Plan
Kettering

**City of Kettering
Comprehensive Plan**

May 2002

CITY OF KETTERING COMPREHENSIVE PLAN

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August 2002

ACKNOWLEDGEMENTS

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INTRODUCTION

Purpose of the Plan

The comprehensive plan for the City of Kettering is intended to provide a long-range vision for development and redevelopment opportunities, housing, and urban design. It is intended to be a decision-making guide for public officials, residents, and the development community. Kettering is a mature inner-ring suburb of Dayton, Ohio, and has been preparing neighborhood plans, corridor plans, and other special area plans for years. This plan will be the first comprehensive approach to citywide planning.

The purpose of this plan is to identify and guide development and redevelopment opportunities through a well thought-out set of development plans and policies. The plan provides a framework for making development and zoning decisions, implementing public improvements, and generating private investment. In addition, the plan outlines a vision of where the residents of Kettering want their community to be in the future and provides a detailed strategy to achieve that vision. With this plan, decision-makers will be able to make short-term decisions that promote orderly long-range results and represent the views and desires of the citizens of the community. The recommendations within the plan are not cast in stone, but rather provide information to be used in the evaluation of future development and redevelopment proposals. The plan presents ideas, policies, and strategies for each of these areas. The recommendations will not happen without implementation. This can take the form of individual decisions on development proposals as well as a variety of public and private planning efforts. The plan provides specific strategies for the following areas:

▶ Economic development
▶ Future land use
▶ Housing
▶ Transportation
▶ Community image

History/Background

The area that is now Kettering saw its first settlement in the late 1700s in the area known as Beavertown. Growth was slow until the post-World War II building boom. Suddenly, Van Buren Township became an attractive residential development area due to its location near Dayton and major employment centers. In 1952, the Village of Kettering was incorporated. Quickly thereafter the Village adopted its first building code, zoning ordinance, and traffic code. Explosive growth continued through the 1960s with Kettering reaching its highest population figure, almost 70,000 residents. Since then, the community has seen a steady decline in population as the Dayton metropolitan area has continued to expand outward.

The location of Kettering has significantly influenced development patterns over the past decades. This is a trend that will continue well into the future. Kettering is south of Dayton, Ohio (Figure 1). The city is located east of I-75 and west of I-675. Kettering shares borders with Dayton and Oakwood, Ohio, to the north; Centerville and Washington Township to the south; Moraine and West Carrollton to the west; and Sugarcreek Township and Beavercreek Township to the east. Because the city has common borders with many other municipalities, there is little opportunity for physical growth.

Kettering's centralized location in the Dayton metropolitan area provides proximity to downtown Dayton and numerous industrial companies, resulting in the development of housing in a wide variety of price ranges and older commercial districts. Some of these older neighborhoods and commercial areas are beginning to decline and do not meet the needs of today's homebuyers and consumers. Lack of maintenance and/or reinvestment is also becoming a more noticeable issue in these older areas.

Figure 1 *Vicinity Map*

Summary of Issues and Findings

The planning process included a series of four public input meetings in the spring of 2001 and 14 steering committee meetings over the past year. The issues outlined are based on the public input received at the public meetings.

The role of the steering committee is to represent a broad base of interests in guiding the planning process and land use planning framework.

A number of key issues that impact the quality of life in Kettering were identified during data collection and public meetings. These issues identified unique concerns of the community and also presented opportunities for the future. This "wish list" for the future provides insight into the vision and desires of Kettering residents. They were analyzed against a background of information on community growth, natural resources, community services, transportation, and land use. The key issues have been summarized in the following statements.

Land Use/Development Issues

Since Kettering is mostly built-out, land use issues discussed by participants focused on the redevelopment of under-used parcels throughout the city. In addition, appropriate land uses for redevelopment sites and possible design standards to be used were also discussed. A mixture of uses within redevelopment sites was desired by a number of residents.

▸ Under-used shopping areas (Van Buren, Wilmington Heights, etc.) and those with vacant buildings should be redeveloped with mixed uses and attractively designed architecture and green spaces.

▸ Incentives to encourage people to recycle aging properties should be offered.

‣ A balance between quality of life and economic development should be achieved in Kettering.

‣ Blighted, old buildings should be eliminated.

‣ New uses, such as affordable housing and nice retail shops, should be invented for old shopping centers.

‣ Condominiums should be promoted like one level units.

‣ Older established neighborhoods should be protected from incompatible commercial development.

‣ Businesses should be held accountable for moving out and without cleaning up.

‣ A city center should be created.

‣ The character of older housing should be maintained.

‣ No new buildings should be built until all the old empty buildings and previously developed lands have been considered. Create incentives to occupy existing spaces.

‣ Industrial uses should be located in appropriate places and should be environmentally clean.

‣ A variety of house styles should be encouraged on each street.

‣ Small retail areas with specialty shops should be developed.

‣ Housing opportunities for seniors should be developed.

‣ Residential uses should stay a primary focus of the community.

‣ Some development decisions seem to be based on the ability to get federal grant money, even when they are not in the best interest of the city.

Transportation Issues

The most prevalent transportation issues focused on creating streets, parking lots and connections between neighborhoods that can accommodate pedestrians and bikes and that will slow cars down. Traffic calming techniques and street design that will help make the streets more friendly were discussed.

‣ A balance between efficient movement of traffic and the comfort of pedestrians is needed.

‣ Curbs and sidewalks should not be required in all areas.

‣ There should be more bikeways and bike lanes throughout the city and they should connect to the regional bikeway system.

‣ There should be better use of computer timing systems for traffic signals during peak times and flashing lights for slow times.

‣ Alternative public transportation such as mass transit, including a shuttle to key locations like the recreation center, Fraze Pavilion, and Town and Country shopping center, should be developed.

‣ Parking lots should be broken into smaller areas with landscaping regulations.

‣ Bike racks should be provided at destinations like shopping areas.

‣ Speed limits should be enforced and narrower streets should be encouraged to help protect neighborhoods from fast cut-through traffic.

▸ Some streets are too narrow for parking on both sides of the street.

▸ Sidewalks should be paid for in an equitable manner.

▸ Pedestrian walkways around Lincoln Park should be developed.

▸ Transportation systems need to be flexible to accommodate an aging population.

▸ Truck routes should be developed to restrict truck traffic in residential areas.

▸ Additional parking is needed in some areas such as Fraze Pavilion and the Town and Country shopping center.

▸ There is too much cut through traffic in some neighborhoods.

▸ The fire station at David Road is poorly located.

Housing

The main housing issues included protecting the existing neighborhoods while providing new housing options and opportunities for seniors and other demographic segments like baby boomers. Owner occupied housing was preferred over rental.

▸ Condominiums should be promoted like one level units.

▸ The character of older housing should be maintained.

▸ Limit construction of new rental apartments.

▸ A variety of house styles should be encouraged on each street.

▸ Housing opportunities for seniors should be developed.

▸ Residential uses should stay a primary focus of the community.

▸ Older established neighborhoods should be protected from incompatible commercial development.

Community Image/Quality Issues

Enhancing the image of Kettering through aesthetic improvements such as gateways, attractive design of buildings and streetscapes was important to the participants. Aesthetic improvements can also include enforcement of existing codes that require owners to maintain properties in need of repair.

▸ Gateways into the city need to be improved with nice signs and landscaping.

▸ Overhead wires should be eliminated over time; new developments should have underground utilities.

▸ Both neighborhood and busy streets should have mature trees lining them in the tree lawn.

▸ Shopping areas should be unique and attractive, less sterile, and less industrial in appearance.

▸ There should be more landscaping in large parking lots.

▸ Aggressive redevelopment of older residential areas should be encouraged.

▸ The excellent education system should be maintained and enhanced to make sure it addresses the needs of the community.

- Home ownership should be promoted over rental properties.

- There should be efforts to promote small businesses.

- Codes to clean up apartment areas/complexes should be enforced.

- Some streets should be designed with landscaped medians.

- Create better buffers between residential and commercial uses.

- There should be more streets with boulevards.

- New buildings should be consistent with the character of surrounding neighborhoods.

- Establish green spaces within neighborhoods.

- Limit the time a residential home can remain vacant and boarded up.

- Better identification of neighborhoods is important.

- The city may not appear open and friendly to minority populations.

- The city is perceived as hard to deal with for commercial and residential development.

A full discussion of existing conditions in Kettering is provided in the plan's appendix. This discussion includes analysis of community demographics, natural resources, existing land use, transportation, community facilities, the urban fabric of the community, economic development, and a summary of citizen involvement. The following plan elements were developed in response to the findings presented in the appendix and the issues stated above.

ECONOMIC DEVELOPMENT

Introduction

Based on an analysis of economic factors and trends within Kettering and the surrounding region, guidance for economic development activities has been developed. This section outlines the overall economic development context and related issues, within which Kettering operates. It then sets forth a series of strategies to address these issue and advance Kettering's standing within the local and regional economy.

Economic Development Issues

A number of factors establish the economic development context within which Kettering operates. These include the existing use of buildings and land, redevelopment of under-used sites, the local housing stock, the Kettering School District, and Kettering's role within the regional economy. Also, Kettering's geographic location is one of the best in the region. Following is a summary of some of the issues that need to be considered.

Housing

Housing is an important economic development asset in the attraction and retention of residents. Regionally, Kettering is in an attractive location to live and offers a wide range of housing options. Recent new development has been very successful. The following qualities need to be sustained and publicized.

- Quality of life is excellent.
- The educational system is attractive to residents.
- The city has an excellent park system.
- There is a wide and healthy range of housing types and prices.

Starter housing is well represented in Kettering. Encouraging new owners to eventually upgrade some of the older homes is an opportunity to enhance the housing stock for modern standards.

- Economic development can target first time buyers and new entrants to the labor force as a means of diversifying the housing market and encouraging growth of young households. Assistance for necessary additions or upgrades, rather than the actual purchase of the home may be appropriate.

- Kettering has traditionally had a comparative advantage for this market over other Dayton suburbs.

- A growing labor force will help attract employers to Kettering.

Adding to and upgrading the housing supply to a more contemporary style is necessary for Kettering to continue to be an attractive residential location within the region. Construction of a variety of new housing is essential.

- Much of the housing is getting fairly old and potentially unattractive by contemporary expectations.

- Encouraging renovation and new construction can help attract and keep residents that, in turn, develop a local labor force and stronger retail buying power.

Land and Building Uses/Redevelopment of Under-Used Sites

Because Kettering is a mature, built-out community the redevelopment of land is necessary for the community to move forward.

- Some land uses, such as starter housing and regional or sub-regional retail centers, are over-represented.

▸ The economy is producing fewer goods while producing more services, so a variety of office buildings may be more appropriate in commercial areas.

▸ Some existing buildings can and should be reused, minimizing the need for complete redevelopment.

▸ Many commercial buildings and sites do not meet today's retail and commercial requirements. Traffic, building size, location, and access to sites are problematic.

Availability of property for development or redevelopment is a key component of future economic development efforts.

▸ Attracting appropriate businesses requires maintaining an inventory of available land and buildings that should be offered to developers and businesses.

▸ The city needs long-term vision and guidance to entice the private sector to invest.

▸ Kettering already has a good track record for recognizing land redevelopment opportunities. Conversion of the Borden Dairy, Gentile Air Force Station, and the Hills and Dales shopping center confirms this.

Regional Economic Development

As the second largest city in the area, Kettering is an integral part of the greater Dayton region. Growth in the region is affected by policies implemented in Kettering. Growth in Kettering is, in turn, affected by the policies and actions of other cities and the metropolitan area acting collectively.

The most efficient means for attracting and retaining economic development (labor force, business growth, tax base) is to sell the region first.

▸ Cooperative efforts help to find companies that fit the economic profile of the Dayton region.

▸ Positive attitudes of regional residents and businesses are vital to attracting business.

▸ Regional unity is an asset in the global marketplace.

▸ Regional approaches to the state's legislative agenda ensure more frequent local success.

Education

The educational system is a key regional economic development asset. Many times, employers locate near educational facilities that produce workers with the skills needed to enter the workforce.

▸ Maintaining Kettering's positive public school image is essential to attracting businesses and employees.

▸ The economic future belongs to those who are best at gathering and critically analyzing information toward commercial applications. Seventy percent of future jobs will require at least two years of formal, post-high school training; 25 percent will require at least a four-year college degree.

▸ There are excellent universities directly serving Kettering, including those near, but outside, the metro area.

▸ Likewise, there are excellent technical training programs, including community colleges.

▸ Highly trained and educated people would like to remain in the region of their education.

▸ Integration of post-secondary training and education with employers is vital for retaining skilled workers

Targeting for Economic Development

Health services has long been a strength of Kettering and the Dayton region.

▸ Research and development companies should be targeted.

▸ Spin-off companies attributable to research and development should be encouraged and nurtured.

▸ Readily available buildings, land, financing, and other city services are essential.

▸ Rapid changes in medical technology and service delivery requires adaptability in the real estate market for off-site facilities.

Likewise, advanced manufacturing is a long-term strength.

▸ Spin-off companies and testing facilities should be encouraged and nurtured.

▸ Offices, small plants, laboratories, and other space will be needed.

