

**LOCKE  
TOWNSHIP  
MASTER  
PLAN**

**LOCKE TOWNSHIP  
INGHAM COUNTY, MICHIGAN**

# **LOCKE TOWNSHIP MASTER PLAN**

Prepared By The  
**LOCKE TOWNSHIP  
PLANNING COMMISSION**

With The Assistance Of  
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Adopted by the Locke Township Planning Commission  
on November 17, 2004

**LOCKE TOWNSHIP  
INGHAM COUNTY, MICHIGAN**

# **ACKNOWLEDGEMENTS**

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**Dorothy Hart, Clerk**  
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**Shane Gruber, Trustee**  
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# Chapter One

# OVERVIEW

## Introduction

This Chapter provides an overview of Locke Township and the Master Plan's role, importance, preparation process, and principal policies. It presents the framework for what follows by defining what the Master Plan is and what it is intended to accomplish. Understanding the fundamentals of the Master Plan will enable Locke Township residents and officials to appreciate the role it plays in ensuring the future welfare of the Township, its residents and its resources. Embracing this Plan as a vital tool in preserving and enhancing the public health, safety, and welfare of the Township is essential if this Plan is to be effective.

## What is the Master Plan?

### Purpose

Just as individuals and families plan for their future well being, so must municipalities. Just as individuals may open savings accounts to save for an addition to their house for a growing family, municipalities must look to the future and take specific actions to address current and future needs. Such actions may involve improvements to the roadway network, improvements to the level of emergency services, and the pursuit of an orderly development and preservation program.

This Master Plan is a policy document that identifies how growth and associated land development should be guided to enhance the future welfare of Locke Township. The following key words and phrases can generally describe the Master Plan:

**FUTURE ORIENTED:** The plan concerns itself with long-range planning to guide and manage future growth, development, and preservation. The plan is a picture of Locke Township today and a guide to how the community should evolve over the next ten to twenty years in response to growth and community aspirations.

**GENERAL:** The plan establishes broad principles and policies to address future land use and public services.

**COMPREHENSIVE:** The Plan is comprehensive in that it addresses all principal types of land use and the practical geographic boundaries of each.

**A PLAN:** The Plan is a specific tangible document which consists of both text and maps, a key portion of which presents and illustrates the Township's policies regarding its planned future land use pattern and associated public services.

**DYNAMIC:** The Plan is intended to be continually evolving in light of the aspirations of local residents, changing conditions in the Township, and new strategies to manage growth.

The Locke Township Planning Commission, under the authority of the Michigan Township Planning Act, P.A. 168 of 1959 (as amended), prepared this Master Plan. The Act provides for the development of plans by a Planning Commission for the purposes of, in part:

*"...to promote public health, safety, and general welfare; to encourage the use of resources in accordance with their character and adaptability; to avoid the overcrowding of land by buildings or people; to lessen congestion on public roads and streets...and to consider the character of each Township and its suitability for particular uses judged in terms of such factors as the trend in land and population development."*

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This Master Plan is not a law or regulatory document, but a "policy plan" to be implemented through, in part, zoning and other regulatory tools. For example, though the Master Plan is not a zoning ordinance, the Master Plan's recommendations and policies serve as a basis for updating the current Locke Township Zoning Ordinance. In fact, the Township Zoning Act, which provides Michigan townships with the statutory authority to adopt zoning regulations, stipulates that a municipality's land development regulations "...shall be based upon a plan..." This Master Plan addresses this statutory requirement and ensures a strong legal foundation for the Township's zoning regulations.

## Elements of the Master Plan

This Master Plan consists of the following key components:

- 1) Chapter One – Overview presents an overview of the purpose and role of the Plan, the process followed in its preparation, key planning policies, and a summary of Township conditions.
- 2) Chapter Two – Planning Issues, Goals and Objectives presents a discussion of important planning issues facing the Township today, and associated goals and objectives that address these issues.
- 3) Chapter Three – Future Land Use Strategy presents the planned future land use pattern for the Township.
- 4) Chapter Four – Public Services Strategy presents policies regarding future public services.
- 5) Chapter Five – Implementation Strategies presents implementation measures to effectuate the policies of the Plan.
- 6) The Appendices present background studies that provide a review of existing conditions and trends including matters pertaining to demographics, land use, and public services.

## Importance and Application of the Master Plan

The importance and application of the Locke Township Master Plan are demonstrated in: 1) the long-term interests of the Township; and 2) the day-to-day administration of the Township's planning and zoning program.

### Long Term Interests

There are a number of interests shared by residents and officials of Locke Township today that can be expected to continue for years to come and be similarly shared by future residents and officials. Some of these important interests include:

- Protecting the Township's small-town and rural character.
- Minimizing increased tax burdens.
- Ensuring appropriate land use and adequate services to protect the public health, safety, and welfare of residents and visitors.
- Managing growth and development.
- Preserving important natural resources including woodlands, wetlands, stream corridors, and farmland.

The Master Plan supports these long-term interests by providing a future-oriented strategy that aggressively seeks to further these and other long-term interests. Chapter Three presents important policies in this regard.

### Day-To-Day Administration

In addition to furthering the long-term interests of the Township, the Master Plan also plays an important role in the day-to-day planning and zoning efforts of the Township:

- Advisory Policies: The Plan is an official advisory policy statement that should be readily shared with existing and prospective landowners and developers. The Plan informs them of the long term intentions of the Township regarding land use and encourages development proposals more closely integrated with the policies of the Plan.
- Regulatory Programs: The Plan establishes a practical basis for the Township to revise, update, or otherwise prepare regulatory programs, including zoning and land division regulations, intended to ensure that the policies of the Plan are implemented.
- Review of Land Development Proposals: Chapter Two includes a list of Township goals and objectives which should be reviewed when consideration is given to future proposed rezoning requests, site plans, and related land use proposals, to further establish a record upon which the proposal can be evaluated. Equally important, Chapter Three provides policies regarding the planned future land use pattern in the Township. This Chapter also provides valuable reference points upon which land use proposals should be evaluated.
- Public Services Improvements: The cost-effective use of the Township's tax dollars requires the identification of a planned future land use pattern. Residential, commercial, and industrial land uses have varying public services needs. The identification of a planned future land use pattern enables the Township to pinpoint areas that may be in need of current public services improvements. The identification also enables the Township to better determine areas of future need, rather than playing "catch-up" while the Township's health, safety, and welfare may be at risk. Again, Chapters Three and Four provide important guidance in this area.

- Intergovernmental Coordination: This Plan provides the basis for Township officials to communicate effectively with nearby communities regarding both the impact of their planning and zoning actions and opportunities for mutual gain through coordinated efforts in the areas of land use and public services.
- Factual Reference: The Plan includes a factual overview of relevant trends and conditions in the Township. This factual profile can educate local officials and residents and aid in the review of development proposals, encourage constructive discussion of planning issues and policies, and serve as a base line for future studies.

## How This Plan Was Prepared

During the early 1990s, Locke Township officials grew increasingly concerned about the proper management of future growth and development, and the ability of its zoning regulations to ensure the type of future Township character that its residents support. To focus greater efforts in the area of long term community planning, the Township initiated the development of a new Master Plan. Soliciting public input during the process, a master plan was adopted in 1995.

Approximately five years after the adoption of the 1998 Master Plan, specific issues surfaced in the community that raised questions about the appropriateness of certain aspects of the 1995 Plan. These included important elements that were lacking or otherwise unclear. Some of the concerns surfaced as officials began to consider updating the Township's zoning regulations. To address the concerns in a comprehensive and orderly manner, Township officials decided to develop a wholly new Plan. The goal was to prepare a new Plan that was generally based on the 1995 Plan but with the necessary revisions to address the 1995 Plan's deficiencies. The Township sought the expertise of a professional planner to assist with the preparation of the document. The Planning Commission assembled a complete draft of the new Plan suitable for presentation to the residents of the community. The Planning Commission held a public hearing on the draft Plan on October 20, 2004 and the Plan was finalized and adopted by the Planning Commission on November 17, 2004.

## Overview of Planning Policies

This Plan presents a coordinated strategy that addresses growth, development and preservation. The Plan supports the continuation of Locke Township as a predominantly agricultural and rural residential community, with reasonable opportunities for higher density residential development and commercial and industrial development. The Plan recommends that the majority of the Township be reserved for farming activities and rural residential development, and that suburban development patterns be limited to the southeast and southwest corners of the Township. Commercial development is guided to specific segments of M-52, in addition to opportunities for commercial and industrial uses in association with residences where such home occupations will not undermine the welfare of surrounding residential areas.

## Locke Township Overview

The following is a brief overview of Locke Township today. A more detailed review of Locke Township trends and conditions can be found in Appendix A, B, C, and D.

Locke Township is located in the northeast corner of Ingham County in the south-central region of Michigan's Lower Peninsula. Principal surrounding townships are Perry to the north, Conway to the east, Leroy to the south, and Williamstown to the west. The nearest urban center to the Township is the City of Williamston, a community of approximately 3,500 persons that abuts the southwest corner of the Township. The outer fringes of the larger urban centers of Lansing, East Lansing, and Meridian Township, with a total population of approximately 205,000, are located 10 – 15 miles to the west.

The Township's topography can be generally described as nearly level to gently rolling. Drainage is facilitated through a network of watercourses. The most dominant is the Red Cedar River. The Red Cedar River travels west along portions of the Township's southern periphery. The Red Cedar River is fed by two principal drains that extend northward through the Township – Wolf Creek and Squaw Creek. The Red Cedar subsequently flows into the Grand River in Lansing. There are no natural lakes or ponds in excess of ten acres in the Township.

Vegetative cover in Locke Township consists largely of cropland, accounting for approximately 70% of the Township area. The principal exceptions are those areas characterized by wetlands, woodlands, or residential development and its associated lawn areas. There are approximately 2,600 acres of wetlands in the Township, comprising 12% of its landscape. The wetlands are

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dispersed throughout the Township but are most prominent along or near to watercourses including the Red Cedar River and the Wolf and Squaw Creeks. Nearly all of the Township's wetlands are comprised of lowland hardwoods such as ash, elm, soft maples, and cottonwoods. The balance is comprised of shrub and emergent wetlands. The Township is nearly void of upland hardwood stands.

Regional access to Locke Township is afforded by I-96, I-69, and M-52. Interstate 96 (I-96) approaches within two miles of the Township's southern border and I-69 travels within four miles of its northern border. M-52 travels north-south through the central region of the Township, with both an I-96 and I-69 interchange. Lansing's Capital City Airport is located approximately 25 miles west of the Township. Locke Township's local roadway network generally exhibits a grid-like pattern, characteristic of the majority of townships in Lower Michigan.

Most of the Locke Township landscape is dominated by farming operations, woodlands, wetlands and other open spaces, and scattered residences. Farming operations occupy approximately 70% of the Township acreage and are present in nearly all areas of the community. Crop farming is predominant although there are a number of livestock operations scattered throughout the Township including dairy, sheep and horse farming.

Residential development comprises approximately 5% (1,200 acres) of the acreage in Locke Township. The 2000 Census recorded 586 dwelling units, 578 of which were single family dwellings and the balance were part of two-family dwelling structures. Except for two platted subdivisions, nearly all of the residential development in the Township has occurred in a strip pattern along the Township's section-line roads on parcels of 5 – 20 acres. The original residential settlement pattern – dwellings on farm parcels approaching 40 acres or more in size – is still very evident but accounts for a small portion of the total households.

The most visible signs of commercial development in Locke Township are along M-52 between Haslett and Bell Oak Roads. The northwest corner of the M-52/Haslett Road intersection includes a small convenience store. The northeast corner of the M-52/Bell Oak Road intersection includes a vehicle repair and truck rental service. The balance of the Township's commercial uses, excluding its farm operations, consist of business operations in conjunction with a residence, and include such uses as vehicle repair shops and a decorating service. Industrial uses in the Township are also limited to businesses operated in conjunction with residences.

A five member Township Board governs Locke Township. The Township Hall on the north side of Bell Oak Road, a short distance east of M-52. The primary offices for local officials are in their homes.

Public services in the Township are comparatively limited. There is no public sewer or water and the Township relies on the State Police and County Sheriffs Department for police protection. Locke Township receives fire protection and ambulance service from the Northeast Ingham Emergency Service Authority (NIESA). NIESA provides service to a four township area including the Village of Webberville and the City of Williamston. Fire stations are located in Williamston and Webberville. NIESA contracts with the Village of Perry Fire Department to provide fire protection to the northern portion of Locke Township. Locke Township operates and maintains three cemeteries. Though the Township does not operate any parks or other recreation facilities, area residents do have access to the various recreation facilities in the surrounding communities and greater regional area. The Township is served by five public school districts.

# Chapter Two

# PLANNING ISSUES, GOALS & OBJECTIVES

## Introduction

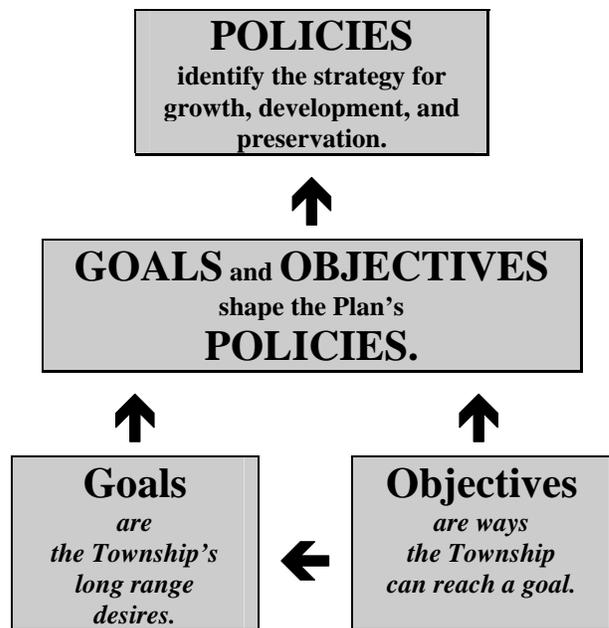
The purpose of this Plan is to establish a basis for future land use and public services in Locke Township. The Township wants to guide and shape future growth and development and not allow the community to evolve merely by chance. To effectively plan for the Township's well being with regard to future land use and public services, it is necessary to identify key goals and objectives in response to important planning issues facing the Township. The following is a summary of these planning issues and related goals and objectives.

The goals and objectives are important for several reasons:

- The goals and objectives provide current and future residents of Locke Township with an overview of the intended future character of the community.
- The goals and objectives identify and outline the basic parameters which should be used in guiding land use and public services policies.
- The goals and objectives serve as references upon which future rezoning, land development, and public services decisions can be evaluated.

## Planning Issues, Goals & Objectives

Each issue presented in this Chapter is followed by a set of goal and objective statements. Planning goals are statements that express the Township's long range desires. Each goal has accompanying objectives which are general strategies that the Township can pursue to attain the specified goal. For example, Mr. Jone's goal may be to establish a riding stable in the community. To achieve this goal, two of his objectives may be to seek a bank loan and meet with a real estate agent to discuss the purchase of a suitable parcel.



