County, Michigan



WADETRIM



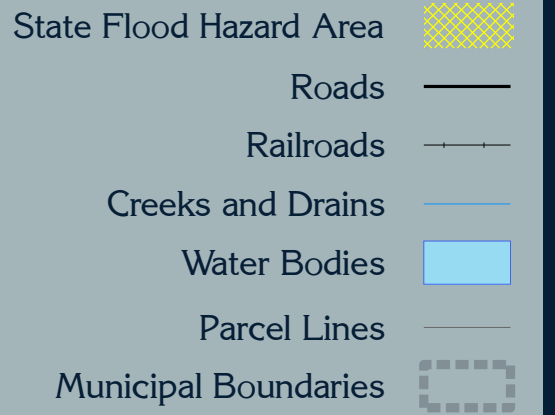
# Map 4 Topography & Floodplains

## Legend

### Elevation Model



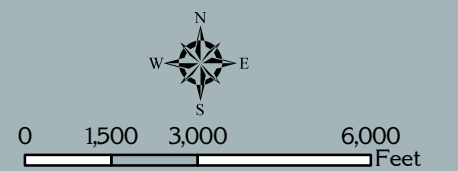
### Contour Lines



Source: Michigan Geographic Data Library (MiGDL). Flood Insurance Program, Federal Emergency Management Agency (FEMA) Mitigation Division. Data Obtained through Michigan Geographic Data Library.

Basemap: Genesee County Equalization Department, 2005.

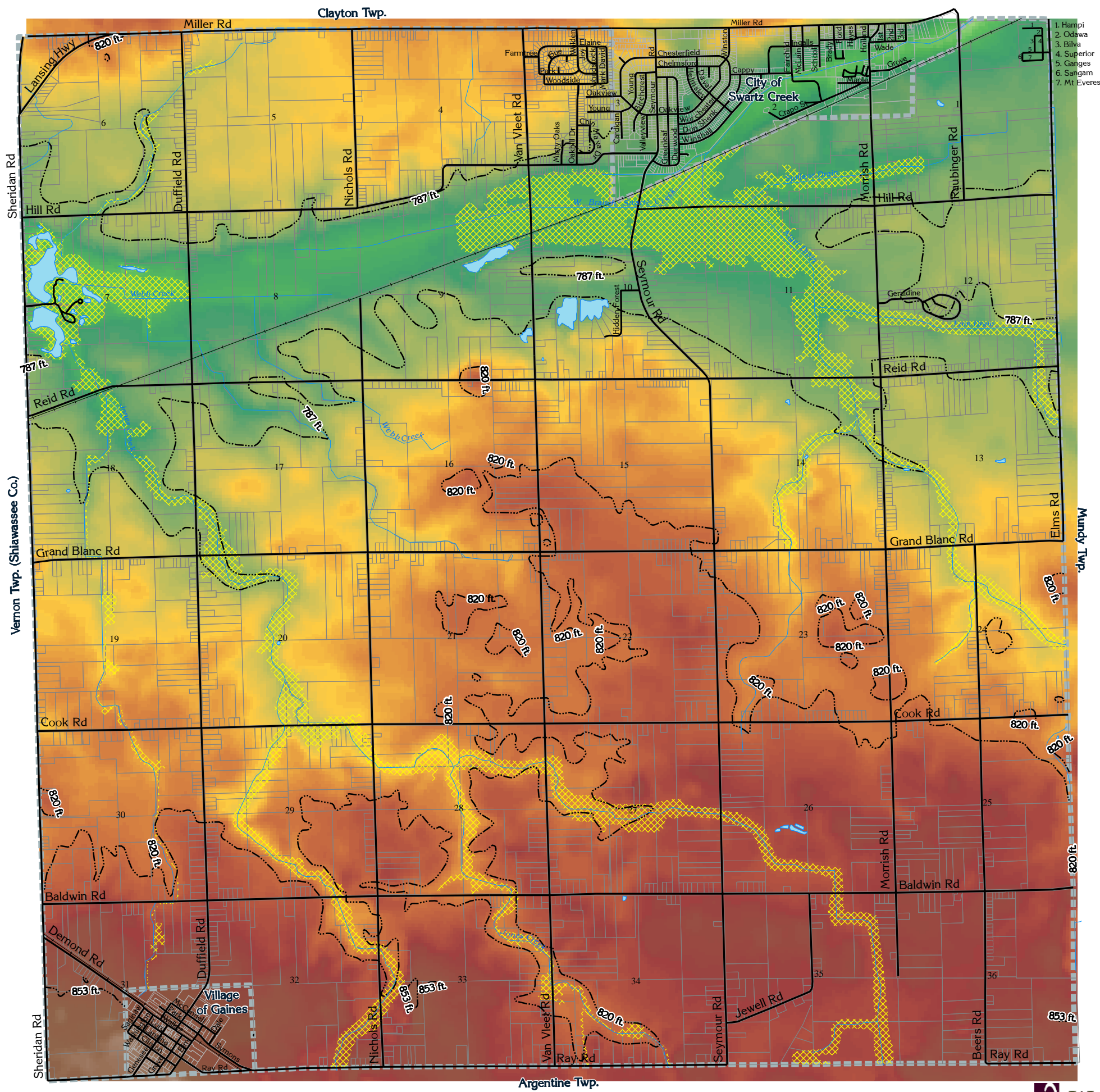
Map Date: May 2007.



## Master Plan Update

*Genesee* *Township*

Genesee County, Michigan



WADETRIM



Map 5  
Soil Conditions

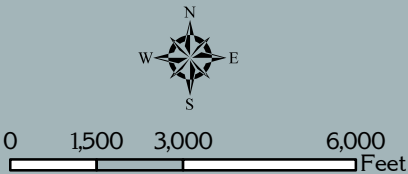
Legend

- Hydric Soils
- Non-Hydric Soils
- Hydric Data Not Recorded
- Steep Slopes (Greater than 10%)
- Roads
- Railroads
- Creeks and Drains
- Water Bodies
- Parcel Lines
- Municipal Boundaries
- Cities and Villages

Source: Natural Resources Conservation Service, U.S. Department of Agriculture. Slopes Derived from Digital Elevation Model. Data obtained from Michigan Geographic Data Library (MiGDL).