▸ The real estate market will need to respond quickly to demands for expansion and temporary spurts in business activity.

Local government is the key to successful regional economic development.

▸ Fast-tracking projects are critical to new development and redevelopment.

▸ Employers actually locate in communities that suit their needs.

▸ Employee households select local communities based on access to jobs and quality of life.

▸ Private-public partnerships are needed for Kettering's future development.

Managing and Attracting Local Economic Development

Incubators and related services can quickly integrate commercial ideas and ventures into the Kettering fabric.

▸ Good re-use of existing buildings
▸ Encourages local entrepreneurship and retention of ideas
▸ Reduces costs of initial commercialization

Marketing, public relations, and business retention tracking

▸ Promote appropriate economic development attitudes within Kettering among residents and more importantly, existing businesses that may choose to expand or not relocate.

▸ Ensure that prospective workers and employers know about employment opportunities in Kettering.

Appropriate incentives are a way to implement the desired economic development strategy.

▸ Use the wide range of tools and techniques that are already available (state, county, federal, and city).

▶ There may be a need for broader education among businesses and developers on the availability of incentives and how they work.

▶ Incentives help to maintain a competitive edge within the region and within the global economy.

▶ Incentives increasingly require professional skill and sophistication in their use.

Economic Development Strategies

Responding to these issues and operating within the local economic development climate, the following strategies begin to establish an overall direction for economic development activity. The strategies focus on regional cooperation, being prepared for opportunities, targeting appropriate industries, and promoting new and existing business growth.

ED1 Maintain widely available inventory of real estate assets, perhaps in cooperation with the local real estate industry. These assets include:

▶ Housing
▶ Commercial for reuse
▶ Commercial for redevelopment
▶ Vacant land

ED2 Identify land uses that are out of proportion to a well-balanced suburban community. Identify specific locations that could be candidates for land use changes. The future land use plan map outlines some of these opportunities.

▶ From one form of housing to another
▶ From housing to commercial
▶ From commercial to housing

ED3 Develop public-private partnerships to change and improve the city's housing supply to retain existing residents and attract new ones.

▶ Identify potential sites and buildings.
▶ Encourage private ownership improvements through incentives (e.g., grants, low-interest loans, interest buy-downs, and tax incentives) and services.
▶ Seek developer proposals for large-scale opportunities.
▶ Improve the housing stock to attract young professionals.

ED4 Develop a Kettering-specific marketing and public relations program.

▶ Work with professional public relations consultants (print, radio, and television).
▶ Identify strengths, both local and regional.
▶ Focus on Kettering and Dayton area residents and businesses.
▶ Target young, employed households seeking a range of housing options with a terrific regional location.
▶ Incorporate Kettering's message into regional marketing programs aimed at national and international targets.
▶ Maintain an up-to-date web site for the city.

ED5 Participate fully in regional economic development initiatives, including:

▶ Lobby at local, state, and federal levels
▶ Make policy
▶ Market the community
▶ Attend trade shows and conferences.
▶ Seek high positions on the boards and committees of regional economic development organizations. Assure that the best interests of Kettering are incorporated.

ED6 Support post-secondary education initiatives within the region and locally. Keep it a high priority.

▸ Recognize the vital role of young adults in defining future economic growth.
▸ Integrate more young adults into the community fabric through part time jobs in career positions, internships, apprenticeships, and volunteer civic activities.
▸ Work with local businesses and educators to assure that formal education and training creates workers with skills adaptable to rapidly changing and emerging opportunities.
▸ Continue to work with and encourage joint ventures with educational institutions and private industry such as MVRP, Sinclair Computer Training, and NCC.

ED7 Continue to capitalize on Kettering's well-known reputation in medical services.

▸ Allow appropriate expansion of Kettering Medical Center.
▸ Marketing campaigns should tout this special strength.
▸ Work diligently to assure that land and buildings are available for changing medical practices, research, and commercial opportunities.
▸ Review local and state regulations to minimize unnecessary barriers.

ED8 Capitalize on Kettering's less well-known reputation in advanced manufacturing technologies.

▸ Marketing campaigns should tout this special strength.
▸ Work diligently to assure that land and buildings are available for changing manufacturing processes, research, and commercial opportunities. The Miami Valley Research Park is a tremendous asset in this area.

▸ Review local and state regulations to minimize unnecessary barriers.

ED9 Encourage the development of a flexible business incubator network with links to a regional network. The city could partner with other organizations to achieve this.

▸ Identify buildings that are adaptable to changing interior uses; existing commercial structures in the city may satisfy this need.
▸ Attract and train professionals in the management of incubators and the services they offer to tenant businesses.
▸ Call on the local consultant community for low-rate and pro-bono services to tenant businesses (e.g., accounting, management, financing, and marketing).

ED10 Assure that a strong day-to-day business retention program is in place within city government.

▸ Maintain regular contact with city businesses, both one-on-one and through business organizations.
▸ Create and maintain of an inventory profile of most businesses in the community through routine surveys and follow-up contacts.
▸ Recognize the indications of problems within local businesses that may need to expand and are in financial trouble.
▸ Train all employees in all city departments to recognize possible intervention points and to share these concerns with economic development officials.
▸ Be well-versed in all incentive programs available through the city, county, state, and federal government, and understand how these programs apply in specific cases.
▸ Develop a priority system for use of incentives that maximizes leverage of private investment.

- ▸ Establish an economic development ombudsman for one-stop intervention and access to any and all services of city, county, state, or federal governments to assist in business retention and attraction.
- ▸ Establish a citizen ombudsman to provide assistance to local citizens when dealing with local, county, state, or federal government.

FUTURE LAND USE

Introduction

This chapter outlines the overriding planning principles guiding the plan, the strategies for implementation of future land use categories, and a land use map. These elements combine to form a general guide for future land use and development within Kettering. A synthesis of this section, with the building types and general design guidelines outlined in the Community Image chapter, will help establish a pattern of development and/or redevelopment that reflects the community's future vision. The land use plan is illustrated in Figure 2 and land use categories are described in Table 1.

Overriding Planning Principles

The overriding long-term planning principle in Kettering is to enhance the current quality of life and to create a balanced network of neighborhoods in redeveloped areas. Ideally, redeveloped neighborhoods would contain housing, parks, and schools located within close proximity of shops, civic services, employment, and entertainment uses.

The pattern of development should include linkages between various land uses including neighborhood and community scale shopping areas, high-quality employment areas, services, schools, and open spaces. Development or redevelopment should be implemented in a more pedestrian scale by providing a balance between the needs of people and cars, by providing a variety of opportunities for housing or businesses to thrive in close proximity to one another, and by providing multiple options to reach one's destination.

This land use plan responds to issues and opportunities to create a vision for the future of Kettering. The first step in the pursuit of that vision is the development of planning principles and strategies that address the issues of

commercial and neighborhood development, employment areas, pedestrian and vehicular circulation; parks and open space, and conservation. Planning principles serve as clear guides for finding solutions as issues arise, while planning strategies begin to lay out the actual implementation steps and direction that the city should follow. The recommendations are based on the overriding planning principles as well as the principles and strategies outlined within the discussion of each specific land use.

Residential Development

New single and multi-family residential development peaked in the 1960s and 1970s with 16,000 new units built. Residential investment has tapered off significantly in the 1990s with only 349 new units constructed between 1990 and 2000. Over 60 percent of the land area of Kettering is devoted to single-family use and five percent is used by multi-family units.

The realization that offering a diversity of housing options in Kettering is an asset to local employers and provides options for people as their housing needs evolve has resulted in a change of attitude. It is now conceivable to have additional residential development options that are still of a high quality and are an amenity to the city.

Planning Principles

‣ **Encourage a range of housing options.** The upper middle income range of housing stock, now between $150,000 to $250,000, is in low supply in Kettering and alternative building types such as owner-occupied townhouses are not well represented. In addition, providing housing options to diversify choices so all people may find a place to live is an important element to continued vitality of the city. This could include options that accommodate both younger and older people, singles and families, and those of various economic means.

▸ **Provide pedestrian and vehicular connections between residential, mixed-use areas, and other amenities such as parks and schools.** Kettering is similar to many communities that developed after World War II in keeping land uses separate and as a result, isolating each land use. To contribute to an improved set of connections between neighborhoods and provide links to other amenities in the city, pedestrian and vehicular connections should be used. The city can become more seamlessly connected with walkable streets.

▸ **Promote compatibility between various housing types.** Kettering residents have identified a need for high-quality development that meets the needs of its current and future residents. Design parameters that ensure appropriate compatibility and scale of development in transition areas and that are compatible with both new and old development need to be considered. Examples include windows and other architectural elements that use the same proportions.

▸ **New higher-density residential should be focused within mixed-use areas.** New higher-density residential development should be focused in areas that are more intense, such as mixed-use areas. Higher-density residential is an excellent transitional land use between more intensely developed areas and less intense areas such as single-family residential. Higher-density residential is important to a successful mixed-use development because businesses and residents benefit from the close proximity to each other and the walkable

environment. Examples include townhomes and residential buildings that follow more urban design principles.

Residential Development Strategies

LU1 Allow for a variety of housing options for families, individuals, and seniors. Housing options should range from higher-density in redevelopment/mixed-use neighborhoods to lower-density areas. Lower-density areas could range from less than one unit per acre to three units per acre. Higher-density housing could range from four units per acre up to 20 units per acre. Higher-density areas could contain small lot single-family homes, townhomes, small apartment houses, and large residential buildings and apartments above retail or office uses.

LU2 Design residential streets to reflect the location and function of the street within the neighborhood. Street sections should be narrow to calm traffic and should contain planting strips between the sidewalk and curb.

LU3 Locate higher-density development in close proximity to, or as a part of, a mixed-use or commercial development. The close proximity to each other provides benefits for the residents and the businesses. Close proximity is defined as a comfortable walking distance, which is about a one-quarter to one-half mile maximum length. Higher-density residential development can then be used as a transitional land use between more intense commercial and less intense residential development.

LU4 Implement appropriate landscaping standards for both the public and private realm to contribute to pedestrian-friendly streets as well as for buffers between higher- and lower-density areas.

LU5 Design the street and sidewalk system to provide a balance between pedestrians and automobiles. One of the most important elements in creating a feel/identity for the city, an interconnected system of streets linking neighborhoods to each other and to commercial areas will reduce dependence on automobiles and reduce car trips.

LU6 Design open space to reflect its location and function within the neighborhood. Squares and plazas are more appropriate for the center of the neighborhood while parks and playfields are more appropriate at the edge of the neighborhood.

LU7 Continued development of single-family detached homes should occur in existing low-density areas. Homes in low-density areas range from approximately three homes per acre to less than one home per acre.

LU8 Construct higher-density developments that are appropriate for higher-intensity mixed-use and commercial areas. Higher-density development would range from six to 20 units per acre, have a pedestrian-oriented streetscape, be linked to adjacent neighborhoods and shopping, follow architectural and building massing guidelines, and have open spaces in the form of squares, greens, and parks. The desired building types in a higher-density residential area consist of townhomes, small lot single-family detached, small apartment houses, civic buildings, medium and large residential buildings, duplexes, apartments over stores, and accessory apartments. More detailed information on each building type is outlined in the Community Image chapter.

Commercial

Kettering's commercial economy has experienced mixed results over the past 10 years. There are several marginal commercial centers as well as some that are doing very well. Generally, newer retail concepts and locations that better meet the market demands have captured retail dollars.

Commercial Planning Principles

▸ **Establish a hierarchy of neighborhood, community, and sub-regional commercial areas.** A hierarchy of commercial development that delivers a scale and size commercial development appropriate for the location, trade area, infrastructure and neighborhood attributes will provide long-term viability for the development and the neighborhood as a whole.

▸ **Concentrate commercial uses within designated locational parameters appropriate for the scale of the specific commercial center.** Commercial areas should be concentrated into specific areas of the city or neighborhood based on available infrastructure and the scale of the surrounding neighborhood.

▸ **Promote commercial areas that strike a balance between the needs of pedestrians and vehicles.** Existing commercial developments have minimized the opportunities for residents of surrounding neighborhoods to access shops by walking or biking. Driving a vehicle on a major thoroughfare is the only safe means to access shopping. Design solutions, such as providing transitional uses between high intensity and lower intensity development, are available to create better connections as well as to provide streets with sidewalks to provide diverse options for accessibility to shopping areas.

▸ **Discontinue the strip/sprawl commercial development pattern in Kettering.** Over the past few decades, commercial development has been implemented in the pattern that the zoning codes ask for—long continuous strips or corridors of commercial development along major thoroughfares. Dixie, Wilmington, Far Hills, and Dorothy roads contain this typical pattern. The strip pattern creates real and perceived problems such as visually unattractive gateways, traffic congestion, and safety concerns for vehicles and pedestrians.

▸ **The planning principles and strategies of the mixed-use buildings apply to both commercial and mixed-use areas.** Mixed-use buildings and development is encouraged over exclusively retail or commercial buildings because mixed-use offers a more efficient use of land and increases the long-term viability of development.