Goals, Objectives, and Policies of the Plan

The planning issues, goals and objectives, are divided into the following major categories:

- Growth Management
- Community Character and Environment
- Housing
- Commercial and Industrial Development
- Circulation
- Regional Coordination

The planning issues presented in the following pages are not intended to be all inclusive. Rather, they are presented as the primary issues that Locke Township should address at this time as it establishes a future for itself. These issues will evolve over time and should be reexamined periodically and the appropriate modifications made.

## **Growth Management**

Locke Township's population has grown from 921 in 1930 to 1,671 in 2000. While the total population change in the community may be comparatively low, it should be recognized that the Township's growth rate has surpassed that of the county and state for the past 30 years. Locke Township is a very desirable place to live, with abundant natural resources and open spaces, easy access to highways and regional employment centers, an overall rural character, and nearby retail and other urban services. It is reasonable to anticipate that the population of the Township may increase by 500 persons or more during the next 20 years (see Appendix C). Based upon an average household size of 2.9 persons, such a population increase would yield approximately 172 new households. The development of a single 80-acre parcel alone, as a platted or condominium subdivision, could potentially yield 40 – 60 new dwellings and 180 new residents.

The character and quality of life will be impacted by the way the Township chooses to manage future growth and development. Managed growth can minimize unnecessary loss of natural resources including farmland; preserve the Township's existing character and environmental integrity; encourage orderly land development; assure adequate public services and wise expenditures of Township funds; provide varied housing opportunities, and limit traffic hazards and nuisances.

Tax revenues dictate, in part, the extent and quality of public services. Although development will increase the Township's tax base, the same development will place additional demands upon public services. Contrary to traditional planning wisdom and thought, recent research has shown that development does not necessarily "pay its way," particularly as it applies to traditional single family residential development.

In this regard, it is advantageous to maintain a compact form of growth and development and, to the extent it is practical, locate higher density and intensity development near or adjacent to areas currently being served with higher levels of public services or anticipated to be served by such services in the future. Current police and fire protection services, and the roadway network, appear to be meeting the present needs of area residents. High growth rates that may be brought on by market conditions and zoning provisions will necessitate greater expenditures of Township funds. Maintaining the current quality of public services, let alone the pursuit of improvements, can be very difficult in the face of unmanaged growth and development.

This Plan must provide a strategy for effectively shaping and guiding future growth and development in a feasible manner, consistent with the aspirations of the citizenry of the Township and the opportunities and constraints presented by its natural and cultural characteristics. The accommodation of growth and development should assure compatibility between land uses and the preservation of the dominant rural character of the community.

***GROWTH MANAGEMENT GOAL:*** *Guide future development in a manner that assures land use patterns compatible with public facilities and services, the cost-effective use of tax dollars, and the preservation of natural resources and rural character.*

## **Objectives**

- 1) Identify locations in the Township by sound planning and zoning that are appropriate for agricultural, residential, and non-residential use, taking into account the constraints and opportunities presented by the Township's natural features and the availability of public facilities and services (including road infrastructure).
- 2) Preserve the Township's natural resources through a coordinated future land use strategy and related implementation tools that permit reasonable use of land while discouraging unnecessary destruction or loss of natural resources, including farmland resources, wetlands and woodlands.

- 3) Establish and administer effective land use and development review regulations to ensure development is compatible with the policies, goals and objectives of this Plan.
- 4) Guide development into areas where public facilities and services have adequate capacity to accommodate the growth and increased development intensities, and where the provision or expansion of public facilities is cost effective.
- 5) Prohibit new growth and development that requires levels of public facilities and services not available, until the time such levels of services become available.
- 6) Explore options to address identified public service and/or facility needs and pursue strategies to address such needs.
- 7) Wherever legally permissible, local regulations should require new developments to pay to the Township the direct and indirect public services costs associated with that development. These costs should not be imposed on existing residents except where public interests and benefits may be at stake.
- 8) Discourage public services improvements that will have the effect of encouraging development at a rate beyond the Township's ability to ensure adequate public health, safety, and welfare, or development in areas of the Township not designated for such growth.
- 9) Separate incompatible land uses by distance, natural features, or man-made landscape buffers that adequately screen or mitigate adverse impacts.
- 10) Monitor local attitudes about public facilities and services, including police and fire protection, water and sewer, and recreation.
- 11) Provide regular opportunities for public input on growth and development issues facing the Township.

## **Community Character and the Environment**

The protection of the Township's rural character and natural resources is extremely important to the residents of Locke Township. "Rural character" is a subjective quality, but is typically associated with an overall perception of abundant open spaces comprised of farmland and/or other open landscapes including woodlands, wetlands, fields, and suburban and urban development of an appropriate scale and form compatible with this overall perception. These open space elements are important in shaping the character of the Township, and provide vital environmental roles including wildlife habitats, flood control, water purification, groundwater recharge, and air quality. The Township has abundant natural resources and sensitive environmental areas including the Red Cedar River and its tributaries. Preservation of these resources can be very difficult because the process of encroachment

can occur slowly. Substantial damage to an entire ecosystem frequently occurs incrementally over a long period of time.

Residents strongly support the existing rural character of the community and its resources, and want these features to be important parts of the Township's future. Effective protection of rural character and the natural environment does not require the prohibition of growth and development. Managed growth and development encourages the continuation of the Township's overall rural character. The preservation of rural character and environmental resources in the face of growth and development is dependent upon site development practices that actively incorporate the protection of open spaces, natural resources and environmental ecosystems in the development plan. Limitations on the extent to which suburban and urban development patterns are permitted to encroach into more rural and resource-rich areas are an important part of the equation.

Increased environmental knowledge, awareness, and education, when incorporated into a comprehensive planning strategy, can minimize the potential for environmental degradation. Establishment and protection of interconnected systems of natural/environmental areas, including wetlands, woodlands, stream corridors, and open fields can provide a diverse and viable habitat for wildlife and native plants.

Zoning and related development regulations can encourage the protection of the Township's natural resources and rural character.

### **COMMUNITY CHARACTER and ENVIRONMENT**

***GOAL:*** *Preserve the dominant rural character of Locke Township and the abundance and integrity of its environmental resources.*

#### **Objectives**

- 1) Encourage land development designed in scale with existing developed areas and the dominant rural character of the community through reasonable standards addressing density, building size, height, and other development features.
- 2) Encourage land development that actively strives to preserve open spaces as part of a development project (woodlands, wetlands, fields, and streams), by use of such tools as conservation easements, land trusts, and more flexible development standards.
- 3) Encourage the maintenance of historically significant structures and a structurally sound housing stock, and the rehabilitation or removal of blighted structures and yard areas.
- 4) Encourage development patterns that preserve the natural beauty and rural character of existing road corridors, including scenic vistas.

- 5) Ensure that the quantity and quality of new development does not unreasonably create increases in air, noise, land, and water pollution, or the degradation of land and water resource environments including groundwater.
- 6) Limit development densities and intensities near or adjacent to environmentally sensitive areas.
- 7) Ensure all development complies with local, county, state and federal regulations intended to ensure environmental protection.
- 8) Encourage development patterns and site improvements that minimize disturbances to natural features including woodlands, wetlands, streams, topographic features, and important wildlife corridors.
- 9) Encourage the establishment of natural buffer areas between environmentally sensitive areas and development activities.
- 10) Assure development proposals to comply with all applicable regulations pertaining to on-site sewage disposal and potable water, including the requirements of the Ingham County Health Department and the Michigan Department of Community Health.
- 11) Encourage septic fields to be placed as far away from water and wetland resources as reasonably possible.
- 12) Review proposed development in light of its potential impact upon wetlands, woodlands, and other natural resource areas.
- 13) Establish an interconnected township-wide network of open space areas that facilitate natural drainage, wildlife habitat corridors, and nature interpretive and recreation trails.
- 14) Recognize the special environmental role of the Red Cedar River, Squaw Creek, Wolf Creek, and other key drainage corridors and discourage development that will disrupt their natural character including the wetland, woodland, and other wildlife habitats of these corridors.
- 15) Educate the public about waste management and the Township's fundamental reliance upon groundwater resources for potable water supplies and the potential detrimental effects of irresponsible land use and development practices.

## **Farming**

Farming has historically been a dominant component of Locke Township and the Township continues to be a strong agricultural community today. However it is important to note that the number of farms in the Township has declined over the years, as has the total acreage devoted to farming. Still, this decline has not been as pervasive as in other areas of Ingham County and Michigan as a whole.

There exists a demonstrated and increasingly critical need in the state for land devoted to agricultural use. Farm operations produce the food and fiber that our society relies on as well as the society of other countries. Agriculture has long been recognized for contributing to the economic stability of local communities and is the second leading industry in Michigan. Studies undertaken in 1995 by the Center for Urban Policy Research at Rutgers University (Dr. Robert Burchell, Fiscal Impacts of Alternative Land Development Patterns in Michigan) found that farmland and open space typically produce more revenue than the cost to provide such land with public services. The same finding was reached by a 1996 University of Michigan study that focused on Scio Township in Washtenaw County.

Agricultural resources are being consumed at an alarming rate by residential sprawl. According to the U.S. Census, Michigan lost 10 acres of farmland every hour between 1982 and 1992. Competing land uses, particularly residential uses, are escalating land prices in the Locke Township area beyond the range of economic viability for farming. This is especially critical for the next generation of farmers who may not be able to afford to buy land to farm. These trends emphasize the importance and need for appropriate farmland preservation strategies. This importance is further illustrated by the considerable legislation being considered in Michigan to stabilize the farming industry and heighten its economic viability.

Permitting a comparatively high level of residential development in a community's agricultural area will encourage residential encroachment of farmlands, increased land use conflicts between farm and non-farm residents, and higher property assessments resulting in a decreased long-term business environment for agriculture – all of which collectively hinder the long term economic viability of farm operations.

Effective farmland preservation is dependent upon the management of the number and size of new non-farm lots, to avoid excessive encroachment and the wasteful conversion of excess tillable land for each home site. In the last few years there have been efforts to establish a number of local and state programs and initiatives to provide other options to landowners. One such important program is the Purchase of Development Rights (PDR),

whereby a landowner can voluntarily sell the development rights to a governmental body in turn for placing an easement on the land prohibiting future non-farm development. Another program is the Transfer of Development Rights (TDR). This program enables a landowner to transfer (through purchase) the farm parcel's development rights to another parcel in an area planned for growth and development. Both the sale and transfer of development rights provides landowners the opportunity to realize the development value of their land without having to actually develop it. Under both programs, the other private property rights remain in tact. The protected land remains in private ownership and can be sold to anyone at any price. However the land cannot be developed for residential, commercial or industrial purposes.

The Township recognizes the economic and other challenges facing the local farming community. The Township also recognizes the economic benefits of local farm operations not only for their productive capacity and contribution to the local economy, but also for their limited demand on public services, infrastructure, and township revenues. If Locke Township can provide viable preservation options to owners of farmland, it can stabilize and strengthen the industry long-term and benefit the community as a whole.

***FARMING GOAL:*** *Encourage the continuation of local farming operations and the long-term protection of farmland resources.*

**Objectives:**

- 1) Identify areas that are supportive of long-term farming, and minimize land use and other hindrances to agriculture through complementary zoning provisions.
  - 2) Minimize potential land use conflicts in designated agricultural areas by limiting the encroachment of non-farm land uses, while similarly providing flexibility for the conversion of farmland to reasonable alternative uses.
  - 3) Establish a Right-to-Farm disclosure program designed to ensure that new builders/owners of homes in designated agricultural areas are aware that the primary and preferred use of land in such designated agricultural areas is agriculture. The statement should provide notice to new homeowners to expect certain odors, noises, dust, and use of crop food and crop protection products.
  - 4) Discourage large residential parcels, and its associated wasteful consumption of farmland resources, as the only means to control development densities in designated agricultural areas.
- 5) Encourage development patterns that minimize disturbances to, and premature destruction of, farmland areas by responsible and innovative site planning including clustering/open space zoning –residences clustered on only a portion of the parcel and the balance is preserved for agriculture.
  - 6) Encourage buffer areas between new residential developments and abutting agricultural areas.
  - 7) Support P.A. 116 farmland preservation agreements.
  - 8) Support the establishment and funding of voluntary Purchase of Development Rights (PDR) and Transfer of Development Rights (TDR) programs administered at the county or regional level.
  - 9) Discourage the extension of municipal utilities (such as sewer and water) into designated agricultural areas.

**Housing**

Residential development will be the major land use change in the coming ten to twenty years. Locke Township is a very attractive place to live for many prospective residents. The Township has abundant natural resources and open spaces, an overall rural character, close proximity to desirable urban services and retail centers, and convenient regional access to near and distant employment centers. Principal limitations to new residential development include its environmentally sensitive areas, the ability of area soils to accommodate septic drain fields, comparatively limited public services, the ability of the Township to provide adequate public services to meet the demands of the increased residential development, balancing residential growth with farmland resources protection interests, and limited employment opportunities and consumer services in the community.

Locke Township and surrounding areas are desirable places to live because of the quality of life that is offered, and provide opportunities for accommodating new households desiring to reside in the area. Locke Township is in a position to offer varied housing opportunities. Rural residential lifestyles are readily available. The proximity of Williamston and Webberville provide potential opportunities for more suburban and urban lifestyles in designated areas of the Township through the extension of public sewer and water. Establishing suburban and urban residential development areas can be important as part of the Township's interests and efforts to provide varied housing opportunities for current and future residents and limit the extent of residential encroachment into agricultural areas. Public studies during the past 10 years have consistently documented that higher density residential development typically generates lower services costs than traditional low-density single family dwellings.

It must also be recognized that areas allocated for suburban residential development need not be extensive nor facilitate excessive high density development as might be associated with large scale multiple family (three or more units per building) and manufactured housing community developments. Growth patterns in Locke Township and the surrounding communities do not suggest the need to accommodate large high-density residential areas. Further, according to the Michigan Department of Consumer and Industry Services and the U.S. 2000 Census, and the 588 dwellings recorded in Locke Township in that year, it would take only approximately 90 multiple family dwelling units and 30 manufactured housing community dwellings to equal the proportion of such units state-wide (15.4% and 4.8% respectively).

The proper placement of residential development of a more suburban and urban character, including multiple family dwellings, is critical if such development is to have limited impact upon the character of existing more rural residential areas, the community's dominant rural character, the cost-effective delivery of public services, and farmland preservation.

The location and character of residential development can have the greatest negative impact on local farming operations. However, farmland concerns should not be the sole consideration in the location and character of new residential development. Inappropriate development can occur where development densities exceed the natural carrying capacity of the land, where public facilities are not adequate to handle increased demands, and where nearby development may reflect a very different character.

Of equal concern is the efficiency in which the Township's land resources are utilized. Future residential development can be efficiently accommodated and need not consume unnecessary farmland acreage and other natural resources, and open spaces. The actual land area needed for future residential development is comparatively small. If Locke Township's population grows by 500 persons by 2020, approximately 300 acres of undeveloped land and/or farmland would require conversion to residential use to accommodate the additional 172 dwellings (based on an average lot size of 1.5 acres and a household size of 2.9 persons). As noted previously, the development of a single 80-acre parcel alone could potentially yield 40 – 45 new dwellings and 130 new residents – accommodating more than one-quarter of this anticipated growth.

