

Brighton Township

Master Plan

Adopted May 19, 2014





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APPENDIX A: Demographics

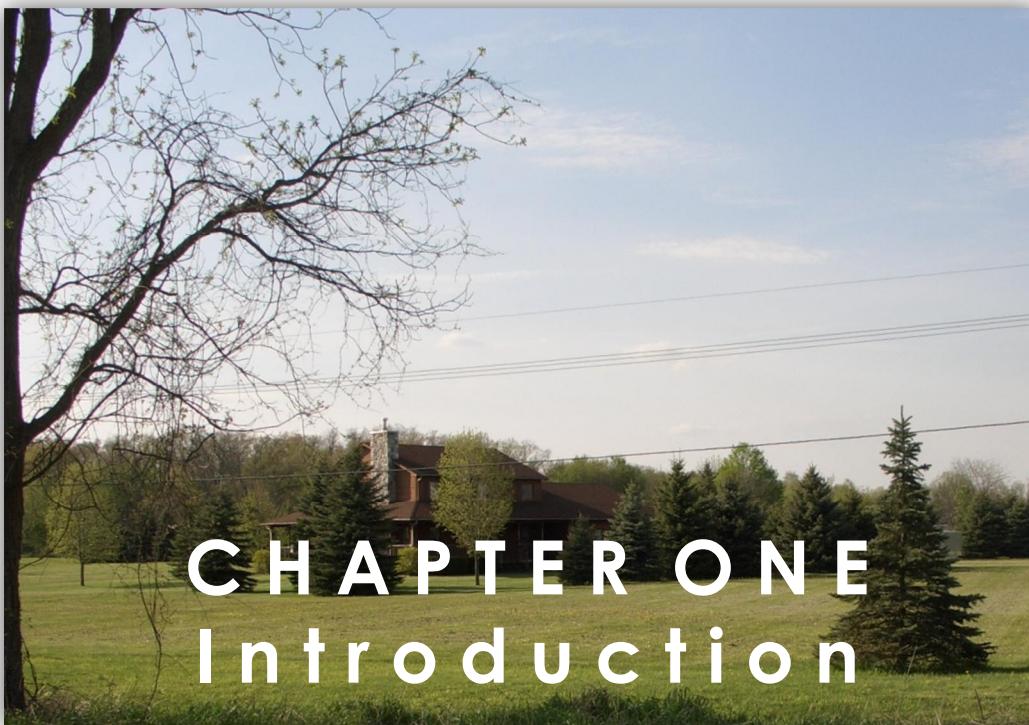
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What is a Master Plan?

The Master Plan is a document created by the Planning Commission to guide the future growth and development of the community. A sound Master Plan helps ensure that the Charter Township of Brighton, to be herein referred to as Brighton Township or Township, remains a highly desirable community in which to live, work, and visit. This can be accomplished by preserving and enhancing the qualities of the community that the residents, businesses, and property owners consider important. The Master Plan is intended to:

- Present a future land use map that illustrates how the Township should develop over time.
- Provide a legal basis for zoning and other regulations for the type, intensity, and timing of development.
- Ensure that as development occurs, the most significant natural features are preserved or enhanced.
- Recommend improvements to the transportation system including roadways that need upgrading, traffic management tools to preserve roadway capacity, access management standards, and non-motorized options.

- Balance the desires and needs of the residents, businesses, and property owners to preserve and enhance the community and its natural aesthetics.
- Provide a pattern for land use which will provide a community with a diversified tax base to support the desired facilities and services with reasonable tax rates.
- Provide specific design standards for development and redevelopment throughout the community.
- Coordinate land use recommendations with anticipated land use changes, infrastructure improvements and surrounding communities.

The Master Plan identifies and examines a wide range of physical issues including population, housing, land use, transportation, natural features, and community facilities and services. The implications of each are analyzed and translated into a series of goals and policies for the Township. This effort culminates in the creation of a Master Plan, which provides recommendations and implementation strategies for land use, transportation, natural features, and community facilities and services. Because the Plan offers a balance between the interest and rights of private property owners with what is best for the future of Brighton Township, this Plan should effectively assist Township leaders in making substantive, thoughtful decisions for the community.

The Township Board, Planning Commission, and the public should continuously strive to ensure effective use of this document and should reference the Master Plan in order to:

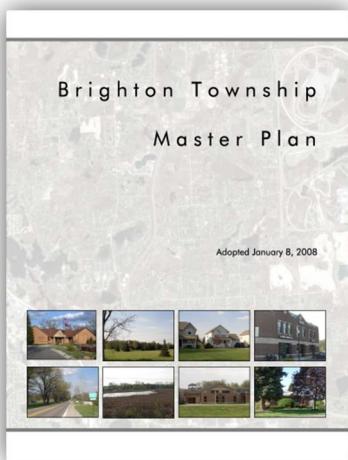
- Understand expectations for the future land use pattern and desired land use types in the community to guide new development and redevelopment.
- Identify and recommend physical improvements to important resources such as roadways, access management, streetscape and entryways, non-motorized pathways, parks, and public facilities.
- Review development proposals – to confirm the proposal meets the goals and objectives of the Master Plan.
- Review rezoning requests – to confirm the request is consistent with the Township's criteria to consider rezonings including existing conditions, the future land use map, the appropriate timing of the change, consistency with the goals and policies of the Master Plan, and potential impacts on the Township.
- Provide a basis for amendments to the Zoning Ordinance and Zoning Map - to help realize Plan goals.

Differences between the Master Plan and Zoning Ordinance

The Master Plan provides general direction on the Township's future development pattern. The plan also provides policies and actions for community leaders to consider. Some of the Master Plan recommendations will be implemented through amendments to the Zoning Ordinance text and map. However, the Master Plan itself does not change the Zoning Ordinance or zoning of any property. Some of the differences between the Master Plan and the Zoning Ordinance are described in Table One.

TABLE ONE	
Master Plan vs. Zoning Ordinance	
Master Plan	Zoning Ordinance
Provides general policies, a guide	Provides specific regulations, the law
Describes what should happen over the next 10-20 years, not necessarily the recommended use for today, with updates required every 5 years	Describes what is and what is not allowed today
Adopted under the Michigan Planning Enabling Act (Public Act 33 of 2008, as amended)	Adopted under the Michigan Zoning Enabling Act (Public Act 110 of 2006, as amended)
Flexible to respond to changing conditions	Fairly rigid, requires formal amendment to change
Source: LSL Planning	

History of Planning in Brighton Township



Brighton Township prepared its first Future Land Use Plan in 1970 and its first Comprehensive (Master) Plan in 1980. A new Master Plan for the entire Township was completed in 1991 and again in 2002 and 2008. This update was developed in accordance with State law, and consisted primarily of a review of past goals and recommendations to ensure they are consistent with current conditions and trends. Since adoption of the 2008 Master Plan update, the following additional plans and studies have been conducted that provided additional input to the goals and recommendations in the Master Plan:

Corridor Plan

In 1998, a Corridor Plan for Old US-23 was completed, which specifies land use patterns, design guidelines, environmental protection and enhancement, and transportation designs and improvements. The Township was involved in the development of an East Grand River Corridor Plan in 2005, in partnership with Green Oak Township.

Pathways Plan

The Township completed its first Pathways Plan in late 2006 to set forth a specific vision for pathway development in the Township and to help foster pathway implementation. The Plan was updated in November of 2009 to refine the scope of the Plan.

Accomplishments

The Township has implemented many past recommendations.

Accomplishments relevant to the Township's goals include:

- Pathway Plan Update (2009)
- SELCRA Regional Recreation Plan Update
- Establishment of the Grand River Corridor Committee
- Adoption of Access Management Ordinance
- Adoption of Natural Features Ordinance
- Adoption of PUD Ordinance
- Adoption of Bike Path and Sidewalk Ordinance
- Adoption of Conditional Zoning Ordinance

Format of the Plan

This Master Plan includes analysis of the following major topics:

- Land Use
- Transportation
- Natural Features
- Community Facilities and Services

Each topic is discussed in individual chapters that begin with an introduction, a discussion of the existing conditions, followed by a summary of key determining factors that influenced the vision and proposed policies for those areas. These include factors determined through the public involvement process and generally accepted planning practice. Each chapter then provides broad goal statements that the Township hopes to achieve in the next ten to twenty years. The Master Plan is not useful if it does not provide the proper tools and methodology for implementation. Therefore, each chapter outlines specific recommendations and tools for implementation to assist the Township in achieving its desired goals. The implementation tables guide local regulators and policy makers toward specific actions that should be taken. They are categorized and prioritized to indicate which actions should be taken in the short-term, which are appropriate for long-term planning, and those that should be continuously pursued.

FORMAT OF CHAPTERS

- ONE: Introduction
- TWO: Existing Conditions
- THREE: Determining Factors
- FOUR: Goals and Recommendations
- FIVE: Implementation Strategies



Introduction

Land uses can impact physical environments, visual impressions and transportation systems. They can also help shape the character of a community by influencing the location and density of various uses throughout the Township. Considerations in this Chapter are, in some ways, influenced by demographic changes, which are more thoroughly described in Appendix A. While some parts of the Township are experiencing more urban development pressures, the Township strives to maintain rural aesthetic in other portions of the Township. The land use plan is a vital component of the Brighton Township Master Plan because it provides a basis for positively influencing the future of the Township.

Existing Land Use

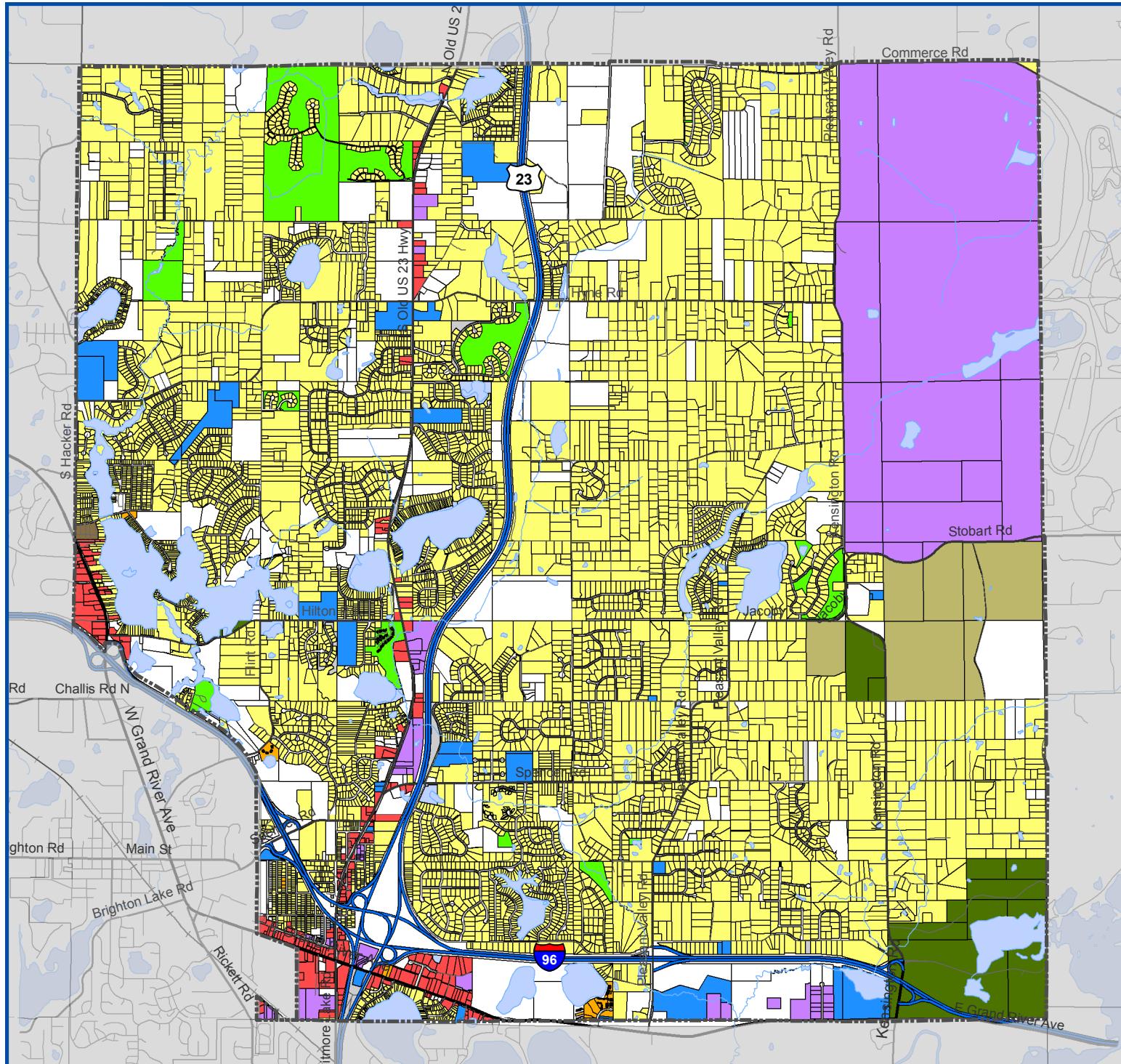
It is essential to examine the current land uses within the Township as part of the Master Plan process. An up-to-date inventory of existing uses, areas under development, and areas already approved for future development is crucial in understanding the character of the Township. Map One depicts the existing land uses within Brighton Township, and Table Two gives the supporting data, compared to the previous land use inventory. Land use inventories conducted by the Southeast Michigan Council of Governments (SEMCOG) were reviewed and considered, but due to differences in methodology and data reporting, this Plan reflects

the physical survey data described above. This update also includes land use categories which have been revised from the previous plan categories. An explanation of each use follows.

TABLE TWO
Existing Land Use Acreage

Land Use	2001	2007	2013
Single Family Residential	12,412 56.68%	11,367 51.90%	11,721 47.06%
Multiple Family Residential	28 0.13%	36 0.16%	31 0.13%
Manufactured Housing	9 0.04%	9 0.04%	9 0.04%
Commercial/Office	290 1.32%	314 1.43%	319 1.28%
Industrial	2,800 12.79%	2,613 11.93%	2,610 10.48%
Institutional	295 1.35%	421 1.92%	420 1.68%
Gravel Pits	761 3.47%	689 3.15%	548 2.20%
Public Recreation	541 2.47%	467 2.13%	561 2.25%
Private Recreation	31 0.14%	587 2.68%	511 2.05%
Water	1,119 5.11%	1,119 5.11%	1,119 4.49%
Total Vacant	Right-of-way 3,614 16.50%	1,576 7.20%	104 0.42%
	Undeveloped	2,702 12.34%	2,654 10.56%
Wetlands	2,283 10.42%	4,300 19.63%	4,300 17.26%

Sources: SEMCOG, 2002, 2008 and 2013 Brighton Township Master Plan; and LSL Planning, Inc.



Map One

Existing Land Use

Brighton Township Master Plan

	Single Family Residential		Public Recreation
	Multiple Family Residential		Private Recreation
	Manufactured Housing		Gravel Pits
	Commercial		Undeveloped
	Industrial		Right-of-Way
	Institutional		Water

ADOPTED: May 19, 2014

Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



0 0.5 1 1.5 2 Miles

Single Family Residential

Occupying over half of the land in Brighton Township, single family residential uses continue to be the most prevalent. Much of the housing stock is relatively new, with 77% of single-family homes built since 1970. Rapid development has since occurred, particularly during the mid-1980s. With such a large amount of newer housing, the Township is not yet dealing with a large number of deteriorating front building elevations and outdated and underutilized homes. These issues may arise however, as the housing stock ages.



Many newer neighborhoods in Brighton Township were developed with a cluster design approach with curvilinear road patterns, which often result in cul-de-sacs and some disconnected streets rather than the more traditional, grid-like street pattern. This subdivision design is the predominant neighborhood pattern within the Township. There are a few exceptions, where a grid street pattern was used and rectangular blocks formed. Most of these neighborhoods are located on the south side of I-96 or closer to the City of Brighton.

Since most of the Township remains pastoral in character, there are a number of large lot country estates and country residential homes that occupy many acres on tree lined gravel roads. The single-family residential category includes all of the land associated with a home, including considerable land associated with estate sized lots. These areas of the Township are generally low-density and represent much of the residential growth experienced since the 1970s.

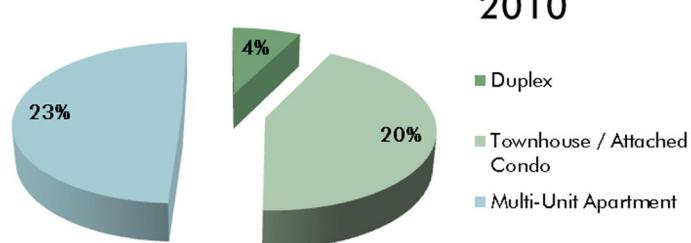
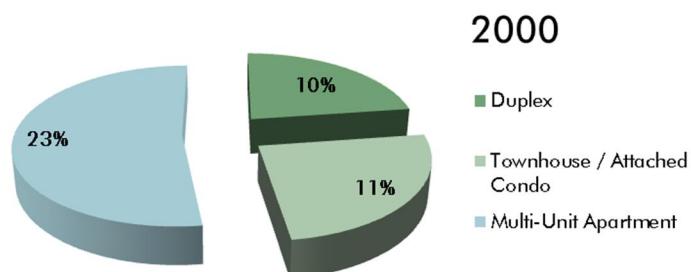
Another notable neighborhood pattern exists around most of the Township's many lakes. Located in highly-desired areas, the homes surrounding lakes were typically small and built on narrow lots. This pattern may result in overuse of the land, as many of the older lakefront homes are undergoing upgrading and/or being removed and replaced with larger housing units.

Other areas of the Township are in transition. In particular, an older manufactured housing community exists on the east side of Woodland Lake, located off of Hacker Road that is slowly evolving into a community of stick-built rather than manufactured homes. This neighborhood should not be confused with the other manufactured housing community in the area, located directly on Hacker, which still remains. Redevelopment of this nature is an indication that there is a strong demand and desire for single-family homes in Brighton Township.

Multiple Family Residential

Multiple family residential includes buildings that house more than one family, and includes apartment complexes, duplexes, attached condominiums, and senior facilities. These housing types account for less than 1% of the land area, and represents only a small fraction (0.25%) of all residential land within Brighton Township. There are a handful of apartment complexes in Brighton Township, most of which are located along Grand River or surrounding Woodruff Lake. Multiple family residential units are found in greater numbers within the City of Brighton.

The mix of multiple-family residential units is shifting, with additional development in the form of attached housing, which is attracting additional duplex and senior housing types. Attached condominiums offer owner-occupied housing for those



Source: SEMCOG

who prefer less home maintenance than those with detached housing. Attached units are generally attractive to younger families or aging residents that look to them for their affordability and low maintenance responsibilities.

Manufactured Housing

The Township has one mobile home neighborhood near its western edge, off of Hacker at Grand River. The area is located between Grand River Avenue and Woodland Lake, and provides a transition between the more commercial uses along Grand River and the predominantly single-family residential uses surrounding the lake.

Commercial/Office

Almost all of the Township's commercial and office development is located on the Grand River or Old US-23 corridors. These uses are particularly focused around the I-96 intersections, with a smaller node of commercial located near Old US-23 and Hyne Road. Commercial and office uses make up only a small percentage (1.4%) of the Township's total land area. The commercial/office uses on Grand River are generally larger scale developments than those on Old US-23, especially approaching the City of Brighton. The Grand River corridor is predominately built-out, whereas development opportunities still exist along the Old US-23 corridor.

Industrial

Industrial uses make up just over 12% of the total land use in Brighton Township. The majority of these uses are classified as light industrial which do not have the same impact on surrounding uses as traditional smoke stack, heavy industrial uses. Businesses in this category typically include warehousing and small workshops and often have the look and feel of an office complex. They serve the community as employment generators and as a source of production of a variety of products and services that benefit the region.

The General Motors Proving Grounds occupy a large portion (over 10%) of Brighton Township. This land is used for the testing of automobiles and is completely segregated from all neighboring uses by a screening fence that surrounds the 2,400+ acre site. The site remains primarily open in nature, and abuts single-family residential uses to the west and gravel pits to the south. For purposes of this Plan, this site was classified as an industrial use and has little negative impact on the surrounding area.

Institutional

All public and semi-public buildings that are used by the general public or a defined group of persons in the community are considered institutional uses. Examples of institutional uses include public and private schools, libraries, post offices, cemeteries, churches, hospitals, and private clubs.

Schools for both the Hartland and Brighton School Districts, Brighton Township Hall, a State Police station, and two fire stations are located within the Township. A number of churches and small cemeteries are scattered throughout the community. The Township also is home to the Brighton Airport, located south of Hyne Road, west of Hunter Road.



Private Recreation

This category includes privately owned outdoor land that is available to the general public or a defined group of persons in the community for recreational uses. Privately owned golf courses, campgrounds, and subdivision parks are included in this category. Brighton Township currently contains three private recreational facilities: the Livingston County Gun Club, the Huntmore Golf Course, and property owned by the Livingston Conservation & Sports Association (originally the Livingston Archers).

Public Recreation

This category includes publicly owned outdoor land that is available to the general public for recreational uses. Examples of public recreational uses include all Federal, State, County or locally owned parks and outdoor facilities. The main public recreation land found within the Township is at Kensington Metropark. The Township has plans to develop its first active park on Township-owned land located on Kensington Road between Buno and Jacoby Roads. While not yet planned as such, other township-owned property could be used as parks in the future.

Gravel Pits

Roughly 689 acres, or just over 3% of the land in the Township, is comprised of gravel pits. These uses include the extraction of sands, gravel, clay and rock. Some of these sites, located on the eastern border of the Township immediately south of the Proving Grounds, are still being actively used, while other sites have been exhausted and are under redevelopment, which explains why the acreage calculations for this category are expected to continue falling as more gravel sites reach the end of their useful life and are developed into other uses. When this occurs, these sites will need to be redeveloped for other uses in a fashion that is consistent with surrounding land uses.

Vacant

A large portion of the Township, almost 25%, is classified as vacant. This category was expanded during the most recent physical survey of the Township, to portray a more accurate picture of undeveloped areas. Table Two shows how the previously named "undeveloped" category was split into three: right-of-way, water and undeveloped. Acreage categorized right-of-way is that land that falls under the State or County jurisdiction for roads. Water acreage includes all areas that will not be developed since they are under water. Lastly, the undeveloped category depicts all areas that are currently not used and remain vacant. Much of this undeveloped land adds to the rural aesthetic of Brighton Township and since most of this land is not actively farmed, the township will need to carefully manage these areas to maintain the existing countryscape.

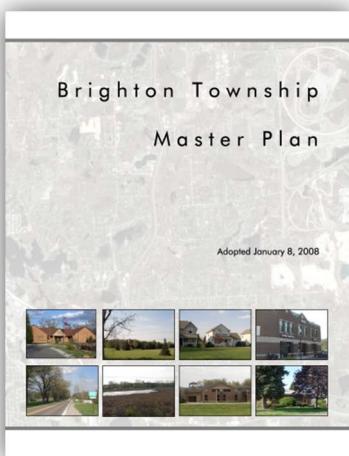
Wetlands

While not a land use, *per se*, wetland acreage has been indicated in Table Two because it represents a significant portion of land cover that may not be appropriate for development. Occupying 4,300 acres of land, this figure has been corrected from previous indications. The previous plan indicated a much lower number, but it was based on information provided by a less reliable source. The figures shown in Table Two are from the National Wetland Inventory, which is better known for their accuracy.

Determining Factors

The Master Plan, and more specifically, the future land use plan was prepared to reflect input received during the public involvement process, discussions with Township representatives, existing land use patterns, and the consideration of proper planning principles. This input and other factors affecting land use patterns were taken into consideration in preparing the future land use map and the Plan. These factors include:

- ✓ **Existing Land Use.** Extensive changes to the existing land use pattern are not proposed. A significant amount of the Township's land has been developed for residential purposes, particularly single-family dwellings on individual lots. The location of most existing non-residential development is appropriate and will continue to serve as the primary business centers. The community land use patterns have evolved in a relatively orderly manner and will be built upon, with slight modification, rather than altered in a significant manner.
- ✓ **Existing Zoning.** Existing zoning designations were considered. There is no "vested interest" that guarantees zoning will not change. However, such changes were carefully considered to ensure the general development arrangement remains consistent and landowners will retain a reasonable use of their land.
- ✓ **Natural Features.** The natural rolling topography, woodlots, and scattered lakes provide highly attractive and marketable property for development. The type of development and allowable densities were determined, in part, by the location and extent of natural features. For example, soil conditions and the ability of the soil to accommodate individual septic systems require that certain areas of the Township be limited to low-density residential development. Lower overall single family residential development densities are also proposed for properties containing significant wetland areas, although the use of clustered developments in buildable areas of properties, while conserving the wetland, can provide a balance between the environment and the development potential of the property. In other cases, the existence of other significant natural features, such as a large woodlot, may also result in a lower development density, that being determined on a case-by-case basis.
- ✓ **Relationship of Incompatible Uses.** The future land use plan strives to reduce or eliminate incompatible land use relationships existing in the Township. Providing a transition between land uses, such as the introduction of multiple family residential between general commercial and single family residential areas, is one approach that



can accomplish such a transition. The Plan designates areas for uses that are considered most appropriate for the community's long-term objectives, with the intention of eventually eliminating some existing uses that do not meet these objectives.

- ✓ **Existing Township Master Plan.** The previous Township Master Plan, adopted by Brighton Township in 2008, and other applicable plans were reviewed and used as a guide for the current version of the Township Master Plan. The future land use plan contained in the previous plan has been re-evaluated based on current trends and conditions.
- ✓ **Infrastructure, Public Facilities and Services.** The density of residential uses and the designation of land for industrial and commercial development are dependent on the availability and capacity of the community's public water and sanitary sewers, existing transportation facilities, public infrastructure, important environmental features, and existing development patterns. Portions of the Township are currently served, or are planned to be served, by public water and/or sewer. Accessibility to and the capacity of the road network will determine, in part, the types and intensity of uses that the township may expect. The availability of community facilities such as schools and recreational facilities determines the areas that are especially attractive for residential development, while the level of police and fire protection contributes to quality of life in all areas of the Township.
- ✓ **Market Conditions.** Market conditions were considered even though they will change during the time frame of this Plan. Brighton Township is experiencing growth in commercial, office, and institutional developments. The manner in which the commercial development occurs will have potential impacts on the aesthetics of the community, traffic patterns, the level of commercial services enjoyed by Township residents, and the relationship to other land uses. Manufacturing, Retail Trade, Service and Office/Business jobs have historically been the employment base in Brighton Township. Service related jobs also represent a significant employment sector. This typifies the nationwide trend over the last twenty years as the country evolves into a more service-oriented economy.
- ✓ **Land Use Patterns in the Brighton Area and Other Communities.** Land use patterns for surrounding communities, including the City of Brighton, were considered to ensure that the new Plan would be compatible with those patterns.
- ✓ **Desires of the Township.** The land use pattern desired by Township officials and property owners has been expressed through a variety of venues. A summary of all public input and concerns can be found

in Appendix B. Residents and business owners generally expressed the need for high quality design within defined commercial districts. They do not desire a fully mixed-use atmosphere, but they do support mixed-use in appropriate areas that can be used as transitions from industrial or commercial uses to residential uses. As businesses develop/redevelop it is important they are upgraded to reflect the high-quality design that is desired. The community has expressed a general desire to maintain light intensity industrial uses only. Brighton Township's character and infrastructure do not support large-scale industrial uses. Land is available in nearby communities which is better suited to accommodate more intense industrial uses.