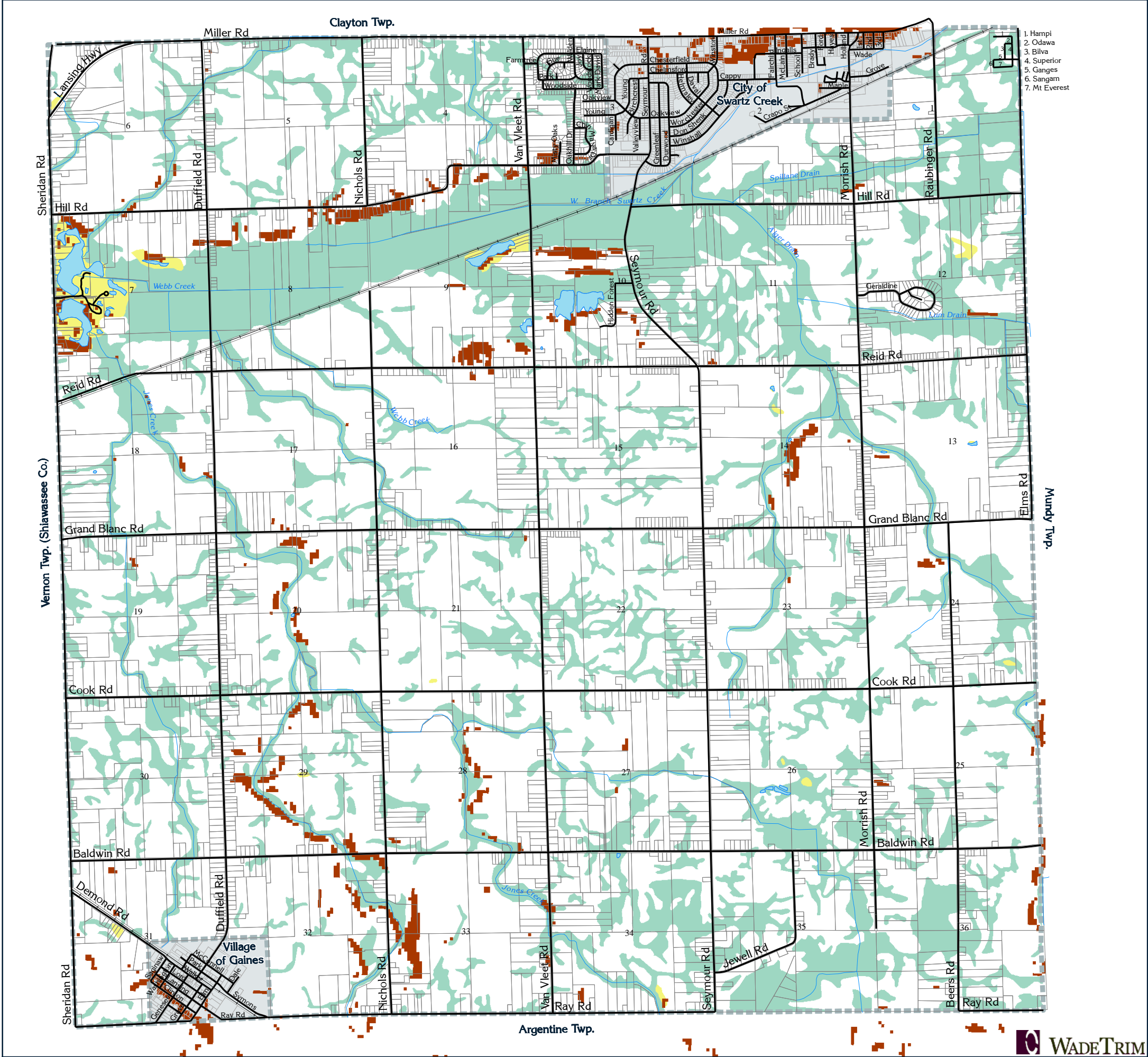
Basemap: Genesee County Equalization Department, 2005.

Map Date: May 2007.



