

Village of Glenwillow Master Plan

Village of Glenwillow
Cuyahoga County, Ohio

October 2009

Recommended for Adoption by the Village of Glenwillow Planning Commission: 10/14/09
Adopted by the Village of Glenwillow Council: 10/21/09

This Master Plan sets forth the vision that the Village of Glenwillow policy makers and residents have for the future of the Village, and serves as a guide to achieving that vision.

Prepared by:

McKenna
ASSOCIATES
I N C O R P O R A T E D

2987 Meadowbrook Boulevard
Cleveland Heights, OH 44118
TEL 330.528.3342
FAX 248.596.0930

ACKNOWLEDGMENTS

The participation and cooperation of community leaders and residents in the preparation of the Village of Glenwillow Master Plan is greatly appreciated. In particular, we acknowledge the efforts of the following individuals:

MAYOR

Donald N. Payne

CLERK-TREASURER

Mark A. Cegelka – *Clerk-Treasurer*

VILLAGE COUNCIL

John A. Baca – *Vice-Mayor*

Jeffrey L. Adie – *Ward 1*

Joseph M. Barber, Jr. – *Ward 3*

Eric Johnson – *Ward 2*

Janice M. Pawul – *Ward 3*

Larry E. Sylver – *Ward 1*

Elaine Lowe – *Clerk of Council*

PLANNING COMMISSION

Bill Divis – *Chairman*

Gregg Bowen – *Secretary*

Donald N. Payne – *Mayor*

Eric Johnson – *Council Representative*

Dr. James Lasch – *Resident Representative*

VILLAGE STAFF

John D. Brown – *Law Director*

Milt Gozelanczyk – *Project Coordinator*

Michael Skvasik – *Building Commissioner*

Peggy Spraggins – *Grant Consultant*

Daisy Walker – *Executive Assistant to Mayor*

POLICE CHEIF

Robert F. Hagquist

MASTER PLAN STEERING COMMITTEE

Mark A. Cegelka

Bill Divis

Gregg Bowen

Donald N. Payne

Eric Johnson

John D. Brown

Milt Gozelanczyk

Michael Skvasik

Peggy Spraggins

Daisy Walker

CONTRIBUTORS

Citizens of the Village of Glenwillow

VILLAGE OF GLENWILLOW
RESOLUTION NO. 2009-10-13

INTRODUCED BY: Mr. Adie
DATE PASSED: 10-21-2009

First Reading 10/21/09

Second Reading _____

Third Reading _____

Waiver of 3

reading rule?

Yes _____

No _____

**AN EMERGENCY RESOLUTION ACCEPTING THE RECOMMENDATION OF THE
PLANNING COMMISSION AND APPROVING AND ADOPTING THE OCTOBER
2009 VILLAGE OF GLENWILLOW TEN YEAR MASTER PLAN
AND DECLARING AN EMERGENCY**

WHEREAS, The Village was awarded a \$30,000.00 Block Grant from the Cuyahoga County Department of Development to partially fund a new Master plan for the Village and the Village advertised for a planning firm to assist in preparing such plan; and,

WHEREAS, McKenna Associates, Inc. was the successful bidder and on December 24, 2008, the Village and McKenna entered into a contract to complete the 10 year master plan by October 31, 2009; and,

WHEREAS, In accordance with such contract, there have been numerous meetings of the Master Plan Steering Committee, the Village Planning Commission, the Village Council and various citizen, resident and business interest focus groups to provide broad based input and guidance to the planners; and,

WHEREAS, the Planning Commission has reviewed the final draft of the 10 Year Master Plan (dated October, 2009) and upon review has approved it and recommended it to Council for Adoption as the 10 Year Master Plan for the Village.

NOW, THEREFORE, BE IT RESOLVED by the Council of the Village of Glenwillow, Cuyahoga County, State of Ohio, that:

Section 1. The October 2009 Draft of the Village of Glenwillow 10 Year Master Plan prepared by McKenna Associates, Inc., and incorporated by reference but not attached due to its large size (official copies maintained on hand by the Village for public availability), is hereby approved and adopted as the Master Plan for the Village of Glenwillow.

Section 2. That this Resolution is hereby declared to be an Emergency Resolution necessary for the immediate preservation of the public peace, health and safety, and it shall take immediate effect in accordance with the provisions of Article IV, Section 11 of the Charter of the Village of Glenwillow, Ohio.

MAYOR DONALD M. PAYNE

Signed October 21, 2009PASSED: October 21, 2009

ATTEST:


ELAINE LOWE, Clerk of Council

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EXECUTIVE SUMMARY

The Village of Glenwillow Master Plan is a long-range vision of how Glenwillow should evolve and grow. It is an important public policy document for several reasons, not the least of which is that it serves as the basis for the Zoning Ordinance and Zoning Ordinance amendments. The Master Plan provides guidance to developers and homeowners making investment decisions in the Village. It also provides guidance to municipal officials as they make decisions about public improvements. The knowledge and direction provided by the Master Plan will help Glenwillow develop its unique, coherent, Village identity.

Glenwillow has a rich history that is tied closely to the Austin Powder Company, which began operation in the Village in 1883. Austin Powder Company created a village for its workers in the vicinity of Austin Powder and Pettibone Roads. Historic homes still exist, forming an essential part of the thriving Village Center. Austin Powder established the east side of the Village as the manufacturing sector. The west side became the residential sector, occupied by several subdivisions to accommodate a growing population. Between 1960 and 2006 the population grew by 25.1%, resulting in a population of 749.

The Existing Land Use reflected the pace of growth over the past ten years. Between 1998 and 2009 vacant land in the Village was converted to primarily two uses, residential and industrial. Residential land use increased 320.5 acres (+125.1%) during the period, while industrial land use increased by 299.8 acres (+176.8%).

In spite of the pace of growth over the past ten years, the potential for additional development still exists. The Build-Out Analysis revealed that vacant land in the Village could potentially accommodate a *maximum* of 100 new housing units and about 309 acres of new industrial development. Village leaders have expressed an interest in research-office or technology-related uses on the remaining industrial land.

Development in the Village is balanced by the presence of significant natural resources, particularly along Tinkers Creek and Beaver Meadows Creek and their related floodplains. Tinkers Creek flows from the southeast to the northwest through the center of the Village and generally separates the Village in half, with residential areas to the west and industrial areas to the east.

One reason that residents and businesses are attracted to the Village of Glenwillow is the presence of a wide array of public services. The availability of public water and sanitary sewer utilities throughout the Village has facilitated growth. The quality of the schools has contributed to the appeal of the Village, having achieved an “Excellent with Distinction” designation from the Ohio Department of Education. Residents have two parks at their disposal, including the multipurpose Donald Norman Payne Recreation Complex. The extensive, growing trail network is another great recreation resource. Residents and businesses also enjoy the benefits of a skilled, professional staff at the Village Hall.

An important aspect of the Village’s infrastructure is its road network, which consists of County and Village roads. The Master Plan provides a thorough analysis of the circulation system and recommends construction of a roundabout at the Richmond Road/Pettibone Road intersection, in the interest of traffic safety and efficient movement of vehicles.

The Future Land Use Plan and Map build on the existing assets of the Village. A lot of attention is focused on the Village Center, which is a special place, the seat of local government, the location of several historic structures, the heart of a growing business district, and the seed for the Village's identity. The Plan calls for expansion of local business uses on the south side of Pettibone Road, between Austin Powder and Cochran Roads. The goal in creating this much business is to create a critical mass so that people are drawn to the Village business district for more than one stop, i.e., creation of a destination.

The Master Plan concludes with Implementation measures that the Village can take to address the issues of greatest importance identified in the Plan and by the Steering Committee. The proposed implementation measures are:

1. Market industrial parcels to attract high-tech users.
2. Extend pathways throughout the Village in accordance with the Trail Development Plan.
3. Construct a roundabout at the Pettibone/Richmond intersection.
4. Develop the Village of Glenwillow Community Park.
5. Adopt the Master Plan.
6. Review the Zoning Ordinance.
7. Improve the visual appeal of the landfills.
8. Implement the Vision for the Village Center as described in the Master Plan.
9. Develop and implement a path enhancement plan for the path along Pettibone Road.
10. Buffer residential uses from industrial land on the east side of the Village.
11. Preserve and protect the natural environment.
12. Pursue the highest quality industrial development.

The Steering Committee, Village Council and Planning Commission must be credited for their involvement in the process of creating the Master Plan. Because of their diligence, the Master Plan reflects the values and aspirations of the community. The Master Plan will serve the Village well, as a sensible guide to growth and improvement.

1. INTRODUCTION

This Master Plan sets forth the vision that the Village of Glenwillow policy makers and residents have for the future of the Village, and serves as a guide to achieving that vision.

A. USES OF THE MASTER PLAN

A master plan is used for a variety of purposes. At the most basic level, a master plan is used as the basis for a community's zoning ordinance. The master plan is a study of the present and future growth of a municipality that identifies the land needed for various types of activities, including agriculture, single-family and multi-family residences, commerce, and industry. After a master plan is adopted, a municipality can then adopt a zoning ordinance to assure that land is available and allocated to meet the community's long term needs.

A common use of the master plan is for reference for zoning changes and conditional use certificates. One of the primary considerations when evaluating the merits of a rezoning application is compliance with the master plan and the future land use map.

Another important function of the master plan is giving guidance to developers and potential homeowners in making investment decisions. Consistent and reasonable application of the master plan by the Village reduces risk and uncertainty in the real estate market.

The master plan provides guidance and coordination in the provision of public services. Understanding long-term growth patterns is helpful in making decisions for public investments, such as parks, and water and sewer infrastructure.

A master plan can be the basis for proactive projects and programs to improve a community. A fundamental part of the master planning process is the public involvement that forms the basis for the future land use plan and indicates the community's desires for its future and its long-term vision. The goals and objectives of a master plan reflect desires for physical development.

A master plan presents the vision of a community over the next 10 years, but also includes a number of specific, short term implementation activities intended to realize the overall vision of the Plan.

This document, then, is the Master Plan that has been developed and recommended for adoption by the Village of Glenwillow Planning Commission and adopted by the Village Council.

B. ORGANIZATION OF THE MASTER PLAN

The master plan contains six sections:

- Introduction – this section, an overview of the Plan and its uses
- The Village of Glenwillow Plan – the future land use plan for the Village of Glenwillow
- Existing Conditions – a survey of existing demographic, housing, land use, utility, and natural features
- Transportation and Circulation – a plan for motorized and non-motorized circulation within the Village of Glenwillow
- Goals and Objectives – the functional goals upon which the Plan is founded
- Implementation Plan – a summary of activities necessary to implement the recommendations of the Plan

C. HISTORY OF THE VILLAGE OF GLENWILLOW

The Village of Glenwillow began in 1883 when the Austin Powder Company (Company) began its operation in the Village. The black powder manufacturing company was started in 1833 in Vermont by five brothers. They eventually moved their operations to Newburgh Township, outside of Cleveland. The area was rapidly growing in population and it became too dangerous to keep the operations in Newburgh because of the occasional explosions that would occur during production. The Company began purchasing farms in the area adjacent to the railroad tracks, nearly 1,000 acres of land in total, which would become the Village of Glenwillow.

The Company built its manufacturing facilities and created a village for its workers. The village included approximately 30 homes, a boarding house for single male workers, a one-room schoolhouse, a nondenominational church, and a general store. With this investment in the community, the Village blossomed.

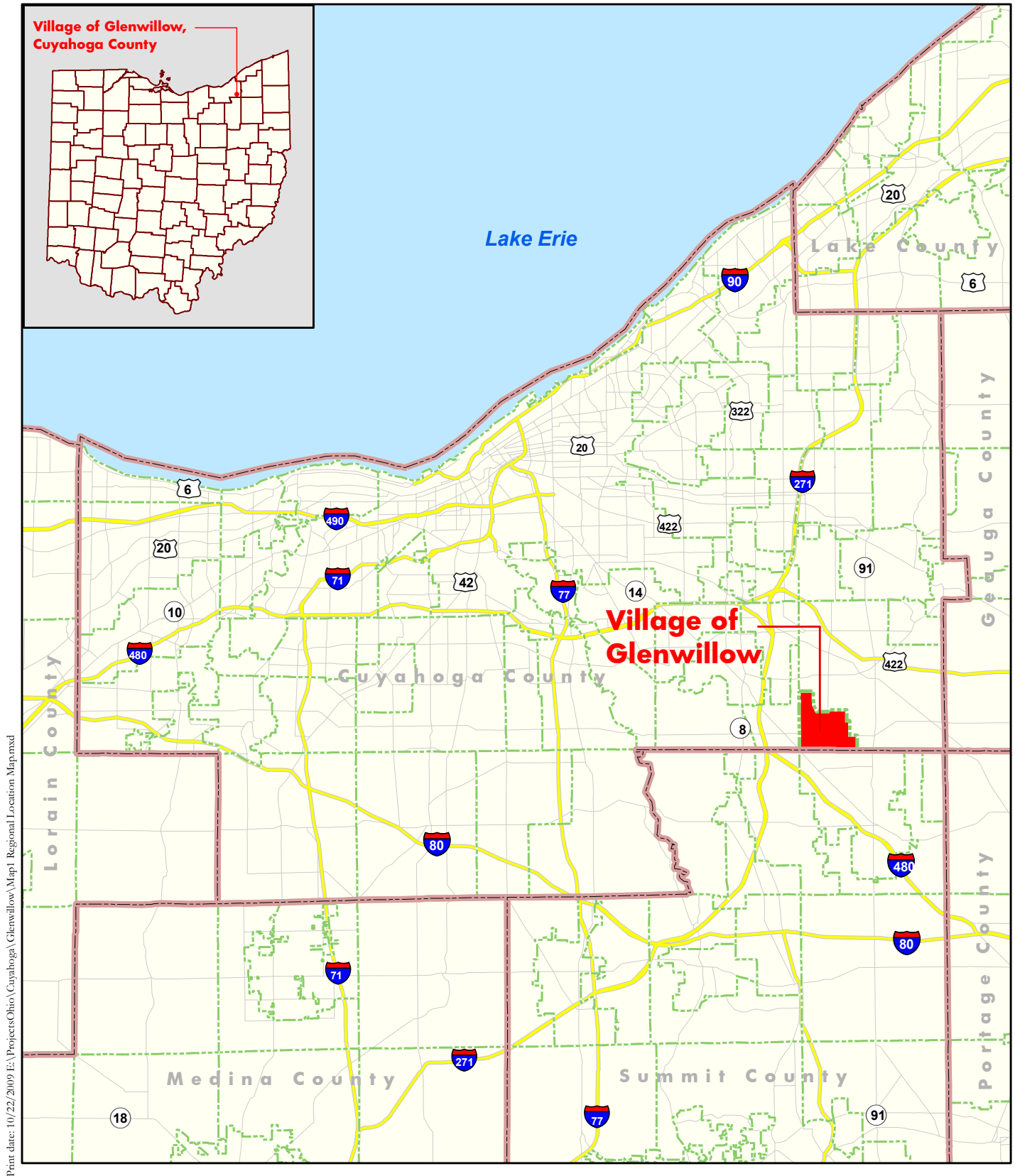
The Village of Glenwillow and the Company grew and prospered in the coming decades and became less isolated as the car became ubiquitous. The houses were updated regularly with modern amenities, including electricity and indoor plumbing. By the 1950s the boarding house and church were gone and eventually the general store was closed and converted into a maintenance building.

In time, black powder became obsolete so the Company diversified its production to include detonating cord and mining charges. However, as Glenwillow's population continued to grow, the Company's operations became more dangerous for the residents. One memorable incident took place on a Sunday morning in 1970 when residents in neighboring communities were awakened by breaking windows and opening doors due to the pressure from the explosion of a warehouse. All manufacturing eventually moved to the Company's Athens, Ohio factory, and the operations in the Village closed in 1972.

Over the course of the next decade, the Company continued to own the Company homes and work the 700-acre farm that was located across Pettibone Road from the former manufacturing facility. The farm had served as a buffer between the manufacturing facility and the rest of the Village during the production years. By the early 1980s, the Village of Glenwillow was prospering signified by the addition of a 250-acre industrial park, city water, sewer lines, and a new Village hall. Residential home sales were strong and the community continued to grow.

In 1999, the Village commissioned a master plan for the community. The plan was completed by the Cuyahoga County Planning Commission and addressed all aspects of land use and development in the Village of Glenwillow. Stemming from recommendations in the master plan, the Town Center Strategic Plan was completed in 2001, which called for rehabilitating and expanding the remains of the former company town. This Plan then became the basis for the Village Center Project that began in June 2004 after months of bidding and contract negotiations with developers. The Project included the rehabilitation of 18 historic structures including the general store into shops and restaurants. To date, 12 homes on the east side of Austin Powder Drive and six on the north side of Pettibone Road have been completely renovated.

In recent years, the Village has seen significant growth. Its small-town quaint atmosphere has made it attractive as a bedroom community and, as a result, several subdivisions have been developed. As the 21st Century begins, the Village of Glenwillow faces the challenge of how to grow economically while at the same time retaining its historic buildings and small town feel. This Plan intends to build on past successful planning initiatives to take the Village to the next level.



Map 1 Regional Context

Village of Glenwillow, Ohio

Base Map Source: Ohio Department of
Transportation, ESRI

0 2 4
Miles

McKenna
ASSOCIATES
INCORPORATED



10/29/09

2. THE VILLAGE OF GLENWILLOW PLAN

A. BUILD-OUT ANALYSIS

A Build-Out Analysis is a planning exercise that is undertaken to see what development could take place under current zoning if all available parcels were built upon. A Build-Out Analysis is intended to give Village leaders an idea of the zoning and master plan changes that may be required to achieve the community's long range vision.

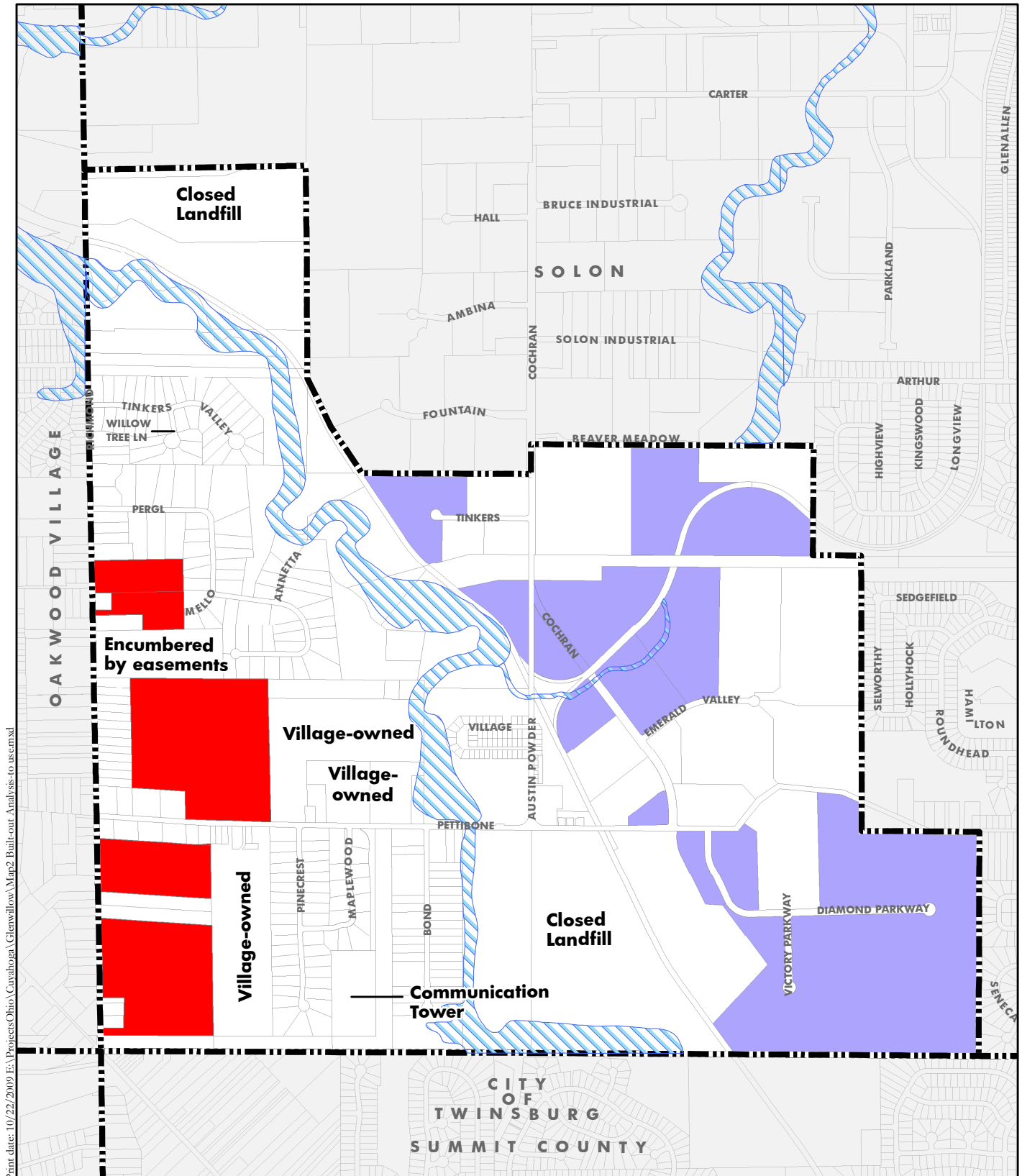
One of the purposes of a Build-Out Analysis is to detect whether there is too much or too little of a particular land use projected for the community. For example, is there enough residential to support the amount of commercial desired? Is there enough industrial to provide a balanced tax and employment base? Is the mix of uses appropriate to create a vibrant Village Center? Is there too much residential proposed, based on the level of services the Village can provide?

Although a Build-Out Analysis is probably most meaningful for larger communities with lots of developable vacant land that is subject to change, there are some lessons that can be learned from the Build-Out Analysis for Glenwillow.

Residential Build-Out

Based on current development standards in the Country Home District, which calls for a 40,000 sq. ft. minimum lot area, and taking into account the vacant property currently within the Country Home District, hypothetically, a maximum of 101 additional lots could be created in the Village. We don't live in a perfect world, so it is not likely that all 101 lots actually could be developed, due to site constraints such as unusual topography, wetlands, etc. Nevertheless, the 101-unit figure provides a rough estimate that is sufficient for planning purposes. There are about 319 developed residential lots currently in the Village, so an increase of 101 units would represent a thirty-three percent (33%) increase in the number of units. Thus, even though the Build-Out Map appears not to show many suitable for new residential development, there actually is a significant amount of residential development potential in the Village. The Build-Out Analysis above considers only single family dwellings with regard to future residential development.

101 new housing units would accommodate about 225 new Village residents. Additional residents would provide support for the fledgling commercial area, but a key question is: are public services, such as water and sewer systems and parks adequate to handle a 33% increase in residents? Existing park acreage should be sufficient, especially if the Village of Glenwillow Community Park is improved with additional park infrastructure and amenities. If fully developed, this park would meet the criteria for a Community Park as established by the National Recreation and Park Association guidelines. It is recommended that each neighborhood be within ½ to 3 miles of a Community Park. The farthest any house in Glenwillow is from the Glenwillow Community Park is only about 1.4 miles, travelling by road.



Industrial Build-Out

The Build-Out Map illustrates the industrially-zoned parcels that are potentially developable. These parcels add up to about 309 acres. A general rule-of-thumb is that approximately thirty percent (30%) of an industrial parcel is occupied by building floor space. The remainder of the parcel is occupied by parking, setbacks, stormwater facilities, landscaping, etc. Based on this rule-of-thumb, Glenwillow has the potential to see approximately 4,038,012 sq. ft. of new industrial development in the future. The number of employees that this amount of industrial development could generate depends on the type of industry that is brought into Glenwillow. Warehouse uses may generate as few as 4-8 employees per acre, whereas more intensive high tech development may generate 20 or more employees per acre. Using 13.5 employees per acre as a reasonable planning figure yields a projected growth in industrial employment of 4,171.

Trip Generation

According to the Institute of Transportation Engineers book, **Trip Generation**, 101 new single family residential units would generate about 1,010 trips per day. The amount of traffic generated by the future industrial development will depend on the type of industry and the density of employment, as described above. Light industrial development generates 3.02 trips per employee in a 24-hour period, whereas warehousing generates 3.89 trips per employee. However, light industry results in 13 to 20 employees per acre, while warehousing provides just 4 to 8 employees per acre. In short, new development in the industrial sector could generate between 7,200 and 12,600 additional trips on Village roads.