- ✓ **Rapid Growth.** Brighton Township is experiencing steady growth (see Appendix A for demographic analysis). The Township population has been climbing steadily over the past thirty years, almost tripling in size. The Township is expected to continue to grow at a steady rate in the foreseeable future.
- ✓ **Community Character.** Faced with changes in their community, residents are concerned about the potential loss of the quality features, especially the rural aesthetic. At the same time, there is interest in ensuring that the types and amount of development will provide a balanced tax base to support the desired high quality services.
- ✓ **Housing Diversity.** The fast pace of growth in Brighton Township is resulting in a significant amount of housing development. Most of the existing and new housing is comprised of single-family detached units. Residents generally have expressed a desire to continue with residential development on "large" lots. However the need for more diversity in housing types will increase due to changing demographics (aging, smaller households, lifestyle). As current residents age, some will desire to downsize and stay in the area. Also, a variety of housing is needed to allow younger families, single parent households, and individuals to stay in the Township. The continued development of large amounts of housing (and other uses) may result in a change to the Township's rural aesthetic and the quality of life enjoyed by Township residents.
- ✓ **Declining Household Sizes.** The average household size has generally declined in the past twenty years (see Appendix A for demographic analysis). In addition, the increased number of households, relative to the size of the population, creates a need for more housing. In the future, the number of households is expected to increase at a faster rate than the population.

Future Land Use Recommendations

The following land use policies were developed to give direction to the Township Board, Planning Commission and the community in general when making decisions regarding future land uses. The Township should refer back to these goals on a regular basis, or when considering changes to the zoning map or to the policies and ordinances that guide development within the Township, to ensure they are in keeping with the goals and recommended land use statements below.

LAND USE GOALS

- (1) *Maintain a balanced mix of land uses to meet the current and future needs of the Township, in consideration of existing development patterns, natural features and the capacity of transportation, utilities, and public and private services and facilities*
- (2) *Create well-designed residential neighborhoods that contribute to the current quality of life and sense of community by providing for housing opportunities that are adequate for the future growth of the Township, suited to the current and future needs of a variety of household types and lifestyles, while still maintaining needed buffers from higher intensity commercial uses*
- (3) *Provide for a suitable amount of business development that will offer goods and services, increased employment opportunities and a sustainable tax base to support the desired facilities and services.*

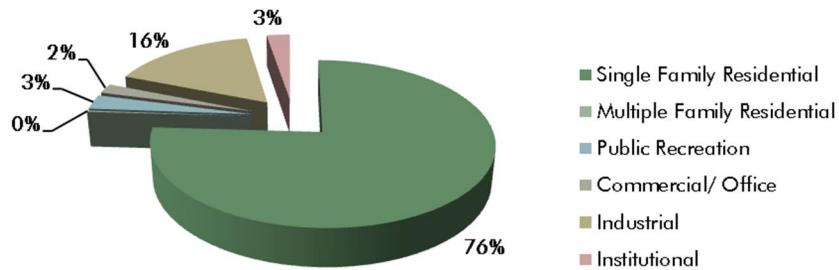
The following recommendations are specific actions to be taken to implement key aspects of the future land use plan.

The recommendations can assist the Township in conducting a number of activities including amendments to the Zoning Ordinance, consideration of development proposals, rezoning requests, variance requests, decisions on public and private investment, and conserving natural features. They are provided as a collection of recommendations that must be used in combination to fully implement the Plan. The future land use plan will be used as a guide in the decision-making process for future modifications to the Township's Zoning Ordinance or any other planning and development concerns that may arise in the Township.

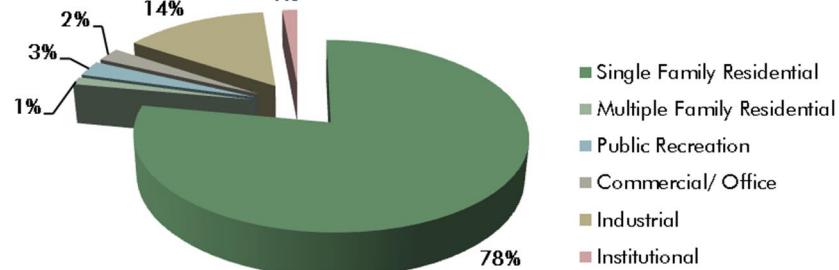
The future land use plan is a representation of how the Township envisions land use and development over the next ten to twenty years. It does not imply that all of the changes should occur at once. Development should proceed in a manner and timeframe that is consistent with policies on the environment, infrastructure, the economic market and other factors.

Table Three on the next page identifies the recommended mix of land uses, compared to the existing land use acreages. The total of the existing and future land use acreages do not agree for a reason: land that is currently vacant, which is not shown in the table, is expected to be converted to other land uses in the future. Deviations from and changes to the future land use map should be carefully considered to ensure that consistency with the goals and policies of this plan is maintained. Decisions that are in direct conflict with the future land use map that could undermine the long-term objectives of the community should also be avoided. Deviations from the future land use map and the Master Plan may be appropriate when it can be justified by more detailed information and studies, changes to conditions or in cases where the deviation is not contrary to the overall intent and purpose of the Plan.

Existing Land Use



Future Land Use



Source: Existing and Future Land Use Maps

TABLE THREE

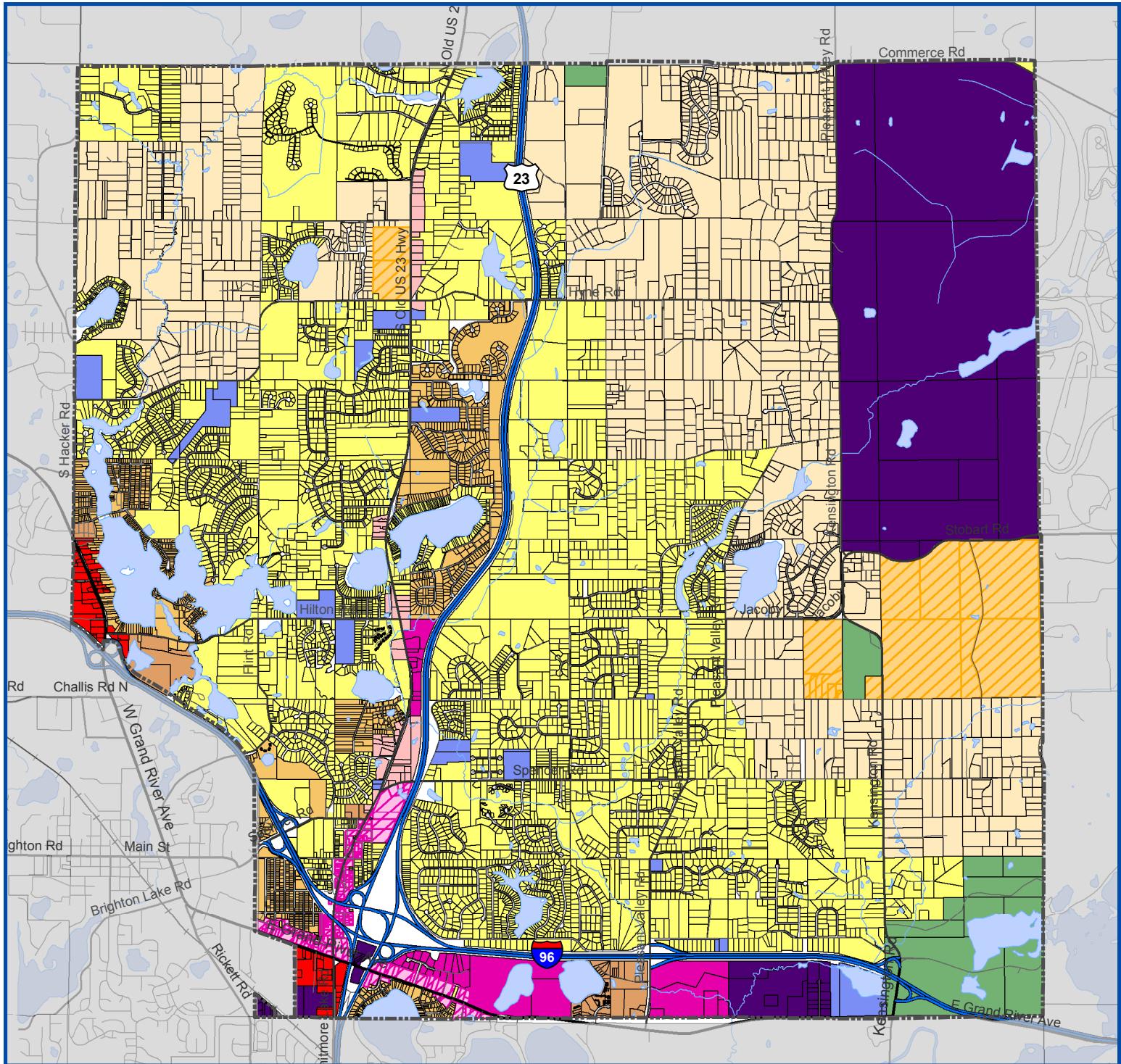
Future Land Use Acreage v. Existing Land Use Acreage

Future Land Use	Acreage		Existing Land Use
	Percent		
Rural Residential	5,479 22.00%	11,721	
Low Density Residential	8,028 32.23%	47.06%	Single Family Residential
Medium Density Residential	836 3.36%	511	
Planned Unit Development	781 3.14%	2.05%	Private Recreation
High Density Residential	158 0.64%	31 0.13%	Multiple Family Residential
		9 0.04%	Manufactured Housing
Public Open Space	539 2.16%	561 2.25%	Public Recreation
Neighborhood Business	137 0.55%	319	
General Business	117 0.47%		Commercial/ Office
Mixed Use	154 0.62%	1.28%	
Research & Development	305 1.22%	2,610	
Industrial	2,633 10.57%	10.48%	Industrial
Institutional	320 1.29%	420 1.68%	Institutional

Source: 2013 Existing and 2013 Future Land Use Maps

Notes:

- The total future land use and existing land use acreages represented above do not agree due to the fact that certain existing land use categories, such as "undeveloped", "private recreation", and "right-of-way" have been planned for other uses on the Future Land Use Map.
- High Density Residential Future Land Use appears high because of the nature of the existing and future land use categories. Since the existing land use is represented as single-family and multiple-family, those uses were so categorized regardless of their density.



Map Two

Future Land Use

Brighton Township Master Plan

- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Planned Unit Development
- Public Open Space
- Neighborhood Business
- General Business
- Mixed Use
- Research & Development
- Industrial
- Institutional

ADOPTED: May 19, 2014

Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



0 0.5 1 1.5 2 Miles

Future Land Use Categories

The following narrative includes descriptions of each land use designation on the future land use map. The various residential categories suggested below roughly relate to the current zoning district densities. Each category name includes the related zoning districts in parentheses; however, it is important to understand, these references are offered only to help the reader envision the type of land use regulations that may apply for each category. They should not in any way replace the more detailed description of vision and character within each category.

- **Residential Categories.** The predominant use in the Township is and will continue to be residential. While residential development is the primary use, a variety of compatible, low-intensity uses that serve the needs of the surrounding neighborhoods are allowed as special land uses in all of the residential categories. These uses include neighborhood institutional uses, such as small churches, government buildings and elementary schools, parks and open space including golf courses. The location, size, scale, and character of any non-residential development must be complementary to the neighborhood it serves. In addition, these uses must be positioned so that they do not negatively impact the residential areas that surround it. Buffering and other development techniques should be considered for these uses to minimize the impacts of noise and light that they can create. Use of transitional zones, where development is intended to gradually reduce in intensity from commercial to lower density residential uses, was also used to minimize the potential for land use conflicts. They must be situated in areas that can accommodate expected increases in traffic volumes and where they can be supported by available public services.
- **Rural Residential.** The designated Rural Residential areas will be almost exclusively developed for single-family detached dwellings on large lots. Many of these areas have limitations for development due to the prevalence of natural features and/or the lack of access to public water or sewer services. These



areas, concentrated in the northern and eastern portions of the Township, are major contributors to the rural aesthetic of the Township and should continue to provide the open and natural qualities that are currently enjoyed and appreciated by residents. The primary type of development within this classification is expected to be single-family residences on lots no smaller than two acres in size. Due to the general condition of the land in this designation, the planned unit development option has been successful in protecting sensitive natural areas while maintaining the desired low density. It is expected that this trend of development will continue in the rural areas of the Township, which help reduce development costs yet still provides important open space and recreation areas for residents.

- **Low Density Residential.** These areas are designated for single-family residences, located between the rural residential and more urbanized areas of the Township. This designation encompasses the majority of land planned for future residential use, and generally includes areas that do not have access to municipal water and sewers. Because public water and sewer service is not planned to be expanded to these areas in the near future, the lot sizes proposed must be adequate to accommodate on-site well and septic facilities. Many areas have already been developed where fewer environmental constraints are found. However, the land immediately surrounding many of the lakes is designated for residential land uses. These areas will need to be monitored to ensure the environmental integrity is maintained and water quality remains satisfactory. Public sewer services have been extended to some of the low density residential areas that surround School and Lyons Lakes, while the remaining lakes within this designation are currently served by on-site facilities. The primary type of development within this classification is expected to be single-family residences on lots that are roughly one acre in size.



- **Medium Density Residential.** This designation primarily refers to moderate-density single-family uses, including single-family homes on existing small lots and some two-family attached condominiums. Areas designated as Medium Density Residential were selected where historic patterns of development near commercial nodes and around many of the lakes in the southern and western portions of the Township have resulted in medium density areas. Other areas of existing moderate density development were also categorized as Medium Density, as well as areas where a transition is needed



between lower density areas and multiple-family or neighborhood commercial areas. These areas are expected to be developed at densities of two to three dwelling units per acre, and are generally located within close proximity to major thoroughfares and commercial areas, and where the existence of larger parcels of land that can accommodate this type of development. The majority of the Medium Density Residential areas are found within areas that are served, or may be served by public water and sewer.

- **High Density Residential.** Development in these areas will be at a density consistent with the infrastructure and land capabilities, generally of four to six units per acre for single-family uses, and eight units per acre for apartments, multiple-family uses, and manufactured housing/mobile homes within planned mobile home parks. These areas are generally located where public water and sewer services are currently provided or where they may be served. More intense residential uses will



be located within the High Density Residential category, especially multiple-family or group homes whose residents generally demand more convenient access to neighborhood retail and service uses. Similar to the Medium Density Residential areas, land designated as High Density will act as a transition or buffer between lower density areas and more intense commercial or highway locations.

- **Planned Unit Development.** Planned Unit Developments are a type of land use that allows some regulatory flexibility in favor for higher quality development. This tool allows a developer to work with the site to develop the most reasonable plan, given existing conditions, surrounding contexts and community goals. Planned Unit Developments can be used to cluster development in a certain area of the site in order to create shared open space or protect natural features. A PUD can help accomplish the following:
 - Provide flexible design to respond to the unique characteristics of a site.
 - Coordinate development on larger sites within the designated lands.
 - Preserve significant natural features in a more coordinated and comprehensive manner.
 - Provide alternatives for developing plans on land that may exhibit difficult physical constraints, and where an improved design can provide the developer and the community with benefits.
 - Allow for clustered development in order to create common space for use by future residents or users of the development.
 - Ensure public infrastructure and road improvements are made as practical, concurrent with the development.
 - Provide the opportunity to mix compatible land uses.

The gravel pits located on several sites near the east side of the Township provide an area for future development. Extraction of gravel has extended below the water table, creating several small lakes that can be used as an attractive feature in future development plans proposed on some of these sites. The gravel pits would be most effectively developed as planned unit developments (PUD) which include a mixture of uses.

- **Public Open Space.** The Public Open Space designation is intended for those locations that are to remain undeveloped or for recreational use. Similar to the Institutional designation, parks and open space is not a common designation for future land uses; therefore, the areas designated on Map Seven are those that are

currently used or have already been planned to be used for recreational purposes. Some areas of private open space, such as the common open spaces protected through the cluster or PUD development options are not shown on the map; however, as previously stated, land to be used as parkland or open space can be designated in any of the residential categories.

- **Neighborhood Business.** This designation is intended for a variety of small-scale retail and service businesses. This category was clarified

to define more nodes of local business areas to distinguish them from the previous mixed-use designation. It is intended that this clarification will help to concentrate commercial development within the defined nodes rather than scatter development along the Old US-23 corridor. The uses in this designation are not intended to compete with larger shopping or employment areas found in other communities that serve Township residents. Instead, they are primarily intended to serve Township residents that do not wish to drive to the more distant commercial/office centers for their convenience and



daily shopping needs. Typical uses would include smaller general merchandising/retail establishments such as convenience stores, banks, drycleaners, video rental shops, beauty/barber shops, and small retail strips.

Certain Neighborhood Business nodes have been designated along Old US-23 in the areas north of Hyne, north of Hope Lake, and at the intersections of Hilton Road and Spencer Road. This allows existing businesses to be recognized, while retaining much of the northern corridor for residential development and open space. The Neighborhood Business designation will allow convenience commercial uses to be provided to Township residents without intrusions into the residential neighborhoods. The location of convenience commercial uses will provide traffic management

benefits since most patrons will already be on the road or traveling a short distance from nearby residential areas or from work.

New Neighborhood Business uses should develop within these nodes and within the mixed-use corridors, south of Hilton and along Grand River Avenue. While there are some scattered commercial and office uses along the entire length of the corridor, these may transition into other more residentially-oriented uses, with commercial uses locating closer to the designated nodes.

- **General Business.** Businesses that rely on and serve a broader customer-base including the entire Township, the cities of Howell and Brighton, and pass by traffic along Grand River, are included in this designation.

Appropriate uses include auto dealerships, grocery stores, restaurants and retail centers.

Special consideration needs to be given to highway commercial uses to minimize their impact on

adjacent land uses, to accommodate the volumes of vehicular traffic generated, their potential impact on the aesthetics of the site and surrounding area, and the need to ensure compatibility between vehicular and pedestrian traffic. The General Business category may include Neighborhood Business uses; however, larger-scale General Business uses should not be located within Neighborhood Business areas in order to protect their character and low-intensity nature.

General Business uses have been designated along Grand River Avenue corridor near the Township's western border, where these uses currently exist. These segments of Grand River abut more intense, regional commercial uses located within the City of Brighton.

- **Mixed Use.** Lands designated Mixed Use, located along portions of Old US-23 and Grand River Avenue are intended to be used for a variety of compatible uses. This mixture of uses would allow land situated in prime locations (i.e. within close proximity to major roadways and nearby shopping and services) to be utilized to its



maximum potential. It is intended to accommodate a mix of business and residential uses in a way that provides easy access to both vehicles and pedestrians and which can serve as the “Township Center.” A Mixed-Use strategy can reduce the overall number of vehicle trips by providing the opportunity for live-work arrangements and convenient walking access from higher density residential, senior and group housing developments. It is especially significant along the Old US-23 and Grand River corridors, where development speculation typically expects to find commercial development, but where it is not necessarily supported by current resident demand. The Mixed Use areas will provide for such uses; however, it should also require a relative percentage of compatible residential uses to help balance the demand and supply of services.

The Old US-23 and Grand River Avenue corridors serve as gateways into the community and it is the intent of this Plan to encourage a mixture of uses that enhance the existing character of these corridors. In effect, development, especially along Old US-23, should work with the existing topography and natural features to maintain the natural character of Brighton Township. While the proposed range of land uses is generally compatible with one another, care will be needed when developing the zoning regulations that will apply to the Mixed Use areas. Each use will need to be of a scale, density, and design that results in benefits to the general area and minimizes negative impacts on other uses. Commercial developments must not have a “big box” appearance but instead should give the impression of a grouping of smaller buildings, or be nestled within residential and office uses. More detail on the Development Guidelines for mixed uses can be found in Appendix C.

- **Research and Development.** The Research and Development designation will accommodate both small and large-scale office, research and technology uses. Brighton Township has attracted some very light industrial and office uses that are not suitable within the business development or industrial categories of this Plan. However, these uses are critical to maintaining a solid, diverse



tax base and they provide valuable jobs and services to Brighton area residents. As such, they are intended to remain where they currently exist along Old US-23 and E. Grand River Avenue, where they will attract similar uses that are seeking a more professional office environment. As opposed to the Industrial areas, the Research and Development areas are intermingled amongst the Neighborhood Business and Mixed Use designations since they are similar in character and many demand convenient access to retail and restaurant uses for their employees. It is intended that all uses in these designations will respect the existing character and environmental characteristics of the land and will work in harmony to create a vibrant mix of uses along the Old US-23 and E. Grand River corridors.

- **Industrial.** The General Motors Proving Grounds occupies a significant amount of land in the northeast corner of the Township and will continue to be the main industrial area of the Township. All other industrial uses are planned in locations south of I-96. Three primary areas are planned for industrial development, including the existing industrial area in the southwest corner of the Township, the area located between the north and south US-23 highway corridor, and the area located north of Grand River roughly between Pleasant Valley and Kensington. The intent of this designation is to allow light industrial uses such as wholesale and warehouse activities, and uses which manufacture, compound, process, package, assemble, and/or treat finished or semi-finished products from previously prepared materials. The intensity of uses is expected to exceed that of the Research and Development designation, though it may include such uses. Alternatively, heavy-intensity uses that process raw material may only be allowed in very defined and limited portions of the Industrial area, and where such operations will not have an adverse impact on other land uses. New industrial development and expansion of existing industries will be designed to ensure they are an asset to the community. In this regard, they will be subject to the Development Guidelines included in Appendix C.
- **Institutional.** These are relatively large sites occupied by utility or civic uses such as schools, parks, State, County and Township facilities, and



major utility lines. As previously stated, smaller-sized institutional uses can be located within and are scattered throughout the residential areas, and are not shown on Map Seven.

Zoning Plan

While there are many programs and activities important to the overall implementation of this plan, zoning is the single most significant mechanism for achieving the desired land use pattern and quality of development advocated in the plan. Because the future land use map is a long range vision of how land uses should evolve over time, it should not be confused with the zoning map, which is a current (short-term) mechanism for regulating development.

The Planning Commission must consider the timing of changes to the zoning map, as they are not all intended to occur immediately following adoption of the Master Plan. They should occur over time, as discussed in the Future Land Use Plan. To determine if and when zoning changes are needed, the Planning Commission should consider the following:

- **Infrastructure.** There must be sufficient public infrastructure to accommodate the types of development allowed under the requested zoning. This should include availability of sewer and water, transportation facilities and other infrastructure required to serve the development. Location within the existing service areas should influence approvals of zoning to an intensity that would require such services.
- **Site Conditions.** Sites proposed for rezoning to accommodate change in land use need to have sufficient width and area to facilitate development that satisfies the requirements of the zoning ordinance, and its physical conditions capable of accommodating the type of development possible under the requested zoning.
- **Market Saturation.** As much as possible, and where it does not compromise other goals of the Township, rezoning should be logical and incremental. Over-supply of vacant land in any one district can lead to reduced overall property values.

Table Four shows how the Future Land Use Map corresponds to the Zoning Map.

TABLE FOUR Zoning Plan			
Future Land Use	Density or Intensity	Maximum Density	Zoning District
Rural Residential	0.5 du/ac	0.2 du/ac	R-CE: Residential Country Estates
		0.4 du/ac	R-C: Residential Country
Low Density Residential	0.5 to 1 du/ac	0.6 du/ac	R-1: Residential Single Family
		1 du/ac	R-2: Residential Single Family
Medium Density Residential	2 to 3 du/ac	2.2 du/ac	R-3: Residential Single Family
		3.6 du/ac	R-4: Residential Single Family
		3.6 du/ac	R-5: Waterfront Residential
High Density Residential	4 to 6 du/ac	8 du/ac	RMH: Residential Manufactured Home
		10 du/ac	RM-1: Residential Multiple-Family
Planned Unit Development	Varies	Per Underlying Zoning	PUD: Planned Unit Development
Mixed Use			
Public Open Space	Low Intensity	—	All Residential Districts
Institutional	Moderate Intensity	—	All Districts
Neighborhood Business	Low Intensity	—	B-1: Local Business OS: Office Service
General Business	Moderate Intensity	—	B-2: General Business
			B-3: Special Business
Research and Industrial	Moderate Intensity	—	I: Industrial
Industrial	High Intensity	—	

du = dwelling unit
ac = acre

Growth Management Plan

A service boundary is a designated area beyond which investments in road, sewer and water improvements will be limited. Land located within the boundary should be encouraged to infill to maximize the potential of the system, and areas outside should be discouraged from premature development, until the existing system is utilized.

Development at the periphery of a community can require installation of underutilized water and sewer mains, or demand transportation improvements well in advance of planned development in the area. This occurrence tends to compound itself – as development is attracted to locations where services are provided, they demand more services, which in turn attract more development, and so on and so forth. Therefore, establishing policies that clearly identify where such improvements and services will be focused helps direct development to locations where they already exist or where they can be more easily and efficiently provided.

Managed expansion of the boundary may be necessary to ensure ideal provision of utility services and cost effective long-term maintenance of the system. Clear standards for expansion of service areas or growth boundaries should be defined by the following variables:

- The amount and capacity of undeveloped or under-developed land currently within the boundary. That land should be used to satisfy the demand for development prior to expanding the boundary.
- The projected population growth in the community and the demand for other lands for commercial or industrial development.
- The availability to extend infrastructure to serve new land areas outside the growth boundary.
- The capacity and condition of the road system to support the new growth areas.
- The ability of the community, county, school districts, and other public agencies to provide the necessary services to the new residents of new growth areas.
- The impact on natural features, agricultural uses, and rural aesthetic of increased development resulting from expansion of service areas.
- Consistency with the goals and objectives of the current master plan.

Redevelopment Ready Plan

The State of Michigan has developed the Redevelopment Ready Communities program to reduce disinvestment that may threaten the stability of older or established communities. The program includes an evaluation of communities to determine how well they are facilitating development, whether by developing a vision for future development activity, providing regulations and procedures that streamline and simplify the process, creating educational programs to train staff and officials, or communicating all of these things to the public in a way that is convenient, welcoming and easy to understand.

Brighton Township currently works with the following groups and agencies to help promote and expand business in the Township.

- **SPARK Ann Arbor.** SPARK is Ann Arbor's engine for economic development. This organization is dedicated to the economic prosperity of the greater Ann Arbor region. Their mission is to attract, develop, strengthen, and invest in driving industries to help the region thrive.
- **Economic Development Council (EDC) of Livingston County.** This EDC is a nonprofit agency dedicated to the creation and sustainability of economic opportunities in-sync with the quality of life and unique characteristics of Livingston County. EDC is a one-stop resource for businesses seeking growth in Livingston County, with services ranging from employee retention, transportation and housing, to site location assistance, job training grants and tax abatements.
- **Greater Brighton Area Chamber of Commerce.** The Chamber of Commerce's mission is to promote opportunities for a prosperous business community. The Chamber leverages its membership to promote member-to-member commerce and collective promotions. The Chamber organizes a variety of events and programs to help attract visitors to local commercial centers, and also to help market and attract businesses.