Master Plan Update

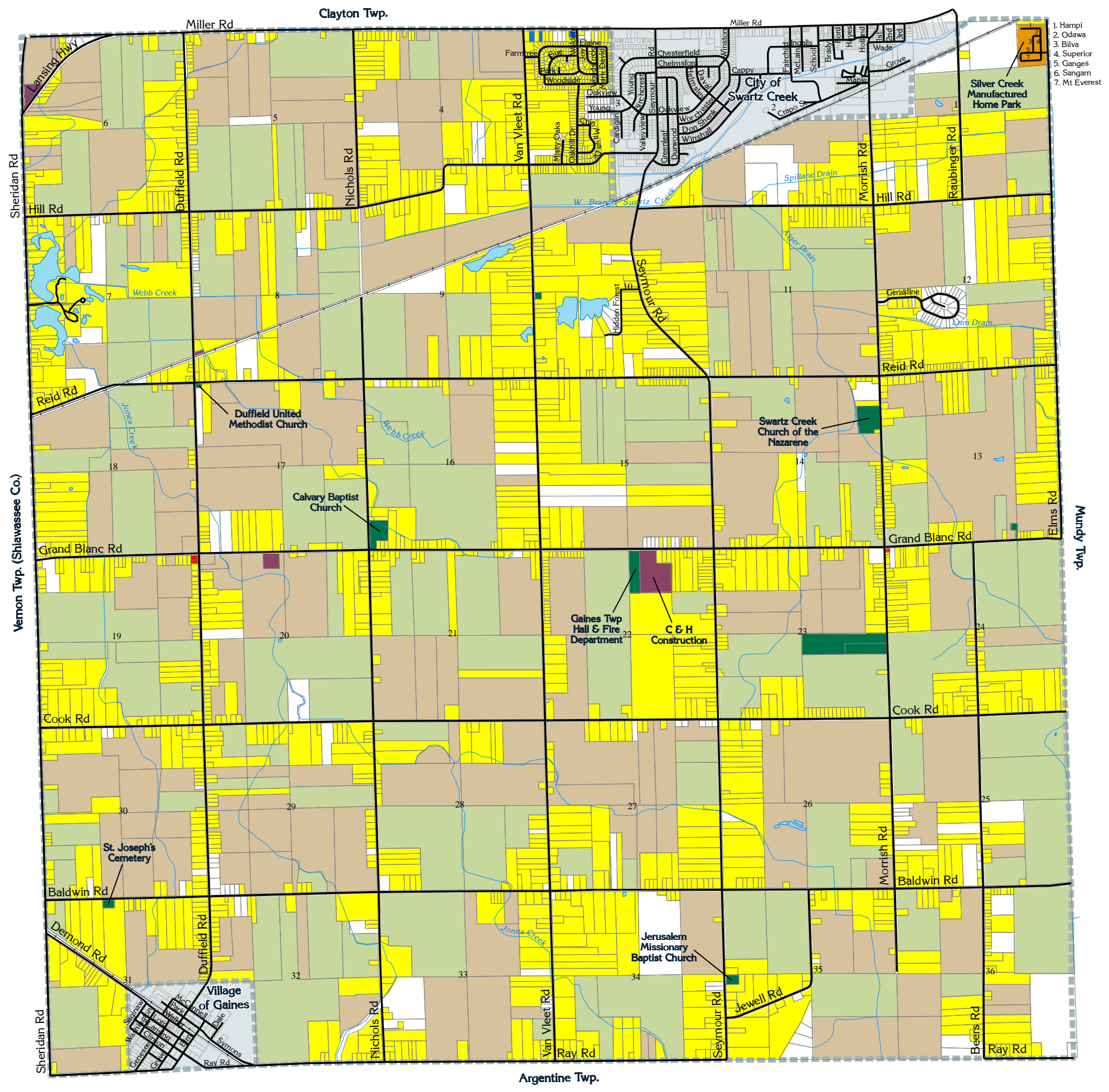
Gaines Township  
Genesee County, Michigan



# Map 6 Existing Land Use

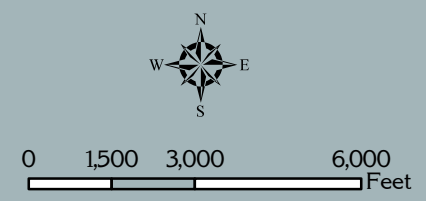
## Legend

|                             |  |
|-----------------------------|--|
| Agricultural                |  |
| Agricultural with Farmstead |  |
| Single-Family Residential   |  |
| Manufactured Home Park      |  |
| Local Commercial            |  |
| Office                      |  |
| Industrial                  |  |
| Public/Semi-Public          |  |
| Vacant/Open Space           |  |
| Roads                       |  |
| Railroads                   |  |
| Creeks and Drains           |  |
| Water Bodies                |  |
| Parcel Lines                |  |
| Municipal Boundaries        |  |
| Cities and Villages         |  |



1. Hampi
2. Odawa
3. Bilva
4. Superior
5. Ganges
6. Sangam
7. Mt Everest

Source: Wade Trim field survey of November 2005.  
 Basemap: Genesee County Equalization Department, 2005.  
 Map Date: May 2007.