The traffic volume data presented later in the Plan suggests that the existing roads should have sufficient capacity to handle the additional residential traffic that would be concentrated on the west side of the Village. Cochran Road should have the capacity to handle a great deal of the industrial traffic generated on the east side of the Village, provided that it can get through the Cochran/Pettibone intersection. If the industrial sector is built-out as currently zoned, the need for capacity and signalization improvements at this intersection may be warranted. A traffic study should be completed to determine the necessity and scope of future transportation improvements at industrial build-out.

Research and Development (R&D) is a land use that many communities actively seek, for several reasons: it is a clean use, it provides highly skilled employment, and it upgrades the image of the community. R&D also generates a lot of traffic because it is employee-intensive. According to Trip Generation, such uses generate an average of 8.11 trips per 1,000 sq. ft. of gross floor area. If all of the remaining square footage was developed as R&D, then up to 32,748 new trips would be generated on Village roads. This information would suggest that a mix of R&D and conventional light industrial would be the best option for future development for the Village.

Conclusion

The Build-Out Analysis identifies locations in the Village where changes in land use are still possible. It identifies pertinent issues for consideration by Village leaders. The

Build-Out Analysis also sets the stage for preparation of the Future Land Use Map. This analysis has focused on transportation as the key issue of concern. Future study should be undertaken to determine appropriate access for truck traffic to/from the Village to accommodate future light industrial development. The Village should explore the feasibility of connecting Pettibone Road to Broadway Avenue (i.e. a Broadway Corridor Connection Study) as a means of handling future increases in truck traffic without impacting the rural character of the western portion of the Village.

B. FUTURE LAND USE PLAN

The framework for land use in the Village has been already established, largely as a result of past development, the location of major roads and the railroad, and the presence of Tinkers Creek and Beaver Meadows Creek. To a lesser extent, land use has also been affected by utility corridors. These land use impacts have resulted in distinct patterns. North of Pettibone Road, industrial uses are concentrated east of the rail line, while a mixture of less-intensive residential-related land uses are located to the west. On the south side of Pettibone Road, the industrial development extends as far west as Bond Street, with residential-related uses west of the Bond Street industrial corridor.

Residential Land Use

Looking more closely at the residential land use north of Pettibone Road, it is evident that Tinkers Creek and its floodplain provide a buffer from the rail line and industrial development. The expectation exists that this buffer will be around for a long time because there are severe constraints to development within a floodplain, parcels along the creek have limited access, and certain parcels are publicly owned. The Build-Out Analysis revealed that there are two locations north of Pettibone Road where new single family residential development could occur. These two areas, as well as the existing residential areas, are designated Single Family Residential on the Future Land Use Map.

On the south side of Pettibone Road, single family residential land use is located east and west of the Community Park. The Build-Out Analysis revealed that there are two parcels south of Pettibone Road where new single family residential development could occur. These two parcels, as well as the existing residential areas, are designated Single Family Residential on the Future Land Use Map.

Industrial Land Use

The existing industrial district on Bond Street is incongruous, being on the west side of the Village, which is predominantly residential. However, Bond Street does provide a transition use between the closed landfill and the residential development to the west. The Future Land Use Map calls for retaining the Bond Street industrial corridor. A substantial landscaped buffer along the south side of Pettibone Road, adjacent to Bond Street, would help to screen the industrial uses and improve the aesthetics along Pettibone Road.

Landfills

The two closed landfills are prominent land uses that anchor the north and south ends of the Village. Although the most deleterious impacts of the landfills are gone because the landfills are closed, the properties are undevelopable for the most part. Efforts to build parks on landfills have generally not been successful because of settlement problems over time, and the presence of above grade monitoring structures. Nevertheless, it is recommended that the Village work with the landfill companies, particularly the southerly landfill, to place landscaping on and around the landfill and explore the feasibility of future redevelopment opportunities.

Utility Corridors

Utility corridors are another prominent feature on the Future Land Use Map. A Board of County Commissioners/CEI Easement extends in an east-west direction across the Village, affecting the division of industrial lots east and west of Cochran Road. Farther west, at the Village's west boundary, the same easement encumbers a sizeable parcel of vacant property so that it is not divisible. There is also a north-south easement that crosses Pettibone Road, west of Austin Powder Drive. This easement affects the development potential of parcels on the north side of Pettibone Road, including a Village-owned parcel that is divided in half by the easement. South of Pettibone Road, the easement has a clear land use benefit, buffering the industrial uses on Bond Street from the residential uses to the west.

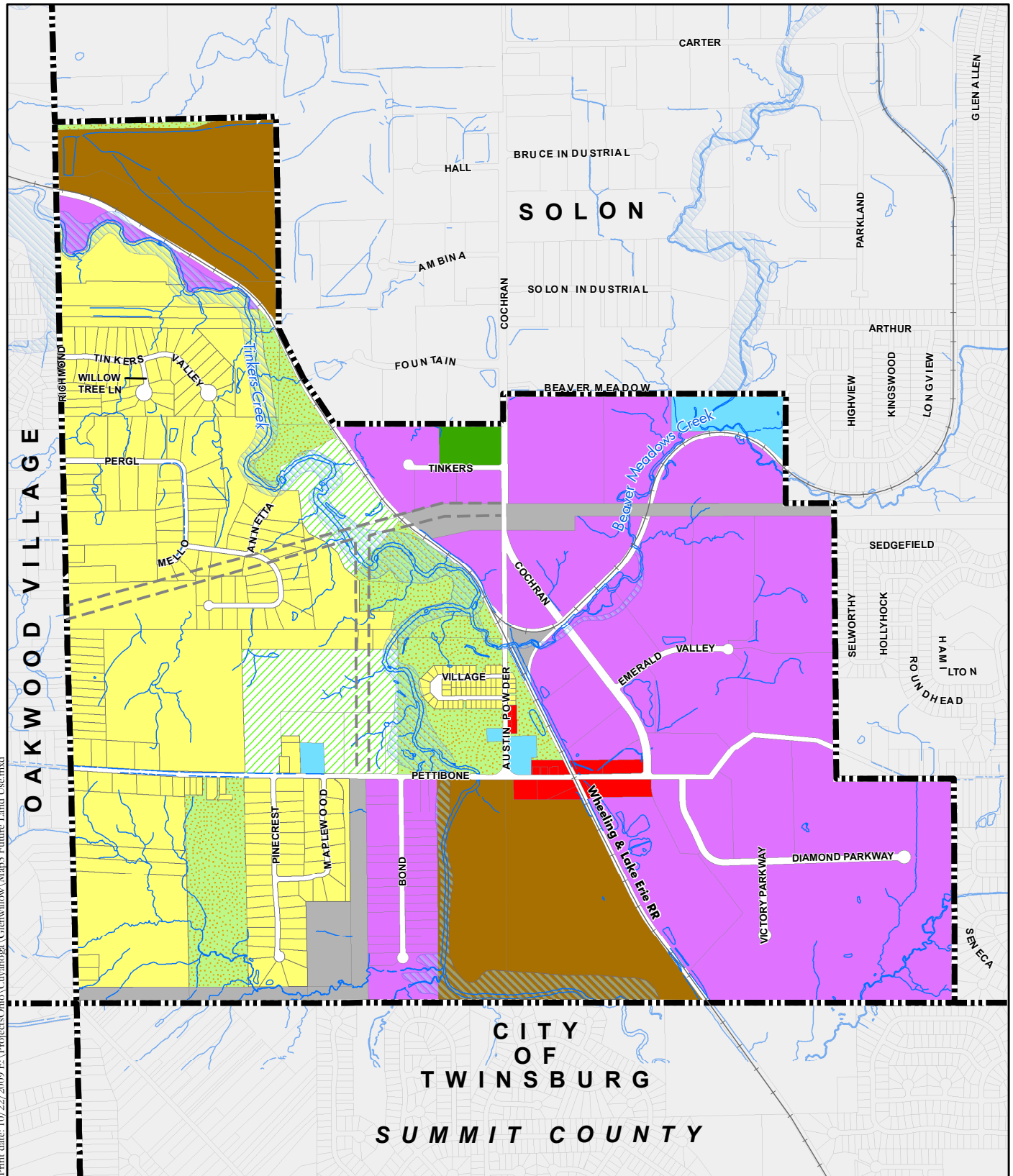
Village Center

The Village Center at the intersection of Pettibone Road and Austin Powder Drive is a special place, since it is the seat of local government, the location of several historic structures, the heart of a growing business district, and seed for the Village's identity. In terms of governmental uses, the most important parcel on the Future Land Use Map is occupied by the Village Hall at the northeast corner of Pettibone Road and Austin Powder Drive. The design of the Village Hall instills pride in local government, which is important.

Local business (retail and office) is an important part of the life of a Village Center and the Future Land Use Map reflects this fact, calling for expansion of local business uses on the both sides of Pettibone Road, between Austin Powder Drive and Cochran Road. The existing retail on the north side of Pettibone Road is also designated Business. The goal in designating this much business is to create a critical mass so that people are drawn to the Village business district for more than one stop, i.e., creation of a destination. The strip of business use along the east side of Austin Powder Drive, north of the Village Hall, is intended to be business (retail and office) use only.

The Village Center is often the main gathering place in a community, and this is accomplished in part by the presence of the Village Hall, but also by the presence of the Donald Norman Payne Recreation Complex on the northwest corner of Pettibone Road and Austin Powder Drive. This park is an essential use in the Village Center and the Village is encouraged to maintain and upgrade it as needs change.

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Map 3 Future Land Use

Village of Glenwillow, Ohio

Legend

- | | |
|----------------------------|------------------------|
| Single Family Residential | Governmental |
| Business (Retail & Office) | Institutional |
| Industrial | Parks and Camp |
| Utilities | Village-Owned/Vacant |
| Closed Landfill | Utilities Right-of-Way |
| | 100 Year Floodplain |

Base Map Source: Cuyahoga County, 2008
Data Source: McKenna Associates, 7/2009

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INCORPORATED



10/29/09

Governmental Buildings and Village-Owned Properties

Besides the Village Hall, other significant governmental parcels identified on the Future Land Use Map include the site of the proposed Police and Service Department building, on the north side of Pettibone Road, north of Maplewood Drive, and a parcel owned by the City of Solon in the northeast corner of the Village. The parcel owned by Solon is partially occupied by a wastewater treatment plant and a police training facility. A small governmental parcel is located on the west side of Austin Powder Drive, north of Pettibone Road, which provides offices for the Village Building Department and Village Law Director.

Village-owned vacant property comprises a large amount of acreage, providing the Village with significant public development opportunities. Much of the acreage, comprising four parcels, is on the north side of Pettibone Road, west of the Donald Norman Payne Recreation Complex. One of the parcels, located north of Bond Street, is zoned Industrial-B, although its use for industrial purposes is questionable because of the presence of a utility easement running through the center of the property. Industrial-B zoned property seems like an incongruous land use, being west of Austin Powder Drive and Tinkers Creek, and surrounded by residentially-zoned property.

Another Village-owned vacant parcel is located west of the rail line and east of Annetta Drive. This parcel does not appear to have direct access to a public road. It benefits from significant natural features on the site because Tinkers Creek cuts through the middle of the site.

The Village-owned vacant properties contribute to the rural-like character of the community. For that reason, it is recommended that the Village retain ownership of the parcels and, if needed, make use of them for passive recreation use, e.g., trails.

Parks and Camps

Looking beyond the Village Center, there are several pieces of land designated Parks and Camp on the Future Land Use Map. One of the most significant pieces is the Community Park, located on the south side of Pettibone Road, west of Pinecrest Lane. This park is a “diamond in the rough” – it is largely undeveloped so it is waiting for a design plan and implementation schedule to make use of this resource.

The Odd Fellows Camp, located north of Village-owned property on the west side of Austin Powder Drive is designated Parks and Camp. This camp is comprised of two parcels abutting the rail line, with Tinkers Creek running through the property. There are also two parcels of land at the north end of the Village, abutting and west of the rail line, that are designated Parks and Camp. These parcels do not appear to have access to a public road, since they are isolated by Tinkers Creek, the rail line, and existing development. Consequently, residential, business, industrial, governmental, and institutional uses would be inappropriate. Parks and Camp remain the only reasonable use for these two parcels.

Institutional Use

There is one institutional use located in the Village, Stratford Commons, an assisted living and nursing home facility located at the northwest corner of Cochran Road and Tinkers Court. Stratford Commons is an attractive building that provides an inviting first impression for people entering the Village from the north.

C. TOWN CENTER PLAN

The Village of Glenwillow has seen impressive, quality growth over the past decade based on sound planning and design and a commitment from leadership to invest in the community. Now that the Village has achieved all their current development goals a new set of goals should be addressed. Building on the Village's quality existing development, the Town Center Plan looks to further enhance the Village.

Village Core

One important development project that will be key to invigorating the Town Center area will be development of the south side of Pettibone Road, which will provide an extension and completion of the existing Town Center area (see Figure 2.1). New development will complete the downtown area and allow for increased restaurant, retail, and office uses in the Village. Additional neighborhood-scale commercial development was identified by the focus groups as critical to growth of the Village.

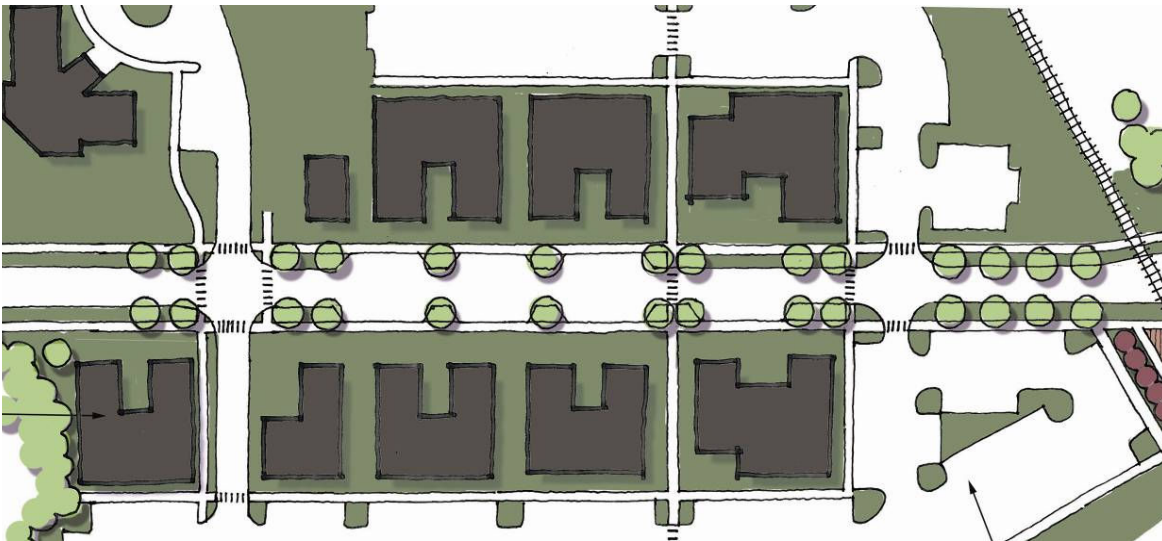


Figure 2.1 Development of the Town Center should include development of the south side of Pettibone Road.

The south side of Pettibone Road development should reflect the existing north side in character and will be supported by on-street and rear parking areas. This parking would also support a plaza space to the east that could accommodate a farmers market fronting Pettibone Road and serve the redeveloped Train Depot.

North and south pedestrian and vehicular connections from existing buildings are proposed to facilitate easy pedestrian movement from one area to the next. Sidewalks and/or paths connect east and west along the north side of Pettibone Road. A trailhead connection from the new development on the south side of Pettibone Road is also proposed as a link to a reforested landfill area.

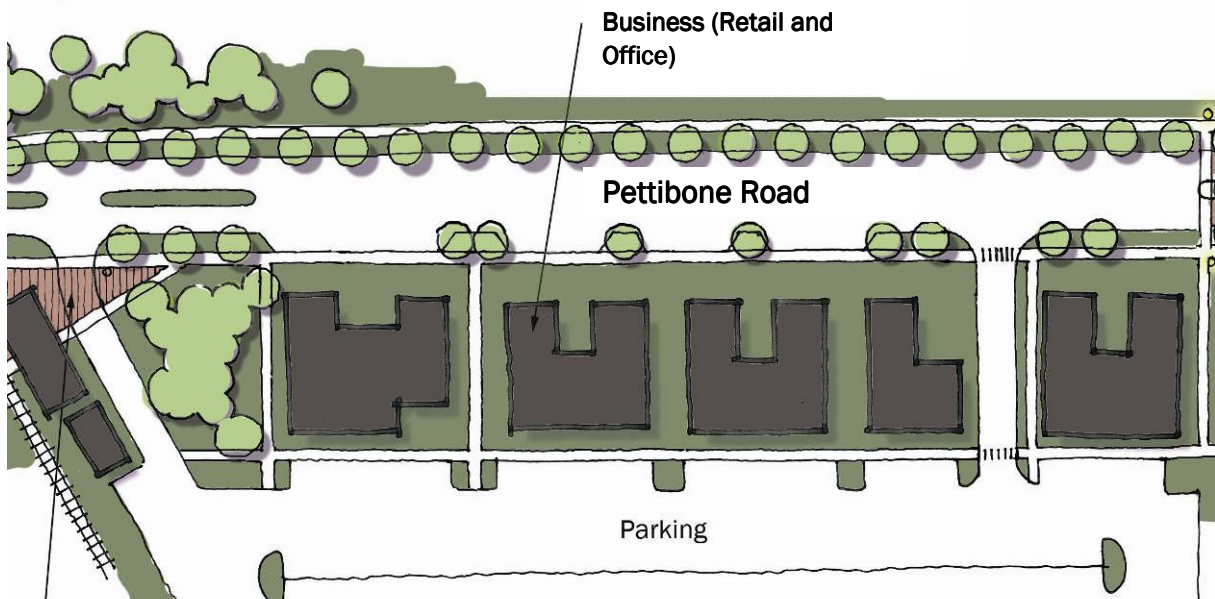


Figure 2.2 Once the south side of Pettibone Road west of the Train Depot is built-out, development east of the railroad would further enhance the Town Center.

East Village

East of the Train Depot will contain business (retail and office buildings) reflective of the current Pettibone Road architecture (see Figures 2.2 and 2.3). A large architectural element such as a clock tower, grouping of flags or sculpture at the Pettibone/Cochran Road intersection would signify the entrance to the Town Center. Large masses of flowering shrubs should anchor the element and the entire feature should be lit at night.



Figure 2.3 The entrance feature at the northwest corner of the Pettibone Road/Cochran Road intersection should be highly visible and make a statement.

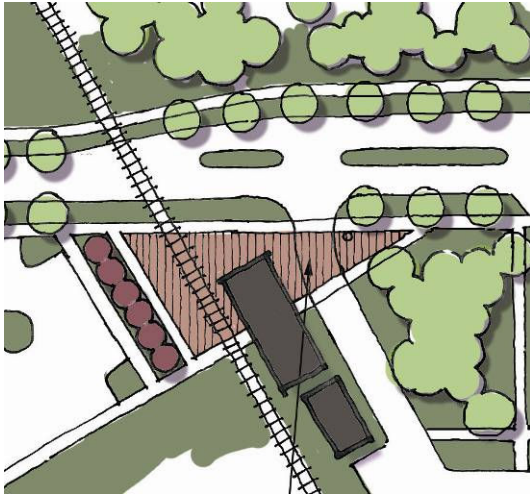


Figure 2.4 The Train Depot will serve as an anchor for the Town Center area.

The Train Depot

Development of the south side of Pettibone Road will connect the Train Depot to the Town Center. An ample parking lot and new plaza space that spans the railroad tracks supports both the new Town Center development and the renovated Train Depot. The Train Depot site has a welcoming plaza along Pettibone Road and a service and employee parking area to the rear (see Figure 2.4).

There are a variety of publicly oriented options for which the Train Depot could be used, but before a new use can be identified, there are a few considerations that the Village should explore before deciding whether or not to try and acquire it from the current owner, the

Wheeling and Lake Erie Railway. 1) The Depot is in close proximity to the actual right-of-way of the tracks, so safety considerations of any public use are paramount. 2) The Depot may need to be physically moved to the east by approximately 50 or 100 feet for safety and expansion purposes, so the availability of suitable land in this area is a crucial consideration. 3) At about 1,500 sq. ft., the Depot is too small to accommodate a number of desirable uses. The Village should explore the feasibility of whether an addition can be built onto the Depot and if there is enough site space to accommodate an addition without harming the historical integrity of the Depot. Regardless of whether or not an addition is constructed, site modifications and enhancements will be required.

Following are a few uses that could be considered for the train depot space:

- A crafts market, in conjunction with an outdoor farmers market. These types of facilities are promoted in downtowns because they draw large numbers of people.
- A transportation museum. The train depot may be eligible for Federal transportation enhancement funds to transform the train depot for this purpose.
- Offices for a non-profit use.
- An education center for sustainable urbanism, where people can learn sustainable technologies for home and business.
- A day-care center run by the Village for residents.
- A senior citizen activity center.

Gateway Entrances

New gateway entrance points are proposed for: 1) the north end of the Town Center on Austin Powder Drive, just south of the railroad crossing; and 2) on the east end of Pettibone Road near the Cochran Road/Pettibone Road intersection (see Figure 2.5). These gateways should include special paving materials, ornamental lights, and flowering or columnar trees.

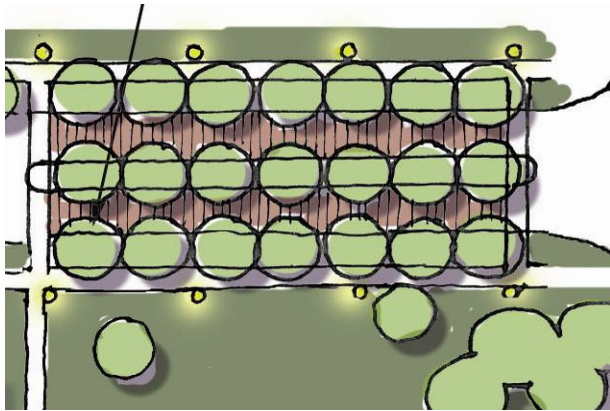


Figure 2.5 Gateways highlight the entrances into the Town Center area.

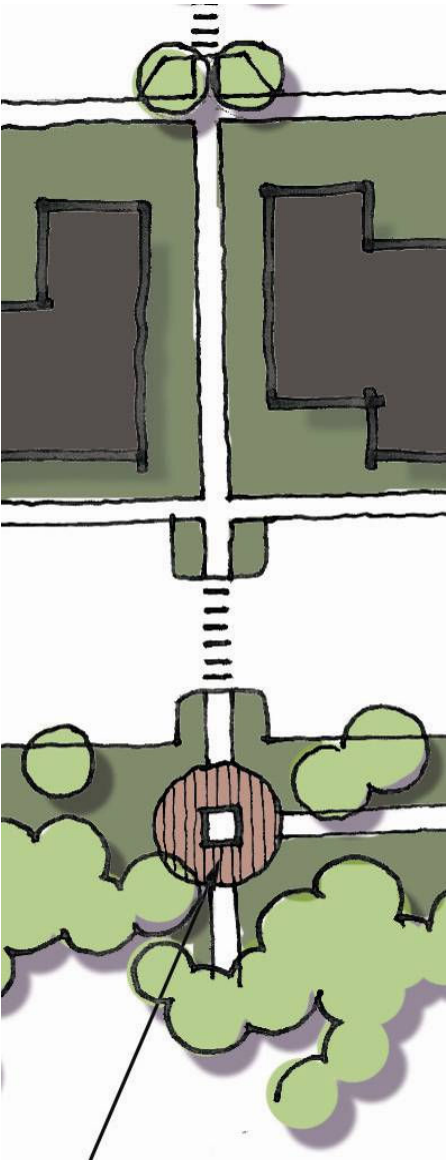


Figure 2.6 A trailhead the reforested landfill area.

Landfill Reforestation

A trailhead connection leading to a reforested landfill area would provide walking and biking access to this unique site (see Figure 2.6). Reforestation and prairie plantings are proposed in order to transition the site to a passive community park. Trails, benches, and informational signage should be included in the park improvements.

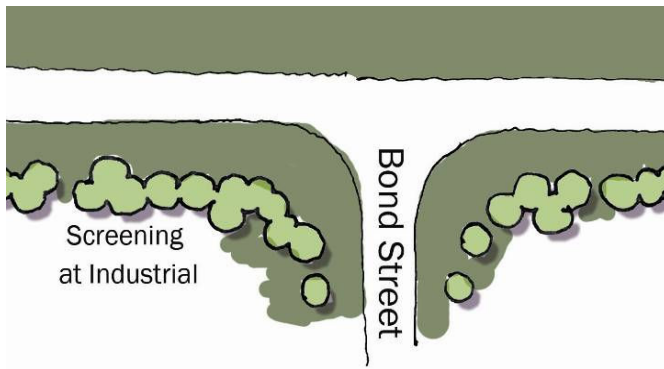


Figure 2.7 Evergreen screening along the Pettibone Road frontage at Bond Street would help preserve the character of Pettibone Road into the future.