Priorities

As part of the planning process, residents expressed a desire to see existing planned growth areas developed before opening up new development areas. In an attempt to better encourage development within the Township's existing commercial and industrial areas, the Township identified the following priorities:

- **Market Available Sites.** This entails a listing of vacant land and buildings, along with basic information and contacts. Most of this information can be provided by the property owner or their

representative, but the Township can assist by posting a summary of each site on its website.

- **Re-use outdated sites.** To encourage re-occupancy and gradual upgrades to vacant buildings and sites, additional flexibility to allow similar uses or those with minimal negative impacts to re-occupy vacant buildings. The Township already discusses non-conforming site improvements in the zoning ordinance, which should be used when reviewing sites that contain compliant buildings and uses, but that may not meet the site development requirements (i.e. parking, landscaping, signage, etc.)
- **Review Procedures.** Another way to encourage re-use of vacant buildings is to streamline review procedures for re-occupancy applications. Some standards and parameters should be developed to guide decision-makers, but sometimes review of adaptive re-use projects can be done by staff or through a committee to help shorten the review process.
- **Redevelopment Ready Plan.** The Michigan Economic Development Corporation (MEDC) created the Redevelopment Ready program to help guide and identify communities who are “Redevelopment Ready.” The checklist discussed next provides additional guidance.

Redevelopment Ready Checklist

A limited number of communities are accepted into the program by the Michigan Economic Development Corporation (MEDC), based on an evaluation of their adherence to a set of best practices developed by a panel of experts. The best practices challenge communities to be flexible while seeking quality development that supports sense of place, and include guidelines for the following. When evaluating the Township, it was found that it already meets many of the criteria. The following checklist of items is provided by the MEDC. Items not relevant to Brighton Township are not listed. A check mark next to the item indicates it has been completed already:

Master Plan:
✓ Is current
✓ Is available online
✓ Includes Economic Development Strategy (similar to CIP)
CIP:
□ Is available online
✓ ID priority redevelopment areas
□ Redevelopment Strategy and Tools
✓ 2 to 5 year action plan
□ Generally consistent track record of meeting CIP goals
✓ Considers Utility capacity relative to planned growth
✓ Budget/Master Plan/CIP coordination

Zoning Ordinance:
✓ Is available online
✓ Is clear and easy to understand
✓ Allows mixed-use by right
□ Form-based code considered for priority districts
□ Industrial Districts allow uses in the "new economy"
✓ PUDs allowed for flexibility
✓ Clear conditional land use standards
✓ Clear conditional zoning procedures
□ Timeliness of reviews
□ Variety of neighborhood classifications
✓ Mixed use living has been considered
✓ Pedestrian-oriented districts
□ Bicycle parking considered
✓ Minimum sidewalk width
✓ Street lighting requirements
✓ Flexible parking
□ Alternative parking management
Planning and Zoning Administration:
□ Development Tracking process
□ Fee Schedule reviewed
✓ Development Guide
Public Involvement Plan:
□ Identifies key stakeholders in the community
□ Methods to solicit input
□ Determines appropriate locations and venues
✓ Efforts are taken above basic methods (mailers, charrettes, public meetings, focus groups, social networking, etc. are used)
Procedural:
✓ One person identified to receive applications and facilitate the process
✓ Staff are helpful
✓ Roles of staff, consultants and officials is clear
✓ Pre-application meetings offered
□ Assists developer in contacting neighbors to discuss project
□ Joint site plan review team assembled
✓ Prompt processing of applications
□ Solicits customer feedback to improve the system more
Training:
✓ Dedicated funds for staff, PC, ZBA, Elected Body, etc.
□ Tracks training attendance
✓ Training information is shared regularly
✓ Joint meetings held regularly

Boards and Commissions:
<input type="checkbox"/> Desired skill sets for various boards advertised
<input checked="" type="checkbox"/> Applications available online
<input checked="" type="checkbox"/> Information packets sent in advance of meeting
Redevelopment Plan:
<input type="checkbox"/> Priority sites identified
<input type="checkbox"/> Priority site evaluation checklist
<input type="checkbox"/> Steering Committee includes elected, appointed and general public
<input type="checkbox"/> Action plan for priority sites
<input type="checkbox"/> Marketing plan
<input type="checkbox"/> Preliminary market research
<input type="checkbox"/> Identify local advocates for redevelopment
<input type="checkbox"/> Includes public visioning
<input type="checkbox"/> Financial support from other groups
<input type="checkbox"/> Property Information Packages created for priority sites
Sources: MEDC, LSL Planning, Brighton Township

Implementation Strategies

The actions below are specific recommendations that may be used to accomplish one or more of the above policies. Table Five should act as a checklist of items that the Township should work toward completing.

TABLE FIVE Land Use Strategies		
Actions	Priority	Responsibility
Coordination		
Re-evaluate the future land use designations and map at least every two years to confirm they are still consistent with land use trends, market conditions and other described factors related to land use.	Ongoing	PC, TB
Hold an annual joint meeting between the Planning Commission and the Township Board to review the Master Plan and the role of the Planning Commission and the Township Board. This is especially important as new members are elected or appointed.	Ongoing	PC, TB
Revise Subdivision Regulations and work with Livingston County Road Commission to develop a hierarchy of road widths and right-of-ways to meet the traffic characteristics and preserve key resources.	Long-Term	PC, TB
Submit a copy of the Plan to adjacent communities.	Short-Term	PD

Coordinate with the County and adjacent communities on issues affecting the region, such as economic development, parks, transportation and watershed planning.	Long term, Ongoing	PD
Ensure lot sizes for residential uses served by private septic systems and wells are adequate to meet Livingston County Public Health Department regulations.	Short-Term, Ongoing	PC, PD, UC
Regulations		
Update the Zoning Ordinance to address the recommendations in the Master Plan.	Ongoing	PC, TB
Complete a comparative analysis of the zoning map and the future land use map and determine which zoning changes should be pursued by the Township to implement the plan.	Short-Term	PD, PC, TB
Consider new large-scale institutional uses as special land uses within residential districts and require Planning Commission approval before being permitted.	Long-Term	PC
Evaluate the Mixed-Use areas shown on the future land use map to determine the appropriate mix of commercial-to-residential.	Ongoing	PC, PD
Review the Zoning Ordinance to determine the types of housing allowed in each zoning district and whether there is a need to update it to allow a greater variety of housing opportunities.	Long-Term/ Ongoing	PC
Low-density residential areas are to maintain the rural/suburban character of the Township and protect its key natural features.	Ongoing	PC
Promote road and pathway linkages between residential developments to encourage the development of a cohesive community and to facilitate local traffic between areas of the Township.	Long term	PC, TB
Promote business developments that are constructed in accordance with the Development Guidelines in Appendix C.	Ongoing	PC, TB
Review the Zoning Ordinance to ensure that it reflects the boundaries of the Neighborhood Business, General Business and Mixed Use areas shown on Map Seven.	Ongoing	PD, PC, TB
Revise Zoning Ordinance to deal more specifically with reuse, redevelopment, and expansions of existing business sites.	Short-Term/ Ongoing	PC, TB

Develop regulatory incentives, such as density bonuses, or streamlined review processes, that promote use of PUD and cluster zoning options over conventional methods as a way to protect natural features and incorporate parks and open space into residential developments.	Ongoing	PC, TB, PD
Establish commercial/office nodes that cluster businesses and minimize impacts on less intensive uses, focus traffic impacts, minimize need for utility expansions, and provide for more efficient use of land.	Ongoing	PC
When considering or evaluating contemplated or requested zoning revisions near or adjacent to neighboring communities, ensure consideration of the same compatibility issues of use and function that are part of the normal zoning process, and from an informational standpoint, coordinate with any such affected community.	Ongoing	PD, PC
Require compliance with approved site plans and conditions through inspections as needed during the development and construction phases, as well as within a short time after operations commence to ensure the site and operations are consistent with Township expectations.	Ongoing	PD
Regulate and manage access and circulation within commercial, office and industrial areas to promote safe and efficient vehicular or pedestrian travel by requiring cross-access between parking lots, shared driveways, and by requiring acceleration, deceleration, turning or bypass lanes where needed.	Ongoing	PC, TB, PD

Improvements and Public Policy		
Review the Master Plan annually and prepare a report for the Township Board on its implementation and the Capital Improvements Plan (CIP), upon request by the Township Board.	Ongoing	PD, PC, TB
Refer to the Master Plan when considering rezonings to ensure the conditions upon which the plan was based are still relevant and the timing for the change is appropriate.	Ongoing	PC, TB
Consider extension of public water and sanitary sewer service to areas intended to be developed for higher density residential and mixed uses.	Ongoing	UC, TB

Limit commercial land uses to focused commercial centers.	Long-Term	PC, TB
Prepare a design plan for the Old US-23/Grand River area.	Ongoing	PD, PC, TB
Promote intense business uses in areas where public infrastructure such as municipal water and sanitary sewers are available and where the transportation system can support them.	Ongoing	PC
Promote higher density residential development to areas adequately served by transportation, public utilities and facilities.	Ongoing	PC
Begin working toward compliance with the Redevelopment Ready principles, and/or develop a Redevelopment Plan that explains how the Township will achieve certification through MEDC.	Ongoing	All

* PC= Planning Commission, TB= Township Board, PD= Township Staff, UC = Utilities Committee, HA = Homeowners Associations



CHAPTER THREE

Transportation

Introduction

An integrated transportation system should contribute to a high quality of life for residents and a desirable climate for business. Many transportation issues in the Township are related to the increase in vehicular volumes and congestion. While the automobile is the dominant mode of transportation, Brighton wants to provide a balanced and coordinated "multi-modal" transportation system to accommodate ongoing growth and development. Comprehensive improvements to all modes of travel can help improve the operation and capacity of the street system.

Historically, transportation decisions were made in the interest of motorized safety, and while such efforts have resulted in improved safety on Michigan roads, they have also resulted in degraded environments for pedestrians, bicyclists and transit riders. For years, road right-of-ways have served their function of moving vehicular traffic; however they are a tremendous public asset that can be used for much more. They represent important connections within a community, provide routes for travel and commerce, and project the first impression that will shape the community's image.



In the past, transportation planning focused on moving cars and trucks efficiently. Different streets were categorized with others, and all planned to have consistent right-of-way widths and function. In that era, land use was primarily considered in relationship to the amount or type of traffic it created, and not necessarily the quality of development or the places it created. Since the 1970's, transportation planning philosophies are shifting to one that focuses on safety for everyone who might use road rights-of-ways, such as bicyclists, pedestrians, transit riders, as well as those with a variety

of ability - from children, to the elderly, to the disabled – all need safe and varied routes to accommodate their individual travel needs. Roads should still be preserved for their intended function, but they should also be designed to accommodate all expected users of the road.

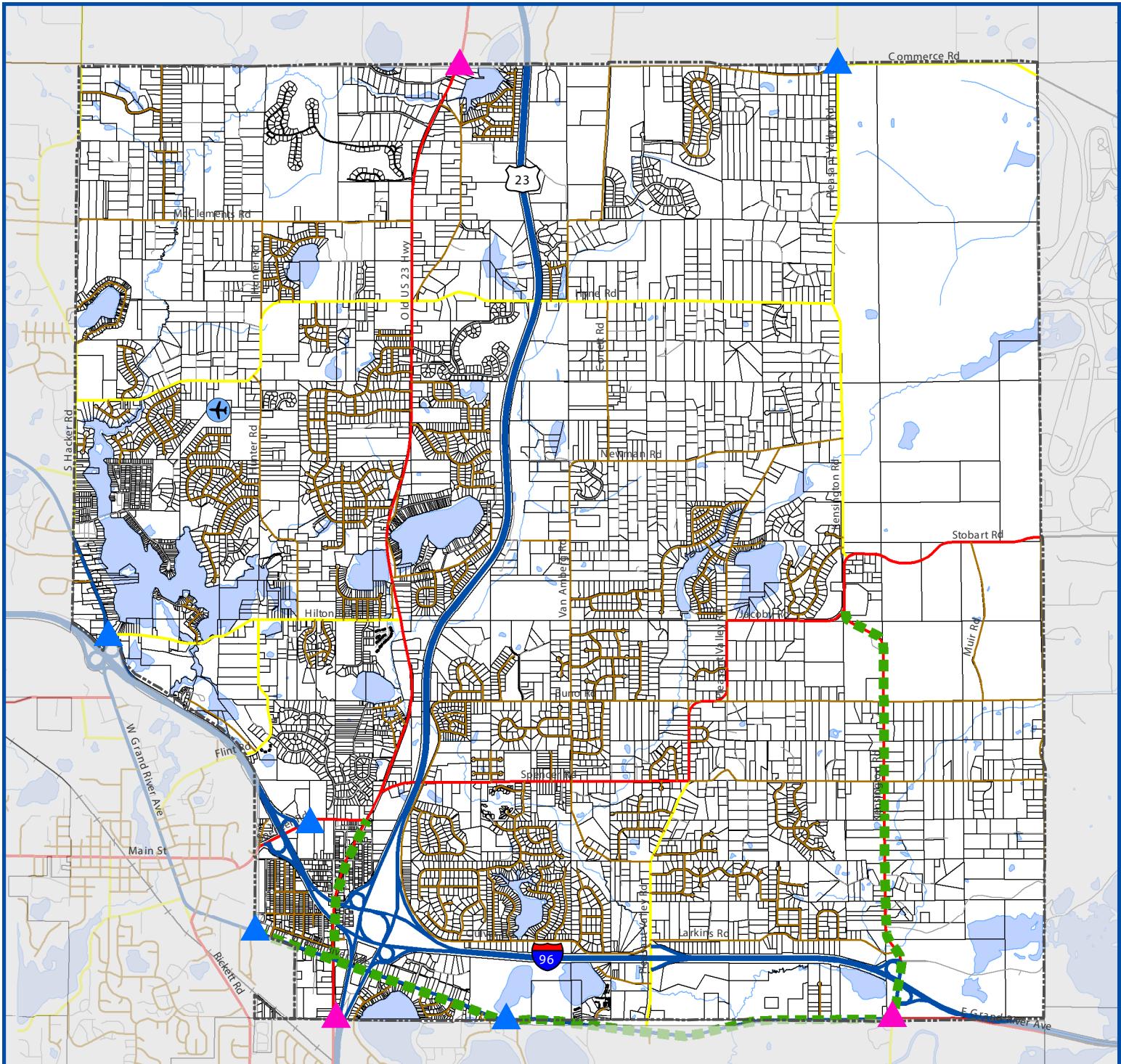
Non-Motorized facilities are beneficial for the following reasons:

- They provide additional connections between homes, schools, parks, public transportation, and destinations.
- Dedicated facilities for walking, biking or transit improve safety by reducing potential crashes between motorized and non-motorized users.
- They encourage walking and bicycling, with corresponding health and fitness benefits.
- They can help ease transportation problems by increasing the transportation network's overall capacity and reducing congestion.
- They provide options to make fewer driving trips, resulting in savings on operation and maintenance of motor vehicles.
- They help enhance the economic vitality of connected commercial areas.
- They help reduce use and a corresponding reduction in air pollution and carbon emissions.

The link between transportation and land use has been apparent throughout the Township's development. The proximity of the Township to a well-developed road and highway system (I-96, US-23 and Grand River) provides convenient access to employment centers and has contributed to Brighton Township's residential development. Commercial development, including larger scale regional commercial

development, is attracted by the same easy access to a quality road network and by the access to a large trade area offered by I-96 and US-23. Most of the industrial, research and development, and office uses have developed in proximity to US-23 and I-96.

Just as transportation routes have an impact on land use, land use can have an impact on traffic as well. Planning appropriate land uses where there are roads and infrastructure to support them will alleviate congestion and safety problems. Development policies can also influence the character of development and how it is accessed by vehicular and non-motorized travelers. Consideration for shared driveways helps minimize congestion along high volume roads and the number of driveways that pedestrians and bikers encounter. Connectivity within neighborhoods helps provide alternative travel routes for all. If street connections cannot be made due to physical limitations or residential market preferences, new neighborhoods should provide non-motorized connections between neighborhoods.



Map Three

Transportation

Brighton Township Master Plan

Roadway Classification	Township Pathways
Principal Arterial	Planned
Minor Arterial	Existing
Collector	Planned
Paved Local Road	Planned
Unpaved Local Road	Planned
Private Road	Planned
Airport	Planned

ADOPTED: May 19, 2014

Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



0 0.5 1 1.5 2 Miles

LSL Planning
A **SAFEBUILT** Company

Existing Conditions

Functional Classification

The quality of life and economic livelihood of the Township is partially dependent upon the transportation system. Roads have two basic roles in the transportation system: providing a conduit for efficient movement of traffic through the Township and providing access to abutting land uses that front on the streets. To help define the role and manage the road network, a functional classification or hierarchy of roads should be established. The National Functional Classification (NFC) is a planning tool which Federal, State, and local transportation agencies have used since the late 1960's to help organize this hierarchy. The Federal Highway Administration (FHWA) developed this system of classifying all streets, roads, and highways according to their function. The FHWA publication, Highway Functional Classification: Concepts, Criteria and Procedures, has a four-element hierarchy in Brighton Township. These road classifications are depicted on Map Three.

- **Principal Arterial.** These roads are at the top of the NFC hierarchical system. Principal arterials generally carry long distance, through-travel movements. They also provide access to important traffic generators, such as major airports or regional shopping centers.
- **Minor Arterial.** Minor arterials are similar in function to principal arterials, except they carry trips of shorter distance and to lesser traffic generators. The primary function of these roads is to move traffic throughout the community. Because of this, access to these roads must be managed in order to maintain safe and effective movement.
- **Collector.** The collectors serve to assemble traffic from local roads of residential neighborhoods and deliver it to the arterials. Collectors will also serve to provide access to abutting properties.
- **Local.** Local streets serve primarily to provide access to individual properties and homes.

Jurisdiction

Brighton Township does not have jurisdiction over any of the roads within its boundary. Instead, the State and County manage and maintain most of the main roads and thoroughfares, while most local residential roads remain under private ownership. The Principal Arterials of I-96 and US-23, as well as their associated interchanges are both under the State's jurisdiction. Minor Arterials, Collectors and Local roads (excluding local residential roads) are maintained by the Livingston County Road Commission.

Road Surfaces

Similar to most growing communities, Brighton Township consists of a mix of paved and gravel roads. Most of the major roads are paved; however, some roads or portions thereof, are improved for year-round travel, but are not paved.

Traffic Volume

Traffic volume data is measured by average daily traffic (ADT) counts, which is an estimate of typical daily traffic volume on a road. Traffic volumes are reported by SEMCOG. As a major thoroughfare traversing the township, it is not surprising that Grand River Avenue is the most heavily traveled road in Brighton Township (not including highways I-96 or US-23), followed by Old US 23, Whitmore Lake Road and Spencer Road.

Crashes

The ability of any road to carry larger volumes of traffic is related to the design of the road, number of lanes, and number of ingress and egress points along the road. Crash data was compiled by SEMCOG, and each intersection within the region was ranked according to the frequency of crashes reported between 2008 and 2012.



Air Travel

Brighton Township is home to one privately-owned airport, located near the southwest corner of Hunter and Hyne Roads. The Brighton Airport contains one landing strip is owned by the Brighton Airport Association, which is a small group of individuals that use the airport mostly for recreational flight. The airport is nestled amongst single family residential development and, as such, is somewhat constrained in its expansion possibilities. The airport primarily serves single-engine aircraft, but has also reported use by multi-engine and ultralight aircraft.



Non-Motorized Transportation

The Township currently requires pathways and sidewalks within certain new development. In November, 2009, Brighton Township adopted an updated Pathways Plan to help define a vision for a

continuous pathways system throughout the Township. The Township has established the following priorities:

- A pathway along Grand River Avenue was planned as part of the road reconstruction project, but was not actually installed.
- Priority A: Old US-23 between Grand River and Spencer.
- Priority B: Kensington Road between Grand River and Sunset Park.

Determining Factors

When considering the transportation system in Brighton Township, a number of factors and issues were identified that can or are currently affecting transportation facilities and services in the Township. These factors and issues were identified using generally accepted planning principles, and were supplemented through discussions with Township staff, officials, and a public involvement process. Factors and issues identified for Brighton Township include:

- ✓ **Attractive Community.** Brighton Township is an attractive place to live, which has attracted many families and residents within the past few decades.
- ✓ **Road Capacity.** A number of existing roads are nearing capacity and congestion is a problem particularly during peak times of the day.
- ✓ **Highway Access.** Although I-96 currently serves the community via interchanges at Kensington Road, Pleasant Valley Road, Spencer Road, and Grand River, some feel that improved access from US-23 is needed, while others feel the impact to the character of the Township would be compromised by such improvements.
- ✓ **Road Jurisdiction.** In Brighton Township, most roads fall under the jurisdiction of the Livingston County Road Commission (LCRC) or the Michigan Department of Transportation (MDOT). While these agencies actively work with the Township on road improvements, the Township cannot make decisions regarding road design or improvement. Roads that are not LCRC or MDOT roads are privately owned and maintained by local residents or an association of residents.
- ✓ **Driveway Design.** Many roads, including Grand River and Old US-23, have access and circulation problems due to the haphazard arrangement of curb cuts, private drives, and driveways.
- ✓ **Topography.** The curves, hills, and alignment of some roads that help create visual interest also can cause problems with sight distances and blind spots.

- ✓ **Legal Limitations.** Michigan law limits the extent developers can be required to fund road improvements. Therefore, the Township should consider the amount of development permitted on dirt or gravel roads since the development may result in the need to upgrade the roads in the future.
- ✓ **Multiple Mode Alternatives.** Additional traffic on roads in the Township has led to safety concerns regarding the interaction of motorized and non-motorized traffic. The current lack of pedestrian and cycling facilities has intensified these concerns.
- ✓ **Community Character.** Current and future streets must function properly so they contribute to the livable character sought throughout the Township. Through opinion surveys and interviews, the public has made it clear that preserving the small-town, pastoral character of the community is preferred.
- ✓ **Land Use Policies.** Future traffic volumes can be influenced by decisions on intensity and location of land uses. Current practices are encouraging development to spread out and encompass larger lots, which can create barriers to public transit or road improvement funding.

Current Regulations

Brighton Township has been planning its future for years. As a result, a variety of past recommendations have already been implemented, which are highlighted below:

Street Trees

A defined roadway assists in slowing traffic and landscaping helps improve the visual image and economic attractiveness of a corridor. Current zoning regulations require developments to include a consistent row of large canopy street trees along major corridors. Trees are required to be located between sidewalks/paths and the street curb and must be planted at a rate of one every 30 feet.

Pathways

Development sites identified in the Brighton Township Pathways Plan (amended in 2009) are required to provide sidewalks and/or bike paths.

Access Management

Studies have indicated that access management can reduce the number and severity of crashes by up to 50% and preserve capacity by 20-40%. Access management involves comprehensive controls over all

aspects of roadway access for the purpose of minimizing conflict points (i.e. places where crashes are more likely); maintains the carrying capacity of roadways; and assures land owners will retain “reasonable” access to their property, though access may not be the most direct nor driveways as numerous as may be desired for a particular project.

Brighton Township currently requires access management for development along arterial and collector roads; however, Livingston County maintains jurisdiction over these roads, and as such, any access design for new development projects along arterials must be coordinated with the Road Commission and MDOT, as appropriate.

- Some access management tools currently included in the Zoning Ordinance are:
- Limits on the number of driveways permitted (typically one per parcel or development)
- Regulations for driveway spacing from other driveways and intersections
- Design standards for access points including minimum turning radii, deceleration lanes, passing lane requirements, etc.
- Requirements for shared access systems such as frontage roads and rear service drives.

Traffic Impact Studies

Traffic impact studies help ensure a development project will be designed to accommodate traffic generated by the site without negatively impacting traffic flow on the adjacent road or the community in general. They include an evaluation of site access design in relation to the expected number of trips the site will generate.

A traffic impact study is currently required during the site plan review process for projects and project expansions that are expected to generate significant traffic. If desired, the Planning Commission may also request a traffic impact study during review of rezoning requests. Studies are required to generally follow the handbook Evaluating Traffic Impact Studies prepared by MDOT and SEMCOG.

Transportation Recommendations

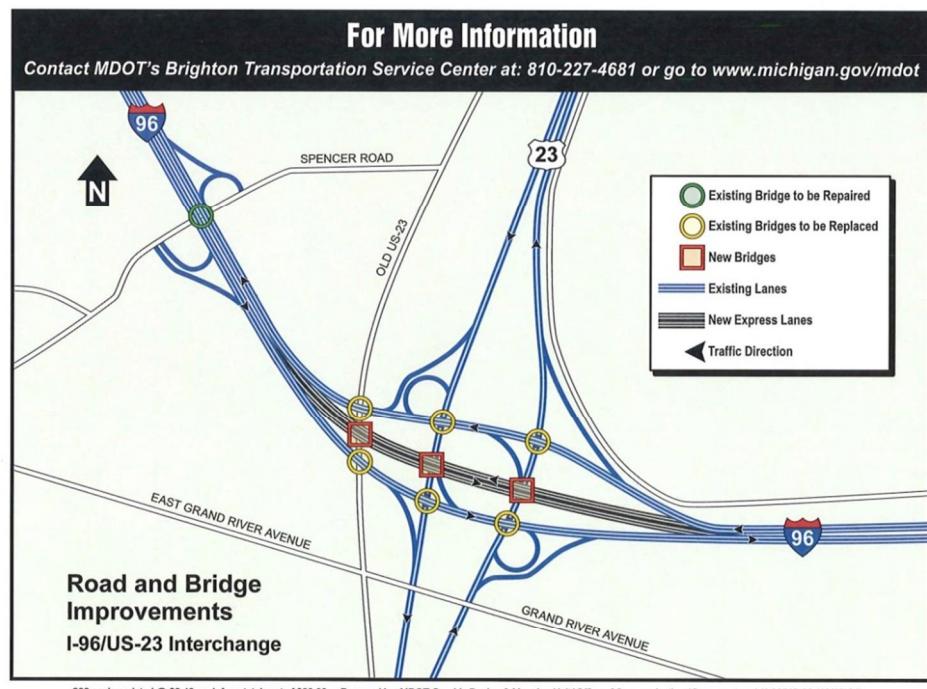
The following recommendations should be considered in total, not as separate statements, in order to consider the effect on the overall transportation in Brighton Township.

TRANSPORTATION GOAL

Create a safe, balanced, and coordinated multi-modal transportation system adequate to accommodate the current and future needs of Brighton Township.

Roadway Improvements

Over time, as more development occurs in Brighton Township, traffic levels are likely to increase, creating capacity deficiencies. While this development may create significant need for roadway improvements, any costly improvements should be supplemented with transportation management practices that will maximize the efficiency and capacity of the existing road network. Access management tools, described later in this chapter, can be used to maintain the efficiency of the transportation network. Other technological advances and innovative design ideas such as signal timing, and design concepts like roundabouts, divided roads and medians should be explored before costly improvements are made. The approach of system management, combined with targeted improvements, limits costs and impacts to the



community character. Land uses should be matched to areas where road capacity is available or where improvements are planned in the near future.