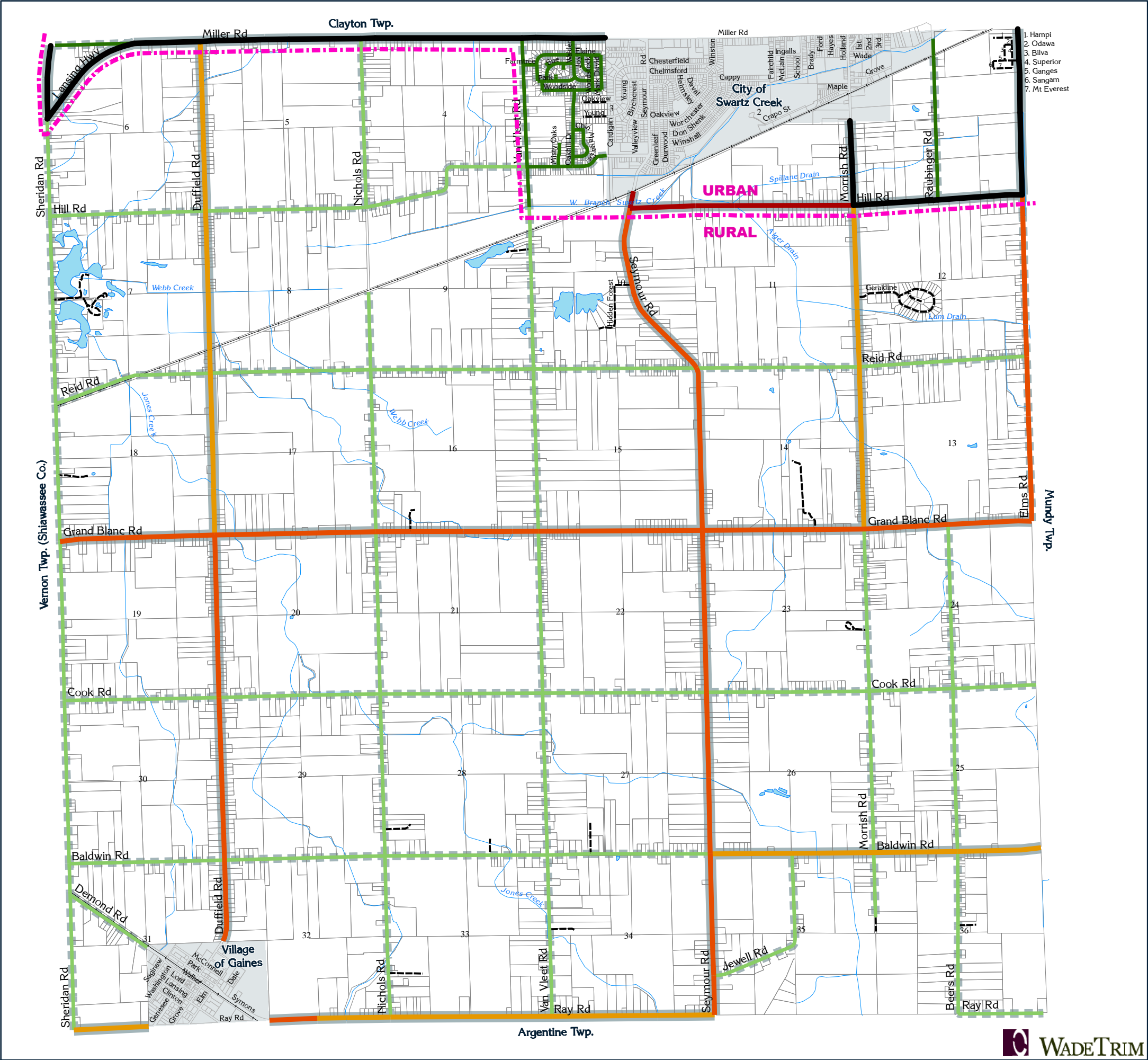


## Master Plan Update

*Gaines Township*  
 Genesee County, Michigan









# Map 8 Transportation Analysis

## Legend

### Traffic Counts 2004

- Less than 1,500
- 1,501 to 3,000
- 3,001 to 4,500
- 4,501 to 6,000
- 6,001 or Higher

### Pavement Condition

- Paved - Excellent
- Paved - Good
- Paved - Fair
- Paved - Not Rated
- Unpaved

- Railroads
- Creeks and Drains
- Water Bodies
- Parcel Lines
- Cities and Villages

Source: Traffic Counts: Genesee County Road Commission, 2004.  
Pavement Condition: Flint-Genesee County 2025 Long Range  
Transportation Plan, September 2001. Paved/Unpaved: Genesee  
County Road Map, 2000.

Basemap: Genesee County Equalization Department, 2005.

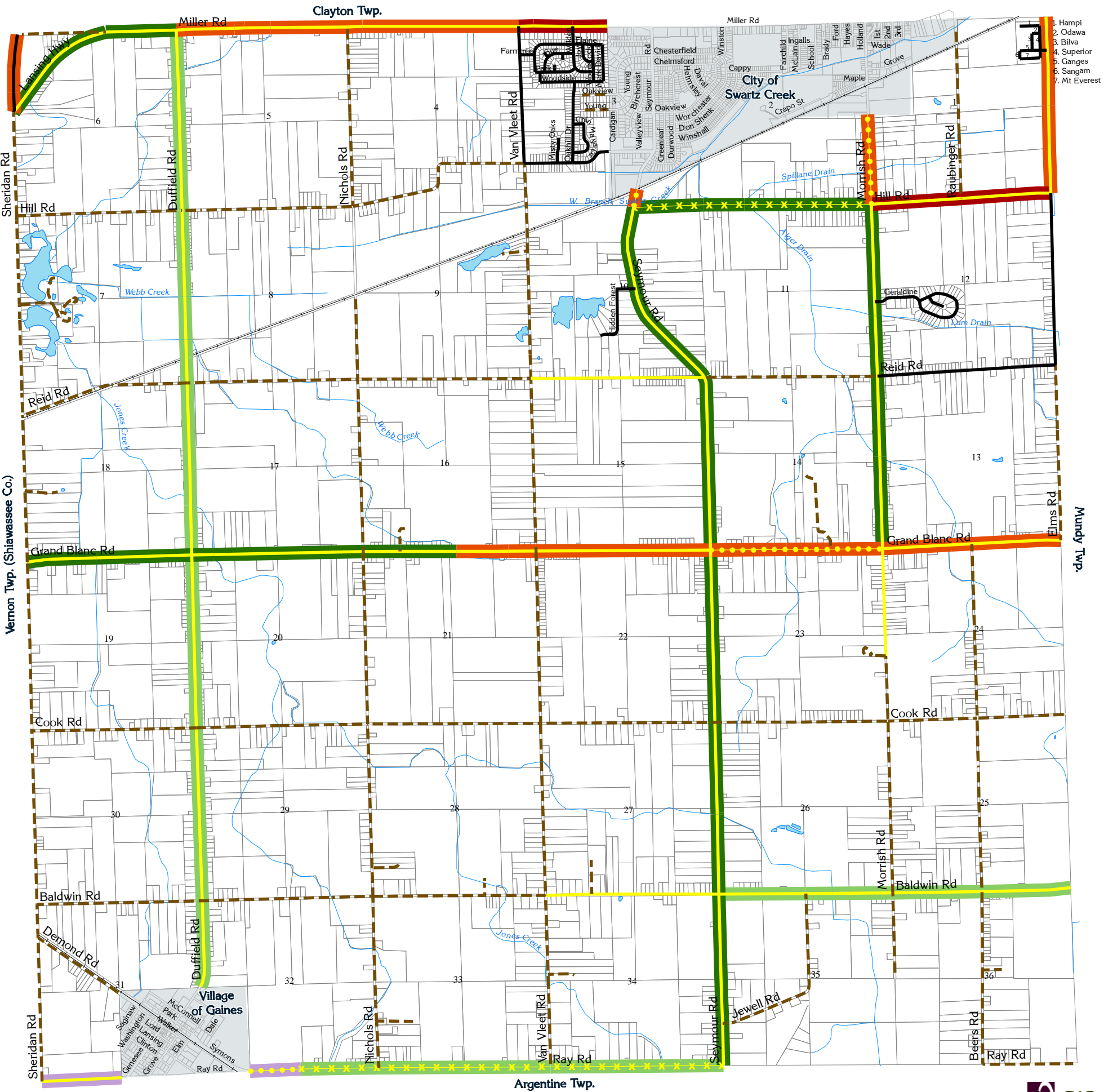
Map Date: May 2007.