Commercial Development Strategies

Mixed-use districts can enhance the City of Kettering by providing walkable, interconnected neighborhoods. In addition, mixed-use design provides the opportunity to develop a variety of housing options and creates entrepreneurial opportunities due to the mix of business and retail locations that offer a variety of rent levels. Mixed-use development also creates a sense of place and identity for the city.

The walkability of the mixed-use development pattern becomes practical due to its overall design and intensity. Streets with sidewalks and street trees become attractive and more comfortable for people to walk. The proximity of residential units to offices and shopping, even through mixed-use buildings, makes it possible to walk two to three blocks from home to work or shopping.

The street network in a mixed-use district strives to connect adjacent areas to provide a seamless system of routes for both vehicles and pedestrians. This system provides an opportunity for an entire series of neighborhoods to become connected and possibly identify with a mixed-use center as a focal point.

The mixed-use district also provides for differing rent levels for businesses as the addition of several streets, blocks, and intersections provides various options for different types of businesses. Traffic counts or locations further or closer to the 100 percent intersection will impact pricing and provide more modest and smaller spaces for new entrepreneurs. Those businesses that need high profile locations will gravitate appropriately to their preferred location.

Efficiency in development is achieved as the higher intensity of a mixed-use district makes better use of existing lands and grows up (up to five stories tall) rather than out. Shared parking efficiencies are also a benefit as less impervious surface is needed to provide parking. Office workers use the parking during the day and entertainment and shoppers use those same parking spaces during the evening.

Mixed-use commercial districts are flexible and can evolve to adapt to the market over time. The framework of streets and blocks provides the flexibility. The users will change over the long term, but the diversity and vibrancy will be retained because the framework for growth is in place.

LU9 Break the commercial development/retail into three categories. To better serve the needs of both the automobile and adjacent walkable neighborhoods, the proper scale and size development is needed. Three retail/mixed-use designations are proposed that are appropriate for various locations within the city. All three of these categories focus on mixed-use development. The following describe the appropriate location, size, and permitted building type parameters for each category.

Neighborhood Commercial Center Development

Neighborhood commercial areas are intended to serve local residents and typically have a trade area of three-quarters to one mile (radius) from the retail stores. The typical size of a neighborhood commercial area is anything under approximately 40,000 square feet of non-residential space. Typically, these types of development are located on arterial streets. The neighborhood commercial areas are illustrated on the future land use plan (Figure 2).

The neighborhood commercial center zone provides for revitalization, reuse, and redevelopment of sites that generally draw from or serve the immediate surrounding neighborhood. A broad array of uses are expected in a pattern that integrates shops, restaurants, retail, civic buildings, work places, and higher-density residential uses in a compact, pedestrian-oriented environment.

In a neighborhood center (a drug store could be a typical anchor) open space is urban in its design and is organized as plazas and squares. A neighborhood center should have a footprint of less than 40,000 square feet of non-residential space. Desired building types are small mixed-use or commercial buildings, townhouses, small apartment houses, or office and civic buildings.

Community Commercial Center Development

Community commercial areas provide service and retail establishments that serve a larger market than neighborhood commercial areas. The typical service area depends on the exact type of stores, although a trade area with a radius of two to three miles is standard.

The community center zone provides for revitalization, reuse, and redevelopment of sites located that generally draw from Kettering proper. A broad array of uses is expected in a pattern that integrates shops,

restaurants, retail, civic buildings, work places, higher-density residential, and educational uses in a compact, pedestrian-oriented environment. These areas enable residents to drive a short distance to a center that includes a variety of commercial uses (typically be anchored by a bookstore or a grocery store). Square footages of the non-residential footprint in this type of center should be in the approximate range of 40,000 to 150,000 square feet.

Open space is urban in its design and is organized as plazas and squares. Typically, these developments are located on major thoroughfares and are noted on the future land use plan (Figure 2).

The following building types are permitted in this zone: medium retail buildings, medium mixed-use or commercial buildings, medium or small apartments or small office buildings, medium residential or mixed-use buildings, townhouses, civic buildings, and small lot single-family homes.

Sub-Regional Commercial Center Development

The sub-regional zone provides for revitalization, reuse, and redevelopment of sites that draw from and appeal to commuters and residents of the region outside of Kettering. The trade area may be in the range of five to ten miles (radius) from the site depending on the type of stores and the location of other competitive shopping areas nearby.

A broad array of uses is expected in a pattern that integrates shops, restaurants, retail, civic buildings, work places, higher-density residential, and educational uses in a compact, pedestrian-oriented environment. This type of development could be anchored by a large format retailer or department store and is generally located on a major thoroughfare. Transit access is integrated into the development to better link transit users to the front door of the development. Square footages of the non-residential footprint of this type of development should be in the approximate range of 150,000 to 300,000 square feet. Smaller retail shops could perhaps fill a niche market on a regional scale.

Open space is urban in its design and is organized as plazas and squares. Architectural and building massing guidelines apply.

The following building types are desired in this zone: large mixed-use or commercial buildings, large or medium retail buildings (big box), large or medium residential buildings, small apartment or office buildings, townhouses, small lot single-family homes, and civic buildings.

LU10 Incorporate traffic calming measures into designs. The overall design of the street network can lead to a more balanced environment for both cars and people. Other streetscape design elements such as street trees and on-street parking can also calm traffic.

LU11 Locate parking to minimize the visual impact. The location of parking lots and parking decks in the rear or sides of buildings and the use of landscaping contribute to a more pedestrian-oriented design of the street frontage areas. Businesses should have a door fronting the street and a door opening to the parking area in the rear to ease access from parking areas to the store.

LU12 Provide a transition between commercial areas and less intense areas. In the design of a mixed-use development, higher-density housing can be used as an appropriate transition. Other transition techniques include designing an open space between the different land uses or landscaping.

LU13 Establish a design manual to outline minimum design standards.

Urban Corridor Development

The urban corridor zone is typically a transitional area located along major thoroughfares that buffers residential areas (from the rear) from high volume roads. Smaller scale buildings, typically a maximum of three stories tall, are used. These buildings front the thoroughfare and soften the streetscape

creating a more pedestrian-friendly pattern. Parking is provided in the rear of the buildings and is accessed from driveways located between buildings.

Urban Corridor Strategies

LU14 Encourage parcel consolidation within the corridor to provide for more efficient use of land.

LU15 Minimize curb cuts on major thoroughfares by using shared access driveways.

LU16 Facilitate internal traffic flow by using cross easements in the rear of buildings and between parcels.

The permitted building types in this zone include buildings of a smaller scale such as townhouses, small apartment houses, small office buildings, and civic buildings. A typical site planning layout is outlined below.

Urban Corridor Development
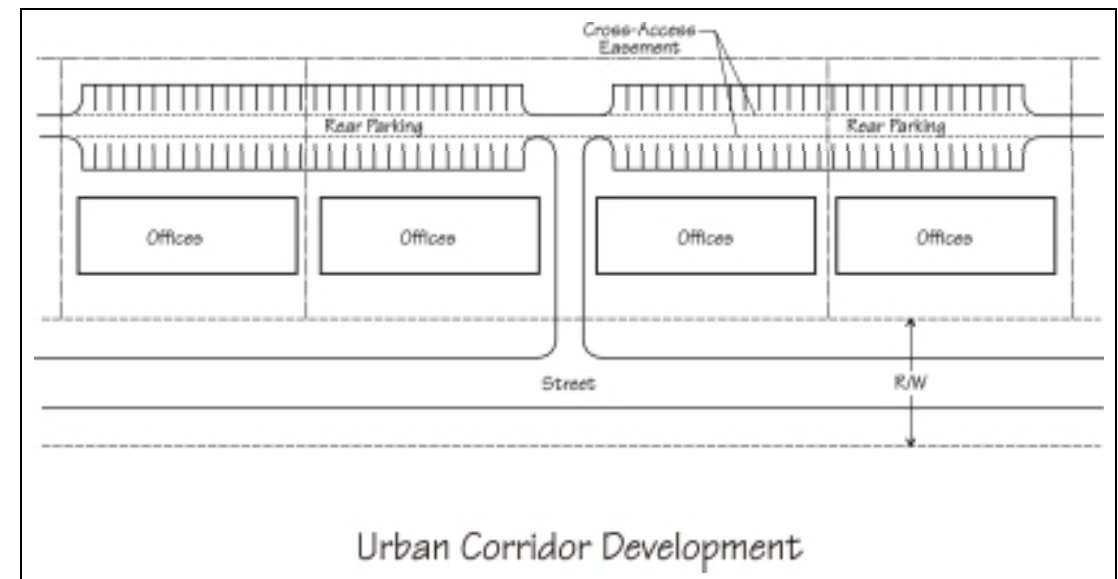
Public, Civic, and Institutional Development

The most prominent public land uses currently in Kettering are schools, municipal buildings, and the medical center. These types of land uses say a lot about the quality of the city and its services. Schools are located throughout the city near residential areas. The government center, which contains most city offices, is somewhat centrally located within the city. Five fire stations provide for major neighborhood anchors and definition. The Kettering Medical Center hospital campus is located in the southwestern portion of the city. The hospital is an asset to not only the city, but to the region. The high quality of medical care available close by for residents and the fact that it is a large employer in the city make it an almost priceless amenity.

Planning Strategies

LU17 Promote appropriate expansion of Kettering Medical Center.

LU18 Preserve public, civic and institutional land uses throughout the city in appropriate locations.

LU19 Provide for appropriate expansion of schools, government offices, and institutional uses where appropriate.

Professional Office, Research, and Industrial Development

Manufacturing, office, and research facilities have been the backbone of the Kettering economy in recent decades. Preservation of businesses such as these are important to maintaining Kettering's quality of life and future vitality within the region. Diversification of the business base within these sectors for employment opportunities is also important to Kettering's long-term future.

Planning Strategies

LU20 Provide a variety of economic development opportunities in Kettering. Business parks should provide a variety of parcel sizes to accommodate a variety of building sizes and market needs and to quickly respond to a changing market.

LU21 Emphasize environmentally clean businesses. New development should focus on clean industries and high-tech office uses to enhance the quality of life in Kettering.

LU22 Locate businesses in areas with good regional vehicular access. Critical to the success of business is the ability to easily and quickly get products to the market. Safe, efficient access to the interstate system will aid in the long-term viability of these businesses.

LU23 Ensure the safety of pedestrians and bicyclists in and around office parks with pedestrian circulation safety measures.

LU24 Encourage the reuse of existing structures or areas to use resources most efficiently.

Parks and Open Space Development

As Kettering has grown over the years, lands were dedicated to or purchased by the city for open space and parks. Today, the city is almost 100 percent built-out, so finding additional vacant lands to purchase for parks may be difficult. This is a serious issue, as there are several neighborhoods and segments of the population that are under-served in the availability of parks and open space. The city needs to provide more public park space as a whole and develop a variety of possible activities to serve its population adequately.

Planning Principles

▸ Encourage new public spaces such as plazas, squares, greens, or parks as part of new mixed-use development or in neighborhoods that are under-served. These spaces can be either active or passive in their use.

▸ Public spaces add value to the neighborhood and can trade off for higher densities.

▸ Use floodplains for conservation areas, greenways, and water management.

Parks and Open Space Strategies

`LU25` Establish public spaces within new mixed-use developments. These redevelopment sites provide prime opportunities for creating public park spaces, both to enhance the immediate neighborhood as well as to add acreage to the city's park system.

`LU26` Define the locational context and site design for dedicated open spaces. Just requiring a certain percent of open space in a new development does not make the space usable for area residents. More urban locations should have open space designed as plazas, squares, or greens while fewer urban locations should be designed as parks, playfields, or greenways.

`LU27` Require public spaces to be created as part of the overall development plan for newly annexed sites.

`LU28` Work with adjacent municipalities to coordinate efforts for parks that may be used by area residents. For example, the Cardington landfill could become a passive open space area for the region.

`LU29` Continue the analysis and updating of the Kettering Park and Open Space 2000 Plan.

Following are parks and open space goals and objectives from the Kettering Parks and Open Space 2000 Plan. These goals and objectives were prepared by city staff on the basis of facility analysis and inventory, park user surveys, and recommendations from the Parks, Recreation, and Cultural Arts Advisory Board and the Planning Commission. The goals and objectives are translated into implementation through the recommendations contained in the action plan.

▸ **Goal 1**—Be responsive to citizen needs.

  ▸ **Objective 1**—Conduct park visitor surveys every two years to determine citizen needs and wants.
  ▸ **Objective 2**—Meet yearly with all park user groups.

▸ **Goal 2**—Provide new park amenities that are responsive to new concepts and trends.

  ▸ **Objective 1**—Keep informed of new developments in park management.
  ▸ **Objective 2**—Analyze users' needs to determine new trends.
  ▸ **Objective 3**—Determine feasibility and longevity of new trends and concepts before implementation.

▸ **Goal 3**—Maintain parks and facilities to be attractive, exciting, and safe and to provide a quality leisure experience within the financial resources of the city.

  ▸ **Objective 1**—Maintain all parks to meet established standards.
  ▸ **Objective 2**—Evaluate the park action plan yearly.
  ▸ **Objective 3**—Complete all capital improvement projects as outlined in the park action plan.

▸ **Goal 4**—Increase appreciation for the natural environment through preservation and resource stewardship.