The SEMCOG Transportation Improvement Program lists road improvement projects planned for the next three years. In Brighton Township, the most significant project is reconstruction of the I-96/U.S. 23 interchange, planned for 2015. Widening of the I-96 bridge over Old U.S. 23 is scheduled for 2016.

Street and Corridor Character

Street width and scale, sidewalks, building setbacks, design speed, right-of-way width, street trees, signs and even pavement markings can contribute to how the street functions and the perceptions of the driver. Driver perceptions can affect vehicle speed and the care used in driving. The character of the street corridor as viewed by the motorist also impacts the overall image of Brighton Township.

The major road corridors in the Township must be treated as design elements that represent the quality and character of Brighton. Successful commercial corridors should be free of unsightly clutter and be easy to navigate to find a destination. Streets in residential areas should make drivers intuitively drive at a low speed. In some cases, the road design elements in the Township reinforce the desired image, while in others improvements need to be considered. This Plan relies on a range of approaches to help ensure the future transportation system operates safely and efficiently, but also in context with the character of the Township.



Greenspace

Road cross-sections can accommodate greenspace between the sidewalk and the curb where trees and lawn areas can be planted. This space should be a minimum of eight feet wide to allow ample foundation for tree planting and for easier maintenance. Alternatively, more native plantings and natural landscaping should be used along the more rural corridors in the north and eastern portions of the Township.

Street Lighting

Consistent street lighting is important for safety and as a decorative element to unify more urban corridors. Use of street lighting in strategic areas intended for mixed-use or urban development can enhance the pedestrian scale by creating a safe and attractive walking environment. Lighting in rural or non-urban areas should still be consistent with the Township's general vision for dark skies and low lighting levels.

Community Gateways

Entryway signage helps to attract and direct visitors, and serves to define the "edge" of a community. Access to Brighton Township is provided through several Principal Arterial and Minor Arterial streets. Brighton Township may benefit from clarifying and establishing a unique identity through entryway treatments.

The entryway into the Township provides the visitors their first and sometimes strongest impression of the Township. It is a reflection of its residents and businesses. To maximize impact, attractive gateways should be constructed at road intersections that carry the most traffic, or are major connectors into and out of neighboring communities. These points represent the areas of highest visibility where the heaviest traffic flow takes place around the Township's edge. Entryway treatments would highlight Brighton Township's small-town, pastoral character through aesthetically appealing signage and plantings. Large, broad plantings that sweep around the entryway and open it up visually can create a sense of grandeur that reflects the current and future character of the Township.

Gateway signs are currently planned at the north and south Township boundaries, and along Grand River Avenue at the east Township boundary. Other gateways are planned at other entry points into the Township. Planned gateways are shown on Map Three.

Non-Motorized Transportation

As previously mentioned, the revised Township Pathways Plan from 2009 prescribes the priorities to develop and improve non-motorized traffic within Brighton Township and to regional parks and other destinations. The Township should pursue implementation of the Pathways Plan, as it continues to be a priority for many residents.

Traffic Calming

Residents expect low volumes of traffic and low speeds within neighborhoods. In areas where high volumes and speeds are noted, traffic calming measures may help keep driver speeds at an appropriate level. Because the Township does not have jurisdiction over roads, these techniques are intended to express the Township's desire to see traffic calming implemented where appropriate.

Traffic calming measures cause drivers to slow-down and be more attentive. Traffic calming is a way to visually and physically impede speeding in residential areas. The physical change in the road parameters and the psychological change in the "feel" of the road reduce the speed of vehicles. Some of the common traffic calming measures described below may be appropriate in certain situations in the Township after considering a number of factors such as traffic volumes, cost, maintenance, and impact on emergency access.

- **Speed Humps and Speed Tables.** Speed humps are vertical variations in the road designed to encourage safe vehicle speeds (15 to 20 mph). They extend across the width of the pavement and range between 2-4 inches in height and 14-22 feet in length, though designs vary based on their location. Speed tables are similar to speed humps, but are constructed with a table or flat portion in the center, which can also provide more aesthetic benefits than humps.
- **Street Narrowing, Slow Points, or Chokers.** These features can include curb modifications, channelization, and sometimes landscaping features that narrow the street to a minimum safe width. They are often installed at intersections to reduce speed and/or redirect traffic. They provide larger areas for landscaping, enhance the neighborhood, facilitate loading and unloading and optimize the pedestrian crossing locations.
- **Boulevards.** Boulevards include center islands that divide the opposing travel lanes at intersections or at mid-blocks. They are aimed at reducing vehicle speeds while enhancing the pedestrian crossing points and safety.
- **Perimeter Treatments.** Visual and physical treatments are used to communicate a message to drivers entering a residential neighborhood. Traffic signs, intersection narrowing, boulevards, textured pavement surfaces such as brick and landscaping features are often used to create this effect. Entry treatments can be a visual enhancement and can be used to increase driver awareness of changes in roadway environment.

Residential Connections

With any new roadway development, roads should be required to tie into the existing road network, and use of cul-de-sacs and other dead end streets should be discouraged except in areas where natural features, such as wetlands, or existing adjacent development patterns precludes through streets. A connected street system is beneficial because of the following:

- Motorists are provided with multiple routes, which help to reduce driving distances and diffuse traffic.
- Road connections between adjacent subdivisions allows for the movement between neighborhoods without the need to access major roads. It also provides alternative means for residents within the subdivisions to access the major road network at locations that are most efficient for traveling to their destination, shortening trips and thereby minimizing traffic impacts to the major road network.
- Connected streets also provide continuous secondary routes that enhance non-motorized transportation. With connected streets, special consideration needs to be given to network design to discourage use by through traffic that does not have an origin or destination within the local neighborhood.

Coordination with Road Agencies

As part of the Michigan Planning Act, communities that plan for public streets must coordinate with other road agencies. While most of the road jurisdiction in Brighton Township rests with the Livingston County

WHY COMMUNICATE?

- To provide coordination between transportation and land use
- To encourage collaboration between MPOs/ local governments and state/federal transportation agencies
- To plan for multi-modal travel

Source: Federal Highway Administration 2005 study

Road Commission (LCRC) and Michigan Department of Transportation (MDOT), the Township must continue to stay abreast of and be involved in future transportation planning by continuing positive working relationships with these agencies. The Southeast Michigan Council of Governments (SEMCOG) is responsible for developing the Regional Long Range Transportation Plan, which lists planned improvements within the region for the next 20 years. Communication with SEMCOG will

therefore be critical to ensuring needed local projects are incorporated into its 5 year Transportation Improvement Program. The following tools can be used to improve current relationships:

- **Education and Dialogue.** Each party in the transportation planning process must understand and appreciate the goals of the other in order to successfully collaborate. Working together minimizes confusion and mis-communications.

- **Technology.** Use of computer models is more common, and the information they contain is more widely shared. Use of imperative data and tools will help reduce misconceptions, generally-accepted assumptions, and provide a more refined basis for discussion.
- **Flexibility.** Building more flexibility into project design standards can help ease tensions between opinionated participants.
- **Criteria and Evaluation Mechanisms.** Develop structured guidelines that are based on shared goals early in the process will help build consensus later in the process.

More specifically, the following may facilitate coordination with the Livingston County Road Commission (LCRC), SEMCOG, and the Michigan Department of Transportation (MDOT):

- Appoint a designated Board liaison to attend LCRC meetings
- Discuss policy and other changes that may affect their operations
- Communicate regularly with the LCRC, SEMCOG and MDOT regarding goals and needs for the community, either through an annual report, or other means
- Identify a protocol to cooperatively evaluate access and traffic impacts during the development review process

Implementation Strategies

The actions below are specific recommendations that may be used to accomplish one or more of the above policies. Table Six should act as a checklist of items that the Township should work toward completing.

TABLE SIX Transportation Strategies		
Actions	Priority	Responsibility
Coordination		
Monitor transportation conditions, and plan for road improvements and design that reflect the Township's character, coordinated through the Michigan Department of Transportation, County Road Commission, adjacent communities, and developers.	Ongoing	All
Share important documents, studies and plans, and coordinate efforts with local and state road agencies to ensure future improvements are complementary to all plans and policies.	Ongoing	PD, PUD
Work with MDOT and the Livingston County Road Commission to plan for the timing of interchange improvements and expansions, such as for Spencer Road, Pleasant Valley Road, Old US 23 and Hyne, if needed.	Ongoing	PD, TB
Work with the Livingston County Road Commission and MDOT to develop creative ways to address traffic flows, such as new technology, roundabouts, and narrow medians.	Ongoing	PD, TB
Request SEMCOG to use the Master Plan's future land use plan to update the transportation model to evaluate the impact of future development in Brighton and to program transportation improvements.	Ongoing	PC, TB, PD
Provide a copy of the Master Plan to the Livingston County Road Commission, MDOT and SEMCOG.	Ongoing	PD
Appoint a regular liaison to attend Livingston County Road Commission meetings.	Short-term	PC, TB, or UC
Regulations		
Promote connections between adjacent subdivisions to provide alternative routes for local travel.	Ongoing	PD, PC
Continue to require traffic impact studies as a part of the rezoning and/or site plan review process for developments that are anticipated to generate significant volumes of traffic, in accordance with the practices outlined in MDOT's <i>Evaluating Traffic Impact Studies – A Recommended Practice for Michigan Communities</i> .	Ongoing	PD, PC

Minimize the number of access points for individual uses along arterial roadways by encouraging the use of shared driveways and other access management techniques.	Ongoing	PD, PC
Promote shared service drives between adjacent commercial sites to minimize curb cuts along arterial roadways.	Ongoing	PD, PC
Promote adequately sized, aesthetically pleasing off-street parking areas for new commercial, industrial, multiple-family and condominium residential developments.	Ongoing	PC

Improvements and Public Policy

Establish consistent entry sign and landscaping theme that serves to inform and welcome visitors to the Township at important gateways into the Township. The locations of these gateways are shown on <i>Map Three</i> .	Short-Term	TB
Continue to evaluate the need for expressway interchanges through communication with MDOT.	Long-Term	TB

* PC= Planning Commission, TB= Township Board, PD= Township Staff, UC = Utilities Committee, HA = Homeowners Associations



CHAPTER FOUR

Natural Features

Introduction

The natural environment is a critical element of the physical basis upon which the community develops. The various components to the natural environment, including topography, water, soils, agricultural land, wetlands, and woodlands; function, change, and interact as part of the ecosystem. Natural features serve a variety of aesthetic and recreation functions. These natural functions need to be maintained in a healthy state, while still allowing the community to grow in a controlled manner. Development within the Township should be directed to areas that can best sustain the physical changes to the landscape without negatively impacting the community's natural features. Those areas which are not well adapted to development, or if developed may have major impacts to other parts of the community, should be protected. The conservation of these natural features will also increase the quality of life for Township residents.

Much of the environmental features data for the Township was gathered from the Southeast Michigan Council of Governments (SEMCOG) and the United States Department of Agriculture (USDA) and are depicted on Map Four.

Existing Natural Features

Topography

The attractive topography of Brighton Township consists primarily of gently rolling hills and a few areas with steep slopes. This topography harbors substantial sand and gravel deposits, which present attractive extractive business opportunities. Steep areas, ranging in gradients from 15% to greater than 25%, are frequently viewed by developers as impediments for large-scale development, and are often leveled. Removal of hillside or riparian vegetation can cause soil erosion and can ultimately contribute to water quality degradation. Careful deliberation is needed before such excavation is permitted which would destroy this attractive resource.

Surface Water

Brighton Township is home to several small bodies of water, over twenty named lakes, many ponds, and several streams which comprise over 1,000 acres, many of which are used for recreational purposes. The water is located in four drainage basins that are channeled into the Huron River Watershed. Aside from the recreational and aesthetic benefits, these lakes offer superior living environments that are increasingly attractive to new residents. Efforts to maintain and improve the quality of surface water must be a priority to protect the local aesthetics, recreational opportunities, aquatic and plant life, and local land values.

Ground Water

The underground water resources found in Brighton Township are located in glacial deposits and bedrock. Most of the deposits are underlain by the Coldwater Shale bedrock which is not generally considered a quality groundwater source. Berea Sandstone underlies glacial deposits in the southwest corner of the Township, which tends to provide a higher quantity and quality of water.

In 2002, Brighton Township committed to expand municipal water into the Township, and it joined Green Oak and Hamburg Townships to form the Livingston Community Water Authority (LCWA). LCWA water mains serve buildings on Whitmore Lake Road and Old US-23 from the south Township line to Old Lane. The LCWA currently has sufficient capacity to provide water to the Township; the Township has made the necessary plans to protect other groundwater resources. The primary groundwater resource available in Brighton Township is located near Woodland Lake, abutting the City of Brighton. To protect this resource, Brighton Township

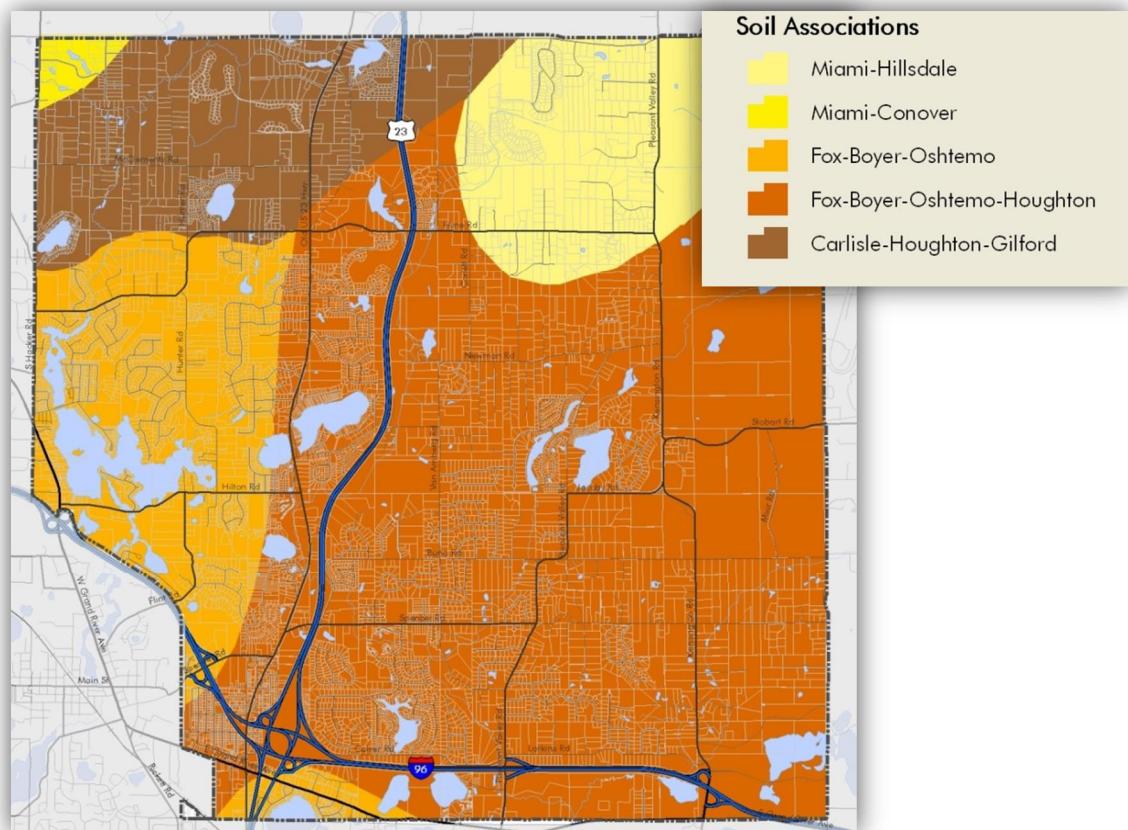
established a wellhead protection area, shown on Map Four. The Township is working to extend water service along Old US-23 to Spencer Road.

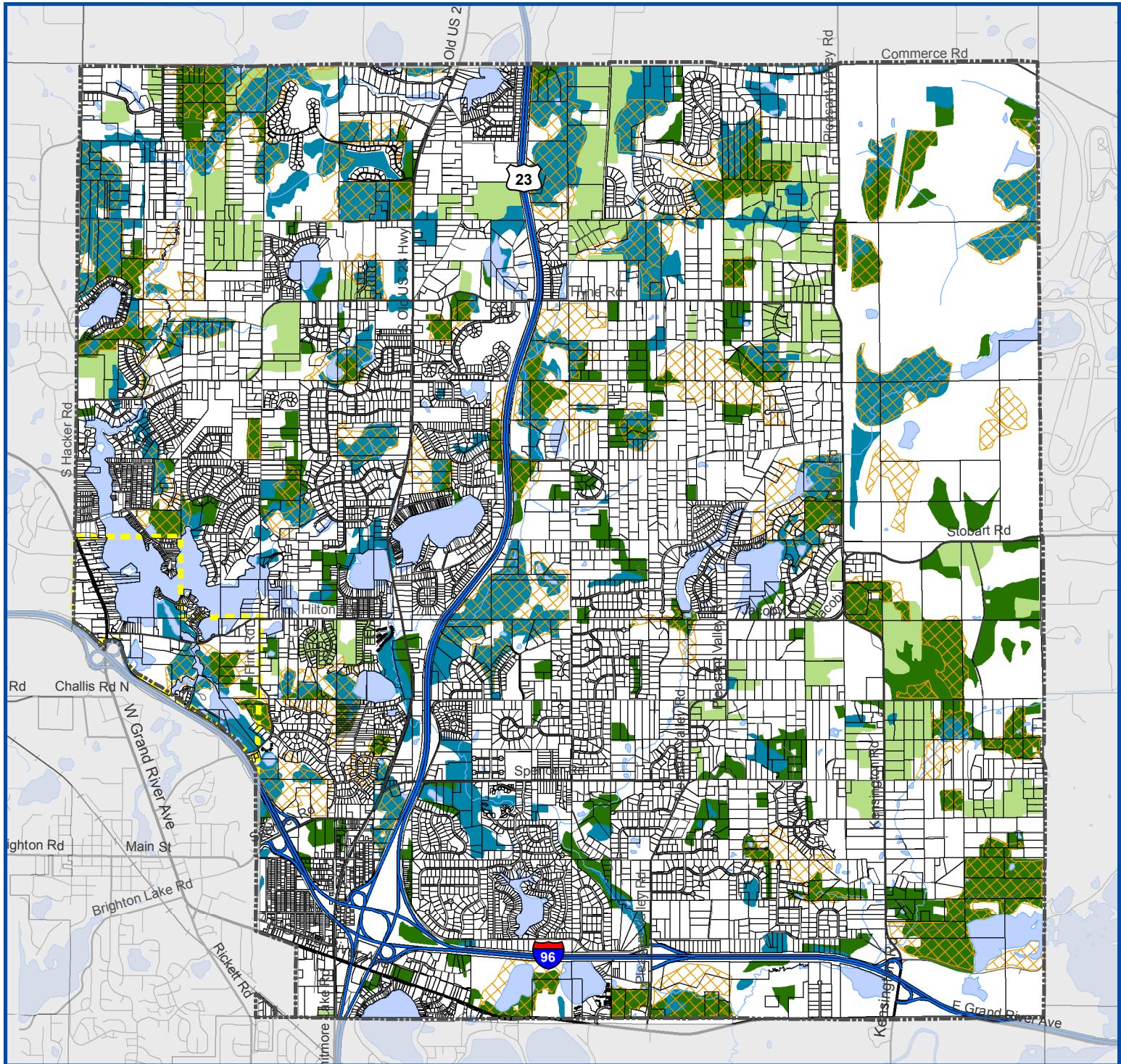
Soils

The soils in Brighton Township vary, but can be put into five general soil associations. A soil association can consist of more than one soil type, but is named for the major soils they typically contain. These associations are general and are not for development approval purposes because slope, depth, drainage, and other characteristics are site specific, the limits of which can only be determined through additional study and site surveys. The five soil associations in Brighton Township are:

- **Miami-Hillsdale Association.** Strongly sloping to hilly, well-drained, medium-textured and moderately coarse textured soils on moraines and till plains.
- **Miami-Conover Association.** Nearly level to strongly sloping, well drained to somewhat poorly drained, medium-textured soils on till plains and moraines.
- **Fox-Boyer-Oshtemo Association.** Steep or hilly, well drained, moderately coarse to coarse textured soils on moraines.
- **Fox-Boyer-Oshtemo-Houghton Association.** Nearly level to steep, well drained, moderately coarse textured soils and very poorly drained, coarse textured organic soils, on outwash plains.

- **Carlisle-Houghton-Gilford Association.** Nearly level, very poorly drained, organic soils and moderately coarse textured soils on outwash plains in glacial drainageways, and on lake plains.





Map Four

Woodlands & Wetlands

Brighton Township Master Plan

- Boundary
- Wellhead Protection Area
- Water
- Natural Feature Protection Areas
- Agriculture
- Woodlands
- Wetlands

ADOPTED: May 14, 2014

Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



0 0.5 1 1.5 2 Miles

Agricultural Land

With only a few scattered working farms in the Township, agricultural land encompasses only a tiny percentage of the overall land. Agricultural land helps maintain rural aesthetic, preserve open space, and provide important wildlife, flora, and fauna habitats. The suitability of land for farming is dependent upon the physical characteristics of the land, namely soil conditions. Soil conditions are perhaps the most significant factor influencing whether or not a parcel of land is capable of supporting agriculture. Little farming is conducted within the Township due to these soil conditions as well as continuing development pressures. There are however three different types of classifications of agricultural land within the Township.



- **Cropland.** Land used to produce crops such as small grains, hay or row crops including vegetables.
- **Orchard, Bush Fruit, Vineyards, and Ornamental Horticulture Areas.** Areas that produce fruit and berry crops, nurseries, flower and seed production areas, and sod farms.
- **Farmsteads.** Single farmsteads as well as barns and out buildings surrounding the house and the grounds that are maintained adjacent to the house.

Wetlands

Wetlands serve as natural water retention, and as such can act as transitional areas between aquatic ecosystems and the surrounding upland areas, and are vital to the maintenance of high quality surface and ground water resources. Wetland systems have the ability to hold larger volumes of water during times of flooding or heavy snowmelt. In this capacity, they can regulate water levels and provide critical wildlife habitat. Wetlands may include areas that are seasonably wet through a surface or ground water influence, or areas that are more permanently saturated throughout the year. Just under 4,300 acres of wetland, both forested and non-forested, exist within the Township, and are comprised of a combination of six different types.

- **Mixed Wooded Wetlands.** Areas that are dominated by trees more than twenty feet tall and the soils surface is seasonally flooded with up to twelve inches of water. Several levels of vegetation are usually present including trees, shrubs and herbaceous plants.
- **Lowland Hardwood Wetlands.** Consists of ash, elm, soft maple, cottonwood, balm of Gilead, and other lowland hardwoods.
- **Lowland Conifer Wetlands.** Areas of predominately cedar, tamarack, black and white spruce, and balsam fir stands.
- **Emergent Wetlands.** Areas that are 30% or more covered by rooted herbaceous hydrophytic plants that are present for most of the growing season in most years.
- **Deep Marsh Wetlands.** Areas with an average depth between six inches and three feet during the growing season. Emergent marsh vegetation is usually dominant, with surface and submergent plants present in open areas.
- **Shrub/Scrub Wetlands.** Areas that are dominated by woody vegetation less than twenty feet tall.



Wetlands are vital to the environmental quality of the Township and serve a variety of important functions that benefit the community such as mitigating flooding by detaining surface runoff, controlling soil erosion and sediment loading in rivers and lakes, providing links with groundwater and improving water quality, and providing important wildlife, flora, and fauna habitats.

All wetlands that are contiguous with (within 500 feet) a waterway or any wetland that is greater than five acres in size are regulated by the Michigan Department of Environmental Quality (MDEQ) through Part 303 of the Natural Resources and Environmental Protection Act (NREPA). Any dredging, excavating, construction within or making use of a wetland requires a permit from the MDEQ. Permits will generally not be granted unless the issuance is in the public interest and necessary to realize the benefits derived from the activity. If a wetland fill permit is granted, mitigation, such as creating new wetlands within the same drainage way or enhancement of existing wetlands is required.

The Township also regulates wetlands through the Zoning Ordinance. In 2004, Brighton Township adopted a "Wetlands and Waterways Protection" Article. This article expanded the scope of wetlands that are regulated in Brighton to include wetlands over two acres in size, as well as those wetlands deemed significant to the environmental quality of the Township. The Ordinance regulates potential hazardous activities conducted within the regulated areas including removal of vegetation, drainage of water, construction, mining or extraction, deposit of material, or alterations to wetlands such as filling, dredging or enlarging.

Woodlands

Most woodland clearing occurred during early settlement of the Brighton area as farmers cleared existing woodland areas for agricultural purposes. What remains are some significant areas of woodlands scattered throughout the Township. In total, woodlands cover over 2,000 acres of land in Brighton Township. Woodlands and hedgerows along property lines and roads provide a variety of benefits.

- **Central Hardwood Forests.** Areas which include beech/maple and oak/hickory forest lands. Also included are sugar and red maple, beech, basswood, cherry, and ash.
- **Pine Forests.** Areas where white, red, jack, and scotch pine predominate.

Determining Factors

Brighton Township is fortunate to have a unique landscape that includes significant topographical, water and soil resources. To protect these resources requires identification of threats to the local ecosystem, and action to correct, improve or prevent them. The following factors were identified through discussions with Township staff, officials, and a public involvement process that included both an open house and focus group meetings.

- ✓ **Attractive Community.** Brighton Township is an attractive place to live, which has attracted many families and residents within the past few decades. This development increases traffic volumes on the road system created by new commuters and local traffic.
- ✓ **Development Impacts.** As development continues in Brighton Township, additional strains will be placed on the ecosystem. It is important that future development is carried out in a manner that conserves important environmental features and natural areas. Filling of larger wetland areas can reduce the watershed's capacity to naturally regulate flooding. Weakening of soils on hillsides can occur during foundation excavation and is further enhanced by removal of vegetation. This can lead to increased soil erosion and subsequent water pollution caused by sedimentation of lakes, rivers and drains. In addition, lawn maintenance practices and lifestyle choices after development has occurred can intensify these effects.
- ✓ **Protection of Water Resources.** Of paramount concern to Brighton residents is the quality of local water resources, both underground and surface waters. Residents in general expressed concern that larger developments are slowly depleting groundwater resources. Township wellhead protection standards help protect possible public water supplies.
- ✓ **Community Character.** Residents have continually expressed their desire to see the existing residential character maintained. Removal of vegetation for new roads, land balancing to



reduce steep slopes, elimination of riparian corridors, and other typical development practices can threaten the natural environment that contributes to community character.

- ✓ **Legal Limitations.** As discussed in other chapters of this Plan, Michigan law can impact the natural resources of the community. Currently, the State regulates wetland impacts and changes to the floodplain. These regulations may be more or less severe than desired in Brighton. Careful review of current laws, as well as continued monitoring of proposed and developing legislation, should be done to ensure the State is adopting regulations that are appropriate for the Township. Where they do not promote local policy, the Township should determine if local ordinances are more appropriate than State laws.