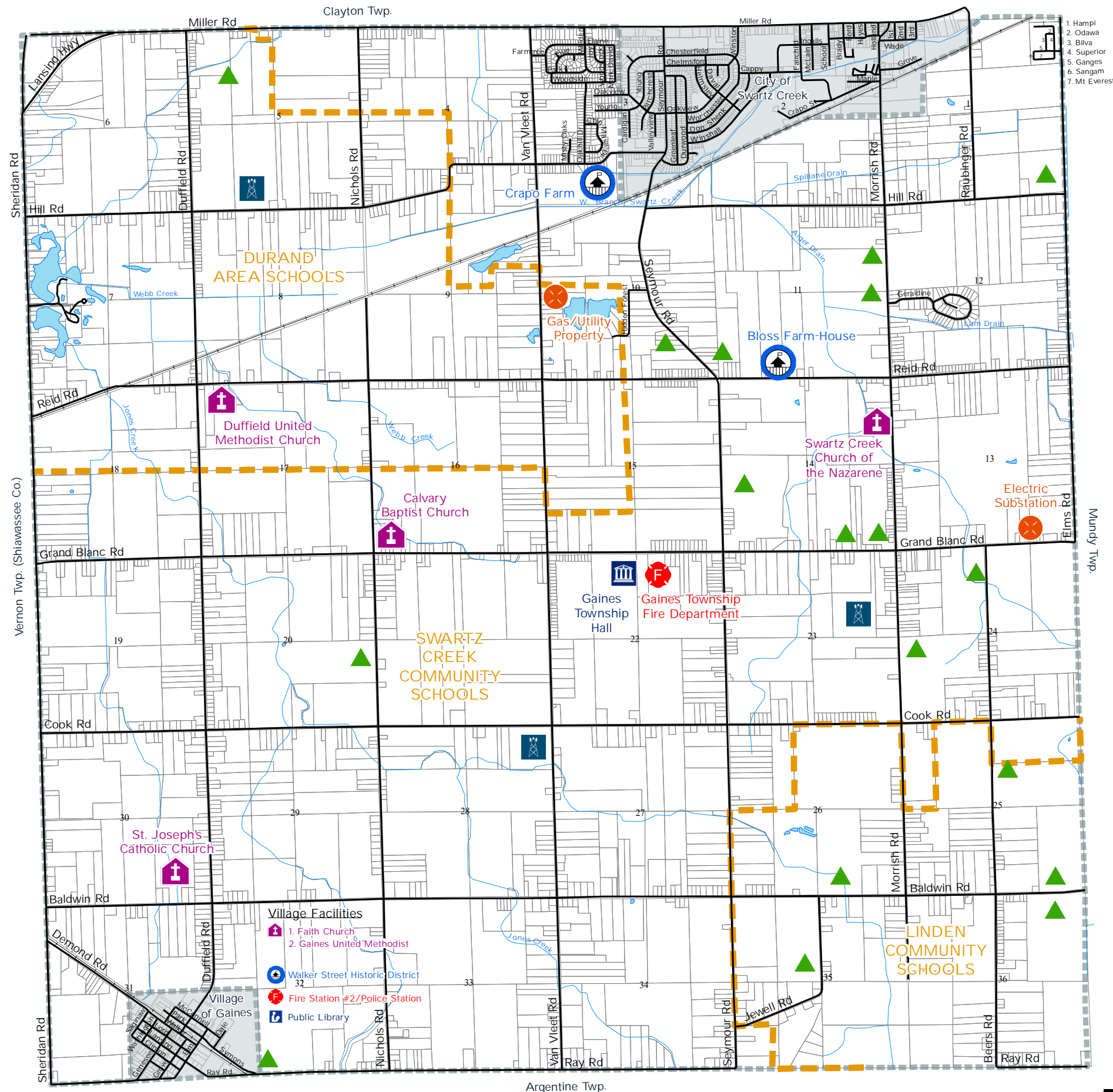


0 1,500 3,000 6,000  
Feet

## Master Plan Update

Gaines Township  
Genesee County, Michigan





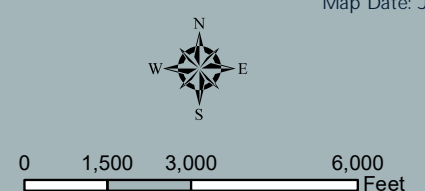
Community Facilities Source: Wade Trim field survey of November 2005, updated by Gaines Township, 2017.

Historic Sites Source: Michigan Historic Sites Online, October 2006.

Centennial Farm Source: State Historic Preservation Office, Centennial Farm List, June 1999, updated by Gaines Township, 2017.

Basemap: Genesee County Equalization Department, 2005.

Map Date: July 2017.



# Master Plan Update



Map 10  
Existing Utilities

Legend

Existing Watermain

- 6" Watermain
- 8" Watermain
- 10" Watermain
- 12" Watermain

Existing Sanitary

- Existing Forcemain
- 8" Sanitary Sewer
- 12" Sanitary Sewer
- 15" Sanitary Sewer
- 18" Sanitary Sewer