Alternatively, the same 172 dwellings can consume as much as 2,500 acres (approaching 10% of the entire Township) if located on large lots of ten acres or more. This less efficient development pattern can dramatically accelerate the rate at which farmland and other

undeveloped lands are converted to residential use and undermine the long term economic viability of local farming operations. When large land splits occur throughout the community, one by one, the cumulative impact upon the Township's agricultural base can be devastating.

However, small acreage zoning across the Township such as one-acre zoning, without any density limitations, provides for a build-out population (the population resulting from all land being developed at a density of 1 dwelling per acre, exclusive of wetlands and future road rights-of way) approaching 35,000 persons or more. Such a growth pattern will have dramatic effects on farming, community character, taxes, and public services demands.

**HOUSING GOAL:** *Accommodate new residential development in a manner that recognizes the opportunities and constraints of the Township's public services, infrastructure, and natural features; preserves the overall rural character of the Township and its farmland resources; and accommodates a range of densities and lifestyles.*

**Objectives:**

- 1) Encourage the continued dominance of low density housing as the principal housing option.
- 2) Provide opportunities for alternative housing options to meet the varying housing preferences of current and future residents, including small-lot single family dwellings and multiple family housing.
- 3) Identify limited areas in the Township where higher density residential development, including multiple family development, can be adequately accommodated due to heightened levels of road infrastructure and public services.
- 4) Discourage strip residential development along the frontage of existing state and county roads, to minimize traffic safety hazards and the "land-locking" of interior acreage, and encourage rural character preservation.
- 5) Encourage innovative residential development that incorporates the preservation of natural resource systems and open spaces, and the preservation of the Township's rural character. One such initiative, where multiple lots or dwelling units are created, should include the development of only a portion of the original parcel, relying on comparatively small lots, and thereby enabling the balance of the parcel to be maintained in a permanent open space status (commonly referred to as "clustering" and "open space zoning").
- 6) Discourage commercial encroachment into established residential neighborhoods, including home occupations that undermine the essential character and desirability of residential areas.

## Commercial and Industrial Development

The most visible signs of commercial development in Locke Township are along M-52 between Haslett and Bell Oak Roads. The northwest corner of the M-52/Haslett Road intersection includes a small convenience store. The northeast corner of the M-52/Bell Oak Road intersection includes a vehicle repair and truck rental service. The balance of the Township's commercial uses, excluding its farm operations, consist of business operations in conjunction with residences. Industrial uses in the Township are also limited to businesses operated in conjunction with residences.

Addressing commercial and industrial development effectively requires consideration of need, location and character. At present, there is little apparent demand or need for significant expansion of either in Locke Township. Public sentiment does not suggest such expansion to be important to area residents. The Township's current population base can support only limited commercial development. In fact, a 1989 study by David Van Horn, focusing on four counties in Florida, California, and Tennessee (including rural areas), found that the average number of acres devoted to commercial use on a county-wide basis was 7.2 acres per 1,000 population (Urban Land, 1989). It is reasonable to expect that a significant lower ratio exists if all cities and villages are excluded. Locke Township's current 10 acres of commercial development (including certain home occupation establishments) yields a ratio of nearly seven acres of commercial development per 1,000 population. According to the 1985 Shopping Center Development Handbook published by the Urban Land Institute, the Township's population of approximately 1,700 is not adequate to support the smallest of the classifications of commercial centers – the neighborhood center. A neighborhood center is considered to require a base population of 3,000 – 4,000 persons.

While M-52 provides a basis for accommodating commercial development that caters to the highway traveler and that need not rely solely on the local population for economic viability, the Plan also recognizes the proximity of Williamston, Webberville, Perry and other nearby communities including Lansing, where commercial development is considered particularly appropriate.

While the American Planning Association (APA)-published studies (1983) found that an approximate average of 8% – 12% of the land in both large and small cities was devoted to industrial use, more rural communities, particularly those without extensive public sewer and water, have more often exhibited land use ratios of less than 2%. Locke Township's approximately 10 acres of industrial development comprises approximately 0.2% of its total developed land area. According to Planning Design Criteria (DeChiara and Koppleman,

1969), a general guideline for the ratio of industrial acreage to a community's population is 12 acres of industrial land for each 1,000 population. Locke Township's current 10 acres yields a ratio of 6.0 acres of industrial development per 1,000 population.

Still, the economic stability of Locke Township directly affects the quality of life experienced by its residents. Economic stability is a function of many elements including property tax revenues, public services costs, employment, and consumer spending. As noted previously, traditional planning wisdom that supported the position that development "pays its way" has been replaced by considerable research to the contrary, suggesting that commercial development typically generates equal or more revenue than its increased public service costs. Thus, accommodating opportunities for commercial and industrial expansion has important benefits.

The viability of commercial and industrial development is typically linked to access and improved levels of public services. In the case of commercial development, visibility plays an important role. Locating future development with recognition of these factors will improve its long term viability, minimize additional public costs, lessen negative impacts upon the local agriculture industry and residential areas, and avoid inefficient development patterns. To this end, and to the extent additional development of this character is accommodated in the community, special attention should be directed to the M-52 corridor.

Commercial uses can vary significantly in character, ranging from retail to office, professional and other services, and ranging in size and scale from a small local hardware store to a large department store or multi-plex movie theater. As commercial uses are of varying character, so are their needs and impacts in association with public services and infrastructure, abutting land uses, the community as a whole, and neighboring municipalities. The character of Locke Township, including existing development patterns, public services, and community attitudes, does not support extensive or intensive commercial development but rather development that is a local flavor and scale, and tied to the day-to-day consumer needs of the local population. These same community conditions suggest future industrial development be of a comparatively light character

Given the strong agricultural and rural character of Locke Township, opportunities for commercial and industrial uses may be able to be successfully accommodated in association with home occupations where such operations will not undermine the quality of life in the surrounding area nor require improved levels of public services.

## **COMMERCIAL and INDUSTRIAL DEVELOPMENT**

**GOAL:** *Provide opportunities for the limited expansion of commercial and industrial development in a manner that encourages businesses of a local character that cater to local needs, compliments the predominant rural character of the community, minimizes new public service costs, and protects the viability and desirability of the Township's residential areas.*

### **Objectives**

- 1) Determine if there are locations in which commercial and/or industrial development are appropriate, taking into consideration such factors as existing land use patterns, public services, accessibility including M-52, and designate such areas as may be applicable.
- 2) Provide opportunities for home-based occupations under conditions that will support the residential character, appearance, and quality of life experienced by surrounding residents.
- 3) Discourage the encroachment of commercial and industrial development into planned agricultural and residential areas except as may be successfully accommodated as home occupations.
- 4) Encourage commercial and industrial development to be in character and scale with surrounding land uses, considering such features as building size and height, architectural design, setbacks, signage, and open spaces.
- 5) Provide opportunities for a mix of commercial uses that predominantly target local day-to-day consumer needs within buildings that compliment the character of the community.
- 6) Limit industrial uses to those predominately characterized by assembly activities and similar "light" operations that do not require added levels of public services or negatively impact surrounding land uses or the community as a whole.
- 7) Encourage industrial uses to locate in industrial parks, characterized by adequate open spaces, landscaping, and buffering.
- 8) Establish landscaping and screening measures to ensure commercial and industrial development is sensitive to the dominant rural character of the community and minimizes adverse impacts on the normal use and enjoyment of adjoining land.
- 9) Enhance the character of commercial and industrial development through complementary open spaces, landscaping and buffering, signage, architectural design and related site features.
- 10) Encourage the upkeep of commercial and industrial properties and the rehabilitation of blighted and deteriorating areas.

## **Circulation**

As new residential and non-residential land uses are introduced into the Township, demands upon the road network will increase. This increased traffic may cause congestion along some of the Township's roads. Conversely, it must be recognized that road improvements may attract new development that will place additional demands on the network. This can be particularly true in the case of commercial and industrial development. Increased traffic demands can be minimized by adequate road maintenance and the coordination of road improvements with the planned future land use pattern.

Good land use management can maximize the potential of the Township's road system and minimize adverse impacts to other road segments. Locating higher intensity land uses close to key thoroughfares will minimize future maintenance costs and traffic levels on the Township's other roads. Improperly managed, the Township's principal thoroughfares have the potential to evolve into corridors of strip residential and commercial development, with excessive signage and lighting, driveways and curb cuts, and expansive parking areas. Such a development pattern will undermine the function of these corridors, encourage congestion and traffic hazards, and alter the essential perception of the dominant rural and small-town character of the Township.

Proper land use management and site development plans along important corridors can enhance the entry experience into the Township, strengthen its identity and charm, and improve economic stability.

The future pattern of residential lot splits and subdivisions will have a significant impact upon the future quality of life in the Township. Much of the residential development in the Township today is of a strip pattern -- residences are "stripped" along the existing county road frontages. This pattern of lot splits can be debilitating because: 1) the increased number of driveways directly accessing the county roads increases the level of congestion and safety hazards; 2) travel times are increased; and 3) the Township's rich rural panoramic views of woodlands, fields, and other open spaces, as experienced from the roads, may be reduced to images of driveways, cars, and garages.

Affording bicycle and pedestrian movement throughout a community, and between communities, has long been identified as an important goal in improving quality of life. The past 20 years have witnessed an unprecedented surge in interest in trail systems on the local, state, and federal level as their value is better understood. These trails can limit the reliance on the automobile, improve the health of local residents, improve the quality of leisure time, facilitate economic activity, and encourage a vibrant community. Locke Township faces unique challenges in the cost-effective and practical development of a comprehensive network of trail systems due to its low

population, the lack of existing population centers and the wide expanses of farmland, and financial constraints. However, smaller trail systems may well be feasible in association with evolving neighborhoods.

**CIRCULATION GOAL:** *Provide and maintain a transportation network throughout the Township that encourages efficient and safe travel consistent with the rural character of the community and coordinated with the planned future land use pattern.*

### **Objectives**

- 1) Identify priority road segments for systematic maintenance and improvement, based upon the planned future land use pattern and existing and projected traffic patterns.
  - 2) Discourage high-traffic generating land uses and development patterns along the Township's secondary roads until the time when such roads have been improved to accommodate the development.
  - 3) Practice access management to minimize the potential for traffic congestion and safety hazards along adjacent roadways, including limitations on the number, size, and shape of new land divisions; the discouragement of "strip" development; limitations on curb cuts; the use of combined service drives; and appropriately located road intersections.
  - 4) Practice access management to ensure reasonable, safe, and efficient internal circulation between abutting residential or neighborhood areas, including the establishment of stub roads to abutting vacant parcels for future extension at the time such parcels are similarly developed.
  - 5) Require all future roads to be designed and constructed to Ingham County Road Commission standards except upon a finding that, in specific instances, such standards do not justify the impact on the natural environment and rural character of the community or are otherwise unnecessary, and lesser standards will not undermine public safety and welfare.
  - 6) Include non-motorized circulation systems (sidewalks, trails, etc.) between neighborhoods, and between neighborhoods and important activity centers such as schools, parks, and other public gathering areas, to facilitate efficient, safe, and environmentally-friendly travel.
  - 7) Discourage road improvements that will increase growth and development pressures in areas not specified for growth.
- 8) Evaluate all proposed future road construction for local and regional impacts on traffic flow, congestion, and public safety, and coordinate new road construction with other local and regional road improvements to address traffic movement in a unified and comprehensive manner.
  - 9) Maintain regular communications with the Ingham County Road Commission regarding local and regional transportation trends and conditions, and road maintenance and improvements.

### **Regional Coordination**

Locke Township must recognize that it exists within a regional network of communities, none of which are islands unto themselves. The Township abuts the Townships of Perry, Conway, Leroy, and Williamstown, and the City of Williamston. The Township and nearby municipalities can greatly benefit by cooperatively pursuing common goals in the areas of land use and public services. In terms of township preservation goals, strategies administered and coordinated on a county or regional basis may provide more viable and effective opportunities for both landowners and the Township as a whole.

Planned land uses, public services and preservation efforts should take into consideration conditions in these abutting communities. These conditions vary, from the more suburban and urban features of the Williamstown Township and Williamston, to the more agricultural and rural features of Perry and Conway Townships. Appendix A provides a review (Neighboring Conditions) of existing conditions in these abutting communities.

Land use planning efforts should seek to establish a land use pattern compatible with surrounding conditions provided the goals of the Township are not undermined. To this end, the Township must recognize the potential for annexation efforts and give careful consideration to the location of new commercial and industrial development and targeted farmland protection areas and the protection of its tax base.

**REGIONAL COORDINATION GOAL:** *Guide future development and public services in a manner that recognizes the position of Locke Township within the larger region, and the mutual impacts of the planning programs of Locke Township and surrounding municipalities.*

### **Objectives**

- 1) Where practical, identify a planned future land use pattern that seeks to ensure compatibility along municipal borders.
- 2) Where practical, identify a planned future land use pattern that does not risk the loss of important

agricultural, commercial and industrial property tax dollars through annexation.

- 3) Work with officials of surrounding communities to coordinate land use planning efforts for preservation and development objectives and minimize the potential for undesirable annexation and land conflicts.
- 4) Maintain a meaningful communication program with area municipalities and county agencies to discuss

local and area-wide public facilities and services needs, land use conditions and trends, preservation goals and objectives, contemporary planning issues, and other mutually beneficial strategies to address short and long-term needs.

# Chapter Three

# FUTURE LAND USE STRATEGY

## Introduction

Locke Township's principal planning components are contained in the Master Plan's Future Land Use Strategy, as discussed in this chapter, and the Public Services Strategy discussed in Chapter Four. The Future Land Use Strategy identifies the desired pattern of land use, development and preservation throughout the Township. Chapter Four presents guidelines regarding future infrastructure and public services improvements to help ensure that future public services are coordinated with the planned future land use pattern, and the achievement of the Plan's goals and objectives.

The goals and objectives presented in Chapter Two are the foundation on which the Future Land Use Strategy is based. These include, in part, the desire to guide future development in a manner that ensures land use patterns compatible with public facilities and services, the cost-effective use of tax dollars, and the preservation of natural resource, and rural character.

The Future Land Use Strategy is based upon an analysis of the Township's natural and cultural features such as community attitudes, existing roadway network, existing land use patterns, soil conditions, existing and nearby public infrastructure, environmentally sensitive areas, and other natural resources. The opportunities and constraints presented by these characteristics were evaluated in the context of the goals and objectives in Chapter Two to arrive at a planned future land use pattern.

The Future Land Use Strategy proposes the continuation of the agricultural and low density residential character of the Township. Modest orderly growth is recognized. A concentration of higher density residential areas located in the southwest and southeast corners of the Township recognize the potential for the extension of existing public services from Webberville and Williamston.