   ▸ **Objective 1**—Cooperate with Five Rivers MetroParks and Kettering-Moraine School District to provide outdoor educational opportunities.
   ▸ **Objective 2**—Communicate the benefits of parks and open spaces to the citizens.
   ▸ **Objective 3**—Continue the Citizen Tree and Park Tree Planting Programs.

▸ **Goal 5**—Protect and expand the open space available in Kettering.

   ▸ **Objective 1**—Determine citywide park needs through the use of Kettering's standards.
   ▸ **Objective 2**—Determine locations for park expansions based upon population needs within each neighborhood.
   ▸ **Objective 3**—Provide each park service area with a park commensurate in size and design to the population and special characteristics of the area.
   ▸ **Objective 4**—Develop recreational facilities so that surrounding residents are not negatively affected by their use.
   ▸ **Objective 5**—Work cooperatively with Kettering schools to maintain and improve park/school sites.

▸ **Goal 6**—Expand the hike/bike trail system using floodplain land, easements, and park lands into areas not currently served.

   ▸ **Objective 1**—Continue to apply for federal funds to subsidize right-of-way acquisition and construction of new trails.
   ▸ **Objective 2**—Support regional agencies in their efforts to expand the regional bikeway system.
   ▸ **Objective 3**—Provide hike/bike linkages between community parks.

▸ **Goal 7**—Maintain a balance between the natural and manmade environments to preserve and protect natural features while allowing new development.

   ▸ **Objective 1**—Continue to enforce the requirement of open space dedication contained in the city's zoning and subdivision code.
   ▸ **Objective 2**—Work with commercial and industrial developers to maintain open spaces as enhancements to their property and adjacent properties.
   ▸ **Objective 3**—Develop and adopt a new tree ordinance.
   ▸ **Objective 4**—Develop a Heritage Tree Program.

City of Kettering

Comprehensive Plan

City of Kettering, Ohio

Low Density Residential
Higher Density Residential
Office
Professional Office & Business Park
Neighborhood Commercial
Community Commercial
Sub Regional Commercial
Public/Institutional
Industrial
Recreation
Commercial Recreation
Urban Corridor
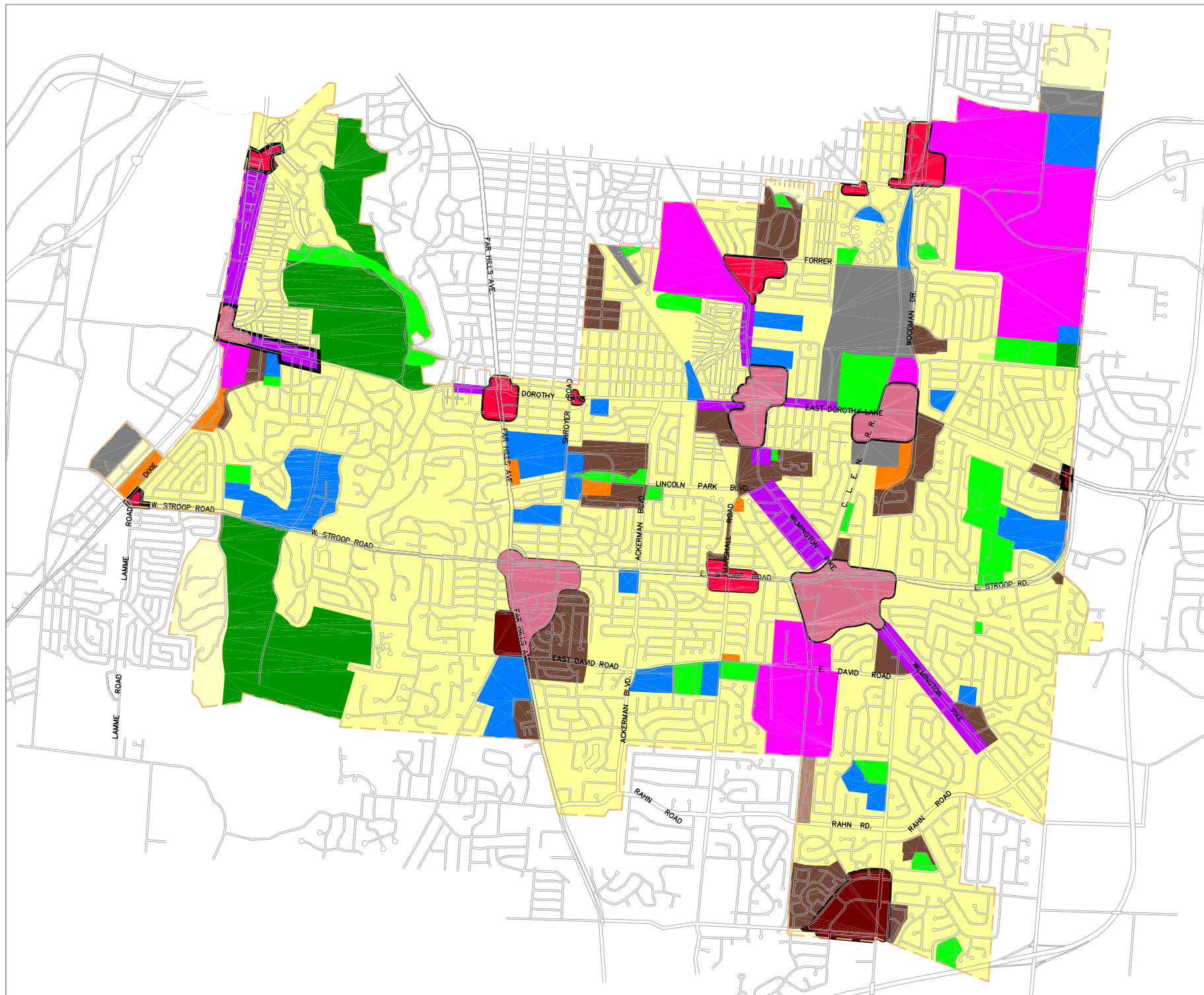
Figure 2
Land Use Plan

North

1"=4000'

Table 1
Description of Land Use Categories

Category	Recommended Uses	Design Characteristics
Neighborhood Commercial Center	Retail, office, residential, and civic uses that are small in scale and primarily serve the neighborhoods surrounding the center. Examples: corner store, insurance, dry cleaners, apartments above the store, and branch post office	▶ Small scale, follows architectural and building massing guidelines ▶ Small market trade area; mostly serves immediate neighborhood ▶ Pedestrian-oriented; linked to neighborhood with streets and sidewalks ▶ Typically located on a secondary thoroughfare ▶ Mixed-use streets with small setbacks and on-street parking
Community Commercial Center	Retail, office, residential and civic uses that are medium in scale and are intended to serve multiple neighborhoods. Examples: grocery store, drug store, townhouses and apartments above the store, library	▶ Small to medium in scale, follows architectural and building massing guidelines ▶ Medium market trade area; serves several neighborhoods ▶ Pedestrian-oriented; linked to neighborhood with streets and sidewalks ▶ Located on a primary thoroughfare ▶ Mixed-use streets with small setbacks and on-street parking

Category	Recommended Uses	Design Characteristics
Sub-Regional Commercial Center	Retail, office, residential, and civic uses that are larger in scale and serve the entire community. Examples: department store, bookstore, grocery store, townhouses, and apartments	▶ Large in scale, follows architectural and building massing guidelines ▶ Larger market trade area; serves more than the city limits of Kettering; fills a niche market on a regional scale ▶ Pedestrian-oriented; linked to neighborhood with streets and sidewalks ▶ Located on a primary thoroughfare ▶ Transit access within the center ▶ Mixed-use streets with small setbacks and on-street parking
Urban Corridor	Small office buildings and small apartment buildings	▶ Small scale buildings, three story maximum, follows architectural and building massing guidelines ▶ Pedestrian-oriented streetscape ▶ Most parking in the rear or side of buildings ▶ Encourages parcel consolidation in the corridor

Category	Recommended Uses	Design Characteristics
Higher-Density Residential	Townhouses and small lot single-family uses	▸ Pedestrian-oriented residential roads ▸ Linked to adjacent neighborhoods and shopping via streets with sidewalks ▸ Follows architectural guidelines and building massing ▸ Open space in the form of squares and parks
Low-Density Residential	Single-family attached and detached and religious	▸ Larger building lots ▸ Pedestrian-oriented streetscape ▸ Linked to adjacent neighborhoods and shopping via streets with sidewalks ▸ Open space in the form of parks, playfields, and greenways
Professional Office and Research	Professional office and research facilities	▸ Follows architectural and building massing guidelines ▸ Clean industry ▸ Located on a primary thoroughfare ▸ Transit access ▸ Open space in the form of squares, plazas, and quadrangles
Parks/ Recreation	Parks	▸ Active and passive recreation facilities ▸ Open space ▸ Greenways ▸ Neighborhood and community scale parks
Institutional/ Civic	Schools, libraries, large religious institutions	▸ No architectural guidelines ▸ Scattered throughout the city to be close to residents

Category	Recommended Uses	Design Characteristics
Industrial	Manufacturing uses	▸ Clean industries ▸ Located on major thoroughfares and rail lines with easy and efficient transportation access ▸ Minimize environmental impacts ▸ Reuse of existing structures/areas encouraged
Commercial Recreation	Golf courses	▸ Transitional land use

Redevelopment Areas

As a mature city that is almost 100 percent built-out, there are very few vacant sites within the existing city boundaries available for development. Conversely, there are numerous sites that contain either vacant or aging buildings, under-used retail centers, or obsolete buildings that are possible sites for redevelopment. These sites provide opportunities to positively affect the city's aesthetics, quality of life, and tax receipts.

Potential redevelopment sites are excellent opportunities for high-quality development that is more efficient, more attractive, and more functional, and that positively impacts the citizens' quality of life. The type of future development that is most appropriate for these redevelopment opportunities is the nature of this chapter. Figure 3 illustrates the location of the proposed redevelopment sites.

Figure 3 illustrates the top priority redevelopment sites in Kettering. It also depicts other areas that should be monitored closely for further change/decline. Detailed strategies for these areas may need to be developed as circumstances change. These areas of concern include the following:

‣ Stroop Road and Marshall Road area
‣ Oak Creek area
‣ Woodman Drive north of Patterson Road
‣ Dorothy Lane and County Line Road area
‣ Dorothy Lane and Far Hills Avenue

The following is a description of the issues and preferred land uses associated with each primary redevelopment site. All of the sites could be redeveloped using an overlay zone/PUD mechanism outlining a specific detailed development plan with land uses, building designs, and setbacks. As each of these areas redevelops, the city should consider the surrounding area for impacts, development spin-off, and improvement. Possible building types and general design guides are outlined in the Community Image

chapter. These development regulations will enhance the surrounding neighborhoods and possibly create destination points for local residents or fulfilling market demands of a larger nature.

LU30 Area One: South Dixie Highway Corridor

This corridor stretches from south of Dorothy Lane north to the Kettering municipal boundary along South Dixie Highway. Within this area is the Governor's Place development, which is currently under construction at the southeast corner of Dorothy Lane and South Dixie Highway. This corridor has a significant amount of under-used and aging commercial structures and parcels resulting in an inconsistent quality of development.

This area is a key entry point into Kettering, and although the stretch of road between the northern city limits and Schantz Avenue is nicely landscaped, the balance of the road does not give a strong or positive message about Kettering. The creation of a gateway feature could improve the impression for visitors.

The existing residential uses adjacent to the corridor are well-maintained and viable neighborhoods. The preservation and enhancement of these adjacent residential uses is important. Investment in a new residential neighborhood on the east side of South Dixie Highway approximately one-half mile north of Dorothy Lane, indicates that the residential component of the corridor is strong. Woolpert's reconnaissance and evaluation of this corridor and an

CITY OF KETTERING

Kettering Plan

Higher Density Residential

Urban Corridor

Commercial

SOUTH DIXIE AREA 1

Commercial

Office

Governor's Place

Neighborhood Commercial

VAN BUREN AREA 8

FORRER

WILES CREEK/ DESC AREA 9

Mixed Use (Commercial/Residential)

Park

Institutional and Residential

Single Family Re-Investment Area

WOLOHAN AREA 7

EAST DOROTHY LANE

Higher Density Residential

Mixed Use

Higher Density Single Family

WAGNER WOOD AREA 4

Commercial

WOODLANE PLAZA AREA 5

Professional Office

Commercial Center with Grid

Commercial

TOWN & COUNTRY AREA 2

Higher Density Residential

WILMINGTON PIKE AREA 3

Higher Density Residential

Higher Density Residential

WILMINGTON HEIGHTS AREA 6

DOROTHY LANE

FAR HILLS AVE.

SHROYER ROAD

W. STROOP ROAD

W. STROOP ROAD

LAMME ROAD

DIXIE

ACKERMAN BLVD.

MARSHALL ROAD

TOWN PARK BLVD.

WILMINGTON PIKE

E. STROOP RD.

STROOP ROAD

E. DAVID ROAD

EAST DAVID ROAD

WOODMAN DR.

RAHN ROAD

RAHN RD.