- 16" Gas Line

- Roads

- Railroads

- Creeks and Drains

- Water Bodies

- Parcel Lines

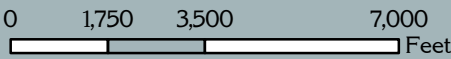
- Gaines Township

- Cities and Villages

Source: Genesee County Drain Commissioner's  
Division of Water and Waste 2005

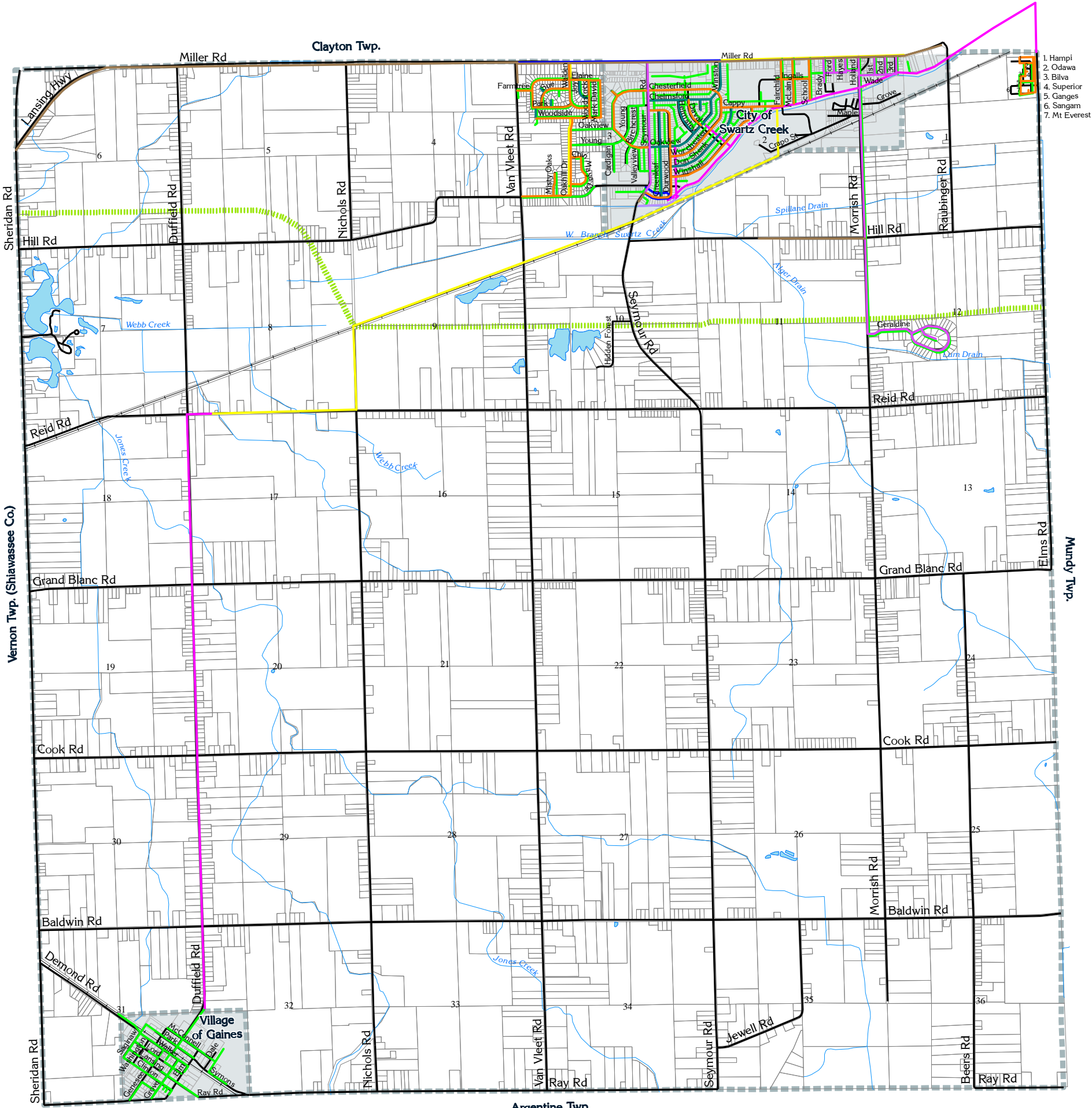
Basemap: Genesee County Equalization Department, 2005.

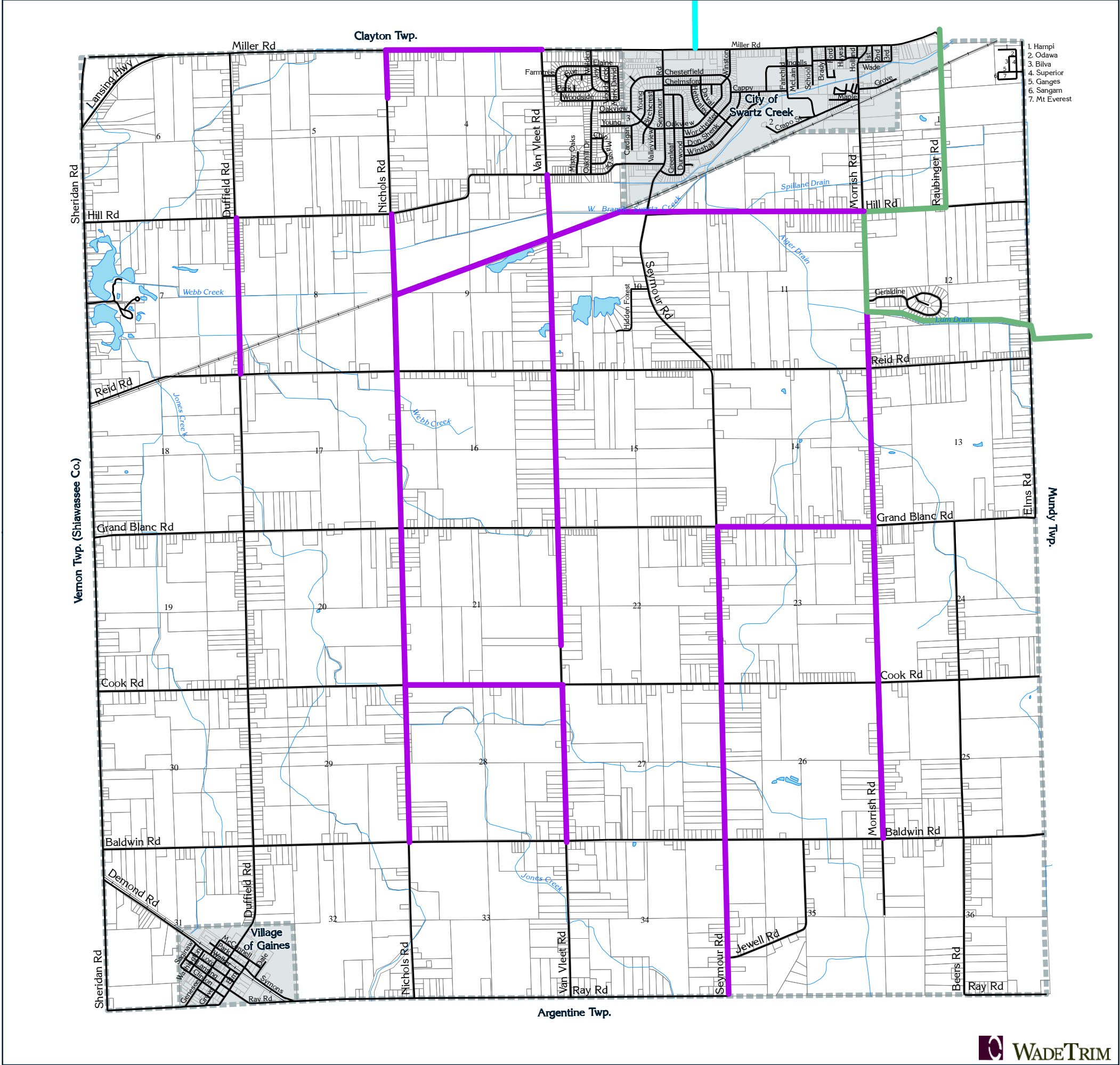
Map Date: May 2007.