## Land Use Areas

The Future land Use Strategy divides the Township into "Areas" and identifies the predominant land use pattern planned for each. These land use Areas collectively make up the planned future land use pattern in the Township. These areas are:

- Agricultural – Rural Residential Areas
- Suburban Residential Areas
- Commercial Areas

It is not the intent of this Plan to identify the specific land uses that are to be permitted in each of these Areas. This Plan makes broad-based recommendations regarding the dominant land use(s) to be accommodated in each of these Areas. Specific permitted land uses will be determined by the zoning provisions of the Township, based upon considerations of compatibility. There may be certain existing land uses that do not "fit" with the planned future land use pattern. This should not be necessarily interpreted as a lack of Township support for the continuation of such uses. Zoning regulations should clarify this matter. The approximate borders of these Areas are illustrated in the Land Use and Circulation Map at the end of this Chapter.

### Agricultural – Rural Residential Area

The Agricultural – Rural Residential Area includes the vast majority of land in the Township and nearly all lands currently farmed. The intent of the Agricultural – Rural Residential Area is to provide opportunities for farming and encourage the preservation of farmland resources and the long-term viability of local farming, while also providing opportunities for low-density residential development that preserves the community's overall rural character, natural resources, and open spaces. This Area is established in recognition of the importance of Agriculture and the need to encourage the preservation of farmland resources and viable farming operations. Agriculture and low-density residential development are intended to be the primary uses of land in this Area.

## LOCKE TOWNSHIP MASTER PLAN

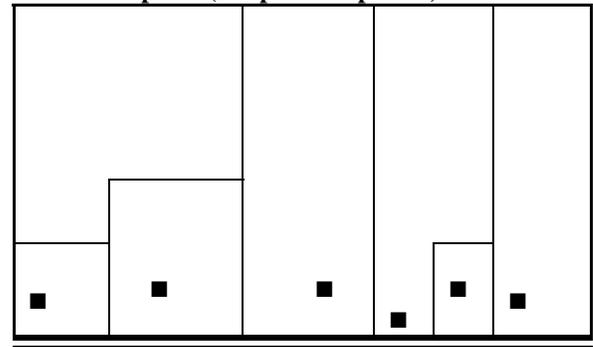
Lands in the Agricultural – Rural Residential Area are largely characterized by conditions that support their long term agricultural economic viability including: 1) classification by the U.S. Department of Agricultural as "prime farmland"; 2) minimum parcel sizes approaching 40 acres or more; 3) limited encroachment by non-agricultural land uses; 4) enrollment in the P.A. 116 Farmland and Open Space Protection Program; 5) adjacency to other farmland parcels considered to offer similar opportunities for long term economically viable farming operations; and 6) proximity to markets and transportation facilities such as grain elevators. The Area encourages the continuation of all current farming activities as well as the introduction of new farming activities. Still, in light of the Township's interest in providing opportunities for new residences in the Area and maintaining the quality of life for existing households, reasonable care should be exercised in regard to accommodating specialized agricultural operations that may have heightened impacts on surrounding land uses (such as large concentrated livestock operations).

Maximum development densities of approximately one dwelling per five acres is recommended in the Agricultural – Rural Residential Area, in support of the preservation of farmland resources and the management of growth and development. No public sewer or water that may be introduced into the Area by a private party should serve as a basis for higher development densities and the undermining of the purposes of the Area.

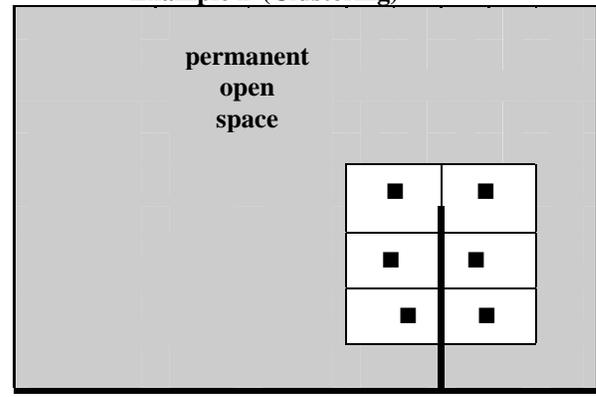
Development patterns that incorporate the preservation of natural resources, open spaces, rural character, and traffic safety are strongly encouraged. To this end, the Area supports opportunities for what is frequently referred to as "clustering" and/or "open space developments." This form of development provides for the clustering of smaller lots than what is normally required, on only a portion of the development parcel, so that the balance of the parcel can be retained for farming or otherwise reserved for open space and/or the preservation of important environmental resources. These open space areas can be reserved by the use of conservation easements, deed restrictions, or similar tools. A critical component of clustering should be the inclusion of new interior roads to serve the new lots, rather than stripping the dwellings along existing road frontages such as Rowley, Haslett, Harris, Morrice, and the many other public roads.

Traditional strip residential development along the Township's major roads is illustrated in Example A. This is the easiest form of development but it impacts public safety the greatest due to the many driveways directly accessing the roads and can significantly undermine the Township's rural character. Example B, illustrating the use of clustering, improves public safety along the road and more effectively preserves the existing character of the community. In the case where land is to be converted to one or more home sites and clustering is not exercised, lot configurations should minimize excessive frequencies of curb cuts and associated traffic hazards and congestion, as well as ensure adequate open spaces and setbacks to support the desired rural character of the area and minimize land use conflicts between farm and non-farm uses.

**Example A (Strip Development)**



**Example B (Clustering)**



## LOCKE TOWNSHIP MASTER PLAN

Potential new residents in the Agricultural Area should recognize that the traditional odors, noises, fertilizer applications, and generally recognized agricultural activities associated with responsible farming may well continue on a long term basis in this area. The Township does not consider such activities and operations as nuisances. Rather, the Township supports the long-term continuation of farming. Local developers and real estate agents should disclose this information to prospective buyers of land in this Area.

There are some existing small settlements in this Area, including scattered subdivisions. The Plan recognizes the viability and desirability of these settlement areas, and that some may be of a higher density than recommended for this Area. On the other hand, these settlement areas are not to serve or be interpreted as future growth and expansion zones and for this reason, are not included in the Suburban Residential Area discussed below. This Plan presents general policies. Specific zoning regulations, including zoning district boundaries and requirements, will address this issue.

### **Suburban Residential Areas**

The Suburban Residential Areas provides for residential development of a more suburban character than planned elsewhere in the Township. These Areas include existing residential development of a suburban character as well as vacant land where new residential development of similar character is considered appropriate.

These Suburban Residential areas will provide reasonable housing alternatives to the predominantly low-density residential development provided for in the Agricultural – Rural Residential Area. The Township is interested in providing increased opportunities for affordable housing and these opportunities are frequently associated with higher density development. Irrespective of affordable housing, the Township is interested in providing existing and future residents with choices in residential housing and lifestyles.

The proposed Suburban Residential areas include more than 700 acres of land that is generally void of wetland and flood-prone environments. This acreage has the potential to accommodate more than 500 new households based on average lot sizes of one acre and the use of a portion of this acreage for new roads. This development potential minimizes the need for additional residential development opportunities in the Agricultural – Rural Residential Area. Should sewer service be introduced to these areas, the build-out potential for the Suburban Residential areas increases to 1,500 households or more based on an average lot sizes of one-third of an acre.

As discussed under “Housing” in chapter Two, there are no locations in the Township that are particularly suitable for suburban residential development. However, the Township wants to establish a foundation for facilitating opportunities for varied housing and lifestyles. The planned Suburban Residential Areas are considered most appropriate for suburban residential development, as compared to the balance of the Township, for the following reasons:

- 1) The Township supports compact development patterns and these locations are in closest proximity to existing suburban and urban development patterns – the nearby communities of the City of Williamston and the Village of Webberville.
- 2) These locations are in closest proximity to existing retail and other commercial services, also located in Williamston and Webberville.
- 3) These locations are in closest proximity to fire protection services which are housed in fire stations in Williamston and Webberville.
- 4) Unless Locke Township intends the establishment of a Township-operated public sewer system, the potential for sewer service to greater facilitate suburban residential development opportunities will likely emanate from Williamston or Webberville.
- 5) These areas are most distant from the Township’s core agricultural areas further to the north, thereby minimizing encroachment into farm areas.
- 6) These areas are nearest to I-96 interchanges for improved access to regional employment and retail centers.

Development densities of approximately one dwelling unit per one acre are considered appropriate in the Suburban Residential Areas provided adequate potable water and on-site sewage disposal exists. Densities higher than approximately one dwelling per acre are considered reasonable only where public sewer is provided and only after special review proceedings to determine if the project is appropriate on the specific proposed property. Factors such as available infrastructure and public services, traffic safety, and the specific characteristics of the property should be considered during such a review. Until the time when public sewer may be available in one or both of these Suburban Residential Areas, development densities will be largely impacted by soil conditions including the extent of limitations they may present to septic drain fields and the rules and regulations of the Ingham County Health Department regarding on-site sewage disposal.

High-density residential developments including manufactured housing communities and multifamily developments, that would likely result in an abrupt increase in the number of dwellings and persons in the Township in a comparatively short period of time, should be located in the southeast Suburban Residential Area only. This portion of the Township is characterized by topographic conditions more suited to such developments.

## LOCKE TOWNSHIP MASTER PLAN

The Williamston School District (serving the southwest Suburban Residential area) is experiencing excess demand on facilities, and the Webberville School District (serving the southeast Suburban Residential area) has substantial excess capacity. In addition, locating such uses toward Webberville, with access to I-96 nearby, will minimize increased congestion in the City of Williamston and its residential areas and more effectively preserve the quality of life in these areas.

Future development in the Suburban Residential Area, when in association with platted or condominium subdivisions, or other development patterns of a similar neighborhood character, should be designed to address important growth management and quality of life measures. These include access management, pedestrian circulation, fire protection infrastructure, and recreation opportunities.

Though the limits of the Suburban Residential areas are approximate, as illustrated on the Land Use and Circulation Map (Map 5), they represent a clear policy to direct comparatively high-density residential development (densities greater than those planned for the Agricultural – Rural Residential Area) to the southeast and southwest corners of the Township. In the interest of encouraging compact development patterns, the extension of the Suburban Residential Areas beyond the illustrated approximate limits should generally be discouraged until such time that there is a demonstrated need that additional lands are necessary to accommodate medium and/or high density residential development. While the illustrated Suburban Residential areas do not extend into nearby 100-year floodplains, development within such floodplains may be reasonable where the public health, safety and welfare is not undermined nor are special environmental ecosystems associated with such floodplains.

### Commercial/Industrial Areas

The Future Land Use Strategy identifies particular locations where commercial and industrial development is considered appropriate. Commercial centers and industrial uses typically require a heightened level of road infrastructure, access, public services and visibility. These factors directly impact the identification of future commercial and industrial areas in the Township. Other concerns include minimizing conflicts between existing and proposed land uses and the encouragement of compact development. However, no development should occur unless adequate measures are provided for sewage disposal and potable water.

There is little apparent demand or need for significant commercial or industrial development in Locke Township. The Plan recognizes the proximity of Williamston, Webberville, Perry, Lansing, and other nearby communities where commercial and industrial

development of varying character is plentiful and particularly appropriate. In addition, the Township is void of public sewer or water service and is of a limited population base. It is the intent of this Plan to provide reasonable opportunities for commercial and industrial expansion within the context of the discussion in Chapter Two under “Commercial and Industrial Development”.

The Future Land Use Strategy establishes a single mixed-use M-52 Commercial / Industrial Corridor between the intersections of Haslett Road and Bell Oak Road. This corridor is to serve as the area to accommodate traditional commercial/industrial uses for several reasons.

- 1) Each intersection includes one or more existing businesses.
- 2) M-52, and the two intersection roads, affords visibility and access for future businesses. In addition, Haslett Road is classified as a county primary road.
- 3) The central location of this corridor affords convenient access from most areas of the Township.
- 4) The Township Hall’s presence on Bell Oak Road near M-52 results in more consumer traffic to these areas since the Hall is a community gathering place.
- 5) The corridor includes limited residences and substantial vacant land, presenting increased opportunities for successfully accommodating new commercial and industrial uses.

This commercial/industrial corridor is to be limited to that portion of M-52 between Haslett and Bell Oak Roads, and these immediate intersection areas. It is a basic tenet of the Plan that the M-52 Commercial/Industrial Corridor not evolve into incremental encroachment along M-52 south of the immediate intersection area of Bell Oak Road or north of the immediate intersection area of Haslett Road, or beyond approximately one-tenth of a mile to the east or west of these intersecting roads.

Future commercial development along this corridor should address the day-to-day consumer and office needs of local populations in addition to visitors and travelers along M-52. This corridor is not intended to accommodate large-scale commercial developments, or high-intensity uses that draw from a more regional market. There are enhanced locations for such development in surrounding communities where greater levels of infrastructure and services are available and where the scale and character of such uses are more appropriate. Similarly, future industrial development along this corridor should be characterized by uses that have comparatively limited public services needs. Industrial uses that have minimal external impacts are strongly encouraged. These may include service-oriented industries such as communication and information technologies and manufacturing operations that focus on the assembly of pre-made parts versus raw materials operations.

All commercial and industrial development should exhibit design measures to encourage compatibility with adjacent and nearby land uses and the desired rural character of the community. Adequate buffer yards and/or screening mechanisms should ensure new development minimizes impacts on residential properties. Reasonable limitations on signage, building height, size, and related architectural qualities should be implemented to ensure compatibility of new development with the desired character of the surrounding areas and the Township as a whole. Special attention should also be directed to ensuring future development does not undermine public health, safety or welfare due to poor road access practices including excessive curb cuts and conflicting turning patterns.

### **Red Cedar River Corridor**

Locke Township has important natural resources. Perhaps the most unique and therefore most significant, is the Red Cedar River Corridor. The Red Cedar River Corridor includes the Red Cedar River and its associated wetlands, woodlands, and flood plain environments, and requires a strong conservation theme. In addition to presenting severe limitations to development, the corridor provides important environmental benefits including habitats for wildlife, flood control, groundwater recharge and discharge, and surface water purification. In addition, they provide special opportunities for passive recreation, including linear trails, and contribute to the Township's overall rural character. It is for these reasons that the Plan establishes the Red Cedar River Corridor as a separate planning area within the Township.

Because of the critical roles this corridor plays and the severe limitations it presents to development, the Red Cedar River Corridor provides for the protection of the resources contained within by limiting the introduction and intensity of new land uses. Development in close proximity to these sensitive resources will threaten their quantity and quality and the overall character of the corridor. Future use and development of land within the corridor should be limited to open-space and natural resource based land uses such as farming and wildlife management, and low-density residential development. Residential densities and development patterns should be subject to the same policies described for the Agricultural - Rural Residential Area. Land uses requiring state and/or federal permits (especially for wetland or floodplain alterations) should not receive final Township approval until satisfactory evidence has been submitted verifying the acquisition of all necessary permits. Where only a portion of a single parcel falls within the Corridor area, future development should occur on only the portions which are not characterized by such environmental limitations.

## **Conservation of Natural Resources**

Locke Township is characterized by conditions that require a strong conservation theme. These lands include abundant wetlands and woodlands, and important streams and stream ecosystems including those of the Red Cedar River, Squaw Creek, and Wolf Creek. In addition to presenting severe limitations to development, these resources provide important environmental benefits including habitats for wildlife, flood control, groundwater recharge and discharge, and surface water purification. In addition, they provide special opportunities for passive recreation and contribute to the Township's overall rural character.