Current Regulations

Brighton Township has been planning its future for years. As a result, a variety of past recommendations have already been implemented, which are highlighted below:

Natural Resources District

The Natural Resources District recognizes the need to regulate extraction of sand and gravel deposits, both to protect these non-renewable resources, but also to protect the quality of life of nearby residents. The ordinance discusses how temporary mining activities can take place under a long-term plan for restoration and future use of gravel mines.

Natural Features Overlay District

The Township adopted a Natural Features Overlay District to help preserve key natural features. It provides creative zoning tools and development options that maintain property rights while protecting quality natural resources. Development according to the underlying zoning is allowed, but allows for the design and arrangement of physical elements in such a way as to protect priority resource areas both on the site and in the vicinity of the site as identified by Brighton Township and Livingston County. The overlay encourages use of Planned Unit Development zoning to further achieve the regulatory flexibility needed to protect resources while maintaining property rights.

Within the natural features protection areas, as identified in an Environmental Impact Assessment, is a minimum setback requirement. Development surrounding water features such as streams and wetlands,

affects the function of the water feature. Wetlands, in particular, are dependent on an interaction between the wetland and the surrounding upland. In addition to the hydrologic function, waterways are natural open space corridors that serve as wildlife habitat. Development immediately adjacent to a water feature can have the effect of increasing the disturbance to this natural ecosystem and reducing the water feature's ability to perform its natural function. Alternatively, maintaining a protected buffer from these features can help repair impacts of existing development upstream.

Wetland and Waterways Protection Ordinance

This ordinance was adopted to strengthen wetland regulations by allowing the Township to participate in regulation and enforcement of activity that can affect wetlands and waterways. The ordinance seeks to prevent the pollution or contamination of these resources, minimize disturbance to them and natural habitat therein, and prevent damage from erosion, siltation, and flooding.

Environmental Impact Assessment

As part of the Natural Features Overlay District regulation, Brighton Township requires environmental impact assessments for all development within the Natural Feature Protection Areas, as shown on Map Four. The assessment must be prepared by a qualified professional, and must identify all significant natural features of the development site. From the assessment, protection areas are outlined to include features that naturally regulate flooding, contain significant vegetation, water, groundwater resources, floodplains, wildlife corridors, buffers, slopes and viewshed areas.

Other Zoning Regulations

- **Multi-Access Riparian Sites (Sec. 13-07).** This ordinance prevents excessive use of lakeshore property by limiting the number of homes or properties that can jointly use land for recreational purposes. Also known as "keyholing" this practice can often lead to poorly managed and maintained sites with a variety of health concerns that arise from lack of proper sanitary facilities, improper parking and use by un-informed citizens.
- **Limit on Excessive Parking (Sec. 15-01).** The zoning ordinance lists the ratio of parking spaces required to serve each type of land use allowed in the Township. While these provisions have reduced the number of sites without adequate parking, they also limit the amount of land that is covered by pervious pavement. Allowing narrower or shorter parking spaces and maneuvering lanes, even by a slight

amount, can sometimes prevent paving of large areas of land that may never be used.

- **PUD Ordinance (Article 12).** Planned Unit Developments are intended to provide regulatory flexibility needed to allow desired development that could not be achieved using the underlying zoning. They were created to permit the coordinated development on larger sites, protect significant natural features present which the property owner and Township wish to preserve, to provide the opportunity to mix compatible uses or residential types, or allow clustering of residential units to preserve common open space and natural features.
- **Residential District Regulations.** Recognizing the need to protect lakefront property, water quality, and the general character these elements provide to the overall community, the Township regulates development on lakefront property in the following ways:
 - A 25 foot setback is required from all natural features, including lakes, ponds, streams, drainage ways, or regulated wetlands
 - Restrictions regarding the size and lot coverage of buildings helps prevent overcrowding and over use of the lake.
 - The number of docks permitted per lakefront lot is limited to one, which can be used by the property owner/resident only.

Natural Features Recommendations

The following recommendations were developed to give direction to the Township Board, Planning Commission and the community in general when making policy decisions regarding the natural environment. The Township should refer back to them on a regular basis, or when deciding on critical ordinances or other programs, to ensure they are managing the community's natural resources in a way that is consistent with this Plan.

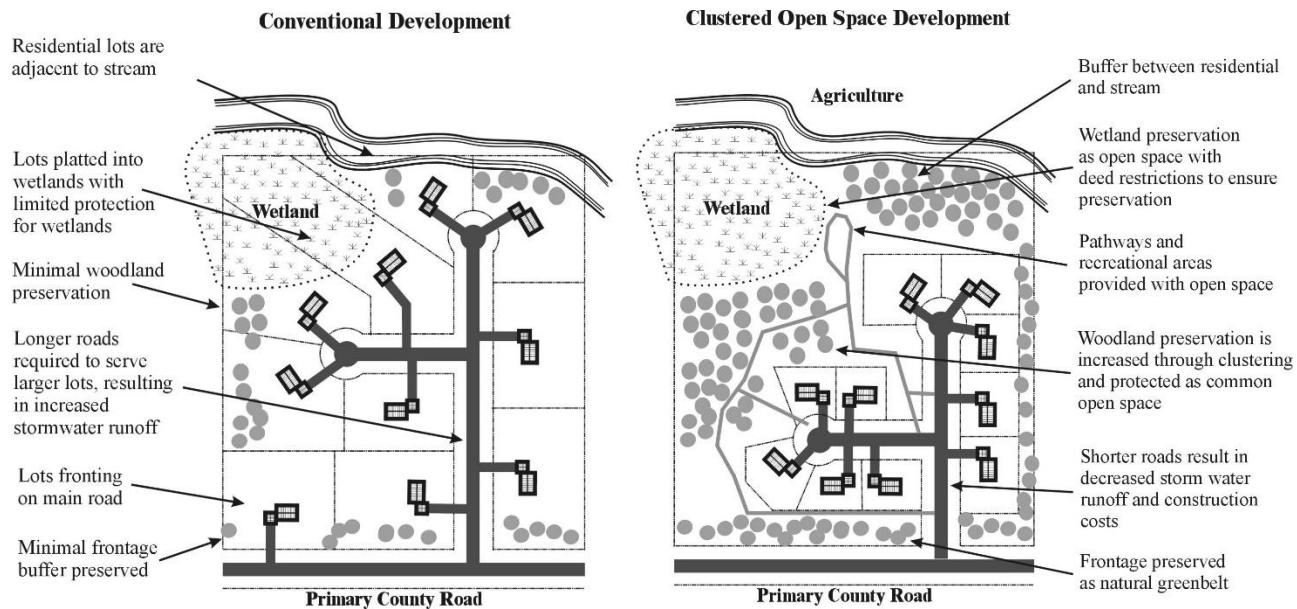
NATURAL RESOURCES GOAL

Enhance the quality of life in Brighton Township by encouraging the conservation of prime natural amenities such as water bodies, floodplains, open space, wetlands, woodlots, aquifers, and well-head areas.

Consideration of natural features during the site planning and development process will help improve and protect the area's existing natural resources. Some of the options for protecting natural features while development occurs are described below.

Clustered Open Space Development

Utilizing clustered development is one of the most effective means of preserving existing vegetation and other valuable natural features. Brighton Township has successfully implemented this mechanism, as evidenced by several residential PUDs developed in the Township. Specific standards were adopted to encourage preservation of open space, vegetative cover and natural topography during site plan review.



Clustering is also utilized to preserve greenway corridors, buffers and natural open spaces. In addition to preserving natural features, these regulations require the provision of landscaping and buffer strips to enhance the natural character of a site. The Township should strongly encourage developers to use this mechanism for both residential and commercial developments. Currently, PUDs are consistently pursued by developers; the Township should continually review these standards to ensure they remain relevant to the development community and provide adequate incentives to encourage their use in the future.

Low Impact Development (LID)

Low Impact Development (LID) is an approach to development aimed at conserving natural resources and protecting the environment by strategically managing rainfall close to its source, minimizing impervious coverage, using native plant species, and conserving and restoring natural areas during site development or redevelopment. Design techniques are focused on the use of applications that are modeled after nature, rather than building costly infrastructure and water quality restoration systems.



While low impact design is encouraged wherever it can be applied, it is specifically warranted in areas where vegetation may be installed in lieu of impervious surfaces (i.e. pavement). It can be applied to open spaces, rooftops, streetscapes, parking lots, sidewalks, and medians. In many cases, these beneficial design alternatives offer a significant long-term cost savings, even when factoring in some additional maintenance costs. Design options to consider include use of rain gardens, native plant species, street trees (i.e. Planter Boxes, Tree Pits), bioswales and porous pavement, guidelines for which are provided below:

- **Bioretention (Rain Gardens) and Bioswales** should be considered in areas between the new or existing sidewalk where driveways are removed and in areas where the road median is relocated or enlarged. Larger drainage areas may require a combination of facilities and overflow areas should be provided for larger rain events. Plant species should be salt tolerant, provide aesthetic benefits and be low maintenance. Sidewalks should be designed to direct runoff into these areas, and maintenance agreements should be included as part of any approval.
- **Native Street Tree Planters** are recommended where earth is disturbed due to the removal or relocation of a driveway or median crossover. Maximizing exposed soil around the tree will facilitate water infiltration; however, tree grates and planter options can be applied in more urban or high pedestrian traffic areas. Street tree species should be varied to minimize the potential of invasive threats.
- **Porous pavement** may be considered instead of previous applications (i.e. asphalt or concrete) in parking areas or the road gutter. To function properly, porous pavement requires adequate

subsurface soil conditions, overflow connection to a storm sewer or other final discharge location and routine vacuum maintenance. Porous pavement should not be installed in areas where there is a potential for soil contamination.

Storm Water Management

Increased development activity places additional burden on existing natural drainage systems. The overtaxing of drainage systems leads to localized flooding, environmental damage and costly storm drainage improvements to be borne by taxpayers. Storm water drainage can be managed by installation and improvements to storm water drainage systems and by requiring on-site detention of storm water, which Brighton Township currently does. Another way to manage storm water is through preservation of natural drainage ways and providing onsite storm water detention with controlled discharge. Through these approaches, the impact of development on drainage systems can be minimized.



Acknowledging that some impacts must be anticipated, a comprehensive approach to storm water management using Low Impact Design recommendations (see above) is encouraged. These types of measures will be much more effective in pre-treatment of storm water before it enters the ground or surface waters. Storm water protection can be achieved through many of the other recommendations in this chapter. Some additional policies not discussed include:

- Private road standards should allow shorter streets to reduce the amount of pervious coverage. Narrower roads may be considered if allowed by the Brighton Area Fire Authority.
- Minimize use of long cul-de-sacs in favor of connected street patterns.
- Encourage clustering of homes to minimize total impervious area, reduce total construction costs, conserve natural areas, provide community recreational space, and promote watershed protection.
- Promote more flexible design standards for residential subdivision

sidewalks. Where practical, consider locating sidewalks on one side of the street and providing common walkways linking pedestrian areas.

- Minimize clearing and grading of forests and native vegetation, except where necessary to accommodate development.
- Conserve vegetation by clustering tree areas, promoting the use of native plants, and planting additional vegetation.

Public Education Efforts

Many citizens are unaware how their typical lawn maintenance practices can degrade local resources. Therefore, it is critical that they understand the impact of overall growth and development on community natural resources. Even more important, landowners should be made aware of methods they can implement on a local scale that can contribute to a larger environmental program. Additional outreach efforts can be made through local organizations, homeowners associations and regulating agencies.

Watershed Planning

A more regional approach to conservation includes watershed planning. Watersheds and the sub-basins within them can be identified using GIS mapping technology that considers topography to locate changes in drainage direction and establish the watershed boundary. Studies have shown that over-development, typically defined as over 10% impervious coverage, within a given sub-basin or watershed can contribute to overall water quality degradation. By requiring minimum vegetated buffers, maintaining riparian corridors, and limiting impervious surface coverage can all help mitigate the impacts of development. Often implemented in a coordinated approach with neighboring communities, protection of watersheds must include all municipalities that regulate any portion of a given watershed and, therefore, requires the Township to pursue local relationships with their municipal neighbors. Additional research to establish watershed and sub-watershed boundaries and existing natural vegetation along surface water resources is needed to accomplish this objective.

Protection of Lakes

Protecting the integrity of the local lakes is vital to maintaining the current quality of life in Brighton Township. Most lakes are surrounded by residential development, which means that impacts to those lakes will also affect the residents that live there. These impacts can be both ecological and recreational, as overpopulation of the lakes can contribute to water quality degradation. Various lake associations are active in preservation efforts, including participation in an on-going water quality monitoring program. The testing program involves volunteers from various homeowner associations to collect water samples and submit them to a biologist who prepares detailed analysis and reports. If pollutants are discovered, the Township must act quickly to address them by working with the State Department of Environmental Quality and the County Drain Office to identify methods, regulations and remediation practices that should be taken to reverse any negative issues. Ongoing water testing will allow the Township to identify concerns early enough to address them before they evolve into a more significant health issue.

Other efforts that can be taken to protect lake water quality include:

- Continuation of homeowner-association support for weed control and dam maintenance.
- Commercial or non-residential development should be discouraged along the banks of any lakes because of their increased potential for degradation.
- A few of the lakes cross the Township boundary into other jurisdictions. In these cases, coordinated preservation efforts with the neighboring community are needed.
- Coordination with other agencies whose policies may affect Township residents, including the Livingston County Road Commission regarding road crossings, the Michigan Department of Natural Resources for enforcement and monitoring of marinas and launches, and the Livingston County Sheriff's Department for policing and patrolling of the lakes, including during the winter when snowmobiling is more prevalent.
- Continued public education, as described above, to inform land owners of the hazards of over use of fertilizers, pesticides and ice salt.



Woodland Protection

The preservation of woodlands as part of any development is vital to maintaining the natural community character. Brighton Township uses the environmental impact assessment and natural features overlay district regulations to identify woodlands as part of the site plan review process, which essentially protects land within the non-residential zoning districts. Consideration of bonuses or other incentives should be made to encourage woodland preservation. Site inspections and other methods of enforcement from the Township are also necessary to ensure compliance with regulations and appropriate implementation. Significant woodlands need to continue to be protected including:

- Forested areas that create significant woodlands.
- Linkage strips where rows of trees create linear corridors and buffers between uses.
- Trees along roads, which help preserve the community character.
- Significant individual landmark trees.

Implementation Strategies

The actions below are specific actions that may be taken, or concepts to use that can help accomplish the above goal and recommendations. Table Seven should act as a checklist of items that the Township should work toward completing.

TABLE SEVEN
Natural Features Strategies

Actions	Priority	Responsibility
Coordination		
Work with Livingston County, Michigan Department of Natural Resources and Environment (MDNRE), organizations and landowners to identify key environmental and natural features.	Ongoing	PC, PD, HA
Provide Development Guidelines to local design professionals and applicants during pre-application meetings.	Ongoing	PC, TB
Continue to work with the Livingston County Public Health Department to monitor environmental limitations that may affect land use and density.	Ongoing	PD
Coordinate with adjacent communities, landowners and the County on watershed and storm water planning with a goal towards shared systems and natural approaches.	Ongoing	PC, PD, HA, UC, TB

Continue working with adjacent communities, agencies and watershed councils and groups to inventory area watersheds, develop a regional watershed plan and devise compatible regulations to protect the entire region's resources and water supply.	Ongoing	PC, PD
Work with lake associations, lake boards and homeowner associations to educate them on groundwater and lake quality preservation through proper use of fertilization, removal of exotic species, septic tank maintenance and preservation of riparian vegetation.	Ongoing	TB, PC, PD, HA, UC
Retain road shoulders and unused right-of-way in a natural state whenever possible, in conjunction with the Livingston County Road Commission. Where appropriate, consideration should be given to the introduction of native plantings to add to the aesthetics of the roadway corridors.	Long-Term	TB, UC
Regulations		
Preserve and enhance important landscaping and natural features along roads in the Township, where feasible. An easement may be required to preserve existing and enhanced vegetation when a subdivision or site plan is approved.	Short-Term, Ongoing	PC, UC
Provide development incentives to limit the amount of woodland clearing.	Ongoing	PC
Require development reviews to include information pertaining to the effects of the development on area groundwater sources.	Ongoing	PC, PD
Ensure development plans on sites with slopes exceeding 25% are reviewed by the Township Engineer.	Ongoing	PC, PD
Discourage land uses that have a high risk of pollution from locating adjacent to significant natural features or near underground aquifers, public well-heads and wellhead protection areas.	Ongoing	PC
Require environmental impact studies for areas with significant natural features so development is more sensitive to the surrounding environment. Encourage protection of floodplains, wetlands, groundwater resources, natural features, and other environmental features when reviewing development proposals. Prohibit or significantly limit development that would disturb or impact floodplains, wetlands or surface water.	Ongoing	PC, TB

Review regulations to protect water quality and regulations restricting placement of driveways, parking lots and storm drains to locations away from important natural features.	Short Term	PC, TB
Consider where use of porous materials can be allowed, such as in low-volume driveways, parking lots, sidewalks, loading areas, emergency lanes, etc.	Short Term	PC, TB
Improvements and Public Policy		
Research the protection of significant natural features through donation of land to conservancies, open space development strategies, conservation easements, the creation of a land trust, or acquisition of land.	Long-Term	PD, TB
Direct homeowners and residents to existing resources for lakefront restoration plans. These resources should recommend plant types and native species that can help provide filtering buffer strips and wildlife habitat in place of lawns along lakefront properties.	Ongoing	PD, HA
Where possible, pursue a natural conservation approach that results in "linked" natural areas.	Ongoing	TB, PC
Explore opportunities to preserve important natural areas and/or features through creative zoning, private open space, conservation easements, or purchase by conservancies.	Long-Term, Ongoing	TB, HA, PC

* PC= Planning Commission, TB= Township Board, PD= Township Staff, UC = Utilities Committee, HA = Homeowners Associations



Introduction

Brighton Township offers a range of community facilities to its residents and businesses and cooperates with different agencies to provide important public utilities. The quality, availability and cost of these elements are among the many factors influencing growth and redevelopment. Residential, commercial and especially industrial users make location decisions based, in part, upon the ability of a municipality to meet their present and future needs in a cost-effective manner.

Community facilities include schools, parks, public safety and Township offices, all of which are provided to serve the needs of residents and businesses in Brighton Township. Utilities, including public water and public sanitary sewer services, are also discussed in this chapter.

Existing Community Services and Facilities

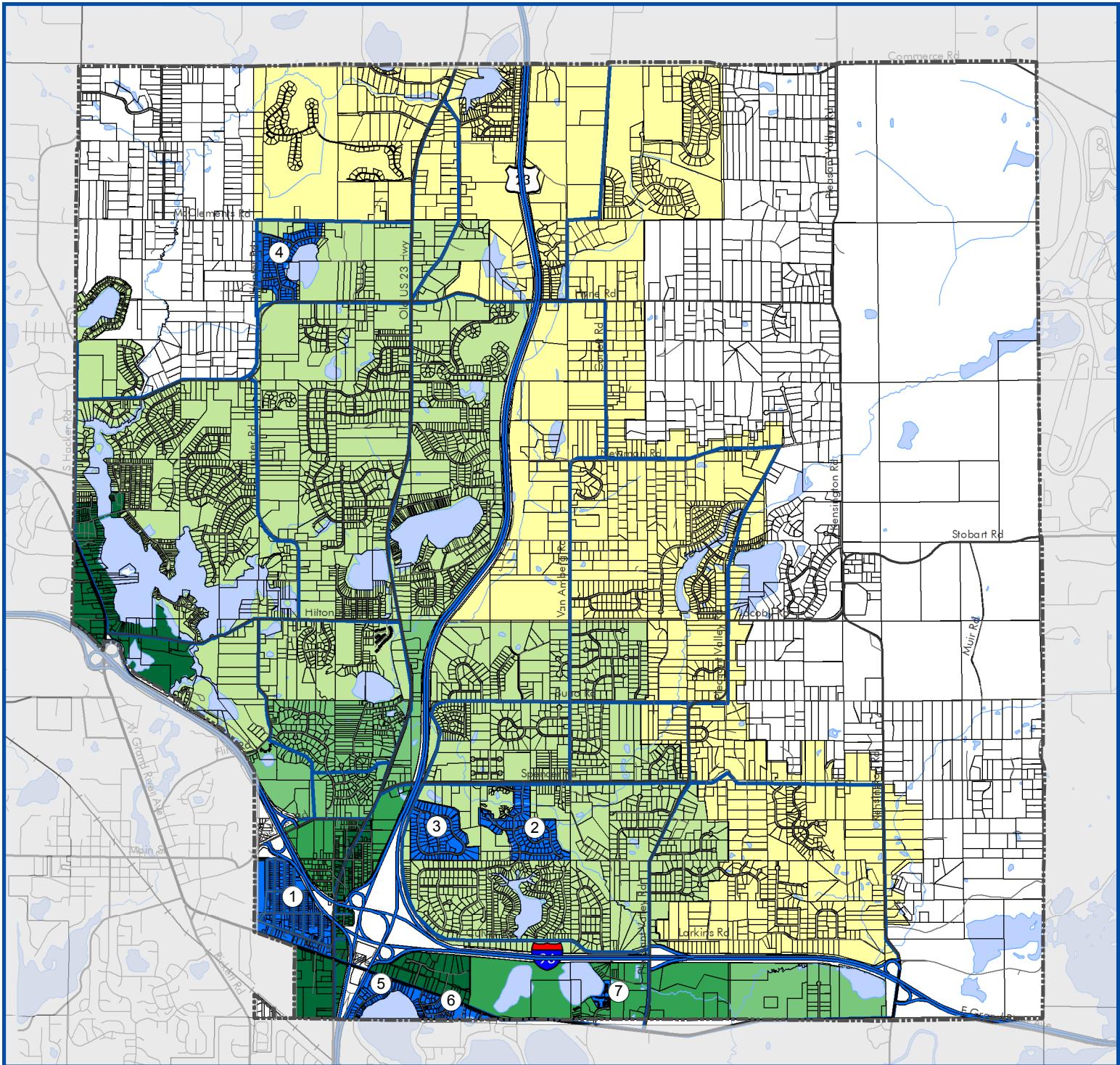
Government Administration

The Brighton Township administration offices are located in the Township Hall on Buno Road, north of Spencer. The building, which was built in 1983 and renovated in 2000, house the offices of the Supervisor, Assessor, Treasurer, Clerk, Manager, Planner and support staff.

Water and Sewer

Availability of water and sewer utilities has a significant impact on the development pattern of the Township. Sites with these improvements are often attractive to developers; therefore, the Township must take care to expand these services to appropriate locations. Special consideration for the timing and location of new public water and sewer now can ultimately affect future development in Brighton Township.

- **Water.** The predominant water supply in Brighton Township is provided by individual well systems. Some of the older and more densely developed subdivisions are provided with water via community wells. These areas include Harvest Hills, Greenfield Pointe, and Osborn, Fonda, Island, and Briggs Lakes. The Livingston Community Water Authority (LCWA), which includes Brighton Township as well as Green Oak and Hamburg Townships, has prepared a future water service plan that outlines areas in Brighton Township that may someday be serviced. On January 1, 2020 the FIB system reverts to Brighton and Green Oak Townships. Discussions should begin in the future about integrating the FIB system into LCWA. Map Five depicts when specific areas in the Township are expected to gain access to the public water supply.
- **Sewer.** Similar to public water, the Township supplies public sewer to some of the community's older and denser developments. Sewer lines run along Grand River, Old US-23, and Hilton and provide service to many of the residential developments within the southwestern portion of the Township. In addition to these areas, the residential development located off of McClements, has offered public sewer service for its homes as well. Map Six indicates which areas in the Township currently have access to public sewer. The remainder of the Township utilizes individual septic systems. A high density of septic systems in areas with unsuitable soils, high groundwater or near bodies of water can have significant impact on the quality of the Township's water resources. Measures need to be taken to protect the Township's natural resources and prevent contamination due to the overuse of septic systems.



Map Five

Water Service

Brighton Township Master Plan

- Existing Water Service
- Immediate District
- 0 to 5 Years
- 5 to 10 Years
- 10 to 20 Years
- Beyond 20 Years
- Water Main

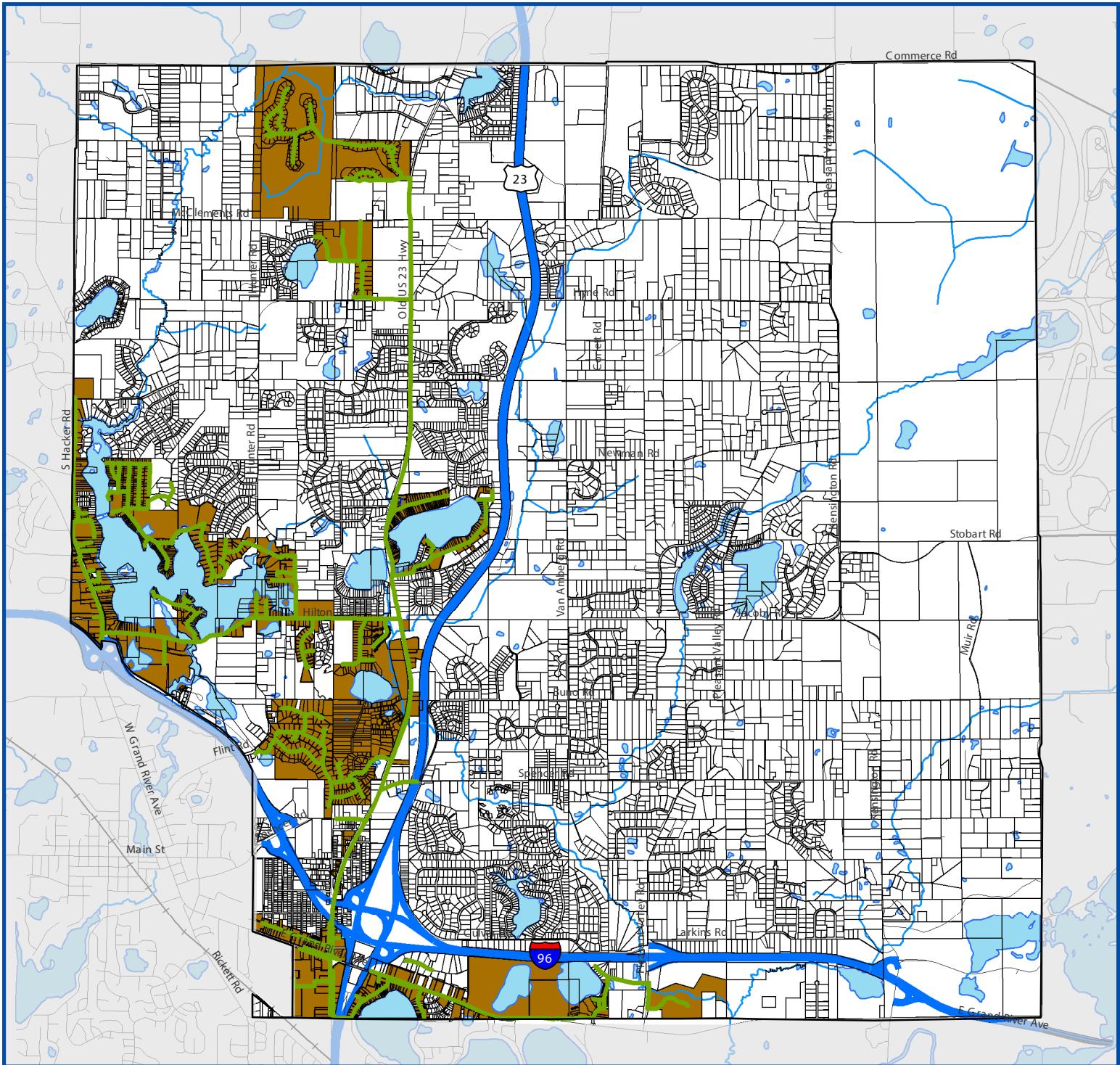
1. Country Club Annex
2. Greenfield Pointe
3. Harvest Hills
4. Osborn Lake
5. Fonda Lake
6. Island Lake
7. Briggs Lake

ADOPTED: May 19, 2014

Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



0 0.5 1 1.5 2 Miles



Map Six

Sewer Service

Brighton Township Master Plan

ADOPTED: May 19, 2014

Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



0 0.5 1 1.5 2 Miles

LSL Planning
A **SAFEBUILT** Company

Public Safety

Brighton Township residents are currently protected through fire services provided by the Brighton Area Fire Authority and police protection through the Livingston County Sheriff's Department and the Michigan State Police. Maintaining high quality public safety services will always be important to the perceived safety of the area.