Bond Street Landscaping

Undeveloped parcels with frontage on Pettibone Road at Bond Street have the potential to significantly change the character of the drive into Glenwillow if they are developed without proper screening. The Town Center Plan proposes heavy evergreen and deciduous screening along the Pettibone Road frontage to protect the beauty that currently exists when entering the Village from the west (see Figure 2.7).

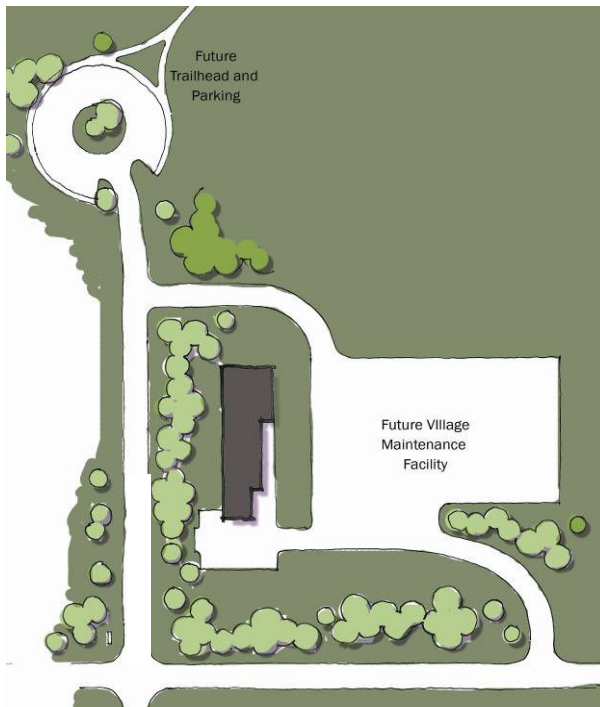
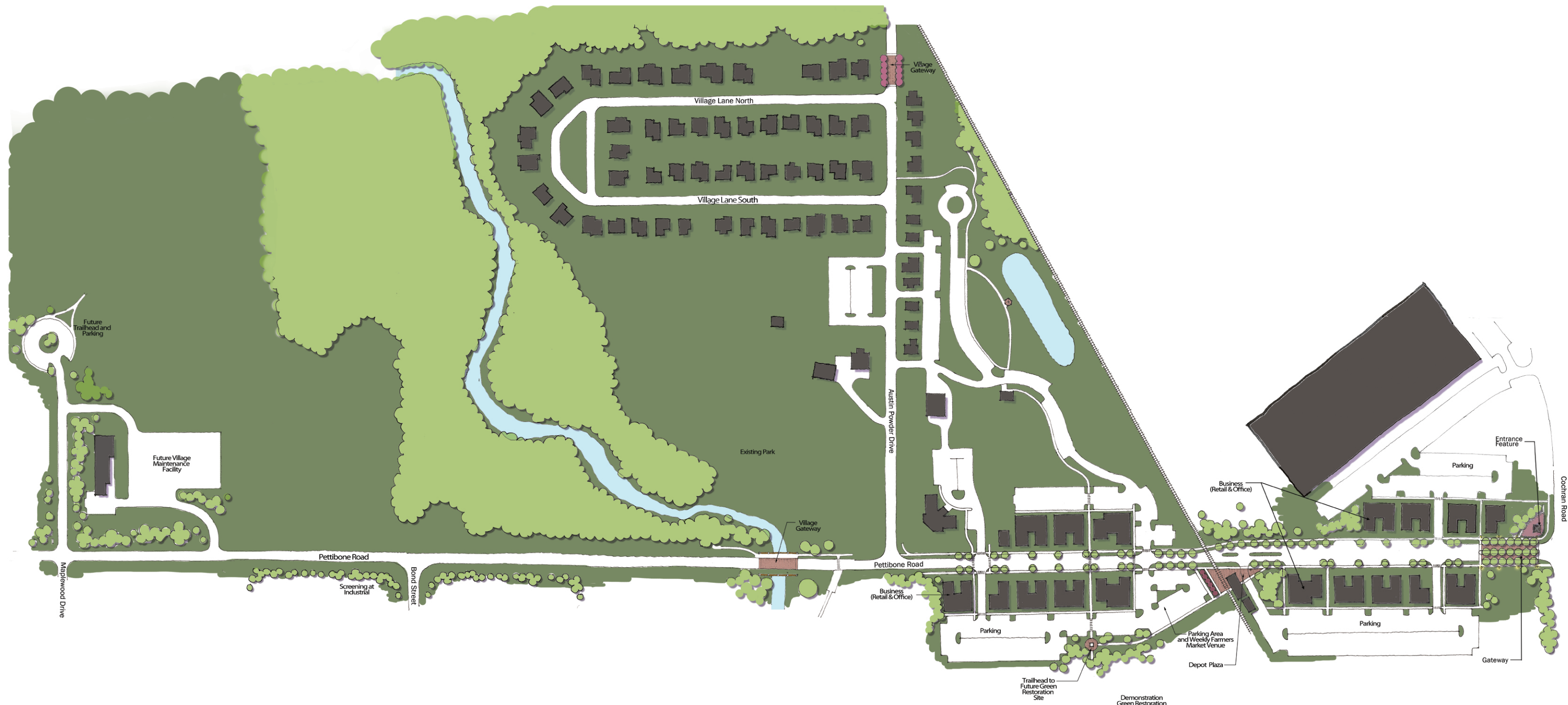


Figure 2.8 Extending Maplewood Drive into a park-like setting and siting the maintenance facility adjacent to but separated from the park provides a dual use.

Village Park Extension

Village-owned vacant property on the north side of Pettibone Road, between Maplewood Drive and Bond Street, has been identified as the location for the future Village Maintenance Facility. This location is can also serve as a western extension to the natural area west of Tinker's Creek. Proper siting and screening of the maintenance facility would provide shared access to a small parking area and trailhead (see Figure 2.8).



Map 4
Conceptual
Glenwillow Town Center Plan
Village of Glenwillow, Ohio

D. EMERGING SECTORS PLAN

Introduction

There are approximately 309 acres of vacant industrially-zoned land in the Village, providing opportunities for growth and development. The Village has expressed a desire to attract employment-generating, high-tech or knowledge-based businesses to fill its industrial parks. As noted below, this will require an aggressive campaign to capture a relatively small market for knowledge-based businesses in the Cleveland area.

Technology and the Economy

The acquisition of technology has long been seen in all economies as central to the process of raising productivity and improving competitiveness. There is a general appreciation of the critical role that innovation and technological improvements play in the performance of a region. The ever-increasing quantity, quality, and variety of goods and the general decline in the physical arduousness of work are the direct result of technological change. By increasing the range of choice with respect to new products and production processes, technological progress raises the potential for economic expansion.

Technological dynamism involves more than acquiring technological know-how. It requires a culture of intellectual curiosity, a drive to innovate, and a motivation for making small improvements within firms. It is important to understand that many of the drivers of high-tech development are outside the control of the Village. To a large extent, technological competitiveness is a regional issue and the key question becomes: How much of the regional high-tech market can the Village of Glenwillow capture?

Knowledge-Based Industry in the Cleveland Area

A March 2009 report (Cleveland Plus Economic Review) by Team Northeast Ohio (Team NEO) paints a very positive picture for the Cleveland area in terms of technology-based economic development, particularly in the biomedical industry. The report indicates that the biomedical industry's gross regional product has grown an average of 7.4% annually over the past 5 years, which is greater than the sector's 6.8% national annual growth rate.

The Cleveland area has been thought of as a biotechnology center. Three ingredients are necessary to foster the growth of biotechnology: money (venture capital), technology, and experienced people. According to the Team NEO report, the Cleveland Plus region, which includes 16 counties, boasts 60 hospitals, 30 colleges and universities, strong manufacturing capabilities, and billions of dollars in public and private investment dollars. In 2008, Ohio attracted \$817 million in combined venture capital/National Institute of Health funding, making Ohio the second highest state in the Midwest, trailing closely behind Illinois, in terms of securing outside venture capital and biomedical funding. The Cleveland Plus region attracted \$395 million of Ohio's 2008 total secured venture capital, which ranks the region higher than some Midwestern states, including Indiana, Kentucky, and Kansas.

Communities with concentrations of knowledge-based industries have been able to create high-paying jobs, retain talented individuals, and attract firms from other locations, sparking additional growth. According to an April 2009 article in the Cleveland Plain Dealer, jobs in the biomedical sector offer average wages of over \$60,000 annually, as compared to the manufacturing industries average wages of approximately \$45,000 annually.

Team NEO President and CEO, Thomas A. Waltermire believes that many manufacturing companies are transitioning from making products for the automobile industry to the medical and energy-related companies. An April 2009 Warren Tribune article quotes Mr. Waltermire, “Many of the same skills that are needed to manufacture parts for the automobile industry translate well to being able to make items for the medical industry.”

The Team NEO report, summarizing CoStar Industrial Data, shows that demand for industrial space remains strong. Between the first quarter of 2004 and the fourth quarter of 2008, the total occupied industrial space in the Cleveland Plus region grew steadily. The vacancy rate (7.4%) remains at its lowest point in 5 years. This trend bodes well for the Village of Glenwillow, which contains an abundance of undeveloped industrial zoned property.

Regional Clusters

A common thread through this discussion is the need to consider the factors that generate a regional advantage because high-tech, knowledge-based industries don't exist in isolation from each other; rather they develop in regional clusters where they enjoy the linkages among similarly oriented enterprises. In these regional clusters, high-tech firms are likely to have access to the skills, organizational forms, and level of knowledge required to develop and maintain a high-tech business.

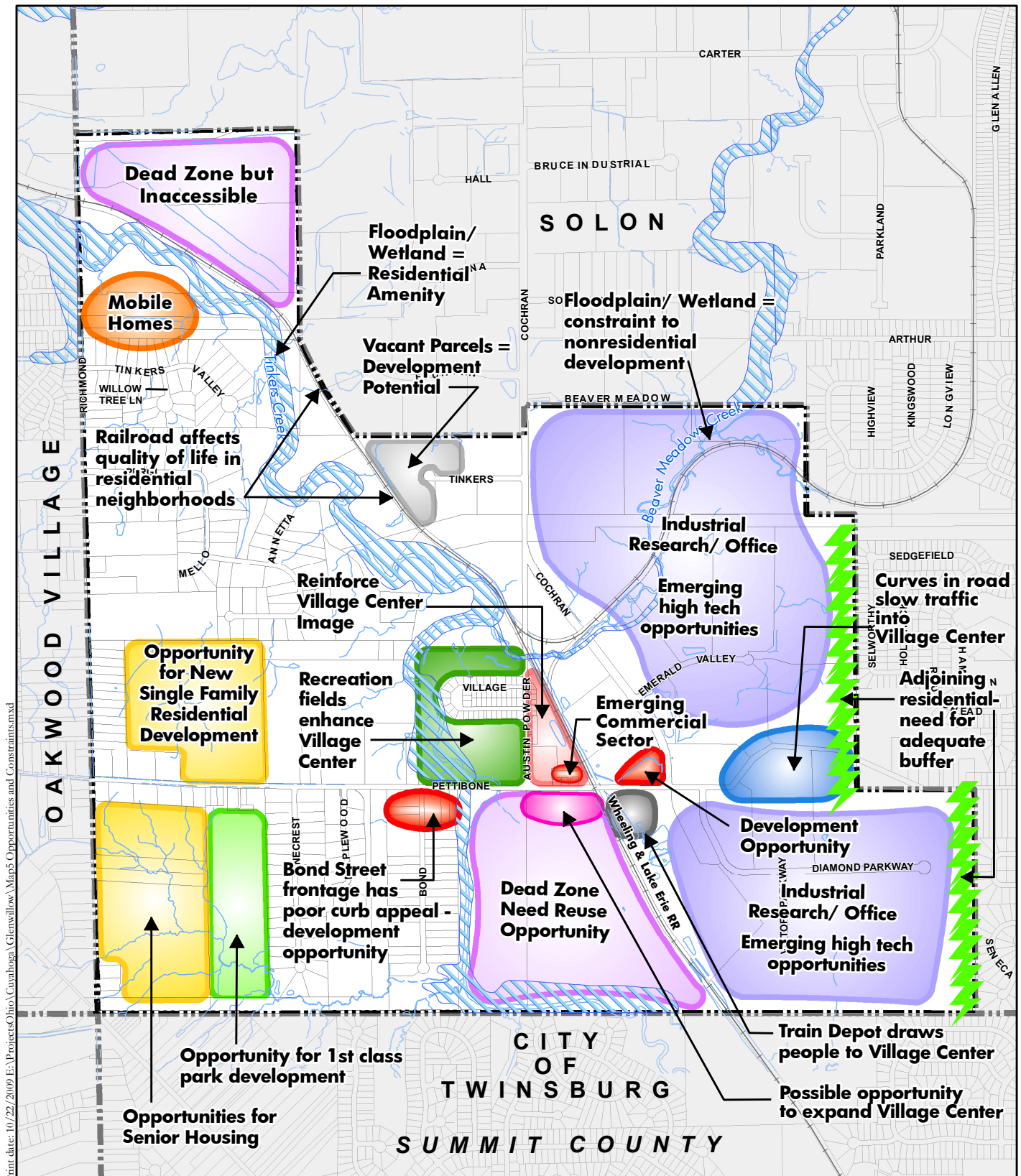
Baiju Shah, President of BioEnterprise, the region's biomedical development group, commented recently about the Cleveland Plus region's biomedical cluster, “I am incredibly optimistic about Cleveland in particular because I think the momentum we've built in the last couple of years continues to grow” (Cleveland Plain Dealer, April 2009). Chris Coburn, Director of Cleveland Clinic Innovations added, “The concept of this community of companies is happening.” The Village of Glenwillow's proximity to hospitals, colleges, and universities; available industrial land; and juxtaposition to existing regional clusters; provides a competitive advantage to the Village in terms of attracting knowledge-based businesses.

Recommendations

Following are recommendations of actions that the Village can take to attract knowledge-based businesses:

1. **Recruit.** Target and actively recruit the businesses it desires, with the assistance of a real estate professional/site selection specialist.

2. **Expedited Review.** Carefully and thoroughly define the physical and operational characteristics of the businesses it desires. These characteristics could then be codified in the Zoning Ordinance. Businesses that satisfy the characteristics would enjoy an expedited review process.
3. **Marketing.** Work with BioEnterprise, Team NEO and other similar organizations to develop a marketing program that targets knowledge-based industries in the Cleveland area.
4. **Cooperating with the County.** Work with the Cuyahoga County Department of Development to benefit from its resources. Become conversant in the Department's financing programs (Grow Cuyahoga County Fund, North Coast Opportunities Technology Fund Pilot Project, New Product Development and Entrepreneurship Loans, and Economic Development Loan Fund).
5. **Cooperating with the State.** Cooperate with State Government on the Technology Investment Tax Credit, Ohio Venture Capital Authority, Ohio Third Frontier Pre-Sold and Sold Initiatives, and Edison Technology Center.
6. **Create an Environment that Attracts a Highly Trained Work Force.** Through implementation of the Master Plan, create an environment that knowledge-based workers find attractive. Some of the features of such an environment that are under the control of the Village include:
 - Quality housing
 - Walkable neighborhoods
 - A destination spot, such as a downtown, where people can meet
 - Quality parks and recreation facilities and opportunities
 - A comprehensive trail network
 - Transportation alternatives
7. **Market Smaller Industrial Parcels.** Parcels of land in the industrial parks, which are 15 to 20 acres and larger, are currently sized to accommodate large scale industrial and warehouse operations. Start-up high technology firms need as little as 2.5 to 10 acres. The Zoning Ordinance permits a minimum lot size of 2 acres with a minimum lot width of 200 feet (measured at the front building setback line) for buildings in Industrial Districts. Marketing the land to accommodate smaller operations, in concert with proper land use controls in the Zoning Ordinance, will have a dramatic impact on the types businesses that locate in the Village.



Map 5 Opportunities, Constraints and Emerging Sectors

Village of Glenwillow, Ohio

Base Map Source: Cuyahoga County, 2008
Data Source: McKenna Associates, 2/2009

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McKenna
ASSOCIATES
INCORPORATED



10/29/09

3. EXISTING CONDITIONS

This section presents an overview of existing conditions in the Village of Glenwillow, including a summary of the demographic makeup of the people who live in the Village, the existing land uses and natural features, the housing stock, the economic conditions, the existing community infrastructure and services, community facilities, and opportunities and constraints. The above will influence the future development, redevelopment, and preservation of the Village of Glenwillow.

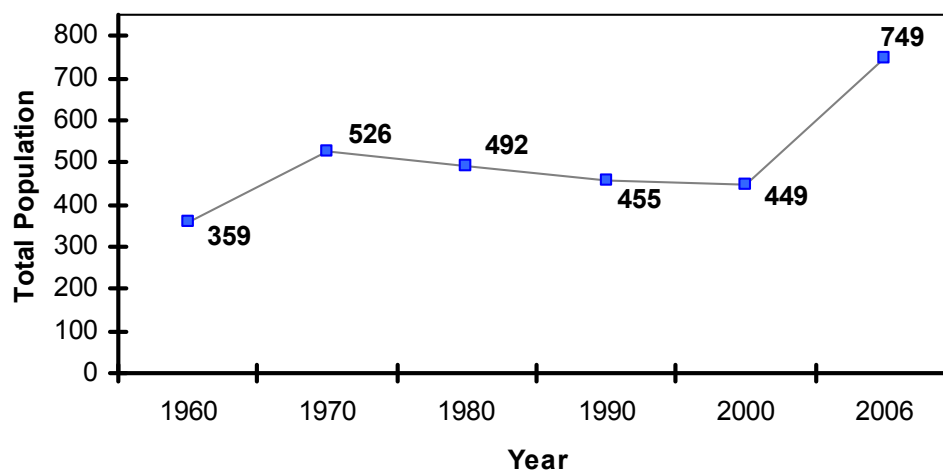
It should be noted that the demographic, housing and economic analyses contained herein are based on the 2000 Census and data collected by the Village of Glenwillow. Rather than extrapolating estimates of future growth using inaccurate data, accurate and verified information will be inserted into the Plan following release and certification of the 2010 Census data.

A. DEMOGRAPHICS

General Population Characteristics

The population of the Village of Glenwillow increased steadily from 1960 to 1970, decreased slightly from 1970 to 2000 and has grown significantly from 2000 to present. The Village of Glenwillow estimates that the population was 749 people in 2006, equally a population increase of nearly 67% over the six year period.

Figure 3.1: Growth in Total Population, Village of Glenwillow, 1960 to 2006



Sources: US Census Bureau, Village of Glenwillow

Taking into account only 2000 Census figures, when compared with other local communities and Cuyahoga County, the Village of Glenwillow demonstrated an overall population growth of 25.1% since 1960. It should be noted that this does not take into account the significant growth between 2000 and 2006 where from 1960 to 2006 the Village of Glenwillow showed an increase of 108.6%. Several nearby communities

experienced growth between 1960 and 2000, with Oakwood showing a moderate increase of 11.7%, while Bedford Heights, Solon, Macedonia, and Twinsburg showed high population growth with increases between 115.6% and 244.3%.

Table 3.1: Change in Total Population, Selected Communities, 1960 to 2010

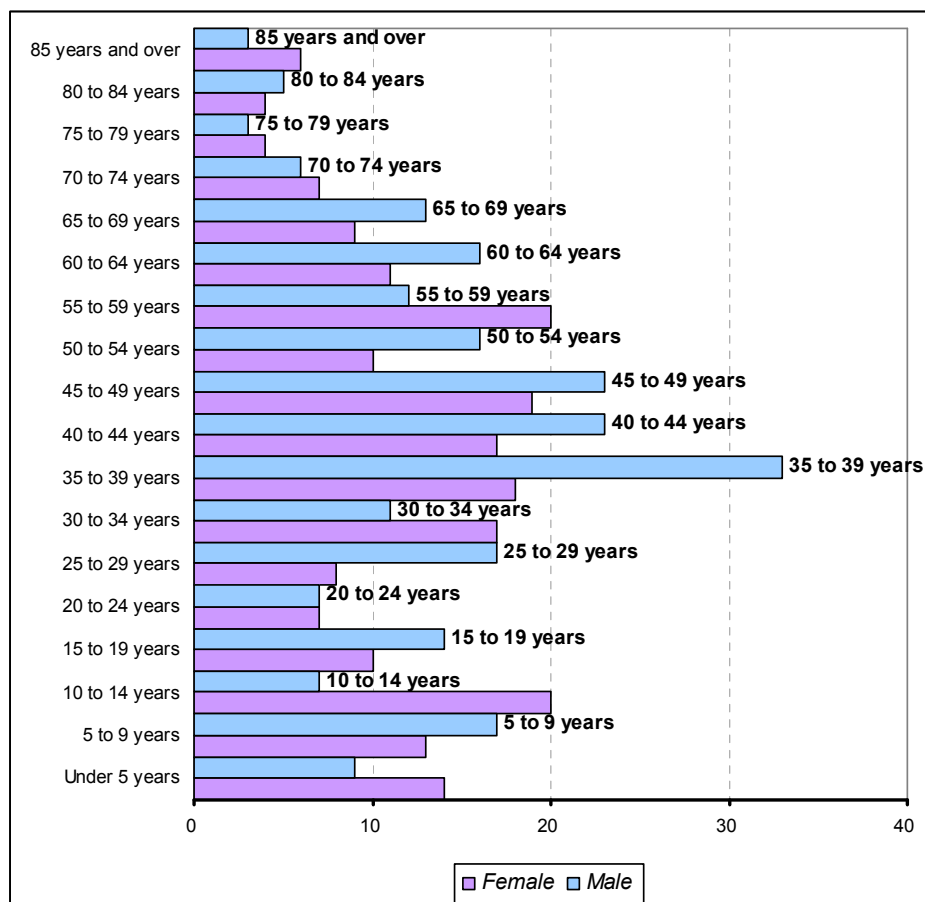
	1960	1970	1980	1990	2000	1960-2000 % Change	2010	1960-2010 % Change
Village of Glenwillow	359	526	492	455	449	25.1%		
Bedford	15,223	17,552	15,056	14,822	14,214	-6.6%		
Bedford Heights	5,275	13,063	13,214	12,131	11,375	115.6%		
Oakwood	3,283	3,127	3,786	3,392	3,667	11.7%		
Solon	6,333	11,519	14,341	15,548	21,802	244.3%		
Macedonia	4,060	6,375	6,571	7,509	9,224	127.2%		
Twinsburg	5,848	7,847	8,889	11,502	17,006	190.8%		
Cuyahoga County	1,647,895	1,721,300	1,498,400	1,412,140	1,393,978	-15.4%		

Source: US Census Bureau

Age Structure of Population

Figure 3.2 on the following page shows the age structure of the Village of Glenwillow in 2000 divided by gender, with females on the bottom and males on the top for each age group. The overall structure of the population pyramid for Glenwillow was typical of a community with family households (parents 30-50 years old, children under 20 years old), a number of single adults, and demonstrates the effects of the Baby Boom and the 'echo' generation (children of the Baby Boomers). The population of college-age and twenty-something individuals in 2000 was notably low, suggesting that many high-school graduates move away from home to attend college. There was a considerable percentage of the population over 60 years old, suggesting that there were and most likely still are adequate housing options and community services available for senior citizens.

With respect to gender, the population of the Village of Glenwillow in 2000 was generally well-balanced, with an unexpected (due to women's longer life expectancy) nearly equal amount of males and females in the over-60 category. Also of note was the higher amount of children and pre-teen (ages 0 to 14) girls as compared to boys (47 vs. 33) and the higher amount of 35-54 year old men (95, compared to 64 women of the same age). It will be interesting to see how these demographic trends have changed between 2000 and 2010.

Figure 3.2: Total Population by Gender and Age, Village of Glenwillow, 2000

Source: US Census Bureau

The table below show the percentage of the population for the Village of Glenwillow and Cuyahoga County in each of five age group categories, or cohorts, including: under 5 years, 5-19 years (school age children), 20-34 year olds (young adults), 35-64 year olds (middle-age adults), and seniors 65 years and over. 2010 data will be added following release of the 2010 Census data.

Table 3.2: Percentage of Population by Age Groups, Village of Glenwillow and Cuyahoga County, 1990 to 2010

	1990		2000		2010	
	Village of Glenwillow	Cuyahoga County	Village of Glenwillow	Cuyahoga County	Village of Glenwillow	Cuyahoga County
Under 5 years	6.6%	7.1%	5.2%	6.6%		
5 to 19 years	16.3%	19.5%	17.9%	20.9%		
20 to 34 years	27.5%	23.6%	14.9%	19.1%		
35 to 64 years	36.2%	34.2%	48.6%	37.9%		
65 years and over	13.4%	15.6%	13.4%	15.6%		

Source: US Census Bureau

Racial Composition

It is believed that, due to the significant population growth since 2000, the racial composition in the Village has changed dramatically. As a result, racial composition data will be included following release of the 2010 Census data.