In light of the critical roles these resources play and the limitations they present to development, the Plan strongly supports the preservation of these resources. Preservation should take precedence over their unnecessary disturbance and/or destruction by land development practices. The presence of such resources in areas designated for residential, commercial or industrial development should be recognized in the deliberation of rezoning, site plan, and similar zoning requests. Land uses requiring state and/or federal permits (especially for wetland or floodplain alterations) should not receive final Township approval until satisfactory evidence has been submitted verifying the acquisition of all necessary permits. Where a portion of a parcel is characterized by environmentally sensitive areas, development should be directed elsewhere on the site.

## **Phased Zoning**

This Plan recommends the rezoning of vacant land to a more intensive zoning district in a phased or incremental manner. For example, while the Plan may identify areas that may be appropriate to accommodate suburban residential development, the Plan does not recommend "across the board" or immediate rezonings of such vacant land. The Plan recommends that rezonings to more intensive districts occur incrementally over time to ensure the Township is capable of meeting the increased public service demands, managing Township-wide growth and development, adequately reviewing rezoning requests as they apply to the specific subject property, insuring rezonings are in response to a demonstrated need, and minimizing unnecessary hardships upon the landowner of the property as a result of property assessments and/or resulting nonconforming uses and structures.

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All rezonings should be evaluated very carefully in the context of this Plan and other factors that may have relevance. The following minimum considerations should be examined in association with all rezoning requests.

- 1) What, if any, identifiable conditions related to the request have changed which justify the proposed rezoning?
- 2) What are the precedents and the possible effects of such precedent that might result from the approval or denial of the rezoning?
- 3) What is the impact of the rezoning on the ability of the Township and other governmental agencies to provide adequate public services and facilities, and/or programs that might reasonably be required in the future if the proposed rezoning is adopted?
- 4) Would approval adversely affect environmental conditions?
- 5) Would approval adversely affect the value of the surrounding property?
- 6) Is the site's physical, geological, hydrological and other environmental features compatible with the host of uses permitted in the proposed district?
- 7) Is the subject property able to be put to a reasonable economic use in the zoning district in which it is presently located?
- 8) Does the rezoning request generally comply with the planning goals of the Township?
- 9) Is the proposed rezoning consistent with the zoning classification of surrounding land?
- 10) Can all requirements in the proposed zoning classification be complied with on the subject parcel?

**LOCKE TOWNSHIP MASTER PLAN**

(Future Land Use Map)

# Chapter Four

# PUBLIC SERVICES

# STRATEGY

## Introduction

Chapter Three describes the planned pattern of land use throughout the Township. Since the character and feasibility of land use and development is influenced by the extent to which public services are available, special attention should be directed to the manner in which public services are provided and improved. For example, certain industrial operations are not feasible without public sewer. The extent of public services also impacts the perceived quality of life within a community. For example, response times by a local fire department and the availability of recreation opportunities can effect the quality of life experienced by local residents.

An important principle of the Future Land Use Strategy is that no new development should occur in the Township unless public services are adequate to meet the needs of that new development. On the other hand, public service improvements and the increased development that may result from such improvements should not jeopardize the Township's interest in managing growth and development. Thus, it is very important that future public service improvements be coordinated with the planned pattern of future land use.

## Circulation

As new residential and non-residential land uses are introduced in the Township, demands upon the road network will increase. The additional residential development anticipated in this Plan, despite its overall low density, will result in higher traffic levels. This increased traffic may lessen the level of service along some of the Township's roads. Conversely, it must be recognized that road improvements may well attract new development which, in turn, will place additional demands on the road network. In regard to vehicular circulation, the Township's roadway infrastructure currently fulfills its function fairly well. This is due, in large part, to the existing low development density throughout most of the Township, the paved status of important thoroughfares,

and the presence of M-52. There are comparatively limited opportunities for safe pedestrian and non-motorized trails and linkages. This is not uncommon in a township of a low and dispersed population such as Locke Township.

### Policies:

- 1) Functional classification of roads should dictate the priority of improvements when all other conditions are generally equal. The functional importance of the roads in the Township, from highest to lowest, is as follows: 1) county primary roads, particularly those segments servicing the Future Land Use Strategy's Suburban Residential Areas; 2) county local roads, particularly those segments servicing the Suburban Residential Areas, but excluding roads in a platted subdivision or similar neighborhood developments; and 3) minor roads, such as local neighborhood roads in platted subdivisions.
- 2) No new roads or road extensions should be undertaken at this time, nor should any be taken in the future except upon a clear finding of need to ensure public safety and welfare or to provide access to lots in new neighborhoods and similar new land development.
- 3) The Township will monitor development patterns and periodically explore the development of a non-motorized circulation plan to facilitate the provision of trails and linkages throughout the Township, with particular focus on linkages within and between neighborhoods and activity centers.

## Sewage Disposal and Potable Water

There is no public sewer or water service in Locke Township. Residents rely upon private wells and septic systems for potable water and sewage disposal. Improperly operating septic systems can contaminate potable groundwater resources, lakes and streams. This poses a public health threat. As development intensities increase, so does the need for public sewer and water. Intensive industrial, commercial, and residential development gen-

erally have greater sewage disposal and potable water needs than can often be met by traditional on-site facilities. Failure to provide adequate sewer and water facilities to these land uses can lead to severe health and environmental problems, while the premature provision of these services can lead to accelerated and unmanaged growth and development. Many of the township soils present severe limitations to on-site sewage disposal. This condition highlights the critical relationship between land use, development intensities, and on-site sewage disposal and potable water.

**Policies:**

- 1) All on-site sewage disposal and potable water facilities shall be constructed and maintained in accordance with the requirements and standards of the Ingham County Public Health Department, Michigan Public Health Department, and other applicable local, county, state and federal agencies.
- 2) No public sewer or water will be introduced by the Township except upon a finding that: a) it is necessary to maintain the public health, safety and welfare in response to a demonstrated existing or anticipated large scale contamination threat; or b) it will address a demonstrated demand for residential densities in excess of those available relying on safe on-site sewage disposal and potable water measures, and such services are to be located in a Suburban Residential Area and funding for such services will be borne by those who benefit from such services.
- 3) Any future decision by the Township to provide public sewer and/or water services is to be based on an in-depth analysis of all available options, including services provided through cooperative agreements with neighboring municipalities.
- 5) Any future introduction or expansion of a public sewer and/or water service will be in a phased and incremental manner so that an overly large geographic area will not be intensely developed at a rate beyond the Township's ability to effectively manage the rate of growth and development and ensure the public health, safety and welfare.

## Storm Water Management

As buildings, parking lots and other impermeable surfaces associated with new development cover more of the Township's land surface, the quantity of storm water runoff increases. The vegetated landscape that previously absorbed and slowed much of the water associated with rainfall is replaced by impervious surfaces. Unless specific preventive measures are taken, this condition encourages flooding, soil erosion, sedimentation and pollution of area water resources. The Township's water resources, including the Red Cedar River, Squaw Creek and Wolf Creek, and its abundant wetlands, are vulnerable to degradation. Though flooding, soil erosion, sedimentation and pollution may originate from site-specific circumstances, their impact can extend to adjacent properties and more regional areas including other communities in the same watershed. Storm water management aims to minimize flood conditions, and control the quality and quantity of runoff that is discharged into the watershed system (streams, rivers, wetlands, lakes, etc.) from a development site.

**Policies:**

- 1) Increased quantities of runoff that occur as a result of property development will be detained on site, if necessary, to avoid placing excess demand on the capacity of the storm water system into which the runoff would otherwise be discharged.
- 2) Proposed land uses will not be permitted if the level of service currently provided by existing storm water management infrastructure and/or existing drainage patterns will be decreased, unless necessary improvements to such infrastructure or natural drainage courses are first made.
- 3) New and existing land uses will comply with all county, state, and federal regulations regarding storm water management and soil erosion, including the regulations of the Ingham County Drain Commissioner, except where local officials determine less stringent standards in site-specific instances are appropriate and will not undermine the public health, safety and welfare.
- 4) Land development proposals that discharge runoff into the Red Cedar, Squaw Creek, Wolf Creek, or other drainage courses and wetland corridors will be reviewed to ensure such discharge practices do not undermine the environmental integrity of such resources.

## **Police and Fire Protection Services**

As community growth and land development increases, so does the demand for emergency services. Commonly referenced standards regarding fire protection suggest a maximum service radius from a fire station in low density residential areas of approximately 3 miles, and approximately 3/4 to 2 mile service radius in commercial, industrial, and high density residential areas. There are portions of the Township that are not within these recommended ranges, particularly within the central regions of the community. Commonly accepted standards for police protection levels do not exist and are frequently measured as a function of public satisfaction.

### **Policies:**

- 1) The Township will require the provision of fire protection infrastructure (wells, water lines, etc.) for all new developments which are of such size and density that on-site infrastructure is considered critical. On-site fire protection infrastructure will generally be considered necessary for residential developments that concentrate building sites on lots of approximately one-half acre or smaller.
- 2) The Township will continually monitor police and fire protection needs and service to prevent emergency services deficiencies, and explore improving service levels. Considerations for expansion of services will include the expansion of joint services with neighboring municipalities.

## **Recreation**

Locke Township officials recognize that the well being of its residents is affected by the availability of recreation opportunities. The Township further recognizes that the type and availability of nearby recreation facilities are important. Demands for recreation opportunities increase with population growth. Available land for recreational purposes decreases as housing and other land uses consume more of what was open space and potential outdoor recreation land. The Township does not operate any recreation facilities and its residents must rely on facilities in neighboring communities and beyond.

The extent to which residents are satisfied with the current recreation opportunities in and around the Township is not clearly understood at this time. A comprehensive survey of resident attitudes specifically addressing recreation issues in the Township has not been undertaken.

### **Policies:**

- 1) The Township will periodically monitor the extent to which area residents are satisfied with recreation opportunities in the general area by the use of surveys, public meetings, and/or interviews.
- 2) Should sufficient public sentiment warrant, the Township will pursue the development of a MDNR-approved five year action plan which will provide a specific action plan aimed at providing needed Township facilities and enable the Township to compete for state and federal recreation grants.
- 3) The township will strive to provide recreation facilities in a manner that recognizes the particular recreation needs expressed by its residents.
- 4) The township will provide incentives to encourage the provision of open space and recreation areas within future development projects.

# Chapter Five

# IMPLEMENTATION

# STRATEGIES

## Introduction

This Master Plan establishes a strategy for growth, development and preservation in Locke Township. The Plan is comprised of graphic and narrative policies intended to provide basic guidelines for making reasonable, realistic community decisions. It establishes policies and recommendations for the proper use of land and the provision of public services and facilities. The Plan is intended to be used by local officials, by those considering private sector developments, and by all residents interested in the future of the Township. The Plan is a policy document. As a policy document, the Plan's effectiveness is directly tied to the implementation of its policies through specific tools and actions.

The completion of the Plan is one part of the planning process. Realization or implementation of the goals, objectives and policies of the Plan can only be achieved by specific actions, over an extended period of time, and through the cooperative efforts of both the public and private sectors.

Implementation of the Plan may be realized by actively:

- 1) Ensuring Township-wide knowledge, understanding, and support of the Plan, and the continued communication with and involvement of the citizenry.
- 2) Regulating the use and manner of development through up-to-date reasonable zoning controls, subdivision regulations, and building and housing codes, and other regulatory tools.
- 3) Providing a program of capital improvements and adequate, economical public services to accommodate desirable land development and redevelopment.

The purpose of this Chapter is to identify implementation tools and where applicable, specific actions to be pursued.

## Public Support, Communication and Community Involvement

Citizen participation and understanding of the general planning process and the specific goals, objectives and policies of the Plan are critical to the success of the Township's planning program. Understanding and support of the Plan by local citizens can greatly enhance its implementation. This enhancement may be found in citizen support for bond proposals, special assessments, zoning decisions, and development proposals.

In order to organize public support most effectively, the Township must emphasize the necessity of, and reasons for long-range planning and the development of the Master Plan. The Township must encourage citizen participation in on-going community planning efforts.

Specific actions to be undertaken to encourage public understanding and support of the Township's planning program, and the continued communication with and involvement of the citizenry, are as follows.

- 1) Ensure that copies of the Master Plan are readily available for viewing at the Township Hall.
- 2) Post the Future Land Use Map of the Master Plan in the Township Hall where it is clearly visible.
- 3) Establish a Township web site and make the Master Plan and a listing of current events pertaining to planning and zoning matters available on the site.
- 4) Through public notices, the Township's newsletter, Township Hall postings, and other means, apprise residents of meetings that will address development proposals as the projects move through each stage of review and deliberation.
- 5) Maintain a posting at the Township Hall that identifies proposed developments and land use decisions under consideration, and where individuals may acquire additional information on such matters.

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- 6) Periodically hold special meetings for the specific purpose of discussing the Township's planning efforts and providing residents with the opportunity to share concerns and suggestions.
- 7) Include in the Township's newsletter, articles that discuss the Township's planning efforts and land use decisions currently under deliberation.
- 8) Post the newsletter at the Township Hall and other public sites for public viewing.
- 9) Encourage Neighborhood Watch programs in each neighborhood to promote cooperation and communication.

### Land Development Codes

#### Zoning Ordinance

A zoning ordinance is the primary tool for implementing a Master Plan. A zoning ordinance regulates the use of land. A zoning ordinance generally divides a community into districts and identifies those land uses permitted in each District. Each district prescribes minimum standards that must be met such as minimum lot area, lot width, and building setbacks.

Zoning regulations for townships are adopted under the authority of the Township Zoning Act, P.A. 184 of 1943, as amended. The purpose of zoning, according to the Act, is to (in part): *"...regulate the use of land and structures; to meet the needs of the state's citizens for food, fiber, energy, and other natural resources, places of residence, recreation, industry, trade, service, and other uses of land; to insure that use of the land shall be situated in appropriate locations and relationships; to limit the overcrowding of land and congestion of population, transportation systems, and other public facilities..."*

An important zoning tool regarding authorized uses in each district is the differentiation between *"uses permitted by right"* and *"special land uses"*:

**Uses Permitted by Right:** Uses permitted by right are the primary uses and structures specified for which a particular district has been established. An example may be a dwelling in a residential district.

**Special Land Uses:** Special land uses are uses and structures that have been generally accepted as reasonably compatible with the primary uses and structures within a district. However, because of their character, they may present potential injurious effects upon the primary uses and structures within the district or are otherwise unique in character. As a result, these uses require special consideration in relation to the welfare of adjacent properties and to the Township as a

whole. An example may be a commercial stable in an agricultural district.

Special land uses require a heightened level of scrutiny in their review and officials are afforded greater discretion in determining whether a particular special land use is appropriate on a particular site.

Another important tool is the requirement for the submittal of a site plan illustrating proposed alterations and improvements to a parcel. Such a plan assists local officials to determine if the development complies with all standards of the Zoning Ordinance and if it is designed to encourage compatibility with surrounding land uses.