- **Fire Services.** Prior to July 1999, Brighton Township provided a twenty-four hour on-call volunteer fire fighting force. Since then, the Township formed the Brighton Area Fire Authority (BAFA) with the City of Brighton and Genoa Township. The Brighton Area Fire Authority currently has 90 paid-on-call firefighters. These volunteers are required to complete the State of Michigan Fire Fighter I and II training as well as complete Medical First Responder (MFR) training. Additional full-time employees include Fire Chief, Deputy Chief, 3 shift captains, and 2 captain fire inspectors. BAFA provides fire inspection and site plan review services.

The Brighton Area Fire Authority has a mutual aid agreement with neighboring communities in Livingston County. This agreement helps the communities work together and collectively

use fire equipment by automatically dispatching equipment to the site of a fire in a neighboring community. Because fire trucks and other capital equipment are quite expensive, shared use through this agreement provides the Township with the best possible coverage.

The Brighton Area Fire Authority currently has five fire stations, two of which are located within Brighton Township. The north station is located on Old US-23, south of Hyne, and the south station is found on Weber, just west of Old US-23. The administrative office is located in the City of Brighton on Grand River, just north of Main.

- **Police Services.** Police protection in Brighton Township is a collaborative effort between Livingston County and the State of Michigan. The State of Michigan maintains a branch headquarters on the east side of Buno Road, next door to Township Hall. The Michigan State Police shares policing responsibilities with the Livingston County Sheriff's Department through a "closest car" agreement, whereby emergency calls are dispatched to both offices with a request that the closest patrol car respond. Due to the



location of the State Police post in Brighton Township, they typically respond to the majority of calls received by central dispatch.

Because Brighton Township is not highly populated, nor high in crime, it is not cost effective to establish its own police department at this time. The Township could consider, among the various options, regional partnering opportunities similar to those implemented for the regional fire department, or part-time or paid on-call arrangements that may be a more efficient use of Township resources.

School Facilities

TABLE EIGHT School Enrollment			
	2005- 2006	2012- 2013	Change
Brighton Area Schools			
Spencer Elementary	433	427	-1%
Hilton Road Elementary	460	516	12%
Hartland Consolidated Schools			
Hartland Lakes Elementary	510	493	-3%
Hartland Farms Middle	836	826	-1%
Private Schools			
Cornerstone Christian School	130	198	52%
Shepherd of the Lakes	90	126	40%
Brighton Montessori	90	-	-
Maple Tree Montessori	78	63	-19%
Source: Michigan Department of Education			

Four different public schools, located in four different school districts, and several private schools are located in Brighton Township, as shown in Table Eight. Geographically, the Brighton Area School District serves the largest area of the Township, incorporating the southern two-thirds. The Howell Public School District incorporates areas near Clark Lake and Woodland Lake, while the Hartland Consolidated School District covers areas north of Newman Road and east of Hunter Road. The Huron Valley School District also covers a very small area of land in the

northeast section of the Township; however, no enrollment comes from Brighton Township, as the only land that lies in the Huron Valley School District is part of the General Motors proving grounds property and currently contains no residents.

Schools located in Brighton Township include:

- **Brighton Area Public Schools.** Spencer Elementary School, located on Spencer near Van Amberg, and Hilton Road Elementary school, located on Hilton west of Old US-23, are part of the Brighton Area School District.
- **Hartland Consolidated Public Schools.** Lakes Elementary and Farms Middle Schools are both on Taylor and are under the jurisdiction of Hartland Consolidated Schools.
- **Private Schools.** In addition to these public schools, a number of Township students attend private schools in or near the Township including Cornerstone Christian School, Shepherd of the Lakes,

Brighton Montessori and Maple Tree Montessori. These schools, as well as other public facilities are depicted on Map Seven.

Recreation

In 1992, The City of Brighton, the Charter Township of Brighton, Green Oak Charter Township and Genoa Charter Township joined together to create the Southeastern Livingston County Recreation Authority (SELCRA). SELCRA is a regional authority that provides recreation and leisure programs for citizens of all ages. The Township relies on SELCRA to plan for and fund recreation improvements in the community.

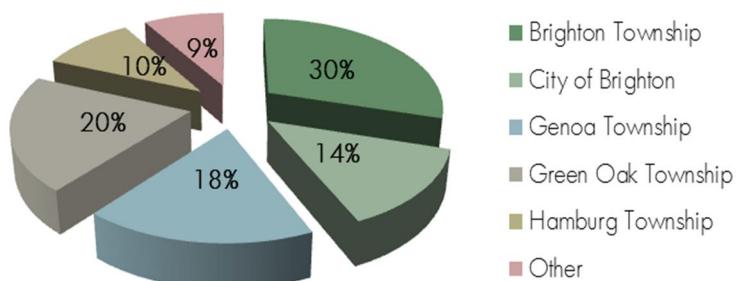
As evidenced by the demographic analysis in Appendix A, the population in Brighton is growing older. That is, growth in the older sectors of the population is higher than that of the younger sectors. Many of the residents in newer residential subdivisions and condominium developments are benefiting from community facilities provided as part of their development. Brighton Township provides funding to the Southeastern Livingston County Recreation Authority (SELCRA), and in turn, they provide recreational programming needs for the community. SELCRA serves participating communities by offering a variety of athletic programs for both children and adults. SELCRA sponsors leagues include basketball, soccer, volleyball, baseball, and softball.

The following describes the parks and recreation facilities currently available to Brighton Township residents.

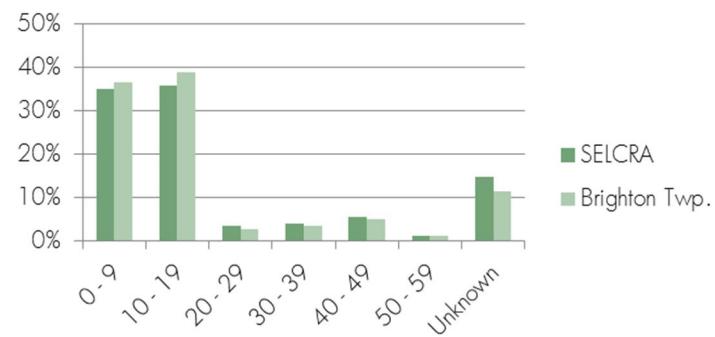
- **Local Parks.** Presently, there are no developed Township-owned parks or recreation facilities in the Township. Township residents rely on County or State parks, schools, privately owned facilities, or Township lakes and streams for recreation.

The only Township-owned parkland is "Sunset Park," which was established through a public/private development agreement between Brighton Township and Sunset Sand and Gravel. Additionally, the Township also owns a property off of Maxfield Road, which is designated for a future park. The Michigan Department of Natural Resources maintains a 3.5 acre boat launch, which provides

2010 SELCRA Participation



2010 Age of SELCRA Participants



public access to Woodland Lake off of Hilton Road.



Kensington Metropolitan Park, a Huron-Clinton Metropolitan Park Authority property, covers 340 acres in the southeast corner of the Township and offers a diverse range of recreational opportunities. The 4,357-acre park offers a variety of recreation facilities including an 18-hole golf course and ball diamonds and activities including swimming, boating, hiking, fishing, picnicking, bicycling, and horseback riding. A variety of winter activities including ice skating, cross-country skiing and sledding are also available. This park is very accessible to Township residents and will likely continue to be the most important recreational amenity in the future.

Playground facilities and open parkland are offered at all of the elementary schools within the Township. In addition, Township residents also can use playground facilities at all of the elementary schools in the neighboring communities as well as the Imagination Station located in downtown Brighton.

Public athletic fields are also found throughout the Township. Farms Middle School has twenty acres of parkland including a number of ball diamonds and fields and Spencer Elementary School has ten acres of park land including a lighted baseball diamond used by summer softball leagues.

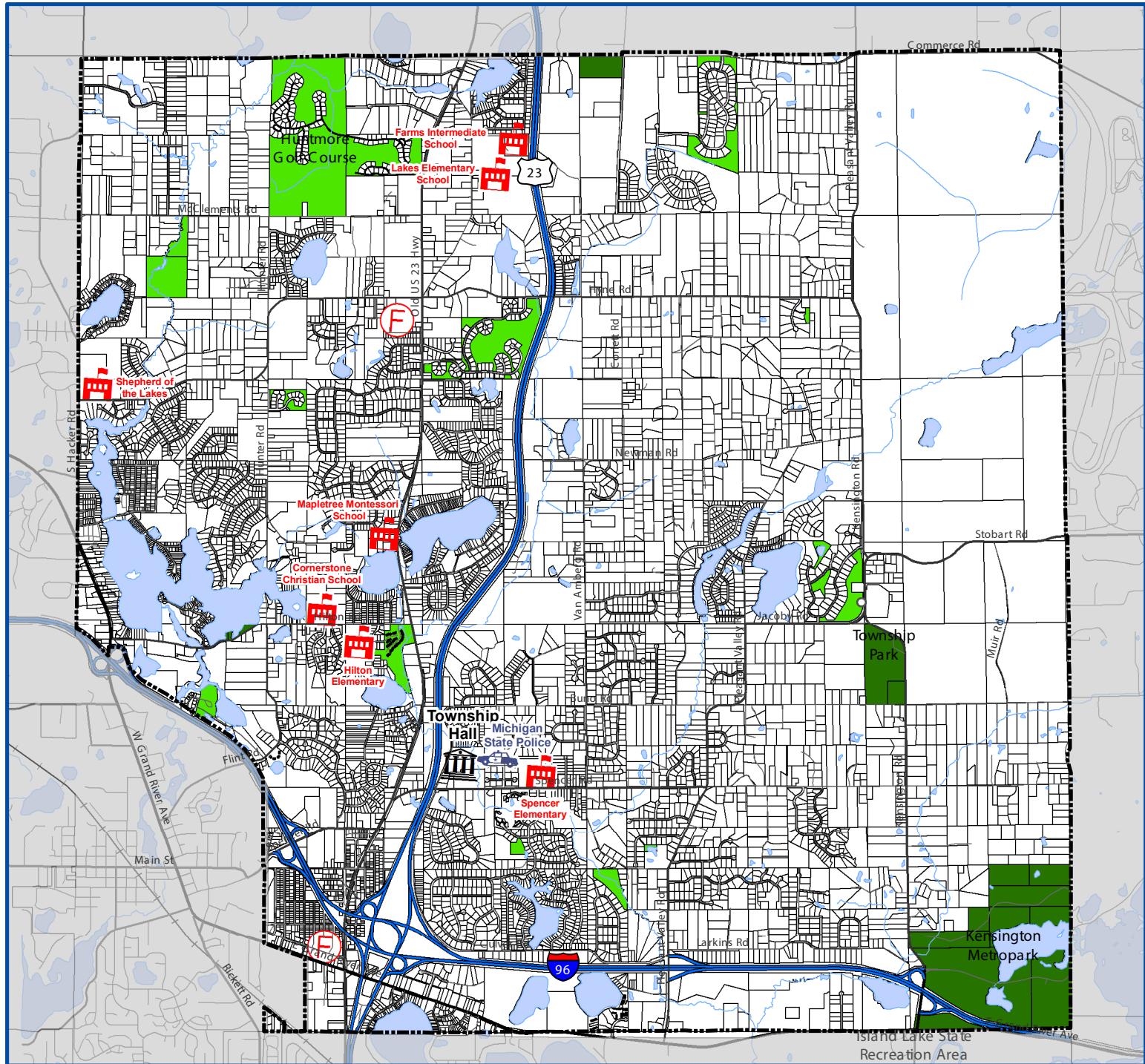
Additional playfield space is accessible to Brighton Township residents at locations in neighboring communities. Scranton and Maltby Middle Schools as well as Brighton and Hartland High Schools provide athletic fields, tennis courts, track facilities and a swimming pool.

▪ **Regional Recreation.** In addition to local community facilities, Brighton Township residents have the benefit of numerous regional recreation facilities provided by the Huron-Clinton Metropolitan Park Authority, County, and State. Below is a brief description of parks located within a fifteen minute drive of the Township.

- **Huron Meadows Metropark (Huron-Clinton Metropolitan Authority Park).** Located along the Huron River three miles south of Brighton, this 1,539-acre park features an 18-hole public golf course and golf-activity center.
- **Lyon Oaks (Oakland County Park).** This 1,024-acre park was developed in the spring of 2002. The park, located west of Wixom on Pontiac Trail, contains a new Arthur Hills designed 18-hole golf course, driving range, banquet and meeting facilities, dog park,

nature center, picnic areas, and a trail system.

- **Brighton Recreation Area (Michigan State Park).** Located in Howell, this 4,947-acre park offers campsites, organization camp, and cabins. Other facilities include picnic equipment, playgrounds, beach house, boat launch, and complete equestrian facilities.
- **Highland Recreation Area (Michigan State Park).** This 5,524-acre park located in White Lake Township has campsites, an organization camp, and cabins. Other facilities include picnic equipment, playgrounds, beach house, boat launch, and nature trails.
- **Island Lake Recreation Area (Michigan State Park).** Located along the Township's southeastern edge, this 3,466-acre park offers campsites, an organization camp, and cabins. Other facilities include picnic equipment, playgrounds, and a boat launch.
- **Pinckney Recreation Area (Michigan State Park).** This 11,000-acre recreation area located in Pinckney has campsites and an organization camp. Other facilities include picnic equipment, playgrounds, a beach house, and a boat launch.
- **Proud Lake Recreation Area (Michigan State Park).** Located along Wixom's western border, this 4,000-acre recreation area has campsites, an organization camp, mini cabins, and tent rentals. Other facilities include picnic equipment, playgrounds, beach house, and boat launch.
- **Seven Lakes State Park (Michigan State Park).** This 1,410-acre site located in Fenton offers camping sites. Other facilities include picnic equipment, playgrounds, a beach house, and boat launch.
- **Huntmore Golf Course.** This 18-hole golf course is part of a larger Planned Unit Development located off of Old US-23, just north of McClements Road. It provides 18 holes of golf and is open to the public.
- **Mt. Brighton Ski Resort.** This resort is a regional recreation area located west of W. Grand River Ave. and south of I-96 in the City of Brighton. Mt. Brighton offers 18 holes of golf along with skiing and lodging facilities. It is a regional destination, especially during the winter, as Mt. Brighton is one of few area ski resorts.
- **Waldenwoods Golf Course.** Waldenwoods Resort, located near the intersection of Old US 23 and M-59, is a private resort offering lake front cottages and lodges, RV camping, tent camping, an Olympic size swimming pool, 140 acre lake, boating, fishing, hiking & biking trails, and family activities like BBQs, dances, parties, and fireworks.



Map Seven

Community Facilities

Brighton Township Master Plan





0 0.5 1 1.5 2 Miles

ADOPTED: May 19, 2014
Data Sources: MCGI,
Brighton Township, LSL Planning, Inc.



Determining Factors

When planning for community facilities and services, it is important to understand the impacts they have on the community. While these impacts are usually positive, poor planning for their location and development can stress the transportation system, the natural environment, and local neighborhoods. Through discussions with Township staff, officials, and a public involvement process, the following issues were identified as it relates to community facilities planning:

- ✓ **Water and Sanitary Sewer.** Public water and sewer is currently available to parts of the Township. Expansions of the public water and sewer systems can greatly increase development demand, and can also allow the Township to accommodate higher development densities. Alternatively, opinions about development are somewhat conservative in that many residents wish to see future development at densities similar to that which currently exists in the Township. The availability of public water and sewer should be considered when deciding future residential densities and will determine where major public facilities can be accommodated.
- ✓ **Police and Fire.** Brighton Township residents are provided emergency services through the Michigan State Police, Livingston County Sheriff and Brighton Area Fire Authority.
- ✓ **Livingston County EMS (LEMS).** LEMS provides both 9-1-1 Emergency Medical Services and non-emergency transportation services in Livingston County. Livingston County EMS was established in 1970 by the Livingston County Board of Commissioners. Ambulances are strategically located throughout Livingston County to provide optimal coverage and allow for the quickest response times.
- ✓ **Lake Safety.** Township residents are fortunate to have access to inland lakes, which provides year-round recreational opportunities. Because of their popularity, lakes are patrolled by the Livingston County Sheriff's Department and the Department of Natural Resources.
- ✓ **Schools.** Schools often locate in more rural areas that offer land at a less expensive rate than in more urban areas. This can lead to undesired development in the outlying areas of a community and additional strain on local resources. These locations require more travel for buses and parents, which can create localized congestion in the areas surrounding the school. In addition, they often encourage residential development, which then increases demand for utilities and services in areas not previously planned for.

The appeal of communities for residential development is partly

dependent on the quality of the schools and educational opportunities that are available. Therefore, it is important that the school districts and the Township communicate regarding development activities so that the necessary changes to school facilities and/or resources can be properly planned. Likewise, the Township should keep informed of any changes to the available educational services so that it understands the potential impacts these changes might have on the education offered to its residents.

- ✓ **Large Institutions.** Larger institutional uses including educational campuses and large churches, because of their size and function, can create significant impacts on a neighborhood unless properly planned for. Their needs are very different than the small-scale institutional uses found in residential neighborhoods. They are usually located on major roadways to serve the traffic generated by the use and require large parcels of land to accommodate the sizable buildings, parking areas, and facilities that typically are required for their function. Specific size thresholds distinguishing small and large scale churches or other places of worship are addressed in the Zoning Ordinance. Building area, number of parking spaces and trips generated are all suggested measures to help distinguish between the small and large institutions.
- ✓ **Parks and Open Space.** Many residents own large parcels of land that serve their own private needs, or live in clustered open space developments that offer private open space. But, other areas of the Township are being developed at higher densities and have a greater need for access to parks and recreation facilities. Public parks and other gathering places can provide additional recreational amenities not available on individual residential lots or development-specific open spaces. The need for public recreational opportunities will increase as Brighton Township continues to attract new households.
- ✓ **Pathways.** Non-motorized transportation facilities, as set forth in the Township's Pathways Plan, will offer improved and safer opportunities for rollerblading, jogging, walking and cycling. Pathways also improve access to the scenic resources found in the Township and the public open spaces that are found in the area.

Community Services and Facilities

Recommendations

The following goals and recommendations were developed to give direction to the Township Board, Planning Commission and the community in general when making policy decisions regarding future community facilities. Because the issues discussed in this Chapter are so integral to the public health, safety and welfare, the Township should refer back to these goals and recommendations on a regular basis, especially when considering extensions of public services, new facilities or when other agencies or organizations undertake their own planning processes. The statements below should be considered in total, not as separate statements, in order to consider the affect on the overall

COMMUNITY FACILITY GOALS

- (1) *Continue to provide the quality of life that Brighton Township residents have come to expect by offering and encouraging facilities and services to meet current and future demands.*
- (2) *Provide a comprehensive system of public and private parks, pathways, recreation facilities and open space throughout the Township that is accessible to residents, and to enhance the quality of life for all residents including children, teenagers, adults, senior citizens, and the physically challenged.*

quality of life in Brighton Township.

Evaluation of community facilities during the site planning and development process will help improve and protect the quality of life for area residents. Improvements or expansions to public systems and services should consider the following recommendations.

Communicating with the Public

During this plan update, the Township solicited input from the community. Throughout the process, it was found that many residents formulated opinions based on hearsay, misinformation or lack of information. While the Township maintains a website that hosts relevant information for the public, it has not been effective in educating citizens about the types of decisions that the Board of Trustees makes, their jurisdiction over various aspects of the community, or the basis for their decisions. In an attempt to bridge the gap between government and citizenry, the Township Board feels strongly that improved

communication is needed to help remove rumor, improve understanding of current and contemplated policies, and how to communicate with elected officials. The Township will consider the following ways, in addition to others, that might help address this need:

- Enable residents to register on the website for email/text/voicemail blasts, which can be used to inform residents of emergencies or other newsworthy issues
- Add an online streetlight outage reporting mechanism to the Township website, or in partnership with the Road Commission
- Better explain how to contact or meet with Township Board members, and how elected officials typically approach an issue
- Provide resource and contact links to other information that may be provided by SELCRA, Livingston County, nearby communities, the State of Michigan, etc.

Utility Planning

Because land use policy can impact the expansion of and improvements to local utility providers, the Township should actively pursue coordinated efforts to provide the needed services to residents.

- **Water and Sewer Service.** There is a strong desire among residents to maintain the pastoral character of Brighton Township. Careful utility planning for public water and sewer service is critical to ensuring this vision is maintained. Services in areas outside the current service area should not be improved or expanded beyond what is needed to maintain existing levels of service. This policy must be continually reviewed to ensure it is consistent with current land use plans.
- **Electric Service.** As the Township has grown, the number of electric poles has increased along the local roads. In higher density areas, these poles can dominate the landscape and affect public perception and economic growth. The Township should pursue general ordinances and policies that encourage new electric lines are buried. In less dense areas, above-ground poles should still be considered so as not to excessively or unnecessarily raise the cost of electric services or disrupt natural features. Other ways the Township can ensure lower rates is to work with utility providers in their planning of new sub-stations or generator sites. Local land use regulations that impose strict standards often discourage providers from upgrading service. The Township should work with these companies in an attempt to locate electric facilities in areas that provide natural visual buffers, require minimal



grading, and where appropriate access is available.

- **Gas Service.** Some areas of the Township are still served by individual propane tanks. In areas of very low-density development, the spacing of homes is such that it is not desirable for utility companies to serve them.
- **Wireless Telecommunication Service.** Wireless technology is a popular means to attain wireless internet, phone and video services. Brighton Township does have some authority over the development of towers. New wireless towers must be built with additional space that will be made available to other providers. New antenna proposed to co-locate on existing towers or on pre-approved sites is encouraged.
- **Public Safety.** Historically, community safety is a major consideration when locating new developments or deciding where to live. While Brighton Township remains a very safe community, and local police and fire agencies currently provide adequate service, consideration should be given to future needs. The Township could consider alternative service options, such as partnering with neighboring communities, contracting for additional County service, or if a new department will be needed for the Township alone. When appropriate, the Township should refer to the County's Hazard Mitigation Plan to determine appropriate safety needs that must be addressed.
- **Connect Michigan.** Connect Michigan is a non-profit agency who partnered with the Michigan Public Service Commission to map and expand broadband service to Michigan communities by facilitating community technology planning. Livingston County participates with Connect Michigan, and has developed the "Advantage Livingston" team to assess the demand and need for broadband technology. The team is evaluating current assets, local policies, underserved areas, and public-private partnerships to determine the level and need for training and education. The Township should continue to participate with Livingston County and Connect Michigan toward implementing the Advantage Livingston Action Plan.



Parks and Recreation

To address future recreation needs, the Township should consider ways to serve residents at a low cost to the community. In addition to pathways, private facilities can provide just such a service. The Township should continue to work with SELCRA to expand recreational

opportunities within the region, and continue to encourage recreational facilities as part of residential development.

Implementation Strategies

The actions below are specific recommendations that may be used to accomplish one or more of the above policies. Table Nine should act as a checklist of items that the Township should work toward completing.

TABLE NINE Community Facilities And Services Strategies		
Actions	Priority	Responsibility
Coordination		
Work with representatives of the franchised utilities to discuss and coordinate needs.	Ongoing	TB, UC, PD
Continue to work with the Livingston County Public Health Department to monitor arsenic levels and other environmental limitations.	Ongoing	UC, PD
Maintain regular communication with school districts serving Brighton Township, to inform them of proposed development activity that might require changes to school facilities.	Ongoing	PC, PD
Encourage development follows a logical pattern for utility expansion, within defined utility service areas, that provides connections between contiguous developments, and considers the timing and sequencing of improvements to areas that will represent a logical extension of the existing systems and where impacts to natural features are minimized.	Ongoing	UC, PC, PD
Continue to support local recreation authorities and coordinate with them to plan for active and passive recreational resources to Township residents.	Ongoing	TB, PD
Promote public safety programs and services to pro-actively increase the feeling of safety in neighborhoods and for local businesses.	Ongoing	TB, HA, PC, PD
Promote shared storm water systems amongst developments to reduce environmental impacts and maintenance issues.	Long-Term, Ongoing	TB, PC, HA

Regulations		
Where possible, promote public utilities to be buried along main corridors or locate them in the rear of properties where feasible.	Long-Term	UC, PC
Promote parkland and recreational facilities (public or private) be provided in large residential developments for the use of residents.	Long-Term	PC, PD
Encourage private-sector funding of public improvements and upgrades.	Ongoing	TB, PC, PD
Promote the preservation of unique natural features, such as trees, forests, natural drainage areas, wetlands and nature trails as a way of providing community-wide passive recreation opportunities.	Long-Term, Ongoing	PC
Improvements and Public Policy		
Use electronic media and newsletters to inform the public of the various facilities and services available to them.	Ongoing	TB, PD
Make sewer and water improvements a priority in areas designated for high-density development, especially on main corridors.	Ongoing	UC, TB, PC
Maintain an inventory of Township owned land and Identify potential sites for the development of active and passive recreational facilities, both within neighborhoods and community-wide.	Ongoing	TB, PD
Continually pursue implementation of the Township Pathways Plan.	Ongoing	TB, HA, PD
Ensure adequate provisions for the on-going maintenance of pathways.	Ongoing	TB
Develop greenways by coordinating the connection of open space, natural areas, and recreational lands.	Ongoing	PC, PD
Identify recreational opportunities in conjunction with SELCRA.	Ongoing	TB, PD
Ensure private roads and open space will be maintained through specific agreements or subdivision/condominium documents. Promote agreements for common trash haulers for subdivision developments.	Ongoing	TB, UC, PC, PD

* PC= Planning Commission, TB=Township Board, PD= Township Staff, UC=Utilities Committee, HA=Homeowners Associations

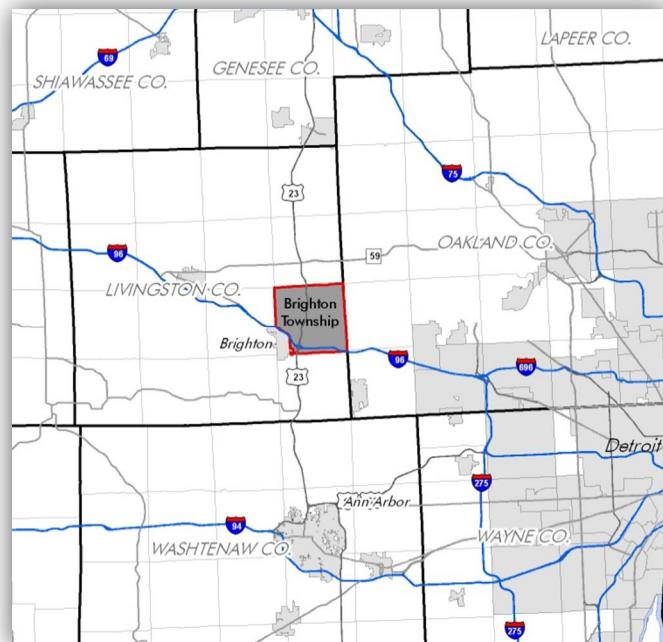


Introduction

Brighton Township is located on the southeast side of Livingston County, and is within a short driving distance of a number of metropolitan areas such as Detroit, Lansing, Ann Arbor, and Flint. The Township has the benefit of having access to both I-96 and US-23, making it a logical center for residences and businesses. Benefiting from its desirable location, Brighton is one of Livingston County's most heavily populated Townships.