Table 3.3: Racial Composition, Selected Communities, 2010

	% White	% Black	% American Indian	% Asian	% Pacific Islander	% Some Other Race	% Two or More Races
Village of Glenwillow							
Bedford							
Bedford Heights							
Oakwood							
Solon							
Macedonia							
Twinsburg							
Cuyahoga County							

Source: US Census Bureau

Education

Consistent with the population growth, the educational attainment of Village residents is anticipated to have increased from 2000 to 2010. As a result, educational attainment data will be included following release of the 2010 Census data.

Table 3.4: Educational Attainment of Persons 25 Years and Older, Selected Communities, 2010

	High School Diploma or higher	Bachelor's Degree or higher	Graduate or Professional Degree
Village of Glenwillow			
Bedford			
Bedford Heights			
Oakwood			
Solon			
Macedonia			
Twinsburg			
Cuyahoga County			
State of Ohio			

Source: US Census Bureau

B. EXISTING LAND USE

The 3 most prominent existing land uses in the Village of Glenwillow include vacant (32.73%), residential (17.62%) and industrial (16.49%). These three land uses account for over two-thirds of the entire Village of Glenwillow. The vacant land is scattered

throughout the Village of Glenwillow while the industrial land uses are located primarily on the east side of the railroad tracks and the residential uses on the west side. The exceptions to this include the two industrial areas – one area located south of the Waste Management of Ohio- Cleveland Hauling landfill (6705 Richmond Road) and one along Bond Street, west of the former Austin Powder landfill (south of Pettibone) – and the institutional area (Stratford Commons) on the north side of Tinkers Court.

Table 3.5: Existing Land Use, Village of Glenwillow, 2009

Land Use	Acres (Percent of Total)	Land Use	Acres (Percent of Total)	Land Use	Acres (Percent of Total)
Vacant	595.2 acres (32.73%)	Utilities	95.0 acres (5.23%)	Institutional	8.5 acres (0.47%)
Residential	320.5 acres (17.62%)	Village-Owned/ Vacant	87.3 acres (4.80%)	Commercial	1.5 acres (0.08%)
Industrial	299.8 acres (16.49%)	Park	85.6 acres (4.71%)	Office	0.9 acres (0.05%)
Closed Landfill	229.4 acres (12.62 %)	Governmental	24.7 acres (1.36%)	Roads	70.1 acres (3.85%)
				TOTAL	1,818.5 acres (100.00%)

Sources: Cuyahoga County Planning Commission, McKenna Associates

The two closed landfills account for 12.62% of the Village's land area while the next highest category is utilities, consisting of 95 acres or 5.23%. The utilities land use category includes the Wheeling and Lake Erie railroads, Cleveland Electric Illuminating Company easements for power lines and substations, and the radio tower property. The next highest category is Village-Owned/Vacant which includes property that is owned by the Village, but is currently vacant. The remaining uses, with the exception of Stratford Commons (institutional use) and the Village of Glenwillow Community Park (park use), are generally concentrated in the Village Center area.



Figure 3.3: Vacant Land Use, land on the north side of Emerald Valley Parkway looking toward Cochran Road



Figure 3.4: Industrial Land Use, located on the east side of Cochran Road, just south of the northern Village boundary



Figure 3.5: Residential Land Use, restored dwellings located along Austin Powder Drive in the Village Center



Figure 3.6: Residential Land Use, dwelling located on Pergl Road



Figure 3.7: Closed Landfill Land Use, Waste Management landfill site



Figure 3.8: Recreation Land Use, Village recreation complex



Figure 3.9: Utility Land Use, right-of-way in Village



Figure 3.10: Institutional Land Use, Stratford Commons, located on Cochran Road and Tinkers Court



Figure 3.11: Governmental Land Use, Village Hall



Figure 3.12: Commercial Land Use, businesses located along Pettibone Road in the Village Center



Figure 3.13: Roads Land Use, truck route along Pettibone Road from Bond Street to Cochran Road



Figure 3.14: Roads Land Use, Pettibone Road facing east

Landfills

The Village of Glenwillow contains two closed landfills, as previously noted. The Waste Management of Ohio-Cleveland Hauling landfill is located in the northwest corner of the Village on the east side of Richmond Road. The former Austin Powder Company landfill, presently owned by Republic Waste, is located in the south central portion of the Village, south of Pettibone.

Both landfills closed in the 1990s and since that time, only required closure activities have taken place on the landfill sites. There have been no new landfilling activities on either site, because no such activities are permitted under OEPA permit. The only Republic Waste operation that remains at the Pettibone landfill site is the trucking transfer station and transcyler to the east of the closed landfill. Both landfill sites continue to be regulated and monitored by OEPA personnel on an ongoing basis. Future options for reuse of the sites do not include expansion of the old landfill uses, but may include other productive land uses, provided only if such activities were permitted by the OEPA. Republic Waste and previous landfill owners have provided a steady revenue source to the Village, which has provided Glenwillow with the opportunity to keep taxes for its residents low.

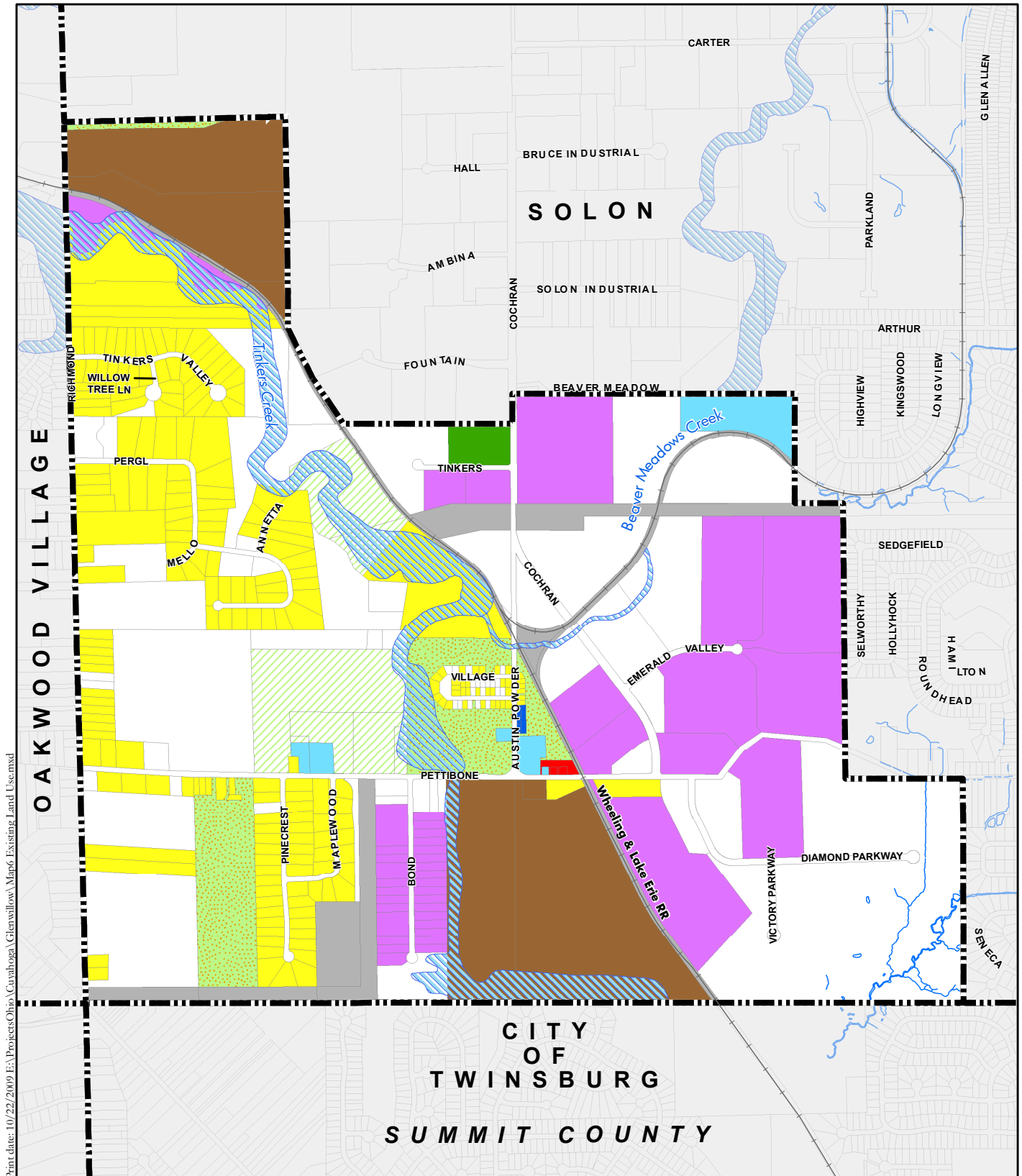
Table 3.6 presents the land use categories and percent change from 1998 to 2009 for the Village of Glenwillow. It should be noted that some of the categories have changed since 1998 because categorization is a subjective process and based upon current conditions. The following categories have been changed: 1) the 1998 Master Plan's park/camp category has been changed to include only parks with the Odd Fellows Camp included in the residential category; 2) the Village-owned/vacant category is new and contains the land referred to as the DLK property, which was categorized as vacant in the 1998 Master Plan; 3) the governmental category is new and contains land uses in the 1998 Master Plan's institutional category; and, 4) the institutional category has been changed to include only Stratford Commons, on the north side of Tinkers Court.

The Village of Glenwillow has experienced considerable growth since the 1999 Master Plan, as displayed by the 46.1% decrease in vacant land. A further sign of growth is the significant increase in other land use categories, most notably the residential and industrial land use categories which increased 125.1% and 176.8%, respectively. The Village-owned/vacant and institutional land uses show 100% increases while the governmental category shows a 605.7% increase which are all due to the above-noted category changes. Finally, the commercial use shows a very large increase of 1,400.0%, however, this increase is relative to the small number of acres dedicated to the use (commercial went from 0.1 in 1998 to 1.5 acres in 2009).

Table 3.6: Land Use Categories and Percent Change, Village of Glenwillow, 1998 – 2009

Land Use	1998	2009	1998-2009 % Change
Vacant	1,104.8 acres (60.9%)	595.2 acres (32.73%)	-46.1%
Residential	142.4 acres (7.8%)	320.5 acres (17.62%)	125.1%
Industrial	108.3 acres (6.0%)	299.8 acres (16.49%)	176.8%
Landfill (closed)	223.0 acres (12.3%)	229.4 acres (12.62 %)	2.9%
Utilities	101.9 acres (5.6%)	95.0 acres (5.23%)	-6.8%
Village-Owned/Vacant	–	87.3 acres (4.80%)	100.0%
Parks/Camp (1998)- Parks (2009)	89.4 acres (4.9%)	85.6 acres (4.71%)	-4.3%
Governmental	–	24.7 acres (1.36%)	605.7%
Institutional	3.5 acres (0.2%)	8.5 acres (0.47%)	100.0%
Commercial	0.1 acres (0.01%)	1.5 acres (0.08%)	1,400.0%
Office	2.0 acres (0.1%)	0.9 acres (0.05%)	-55.0%
Roads	38.8 acres (2.1%)	70.1 acres (3.85%)	80.7%
TOTAL	1,814.2 acres (100.00%)	1,818.5 acres (100.00%)	–

Sources: Cuyahoga County Planning Commission, McKenna Associates



C. NATURAL FEATURES and ENVIRONMENTAL RESOURCES

The natural features in the Village of Glenwillow play an important role in the development of current and future land uses and enhance the character of the community. The Natural Features map on the following page shows the location of natural features in the Village. The map displays the topography and floodplains in the Village. A majority of the Village's natural features that pose significant constraints to development are either located within utility rights-of-way and or are protected via the Village's Flood Plain Zoning District.

Topography

The Natural Features map illustrates the topography of the Village of Glenwillow with contour lines which indicate 20 foot changes in elevation. The closer the contour lines are to one another, the steeper the slope. The primary steep slopes in the Village of Glenwillow are located along Tinkers Creek and Beaver Meadow Creek. Tinkers Creek flows from the southeast to the northwest through the center of the Village and generally separates the Village in half, with residential areas to the west and industrial development to the east. Tinkers Creek provides a link from the South Chagrin Reservation of the Cleveland Metroparks, at the northwest corner of the Village, to the Village Center. Other steep slopes in the Village are located around the two landfills, which have built up over the years, and along other small scattered streams.

Floodplains

The Natural Features Map below also illustrates the floodplains present in the Village of Glenwillow which have been identified by the Federal Emergency Management Agency (FEMA) as part of its National Flood Insurance Program (NFIP). It should be noted that FEMA is currently updating its Flood Insurance Rate Maps (FIRM), which show floodplain boundaries; however, it is unclear when the preliminary maps will be finalized. The Preliminary FIRM vs. Effective FIRM Map for the Village is included after the Natural Features Map (see page 34). The floodplains in the Village are concentrated along both Tinkers Creek and Beaver Meadow Creek. Both areas are subject to the Flood Plain Zoning District regulations in the Village's Zoning Ordinance. It should be noted that the floodplain regulations are in line with the minimum NFIP setback requirements.

Wetlands and Hydric Soils

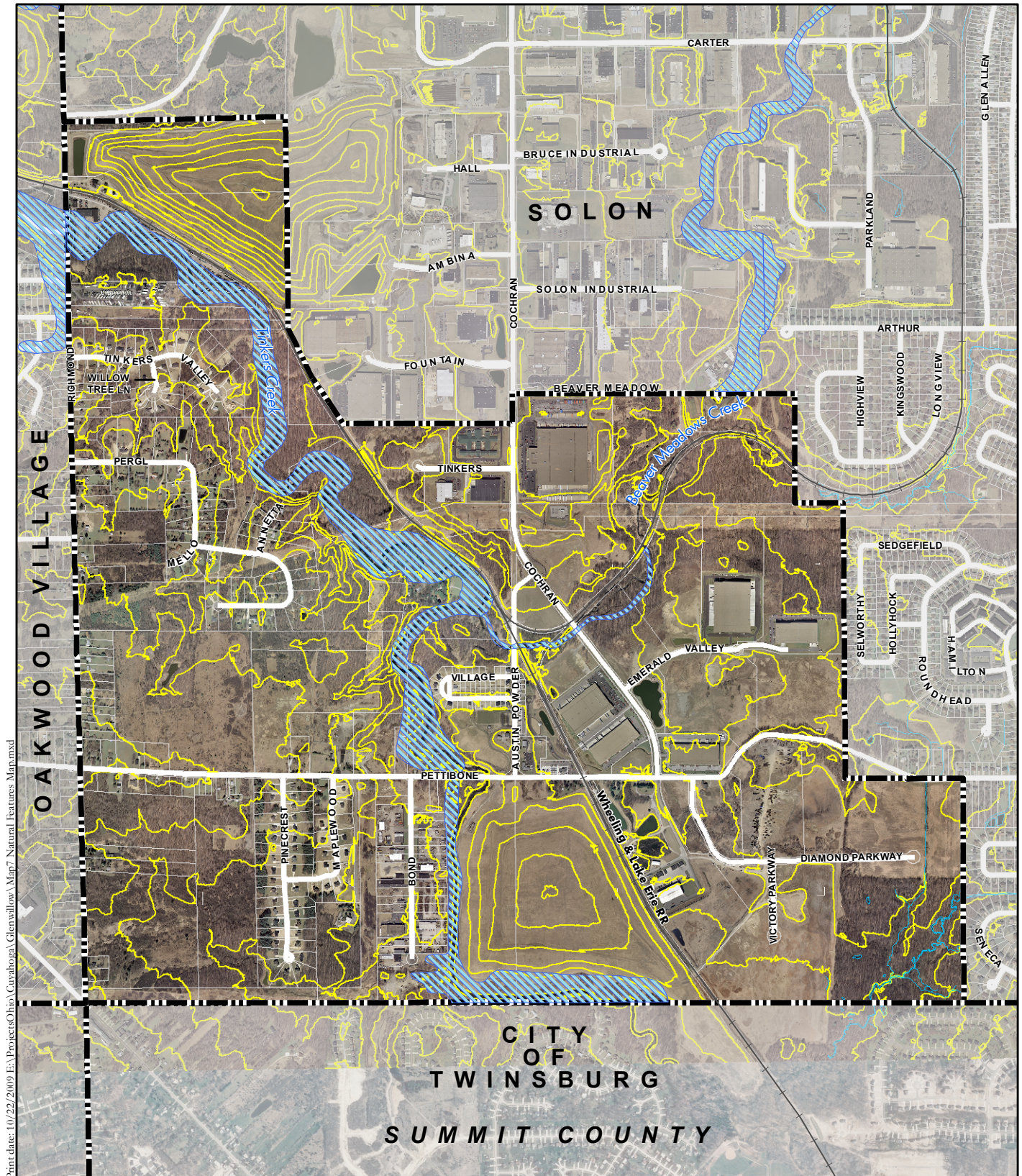
The Natural Features map does not denote wetlands or hydric soils specifically because the majority of the wetlands are located in the floodplain areas and the remaining are small and scattered throughout the Village of Glenwillow. The small wetlands are isolated and not contiguous, with a majority being relatively low quality and therefore not considered significant impediments to development. The hydric soils, one indicator of the presence of wetlands, have not posed a constraint to development of land in the Village as indicated by the development of the Pettibone Glen subdivision where a majority of the hydric soils are located.

Wetlands are regulated by Section 404 of the Clean Water Act which requires that anyone interested in depositing dredged or fill material into wetlands must receive

authorization for such activities. Any projects that increase or decrease the runoff in wetland areas must also receive authorization. The Environmental Protection Agency (EPA) establishes guidelines for the program and the Army Corp of Engineers administers the program and issues the permits. The regulations are site-specific and different measures are taken based on the proposed impact and necessary mitigation measures.

Climate

The climate of the Village of Glenwillow and the surrounding area can be classified as generally mild. There are no unusual climatic conditions which severely impede activities within the Village of Glenwillow. Data obtained by the National Weather Service at Cleveland Hopkins Airport reveals an average daily temperature of 50.3 degrees for 2008. The annual precipitation was 44.59 inches with an annual snowfall of 77.2 inches for 2007-2008.





Print date: 10/22/2009 E:\Projects\Ohio\Cuyahoga\Glenwillow\Map7 Natural Features Map.mxd

Map 7 Natural Features

Village of Glenwillow, Ohio

Legend

-  100 Year Floodplain
-  20 Ft. Contour Lines

Base Map Source: Cuyahoga County, 2008
Floodplain Source: FEMA, FIRM, Effective 2/18/1981
Contour Lines Source: Cuyahoga County, 2008

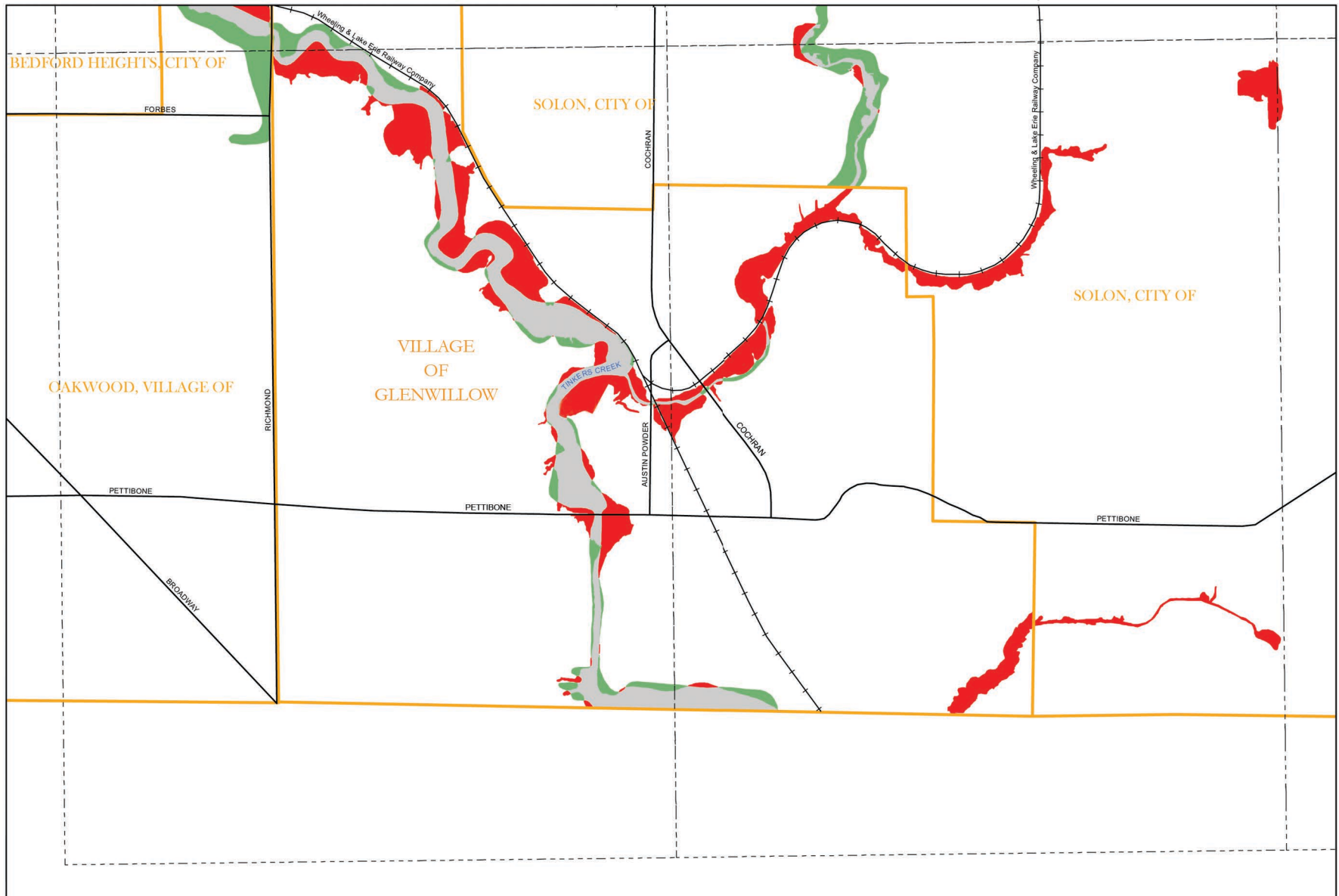
0 1,000 2,000
Feet

McKenna
ASSOCIATES
INCORPORATED



10/29/09

Preliminary FIRM vs. Effective FIRM



Map 8 Preliminary FIRM vs Effective FIRM

10/29/09

Village of Glenwillow, Ohio

- Incorporated Map Revisions
- Railroad
- FEMA Map Panel Boundaries
- Corporation Limits
- Removed SFHA
- New SFHA Identified
- No Change to SFHA

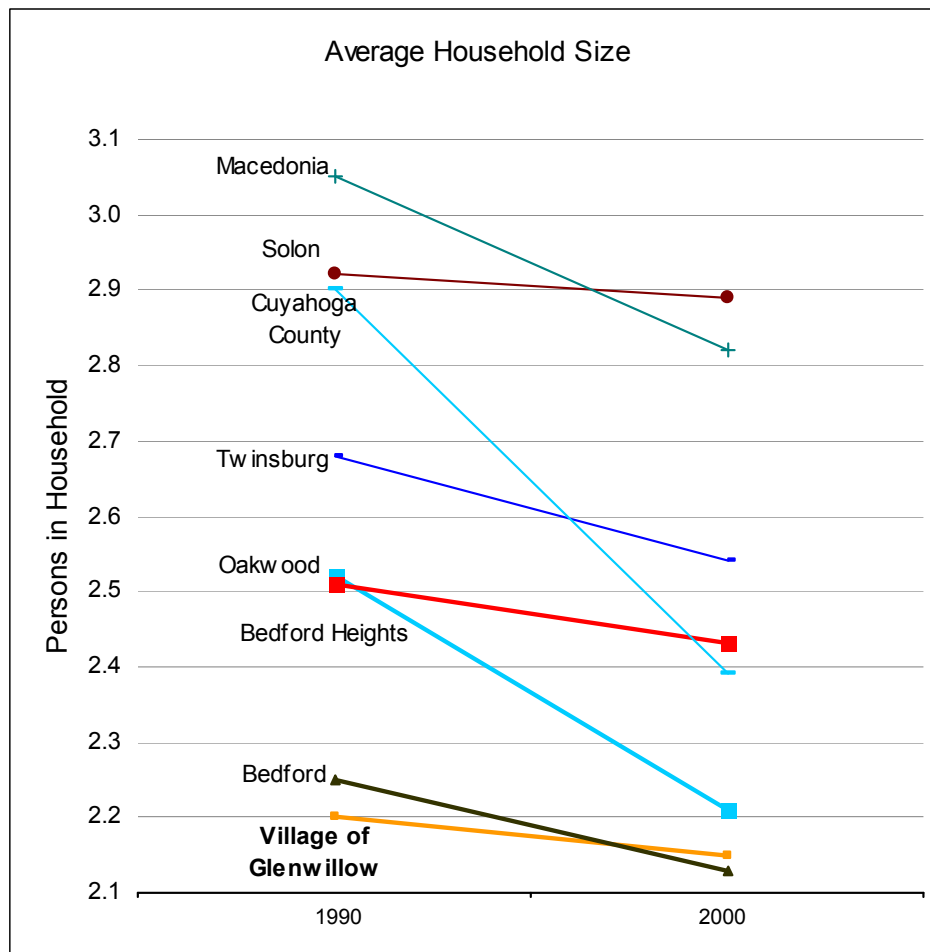
Panel Scheme follows FEMA 2008 Preliminary DFIRM panels. This map is not to be used for regulatory or insurance purposes. Caution should be taken in areas with map revisions (LOMRs), as these revisions are not incorporated in the current flood maps.