Adoption of zoning regulations by the Township Board provides the legal basis for enforcement of zoning provisions. The ultimate effectiveness of the various ordinance requirements, however, is dependent upon the overall quality of ordinance administration and enforcement. If administrative procedures are lax, or if enforcement is handled in an inconsistent, sporadic manner, the result will be unsatisfactory. The Planning Commission, Township Board, and staff are responsible for carrying out zoning/development related functions including the review of development plans and site inspections, community/developer liaison, and other functions. Each of these functions can require a substantial investment of time. Adequate staff levels and/or consulting assistance are necessary to ensure that these essential day-to-day functions are met and appropriate development is facilitated.

The Township first adopted zoning regulations more than 40 years ago, and has periodically updated its zoning provisions to address changing conditions and policies in the Township. The last comprehensive update of the ordinance occurred in 1999. With the adoption of this Master Plan, the Township's zoning ordinance should again be carefully reviewed to identify any amendments that may be beneficial to implement the policies of the Plan and facilitate efficient day-to-day zoning administration.

At a minimum, the following regulatory areas should be investigated and, where deficiencies may be identified, amendments should be adopted to ensure coordination between the Master Plan and Zoning Ordinance.

- 1) Appropriate schedule of Districts to implement the Plan's policies, including clear purpose statements for each District.
- 2) Appropriate delineation of authorized uses in each District, including those authorized as *"uses permitted by right"* and as *"special land uses."*

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- 3) Appropriate site development standards of each District to ensure the purpose of the District is implemented.

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- 4) Appropriate site plan and special land use review procedures including sufficiency of information required to make sound decisions, scope of approval standards, clarity of procedures, and opportunities for comment by varied public bodies including police and fire departments.
- 5) Appropriate site development standards addressing:
  - a) landscaping/screening, outdoor lighting, environmental protection, access management along thoroughfares, and off-street parking; b) preservation of the Township's character and environmental integrity; and c) conflicts between land uses.
- 6) Facilitation of beneficial innovative development patterns, including mixed-use areas and open space developments.
- 7) Clear provisions addressing all administrative and enforcement matters to ensure consistency in the application of the Zoning Ordinance, including provisions addressing site plan review, review of special land uses, and amendments.
- 8) Inclusion of adequate green space areas as part of new development, including both residential and nonresidential development.
- 9) Inclusion of provisions to ensure multi-unit residential developments, including platted and condominium subdivisions, undergo appropriate review for conformance to the Zoning Ordinance.

### Subdivision Ordinance

When a developer proposes to subdivide land, the developer is, in effect, planning a portion of the Township. To ensure that such a development is in harmony with the Master Plan, the subdivision or resubdivision of residential and nonresidential land must be adequately reviewed. A subdivision ordinance establishes requirements and design standards for the development of plats including streets, blocks, lots, curbs, sidewalks, open spaces, easements, public utilities, and other associated subdivision improvements. The Land Division Act, P.A. 288 of 1967, as amended, provides the authority for municipalities to adopt local ordinances to administer the provisions of the Land Division Act.

With the implementation of a subdivision ordinance, there is added insurance that development will occur in an orderly manner and the public health, safety and welfare will be maintained. For example, subdivision regulations can help ensure developments are provided with adequate utilities and streets, and appropriately sized and shaped lots. Adopting a local ordinance addressing the creation of subdivisions can encourage a more orderly and comprehensive manner for the review and approval of subdivision plats.

Of equal or perhaps greater importance is the adoption of a "land division ordinance." While a subdivision ordinance addresses unified residential developments of multiple units (plats), nearly all of the residential development in Locke Township to date has been incremental land divisions for the purpose of establishing a single home site. A land division ordinance assures that these incremental divisions meet certain minimum zoning ordinance standards such as lot area and width. The Land Division Act referenced above also provides municipalities with the authority to adopt a land division ordinance. Such an ordinance can ensure consistency in review and approval practices. Locke Township has adopted such an ordinance. The ordinance should be periodically reviewed and, if necessary, updated to address identified deficiencies.

### Other Special Purpose Ordinances

While zoning and subdivision regulations are the most frequently used tools for the regulation of land use and development, the control of land use activities can extend beyond their respective scopes. Special purpose rules and regulations can complement zoning and subdivision regulations and further the implementation of the Master Plan. Such ordinances may address matters pertaining to noise, public nuisances, outdoor assemblies, and junk. The Township should evaluate its current special purpose ordinances and determine what new ordinances, and/or amendments made to current ordinances, may be beneficial to further implement the Master Plan.

## Capital Improvements Programming

The orderly programming of public improvements is to be accomplished in conjunction with the Master Plan. The use of capital improvements programming can be an effective tool for implementing the Master Plan. In its basic form, a Capital Improvements Program (CIP) is a complete list of all proposed public improvements planned for a six year period (the time span may vary), including costs, sources of funding, location, and priority. It is a schedule for implementing public capital improvements that acknowledges current and anticipated demands, and recognizes present and potential financial resources available to the community. The CIP is not intended to encourage the spending of additional public monies, but is simply a means by which an impartial evaluation of needs may be made.

The CIP outlines the projects that will replace or improve existing facilities, or that will be necessary to serve current and projected land use development within a community. Advanced planning for public works through the use of a CIP ensures more effective and economical capital

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expenditures, as well as the provision of public works in a timely manner. Few communities are fortunate enough to have available at any given time sufficient revenues to satisfy all demands for new or improved public facilities and services. Consequently, most are faced with the necessity of determining the relative priority of specific projects and establishing a program schedule for their initiation and completion.

This Master Plan does not recommend significant increases in public services or infrastructure at this time, and includes no recommendations for the introduction of public sewer or water. However, as the Township grows and increased demands for public services and infrastructure improvements surface, the benefit of capital improvement programming may be particularly applicable in Locke Township.

### **Maintaining a Current Master Plan**

Successful implementation of desired policies requires the maintenance of a current Master Plan. The Master Plan should be updated periodically. The Plan must be responsive to community changes if it is to be an effective community tool and relied upon for guidance. Periodic review of the Plan should be undertaken by the Planning Commission, Township Board, and other officials to determine whether the Plan continues to be sensitive to the needs of the community and continues to chart a realistic and desirable future. Community changes that may suggest amendments to the Plan include, but need not be limited to, changing conditions involving available infrastructure and public services, growth trends, unanticipated and large-scale development, and changing community aspirations. The importance of maintaining a current Plan is reflected by the 2002 amendment to the Township Planning Act that requires a Planning Commission to review its Master Plan at intervals not less than five years to determine whether amendments or a wholly new Plan is necessary.

Important questions that should be asked during a review of the Plan should include, at a minimum:

- 1) Does the Plan present valid and current inventory data (Appendices)?
- 2) Does the discussion of planning issues and goals/objectives (Chapter Two) continue to be appropriate for the Township today and, if not, what additions, deletions or other revisions should be considered.
- 3) Does the Future Land Use and Public Services Strategies (Chapters Three and Four) continue to reflect the preferred strategy for addressing development, preservation and public services and, if not, what revisions should be considered.

Amendments to the Plan, or the preparation of a wholly new Plan, should follow the minimum procedures delineated in the Township Planning Act in addition to measures the Township believes will enhance the planning process. The Township should seek substantive community input on possible changes during the early stages of deliberations as it has done in the past.

# Appendix A

# CULTURAL FEATURES

## Geography & Early History

Locke Township is located in the northeast corner of Ingham County in the south-central region of Michigan's Lower Peninsula. Principal surrounding townships are Perry to the north, Conway to the east, Leroy to the south, and Williamstown to the west. The nearest urban center to the Township is the City of Williamston, a community of approximately 3,500 persons that abuts the southwest corner of the Township. The outer fringes of the larger urban centers of Lansing East Lansing, and Meridian Township, with a total population of approximately 205,000, are located 10 – 15 miles to the west. The balance of the regional landscape is dominated by agriculture and scattered residential development and small villages including Webberville (population of approximately 1,500), one mile south of the Township's southeast corner, and Perry, (population of approximately 2,100), three miles to the north.

Approximate distances between Locke Township and major regional urban centers are: 1) Detroit, 60 miles east; 2) Ann Arbor, 40 miles southeast; 3) Jackson, 30 miles south; and 4) Grand Rapids, 75 miles west.

## Access and Circulation

### Regional Access

Regional access to Locke Township is excellent. Interstate 96 (I-96) travels east-west across Michigan and approaches within two miles of the Township's southern border. M-52 travels north-south through the central region of the Township, with an I-96 interchange (Exit 122) just south of the community. Lansing's Capital City Airport is located 25 miles northwest of the Township

### Local Roadway Network

Locke Township's local roadway network generally exhibits a grid-like pattern, characteristic of the majority of townships in Lower Michigan. All roads in the Township are under the jurisdiction of the Ingham County Road Commission except for M-52 which is under the jurisdiction of the Michigan Department of Transportation.

In compliance with the requirements of Michigan Act 51 of 1951, the Ingham County Road Commission (ICRC) classifies all roads under its jurisdiction as either "primary" or "local" roads. Primary roads are considered the most critical in providing regional circulation throughout the County. The classification of roads by the ICRC has important financial implications with regard to maintenance and improvements. Under Michigan law, townships have no responsibility for funding road improvements and maintenance. The ICRC is responsible for local road maintenance. On the other hand, while the ICRC must maintain and improve primary roads at their own expense, state law limits the participation of Road Commissions to no more than 50% of the cost for improvements to local roads. Requests by local townships for local road maintenance levels beyond those considered adequate by the ICRC frequently require local funding. In reality, there are very few counties in Michigan where local townships are not actively involved in funding road improvements. The ICRC has no major road improvements planned at this time in Locke Township.

Roads in the Township which the ICRC classifies as "primary" include:

- Allen Rd., east of Morrice Rd..
- Bell Oak Rd., east of Morrice Rd.
- Dietz Rd., south of Rowley Rd.
- Haslett Rd.
- Herrington Rd., south of Chase Lake Rd.
- Morrice Rd.
- Sherwood Rd., west of Dietz Rd.
- Rowley Rd.
- Webberville Rd., south of Rowley Rd.

All other roads in the Township are classified as “local.” The vast majority of the Township roads are paved. The majority of the roads that are not paved are located in the Township’s northeast corner including Colby, Corey, Jacobs, and Lovejoy Roads.

Also of importance is the functional classification of township roads as established by the Federal Highway Administration (FHA). The FHA classifies road segments according to their function – the extent to which the road is intended to facilitate traffic movement over long distances versus access to abutting property. The relative hierarchy of the classification and its applicability to Locke Township follows.

*Interstates, Freeways and Principal Arterials* are thoroughfares intended to move large volumes of traffic over long distances. Facilitating circulation on a regional level, including between cities and states, is the primary role of these thoroughfares. None of these classifications apply to roads in Locke Township.

*Minor Arterial/Major Collector* roads serve to both accommodate through traffic while also providing access to abutting properties and minor intersecting streets.

Minor Arterials: M-52

Major Collectors: Haslett Rd., west of M-52.

*Minor Collector* roads serve to collect traffic from local streets and to provide a means of access to local destinations and minor arterial/major collector roads.

Minor Collectors: Allen Rd. east of Morrice Rd.; Bell Oak Rd., east of Morrice Rd.; Haslett Rd., east of M-52; Herrington Rd., south of Chase Lake Rd.; Morrice Rd.; and Sherwood Road, west of M-52; .

*Local Streets* serve primarily to provide access to adjacent properties and minor collectors.

Local Streets: The roads in the Township not otherwise identified above.

Federal aid for road projects is limited to roads classified as major collectors or higher. Roads classified as minor collectors have limited eligibility. Roads classified as local streets are not eligible for federal funding.

## Land Use & Development

Most of the Locke Township landscape is dominated by farming operations, woodlands, wetlands and other open spaces, and scattered residences. A review of some of the more significant characteristics of land use and development in the Township follows.

### Agriculture

Farming operations occupy approximately 70% (16,000 acres) of the Township acreage and are present in nearly all areas of the community. Nearly all the farm acreage is used for crop production. Some of the more commonly harvested crops are corn, soybeans and hay. There are a number of livestock operations scattered throughout the Township including dairy, sheep and horse farming. The eight principal livestock operations are generally limited to the southeast half of the Township and are most prominent along Morrice Road, south of Royce Road. Dairy farming accounts for approximately one-half of the livestock operations.

In an effort to better protect Michigan’s farming interests, Public Act 116 of 1974 was adopted by the state, and has since been amended. The Act establishes a program whereby farmers can enroll their properties to gain property tax relief, provided the farmland is maintained in agricultural/open space use. There were approximately 4,600 acres enrolled in the Farmland and Open Space Preservation Program in 2003, nearly 20% of the Township’s area. The most concentrated area of PA 116 enrolled land is the northern periphery of the Township, consisting of Sections 3 – 6. These Sections comprise approximately one-third of all PA 116 enrolled land. Section 26 alone, in the southern third of the Township, accounted for approximately 10% of the PA 116 enrolled land in 2003.

### Residential Development and Land Division

Residential development comprises approximately 5% (1,200 acres) of the acreage in Locke Township. If the vacant acreage associated with dwellings on five and ten-acre lots (and larger) is taken into account, this percentage increases to approximately 13%. The 2000 Census recorded 586 dwelling units, 77 more than the 509 dwellings recorded in 1990. Of the 586 dwellings in 2000, 578 were single family dwellings (98.6%), 10 of which were mobile homes. The remaining 10 dwellings were in two-family dwelling structures. 2.7% of the dwellings in 2000 were vacant. Vacancy rates among the immediately abutting townships ranged from 1.6% (Williamstown Township) to 6.1% (Leroy and Perry Townships). Of the 570 occupied dwellings in Locke Township, 89.1% were owner occupied and the balance were occupied by renters.

The 2000 Census reported that 38.4% of the dwelling units were constructed between 1940 and 1979, and 35.3% were constructed prior to 1940 (see Table A-1). Thus 26.2% of the dwelling units in 2000 were constructed since 1980. The median construction year for housing units in 2000 was 1961, falling between that of the County (1962) and State (1960). The median construction years among the immediately abutting townships ranged from 1972 (Leroy Township) and 1979 (Conway Township). The 2000 median value of the owner-occupied housing stock in the

Township was \$135,400. This value is significantly higher than that of the County (\$98,400) and State (\$115,600).

Residential construction between 2001 – 2003 suggests that Locke Township will have a heightened level of residential development in this decade as compared to the 1990s. The approximately 40 building permits issued for new-home construction in 2001 through August of 2003 is more than half the number of new homes constructed in the previous ten years.