Legend

- Low Density Residential
- Higher Density Residential
- Office
- Professional Office & Business Park
- Commercial
- Public/Institutional
- Urban Corridor
- Mixed Use
- ✳ Additional Areas of Concern

Figure 3
Redevelopment Area Concepts

North

1"=4000'

earlier land use study, prepared by Gem Real Estate Group, Inc., resulted in the identification of the following issues and corridor recommendations:

Redevelopment Issues

▸ Proposed big box development on the northwest corner of South Dixie Highway and Dorothy Lane will have an impact on the south end of the corridor.

▸ There are a large number of aging commercial structures. There are numerous vacancies along the corridor.

▸ Protection/preservation/enhancement of adjacent residential uses on both sides of the street is needed.

▸ In many areas, the non-residential uses only go one property deep.

▸ There is an inconsistent quality of development.

Recommendations

▸ Concentrate commercial development in the areas closest to the intersection of Dorothy Lane and South Dixie Highway, with some mixed-use and office uses to the south.

▸ Concentrate the urban corridor development to the north and east of Dorothy Lane and South Dixie Highway.

▸ Centralize sub-regional and community commercial center uses at the intersection of South Dixie Highway and Dorothy Lane as part of the Governor's Place development.

▸ Establish a gateway feature at both ends of the corridor.

▸ Improve the roadway aesthetics with street trees in the planting strip between sidewalks and curb and in medians.

▸ Develop appropriate buffers between commercial and residential areas.

▸ Develop a comprehensive acquisition and development plan for the corridor.

LU31 Area Two: Town and Country Mall Site

This area includes the current Town and Country shopping center and land south to Westgate Drive. This mall has a high occupancy rate, but is beginning to show its age as retail concepts continue to evolve. The mall is located at the "main/main" intersection in Kettering. This location is one that the best retailers search for when looking at a community. This area is considered the heart of Kettering and could become more of a downtown area or the commercial core of Kettering as the site evolves.

Redevelopment Issues

▸ Retail facilities are becoming outdated. They are beginning to lose tenants because they can no longer meet their space needs.

▶ Multi-family units are also outdated. High vacancy rates on second floor units.

▶ This may be the best retail location in Kettering.

▶ Single-family residential units were converted to professional offices to the north.

▶ The area is surrounded by residential uses on three sides.

▶ The Town and Country shopping center is over 50 years old, speaking to its success.

Recommendations

▶ Promote a sub-regional commercial center and mixed-use development on the southeast corner of Stroop Road and Far Hills Avenue. Include retail, office, and residential uses as well as formal open space. Commercial uses should be focused in the north, higher-density residential in the middle section (north of Shroyer Road), and higher-density residential south of Shroyer Road.

▶ Use pedestrian-friendly street designs appropriate for mixed-use and residential developments.

LU32 Area Three: Wilmington Pike Corridor

Wilmington Pike, from David Road north to the Van Buren Shopping center, contains significant commercial strip development and a concentration of retail uses. The popularity of this area for retail is limited due to speed of traffic, roadway congestion, and difficulty with ingress and egress to many parcels. Wilmington Pike has the traffic counts contributing to potential retail success, but the traffic volume can also be a negative for long-term viability

of commercial uses. This may cause the area to be less desirable over time as high levels of traffic become a deterrent and people stop patronizing those stores.

There are many small businesses in older recycled facilities that help to diversify the economy. Many of these businesses are family-owned and face the challenges of transition to the next generation. The small parcels along the corridor are difficult to assemble into more usable sites. Woolpert's reconnaissance and evaluation of this corridor and an earlier land use study, prepared by Gem Real Estate Group, Inc., resulted in the identification of the following issues and corridor recommendations:

Redevelopment Issues

▶ Many vacant businesses exist along the corridor.

▶ The entire 2.5 mile corridor is commercial use with vacancies throughout.

▶ There is inconsistent development quality.

▶ Residential uses border commercial strip uses.

Recommendations

▸ Focus two mixed-use commercial districts sub-regional commercial centers within the corridor, the first at the intersection of Wilmington Pike and Dorothy Lane and the second located at Wilmington Pike and Stroop Road. Due to the nature of mixed-use districts, these will provide a variety of possible rent structures within the development. This helps diversify the types of businesses that locate to the corridor.

▸ Locate office and higher-density residential uses along Wilmington Pike between the commercial nodes using the urban corridor concept.

▸ Locate institutional uses north of the commercial node at Dorothy Lane and Wilmington Pike.

▸ Establish a coordinated development plan or overlay zone as a tool to implement vision and to ease assembly of parcels.

▸ Preserve viable residential uses that border commercial areas.

▸ Use possible slip street options to separate local and through traffic, easing access challenges to parcels.

▸ Locate higher-density residential development south of the Wilmington Pike/Woodman Road split.

LU33 Area Four: Wagner Wood Area

This site currently contains a large, under-used retail establishment, other small commercial establishments, and vacant land. This site is a prime example of an under-used parcel that has lost its economic viability. Residential development borders the site on three sides and commercial retail is located to the west. A former railroad line bisects the site.

Recommendations

▸ Locate higher-density single-family housing to capitalize on surrounding residential development to the south, including the recent single-family residential development along Devon Avenue.

▸ Buffer the residential redevelopment from Dorothy Lane using the urban corridor or neighborhood commercial concepts.

LU34 Area Five: Woodlane Plaza Site

This site, located south of the intersection of Woodman Drive and Dorothy Lane, is an under-used commercial center. Commercial and office uses are adjacent to the west and north, multi-family uses are to the south, and single-family uses to the east.

Recommendations

▸ Develop higher-density residential uses linking the residential areas to the south and east. Another option for this area is the inclusion of office buildings that could capitalize on the adjacent office/commercial area to the west. Development could follow the urban corridor concept.

LU35 Area Six: Wilmington Heights Shopping Center Site

This retail area is an example of an aging, obsolete commercial strip development. Approximately 50 percent of storefronts in this area are vacant. The site is located on a major thoroughfare and is surrounded by viable residential areas.

Recommendations

▸ Develop higher-density residential that would be compatible with surrounding higher-density and single-family residential neighborhoods adjacent to the site. This could be developed using the urban corridor concept.

LU36 Area Seven: Old Wolohan's Retail Site

This site has an under-used commercial building with commercial uses to the east and west, residential uses to the south, and Delco Park to the north. Commercial uses in this location, if designed appropriately, could contribute to a walkable scale, link to the commercial area adjacent to the east, and serve as a transition between the commercial and the lower-density residential areas to the west.

Redevelopment Issues

‣ Under-used building fronting exists on Dorothy Lane.

‣ The former lumberyard has been demolished.

‣ The site is adjacent the city's recycling center.

Recommendations

‣ Develop commercial uses that are compatible with the surrounding retail and industrial development.

LU37 Area Eight: Van Buren Site

This site includes the vacant Van Buren strip shopping center and the commercial area west of Smithville Road. This area has residential uses on the north, east, and south, and the Kettering Business Park on the west. The viability of this site for small-scale retail is strong, due to its location on Wilmington Pike and the possibility of residential uses being developed on the site.

Recommendations

‣ Develop the site as a mixed-use, neighborhood scale commercial center.

‣ Retain the mixed-use, commercial, or office uses on the northwest corner of the Van Buren site.

‣ Develop higher-density residential uses throughout the balance of the site.

‣ Focus the redevelopment of the commercial area west of Smithville Road as neighborhood commercial.

LU38 **Area Nine: Wiles Creek/Kettering Business Park Neighborhood Area**

This neighborhood is characterized by modest and sub-standard small single-family residential homes. The neighborhood has had inconsistent maintenance of existing homes. Much of this area is in a floodplain or floodway, constraining new investment in the area. There is developable land at the south end of Kettering Business Park.

Recommendations

▸ Establish a neighborhood park on the western portion of the area.

▸ Enhance the existing single-family neighborhood by focusing reinvestment resources and using grant and loan programs to improve, replace, or move homes within the neighborhood.

▸ Continue to provide curb, gutter, and sidewalk improvements to improve drainage and the appearance of the streets if desired by local residents.

▸ Develop new higher-density homes and townhomes between the Wiles Creek neighborhood and the proposed park to the west.

▸ Any investments made in the neighborhood (public or private) will encourage additional rebuilding of the neighborhood.

▸ Develop strategies to address homes most susceptible to flooding.

HOUSING

Kettering's housing stock has generally served the needs of its diverse population. Housing starts peaked in the 1950s with 9,800 units built, but they have dropped off to 370 units built during the 1990s. There is very little vacant land available for new housing, although redevelopment of certain areas or expansion of an existing house is a realistic option for developers and homeowners. Many of the single-family homes and neighborhoods are modest in size, providing plenty of room for expansion. Most of the newer neighborhoods have larger homes.

The changing needs and desires of the population impact how homes are designed and used. For example, having a garage or a garage that accommodates more than one car is a function of today's lifestyle as most households have more than one car. Space for a home office is also a popular component of new houses built today. Older homes need to be updated to meet these types of needs and remain viable into the future. In addition, finding housing to accommodate singles, families, and seniors in the same neighborhood and within walking distance of shopping is important to creating a vibrant neighborhood and city. Other housing issues are outlined below:

Housing Issues

▸ There is a lack of diverse housing price ranges within the city, especially in the middle ranges (between $150,000 and $250,000).

▸ Home ownership rates have declined over the years but seem to have stabilized recently.

▸ Redevelopment of some homes and/or areas may be needed as they reach the end of their functional life span.

▸ There is often poor or inconsistent maintenance of rental units.

▸ Many existing homes need to be remodeled and/or updated with larger garages and second floors to meet current market demands.

▸ There are few available parcels of land for new housing development.

▸ There is a pattern of large concentrations of rental units rather than distribution of rentals throughout the city.

▸ There are some zoning code hindrances that limit enhancing existing homes. These include:

   ▸ Garage additions and accessory units are limited.
   ▸ Expanding an existing small, antiquated home on a small lot is difficult. Improvements such as garages and house additions are difficult to accomplish without degrading the character, style, and feel of the neighborhood. Use of performance or design criteria is one possible mechanism to address this issue.
   ▸ The zoning code does not specifically address how to effectively permit teardowns of existing homes to rebuild larger homes.
   ▸ The PUD regulations allow flexible designs and setbacks but do not allow for high enough densities to create an urban feel.
   ▸ The zoning code was originally written around the existing uses that were there at the time; therefore, many modifications require variances.
   ▸ The zoning code discourages reuse and good design.

Current Housing Programs

Kettering has several current programs and policies that are being implemented to address various housing issues. The existence of these programs is important because the city is proactively trying to solve some of the existing housing problems. The following programs are being implemented by the city:

▶ **Housing Rehabilitation Program—**This program offers low interest loans for eligible homeowners for home repairs like heating, plumbing, electrical, roof, windows, doors, insulation, and siding. As a result, the program preserves the existing housing stock and encourages property owners to make necessary improvements to their homes and neighborhoods.

▶ **First Time Homebuyers Program—**This program provides financial assistance for down payments in the form of a forgivable loan for some first time homebuyers. This encourages neighborhood pride through home ownership.

▶ **Purchase Rehabilitation Program—**The City of Kettering buys homes and renovates them for sale on the market. This helps rebuild the housing stock and stabilize neighborhoods one house at a time.

In addition, a strategic housing plan and a 12 point housing and neighborhood plan are under consideration by the city to help guide decision-making and provide the basis for additional resources. These two policies detail strategies to enhance neighborhoods through improved maintenance, increased home ownership rates, land assembly, and diversification of the mix of housing options. Please see the appendix for a summary of these two plans.

Planning Principles

▶ **Provide a variety of housing options to meet the needs of city residents.** Kettering has many homes that are inhabited by the original homeowners and were designed to meet the needs of a 1950s/60s/70s era household. Times and needs have changed since the 1950s, but the housing stock is essentially the same. There is no shortage of affordable, single-family housing in Kettering; however, there is a shortage of mid-range single-family housing and high-quality townhomes and condominiums.

Since Kettering is almost completely built-out, new housing opportunities have been limited to a few small redevelopment projects in recent years. There is a desire for mid-range housing, as Kettering residents revealed in public meetings and the success of recent projects prove. A diversity of housing types, such as single-family detached, high-quality single-story, and multi-story townhomes and condominiums, was identified as being a benefit to the community.

▶ **Ensure compatibility between single-family residential and non-residential land uses.** Kettering is dominated by single-family residential neighborhoods that residents want to preserve. However, the desire for the conventional development pattern of a clear delineation between land uses is beginning to change. Kettering residents have revealed a desire to have more connectivity and proximity to public spaces such as parks, schools, and in some cases, shopping areas. However this desire is predicated by the need for adequate transitions of building size, design, and buffering between land uses.

▶ **Improve the condition of existing housing stock.** The dominant development pattern for single-family neighborhoods in Kettering is a small house on a small lot. And since most of the homes were built prior to the 1970s, these homes are aging and need improvements to meet the needs of a modern household. In many cases, smaller homes are being converted to rental properties, which could result in improvements or repairs being conducted less often.

City residents want to maintain the character of their neighborhoods as well as their own property values. These desires need to be balanced with the need for continued home improvements to ensure that housing in Kettering can compete with newer housing in outlying suburbs.