Master Plan Update

Gaines Township  
Genesee County, Michigan





Map 11  
Proposed Sanitary Sewer

Legend

- WTES 21" Sanitary Sewer
- WTES 48" Sanitary Sewer
- Possible Future Sanitary Sewer Route
- Roads
- Railroads
- Creeks and Drains
- Water Bodies
- Parcel Lines
- Municipal Boundaries
- Cities and Villages

Source: Genesee County Drain Commissioner's  
Division of Water and Waste 2005

Basemap: Genesee County Equalization Department, 2005.

Map Date: May 2007.

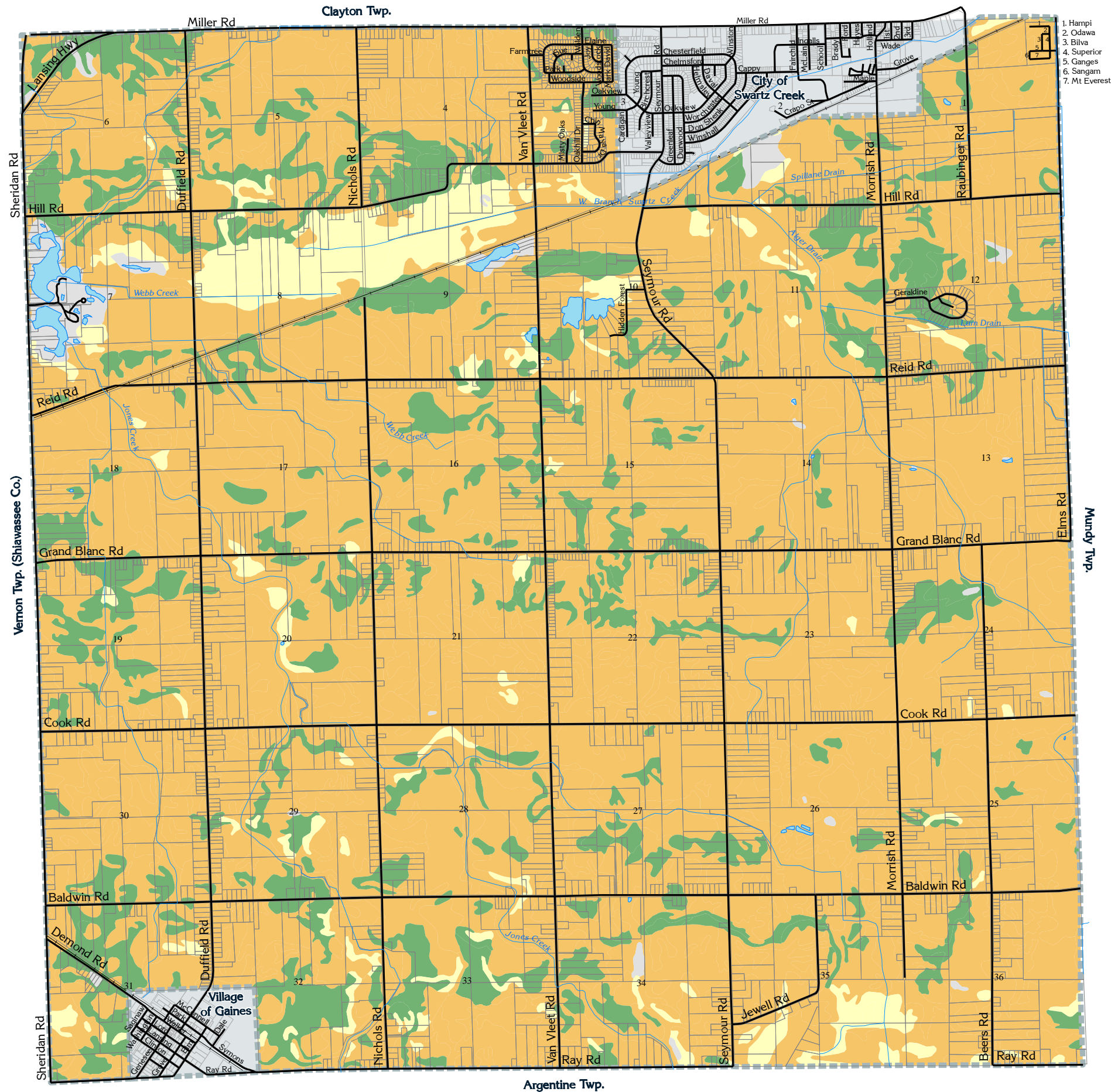


0 1,800 3,600 7,200  
Feet

Master Plan Update

Gaines Township  
Genesee County, Michigan





# Map 12 Prime Farmland

## Legend

- Roads ———
- Railroads —+—+—
- Creeks and Drains ———
- Water Bodies [Blue Box]
- Parcel Lines [Thin Gray Line]
- Municipal Boundaries [Dashed Gray Line]
- Cities and Villages [White Box]

## Farmland

- All Areas are Prime Farmland [Green Box]
- Farmland of Local Importance [Yellow Box]
- Not Prime Farmland [Light Gray Box]
- Prime Farmland If Drained [Orange Box]

Source: Natural Resources Conservation Service, U.S. Department of Agriculture.