**TABLE A-1**  
**Selected Housing Characteristics, 2000**

<b>DWELLINGS</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE OF MICHIGAN</b>
<b>Year Built (%)</b>			
<b>Since 1980</b>	26.2%	21.7%	25.2%
<b>1940 to 1979</b>	38.4%	60.2%	57.8%
<b>Before 1940</b>	35.3%	18.0%	16.9%
<b>Median Year</b>	1961	1962	1960
<b>Vacant</b>	2.7%	5.6%	10.6%
<b>Median Value</b>	\$135,400	\$98,400	\$115,600
<b>Median Rent</b>	\$638	\$542	\$546

Source: 2000 U.S. Census

During the early half of the 1900s, primarily large parcels of 80 to 160 acres or more characterized the dominant land division pattern in Locke Township. While this land division pattern continued to dominate into the late 1960s, smaller parcels of 5 – 20 acres had started to appear. Still, less than 1% of the Township’s acreage in 1970 was contained in parcels of 20 acres or less. In addition, the Township had its first two platted subdivisions – the Glen Dor Subdivision in the Township’s southwest corner and the Al Mar Riverside Estates Subdivision in the southeast corner. The following 30 years saw this trend continue but with a greater occurrence of new divisions of 5 – 10 acres in area. While the Township’s acreage continues to be contained predominantly in parcels approaching 80 acres or more, approximately 10% – 15% of the community’s acreage is now contained in parcels of 20 acres or less. This changing land division trend is exemplified in Section 35 at the southern edge of the Township, between Webberville and Morrice Roads. Containing only three parcels less than 20 acres in 1970, this Section is now comprised of approximately 21 parcels of such size.

This trend of parcel splitting along the Township’s section-line roads accounts for the primary manner in which residential development has been accommodated in the Township to date. Commonly referred to as *strip development*, this pattern is evident throughout the Township. This form of development has been the source

of increasing concern in the transportation and land use planning arena due to its negative impacts upon traffic safety, congestion, farmland preservation, and rural character preservation.

The original residential settlement pattern – dwellings on farm parcels approaching 40 acres or more in size – is still very evident but accounts for a small portion of the total households.

### **Commercial / Industrial Development**

The most visible signs of commercial development in Locke Township are along M-52 between Haslett and Bell Oak Roads. The northwest corner of the M-52/Haslett Road intersection includes a small convenience store. The northeast corner of the M-52/Bell Oak Road intersection includes a vehicle repair and truck rental service. The balance of the Township’s commercial uses, excluding its farm operations, consist of businesses operation in conjunction with a residence, and include such uses as vehicle repair shops and a home decorating service. Industrial uses in the Township are also limited to businesses operated in conjunction with a residence, including a sawmill, machine shop, and concrete forms construction.

# Community Facilities & Services

## Government Administration

A five member Township Board governs Locke Township. The Township Hall is on the north side of Bell Oak Road, a short distance east of M-52. The Hall was built in the 1950s. The Hall includes a large meeting room and stage on the first floor and a smaller meeting room with kitchen facilities in the basement. The Hall includes some storage room but no office facilities. The primary offices for local officials are in their homes. The Township Hall is used as a polling place and for public meetings, and is available to community residents to rent for certain occasions.

## Cemeteries

Locke Township operates and maintains three cemeteries:

- Rowley Cemetery; Rowley Road and M-52.
- Shaftsbury Cemetery; Shaftsbury and Haslett Roads.
- Bell Oak Cemetery; Bell Oak and Morrice Roads.

## Education

Locke Township is served by five public school districts. Webberville Community Schools serves the largest portion of the Township, including the southwestern and central areas of the community. Williamston Community Schools serves the majority of the southeast region of the Township. The northern one-third of the Township is served by Perry Public Schools, Morrice Area Schools, and Fowlerville Community Schools. There are no public school facilities located within the Township's boundaries, the closest being Williamston High School just east of the Township in Williamstown Township.

## Public Sewer and Water

There is no public sewer or water in Locke Township. The nearest sources of such services are the City of Williamston and the Village of Webberville.

## Emergency Services

Locke Township receives fire protection and ambulance service from the Northeast Ingham Emergency Service Authority (NIESA). NIESA provides service to a four township area including the Village of Webberville and the City of Williamston. Fire stations are located in Williamston (Williamston Fire Department) and Webberville (Leroy Township Fire Department). To improve the level of fire protection services, NIESA contracts with the Perry Fire Department for service to the northern third of the Township. NIESA provides ambulance service from the Williamston Fire Station.

Police protection services are provided by the Ingham County Sheriff's Department. The Sheriff's Department

provides emergency service to all area townships on an as-needed basis. The Michigan State Police also patrol M-52.

## Recreation

Locke Township does not own or operate any public recreation facilities. There are numerous recreational sites and programs available to Township residents if they have access to nearby communities. Some of these site and faculties include, but are not limited to:

- 1) Williamstown Township Hall at the Sherwood/Zimmer Roads intersection, includes a ball field, picnic pavilion, and more than five acres of open space area. The Township recently purchased a 100-acre parcel north of Berkley Road which is to be developed as a community park.
- 2) Williamston High School, at the Mitchell/Vanneter Roads intersection, includes traditional high school sports facilities including tennis courts, basketball courts, ball fields, soccer fields, pool and a nature trail.
- 3) The City of Williamston owns and maintains both active and passive recreational facilities including McCormick and Memorial Parks. These facilities include tennis courts, basketball courts, ball fields, and picnic areas. The City recently completed, with the assistance of the Department of Natural Resources, the construction of engineered rapids along 100 yards of the Red Cedar River in the Williamston downtown area, with a public launch site at McCormick Park. The Red Cedar Recreation Association is a non-profit organization that provides recreation activities in association with local park facilities, with input from officials of local municipalities.
- 4) The Community Education Center in Williamston includes a football field, ¼-mile track, basketball courts, and an obstacle course.
- 5) A YMCA seasonal day camp in Leroy Township, covering approximately 52 acres and including Red Cedar River frontage.
- 6) More regional-based recreation facilities are available to area residents as well, including those of the City of Lansing, Ingham County and surrounding county parks programs, Michigan State University, and state-operated recreation areas and game areas.

Most of the recreation services in the immediate Williamston area are provided by the partnership of the Red Cedar Recreation Association and the Williamston Community School District's Community Education office.

## **Neighboring Conditions**

Just as cultural features within Locke Township have bearing upon the Township's efforts to identify appropriate planning and future land use policies, so does the land use pattern along the Township's borders in neighboring communities. Existing land use patterns are important considerations, as are the planning policies and zoning that affects these abutting areas. Following is a review of land use conditions along Locke Township's borders.

### **Perry Township**

Perry Township abuts the entire northern border of Locke Township. Its existing land use pattern in this area is one of agriculture and low density residential development. The planning policies of Shiawassee County provide for the same. The entire southern periphery of Perry Township is zoned primarily for agriculture and residential development, the vast majority of which is limited to development densities of one dwelling per 40 acres.

### **Leroy Township**

Leroy Township abuts the entire southern border of Locke Township. Its existing land use pattern in this area is nearly entirely vacant and agricultural land. The exceptions include rural residential development along Allen Road, and some limited commercial and residential subdivision development in the township's northwest corner along Grand River Avenue. The planning policies of the township provide for its northern edge to be devoted to residential and outdoor recreation except for M-52, outside of the Grand River corridor, which is planned for commercial/industrial uses. The present zoning of the northern edge of the Township includes agricultural and residential districts, except for the northwest corner which is zoned for highway commercial in recognition of the existing use of the property.

### **Conway Township**

Conway Township abuts the entire eastern border of Locke Township. Scattered residences along with farm operations and other open space characterizes this area of Conway Township. Planning policies for this portion of the Township support farming and low density residential development (approximately one dwelling per two acres). Current zoning parallels these planning policies.

### **Williamstown Township**

Williamstown Township abuts the entire western border of Locke Township except along segments of Locke Township's southwest corner where the City of Williamston is present. Its existing land use pattern in this area is a mix of farmland and other open spaces, and scattered rural residential development. The planning policies of the township provide for its eastern edge to be devoted to agriculture and single family residential use except in the area of Grand River Avenue, which is planned for a mix of industry and high-density residential development. The present zoning of the east edge of the township reflects the planned land use pattern described above.

### **City of Williamston**

The City of Williamston abuts approximately one-half mile of Locke Township along its southwest corner, just south of Rowley Road. This area is presently characterized by scattered residences and open space . The planning policies of the City provide for this area to be devoted to residential use and the present zoning reflects this planned land use pattern.

# Appendix B

# ENVIRONMENTAL FEATURES

## Geology & Topography

During the Paleozoic era of geological history, Ingham County and the state as a whole was inundated by successive warm, shallow seas during which large amounts of sediment were deposited. These deposits subsequently lithified to form bedrock. Nearly the entire area of Locke Township sits upon Saginaw Formation bedrock, consisting of sandstone with interbedded shale, limestone, coal and gypsum. The Ice Age brought four successive continental glaciers across the Great Lakes area. As these ice sheets moved southward from Canada, they scoured and abraded the surface of the land leaving behind deeper valleys and more rounded hilltops. The advancing glaciers carried large quantities of rock materials scraped and gouged from the land's surface. These materials were then deposited during the melting of the ice to form drift materials covering the bedrock below. While the depth to bedrock exceeds 800 feet in some parts of Michigan, the depth of the drift layer in Locke Township ranges between approximately 50 to 150 feet, and generally increases as one moves northeast.

The Township's topography can be generally described as nearly level to gently rolling. There is only approximately 70 feet in difference between the Township's highest and lowest elevations. The lowest elevations, along the Red Cedar River in the southern edge of the Township, are approximately 870 feet above sea level. The highest elevations, approximately 940 feet above sea level, can be found in Sections 17 and 25.

The character of an area's geology and topography has bearing on development and land use planning. Land use planning guidelines recommend that development be generally discouraged in areas dominated by 12% – 18% slopes, and severely limited in steeper areas. Geology can also impact the availability of potable water, and this issue is further discussed under "Groundwater."

## Drainage & Water Courses

Drainage is facilitated through a network of watercourses (see Wetlands and Floodplains Map). The most dominant is the Red Cedar River. The Red Cedar River travels west along portions of the Township's southern periphery. The Red Cedar River is fed by two principal drains that extend northward through the Township. Wolf Creek drains much of the Township's eastern half. Squaw Creek drains much of the eastern and central portions of the Township. Wolf Creek flows into the Red Cedar River just east of Webberville Road and south of Allen Road. Squaw Creek flows into the Red Cedar River south of Rowley Road and west of Dietz Road. The Red Cedar subsequently flows into the Grand River in Lansing and the Grand River ultimately empties into Lake Michigan. All runoff in Locke Township flows into Lake Michigan. A network of wetlands also help to aid drainage. There are no natural lakes or ponds in excess of ten acres in the Township.

Lands abutting or in close proximity to drainage courses, such as streams and creeks, are subject to flood conditions where the drainage courses do not have the capacity to accommodate the rate of runoff from a single heavy rainfall or numerous lighter rainfalls over a relatively short period of time. Serious flooding has not been a common occurrence in Locke Township. This is due in large part to the comparatively limited development (limited impervious surfaces) in the Township, and the network of drainage courses and wetlands that carry and store runoff.

The Federal Emergency Management Agency performed a flood study for the Township. The study identified portions of the Township's drainage corridors as areas located within the 100-Year floodplain. These areas primarily follow the Red Cedar River corridor and portions of the northern limits of the Wolf and Squaw Creeks. The largest expanse of floodplain area includes Squaw Creek, extending from Bell Oak Road north to the Township's northern boundary, and extending west into the northwest corner of the Township.

Although Locke Township may be relatively free of any regular threat of flooding, improperly managed land development practices can impact flood conditions both in the Township and in communities downstream.

## Groundwater

As runoff flows across land surfaces and travels through drainage courses, a portion of the runoff seeps into the ground and collects in great quantities in the underlying soils and deeper bedrock. These reservoirs of water are referred to as aquifers and serve as the sources of drinking water for nearly all residents of Locke Township.

The water drawn from the Saginaw Formation aquifer is considered to be of very good quality. Isolated areas in the Township's northeast corner have been found to have a comparatively high saline content. Aquifers can be "confined" or "unconfined" systems. Confined systems have an impermeable soil layer (typically clay) above them which acts to confine the aquifer and protect the aquifer from contaminants seeping into the subsurface above the confining soil layer, such as petroleum products, fertilizers, and improperly disposed household liquids. Unconfined systems do not have this protective layer of clay soil and are much more prone to contamination. Data from well logs suggest that while a confining clay or shale layer is present in areas of the Township, this protective cover does not extend across the entire Township. The protection of groundwater quality requires appropriate land use management along a number of fronts. Contamination of ground water resources can originate from a number of sources including, but not necessarily limited to poorly operating septic drain fields, floor drains that discharge to the outdoors, the storage of hazardous and toxic substances without the necessary safeguards, the improper disposal of fuels and oils, excessive use of fertilizers, and improper disposal of wastes by industrial, commercial and residential activities.

## Vegetation

Vegetative cover in Locke Township is comprised largely of cropland, accounting for approximately 70% of the Township area. The principal exceptions are those areas characterized by wetlands, woodlands, or residential development and its associated lawn areas.

There are approximately 2,600 acres of wetlands in the Township, comprising 12% of its landscape (see Wetlands and Floodplains Map). The wetlands are dispersed throughout the Township but are most prominent along or near to watercourses including the Red Cedar River and the Wolf and Squaw Creeks. The greatest continuous expanse of wetlands follows the Red Cedar River for

approximately 2.5 miles from M-52 west to the Township's border. Nearly all of the Township's wetlands are comprised of lowland hardwoods such as ash, elm, soft maples, and cottonwoods. The balance is comprised of shrub and emergent wetlands. The Township is nearly void of upland hardwood stands.

The network of wooded and non-wooded wetlands is important because of the vital role these resources play in flood control, runoff purification, groundwater recharge, wildlife habitats, recreational opportunities, and supporting the rural character of the Township. Wetlands are environmentally sensitive resources and can experience degradation and destruction due to changes in water levels, erosion and sedimentation, filling, dredging, and draining. The degradation or pollution of a wetland area can have a destructive impact upon wetlands and related woodland resources distances away due to the frequent physical linkages between these resource areas. In addition to the environmental constraints wetlands pose for development, wetlands present severe physical constraints for land development due to wetness, flooding and instability of soils.

## Soils

The U.S. Department of Agriculture, Natural Resources Conservation Service, has prepared a soil survey for Ingham County. According to the Survey, Locke Township exhibits six general soil associations that include muck, loamy and sandy soils (see General Soils Map). "Soil associations" refer to the classification of broad patterns of soils, topography, and drainage. A soil association generally consists of one or more major soils and other minor soils. It is the pattern of these major and minor soils (including topography and drainage) which differentiates one association from another. An association often includes individual soils of varying character. Approximately two-thirds of the Township falls with the Marlette-Capac-Owosso Association, which is described as "nearly level to rolling, well drained to somewhat poorly drained loamy soils." Muck soils are most prevalent along the upper limits of the Squaw Creek corridor and associated floodplain areas, and limited portions of the far southeast and northwest corners of the Township. Muck soils are frequently evident in areas characterized by wetlands.

The soil associations identified by the Natural Resources Conservation Service are very general. The Natural Resources Conservation Service has identified more specific individual soil units throughout the County based upon the characteristics of the upper soil layers (approximately five feet in depth) and this provides a more reliable basis for township planning purposes. The character of soils can have a profound impact upon the suitability of future uses with regard to groundwater

contamination, buckling and shifting of foundations and roads, erosion, on-site sewage disposal, and agricultural productivity.