Housing Strategies

H1 Allow higher-density residential development in redevelopment areas to provide additional housing type options and to make the redevelopment more financially attractive. New housing in these areas could be single-story or multi-story townhomes and condominiums Neighborhoods in redevelopment areas should have appropriate public spaces (neighborhood parks, greens, tot lots) to ensure that there is adequate open space within walking distance of the neighborhood. Adequate transitions or buffering should be incorporated in redevelopment areas that border existing single-family neighborhoods. The transition area would be a good location for a neighborhood park or open space.

H2 Encourage programs for the city to assemble land for new housing development. Land assemblage could be accomplished by purchasing the few vacant properties that still exist in Kettering or by purchasing the existing homes that have low values. As part of the development process, the city could possibly become partners (encourage public/private partnerships) in development projects, minimizing development hurdles.

H3 Provide incentive programs such as waiving of development fees, lower property or income tax rates, tax increment financing, or tax rebates/abatements to encourage redevelopment and investment.

H4 Continue to implement and enforce existing programs, plans, and policies such as the Housing Rehabilitation Loan Program, Purchase Rehabilitation Program, and First Time Homebuyers Program.

H5 Enforce aggressively the requirements presented in the recently updated property maintenance code.

H6 Allow for flexibility in building types to meet market demands. The city's zoning ordinance should be updated to allow new types of building (granny flats/accessory units, live/works units, townhomes, and higher-density condominiums) in redevelopment areas as well as bigger homes on smaller lots. The zoning ordinance is unclear whether a residential unit could be located above a retail use within a general business district or within an office PUD zone.

H7 Annex undeveloped and developed lands. This strategy would enable the city to have direct influence on the type of housing development at that location. Once the land is acquired, the city could rezone the land for the appropriate type of housing.

H8 Update the city's zoning ordinance to allow or regulate home additions and teardowns. As homes turn over in ownership, new investments to accommodate today's lifestyles require modifications to the existing homes, or in some cases, tearing down the entire home and rebuilding on the same lot. Providing for this option or regulating how it should be implemented is important to retaining the character of some of Kettering's older neighborhoods.

H9 Revise the PUD component of the city's zoning ordinance to allow for higher densities. Currently, it somewhat restricts higher-density, more urban type development. The current PUD allows for the appropriate flexibility in design but does not allow for high enough densities to create an urban feel. Densities are restricted to what is allowed within the underlying zoning.

TRANSPORTATION

Introduction

Kettering has an excellent network of streets and good connections to the regional interstate highway system. The existing street network serves regional commuters and local traffic fairly well. The existing classification of thoroughfares in Kettering includes primary and secondary thoroughfares, primary and secondary arterials, collectors, and local streets.

Additional street types and designs are important to consider, especially as redevelopment occurs along major thoroughfares or as individual sites are redeveloped. Additional street design options should be used to help deliver streets, boulevards and roads that are more balanced between the needs of pedestrians and vehicles.

Planning Principles

▶ **Implement measures to reduce congestion and the amount of vehicle miles traveled.** Establish a mixed-use development pattern that reduces the distance between home, schools, shopping, recreation, and work and as a result potentially reduces the distances driven and provides the option to walk.

▶ **Create a balance between the needs of vehicles and pedestrians when designing streets.** Increased comfort for pedestrians is important in order to create balance on a street, and it will contribute to the attractiveness of walking to nearby destinations.

▶ **Designate gateway areas and intersections along major routes that will have a high priority for aesthetics and a gateway feature.** In addition to serving as the primary travel corridors, major thoroughfares function as gateways into the city and provide visitors and residents with an image of Kettering. To enhance the image, major roads should receive landscaping treatments and signage that provides a positive image of the city.

▶ **Streets are important public spaces and need to be designed as such.** The attitude that streets are important public spaces should be reflected in the street design parameters to create functional, beautiful, and comfortable space for vehicles and pedestrians.

▶ **Establish strong links between land use and infrastructure decisions.** Coordinate land use and street design to create more walkable neighborhoods.

▶ **Promote increased street and road connectivity between existing and future developments.** New development or redevelopment should have interconnected streets to give residents more choices of routes and means of transportation.

▶ **Increase pedestrian activity through proper street section design with sidewalks and street trees.** Create streets that are balanced between being comfortable for pedestrians and functional for vehicles.

▶ **Increase alternative transportation options such as bicycle paths and public transit.** Create systems that are easy to use and connect to locations such as shopping, civic, and entertainment buildings.

▶ **Implement traffic calming measures at appropriate locations.** In areas that need traffic calming, implement appropriate techniques to create streets that are safer for both vehicles and pedestrians.

Transportation Strategies

Transportation strategies focus on transit service, bicycle route, pedestrian design, and street design parameters.

T1 Enhance bus service to provide more complete route coverage as needed, especially on east/west routes.

T2 Provide bus service that is integrated into new development in order to link travelers to the front door of a neighborhood or business rather than emptying riders into a huge parking lot.

T3 Connect Kettering to the existing regional bikeway systems and provide bicycle routes and paths within Kettering. This will provide not only another transportation alternative for residents, but also additional recreational opportunities. Implementation of the bikeway recommendations in the city's parks and open space plan, illustrated in Figure 4, would create a system of pathways that provides access to the regional bikeway system as well as link various portions of the community.

T4 Add bike lane stripes on collector streets to permit a safer and more comprehensive bikeway system.

T5 Provide street lights for every major thoroughfare street improvement.

T6 **Street Design Parameters**

The following thoroughfare design standards should be adopted by the city and used in redevelopment areas and on major corridors where major roadway construction is occurring. The road design standards help codify the appropriate design for a road based on its locational context within the community. Each street type has its own role and is designed for the function and role it plays in the transportation network. The street design is important because it links together the two sides of the street forming, the floor of an outdoor room, where the buildings are the walls of the outdoor room.

Streets serve a variety of uses. They create a place for social interaction; provide the framework through which buildings gain an address; provide access and identity; and act as a place for vehicles, cycling, walking, playing, utilities, and creative expression. Street design should serve the pedestrian and vehicles equitably within the system of roadway, sidewalks, and street trees.

As a general rule, the tighter the height to width ratio, the stronger the sense of place; the more comfortable it is for pedestrians, the less comfortable it is for vehicles. The combination of street width, landscaping, disciplined street tree plantings, and building facades implements the ratio and the resultant sense of place. One or more of these elements will be effective in achieving the sense of place. Using this concept, a streetscape that is balanced between the needs of people and cars can be designed and built. The following image graphically outlines how space is defined through the height to width proportions.

Street Design Guidelines

The following sections outline possible street design guidelines for new streets that are part of redeveloped sites, neighborhoods, or corridors. Since the City of Kettering is urban, the outlined thoroughfare options follow design principles for urban locations. Please note that the numbers (for example 92-42) associated with each street type reflect the right-of-way width (92') and the pavement width (42').

Comprehensive Plan

City of Kettering, Ohio

Legend

Existing (Outside Kettering)
River Corridor
Five Rivers Metro
Dayton
Centerville
Beavercreek
Moraine

Existing (Inside Kettering)

Proposed (Outside Kettering)
River Corridor
Five Rivers Metro
Dayton
Centerville
Beavercreek
Moraine

Proposed (Inside Kettering)
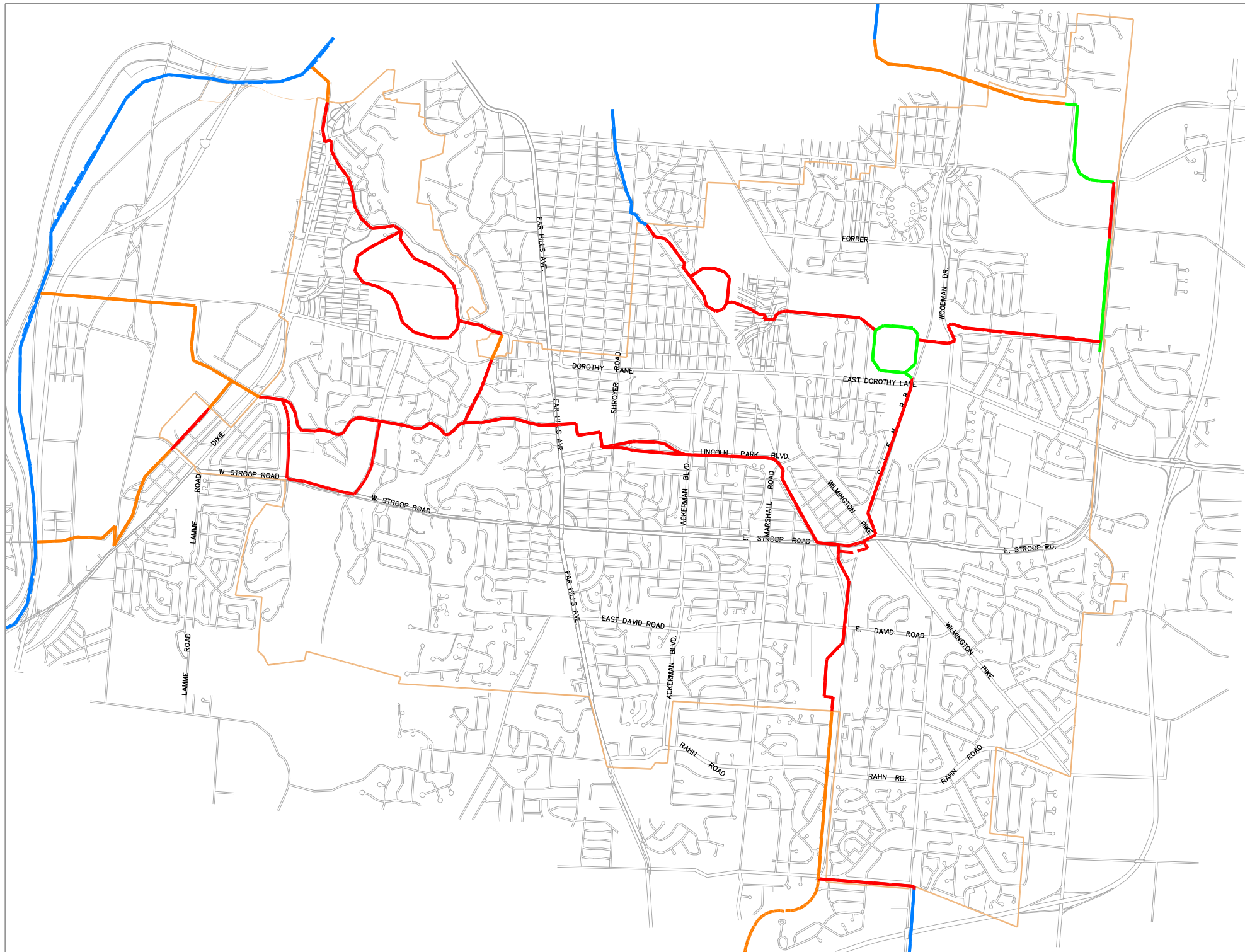
Figure 4
Proposed Bikeway Routes

North

1"=3000'

Residential Boulevard

A residential boulevard is a long distance, free movement thoroughfare traversing an urbanized area. In this case, a boulevard is flanked by residential uses. The design includes sidewalks, median, and planting strip with street trees. On-street parking could be added if desired, but only if the redesign retains the planting strip and sidewalks. Current examples of this type of road in Kettering include parts of Stroop Road.
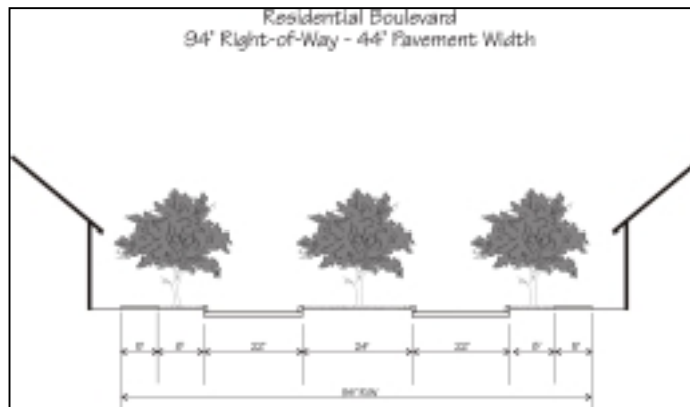
Residential Boulevard
94' Right-of-Way - 44' Pavement Width

Residential Boulevard
94' Right-of-Way - 44' Pavement Width

Road Design Parameters

Type	Residential Boulevard
Movement	Medium Speed
Design Speed	35 MPH
R.O.W. Width	94 ft.
Pavement Width	44 ft.
Traffic Flow	Two Lanes Each Way
Number of Parking Lanes	N/A
Curb Type	Raised
Curb Radius	15 ft.
Planter Width	N/A
Planter Type	Continuous
Planting Pattern	Allie 30 ft. on center
Tree Type	N/A
Bike Way Type	N/A
Bike Way Width	N/A
Sidewalks	Both Sides
Sidewalk Width	5 ft.

Rear Lane

A rear lane is a vehicular access located to the rear of lots providing access to garages and parking areas. Lanes are paved to driveway standards. Lanes are most appropriate for lower-density residential areas and exist in some of Kettering's older neighborhoods.