D. HOUSING

Households

The average household sizes below in Figure 3.15 are based on the 1990 and 2000 Census. Consistent with local, regional and national trends, the average household sizes are anticipated to continue decreasing. The selected household characteristics figures in Table 3.7 are based on the 2000 Census and are anticipated to change with the increased population. The data for 2010 will be included in both Figure 3.15 and Table 3.7 following the release of the 2010 Census information.

Figure 3.15: Average Household Size, Selected Communities, 1990-2010



Source: US Census Bureau

Table 3.7: Selected Household Characteristics, Village of Glenwillow, 2000 and 2010

	Number of Households	Average Household Size	Married-couple Families	with children at home	Single-mother Households	One-person Households
2000	205	2.15	38.5%	16.6%	11.2%	41.0%
2010						

Source: US Census Bureau

Housing Units

The housing unit figures in Table 3.8 are based on the 2000 Census and are similarly anticipated to change with the increased population. The data for 2010 will be included in the table following the release of the 2010 Census information.

Table 3.8: Percentage of Housing Units by Type, Village of Glenwillow, 2000 and 2010

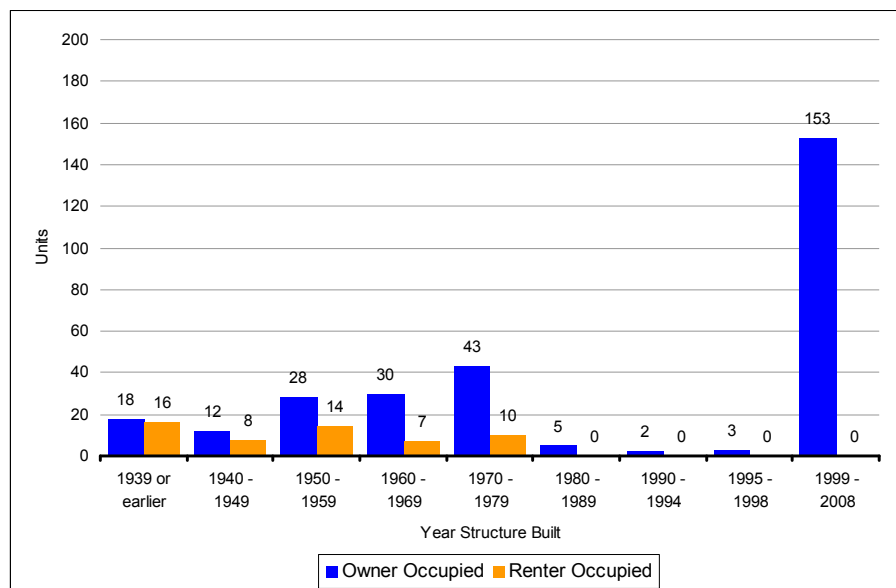
	Total Housing Units	Single Family Home	2 - 4 Unit Structure	5+ Unit Structure	Other Housing Units (including mobile homes)	Rental Units	Vacant Housing Units
2000	222	59.2%	N/A	N/A	40.8%	22.5%	7.7%
2010							

Source: US Census Bureau

Housing Age

As shown in Figure 3.16 below, 38% of the Village's housing units were built before 1969 and the median year for structures built in the Village is 1960. The median year built for structures in the Village is comparable to that of Cuyahoga County where the median year built is 1954. The Village's percentage of units built before 1969 is much lower than the County's, where 78.5% of the housing units were built before 1969. The Village appears to have experienced a housing boom immediately following World War II, with significant increases in building activity continuing until 1980. Glenwillow has experienced a large increase in the number housing units, with 153 single family dwellings (around 44% of the total) built after 1999. It should be noted that there is not currently an accurate separation between owner-occupied and rental housing for the units built after 1999, thus all of the housing units are shown as owner-occupied. Accurate data will be provided following release of the 2010 Census information.

Figure 3.16: Year Structure Built for Owner-Occupied and Rental Housing, Village of Glenwillow, 2000



Sources: US Census Bureau, Village of Glenwillow

Housing Value and Affordability

The housing values in the Village of Glenwillow are anticipated to have changed from the 2000 Census statistics due to the significant increase of single family homes built since this time. Housing values are a self-reported statistic on the Census form and include all owner-occupied housing units. At such time that the 2010 Census data becomes available this section will be updated with accurate information.

Table 3.9: Value of Owner-Occupied Housing Units as Percentage of Total Housing Units, Selected Communities, 2010

	Village of Glenwillow	Bedford	Bedford Heights	Oakwood	Solon	Macedonia	Twinsburg	Cuyahoga County
Less than \$50,000								
\$50,000 to \$99,999								
\$100,000 to \$124,999								
\$125,000 to \$149,999								
\$150,000 to \$174,999								
\$175,000 to \$199,999								
\$200,000 to \$249,999								
\$250,000 to \$299,999								
\$300,000 to \$399,999								
\$400,000 to \$499,999								
\$500,000 or more								

Source: US Census Bureau

The definition of affordable housing is related to income: if a household spends less than 30% of its income on housing costs (including mortgage, rents, utilities, taxes, and heating fuels), that housing is considered to be affordable. Table 3.10, below, will be updated at such time that the 2010 Census data becomes available.

Table 3.10: Selected Monthly Owner Costs as Percentage of Household Income, Village of Glenwillow, 2010

		Household Income in 2009							
Housing Costs (Percent of Income)		Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$34,999	\$35,000 to \$49,999	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 to \$149,999	\$150,000 or more
Affordable	Less than 20%								
	20% - 24%								
	25% - 29%								

	<i>Household Income in 2009</i>							
<i>Housing Costs (Percent of Income)</i>	Less than \$10,000	\$10,000 to \$19,999	\$20,000 to \$34,999	\$35,000 to \$49,999	\$50,000 to \$74,999	\$75,000 to \$99,999	\$100,000 to \$149,999	\$150,000 or more
30% - 34%								
35% or more								

Source: US Census Bureau

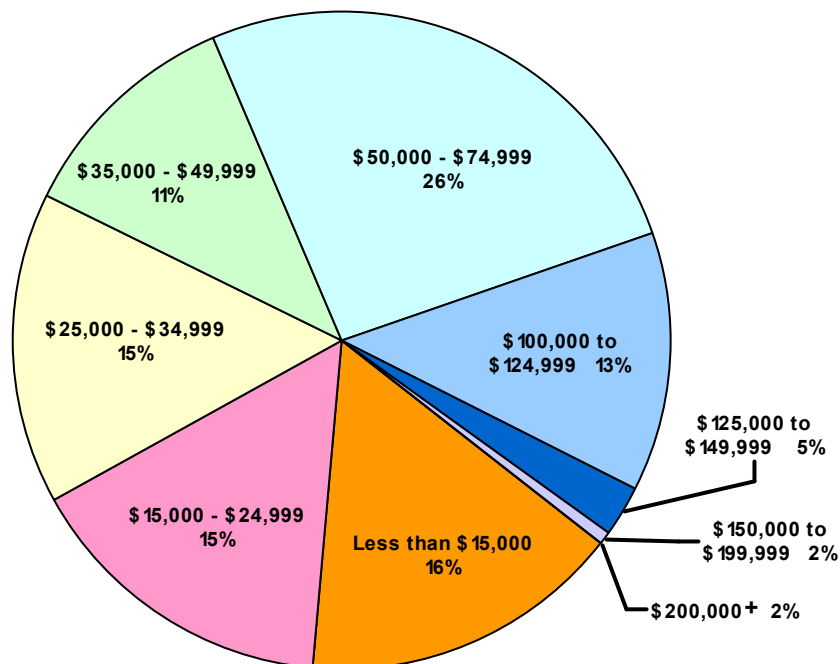
E. ECONOMY

Household Income

The figures for the distribution of household income in Figure 3.17 are based on the 2000 Census and are anticipated to change. The data for 2010 will be included in the figure below following the release of the 2010 Census information.

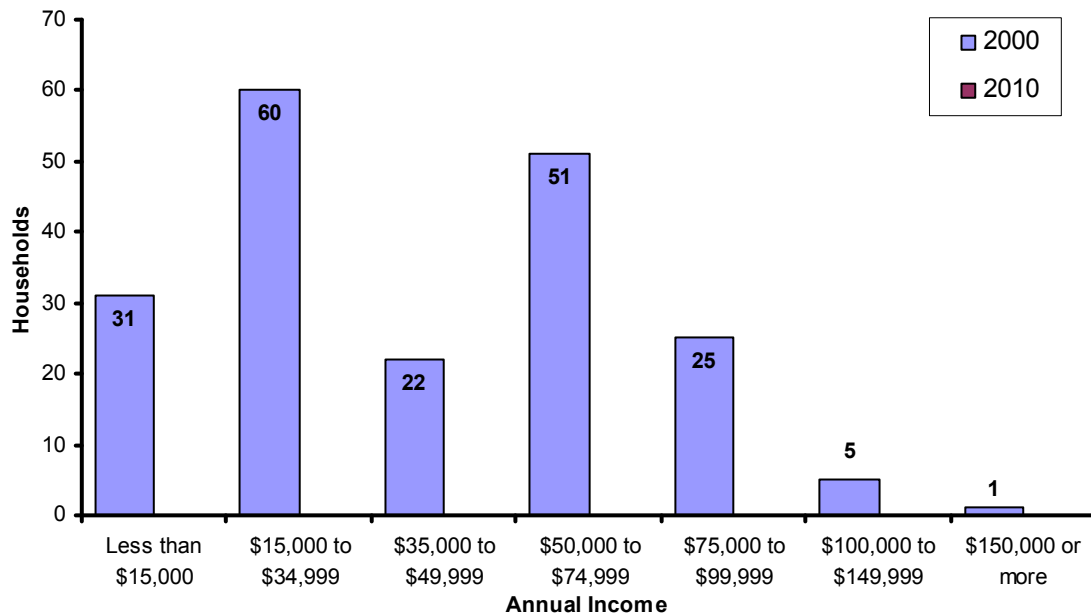
Figure 3.18 shows the data for the distribution of household income based on the number of households in the Village of Glenwillow in 2000. Given the significant population increase since 2000, the figure will be updated with the data for 2010 when the information becomes available.

Figure 3.17: Distribution of Household Income by Percentage of Total Households, Village of Glenwillow, 2000



Source: US Census Bureau

Figure 3.18: Distribution of Household Income with Number of Households, Village of Glenwillow 2000 and 2010



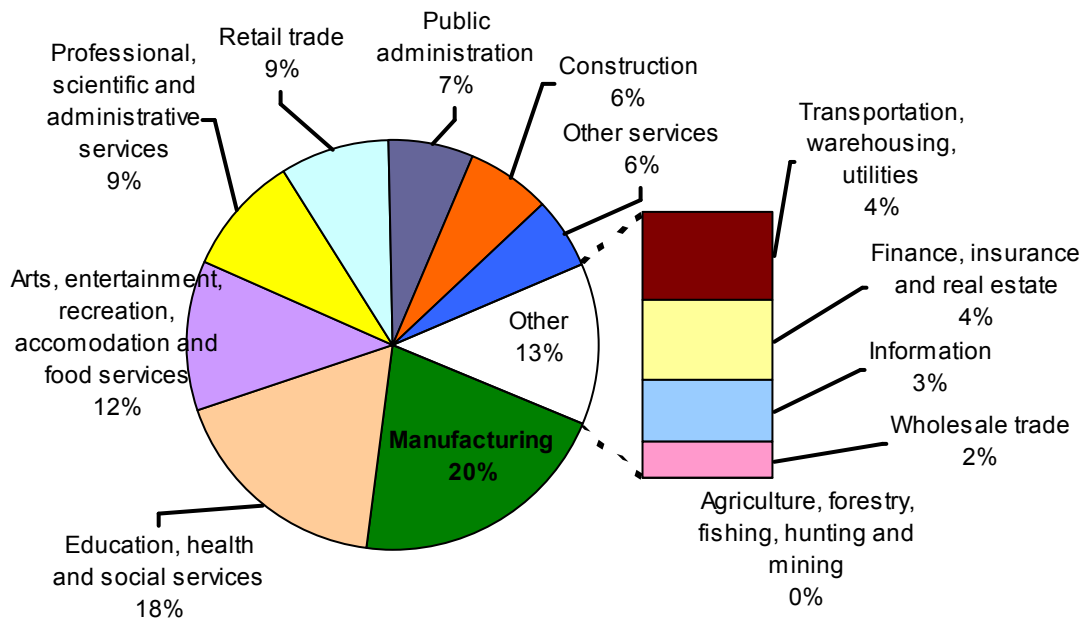
Source: US Census Bureau

Employment

While the Village of Glenwillow residents are employed in a wide range of industries, manufacturing dominated their employment in 2000, with one in five workers being employed in this sector (see Figure 3.19). Educational, health, and social service industries were a close second, employing 18% of the Village's residents, while 12% of Glenwillow residents work in the arts, entertainment, recreation, accommodation, and food services sector. Overall, 45% of the Village of Glenwillow's residents were employed in service industries, reflecting a common trend away from production industries.

A change in statistical methods used by the Census Bureau in the 1990s means that employment data for some industries cannot be directly compared between 1990 and 2000. The percentage of Village of Glenwillow residents employed in the manufacturing sector declined slightly, decreasing from 21.9% of residents in 1990 to 20.0% of residents in 2000. The percentage of Village of Glenwillow residents working in retail trade shrank by 59% in terms of raw numbers, from 21.9% of residents in 1990 to 9% of residents in 2000. The education, health, and social service sector saw a nearly 30% increase from 13.9% in 1990 to 18% in 2000.

Figure 3.19 will be replaced in its entirety and will contain applicable Village of Glenwillow Employment by Industry data for 2010, following the release of the 2010 decennial Census information.

Figure 3.19: Employment by Industry, Village of Glenwillow, 2000

Source: US Census Bureau

F. INFRASTRUCTURE and COMMUNITY SERVICES

Water

All properties, except for those included in the Odd Fellows Camp, are served by City of Cleveland water with water lines that run along Pettibone Road, Richmond Road and Pergl Road. The existing lines were installed within the last 20 years, with many installed more recently. The existing lines serve the current development and provisions have been made for future extensions to new development.

Sanitary Sewer

The Village's main sanitary sewer line ties into a sanitary sewage treatment plant on Solon Road, owned and operated by the City of Bedford Heights. In general, sewage from the Village flows in a northerly direction. The main trunk line runs along the Wheeling & Lake Erie Railroad line to the Village Center and breaks off in three directions: 1) along portions of Austin Powder Drive and Pettibone Road; 2) along Cochran Road, south and east of the railroad; and, 3) along Bond Street. The construction of sanitary sewers has contributed to the new development in the community while also improving the poor septic system conditions once present in the Village. The Village of Glenwillow plans to begin work on Phase I of the Pergl Road trunk sewer extension project when grant or other funding becomes available.

Police

The Village of Glenwillow has their own Police Department currently located in Village Hall. The department includes 15 full and part-time officers that are available 24 hours per day. In addition to police services, the Department provides vacation security checks, checks on the welfare of elderly and disabled residents, and hosts a Children's Safety Fair every summer. The Police Department is a member of the Valley Enforcement Group, a group made up of other Chagrin Valley police departments, which provides access to training equipment and other services.

Emergency Services

Fire and EMS services, including dispatch and protection, are provided to the Village of Glenwillow by the City of Solon on a contract basis. The Solon Fire Department is staffed full-time, 24 hours per day by 42 members of the Fire Suppression team and three members of the Fire Prevention team.

G. COMMUNITY FACILITIES and RECREATION

Village Hall and Services

Village Hall is located at the northeast corner of Pettibone Road and Austin Powder Drive in the Village Center area. Village Hall is home to the administrative offices, council chambers, meeting rooms and the Police Department. The Building Department is located on the west side of Austin Powder Drive on the top of the hill north of the Village Recreation Complex. The Department operates out of a renovated Austin Powder Company home and contains offices for the Law Director and Project Coordinator. The Village Service Garage is located north of Village Hall and contains most of the equipment necessary to maintain the Village of Glenwillow grounds, buildings and streets.

The Village of Glenwillow owns property on the north side of Pettibone Road, across the street from the Pettibone Glen subdivision. Additional Village-owned service equipment is stored on the property. The Village intends to use the property for a public purpose such as a new Village Service Complex that would include a new service garage and Police Department headquarters. The Village has begun Phase I environmental assessments on the property and is in the process of identifying funding sources to accommodate possible demolition of the existing structures.

Schools

Glenwillow is served by the Solon School District. The Solon School District serves more than 5,200 students from preschool to twelfth grade. The school district continually meets or exceeds all state indicators based on test achievement, attendance rate and graduation rate. In the 2007-2008 school year Solon Schools received a rating of "Excellent with Distinction" from the Ohio Department of Education, based on exceeding all of the indicators and showing above expected growth for at least two consecutive years.

Parks and Recreation

The Village of Glenwillow owns two parks; 1) Village of Glenwillow Community Park on the south side of Pettibone Road west of Pinecrest Lane; and, 2) the Donald Norman Payne Recreation Complex, located at the northwest corner of Austin Powder Drive and Pettibone Road. The Community Park, approximately 38 acres in size, was purchased in 1981 with the assistance of Cuyahoga County Community Development funds. The park is mostly undeveloped with the exception of a parking lot and picnic shelter.

The Recreation Complex is approximately 15 acres in size and was developed as part of the Village of Glenwillow's agreement with the landfill operator now doing business as Republic Waste. The Complex includes soccer fields, ball diamonds, parking, a pavilion, and the largest of the former Austin Powder Company homes which currently serves as home to the Building Department. There is additional vacant land to the west of the complex, across Tinkers Creek, which is currently being considered for possible future privately-owned recreation uses.

Trails

The Village of Glenwillow prepared a Trail Development Plan in 2005 which identified existing and proposed trail connections and a Village-Wide plan. Since 2005, two segments of the trail system have been constructed. The Pettibone West trail was completed in 2008 at a total cost of approximately \$450,000 and funded by the Village of Glenwillow through grant monies from the Ohio Department of Natural Resources (ONDR) and Cuyahoga County CDBG funds. This trail is a bicycle/pedestrian pathway that connects the western section of the Village of Glenwillow with the Village Center. The Pettibone East Alternative 1 Trail, as it is referred to in the 2005 Trail Development Plan, was also completed in 2008 in conjunction with the Diamond Business Park development and was funded entirely by private sources. The trail is located along the south side of Pettibone Road from Cochran Road to the eastern border of the Village of Glenwillow.

The plan includes proposed future connections to the South Chagrin Reservation of the Cleveland Metroparks to the northwest and the City of Twinsburg to the south. The Metroparks connection would be part of the larger greenway along Tinkers Creek linking the Village Center to the Cleveland Metroparks Hawthorn Parkway. The Twinsburg Connection would utilize the existing service road adjacent to the landfill and link to the Twinsburg Center Valley Park. These proposed trails are a top priority for the Village of Glenwillow.

Odd Fellows Camp

The Odd Fellows Camp is located north of the Village Center adjacent to Tinkers Creek. The camp is owned by the fraternal organization, the Independent Order of Odd Fellows, and is considered a "hidden gem" by many residents of the Village.

4. TRANSPORTATION AND CIRCULATION

This section presents an overview of transportation and circulation in the Village of Glenwillow and the surrounding region. It includes a review of existing conditions, non-motorized and alternative modes of transportation, and road classifications. The analysis concludes with a circulation plan and recommended transportation and circulation improvements for the Village of Glenwillow.

A. EXISTING CONDITIONS

Road Jurisdiction

The road network in the Village of Glenwillow consists of County and Village roads. Richmond Road is a north-south route connecting the Village of Glenwillow to Bedford Heights to the north and Twinsburg and Summit County to the south.

Pettibone Road and Richmond Road are under the jurisdiction of Cuyahoga County, specifically the Cuyahoga County Engineer's Office (CCEO). The CCEO oversees capital projects related to transportation improvements. The projects include federal aid projects for roads and bridges managed by the CCEO, local projects managed by the CCEO, and local projects managed by the individual municipality. The only Village of Glenwillow project currently in the CCEO's five-year Capital Projects Plan is repair of the Austin Powder Drive bridge at a cost of nearly \$1 million, slated to take place at some point in the future.

The remaining roads are under the jurisdiction of the Village of Glenwillow. The Village's Service Department maintains and repairs all of the roads, including Richmond Road and Pettibone Road.

Traffic Volumes

Existing traffic volumes for the roads in the Village of Glenwillow are only available for the more heavily traveled roads: Richmond, Pettibone, and Cochran. The most recent average daily traffic counts for the Village were taken by TMS Engineers in 2006 and 2007, and include the above roadways and intersections thereof. The traffic counts are shown on the Existing Conditions – Transportation Map located on page 47 and are as follows:

	<u>Average Daily Traffic (ADT)</u>
Richmond Road, along entire length of Village's western boundary:	5,241 (2006)
Pettibone Road, between Richmond Road and City of Solon boundary:	8,182 (2007)
Richmond Road/Pettibone Road intersection:	13,193 (2006)
Cochran Road, between City of Solon boundary and Pettibone Road:	4,400 (2007)
Cochran Road/Pettibone Road intersection:	12,583 (2007)

It is important to consider existing traffic volumes when evaluating future development in the Village of Glenwillow, as such information provides insight into the need for future road improvement projects, and forms the basis for projections of future road capacity.

High-Accident Intersections

The locations and intersections of relatively high accidents in the Village are shown on the Existing Conditions – Transportation Map. The accident data are based on information compiled by the Village of Glenwillow Police Department from 2000 to 2009. Pettibone Road had the most accidents over the nine year period with 168, followed by Cochran Road (99), and Richmond Road (63). The intersection with the most accidents was Cochran Road/Pettibone Road with 47, followed by the Richmond Road/Pettibone Road (19), and the Cochran Road/Austin Powder Drive (16). There were 26 accidents located along the Pettibone Road curve, east of Cochran Road. The accident data is consistent with the traffic volumes on the major roads, and these areas warrant further study and should be considered for possible future road improvements to reduce the number of accidents.

	<u>Number of Accidents</u>
Pettibone Road, between Richmond Road and City of Solon boundary:	168
Cochran Road, between City of Solon boundary and Pettibone Road:	99
Richmond Road, along entire length of Village's western boundary:	63
Cochran Road/Pettibone Road intersection:	47
Pettibone Road (along curves):	26
Richmond Road/Pettibone Road intersection:	19
Cochran Road/Austin Powder Drive intersection:	16

Road Conditions

The Village Engineer completed an analysis of current conditions of all existing roads, bridges, culverts, water distribution, wastewater collection, and stormwater collection systems in September 2008. The condition of all Village roads were noted as being in good or excellent condition, as shown on the Existing Conditions – Transportation Map and noted below. It should be noted that road condition information for roads within The Diamond Business Center (Diamond Parkway and Victory Parkway) have been added, as both roads were constructed following the September 2008 assessment.

<u>Road</u>	<u>Road Condition</u>
Richmond Road:	Good
Pettibone Road:	Good
Cochran Road:	Good
Diamond Parkway:	Excellent
Victory Parkway:	Excellent
Austin Powder Drive:	Good
Pinecrest Lane:	Good
Maplewood Drive:	Good
Bond Street:	Good
Emerald Valley Parkway:	Good
Tinkers Court:	Good
Pergl Road:	Good
Mello Drive:	Good
Annetta Drive:	Good
Tinkers Valley Drive:	Good
Willow Tree Lane:	Good

Road

N. Village Lane:
S. Village Lane:
Glenwillow Place:

Road Condition

Excellent
Excellent
Excellent

Road Surface Type

In the process of assessing the transportation and circulation system infrastructure in the Village Engineer included information regarding the surface type of each existing road, as of September 2008. The surface of each road in the Village is shown on the Existing Conditions – Transportation Map and noted below. It should be noted that road surface information for roads within The Diamond Business Center (Diamond Parkway and Victory Parkway) have been added, as both roads were constructed following the September 2008 assessment.