The following is a report of the existing demographic condition of Brighton Township. This serves as a starting point for understanding the Township and its unique characteristics.

Upon a review of the 2010 data provided by the United States Census Bureau, the following general observations were made:



Population Observations

- Population grew significantly since 1970, but has been relatively stable since 2000
- Population is expected to grow another 17% over the next 20 years (see table Thirteen)

TABLE THIRTEEN
Population Trends and Projections

	POPULATION TRENDS							PROJECTIONS		
	1970	1980	1990	2000	2010	% Change 1970-2010	% Change 2000-2010	2020	2030	% Change 2010-2030
Brighton Township	5,882	11,222	14,815	17,673	17,791	202%	0.7%	19,298	21,306	17.1%
Genoa Township	4,800	9,261	10,820	15,901	19,821	313%	24.7%	20,969	22,293	28.7%
Green Oak Township	7,598	10,802	11,604	15,618	17,476	130%	11.9%	18,354	18,586	16.0%
Hamburg Township	5,481	11,318	13,083	20,627	21,165	286%	2.6%	23,069	23,595	12.6%
Hartland Township	2,630	6,034	6,860	10,996	14,663	458%	33.3%	15,238	15,654	29.8%
City of Brighton	2,457	4,268	5,686	6,701	7,444	203%	11.1%	8,136	8,794	31.2%
Livingston County	58,967	100,289	115,645	156,951	180,967	207%	15.3%	192,116	204,704	30.4%

- Township residents are older today, indicating fewer children were born and fewer young residents moved into the Township since 2005 (see table Fourteen)

Economic Observations

- Income levels across the region are down, but household incomes in Brighton Township remain relatively high as compared to the State
- In 2010, residents reported the following top 3 places where they work:

	TABLE FOURTEEN	
	2000	2010
Brighton Township	37.6	43.8
Genoa Township	37.5	42.7
Green Oak Township	36.9	42.3
Hamburg Township	35.8	42.6
Hartland Township	35.8	39.3
City of Brighton	37.4	43.4
Livingston County	36.2	40.9

	INDUSTRY (Where they work)	OCCUPATION (What they do)
1	Manufacturing	Management, Business, Science and Arts Occupations
2	Educational Services, Health Care, and Social Assistance	Sales and Office Occupations
3	Retail Trade	Service Occupations

- Educational levels are still high in the Township; in general, Township education levels exceed those at the County and State levels

TABLE SIXTEEN
Educational Attainment

Level of Education	2010		
	Township	County	SE Mich
Graduate or Professional Degree	14.1%	10.1%	11.5%
Bachelor's Degree	25.9%	21.1%	17.0%
Associate Degree	8.8%	9.5%	7.7%
Some College, No Degree	21.5%	25.2%	23.2%
Graduated High School	25.6%	27.8%	28.5%
Did Not Graduate High School	4.0%	6.4%	12.2%

Housing Observations

- Despite some decline since 2000, Brighton Township housing values remain relatively high compared to the region and County
- Homes are relatively new in Brighton Township, with more than a third of homes built since 1990. One quarter of the Township's housing stock was built between 1970 and 1979.

Median Housing Values





Introduction

The Master Plan represents an extensive effort by the public officials, Township staff, and the public. The document was prepared primarily in cooperation with the Planning Department, the Planning Commission, and Township Board. The process is described as follows:

Project Kick-Off

At the beginning of the project, the Township held a project kick-off meeting to determine the planning process and begin to establish the areas of the Plan that should be updated. At this time the Township distributed a 'Notice of intent' in accordance with the Michigan Planning Enabling Act.

Demographic Profile

The township's demographic profile was updated to reflect current economic and social conditions in the community, and to provide an understanding of how the local citizenry is changing.

Public Involvement

To help the Township identify issues, priorities and future implementation, they solicited input from its residents and citizens. The following methods were conducted, with feedback summarized at the end of this Chapter.

- **Community Survey.** An online survey was posted on the Township's website in 2012, with hard copies available at Township Hall.
- **Focus Group Meetings.** A series of focus groups were held in January and February of 2013. The Township invited a Developers Group, a Resident Group, and a Parks and Recreation Group, and attended one PTO group meeting.
- **Public Open House.** The workshop, held in February 2013, included a brief presentation and display boards for participants to visit. The focus group and workshop combined allowed nearly 70 interested residents, business owners, and investors an opportunity to express their ideas either verbally and/or in writing.

Vision and Policies

A joint meeting was held on April 22, 2013 with the Township Board and the Planning Commission to review the results of the public's comments and to review the overall vision for the Township and identify the scope of needed changes to the Master Plan.

Analysis and Recommendations

Based on the data collected from the existing conditions report, public involvement effort, and the experience of staff and consultants, information was then analyzed and recommendations were made for the future of the Township.

Agency Review

Once the Township was satisfied with the draft plan, the Township Board passed a resolution to initiate the required agency review period in March, 2014, in accordance with the Municipal Planning Act, as amended. This allowed a valuable opportunity for neighboring communities and applicable agencies to have an opportunity to submit their comments.

Adoption Process

Upon completion of the agency review period, a public hearing was held to allow an additional opportunity for public comment at a Planning Commission meeting. Following the hearing, both the Planning Commission and the Township Board adopted the Master Plan on May 19, 2014.

Summary of Public Comment

The following is a summary of the comments and suggestions that were offered during the different public involvement opportunities. Throughout the process there were many ideas discussed and the comments listed below encompass the general sentiment of the opinions that were heard. Although public involvement is essential in the Master Planning process it is only one form of input used to provide the basis of this Plan. Public input, together with an examination of existing conditions, demographic data, review of plans and documents from other agencies, discussions with Township leaders, and professional planning expertise collectively serve as the basis for the Plan update's policies and recommendations.

Through this input and through discussions with the Township Board and Planning Commission, the following key themes or issues emerged:

- Continue to manage growth
- Plan for US-23 road widening
- Traffic and safety
- Pedestrian access
- Natural resource protection
- Fiscal issues
- Market Industrial area for R&D uses
- Consider a Business Improvement District
- Improve access and visibility
- Be Redevelopment Ready

Community Survey

The Township conducted an online survey to solicit input from citizens. While the majority of responses were from residents, only 3% of the Township's residents responded to the survey. A summary sheet of responses is also provided at the end of this Chapter. Key responses included:

- Maintain current single-family residential
- No strong desires to encourage new growth areas
- New growth should include specialty commercial, senior housing, and preservation of natural areas

Focus Groups

A series of four focus group sessions were held in the early part of 2013 to discuss planning and development issues that specifically affect individual geographic areas or neighborhoods within Brighton Township.

A list of questions was given to each participant; however, once discussion commenced, the forum was left open for general comment. The intent of the focus groups was not to direct the discussion, rather it was to offer residents a forum to express ideas and suggestions in an informal way and help identify issues that otherwise may not have surfaced.

During the 2008 Master Plan update, the Township focused on meeting with groups representing different geographic areas, so this update took a different approach. The Township sought to reach different segments of the community, and even offered to attend meetings of local groups who might want to participate in the project. The following is a summary of the responses received during these focus group meetings.

Spencer Elementary PTO Meeting January 8, 2013 at 4:00 pm

The project was introduced to the PTO, and a brief explanation of the purpose of the Master Plan was given. Some question and answer followed, mostly regarding the Township's jurisdiction over roads and school site planning. Focus Group Handouts were distributed with a request to return them at their convenience, and a short discussion followed. Below are the key points of discussion. Additional written comments were also received.

- Passing lanes are needed, especially in front of schools
- Work together with schools to provide safe site layouts and circulation
- Need sidewalks within neighborhoods

Resident/Young Family Meeting February 25, 2013

The project was introduced and a brief explanation of the purpose of the Master Plan was given. Below are the key points of discussion.

- Balance preservation with reasonable regulations
- Sidewalks and pathway connections (parks, natural areas, other communities, etc.)
- Focus development first in existing commercial areas
- "Respect and preserve natural features"

Parks and Recreation Meeting February 25, 2013

The project was introduced and a brief explanation of the purpose of the Master Plan was given. Some question and answer followed, mostly discussing opportunities for environmental protection, parks and pathways. Below are the key points of discussion. Additional written comments were also received.

- Identify land available for use by the public on the future land use map
- Develop a Natural Features Protection plan that protects:
 - Open space
 - Lakes quality
 - Natural Features
 - Rural aesthetic
- Viewshed protection should be considered
- Include discussion of “volunteer” efforts:
 - Many state mountain bike trails are built and maintained by volunteers
 - Road clean up

Developers Meeting

February 27, 2013

The project was introduced and a brief explanation of the purpose of the Master Plan was given. Below are the key points of discussion. Additional written comments were also received.

- Water and sewer availability is an attractive feature
- Accessibility of staff and Board is a positive asset for the Township
- Review process should include pre-application meetings
- Reach out to developers to explain the Township's vision and policies
- Allow re-use of nonconforming buildings where site improvements are proposed

Public Open House

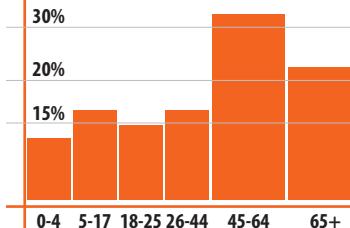
On the evening of February 27, 2013, Brighton Township hosted a public open house at the Township Fire Hall on Old US-23. Nearly 50 people attended the meeting, the vast majority of who were residents. Prior to this meeting, the Township posted an online survey to gauge public opinion, the results of which are presented earlier in this Chapter.

The casual, drop-in workshop included a series of topic-based stations where participants could visit, view information, and comment on the issues of land use, natural features, transportation, and community facilities and services. A short presentation was given, followed by a question and answer period. Participants were also presented with information in an open house format and given comment forms. An online survey was created for those who could not attend in person.

BRIGHTON TOWNSHIP MASTER PLAN SURVEY RESULTS

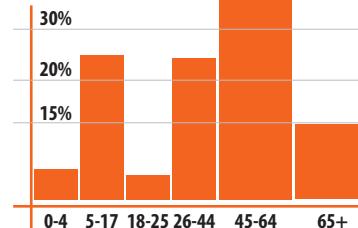
DEMOGRAPHICS

AGE ACCORDING TO SURVEY



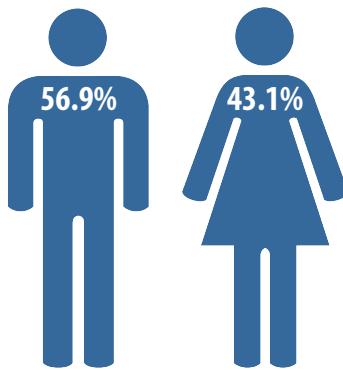
Survey results indicated that most households are occupied by middle- and retirement-age individuals. Adolescent and young adult age groups were considerably lower.

AGE ACCORDING TO CENSUS

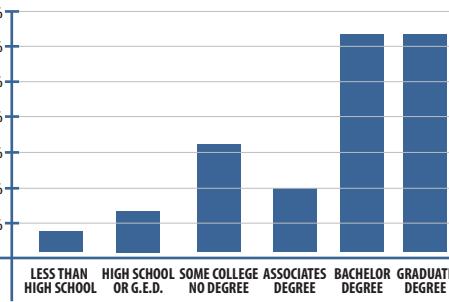


According to the 2010 Census, the current age distribution in Brighton Township varies quite a bit from the survey results, most notably showing less retirement-age residents and more middle-age and young adult residents.

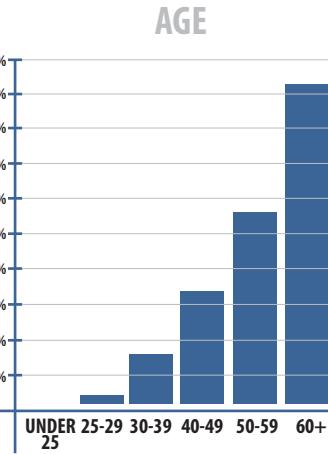
SEX



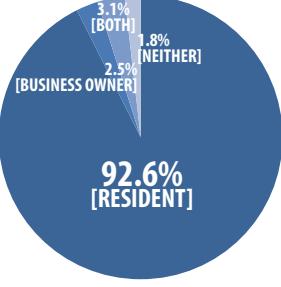
EDUCATIONAL ATTAINMENT



AGE



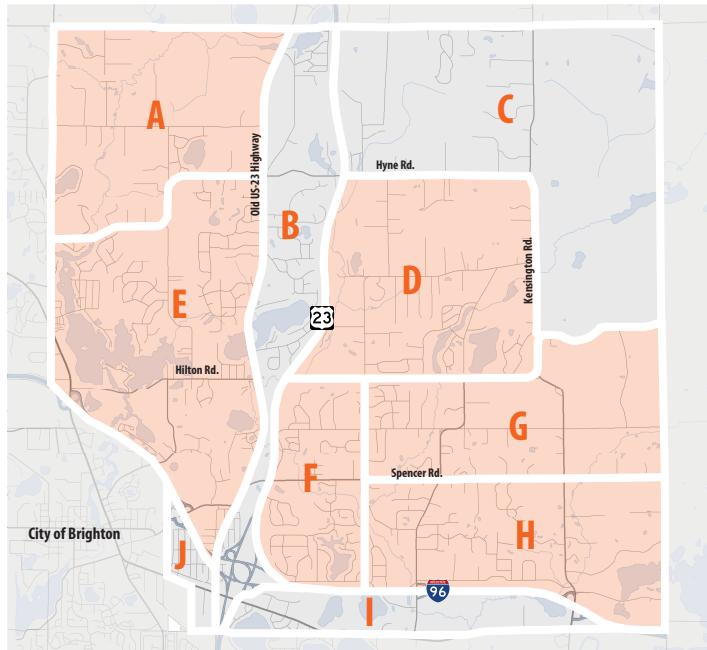
RESIDENT OR BUSINESS OWNER?



The responses received indicated that over 95% were residents while only 5.6% were business owners. These numbers preface the remainder of the survey to reflect the concerns of residents primarily.

RESPONSES BY RESIDENTS

WHERE DO YOU LIVE?



The vast majority of residents that responded to the survey reside in the two distinct areas noted in orange on the adjacent map. These two areas are primarily bound by I-96, US-23 and Old US-23. According to the results of this survey, about 30% of the township's population reside in the area west of Old US-23, while over 55% of the population reside in the area east of US-23. These larger numbers are partly due to the size of the areas (ex. compared to Areas I and J), but can also be contributed to the intensity and typology of land use (ex. compared to the large Area C).

DO YOU RENT OR OWN PROPERTY?



An astonishing 99.4% of survey respondents revealed that they are **homeowners** in the township. Of the 564 surveys, only 3 people identified themselves as **renters**.

HOW LONG HAVE YOU LIVED HERE & HOW LONG WILL YOU STAY?

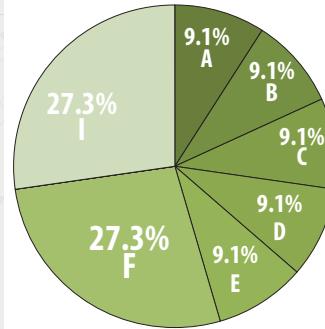
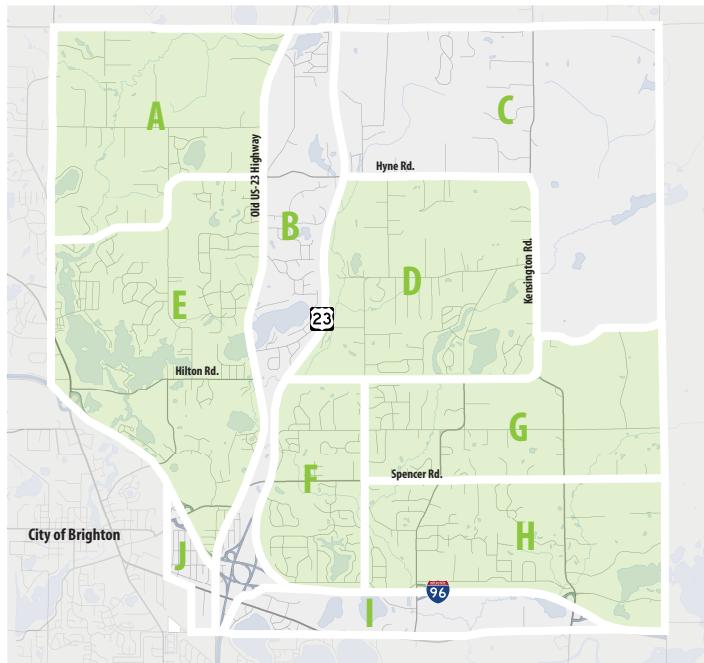


Over 70% of respondents have lived in Brighton Township for over a decade and 90% plan to stay for the next 5 years.

BRIGHTON TOWNSHIP MASTER PLAN SURVEY RESULTS

RESPONSES BY BUSINESS OWNERS

WHERE IS YOUR BUSINESS?



The amount of business owners who took the survey was relatively low. Areas F and I had the most representation, while Areas A - E each had one representative. Areas F and I are located in the southern portion of the township, east of the expressway. It may be worthy to note these locations in comparison with other economic data to determine whether this part of the township is more appropriate for business and economic development. Findings could inform future determinations on where the township would target investment.

TYPE OF BUSINESS



16.7% MEDICAL SERVICE



16.7% RETAIL TRADE



16.7% EATING/DRINKING



16.7% AUTO SERVICE



33.3% FINANCE/INSURANCE
REAL ESTATE

HOW LONG HAS YOUR BUSINESS BEEN LOCATED HERE?

DO YOU PLAN TO REDUCE, EXPAND OR MAINTAIN THE SIZE OF YOUR BUSINESS?

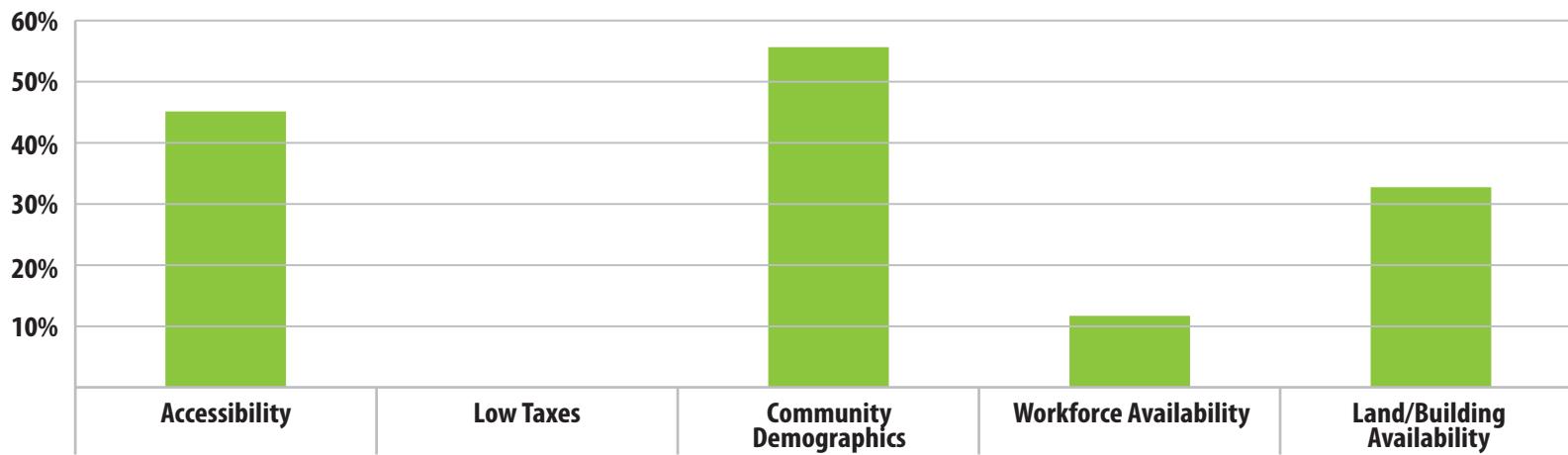
**OVER
10 YEARS
54.5%**

**STAY
SAME
63.6%**

**EXPAND
36.4%**

Over 50% of businesses have been located in Brighton Township for over a decade. Over 60% of businesses intend to remain located in Brighton Township at their current size while almost 40% intend to expand their business in Brighton Township.

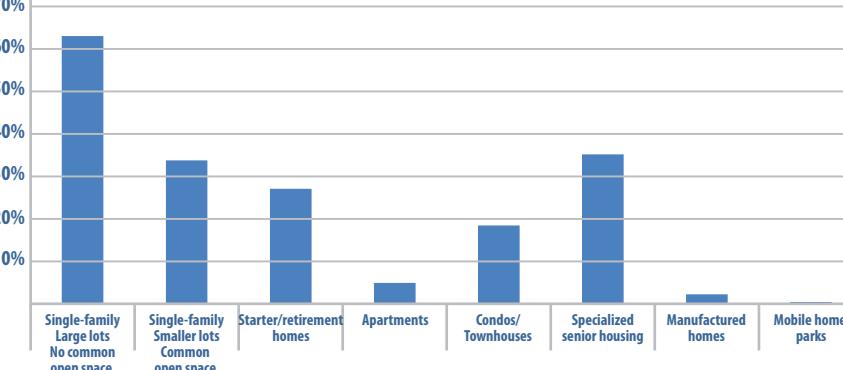
WHAT ATTRACTED YOU TO OPEN A BUSINESS IN BRIGHTON TOWNSHIP?



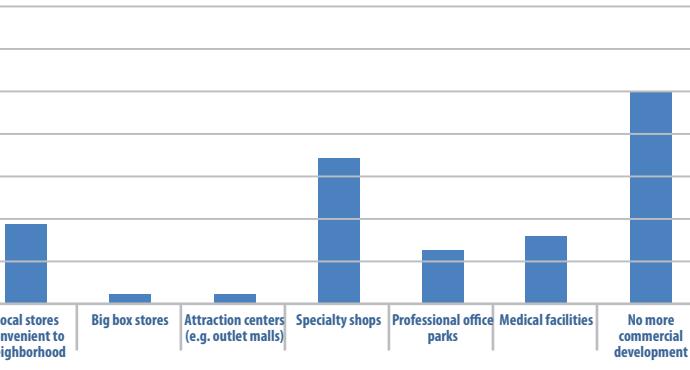
BRIGHTON TOWNSHIP MASTER PLAN SURVEY RESULTS

PLANNING ISSUES

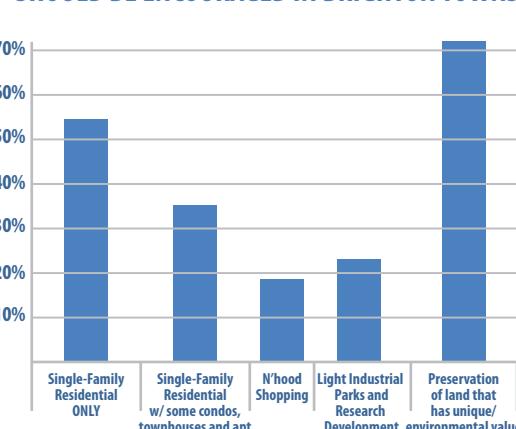
WHICH OF THE FOLLOWING TYPES OF HOUSING SHOULD BRIGHTON TOWNSHIP HAVE MORE OF?



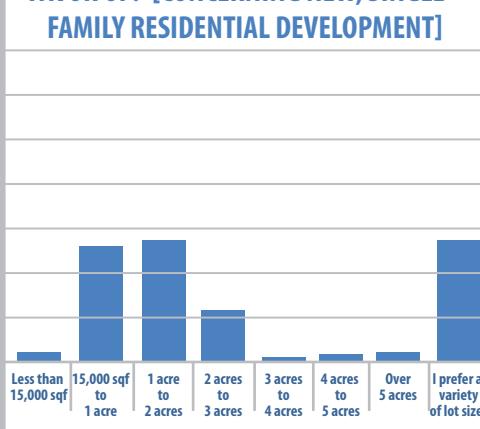
WHICH OF THE FOLLOWING TYPES OF OTHER DEVELOPMENT SHOULD BRIGHTON TOWNSHIP HAVE MORE OF?



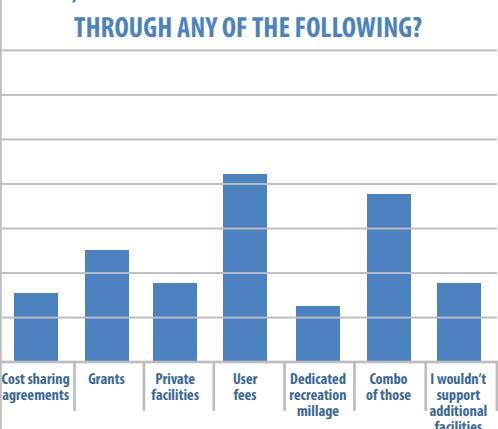
WHICH OF THE FOLLOWING TYPES OF LAND USES SHOULD BE ENCOURAGED IN BRIGHTON TOWNSHIP?



WHAT SIZE LAND PARCELS ARE YOU MOST IN FAVOR OF? [CONCERNING NEW, SINGLE-FAMILY RESIDENTIAL DEVELOPMENT]

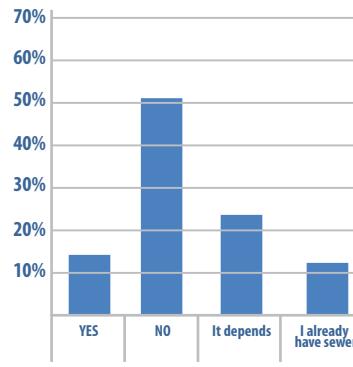


IF ADDITIONAL RECREATIONAL FACILITIES WERE BUILT, WOULD YOU SUPPORT THEIR EXPANSION THROUGH ANY OF THE FOLLOWING?