Use of rear lanes can divert some local traffic to the rear (accessing garages) making the streets more aesthetically pleasing. In addition, utilities and other services can be provided in the rear rather than front.

Lane
24' Right-of-Way - 8' Pavement Width

Road Design Parameters

Type	Lane
Movement	Yield Movement
Design Speed	15 MPH
R.O.W. Width	24 ft.
Pavement Width	8-12 ft.
Traffic Flow	Two Way
Number of Parking Lanes	None
Curb Type	Swale
Curb Radius	15 ft. max.
Planter Width	N/A
Planter Type	Continuous
Planting Pattern	None
Tree Type	N/A
Bike Way Type	Bike Route
Bike Way Width	N/A
Sidewalks	None
Sidewalk Width	N/A

Alley

An alley is a vehicular access route providing access to the rear of more urban or commercial lots. Alleys provide access to service areas, parking and utility easements. Alleys must accommodate trucks and dumpsters and should be paved from building face to building face.

Alley
24' Right-of-Way - 24' Pavement Width

Road Design Parameters

Type	Alley
Movement	Slow Movement
Design Speed	15 MPH
R.O.W. Width	24 ft.
Pavement Width	24 ft.
Traffic Flow	Two Ways
Number of Parking Lanes	None
Curb Type	None
Curb Radius	15 ft. max.
Planter Width	None
Planter Type	None
Planting Pattern	None
Tree Type	None
Bike Way Type	Bike Route
Bike Way Width	N/A
Sidewalks	None
Sidewalk Width	N/A

CITY OF KETTERING

TRANSPORTATION

Mixed-Use Boulevard

A mixed-use boulevard is a long-distance, free-movement thoroughfare traversing an urbanized area. In this case, a boulevard is flanked by a mixture of uses including offices, retail, and residential uses. The design includes four lanes of through traffic and two lanes of local traffic with on-street parking (one lane each direction) separated from the through traffic by a median; sidewalks, median, and planting strip with street trees. This type of boulevard provides excellent access to properties fronting high volume roads and greatly enhances traffic flow. Area examples include Far Hills north of Dorothy Lane.

Mixed Use/Parisian/Pedestrian Boulevard
124 - 74

Mixed Use/Parisian/Pedestrian Boulevard
124' Right-of-Way - 74' Pavement Width

Road Design Parameters

Type	Mixed Use Boulevard
Movement	Medium Speed
Design Speed	35 ft.
R.O.W. Width	124 ft.
Pavement Width	44 ft.
Traffic Flow	Two Lanes Each Way
Number of Parking Lanes	N/A
Curb Type	Raised
Curb Radius	15 ft.
Planter Width	N/A
Planter Type	Continuous
Planting Pattern	Allie 30 ft. on center
Tree Type	N/A
Bike Way Type	N/A
Bike Way Width	N/A
Sidewalks	Both Sides
Sidewalk Width	5 ft.

Mixed-Use Street

A mixed-use street is a local, free-movement thoroughfare that provides frontage for higher-density mixed-use areas. It is more urban in character with raised curbs, closed drainage, wide sidewalks, parallel on-street parking, and street trees in individual planters.

Mixed Use Street
58' Right-of-Way - 32' Pavement Width

Mixed Use Street Two-Way Traffic; On-Street Parking on Both Sides.
58' Right-of-Way - 32' Pavement Width

Road Design Parameters

Type	Commercial and Residential Street
Movement	Slow
Design Speed	20 MPH
R.O.W. Width	58 ft. min.
Pavement Width	32 ft.
Traffic Flow	Two Ways
Number of Parking Lanes	Both Sides
Curb Type	Raised
Curb Radius	15 ft. max.
Planter Width	7 ft.
Planter Type	Continuous
Planting Pattern	Allee 30 ft. o.c.
Tree Type	N/A
Bike Way Type	Bike Lane
Bike Way Width	4 ft.
Sidewalks	Both Sides
Sidewalk Width	5 ft.

Residential Street

A residential street is a local, free-movement thoroughfare that provides frontage for higher-density residential areas. A residential street in an area that is urban in character should have raised curbs, closed drainage, parallel on-street parking, sidewalks, and street trees in a planting strip between the sidewalk and curb. The majority of roads in Kettering fall within this category.

Some residential areas are less urban, have larger lot sizes, and are not adjacent to significant concentrations of commercial or civic activity. Sidewalks and curbing may not be necessary in these areas.

Local Residential Street
On-Street Parking on Both Sides.
(yield movement)
52' Right-of-Way - 26' Pavement Width

Local Residential Street
On-Street Parking on Both Sides.
(yield movement)
52' Right-of-Way - 26' Pavement Width

Road Design Parameters

Type	Residential Street
Movement	Yield Movement
Design Speed	15 MPH
R.O.W. Width	52 ft. min.
Pavement Width	26 ft.
Traffic Flow	Two Ways
Number of Parking Lanes	Both Sides
Curb Type	Raised
Curb Radius	15 ft. max.
Planter Width	7 ft.
Planter Type	Continuous
Planting Pattern	Aliae 30 ft. o.c.
Tree Type	N/A
Bike Way Type	Bike Lane
Bike Way Width	4 ft.
Sidewalks	Both Sides
Sidewalk Width	5 ft.

T7　Traffic Calming

Traffic calming measures are also important to creating a balance between pedestrians and vehicles. These may be most applicable in existing neighborhoods rather than redevelopment areas, but could be used wherever needed. Table 2 outlines a matrix of options and the pros and cons of each possible method.

Table 2
Traffic Calming Measures

Type of Traffic Calming	Applies to Low Density Areas	Applies to Mixed Use or High Density Areas	Pros	Cons
Stripe pavement	✓	✓	Low cost; creates possible bike lane	Concern about aesthetics in residential neighborhoods
Rebuild street with a narrower pavement width	✓	✓	Increases planting strip width	Higher cost; may create operational challenges if too narrow
Allow on-street parking on one or both sides	✓	✓	Low cost	Residents may choose not to park on the street, negating the effectiveness
Speed hump	✓	✓	Relatively low cost	Noise generated as cars accelerate after passing over; delays emergency vehicles; hazard to motorcycles
Speed table	✓			Noise generated as cars accelerate after passing over. Very difficult for snow removal
Stop signs	✓	✓	Low cost	Misuse of four way stops cause stop sign running
Turning restriction signs			Makes cut-through difficult	Physical barriers are needed to ensure compliance; cost

Type of Traffic Calming	Applies to Low Density Areas	Applies to Mixed Use or High Density Areas	Pros	Cons
Mid-block bulb-out	✓	✓	Greatly reduces pedestrian crossing distance and time	Design detail needed to accommodate snow plows
Bulb-out at intersection	✓	✓	Greatly reduces pedestrian crossing distance and time	More difficult for larger vehicles to make the turn
Textured pavement or brick	✓	✓	Aesthetically pleasing	Noisy; more maintenance; higher cost
Raised intersection		✓		Noise generated as cars accelerate after passing over; delays emergency vehicles; hazard to motorcycles
Enforcement	✓	✓		Costly; takes officers away from other crime work; needs periodic repetition
Radar speed monitoring	✓	✓		Useless without enforcement
Gateways			Narrows the street; could be transit stop area	
Rumble strips	✓			Noisy; dangerous to bicycles
Landscape island or traffic circle	✓	✓	Efficient traffic flow	Traffic patterns can be confusing for first time users

COMMUNITY IMAGE

Introduction

Community image is comprised of several physical elements that are generally located within the city's public spaces and streets. These elements include public art, gateways, building design, civic buildings, open space design, signage, and landscaping within public areas and streets. Standards for design of these elements can help contribute to the sense of identity within Kettering and help enhance the quality of life available.

Kettering is presently implementing two programs that address community image. The first is a public art program that generates funds for public art within the city. The second is enhancement of several key gateway locations at major entry points to the city. These programs should continue to be implemented. The following additional design guidelines should be used in a general sense in specific locations as appropriate.

Building Types

The following building types are general guidelines that may be appropriate for redevelopment sites or areas that are redeveloped. Each building type is appropriate for use within various land use classifications. The land use classification locations are noted on the future land use map in the land use section.

CI1 **Large Mixed-use or Residential Building**

A large mixed-use or residential building is generally appropriate for areas that are to be redeveloped and specifically appropriate for the sub-regional commercial center. Mixed-use buildings can have multiple uses, including commercial, office, retail, residential, or hotel uses.

This type of building can generally be up to five stories tall and should have a very small front setback, perhaps as small as zero feet. The building should have doors providing access to both the street in the front and parking areas in the rear. Parking is provided both on-street and in the rear. Shared parking concepts should be used for efficiency where appropriate. When small setbacks are used, utilities can be located in the rear or in the street right-of-way in front.

Architectural guidelines include having windows and other features commonly associated with the front façade of a mixed-use building such as awnings, cornice work, edge detailing, and doors. Signage for commercial uses should be in keeping with a pedestrian scale environment. Please see the images and graphics below for visual and site planning examples.

Mixed use or retail section

Mixed use or retail plan view
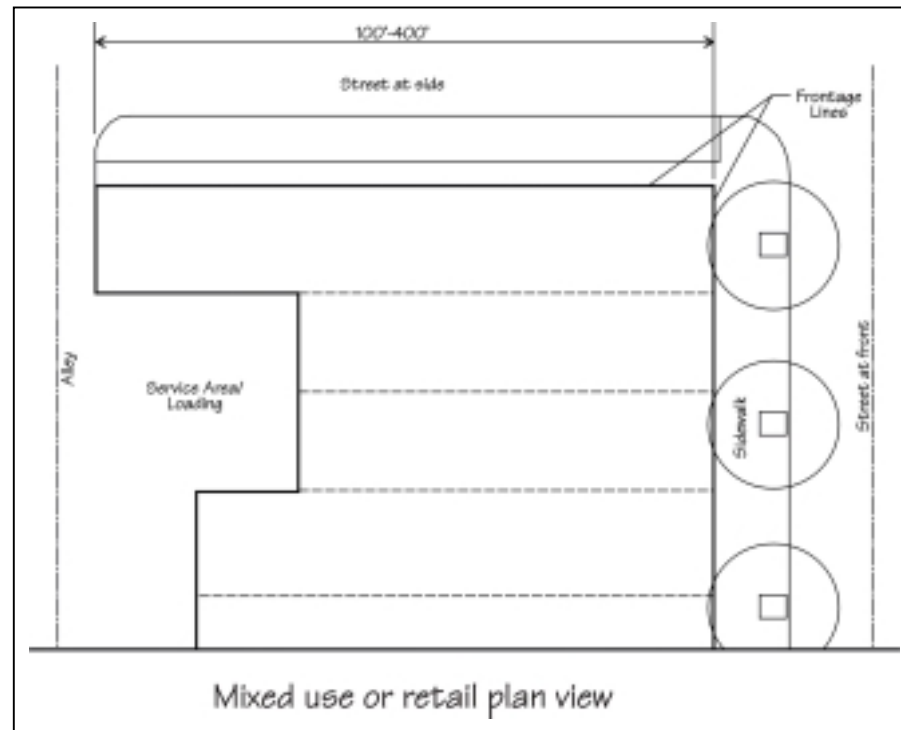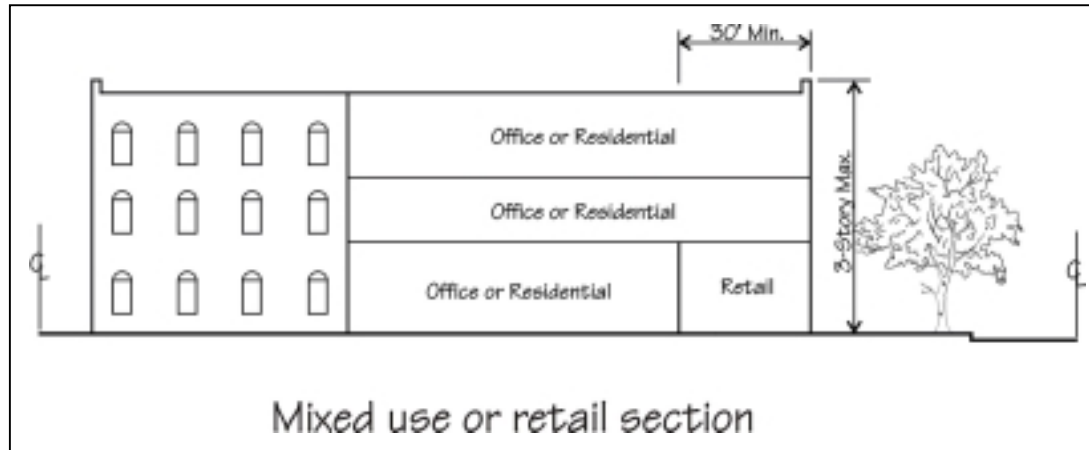
Cl2 **Medium Mixed-Use or Residential Building**

A medium mixed-use or residential building is generally appropriate for areas that are to be redeveloped and specifically appropriate for sub-regional commercial centers, community commercial centers, and urban corridor areas. Mixed-use buildings can have multiple uses, including commercial, office, retail, residential, or hotel uses while residential buildings are restricted to residential uses.