Road

Richmond Road:
Pettibone Road (West):
Pettibone Road (Central):
Pettibone Road (East):
Diamond Parkway:
Victory Parkway:
Cochran Road:
Austin Powder Drive:
Pinecrest Lane:
Maplewood Drive:
Bond Street:
Emerald Valley Parkway:
Tinkers Court:
Pergl Road:
Mello Drive:
Annetta Drive:
Tinkers Valley Drive:
Willow Tree Lane:
N. Village Lane:
S. Village Lane:
Glenwillow Place:

Surface Type

Asphalt
Asphalt
Concrete
Asphalt
Concrete
Concrete
Concrete
Asphalt and concrete
Asphalt (with concrete curb and gutter)
Asphalt (with concrete curb and gutter)
Asphalt (with concrete curb and gutter)
Concrete
Concrete
Asphalt
Asphalt
Asphalt
Asphalt (with concrete curb and gutter)
Asphalt (with concrete curb and gutter)
Asphalt
Asphalt
Asphalt

B. ALTERNATIVE MODES OF TRANSPORTATION

Non-motorized

The Village of Glenwillow prepared a Trail Development Plan in 2005 which identified existing and proposed trail connections throughout the Village. The major goals of the Plan were to connect the all-purpose trails in the parks along Tinkers Creek (operated by the Cleveland Metroparks) and the City of Twinsburg, and to link the pedestrian and bike improvements on Pettibone Road in the City of Solon to the Village of Oakwood's all-

purpose loop, thus allowing for both north-south and east-west regional pathway connections.

The Trail Development Plan outlines the specific proposed improvements throughout the Village, which include a Metroparks Connection to the northwest, the Twinsburg Connection to the south, the Pettibone Road east and west connections (which have been completed), the Village Park Easement, and the Town Center Trail, and Pergi Road Connector, adjacent to the Village Center and Recreation Complex. The sidewalks and pathways that have already been installed along the entire length of Pettibone Road are shown on the Existing Conditions – Transportation Map. The other planned non-motorized improvements, not yet constructed, are displayed on the Circulation Plan Map, located on page 49. Additional planned trails, sidewalks, and pathways will continue to be developed by the Village as funds become available.

Rail

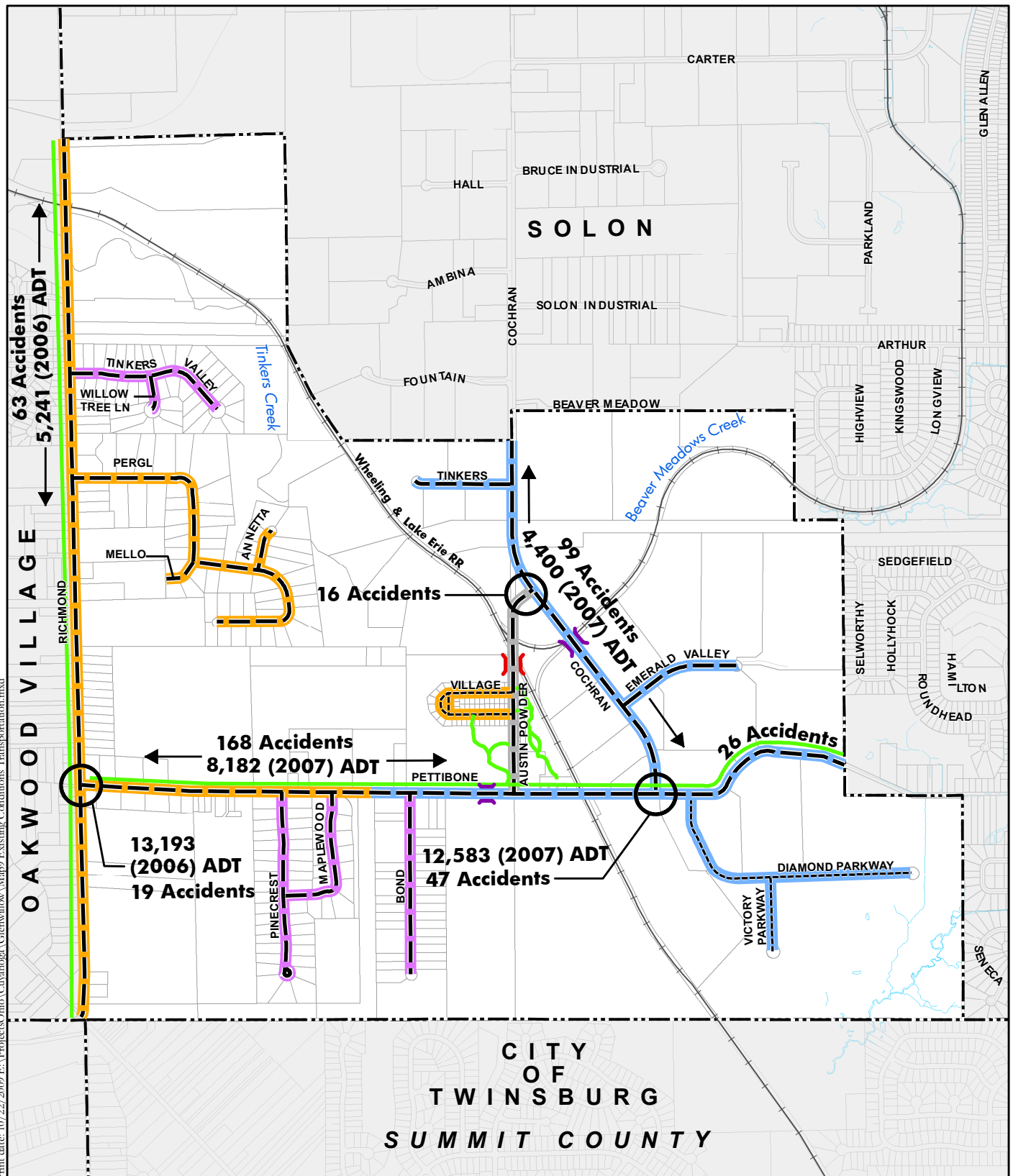
The Village of Glenwillow contains an active railroad line, operated by Wheeling and Lake Erie Railroad. The railroad is operated for freight transit and is considered short line rail by the Public Utilities Commission of Ohio (PUCO). A portion of the railway is utilized by the Cleveland Commercial Railroad Company, which is located in Glenwillow and operates approximately 10 miles of rail between the Village and the City of Cleveland.

The Wheeling and Lake Erie rail line originates near Cleveland and enters the Village from both the northeast and northwest corners. The two lines meet near the Village Center at the Falls Junction Depot. The rail line then heads southeast toward Pennsylvania and west toward central Ohio. There are a number of railroad crossings in the Village, including Cochran Road, Pettibone Road, Austin Powder Drive, and Richmond Road.

Bus

The Village of Glenwillow is part of the Greater Cleveland Regional Transit Authority bus system, which has two routes with stops located in the Village and a third route (Broadway-Libby 90F) that runs down Richmond Road, stopping at the Summit County line, just south of the Village. The Solon Flyer (27F) route stops on Tinkers Court on the weekdays and travels down Cochran Road, while the Warrensville (41) route stops on Emerald Valley Parkway and travels down Cochran Road 7 days a week. The Solon Flyer and Warrensville routes generally serve the industrial areas of the Village.

Print date: 10/22/2009 E:\Projects\Ohio\Glenwillow\Map9 Existing Conditions Transportation.mxd



Map 9 Existing Conditions - Transportation

Village of Glenwillow, Ohio

Surface Type

- Asphalt
- Asphalt and Concrete
- Asphalt with Concrete
- Curb and Gutter
- Concrete
- Existing Pathways

Road Conditions

- Excellent
- Good

Bridge Conditions

- Good
- Poor

Number of Accidents
2006-2009

Base Map Source: Cuyahoga County, 2008

0 1,000 2,000
Feet

Mckenna
ASSOCIATES
INCORPORATED



10/29/09

C. CIRCULATION PLAN

At its most basic level, a transportation system provides a means of moving people and goods within a geographic area. A transportation system may be made of up multiple modes of transportation, such as roads, railroads, bikeways, airports, and seaports. Mass transit is sometimes available, either via buses or other types of transit that use roads, or light-rail or subway transit that ride on dedicated rails. The circulation system in the Village of Glenwillow currently consists of roads with adjacent pathways, which accommodate pedestrian travel throughout the Village, primarily running east-west along Pettibone Road. Oakwood Village constructed a pathway adjacent to Richmond Road, which provides north-south pedestrian travel.

The Village of Glenwillow's circulation plan, presented on the following page, highlights the classification of each road in the Village, recommended traffic and circulation improvements, and planned non-motorized pathway system improvements.

Note that the Circulation Plan shows the location of planned road and non-motorized pathway improvements. The proposed improvements are intended to provide general guidelines. The exact location and design of transportation improvements should be determined as the improvements are built, based on existing conditions and engineering limitation. For instance, it may be appropriate for pedestrian improvements to be built on both or just one side of a street, depending upon factors such as nearby land uses and right-of-way constraints.

D. ROAD CLASSIFICATION

Classification of the roads is necessary in order to communicate the function of each road in the overall transportation network. The following road classifications are based on established systems of state and national transportation authorities and tailored to the road characteristics present in the Village. The classifications take into account the Federal Highway Administration's Functional Classification Guidelines, as utilized by the Ohio Department of Transportation. The basic difference between types of road is that some roads are intended to carry through traffic that is heading towards a destination outside of the Village, while others are designed to carry local traffic within the Village.

The Circulation Plan includes 3 types of roads:

Table 4.1: Road Classifications, Village of Glenwillow

	ROAD TYPE	ROADS
	<ul style="list-style-type: none"> Minor Arterials interconnect with and augment the principal arterials and serve trips of moderate length at a somewhat lower level of travel mobility than principal arterials (serve major activity centers, high volume corridors). Minor arterials also stand to distribute traffic to smaller geographic areas than those served by principal arterials, provide more land access without penetrating identifiable neighborhoods, and provide urban connections for rural connectors. 	Pettibone Road Richmond Road
	<ul style="list-style-type: none"> Collectors serve both land access and traffic circulation in residential and commercial/industrial areas. Collectors penetrate neighborhoods and distribute and channel trips between local streets and arterials. 	Cochran Road
	<ul style="list-style-type: none"> Locals provide direct access to adjacent land, provide access to higher systems and carry no through traffic movement. 	All other Village rights-of-way

Source: Ohio Department of Transportation

E. RECOMMENDED TRANSPORTATION AND CIRCULATION IMPROVEMENTS

According to Village staff, the Village does not have any transportation or circulation improvements planned at this time, and a most of the infrastructure in the Village is in good condition. However, it is important to plan for future transportation and circulation-related improvements. Transportation and circulation improvements should be prioritized using the follow standards:

- Year in which infrastructure was last improved/built
- Existing condition of infrastructure
- Improvements necessary for safety
- Improvements in conjunction with other projects (i.e. repair road at same time as bridge repairs take place)

These standards should be used to evaluate each project in terms of the potential impact on the Village of Glenwillow. Based solely on the 2008 analysis the Village Engineer and the above standards, the following table is a list of prioritized future transportation and circulation improvements for the Village:

Table 4.2: Future Transportation and Circulation Improvements, Village of Glenwillow

Road/Bridge	Year Improved	Condition	Repair/Replacement Cost
Bridge- Austin Powder Drive over Beaver Meadow	Unknown	Poor	\$900,000 Replacement*
Tinkers Valley Drive	1998	Good	\$211,000 Repair
Willow Tree Lane	1998	Good	\$44,000 Repair
Tinkers Court	1998	Good	\$40,000 Repair
Cochran Road	1999	Good	\$167,000 Repair
Pergl Road	1999	Good	\$267,000 Repair
Mello Drive	1999	Good	\$23,000 Repair
Annetta Drive	1999	Good	\$29,000 Repair
Bridge- Cochran Road over Beaver Meadow	1999	Good	\$1,500,000 Replacement
Emerald Valley Parkway	2000	Good	\$51,000 Repair
Austin Powder Drive	2001	Good	\$168,000 Repair
Pinecrest Lane	2001	Good	\$233,000 Repair
Pettibone Road- Central	2001	Good	\$113,000 Repair
Pettibone Road over Tinkers Creek	2002	Good	\$1,200,000 Replacement
Pettibone Road- West	2003	Good	\$190,000 Repair
Richmond Road	2004	Good	\$557,000 Repair
Maplewood Drive	2004	Good	\$188,000 Repair
Bond Street	2005	Good	\$244,000 Repair
Pettibone Road- East	2006	Good	\$170,000 Repair
N. Village Lane	2005	Excellent	\$48,000 Repair
S. Village Lane	2005	Excellent	\$48,000 Repair
Glenwillow Place	2005	Excellent	\$20,000 Repair

Sources: Village Engineer, Village of Glenwillow

*Total Village cost is \$40,000

Using engineer's estimates and cost information provided by Geis Companies, the Village should add Victory and Diamond Parkway to Table 4.2, both of which were excluded because the roadways were completed after the Village Engineer's 2008 analysis. In general, the cost of future transportation and circulation improvements should be updated periodically to account for changes in material costs.

The Circulation Plan also includes a proposed roundabout at the Richmond Road/Pettibone Road intersection. Roundabouts encourage efficient vehicular travel, while at the same time decreasing the number of conflict points, and associated potential for accidents. The Richmond Road/Pettibone Road intersection is heavily traveled and currently contains a four way stop, which creates frequent traffic congestion. A roundabout would alleviate traffic congestion and facilitate safe vehicular travel. The Village should continue to explore funding opportunities for development of a roundabout at the Richmond Road/Pettibone Road intersection.

In addition to the above specific projects, we recommend that the Village consider the following transportation and circulation concepts when evaluating future improvements:

- Resist conventional engineering solutions to traffic to just widen roads at the expense of pedestrian safety.
- Develop engineering solutions for safe pedestrian road crossing (such as, refuge islands) so that residents have safe means of access to Village facilities.
- Develop engineering solutions to reduce accident rates at high-accident locations.
- Extend the trail system throughout the Village and into existing parks.
- Continue to provide sidewalks in residential areas on both sides of the road.
- Include stopping points along existing and future trails that provide interesting and educational facts about the Village's history and natural resources.
- Budget for anticipated road improvements.

In order to accommodate thoughtful budgeting for anticipated road improvements, the Village should develop a capital improvements plan to identify and prioritize all capital improvements, which include but are not limited to transportation and circulation improvements. A capital improvements plan includes other infrastructure improvements, such as stormwater management projects, and other large-scale Village expenditures. The Village should periodically update its capital improvements plan to reflect the ever-changing needs, revenue stream, development trends, and technological advances in infrastructure.

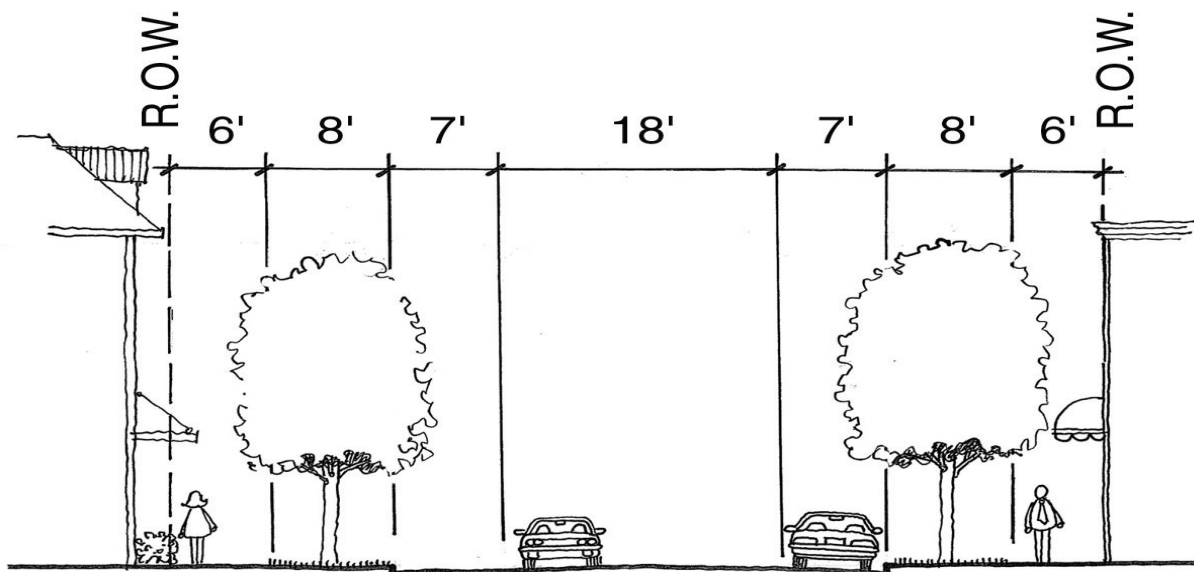
F. ROAD DESIGN GUIDELINES

The design characteristics of each type of road will, in large part, determine the character of that road. It is important that roads are designed commensurate with their intended function in order to ensure that roads are not over or under-built, and to ensure that each road meets the needs of all persons who will utilize the road, including motorists, pedestrians, and bicyclists.

In general, roads can be divided into two primary areas – the travelway and the roadside. The travelway accommodates travel lanes, turn lanes, parking lanes, and bicycle lanes. The roadside accommodates landscape areas; street trees (planted either in a tree lawn or in tree grates); pedestrian facilities such as sidewalks or non-motorized pathways; streetscape improvements such as decorative lighting or street furniture; and uses associated with nearby buildings such as outdoor cafés.

Below is a typical road cross section for a small commercial district, similar to Pettibone Road in the Village Center.

Figure 4.1: Typical Road Cross Section, Small Commercial District



General road design guidelines are included in the following table. The table should guide future road improvement plans in the Village, to ensure that the transportation and circulation system is not over or under-built:

Table 4.3: General Road Design Guidelines

	Road Type	Lanes	Roadside Area Width	Roadside Area Improvements	Bicycle Lane [lane within the public right-of-way (ROW)]	On-Street Parking
ROAD DESIGN GUIDELINES	Principal Arterial	3+	16 ft. min.	Sidewalk or non-motorized trail , landscape area	No	No
	Minor Arterial	2-3	12 ft. min.	Sidewalk or non-motorized trail, landscape area	Permitted	No
	Collector	2-3	12-18 ft.	Sidewalk, street tree plantings, street furniture	Permitted	Yes
	Local Roads	2	12 ft. min.	Sidewalk, landscape area	N/A	Yes

The above guidelines are intended to be general in nature and will vary greatly depending upon site-specific characteristics, such as speed limit and existing and/or proposed uses.

The above table includes recommendations for the width and improvements permitted in the roadside area. The roadside area is the portion of the right-of-way located between the curb or edge of pavement and the edge of the right-of-way. How this area is treated will, in large part, determine the character of the road. It is recommended that all future roads in the Village have sidewalks or non-motorized pathways. In addition, additional uses can be provided along local roads to complement the uses in adjacent buildings. See the image below for an example of a properly designed roadside area.

Figure 4.2: Properly Designed Roadside Area


Wide roadside area incorporating street furniture, public space, and the potential for outdoor cafes and other uses.

5. GOALS AND OBJECTIVES

Introduction

In the context of this Plan, **goals** are high-level aspirations that provide general guidance and direction. Their scope can be very large, but they can be very specific. Goals are descriptive, not wordy, with a clear intention.

An **objective** is an action statement related to achieving the goal. An objective may or may not be a task, depending on the scope of the objective. An objective will have implementation steps tied to it.

A **policy** is a statement of belief, a principle that will guide behavior. A policy describes an action that Village officials will take to maintain integrity of the Master Plan goals. Policies set limits or define the scope of action that can be taken.

GOAL 1: VILLAGE CHARACTER

Preserve, promote, and enhance the rural character of the west side of the Village through preservation of open space and the predominance of single family residences, with a single Village Center that serves as the main gathering place and includes a small commercial district, historic residences, and Village Hall.

Objectives

1. Develop zoning elements that reflect standards and techniques to protect Village character.
2. Maintain a Village Center reminiscent of a small rural village.
3. Encourage actions to improve the aesthetic value of neighborhoods, such as burial of above ground utilities.

Policies

1. Preserve natural resources.
2. Encourage creative design and planning for both housing and land development that produce harmony without monotony, preserve special physiographic features, and protect vital natural resources.
3. Limit new residential development to detached single-family housing types.

GOAL 2: HISTORIC IDENTITY

Preserve, promote and enhance the historic identity of the Village in terms of its heritage and the physical appearance of its historic Village Center.

Objectives

1. Develop zoning elements and urban design guidelines pertaining to the historic district of the Village to protect its historic character.
2. Build and/or increase Glenwillow officials' and residents' awareness of the benefits of the historic district to the overall character of the Village.

Policies

1. Encourage the preservation of historic structures and spaces in the Village Center, including those related to the Austin Powder Company and the Railroad Depot.
2. Promote use of architectural materials and landscaping in the Village Center to emulate the Village's 19th century historic character.
3. Ensure that site development in the Village Center relates to and is compatible with nearby buildings, land uses, and the historic character of the Village.
4. Encourage the creation and use of special designation of roads or properties that further the Village's historic context. Explore the benefits and liabilities of adding the Village Center to the Historic Register.
5. Ensure that Glenwillow officials have knowledge of historic preservation techniques and zoning procedures.

GOAL 3: NATURAL RESOURCE PRESERVATION

Preserve the natural resources of the Village, including its open spaces, wetlands, woodlands, and the Tinkers Creek and Beaver Meadows Creek floodplains, to prevent damage to the environment or harm to these resources.

Objectives

1. Develop guidelines that promote and regulate land acquisition for use as public space and as a means to preserve environmentally sensitive lands.
2. Develop guidelines for use by private property owners in managing their properties to protect sensitive natural resources.
3. Develop a parks master plan that provides both active and passive recreation opportunities for residents of all ages.
4. Complete a natural resources inventory to document the resources that are worthy of being protected.

Policies

1. Protect sensitive environmental lands and open spaces by directing development to the more buildable portions of a parcel, i.e., the portions of the parcel containing the least environmental constraints.
2. Preserve the natural water bodies and drainage ways, flora and fauna, and unique physiographic and geologic landforms.
3. Prohibit development of floodplains and wetlands, and avoid disrupting or infringing upon environmentally sensitive slopes and woodlands.

GOAL 4: VILLAGE CENTER

Enhance and support the economic vitality and attractive appearance of the Village Center.

Objectives

1. Define a vision for the Village Center, including a cohesive image for the Village commercial district, and develop and implement recommendations to achieve the vision.
2. Provide design guidelines that protect and enhance the historic visual character of the Village Center.
3. Develop a Property Maintenance Code for the Village Center area.
4. Develop a strategy for renewed, continuous, year-round use and programming of the Railroad Depot and Village Center area as an economic development tool.

Policies

1. Participate whenever possible in Federal, State, and County initiatives to maintain and improve the Village Center.
2. Require property owners to maintain structures and grounds in an attractive condition, consistent with the Village Center objectives.
3. Encourage property and business owners to pro-actively define and participate in efforts to improve the vigor and liveliness of the Village Center and attract small business spending.

GOAL 5: UNIQUE IDENTITY

Enhance and maintain a unique, coherent visual, social, and jurisdictional Village identity, distinct and separate from surrounding communities.

Objectives

1. Design and install distinctive gateway signs for major entry points into the Village.
2. Develop and maintain a tree management program that ensures a continuous tree canopy throughout the Village and especially along public rights-of-way.
3. Develop wireless service in the Village that could be marketed to businesses and residents.

Policies

1. Encourage the design of residential development that will contribute to the character, identity, diversity, and individuality of the Village.
2. Maintain and ensure the continuation of the Village Hall within the Village Center.

GOAL 6: REGIONAL DEVELOPMENT

Recognize the mutual relationships that the Village of Glenwillow has with its neighboring communities and the larger region.

Objectives

1. Encourage lands that abut the Village to be developed in ways that either buffer properties in the Village or are compatible with existing Village land uses.
2. Cultivate cooperative relationships with adjacent communities so that Glenwillow will be a partner in adjacent municipalities' planning efforts affecting lands adjacent to the Village.