Basemap: Genesee County Equalization Department, 2005.

Map Date: May 2007.

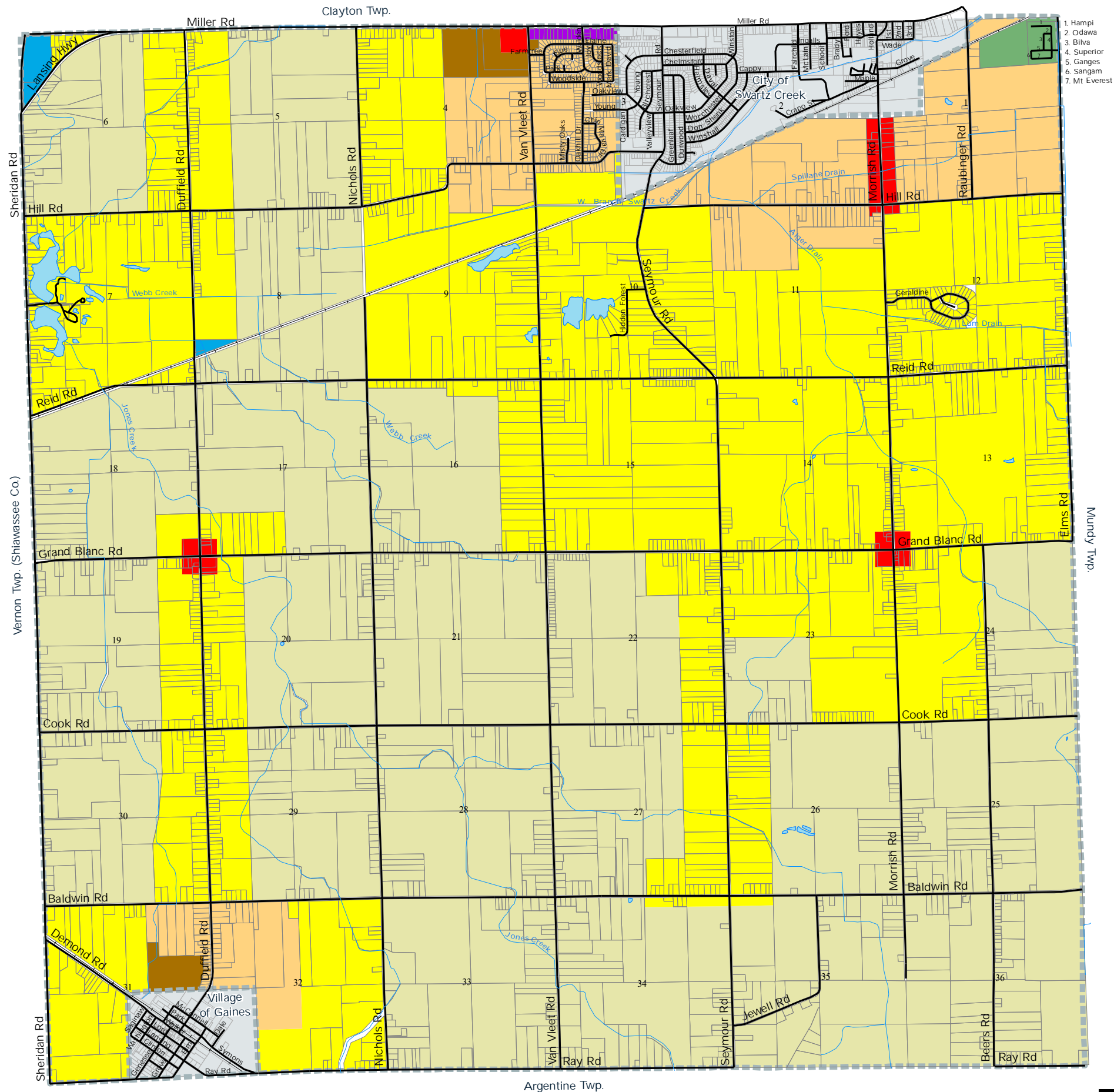


0 1,500 3,000 6,000 Feet

## Master Plan Update

# Gaines Township

Genesee County, Michigan



# Map 13 Future Land Use

## Legend

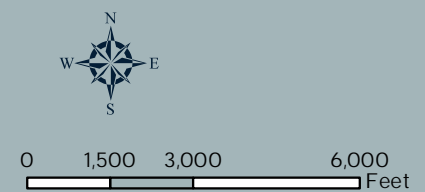
- Roads ———
- Railroads —+—+—
- Creeks and Drains ———
- Water Bodies
- Parcel Lines ———
- Municipal Boundaries
- Cities and Villages

## Future Land Use Designation

- Agricultural
- Rural Residential
- Suburban Residential
- Multi-Family Residential
- Mixed Use
- Mobile Home Park
- Commercial
- Industrial

Basemap: Genesee County Equalization Department, 2005.

Adopted March 7, 2018



## Master Plan Update

*Gaines Township*  
Genesee County, Michigan







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Detroit, MI 48226  
[www.wadetrim.com](http://www.wadetrim.com)

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Nebraska  
New York  
North Carolina  
Ohio  
Pennsylvania  
Texas