According to the Natural Resources Conservation Service, the vast majority of the Township presents severe limitations to septic systems due to seasonally high water tables, ponding, and/or soil wetness. A primary concern is the soil's ability to absorb and break down the leachate from the septic drain fields before it reaches underground water supplies. This can be particularly troublesome where soils are characterized by wetness and poor percolation rates. For example, much of the Township is characterized by Capac loams, Aubbeenaubbee-Capac sandy loams, and Colwood-Brookston loams. All of these soils are characterized by water tables that approach within approximately two feet or less of the ground surface during spring and winter. Limitations on septic system by soils can often be overcome with increased lot sizes and/or specially engineered septic systems at additional costs.

The Ingham County Health Department is responsible for issuing permits for on-site sewage disposal. A permit will not be issued unless all county requirements have been met. Under typical conditions, sites approaching one to two acres are generally adequate to meet the Health Department's requirements for effective septic systems, including a back-up area should the initial drain field fail. Even on a two-acre site, a mounded system may be frequently required to minimize soil wetness below. Sites approaching one acre must meet more stringent standards and may not be able to do so due to soil conditions. Development at this density may require a sewer system.

It should be noted that while a site may be classified by the Natural Resources Conservation Service as presenting a limitation to septic systems or building construction, on-site investigation may show the classification to be less than fully accurate and/or show that the deeper soils (more than five feet deep) present different characteristics than the upper layer soils and thus, varying limitations. On-site investigations should be carried out before specific land development projects are initiated.

While the area soils present primarily severe limitations to septic drain fields, more than 90% of the Township is classified by the Natural Resources Conservation Service as *prime farmland* and the majority of the balance is classified as *additional farmland of local importance* (see Farmlands Map). The Natural Resources Conservation Service generally defines *prime farmland* as land that is, under proper management, particularly well suited to food, feed, forage, fiber, and oilseed crops and is capable of producing sustained high yields. *Additional farmland of local importance* is generally defined as land that is nearly prime farmland and that economically produce high yields (under proper management).

## Climate

The climate of Locke Township can be classified as mild. Based upon data collected by the Department of Agriculture between 1947 and 1976 in East Lansing, the average daily temperature is 47.4 ° F. By comparison, the average daily temperature in Sault St. Marie in the Upper Peninsula is 39.7° F. The average summer temperature is 68.9° F and the highest recorded temperature of 102° F occurred in July of 1934. The average winter temperature is 24.9° F and the lowest recorded temperature of -33° F occurred in February of 1875. Average yearly precipitation is 29.84 inches and average yearly snowfall is 39.4 inches. June is typically the wettest month with an average rainfall of 3.64 inches.

Because the day-to-day weather is controlled by the movement of pressure systems across the nation, this area seldom experiences prolonged periods of hot, humid weather in the summer or extreme cold during the winter. The lake effect, so noticeable in many areas of Michigan, is limited in the Locke Township regional area. However, the prevailing westerly winds blowing over Lake Michigan often produce cloudiness which extends across Michigan's entire Lower Peninsula, modifying fall and early winter temperatures. Weather conditions change gradually between the seasons. The climate of Ingham County as a whole is favorable for the growth of most farm crops cultivated in Michigan.

# Appendix C

# DEMOGRAPHIC FEATURES

## Population Growth

Locke Township has grown from a community of 921 in 1930 to a community of 1,671 in 2000. The rate of growth over this period has varied. The strongest growth rate, 17.0%, occurred in the 1950s. Its slowest rate of growth, 4.4%, occurred in the 1930s and 1940s. While the Township's growth rates have historically lagged behind that of Ingham County and Michigan as a whole, the past 20 years have witnessed a reversal of this trend. The Township's 4.5% and 9.9% growth rates during the 1980s and 1990s, respectively, exceeded those of the County and State by 40% or more. In fact, Ingham County's 2000 population reflected a 0.9% decline since 1990 (largely due to the population loss in the City of Lansing).

Over the years, the Township has maintained an approximately 0.6% share of the County population. The Township's rising population has increased population density. Its density was 26 persons per square mile in 1930 and increased to 46 persons per square mile in 2000. By comparison, Meridian Township, the county's most populated township, had a 2000 population of 39,116 persons and a population density of 1,222 persons per square mile.

Locke Township's 4.5% growth rate during the 1990s lagged behind all but one of the four principal adjacent Townships of Perry, Conway, Leroy, and Williamston. Leroy Township reflected the slowest growth over this period with a rate of 2.5%. Conway Township reflected the fastest rate of growth at 50.2%.

**TABLE C-1**  
**Population Trends & Growth Rates**  
(ten-year growth rates indicated by "%")

YEAR	LOCKE TOWNSHIP		INGHAM COUNTY		STATE of MICHIGAN	
1930	921		116,587		4,842,325	
1940	980	4.4%	130,616	12.0%	5,256,106	8.5%
1950	1,023	4.4%	172,941	32.4%	6,371,766	17.6%
1960	1,171	14.5%	211,296	22.2%	7,823,194	18.6%
1970	1,370	17.0%	261,039	23.5%	8,881,826	11.9%
1980	1,456	6.3%	275,520	5.5%	9,262,078	4.1%
1990	1,521	4.5%	281,912	2.3%	9,295,297	0.4%
2000	1,671	9.9%	279,320	-0.9%	9,938,444	6.9%

Source: U.S. Census Bureau

**LOCKE TOWNSHIP MASTER PLAN**

**Population Projections**

Estimating future population growth can provide important insights into identifying future land use and public services needs. Projecting the growth of a community's population over a prescribed period of time is not an exact science. The many unpredictable factors that affect growth make population projections somewhat speculative. By using several projection techniques, a range of growth estimates can be generated. These shed light on potential growth if planning policies and land development regulations are generally held constant.

The current trend approach assumes that the Township will continue to grow at a rate similar to that which occurred between 1990 and 2000 (9.9% every ten years).

The historical trend approach assumes the Township will grow at a rate that reflects the Township's average growth rate between the years 1930 and 2000 (8.7% every ten years). The ratio trend approach assumes the Township will continue to capture 0.6% of the county population as it has during much of the past 70 years. The ratio trend projection relies on the Trio-County Regional Planning Commission's (TCRPC) population projections for Ingham County. A fourth projection has been prepared by the Tri-County Regional Planning Commission for the county subdivisions. These projections take into account factors in addition to past population trends, including employment conditions. The average of the resulting four projections yields a population of 1,809 in year 2010 and 1,928 in year 2020 (see Table C-2).

**TABLE C-2  
Locke Township Population Projections**

<b>Projection Method</b>	<b>Year 2010</b>	<b>Year 2020</b>
<b>Current Trend</b>	1,836	2,018
<b>Historical Trend</b>	1,816	1,974
<b>Ratio Trend</b>	1,808	1,898
<b>TCRPC</b>	1,777	1,823
<b>Average of Projections</b>	<b>1,809</b>	<b>1,928</b>

**Social and Economic Characteristics**

The 2000 Census showed Locke Township to have a more homogeneous racial population than the County and State as a whole (see Table C-3). This homogeneity is typical of rural Michigan communities, as compared to more urban areas such as the City of Lansing. 97.5% of the Township population was white, compared to 79.5% for the County and 80.2% for the State. The 2000 median age of 36.1 years reflects a population that is considerably older than the County as a whole (30.4 years) but just slightly higher than the State as a whole (35.5 years). This increased maturity is largely the result of the comparatively high number of residents falling within the 40 – 64 years age category. The 34.9% of the Township's population between 40 – 64 years of age is 14% – 28% higher than the County and State. Like the nation, the Township's residents are continuing to mature. Its 2000 median age of

36.1 years reflects an 8.7% increase over its 1990 median age of 33.2 years. (see Table C-4)

The 2000 Census recorded 571 households and 481 families in the Township. The average household size in 2000 was 2.93 persons and the average family size was 3.18 persons. Of all the households in the Township, 73.7% included a married-couple. This percentage was significantly higher than that for the County (43.0%) and State (51.4%) as a whole. Of the 10.5% of nonmarried-couple families, 51.4% are headed by a male. This is in contrast to the County and State as a whole where male householders in nonmarried-couple families represented approximately one-third of such households. Approximately one of every six households (15.8%) in the Township was a non-family household in 2000 – a rate substantially lower than the County (41.3%) and State (31.9%).

**LOCKE TOWNSHIP MASTER PLAN**

**TABLE C-3**  
**Race, 2000**  
(by percent)

<b>RACE</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE of MICHIGAN</b>
White Alone	97.5	79.5	80.2
Black/African American Alone	0.1	10.9	14.2
American Indian, Alaska Native Alone	0.7	0.5	0.6
Asian Alone	0.6	3.7	1.8
Native Hawaiian/Other Pacific Islander Alone	0.0	0.1	0.0
Some Other Race Alone	0.1	2.4	1.3
Two or More Races	1.0	3.0	1.9

Source: 2000 U.S. Census

**TABLE C-4**  
**Age, 2000**  
(By Percent, except where otherwise noted)

<b>AGE</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE of MICHIGAN</b>
Under 5 yrs.	6.8	6.3	6.8
5 – 17 yrs.	21.5	17.1	19.4
18 - 24 yrs.	6.7	18.5	9.4
25 - 39 yrs.	21.9	21.4	21.6
40 – 54 yrs.	24.4	20.2	21.9
55 - 64 yrs.	10.5	7.1	8.7
65 - 79 yrs.	6.6	6.9	9.1
80 yrs. or more	1.7	2.5	3.2
Median Age	36.1 yrs.	30.4 yrs.	35.5 yrs.

Source: 2000 U.S. Census

**TABLE C-5**  
**Household Type, 2000**  
(by percent)

<b>HOUSEHOLD TYPE</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE OF MICHIGAN</b>
Married-couple family	73.7	43.0	51.4
Other family:	10.5	15.8	16.6
(Male householder)	(5.4)	(3.7)	(4.1)
(Female householder)	(5.1)	(12.1)	(12.5)
Non-family household	15.8	41.3	31.9
(Male householder)	(8.7)	(19.0)	(14.9)
(Female householder)	(7.0)	(22.3)	(17.0)

Source: 2000 U.S. Census

**LOCKE TOWNSHIP MASTER PLAN**

The Township’s labor force in 2000 was comprised of 924 persons. The three principal employment industries in year 2000 for Locke Township workers were (1) education, health, and social services (2) manufacturing and (3) professional and related services. These industries alone accounted for 48.3% of residents’ employment. Education, health, and social services accounted for 22.3% of local residents’ employment, the largest employment industry for Township workers. The 4.5% of Township residents employed in the agriculture, forestry and fisheries industry was approximately four times that of the State and six times that of the County (see Table C-6). The unemployment rate in Locke Township in 2000 was 2.2%, compared to 2.7% for the County and 3.5% for the State. The unemployment rate in the Township in 2003, through September, was 4.3%. This compares to the County’s and

State’s unemployment rates of 5.1% and 7.1% respectively. Since 1990, the Township’s unemployment rate had generally fallen from 5.4% to 2.2% in 2000. The Township’s unemployment rate has generally been about 0.5 – 1.0 percentage points lower than that of the County.

4.2% of Township workers worked in their home, compared to 3.0% and 2.5% for the County and State respectively. The average commute time for Locke Township workers was 29.2 minutes – a reflection of the limited employment opportunities in the immediate area of the Township. 10% of Township residents who were workers of 16 years of age and over were employed within Locke Township itself. However, this 10% rate is greater than three of the four principal surrounding townships.

**TABLE C-6**  
**Employment by Industry, 2000**  
 (employed persons 16 years and older, by percent)

<b>OCCUPATION</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE of MICHIGAN</b>
<b>Education, health, and social services</b>	22.3	27.3	19.9
<b>Manufacturing</b>	13.9	10.4	22.5
<b>Professional, scientific, management, administrative, waste management, and other services</b>	12.1	12.7	12.6
<b>Retail trade</b>	11.0	10.9	11.9
<b>Construction</b>	10.4	4.9	6.0
<b>Public administration</b>	7.7	8.7	3.6
<b>Art, entertainment, recreation, accommodations, and food services</b>	6.7	9.4	7.6
<b>Finance, insurance, and real estate</b>	5.6	6.4	5.3
<b>Agriculture, forestry, fishing, hunting, and mining</b>	4.5	0.7	1.1
<b>Transportation, warehousing, and utilities</b>	3.4	3.1	4.1
<b>Wholesale trade</b>	2.2	2.7	3.3
<b>Information</b>	0.2	2.7	2.1

Source: 2000 U.S. Census

For those employed in 1999, workers' income characteristics placed the Township in a significantly more prosperous position than the County and State as a whole. The Township's median household income (\$58,188) and family income (\$62,422) levels were 17% – 45% higher than the County and State as a whole. The rates of Township persons (4.1%) and families (1.8%) that were below poverty level were less than 60% of those for the County and State. (see Table C-7)

The 2000 Census revealed Locke Township residents had a somewhat comparable level of formal education as compared to the County and State. While 92.3% of the Township residents 25 years or older had received a high school education or higher, a rate somewhat higher than the County (88.1%) and State (83.4%), the proportion of Township residents earning a college degree (19.8%) was considerably lower than the County (33.0%) and somewhat lower than the State (21.8%). For 40% of the Township residents, the highest level of education attainment was acquiring a high school diploma, compared to 23.4% for the County and 31.3% for the State.

**TABLE C-7**  
**Income, 1999**

<b>INCOME CHARACTERISTIC</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE OF MICHIGAN</b>
<b>Median household income</b>	\$58,188	\$40,774	\$44,667
<b>Median family income</b>	\$62,422	\$53,063	\$53,457
<b>Per capita income</b>	\$23,149	\$21,079	\$22,168
<b>Families below poverty level</b>	1.8%	8.3%	7.4%
<b>Persons below poverty level</b>	4.1%	14.6%	10.5%

Source: 2000 U.S. Census

**TABLE C-8**  
**Highest Level of Education Attainment, 2000**  
(for persons 25 years of age, by percent)

<b>HIGHEST EDUCATION ATTAINMENT</b>	<b>LOCKE TOWNSHIP</b>	<b>INGHAM COUNTY</b>	<b>STATE of MICHIGAN</b>
<b>Less Than 9th Grade</b>	1.0	3.3	4.7
<b>9th to 12th, no diploma</b>	6.7	8.6	11.9
<b>High School Diploma</b>	40.0	23.4	31.3
<b>Some college, no degree</b>	27.0	24.1	23.3
<b>Associates Degree</b>	5.6	7.7	7.0
<b>Bachelor's Degree</b>	12.8	18.5	13.7
<b>Graduate/Professional Degree</b>	7.0	14.4	8.1
<b>High school graduate or higher</b>	92.3	88.1	83.4
<b>Bachelor's degree or higher</b>	19.8	33.0	21.8

Source: 2000 U.S. Census

Appendix D  
**INVENTORY MAPS**

Existing Conditions  
Wetlands and Floodplains  
General Soils  
Farmlands