Policies

1. Participate in planning and development activities with adjacent communities and regional planning bodies, such as NOACA.
2. Through the Village Council and Planning Commission, monitor and present to the appropriate bodies the Village's position on proposals for development by private and public organizations on lands adjacent to the Village.

GOAL 7: VILLAGE GOVERNMENT

Conduct day-to-day Village business through a small, professional staff while relying on the Mayor and other elected officials for policy decisions.

Objectives

1. Continue with a strong mayor form of government, with a small professional support staff, to manage Village operations.
2. Maintain and upgrade the Village web site, when necessary, as a means to communicate timely Village information to residents and other interested parties.

Policies

1. Encourage open communication and discussion of Village policies and proposed actions between Village officials, employees, and residents.
2. Encourage volunteer participation in Village activities.
3. Ensure that Village officials have training in zoning, land use planning, and historic preservation.

GOAL 8: PARKS AND RECREATION

Develop high quality parks and recreation opportunities for residents.

Objectives

1. Continue to develop a network of safe routes for pedestrians and other modes of non-motorized transportation throughout the Village.
2. Develop pedestrian and bicycle links between residential neighborhoods and the Village Center, and between the Village, surrounding communities, and the Cleveland Metroparks.
3. Develop parks with a variety of facilities to meet the needs of residents.

Policies

1. Encourage the development of pedestrian ways and bicycle paths connecting major activity points in the Village, utilizing open areas and/or road rights-of-way.
2. Maintain the Village Center as the destination point for community activities.
3. Provide recreation programs to maximize use of the park facilities.

GOAL 9: TRAFFIC

Encourage measures to improve traffic safety and reduce congestion, including traffic and parking regulation and enforcement. Discourage and oppose projects that have as their primary benefit the enhancement of traffic flow at the expense of the environment, historic and rural character, or quality of life in Glenwillow.

Objectives

1. Develop road corridor plans for the major roads in the Village, taking into account the need to move traffic safely, traffic calming methods, pedestrian and bicyclist safety, and scenic qualities.
2. Determine options and funding for modifying existing at-grade railroad crossings. Support initiatives to lessen the impact of trains on residential neighborhoods.
3. Widen existing curb cuts along Cochran Road to accommodate truck turning radii.

Policies

1. Continue to enforce traffic regulations.
2. Encourage the efficient use of existing roads and parking areas before considering changes to accommodate increased capacity.
3. Maintain a circulation and parking system on the westerly side of the Village (west of Cochran) that encourages the maintenance of the rural character of the Village.
4. Continue to restrict truck traffic to Cochran Road only so as to minimize impact on the Village Center and other parts of the Village. Post additional signs to inform truck drivers about the truck route.

GOAL 10: SIGNAGE

Provide signs in Glenwillow that are informative, contribute to safety, enhance the businesses in the Village Center and reinforce the historic character of the Village.

Objectives

1. Develop design guidelines for signs in the Village Center that help business owners attract business while protecting Glenwillow's historic character and encouraging individual expression.
2. Develop wayfinding signage for use throughout the Village that reinforces the unique character and identity of Glenwillow. The color scheme, fonts, and shapes of wayfinding signs can carry over to other types of public signs, such as street signs and entryway signs.

GOAL 11: INDUSTRIAL/RESEARCH SECTOR

Continue to support the development of the industrial/research sector on the easterly side of the Village.

Objectives

1. As allowed by Ohio law and Village policy, provide incentives to industrial/research businesses to locate in Glenwillow.
2. Aggressively recruit desired types of business with a tailored marketing program designed to attract environmentally clean businesses that grow the tax base and produce quality, skilled employment opportunities.
3. Develop zoning regulations that favor the development of relatively small-scale, high employment, research and light industrial businesses.
4. Develop industrial design guidelines that lessen the impact of large industrial buildings on the Village Center.

Policies

1. Produce marketing materials to convey the desired brand identity that will appeal to businesses that meet the objectives stated above.
2. Continue to employ an Economic Development Consultant to achieve the industrial/research sector goals and objectives.
3. Continue to maintain roads and utilities serving the industrial/research businesses.
4. Consider the proximity of nonresidential uses in the industrial/research district to ensure compatibility between adjoining residential uses.
5. Continue to consider, as may be feasible and as circumstances dictate, the acquisition of property by the Village to achieve the community development goals stated herein.

GOAL 12: VILLAGE BUSINESS

Support local business by implementing a plan and strategies that demonstrate that Glenwillow is a business-friendly community.

Objectives

1. Prepare a Business Development Plan to identify the types of businesses desired by the Village, both in the industrial area and the Village Center.
2. Prepare an Economic Development Strategy to outline the step-by-step approach that will be used to recruit the types of businesses identified in the Plan.

Policies

1. Support businesses that provide employment for Village residents.
2. Encourage public/private partnerships to promote the desired type of development.
3. Streamline the approval process for businesses wishing to locate in the Village.

6. IMPLEMENTATION PLAN

This Section of the Master Plan identifies several initiatives the Village can take to implement the goals set forth in the Master Plan. Following each implementation strategy is a brief explanation of specific actions the Village should take to implement the stated strategy. The following symbols were used to designate entities with lead implementation responsibility for identified strategy:

<u>Symbol</u>	<u>Meaning</u>
LG	Local Governmental Units (Village and/or adjacent communities where applicable)
PU	Other Public Entities (County, ODOT, etc.)
PV	Private Entities

The following descriptors were used to identify the implementation timeframe for completion of each strategy:

Descriptor	Description
High:	Immediate need and/or most readily attainable.
Medium:	Implementation time frame of 2-5 years.
Low:	Implementation time frame of 6-10 years.
Ongoing:	Of a continuing nature, rather than a one-time event.

- **Market industrial parcels to attract high-tech users.** High-tech start-up companies don't need 25 to 35 acre parcels. Three to 10 acre parcels would be more appropriate. If the undeveloped parcels with Cochran frontage were marketed for smaller scale development and utilized by high-tech users, the image along Cochran would be very pleasing, and land farther to the east could be left for conventional industrial use.
Timeframe for Completion: Ongoing
Responsible Party: LG/PV
Cost Estimate: Not Applicable, when prospective development arises, let it be known that existing large parcels can be changed to accommodate individual needs.
- **Extend pathways throughout the Village in accordance with the Trail Development Plan.** Surveys have shown that people today enjoy linear parks as much as they do conventional parks. Thus, it is imperative that the Village continue its trail building plan so that the non-motorized public can travel safely throughout the Village and to the Village Center.
Timeframe for Completion: Medium- Construction to be completed in phases, as funding becomes available.
Responsible Party: LG
Cost Estimate: Approximately \$105.00/linear foot for a 10 foot wide asphalt path.

<u>Symbol</u>	<u>Meaning</u>
LG	Local Governmental Units (Village and/or adjacent communities where applicable)
PU	Other Public Entities (County, ODOT, etc.)
PV	Private Entities

The following descriptors were used to identify the implementation timeframe for completion of each strategy:

Descriptor Description

High: Immediate need and/or most readily attainable.

Medium: Implementation time frame of 2-5 years.

Low: Implementation time frame of 6-10 years.

Ongoing: Of a continuing nature, rather than a one-time event.

- **Construct a roundabout at the Pettibone/Richmond intersection.** A roundabout has been proven to be the most effective and safest way to move traffic through an intersection. It is recommended that the Village continue to work toward installing a roundabout at the Pettibone/Richmond intersection. Given the amount of traffic anticipated at the Pettibone/Cochran intersection as the industrial sector gets built out, the Village may wish to evaluate the need for a roundabout at that intersection, too.

Timeframe for Completion: High

Responsible Party: LG/PU

Cost Estimate: Engineer's Estimate (2007): \$447,000, subject to change, as the cost of materials fluctuates and depending upon acquisition of additional right-of-way

- **Develop the Village of Glenwillow Community Park.** A design plan ought to be prepared and funding sought to develop the Village of Glenwillow Community Park into a first class community park facility. The park would be well-suited to accommodate active recreation uses, such as ball field and soccer fields.

Timeframe for Completion: Low

Responsible Party: LG

Cost Estimate: To Be Determined- Depends upon the scope of proposed improvements

- **Adopt the Master Plan.** The Planning Commission and the Village Council should demonstrate their commitment to the ideas, goals, and strategies set forth in the Master Plan by adopting it as the guide for future development of the Village.

Timeframe for Completion: High

Responsible Party: LG- Planning Commission recommendation followed by Village Council adoption

Cost Estimate: Not Applicable

<u>Symbol</u>	<u>Meaning</u>
LG	Local Governmental Units (Village and/or adjacent communities where applicable)
PU	Other Public Entities (County, ODOT, etc.)
PV	Private Entities

The following descriptors were used to identify the implementation timeframe for completion of each strategy:

Descriptor Description

High: Immediate need and/or most readily attainable.

Medium: Implementation time frame of 2-5 years.

Low: Implementation time frame of 6-10 years.

Ongoing: Of a continuing nature, rather than a one-time event.

- **Review the Zoning Ordinance.** Frequently, when a new Master Plan is adopted, zoning amendments are required so that the Zoning Ordinance keeps in step with the Master Plan. One area that needs attention is the Village Center, where the zoning must be crafted to implement the vision set forth in the Village Center Plan. Rather than conventional zoning, which is cumbersome and frequently doesn't produce the intended results, Form-Based Coding should be considered. The goal of Form-Based Coding is to build walkable, mixed use, sustainable neighborhoods. Whereas, *use* is the primary consideration in conventional zoning, *physical form and character* are the primary considerations in Form-Based Coding. Conventional zoning regulates what *is not permitted*; Form-Based Codes describe what *is required*, such as build-to lines and minimum/maximum heights.

Timeframe for Completion: Ongoing/High

Responsible Party: LG- Planning Commission recommendation followed by Village Council adoption

Cost Estimate: To Be Determined- Depends upon the scope of proposed Zoning Ordinance amendments Form-based coding, while being an ideal regulatory approach, would be more costly to implement.

- **Improve the visual appeal of the landfills.** Work with the companies that own the landfills to landscape the sides that are visible from public roads or residential areas. The entire hillside cannot be landscaped with trees, so a landscape architect should be hired to prepare a design that makes the best use of available resources. Grant funding should be sought to defray the cost of such improvements.

Timeframe for Completion: Low

Responsible Party: PV/LG

Cost Estimate: Landfill development can vary quite dramatically in cost based on stability of the soils. Cost for simple bare root reforestation efforts in key areas could begin at \$15,000 per acre. Further study to determine specific project opportunities is warranted.

<u>Symbol</u>	<u>Meaning</u>
LG	Local Governmental Units (Village and/or adjacent communities where applicable)
PU	Other Public Entities (County, ODOT, etc.)
PV	Private Entities

The following descriptors were used to identify the implementation timeframe for completion of each strategy:

Descriptor	Description
High:	Immediate need and/or most readily attainable.
Medium:	Implementation time frame of 2-5 years.
Low:	Implementation time frame of 6-10 years.
Ongoing:	Of a continuing nature, rather than a one-time event.

- **Implement the Vision for the Village Center as described in the Master Plan.** The primary goals of the Village Center plan are to promote small scale retail and office uses, and renovation of the train station. A marketing plan shall be undertaken for the Village Center to identify the Village Center's niche in the regional and local market.
Timeframe for Completion: High
Responsible Party: PV/LG
Cost Estimate: To Be Determined. Retail and office uses will require private sector involvement; costs related to the train station will require input from an architect; a marketing plan could cost anywhere from \$10,000 to \$60,000, depending the scope of services.

- **Develop and implement a path enhancement plan for the path along Pettibone Road.** Pettibone Road is the most heavily-travelled road in the Village, so it is along this road that most people obtain an impression of the Village. Pettibone is the "front walk" and the Village Center is the "front door" to the Village. The Village has invested in developing a path along the north side of the entire length of Pettibone Road. It is vitally important that Pettibone convey a positive impression for travelers and pedestrians along the entire length of the road. This can be achieved with a path enhancement program that focuses on decorative lighting (type, design, height, location, etc.), wayfinding-type signage, additional trees, accent landscaping (ornamental trees, shrubs, at select locations), pathway road crossings, educational or exercise stations at points along the path, and so forth. In addition to the path enhancement activities noted above, burial of the utility lines will have a substantial impact on the appearance of the Pettibone corridor. Finally, colorful "Welcome to Glenwillow" signs should be installed at the east and west borders of the community.
Timeframe for Completion: Medium
Responsible Party: LG/PU
Cost Estimate: To Be Determined- depends upon the scope of path improvement activities, utility line burial, and type of gateway and wayfinding signage selected.

<u>Symbol</u>	<u>Meaning</u>
LG	Local Governmental Units (Village and/or adjacent communities where applicable)
PU	Other Public Entities (County, ODOT, etc.)
PV	Private Entities

The following descriptors were used to identify the implementation timeframe for completion of each strategy:

Descriptor Description

High: Immediate need and/or most readily attainable.

Medium: Implementation time frame of 2-5 years.

Low: Implementation time frame of 6-10 years.

Ongoing: Of a continuing nature, rather than a one-time event.

- **Buffer residential uses from industrial land on the east side of the Village.** Industrial land abuts residential land in Solon on the east side of the Village. This juxtaposition of such uses is not normally recommended unless there is a sufficient buffer between the two such that the residential uses will not experience any off-site impacts from the industrial uses.

Timeframe for Completion: High

Responsible Party: PV

Cost Estimate: To Be Determined- depends upon the width and length of the landscaped buffer and the types of landscape materials selected.

- **Preserve and protect the natural environment.** Glenwillow views itself as a rural-like community, so preservation and protection of the natural environment should be near the top of everyone's list of implementation strategies. Attention is immediately focused on land surrounding Tinkers Creek and Beaver Meadows Creek as the Village's most visible and most valuable natural resources. Property owners adjoining these areas need to be educated about the value of these greenways and wildlife corridors, which extend for miles into adjoining communities. Encroachment into protected wetlands or floodplains should be strictly regulated. The other resource of value throughout the Village is trees. Currently, the Zoning Ordinance allows a subdivider to remove all trees under 12 inches in diameter. This dimension should be changed to 8 inches, and the regulation should be extended to new industrial and residential development in the Village, as part of the site plan review criteria.

Timeframe for Completion: High

Responsible Party: LG- Planning Commission

Cost Estimate: Not Applicable

- **Pursue the highest quality industrial development.** Implement building design standards for the front façade so as to promote quality, lasting, and good looking construction. Such standards might address building materials, windows, architectural features, colors, building form and composition. Design standards would also be appropriate to achieve discrete lighting, signage, and landscaping in front yards.

Timeframe for Completion: High

Responsible Party: LG- Planning Commission recommendation followed by Village Council adoption

Cost Estimate:

To Be Determined- Depends upon the scope of proposed Zoning Ordinance amendments

APPENDIX A- SUMMARY OF PUBLIC INPUT

Following is a summary of the Plan's Public Input (Kick-off and Focus Group Meeting Results)

February 25, 2009



Master Plan Steering Committee
Village of Glenwillow
29555 Pettibone Road
Glenwillow, Ohio 44139-5348

Subject: Results of the Kickoff Meeting

Dear Steering Committee Members:

Thank you for attending the kickoff meeting for the Master Plan update. Because of your participation, it was a very beneficial meeting for us. We learned a lot about the Village, and more importantly, what your aspirations and goals are for the Village.

Attached is a summary of the visioning exercise we went through at the kickoff meeting. There was some interpretation involved in putting together the chart, so we welcome any comments or corrections.

Looking at the number of votes various items received, we noted that traffic issues and development of a niche, or decisive competitive advantage for Glenwillow, were the top rated issues. We believe that, with Committee and public input, we will be able to address these and other important challenges identified at the kickoff meeting.

We look forward to working with you as we continue the Master Plan update and hope that the level of participation we saw at the kickoff meeting continues throughout the project.

Sincerely,

McKENNA ASSOCIATES

Christopher J. Doozan

Christopher J. Doozan
Senior Vice President

John H. Cieszkowski, Jr.

John H. Cieszkowski, Jr.
Senior Planner

Enclosure

235 East Main Street
Suite 105
Northville, MI 48167
TEL 248-596-0920
FAX 248-596-0930

151 South Rose Street
Suite 920
Kalamazoo, MI 49007
TEL 269-382-4443
FAX 269-382-4540

30 East Mulberry Street
Suite A
Lebanon, OH 45036
TEL 513-934-2345
FAX 513-934-2809

10 West Streetsboro Street
Suite 204
Hudson, OH 44236
TEL 330-528-3342
FAX 330-342-5699

TOLLFREE 888-226-4326
WEB www.mcka.com

GLENWILLOW MASTER PLAN STEERING COMMITTEE

Kickoff Meeting
February 11, 2009

Identification of Major Planning and Development Issues	No. Votes Received
Town Center	
Take Town Center to the next level	
Railroad Depot – Village Lease – change in use	4
Midwest Railway Historic Society	
Wheeling and Lake Erie Railroad	
Rides – Bedford to Medina City	
or future use and station village restored and ready for use	
Christmas at Depot	2
Restrictions on future use – Sewer/ parking	
Commercial	
General Store, rent too high	4
Lease conditions of property owners	
Whitlach controls north side of Pettibone	
Stratford Commons in light industrial area	
Farmers Market	
Circulation	
Quiet zone for train 2/day – 5:30 a.m. Full length gates required \$160,000/crossing	
Traffic – truck traffic – Cochran only	5
4:30 – 6:30 Pettibone – Pergl to Broadway	
Roundabout Richmond/Broadway Richmond/Pettibone	1
Widen Pettibone Would affect character	
Utilities	
Utilities – phased sewer expansion Pergl Road	2
Improve drainage system - relieve flooding (goal)	
Wireless service – Industrial section T-3 lines Village finance infrastructure Possible niche	

GLENWILLOW MASTER PLAN STEERING COMMITTEE

Kickoff Meeting
February 11, 2009

Identification of Major Planning and Development Issues	No. Votes Received
Cable – Time Warner	
Phone AT&T	
Sewer – Bedford Heights	
Water – Cleveland	
Recreation – (Sports Land)	
Improve parks	1
Retain rural character	1
Develop a niche – decisive competitive advantage	5
No tax impact	
Bike Trails – two proposed	3
Odd fellows camp	
Strengths	
Low tax structure	
Services – Village trucks for moves	
-Free recycling	
-Garbage removal	
-Lifeline	
-Free mulch/notary	
Solon Schools	
Snow plowing	
Industrial	
Large footprint few employees	
Dots – corporate headquarters - Back office operations (212 acres southside of Pettibone available for development)	
Enhance industrial with design improvements	
Residential	
No more additional except infill	1
Built out at current zoning – one acre minimum	

May 1, 2009



Master Plan Steering Committee
Village of Glenwillow
29555 Pettibone Road
Glenwillow, Ohio 44139-5348

Subject: Results of the Master Plan Focus Group Meetings

Dear Steering Committee Members:

The Village of Glenwillow Master Plan Focus Group meetings were a success last week. Although not as well attended as hoped; the residents, business owners, and developers who attended offered a significant amount of input into the future of the Village. Below is a summary of the discussion items that were brought forth at each meeting.

Residents Outside of the Town Center Area Focus Group- April 23rd at 5:30pm

- Traffic should be addressed at the Pettibone/Richmond intersection.
- Glenwillow needs a niche/draw to bring people to the community.
- Glenwillow has a lot to offer: small family community.
- Outsiders don't know Glenwillow exists.
- How do we attract people to the shops?
- Maintaining the natural features in Glenwillow is important.
- Glenwillow Park: beautiful location but nothing worth going to it for. Fix it up so residents can use it.
- Love the new walking/biking path.
- Sunday concerts are great, but residents don't take advantage of them. Marketing could be helpful.
- Sports complex: Make sure residents have access to it. Could it be the destination that the Village needs? Make sure to manage traffic generated by use.
- Do not let the Village get in over their heads with large projects that they cannot manage.
- Partnerships should be developed with area businesses to get residents 'first dibs' on jobs. Support increasing employment in Village.
- Austin Powder & Pettibone traffic light never works. Could this light be used to stop some of the drive-by traffic and get them to frequent Village businesses?
- Businesses that could help Glenwillow: coffee shop, another restaurant.
- Glenwillow Grille should be open on Sunday.

235 East Main Street
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Northville, MI 48167
TEL 248-596-0920
FAX 248-596-0930

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- No Chamber of Commerce---how are businesses supported?
- Coordinate interaction between old and new residents.

Industrial Area Business Owner Focus Group- April 23rd 7:30pm

- Supports connection of bike trail to the Cleveland Metroparks reservation.
- Is anything being done to improve Village Park?
- Kids go to school in Solon but Glenwillow residents pay double for Solon Recreation Center. Could we strike an agreement with them to provide services to Glenwillow families? Possible partnership with the Twinsburg Recreation Center?
- We need a basketball court.
- Influx of children in the community---we need to provide them with recreational opportunities.
- General Store was a good idea.
- We like the restaurant and bar.
- Glenwillow should grow the Pettibone corridor.
- Glenwillow is not as economically depressed as the rest of the Cleveland area.
- We need a gas station.
- Hard to find staples in the area. Need that General Store.
- Preserve the natural features.
- Parks are great.
- Community Center idea is supported by area industry.
- Distribution out of the industrial area has slowed a lot.
- Peninsula should be an example for Glenwillow.
- Dump turned into a preserve or golf course?
- Continue to reach out and do economic development.
- Update the Zoning Ordinance after updating the Master Plan.
- The Town Center should be bigger.
- The Grille was granted a liquor license by the community and isn't even open on Sunday for Browns games.

Town Center Area Business Owner/Resident Focus Group- April 24th 9:00am

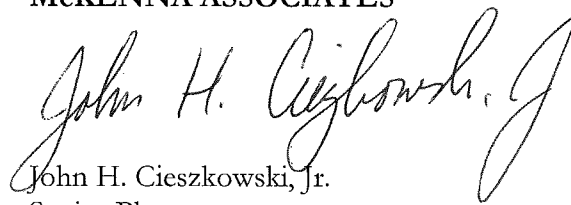
- New Geis building access off Pettibone was bad planning.
- Last train ride was 2005; utilize the railroad more.
- The energy that surrounded Glenwillow when the Town Center first developed (10 years ago) was great---we need to get that back.
- Develop the extra building pad in the Village Center, west of the Dog Groomer.
- We need a store to sell things like alcohol, tobacco and lottery.
- A better variety of businesses will create a more dynamic Town Center.
- Store hours need to be extended.

- Architectural Committee needs to keep up standards on new homes in the Village.
- Solon maintains recreation complex. DPW needs to do more to keep up the recreation fields. Cooperation between Solon and Glenwillow would go a long way.
- Too many 'handshake' agreements seem to occur in the Village.
- We need a Chamber- no support for business owners. More focus on business development, a business growth strategy.
- Focus on drawing visitors from the outside to Glenwillow.
- We need more events in the Town Center.
- Take down the "shops" sign...no shops exist anymore.
- An upscale consignment type or second hand store would probably do well. Give visitors a reason to stay and spend money.
- We need a quick take-out place for breakfast and lunch only. Some place that serves breakfast sandwiches, salad, soups. Visitors and factory workers would enjoy a place like that.

The principles expressed at the Focus Group Meetings, issues identified in the Existing Conditions section of the Plan, and input received at the Kickoff Meeting have been utilized to develop DRAFT Goals, Objectives, and Policies. We look forward to discussing the above information with the Steering Committee at an upcoming meeting.

Sincerely,

McKENNA ASSOCIATES



John H. Cieszkowski, Jr.
Senior Planner

APPENDIX B- OFFICIAL ZONING MAP

Following is a copy of the Village of Glenwillow Official Zoning Map, including current parcel number information.

CITY OF SOLON

THE VILLAGE OF GLENWILLOW - ZONING MAP-

COUNTY OF CUYAHOGA, STATE OF OHIO

MAYOR - DONALD N. PAYNE

MARCH 2009

EFFECTIVE AUGUST 20, 1982 PURSUANT TO
VILLAGE OF GLENWILLOW ORDINANCE NO.1982-6-25
AND AS AMENDED MARCH 22, 1983 BY ORDINANCE
NO.1983-2-18.