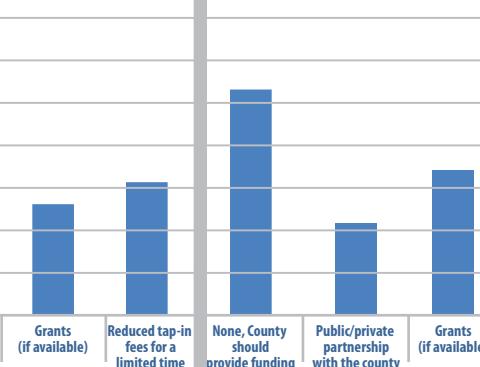


UTILITIES

IF SEWER WERE MADE AVAILABLE, WOULD YOU BE INTERESTED IN HOOKING UP?



BRIGHTON TOWNSHIP IS EXPLORING OPTIONS TO ENCOURAGE ADDITIONAL USERS IN ORDER TO INCREASE THE EFFICIENCY OF THE WASTE WATER TREATMENT PLANT AND TO LESSEN THE FINANCIAL BURDEN ON EXISTING SEWER CUSTOMERS. WOULD YOU SUPPORT INCENTIVES TO ACHIEVE THESE GOALS? IF SO, WHAT TYPE OF INCENTIVES?



PUBLIC ROADS ARE NOT UNDER THE JURISDICTION OF BRIGHTON TOWNSHIP, BUT ARE IN NEED OF REPAIR. IT COSTS IN EXCESS OF \$1 MILLION PER MILE TO PAVE A ROAD, AND REPAIRS COST IN THE HUNDREDS OF THOUSANDS OF DOLLARS. WHAT, IF ANY, FUNDING MECHANISMS WOULD YOU SUPPORT TO FUND IMPROVEMENTS?

IF BRIGHTON TOWNSHIP WERE TO PARTNER WITH THE COUNTY USING TOWNSHIP FUNDS TO ENCOURAGE ROAD IMPROVEMENT WITHIN THE TOWNSHIP, WHICH TYPES OF ROADS SHOULD BE FOCUSED UPON?

BRIGHTON TOWNSHIP MASTER PLAN SURVEY RESULTS

TOP THREE REASONS PEOPLE MOVE TO BRIGHTON TOWNSHIP

1. Rural character of the Township

2. Safe neighborhoods and low crime rates

3. Quality and reputation of public schools

RATING THE TOWNSHIP'S AMENITIES AND POLICIES

The rankings (right) summarize how residents rate the township on a variety of issues, including key policies, amenities, future considerations, and development regulations.

Items in **TEAL** refer to how residents perceive the township on physical development and how it is guided.

Items in **BLUE** refer to the support that residents have for different planning issues.

Items in **GREEN** refer to how likely residents do (or intend to) use different types of recreational facilities.

It is clear that the rural character of the township is the main reason that current residents live in Brighton Township and is what they believe to be the main attraction for future residents. Survey-takers had varied responses on many of the planning issues and recreational facilities, while community perception was very moderate.

PERCEPTION

How would you rate each of the following statements regarding the perception of Brighton Township?

1. Appearance of entrances/signage for major subdiv. **6.0**
2. Guiding residential development **5.9**
3. Amount of landscaping around commercial uses **5.8**
4. Amount of open land around commercial uses **5.7**
5. Signs on commercial buildings **5.5**
6. Guiding commercial development **5.5**
7. Landscaping along major roads **5.0**

PLANNING ISSUES

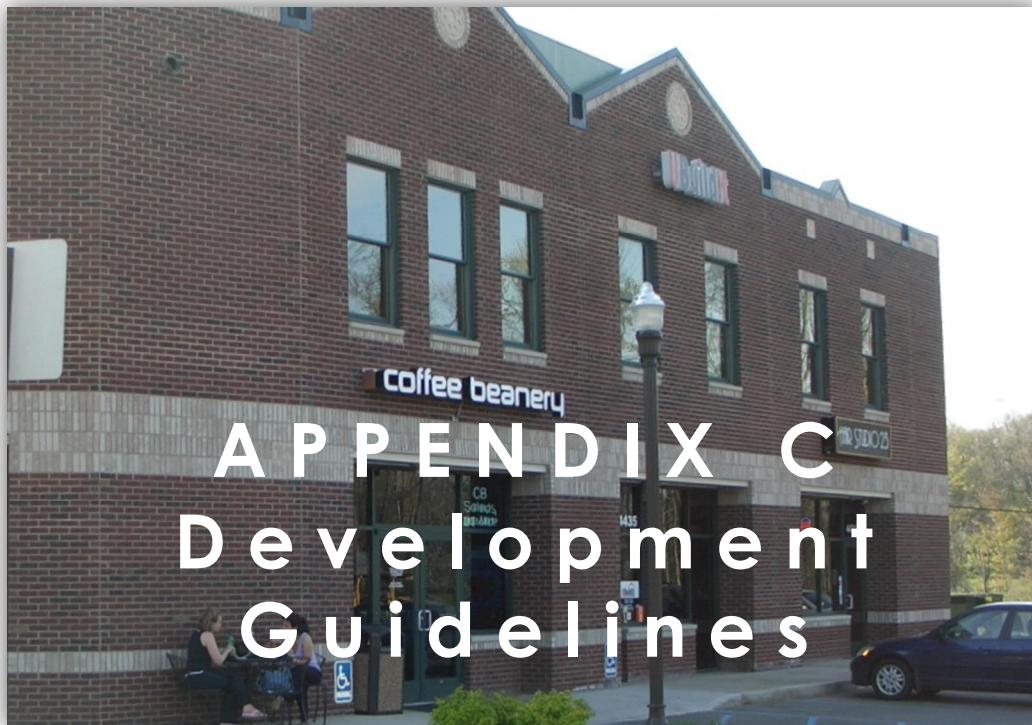
Please indicate the extent to which you agree or disagree with each statement related to planning policy.

1. Maintain low-density, rural character **8.2**
2. Low-density [2-5 acres] rural estate areas **7.1**
3. Increase senior housing **6.2**
4. Current commercial buildings are attractive **5.7**
5. Increase moderate income housing **5.3**
6. Public services more important than low taxes **5.1**
7. Demanding on residential development **5.0**
8. Demanding on commercial development **4.8**
9. Increase tax/employment base **4.5**

RECREATIONAL FACILITIES

Which of the following are you most likely to use?

1. Nature trails/bikeways **7.9**
2. Parks/picnic areas **7.6**
3. Senior centers **5.2**
4. Playgrounds **4.8**
5. Gymnasium **4.5**
6. Tennis courts **4.1**
7. Baseball fields **4.0**
8. Soccer fields **3.8**
9. Handball/racquetball courts **3.4**



Introduction

Development guidelines are intended to direct future physical development within the Township. This can be done in a variety of different ways. It is up to the Township to determine how these guidelines will be used. These guidelines can:

- Provide the Township, design professionals and members of the business community with a comprehensive set of guidelines that explain the expectations for the future development within the Township.
- Provide assistance to the Township Planning Commission in reviewing development proposals.
- Serve as a guide for Zoning Ordinance changes to better reflect development that is desired in the Township.

Guidelines have been developed to help implement the recommendations found in this Plan. They do not seek to create a rigid set of standards, instead, they are intended to articulate the vision and provide various alternatives to conventional site development. While improved aesthetics is one of the goals, the guidelines also intend to enhance a variety of features both on-site and for the overall community. The development guidelines seek to:

- Protect the investments of landowners.
- Protect natural features.

- Develop more attractive commercial and residential areas.
- Improve overall site function, vehicular and pedestrian circulation, and safety.
- Create a unified visual appearance.

To the greatest extent possible, these guidelines should apply to all new development, as well as the redevelopment of existing land and buildings within the Township. Special attention should be applied to non-residential development along the Mixed Use Corridors, on parcels that contain expressway frontage, residential development throughout the Township, and on waterfront properties.

Mixed Use

Applicability

Mixed Use areas are located along Grand River Avenue and Old US-23, south of Spencer Road. Much of the land within this designation has already been developed into primarily commercial corridors. Future redevelopment should seek to integrate other residential and civic uses to help alleviate some of the heavy traffic currently experienced in these areas.

Intent

It is the intent of these development guidelines to tie together a variety of land uses in a harmonious, aesthetically pleasing, easily accessible, safe environment.

Vehicular Parking/Circulation

The site design for any non-residential property must accommodate required vehicular parking. The relationship between the proposed parking and the adjacent roadway is critical for overall circulation. The vehicular needs shall be well defined, while not dominating the site and should be planned to achieve the following objectives:

- Locate off-street parking and related service areas at the rear or side of building(s). In locations where site size and configuration does not allow this, a single aisle of parking shall be provided in front of the building.
- All front yard parking areas shall utilize buildings, landscaping, walls or other architectural elements to create a visual transition from parking areas to the sidewalks and road edges.
- Ensure parking areas are paved and that parking spaces are delineated with painted lines.

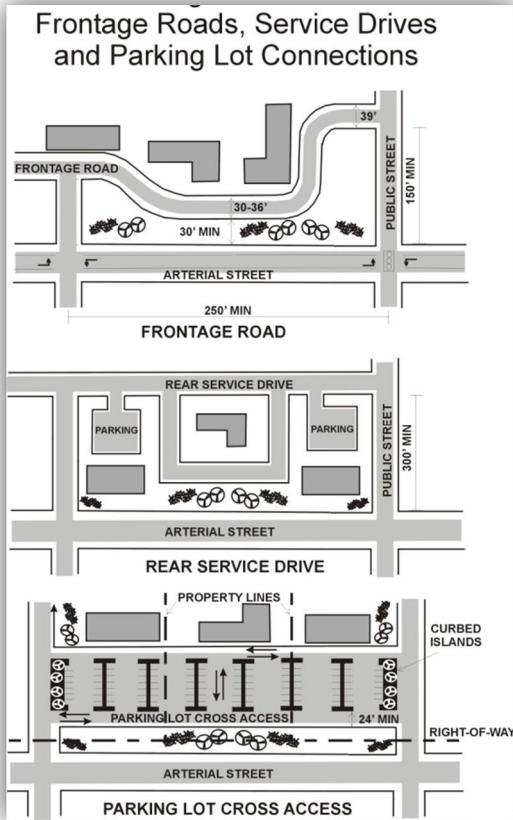
- Improve the appearance and provide shading of parking areas through the use of planting islands.
- Require planting islands to be located at the outer edge and at entrances of parking areas to define circulation and to slow entering traffic.
- Design planting islands that are shorter than the parking spaces to provide adequate maneuverability and traffic flow.
- Improve the flow of traffic into or out of the parking area by providing adequate stacking room that does not interfere with traffic entering the site or interior site circulation.
- Include islands and greenbelts within parking areas to provide adequate snow storage areas.
- Avoid parking area designs that form irregular angles.



Site Access

Accessibility into, out of and within the site must be easy and safe. All sites should be planned to achieve the following accessibility objectives:

- Provide shared rear service drives to connect buildings for sites located along Old US-23, south of Spencer. Where this is not possible, provide frontage roads, shared driveways or at least connections between parking areas.
- Construct connections to site edges and ensure access easements are provided for future connections on sites that are adjacent to undeveloped sites.
- Include adequate clear access routes with sufficient radii are provided for trucks to access driveways, loading areas, and waste receptacles.
- Limit access to one driveway per site in most cases.
- Promote good traffic operations and safety by requiring driveways to be aligned or adequately off-set from other driveways, as defined by current MDOT and Livingston County Road Commission standards.





Pedestrian Circulation

Grand River and Old US-23 function as the main corridors which move vehicles through the community. The roads must do a better job of accommodating and encouraging pedestrian activity. Safe and contiguous pedestrian circulation should be a priority in the future. Pedestrian circulation within the corridors should be designed according to the adopted Pathways Plan, and should achieve the following objectives:

- Develop a continuous pathway system throughout the corridors. Refer to *Chapter Three* and *Map Three* for recommended locations.
- Connect pathways to the corridors and provide pedestrian linkages from building entrances to parking lots, pathways, and neighboring businesses.
- Eliminate conflicts between vehicles, pedestrians, and bicyclists. Create a more secure environment by providing adequate separation between automotive and non-automotive routes by utilizing greenbelts and landscaping.
- Provide bike racks and benches in easily accessible locations.
- Identify crosswalks by means of advance warning signs, variation of materials and/or pavement markings.

Site Landscaping

Landscaping provides many aesthetic and functional qualities which enhance the overall appearance of outdoor spaces. Landscaping can provide shade, reduce the visual mass of buildings and help to define or enclose spaces. Plant material shall be carefully selected and located so that it does not create a nuisance, safety concern, or maintenance problem. Landscaping should be designed to achieve the following objectives:

- Preserve existing on-site woodlands, wetlands, lakes, and streams and incorporate them into the site design.
- Incorporate native, non-invasive, and drought tolerant vegetative species when possible.
- Cluster plant material to create a strong visual impact, unless the site dictates otherwise.
- Locate mechanical equipment, waste receptacles, and loading areas where they are least visible to the public, so they blend into the overall landscape plan.

- Use plantings as a buffer to help mitigate impacts between different uses.
- Select plant material to complement the architectural style and details of the building, such as upright shrubs as foundation plantings or trees to break up longer building walls.

Greenbelt Landscaping

The area between the edge of the roadway pavement and the building and/or parking area shall be considered the 'greenbelt'. Within the greenbelt, landscape elements should achieve the following objectives:

- Preserve existing street trees and other vegetation whenever possible.
- Incorporate native, non-invasive, and drought tolerant vegetative species when possible.
- Create repetition along the road edge by providing fairly close, evenly spaced street trees within or at the edge of all public rights-of-way to help separate vehicular and pedestrian routes.
- Identify vehicular and pedestrian access points with planting beds on each side of vehicular driveways. Planting beds shall contain a combination of upright and low-level shrubs as well as perennial and annual flowers.
- Utilize contiguous hedgerows or knee walls to screen parking lots visible from the road. Ensure they are located outside of clear vision areas at driveway entrances and intersections to minimize visual interference.
- Provide an informal mix of trees and upright shrubs, located in a manner which screens the parking, accents the building, or provides a visual and physical separation between pedestrian and vehicular traffic.
- Use spreading shrubs sparingly as the visual impact is minimal.
- Provide a planting bed around the base of all signs that will soften and screen support structures and mechanical equipment.
- Ensure all plantings are adequately spaced from all underground utilities.



Building Design & Orientation

Architectural design and the relationship of a building to the site are both critical components of successful design. Buildings should be designed with the following design elements:



- Building façades visible from the road and portions of buildings that are visible to the public should be of a high quality and finished in a manner that is consistent with the front façade.
- Buildings with long wall expanses should include fenestration, relief or other architectural details to add interest and reduce the perceived length and mass of the building.
- Sites with multiple buildings should contain compatible design elements and a strong visual relationship between buildings.
- Buildings should be used to obscure service areas, waste receptacles, loading docks, delivery areas, mechanical equipment and other similar necessities which may detract from the overall appearance of the corridor.
- Buildings should reflect the unique style of the Township and not develop according to a standard 'corporate' or 'franchised' style that is typically found with big-box or other national businesses.

Building Materials and Façade Treatments

Buildings should be constructed of a high quality design which creates an aesthetically pleasing atmosphere. Building materials and façade treatments should generally utilize the following design elements:

- Buildings should be constructed of durable, high quality materials. The primary building material should be brick, masonry, or stone. Careful analysis of faux products that imitate these materials should be done to ensure they will effectively provide the desired look, yet still be durable to last over time. In addition, use of concrete masonry units (CMU) or modified concrete materials should be used sparingly, as they are more appropriate as accent materials.
- Accent materials may include Fiberglass, reinforced concrete, polymer plastic (fypon), Exterior Insulation and Finishing Systems (EIFS), or dryvit materials, but should be used sparingly or as a way to add interest to large wall expanses. Highly reflective materials are also discouraged.

- Exterior finish colors should fit into the context of the built environment. Subtle earth-tones are preferred over stark or bright colors.
- Neon lighting should not be permitted on the building exterior unless approved on a case by case basis.
- Provide variation within the roof line, including raised/decorative parapets over customer entrances, peaked roof forms, and/or dimensional details at the cornice level.
- Use windows to maintain a sense of scale and add interest to the building. Long, blank facades along sides visible to the public should be avoided.

Signs

Signs serve the important functions of both advertising and navigation for motorists and pedestrians. However, signs often dominate a site and can be counterproductive to the primary function of directing patrons. Through careful and well-planned site design, signs should be designed with the following elements in mind:

- Compatibility with their surroundings in terms of size, shape, color, texture, and lighting and not promote visual competition with other signs along the corridor.
- Architectural integration with the site's primary building(s). Sign bases should be constructed of the same materials as the building.
- Restriction of the sight distances of pedestrians or motorists, especially at driveways and intersections. Signs should be located outside of clear vision areas, and away from loading areas and intersections.
- Directional signs should be limited to the number necessary to direct patrons throughout the site.
- Discourage the use of pole, pylon, and temporary signs.
- Advertising should be limited to necessary identification information only, regardless of the size permitted by the sign ordinance. Repetitive information shall not be permitted, such as dual signs on corner buildings when one sign is highly visible from the intersection. Additional signs not relevant to the business, such as advertising specific products or well known services, should be avoided.

Lighting



Lighting is an important design element; too little lighting may create unsafe conditions while too much may lead to undesirable light pollution. Lighting can become a nuisance, especially where commercial sites abut residential areas. Lighting should create an attractive balance between the pedestrian and automobile, and should generally be provided with the following design elements:

- Lighting should provide for adequate safety without over-emphasizing the site or building.
- Discourage off-site light pollution by requiring down-shielded fixtures that use directional lenses and by restricting lighting intensities to only those which are required for the safety and function of the site. Alleys or other places that are outside of public view may be considered for additional lighting, if it is determined necessary.
- Utilize decorative fixtures, such as goose neck fixtures, or others that still direct light downward. Use of LED lighting may also be considered as a way to avoid light "spread" that is typical of metal halide and fluorescent bulbs.
- Integrate lighting with the building style and architecture. For instance, modern fixtures should be avoided when the building style is more traditional.
- Provide appropriate low-level, pedestrian scale lighting such as bollard lighting, three to four inches in height along pathways.

Storm water Detention Design

Planning for storm water detention is essential for maintaining an ecological balance. Adequate storm water detention can prevent flooding and help decrease the amount of sediment and other pollutants into bodies of water. If properly designed, a natural detention basin can provide secondary aesthetic and open space benefits. Storm water detention systems should be designed to achieve the following objectives:



- Discourage the disturbance of wetlands, as they serve as natural storm water retention areas.
- Cluster development over non-wetland areas.
- Encourage the use of shared storm water detention systems for multiple sites.

- Incorporate gradual side slopes for overall public safety and to re-create natural setting.
- Discourage detention basins that require fencing or enclosures or require they be located in the rear yard where they are not visible from the roadway. If fencing is used it should be comprised of decorative materials.
- Provide detention pond landscaping that seeks to re-create the natural environment through the use of tall ornamental and clusters of shrubs to transition between the mowed lawn and the water's edge.
- Work with the Livingston County Drain Commissioner and design professionals to help filter sediment and pollutants from the drainage flow, incorporating best management practices.
- Design storm water detention systems in accordance with the Livingston County Procedures and Design Criteria for Storm water Management Systems and Soil Erosion and Sedimentation Control Program.

Expressway Parcels

Applicability

Additional guidelines are to be applied for parcels that abut US-23 or I-96. A majority of those parcels are located off of Old US-23 or Grand River, but there are also sites that are located off of smaller access roads that are visible from the highways. Parcels that are located within the Mixed Use Corridors area should follow the guidelines outlined for that area as well.

Intent

It is the intent of these development guidelines to maintain a natural, uncluttered appearance along the US-23 and I-96 expressway corridors. This will be accomplished by maintaining a vegetative buffer, whether existing or created. Establishing building and site design standards along these expressway corridors provides an attractive and aesthetically pleasing appearance and ensures that site activities, such as lighting, do not have a negative impact on safe expressway travel. These design standards complement the Mixed-Use Corridors development standards found earlier in this section and apply only to those yards that are visible from the expressways.

- Include cross sections or other visual images to illustrate viewsheds from the expressway on all site plans.
- Provide a natural vegetative buffer, including trees or tall shrubs, along the property line abutting the expressway. Where existing

vegetation is not sufficient for screening purposes, additional landscaping will be required.

- Locate loading, service and delivery bay doors so that they do not face onto the expressway right-of-way. Where unusual site constraints make this standard impossible, full screening from the public right-of-way is required. Use of extensive berms in combination with attractive walls and landscaping may be needed to accomplish the desired screening.
- Avoid exposed light fixtures and require them to be fully shielded. Flashing or moving lights should not be permitted.
- Require visible building façades to maintain an appearance similar to the front façade, and limit signage on the highway side of the building to individual, internally illuminated letter type signage.
- Prohibit billboards and pole signs.
- Prohibit exterior gutters, downspouts and roof ladders.

Residential Guidelines

Applicability

The residential guidelines should be used for all residential development including both single and multiple-family, subdivision or condominium developments that occur within the Township.

Intent

The residential guidelines seek to develop attractive neighborhoods that preserve natural features, provide a functional motorized and non-motorized transportation system, and contribute to a high quality of life for current and future residents to enjoy. One of the Township's main attractions is the natural setting and living environment that is set among vast open space and environmental features. New residential development should be designed to enhance these features and provide for neighborhoods that maximize open space and limit views of homes from the roadway.

Vehicular Circulation

The physical layout of neighborhoods should balance the vehicular needs with the objective of creating a vibrant, pedestrian friendly neighborhood. Vehicular components of a residential site should be designed to achieve the following objectives:

- Use vehicular connections, pedestrian connections and open spaces to visually and physically integrate the different residential types.

- Design residential roads for the minimum width necessary to safely accommodate vehicular travel lanes, on-street parking and emergency vehicles.
- Connect roads in new and existing neighborhoods especially to stub streets included previously approved developments as a continuation of those roads. Creating connectivity between neighborhoods leads to increased social interaction, sense of community, and increased accessibility.
- Avoid long, straight views on roads within neighborhoods that encourage “drag racing” activity or which contribute to a more urban residential look. Break up straight roads with curves and/or varied building setbacks.
- Use cul-de-sac’s only when necessary to take into account site conditions or to preserve natural features.
- Evaluate the road width hierarchy based on density, expected volumes and natural features.
- Integrate traffic calming mechanisms into street designs to reduce vehicular speeds on residential streets. These measures may include such elements as narrowing the pavement width at intersections and pedestrian crosswalks, utilizing a modified grid street system, and terminating street segments with views of open spaces or prominent buildings or other similar techniques.

Pedestrian Circulation

As the community grows and traffic volumes increase, the need for pedestrian facilities becomes more apparent. Pedestrian circulation within residential areas should be provided as follows:

- Require pathways on at least one side of the road along new roads within residential developments.
- Require pathways where a development fronts on a major road that is designated for a pathway in the Master Plan, as depicted on Map Three.
- Provide pathways to key destinations within the Township such as schools, parks, shopping, and public facilities.
- Provide barrier free access to the pathways system.
- Provide stone or wood chip paths or wooden boardwalks in areas with sensitive environmental features instead of paved sidewalks.

Landscaping

To preserve the scenic character of the Township and to enhance the natural quality of residential neighborhoods, the following landscaping should be required in all residential developments:

- Incorporate native, non-invasive, and drought tolerant vegetative species when possible.
- Encourage individual homeowners to utilize rain gardens that can act as secondary detention mechanism.
- Consider entrance landscaping that preserves existing vegetation to maintain the natural aesthetic and furthers the scenic qualities of the Township.
- Locate street trees or canopy trees within the front yard of each lot.
- Provide landscaping within cul-de-sac's to minimize impervious surface and visually reduce the scale of the street.
- Perimeter buffering along major roads that border the development.
- Provide detention pond landscaping that seeks to re-create the natural environment through the use of clustered, tall ornamental shrubs to transition between the mowed lawn and the water's edge.

Open Space/Recreation



Accessible recreational facilities are essential to creating a high quality of life for the Township's residents. The Township should promote the provision of open space and recreation areas that:

- Preserve existing on-site woodlands, wetlands, lakes, and streams and incorporate into the site design.
- Require major residential developments to incorporate active and passive recreational amenities. The Township should require a minimum amount of usable recreational area within all subdivisions and condominium projects.
- Preserve natural open space in front yards as well as in rear yards to help protect natural viewsheds along roadways.
- Utilize open space as a buffer between wetlands and other, more intensive uses.
- Create natural open spaces, or gathering spaces, large enough to preserve natural features and promote a natural setting, within the neighborhoods to meet the recreational needs of the residents.
- Specify that the location of open space will preserve natural features and open space corridors along waterfront creeks and major roads.

Building Design

Attached unit residential development shall be complementary with existing building forms and styles. Although diversity is encouraged in terms of building style, form, size, color, and material, the character of the neighborhood should be unified. Attached unit residential buildings should be designed to achieve the following objectives:

- Reduce the visual dominance of garage doors along the street edge by encouraging or requiring detached, side entry or recessed garages that are set back at least five feet behind the main building line.
- Provide a mixture of traditional architectural styles and design elements such as functional front porches, varied rooflines, staggered front yard setbacks, and a mixture of single-family lot sizes within residential blocks or street segments.
- Multiple-family residential units should be varied using color, arrangement and/or materials to emphasize façade elements. The planes of exterior walls should be varied in height, depth or direction. Long façades should include sufficient relief and landscaping to reduce the dominance of the building.



Waterfront Lots

Applicability

The Township lakes and streams have unique planning and custodial requirements which may require additional guidelines. Further, additional guidelines should be applied for uses that are located on waterfront lots. While a majority of waterfront lots have already been developed, these guidelines speak specifically to redevelopment of these properties.

Intent

It is the intent of these development guidelines to maintain natural viewsheds surrounding the Township's many lakes and streams. The design standards below complement development standards found earlier in this section and apply to waterfront lots, regardless of the land use.

- Design infill development within existing waterfront neighborhoods to respect the established lot sizes, scale, and height of existing buildings.
- Set buildings back from the shoreline to prevent water quality degradation and to provide a more natural looking shoreline.
- Encourage residents to maintain a natural vegetative buffer along the shoreline to prevent sedimentation and unwanted algae caused by fertilizers and ineffective filtration of runoff.
- For homes along rivers, streams and creeks, homeowners should maintain natural vegetative buffers to help reduce sediment and nutrient loading, and to preserve cold water temperatures needed to maintain aquatic life.
- Discourage the use of commercial fertilizers on waterfront properties, as runoff leads to increased water pollution and increased weed growth in water bodies.
- Heavy commercial land uses should not be permitted to locate on waterfront lots. Residential uses, home occupations or other low-impact office or commercial uses may be permitted provided the character of the lakes communities is maintained and water quality is protected.