REVISED: MARCH 10, 2009
EFFECTIVE: DECEMBER 3, 2008
PURSUANT TO VILLAGE OF GLENWILLOW
ORDINANCE NO. 2008-11-59

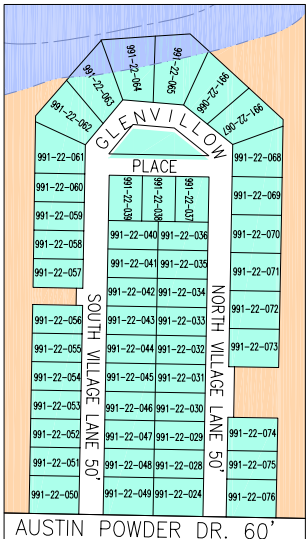
SCALE 1"= 400'



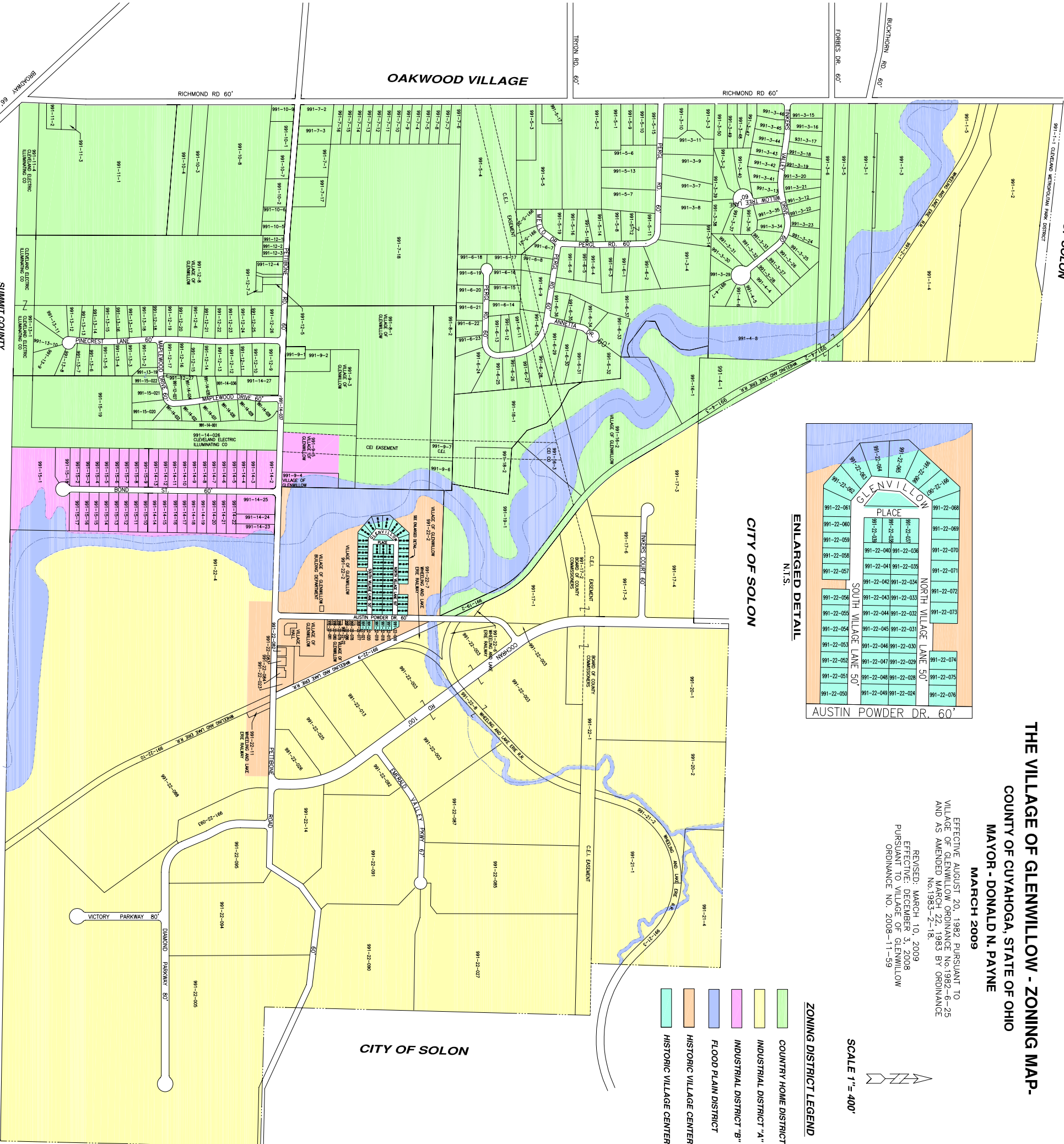
ZONING DISTRICT LEGEND

- COUNTRY HOME DISTRICT
- INDUSTRIAL DISTRICT "A"
- INDUSTRIAL DISTRICT "B"
- FLOOD PLAIN DISTRICT
- HISTORIC VILLAGE CENTER 1
- HISTORIC VILLAGE CENTER 2

ENLARGED DETAIL
N.T.S.



CITY OF SOLON



APPENDIX C- TOWN CENTER DESIGN STANDARDS

TOWN CENTER DESIGN STANDARDS

Introduction

The existing Glenwillow Town Center Strategic Plan observed that new commercial buildings should pick up on cues from the architecture and scale of existing structures in order to reinforce a consistent image for the district. The image of the Town Center is that of a small, rural-like, mixed use, pedestrian friendly Village center. The design guidelines that follow are intended to capture this image by setting forth specific standards to achieve development that is a natural extension of the existing pattern of streets and structures. The standards below are in-line with and are intended to supplement the Village's current Town Center Design Guidelines.

These standards will not have the force of law unless they are adopted by Village Council and, therefore, incorporated into the Zoning Ordinance. Otherwise, the standards are simply recommendations, to be endorsed or ignored by developers. One option that is available to the Village is Form-Based Coding, which is a relatively new method of zoning. The goal of Form-Based Codes is to build walkable, mixed use, sustainable neighborhoods – the same goal Glenwillow has for the Town Center. Unlike conventional zoning that regulates what is *not permitted*; Form-Based Codes describe what *is required*, such as build-to lines and minimum/maximum building heights. Form-Based Codes incorporate design standards as an essential part of the code.

1. Building Elements

- a. **Exterior Finish.** The exterior finish of buildings shall be harmonious with the surroundings and in character with the existing man-made or natural environment. Bright primary or pastel colors shall not be permitted as the predominant color and shall not be used for any significant features. Reflective glass shall not be the predominant exterior material. Painted or stained concrete masonry units shall not be deemed in compliance with this section. A minimum fifteen percent (15%) of the exterior finish of all structures shall be of a contrasting color or material.
- b. **Facade Materials.** Building facades visible from a public right-of-way shall be finished with a minimum of fifty percent (50%) brick, stone or decorative masonry materials. Not more than fifty percent (50%) of building facades shall be composed of non-reflective glass. The first floor of buildings (to a maximum height of fifteen (15) feet) shall consist of at least twenty-five percent (25%) glass. Aluminum, steel or EIFS (exterior insulation finish systems) shall not comprise more than twenty-five percent (25%) of facade materials.
- c. **Design Features.** Buildings shall incorporate design features, such as gable roofs, recesses, off-sets, arches, colonnades, columns, and/or pilasters. Such features shall be integrated by use of continuous, detailed trim brick bands, contrasting courses of materials, and/or cornices to vary building facades.

- d. **Mechanical Equipment.** All mechanical equipment, utility meters, storage tanks, air conditioning equipment or similar equipment, incidental to any building, including roof-mounted equipment shall be enclosed or screened from view. Screening shall be an integral part of the architectural design of the building. Such equipment shall not be visible from adjacent properties or any public right-of-way.
- e. **Loading and Unloading Areas.** All loading and unloading areas, loading docks, and truck wells shall be located in the rear of the building so as not to front a public road right-of-way or residentially-zoned districts.
- f. **Overhead Doors.** Overhead doors used to accommodate trucks, shall be located on the side or rear of the building, screened from view from all public rights-of-way or residential zoning districts. Truck use areas shall be screened with landscaping or another alternative acceptable to the Planning Commission.
- g. **Architectural Consistency.** The Planning Commission may suggest that common architectural elements from existing buildings within the district be incorporated into new buildings, so as to achieve consistent signage, landscape treatments, and so forth. The Planning Commission may require color renderings of the elevations, material samples, and other information deemed necessary to determine compatibility.
- h. **Utilities.** All utilities shall be placed underground.
- i. **Parking in the Rear.** When parking is located in the rear of the building, the rear entrance shall respond to the same needs as the front façade. Thus, rear entrances and rear facades shall be finished quality and constructed of the same material as the front façade. This shall include minimal identification signage, an attractive entry, and pedestrian sidewalks.
- j. **Residential Buildings.** Additions and renovations to existing residential structures on the east side of Austin Powder Drive, north of Pettibone Road, shall comply with the guidelines set forth in the Glenwillow Town Center Strategic Plan.
- k. **Commercial Buildings.** Additions, renovations, and new commercial buildings in the Town Center shall comply with the guidelines set forth in the Glenwillow Town Center Strategic Plan, except as noted herein.

2. Site Circulation.

- a. The site plan shall be designed to provide safe and efficient motorized and non-motorized circulation.
- b. Sidewalks shall be provided along all public rights-of-way and major thoroughfares. Sidewalks shall be provided within the development to provide circulation on site and between developments. All sidewalks shall be a minimum

five (5) feet in width except where such walks directly abut a parking area. Where sidewalks abut a parking area, the minimum sidewalk width shall be six (6) feet. All sidewalks shall conform to Village engineering standards.

- c. Cross access agreements shall be provided to allow vehicular and pedestrian access between adjoining sites, as determined by the Planning Commission.
- d. All buildings shall be readily accessible by fire and emergency vehicles, in compliance with the standards of the Village.
- e. All access to a site shall be only by paved roads constructed to the engineering standards as established by the Village.
- f. Concrete curbing shall be provided throughout all parking areas and vehicle circulation routes, and shall be designed to protect any landscape areas from vehicle encroachment. The use of asphalt curbing or wheel stops shall not be permitted.
- g. Service and employee parking shall be located to the rear of the building.

3. Landscaping.

- a. **Screening.** Where landscaping is required for screening between incompatible land uses, the Planning Commission shall insure that the landscape plan meets the following objectives:
 - 1) The proposed plan shall form a complete visual and physical separation between incompatible land uses.
 - 2) The proposed plan shall form a transition zone between incompatible land uses and shall be compatible with the character of the adjacent residential area.
 - 3) The proposed plan shall effectively reduce the adverse effects of the proposed use, in particular, glare of headlights, lighting from parking areas, unsightly areas such as trash pickup points and contrasting views such as parking areas and access drives.
- b. **Setbacks.** All setback areas shall be landscaped with lawn, trees, shrubs and/or other plantings and may include reflecting pools, retaining walls and other landscape construction harmonious with the overall landscape scheme. The use of grade changes to enhance screening or landscaping is allowed.
- c. **Foundation Plantings.** All buildings shall be provided with foundation plantings around the perimeter of the building.

- d. **Right-of-Way Planting.** Canopy street trees shall be installed within the right-of-way of any public or private roads or common access drives, at a minimum interval of one (1) canopy tree, with a minimum caliper of two and one half (2½) inches at the time of planting, per each forty (40) linear feet of road frontage.
 - e. **Specific Landscape Requirements.**
 - 1) **Landscaping adjacent to a major thoroughfare.** The setback adjacent to a major thoroughfare (e.g., Pettibone, Cochran, Austin Powder) shall be planted with one (1) deciduous tree three and one-half (3½) inches in caliper or evergreen tree seven (7) feet in height at the time of planting, per forty (40) linear feet of road frontage, plus a mixture of five (5) ornamental or evergreen shrubs per thirty (30) linear feet of road frontage.
 - 2) **Screening adjacent to residentially-zoned property.** The required setback shall be densely planted to achieve a year-round buffer that retains natural vegetation where possible. A minimum evergreen screen shall be installed adjacent to the residentially-zoned property that consists of seven (7) foot evergreen trees at the time of planting, planted ten (10) feet on-center in a double staggered row ten (10) feet apart.
 - 3) **Exceptions.** The Planning Commission may approve alternatives to the above standards as it deems necessary to accommodate unusual circumstances, or unforeseen problems, to protect the natural vegetation, or to otherwise achieve the intent of this section.
 - f. **Parking Lots.** Parking lots shall be designed to avoid large masses of impervious surface area and long rows of parking. Creative design techniques such as landscape islands, varying levels of different sections of parking, lowering a parking lot to slightly below grade, and gradual curves to long rows of parking should be utilized to improve the appearance of a parking lot.
 - g. **Landscaped Areas Between Parking Lots.** Parking areas on adjacent properties shall be separated by a minimum landscaped area of twenty-five (25) feet and shall meet the standards of subsection b above. The use of berms, or grade changes are encouraged. In no case shall parking areas abut one another without such a landscape area, except where cross-access easements apply.
 - h. **Trash Enclosure Screening.** Trash enclosures shall be screened from public view with a fence or wall and landscaping.
4. **Storm Water Management.** Storm drainage and detention/retention basins shall be designed and located to function as an amenity feature of a site. This shall be accomplished by integrating and designing them as an integral part of a site's open space, incorporating fountains or aesthetic improvements to the water quality. Use of rain gardens or bioswales in the stormwater management plan is encouraged.

5. Outdoor Lighting. Outdoor lighting shall meet the following minimum standards:

- a. Lighting fixtures shall be focused downward and shall be fully shielded to prevent glare and sky glow and to minimize light trespass onto adjoining properties. Full cut-off fixtures shall be used to prevent light from projecting above a ninety degree (90°) horizontal plane.
- b. Photometric plans shall be submitted to show light levels on the site during and after hours of operation. The Planning Commission shall review the light levels to ensure that the minimum illumination has been provided for the security of property and safety of persons.
- c. The type of lighting used on a site should be consistent throughout the contiguous areas of the district.
- d. Light poles shall not exceed twenty (20) to twenty-five (25) feet, except that light poles used to illuminate sidewalks shall not exceed fifteen (15) to twenty (20) feet to support a pedestrian friendly design.

6. Signs.

- a. **Wall Signs.** Wall signs shall not exceed twenty-four (24) square feet. Wall signs shall be placed in areas where they fit comfortably within any given frame of the architectural design. Preferred locations include above entryways and in the lintel area above windows. Signs attached directly to a building's façade shall always be placed at least four (4) inches from the roof line, one (1) foot away from any window, and four (4) inches away from the fascia board which divides the first from the second story. Wall signs placed in the vertical space between windows shall not exceed in height more than two-thirds (2/3) the distance between the top of the window and the sill of the window above, or major architectural features related to those windows.

Wall signs shall not extend above roof lines, and shall not cover or interrupt any architectural features. Signs shall protrude as little as possible from the building façade.

- b. **Freestanding Signs.** Freestanding monument signs shall not exceed sixteen (16) square feet and four (4) feet in height. Freestanding monument signs made of wood or stone are preferred. The text and graphic elements on the sign should be externally lit. The area around the base of the sign should be landscaped with plant material that is low enough in height to not obstruct the view of the sign.
- c. **Blade Signs.** The maximum size for blade signs is four (4) square feet. They shall be placed at a minimum height of eight (8) feet above the finished grade. Blade signs shall protrude no more than three (3) feet from the building façade.

- d. Awning and Canopy Signs.** The maximum length for awning and canopy signs is five (5) feet, and the maximum height of the valance is one (1) foot. For awning and canopy signs, letters are typically placed on the valance. The size and style of lettering should be in scale with the storefront, and similar to that of adjacent storefronts. Awnings and canopies shall be made of fabric. Aluminum awnings and canopies, and internally lit awnings shall not be permitted.
- e. Suspended Signs.** The maximum dimensions for a suspended sign shall be one (1) foot high by five (5) feet wide. Suspended signs shall be surface-mounted to the underside of a canopy or porch roof.
- f. Window Signs.** Permanent window signs shall cover no more than twenty-five percent (25%) of the window area.
- g. Prohibited Signs.** Pole signs, roof signs, and projecting signs (except blade signs) shall be prohibited in the Town Center.

APPENDIX D- INDUSTRIAL DESIGN STANDARDS

INDUSTRIAL DESIGN STANDARDS

Introduction

Although the design standards for Industrial Districts A and B are similar to the design standards for the Town Center, there are some distinct differences. Industrial design standards provide more latitude regarding types of façade materials and roof form, reflecting the character of use and typical size of industrial buildings. The design standards that follow are meant to achieve five basic characteristics of good industrial building design, which include:

- Buildings should use high quality building materials, such as brick and stone, rather than EIFS or metal.
- Buildings should be pleasing to look at. They should incorporate features that give the buildings design flair, such as stone accents, articulation, combination of horizontal and vertical elements, etc. If possible, the buildings should have pitched roofs or pitched roof elements.
- Buildings should incorporate architectural elements that impart greater significance and interest to the building entrances.
- The attention to detail should not end with the building. Abundant landscaping should be prevalent on all sites. Parking should be given a great deal of design thought so as to avoid vast seas of asphalt in favor of smaller groupings of parking.
- Buildings should be designed to be flexible, with high ceilings and open floors plans, so as to accommodate new users when old ones move out, without becoming functionally obsolete.

As with the Town Center Design Standards, these standards will not have the force of law unless they are incorporated into the Zoning Ordinance. Otherwise, the standards are simply recommendations, to be endorsed or ignored by developers.

1. Building Elements

- a. Façade Materials.** The specifications in this paragraph are intended to result in high quality, durable buildings with aesthetic appeal. Front building facades shall be finished with a minimum of fifty percent (50%) brick, stone or concrete masonry materials (e.g., split face block, scored block, ground face block). EIFS (exterior insulation finish systems) shall not comprise more than twenty-five percent (25%) of façade materials, and EIFS shall not be used within four (4) feet of the ground. T 1-11 and non-architectural grade aluminum shall be prohibited.
- b. Design Features.** Buildings shall incorporate design features, such as recesses, off-sets, arches, colonnades, columns, and/or pilasters. Such features shall be integrated by use of continuous, detailed trim brick bands, contrasting courses of materials, and/or cornices to vary building facades.

- c. **Colors.** The front façade shall have a neutral (sand to brown), gray, or traditional (e.g., brick red) color. Accent colors shall be compatible with the primary color. Bright (e.g., purple, orange, pink, lime) and fluorescent colors shall be prohibited.
- d. **Roof Form.** Pitched roofs (e.g., gable, hip, shed) or mock gable roofs are recommended, particularly on the front façade.
- e. **Mechanical Equipment.** All mechanical equipment, utility meters, storage tanks, air conditioning equipment, or similar equipment, incidental to any building, including roof-mounted equipment shall be enclosed or screened from view. Screening shall be an integral part of the architectural design of the building. Such equipment shall not be visible from adjacent properties or public rights-of-way.
- f. **Loading and Unloading Areas.** All loading and unloading areas, loading docks, and truck wells shall be located in the rear of the building so as not to front a public right-of-way or residential-zoning district.
- g. **Overhead Doors.** Overhead doors used to accommodate trucks, shall be located on the side or rear of the building, screened from view from all public rights-of-way or residential zoning districts. Truck use areas shall be screened with landscaping or another alternative acceptable to the Planning Commission.
- h. **Utilities.** All utilities shall be placed underground.
- i. **Parking in the Rear.** When parking is located in the rear of a building, the rear entrance shall respond to the same needs as the front façade. Thus, rear entrances and rear facades shall be of finished quality and constructed of the same material as the front façade. This shall include minimal identification signage, an attractive entry and pedestrian sidewalks.

2. Site Circulation.

- a. The site shall be designed to provide safe and efficient motorized and non-motorized circulation.
- b. Sidewalks shall be provided along all public rights-of-way and major thoroughfares. Sidewalks shall be provided within the development to provide on-site circulation and between developments. All sidewalks shall be a minimum five (5) feet in width except where such walks directly abut a parking area. Where sidewalks abut a parking area, the minimum sidewalk width shall be six (6) feet. All sidewalks shall conform to all other Village engineering standards.
- c. All buildings shall be readily accessible by fire and emergency vehicles.

- d. All access to a site shall be only by paved roads constructed to the engineering standards as established by the Village.
- e. Concrete curbing shall be provided throughout all parking areas and vehicle circulation routes, and shall be designed to protect any landscape areas from vehicle encroachment. The use of asphalt curbing or asphalt wheel stops shall not be permitted.
- f. Service and employee parking shall be located to the rear of all buildings.

3. Landscaping.

- a. **Screening.** Where landscaping is required for screening between incompatible land uses, the Planning Commission shall insure that the landscape plan meets the following objectives.
 - 1) The proposed plan shall form a complete visual and physical separation between incompatible land uses.
 - 2) The proposed plan shall form a transition zone between incompatible land uses and shall be compatible with the character of the adjacent residential area.
 - 3) The proposed plan shall effectively reduce the adverse effects of the proposed use, in particular, glare of headlights, lighting from parking areas, unsightly areas such as trash pickup points, surface parking areas, and access drives.
- b. **Setbacks.** All setback areas shall be landscaped with lawn, trees, shrubs and/or other plantings and may include reflecting pools, retaining walls and other landscape construction harmonious with the overall landscape scheme. The use of grade changes to enhance screening or landscaping is allowed.
- c. **Foundation Plantings.** All buildings shall be provided with foundation plantings around the perimeter of the building.
- d. **Right-of-Way Planting.** Canopy street trees shall be installed within the right-of-way of any public or private roads or common access drives, at a minimum interval of one (1) canopy tree, with a minimum caliper of 2½ inches, per each 40 linear feet of road frontage.
- e. **Specific Landscape Requirements.**
 - 1) **Landscaping adjacent to a major thoroughfare.** The setback adjacent to a major thoroughfare (e.g., Pettibone, Cochran) shall be planted with one (1) deciduous tree 3½ inches in caliper or one (1) evergreen tree seven (7) feet in

height, per 40 linear feet, plus a mixture of five (5) ornamental and evergreen shrubs per thirty (30) linear feet.

- 2) **Screening adjacent to residentially-zoned property.** The required setback shall be densely planted to achieve a year-round buffer that retains the natural vegetation where possible. A minimum evergreen screen shall be installed adjacent to residentially-zoned property that consists of seven (7) foot evergreen trees at the time of planting, planted ten (10) feet on-center in a double staggered row 10 feet apart.
 - 3) **Exceptions.** The Planning Commission may approve alternatives to the above standards as it deems necessary to accommodate unusual circumstances, or unforeseen problems, to protect the natural vegetation, or to otherwise achieve the intent of this section.
- f. **Parking Lots.** Parking lots shall be designed to avoid large masses of impervious surface area and long rows of parking. Creative design techniques such as landscape islands, varying levels of different sections of parking, lowering a parking lot to slightly below grade and gradual curves to long rows of parking should be utilized to improve the appearance of a parking lot.
 - g. **Trash Enclosure Screening.** Trash enclosures shall be screened from public view with a fence or wall and landscaping.
4. **Storm Water Management.** Storm drainage and detention/retention basins shall be designed and located to function as an amenity feature of the site. This shall be accomplished by integrating and designing them as an integral part of a site's open space, incorporating fountains or aesthetic improvements to the water quality. Use of rain gardens or bioswales in the stormwater management plan is encouraged.
 5. **Outdoor Lighting.** Outdoor lighting shall meet the following minimum standards:
 - a. Lighting fixtures shall be focused downward and shall be fully shielded to prevent glare and sky glow and to minimize light trespass onto adjoining properties. Full cut-off fixtures shall be used to prevent light from projecting above a ninety degree (90°) horizontal plane.
 - b. Photometric plans shall be submitted to show light levels on the site during and after hours of operation. The Planning Commission shall review the light levels to ensure that the minimum illumination has been provided for the security of property and safety of persons.
 - c. The type of lighting used on a site shall be consistent throughout the contiguous areas of the district.

- d. Light poles shall not exceed thirty (30) feet, except that light poles used to illuminate sidewalks should not exceed 15 to 20 feet to support a pedestrian friendly design.

6. Signs.

- a. **Wall Signs.** Wall signs shall not exceed ninety-six (96) square feet. Wall signs shall be placed in areas where they fit comfortably within any given frame of the architectural design.

Wall signs shall not extend above rooflines, and shall not cover or interrupt any architectural features. Signs shall protrude as little as possible from the building façade.

- b. **Freestanding Signs.** Monument signs shall not exceed forty-eight (48) square feet and six (6) feet in height. Monument signs made of wood or stone are preferred. The text and graphic elements on the sign should be externally lit. The area around the base of the sign should be landscaped with plant material that is low enough in height to not obstruct the view of the sign.

- c. **Prohibited Signs.** Pole signs, roof signs, and projecting signs shall be prohibited.

McKENNA ASSOCIATES, INCORPORATED
Community Planning – Urban Design – Landscape Architecture
2987 Meadowbrook Boulevard
Cleveland Heights, OH 44118
Telephone: 330-528-3342
Fax: 248-596-0930
Website: www.mcka.com

Phillip C. McKenna, PCP, AICPPresident
Christopher J. Doozan, PCP, AICPProject Director
John H. Cieszkowski, Jr., Project Manager
Courtney R. Piotrowski, RLA, ASLA.....Project Landscape Architect
Heather L. McPhail..... Project Planner
Sabah Aboody-Keer..... GIS Mapping
Andrew Robertson..... Graphic Support and Cover Design
Kacy Smith..... Administrative Support