This type of building can be generally up to three stories tall and has a very small front setback, perhaps as small as zero feet. The building should have doors providing access to both the street in the front and parking areas in the rear. Parking is provided on-street and in the rear. Shared parking concepts should be used for efficiency where appropriate. When small setbacks are used, utilities can be located in the rear or in the street right-of-way.

Architectural guidelines should generally include having windows and other features commonly associated with the front façade of a mixed-use building such as awnings, cornice work, edge detailing, and doors. Signage for commercial uses should be in keeping with a pedestrian scale environment. Please see the images and graphics to the right and in the large mixed-use building type pages for visual examples.

Cl3 **Small Mixed-Use or Residential Building**

A small mixed-use or residential building is generally appropriate for areas that are to be redeveloped and specifically appropriate for sub-regional commercial centers, community commercial centers, neighborhood commercial centers, and urban corridor areas. Mixed-use buildings can have multiple uses, including commercial, office, retail, residential, or bed and breakfast type uses; residential buildings are restricted to residential uses.

This type of building can be up to two stories tall and shall have a very small front setback, perhaps even as small as zero feet. The building should have doors providing access to both the street in the front and parking areas in the rear. Parking is provided both on-street and in the rear. Shared parking concepts should be used for efficiency where appropriate. The images below are provided as visual examples.

CI4 **Large, Medium, and Small Retail Buildings (Big Box Retail Buildings)**

Large, medium, and small retail buildings are generally appropriate for areas that are to be redeveloped. This type of building is generally one story tall with a tall front façade and very small front setbacks. Parking can be provided on a slip street, in the rear, and on-street in the blocks surrounding the store. Shared parking concepts should be used for efficiency when appropriate.

Architectural guidelines generally include the requirement that front and side elevations have windows and other features such as awnings, cornice work, edge detailing, and doors. The building shall have doors providing access to both the street in the front as well as parking areas in the rear. Signage should be in keeping with a pedestrian scale environment.

In addition, retail buildings should have an active façade for the elevation that fronts the street. This may be accomplished by designing individual shops fronting the street (with operating doors and display windows) for specific departments of the store. For example, the diagram below outlines how a grocery store could implement the individual shopfront concept by providing the floral, bank, and pharmacy departments their own individual door to the street and distinct display windows on the street frontage. This concept activates the street with doors and windows rather than having a long blank, brick wall that detracts from the streetscape. Please see the images and graphics below for visual examples.

CI5 Retail Building Size Parameters

Large retail buildings are those with a footprint generally greater than 50,000 square feet and are permitted in the sub-regional commercial center. Medium retail buildings have a footprint ranging from approximately 10,000 to 49,999 square feet of space and are permitted in the sub-regional commercial center and community commercial center. Small retail buildings have a footprint under approximately 10,000 square feet and are permitted in the sub-regional commercial center, community commercial center, and the neighborhood commercial center. Small retail buildings are not required to have individual doors for small departments but shall have clear glass display windows. The following graphics outline the concept of individual departments having doors and windows along the street as well as the building's placement and relationship to the street.

Big box/retail building section

Big box/retail building plan view
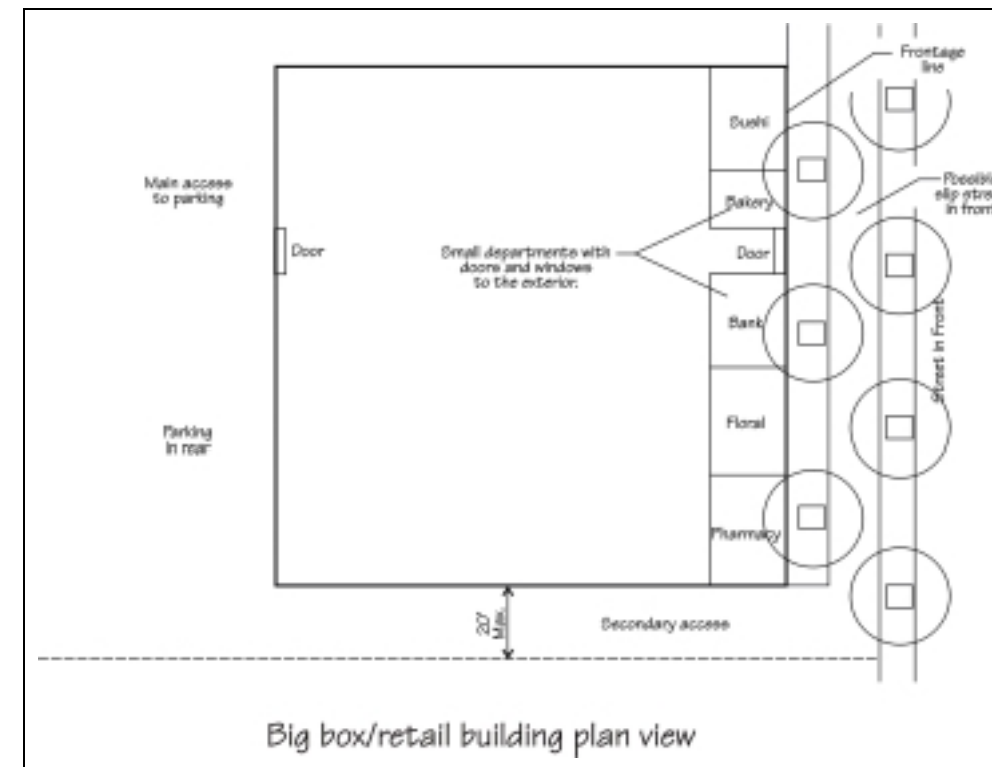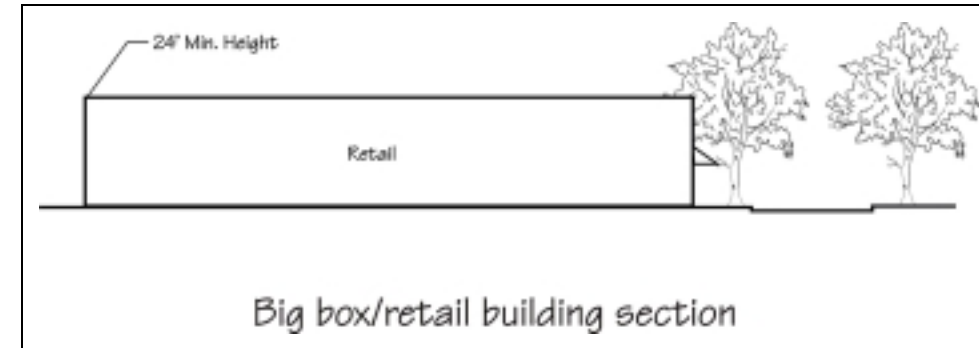
CI6 Townhomes and Live Over Work Buildings

Townhomes are single-family dwellings with common walls on the side lot lines and a continuous façade. Townhomes and live over work buildings are generally appropriate for areas that are to be redeveloped and specifically appropriate for sub-regional commercial centers, community commercial centers, neighborhood commercial centers, urban corridor areas, and higher-density residential areas. This building type is an excellent transition between more intense areas and less intense single-family areas.

Generally this type of building can be up to three stories tall and shall have small front setbacks. The buildings should have doors providing access to both the street in front and a private area or parking areas in the rear. Townhomes are restricted to residential uses, while live over work buildings are restricted to a professional office or studio on the first floor only and residential uses on the second and third floors.

Architectural guidelines include the requirement that front and sidewalk elevations shall have windows and features commonly associated with the front façade of a townhouse such as awnings, cornice work, edge detailing, and doors. Parking is provided both on-street and in the rear. Shared parking concepts should be used for efficiency where appropriate. Please see the images below for visual of elevations and site plan layout examples.

Townhouse
2 1/2 story street elevation

Townhouse plan view
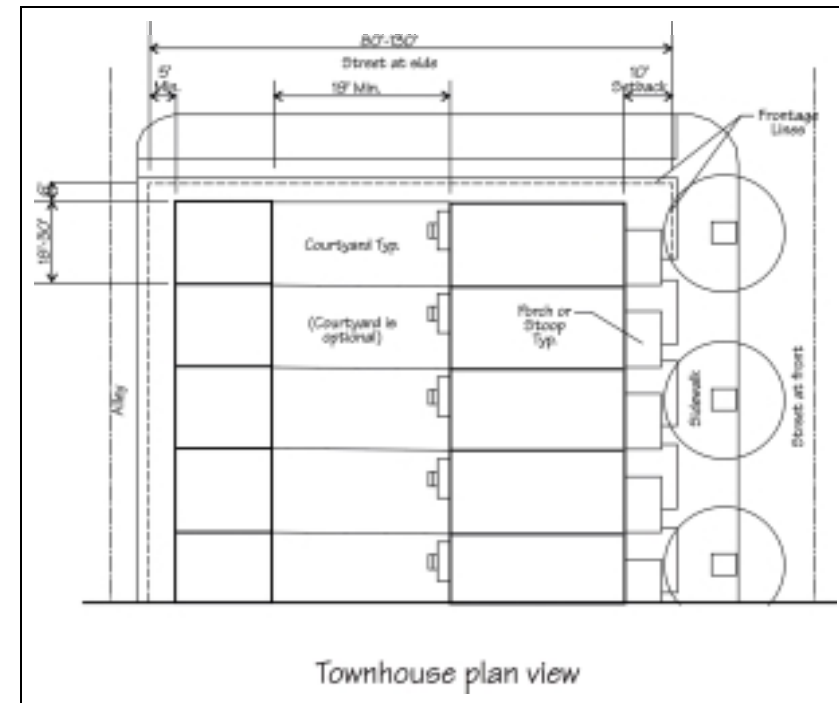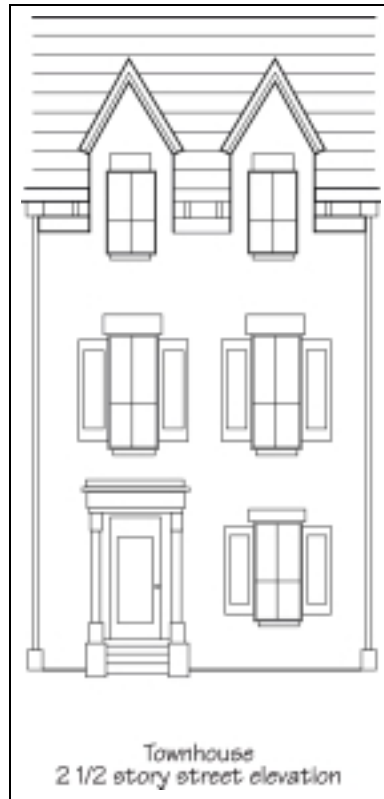
CI7 **Small Office Building or Small Apartment House**

The small office building or small apartment house building type accommodates multiple dwelling units or small office suites above and or next to each other. The individual units all share a common entry from the street. The building is generally compatible in design with a large single-family home. A small office building or small apartment house is generally appropriate for areas that are to be redeveloped and specifically appropriate for a sub-regional commercial center, community commercial center, neighborhood commercial center, urban corridor area, or higher-density residential area.

This building type is generally restricted to a maximum of three stories in height and office or residential uses. The front setback shall be somewhat small, perhaps in the range of 15' to 25'. Parking is provided in the rear or on-street. Typically, rear parking areas are served by rear lanes that have occasional driveways accessing the street. Cross easements with adjacent parcels are encouraged for higher efficiencies.

Architectural guidelines generally include the requirement that front and side elevations shall have windows and features commonly associated with the front façade of a single-family house. The building should have doors providing access to both the street in front and parking areas in the rear. Signage for commercial uses should be in keeping with a pedestrian scale environment. Please see the images below for visual examples of typical elevations.

Front elevation small office building or small apartment building.

Plan
Kettering

Plan view
small apartment or small office building
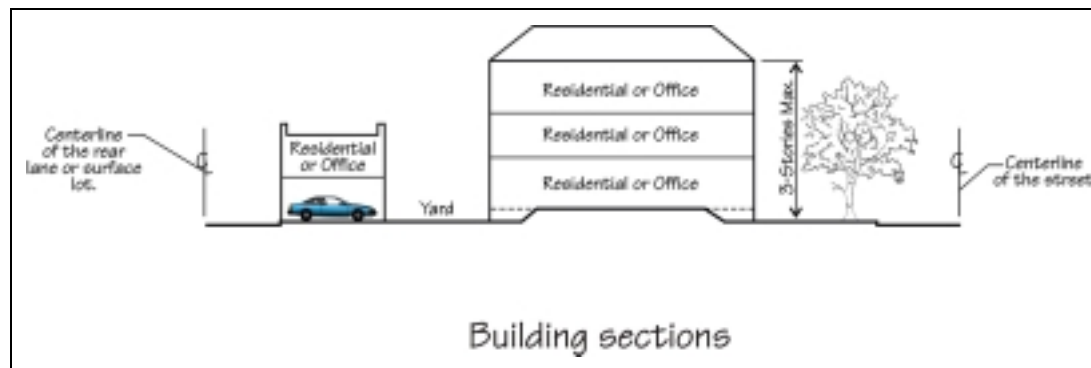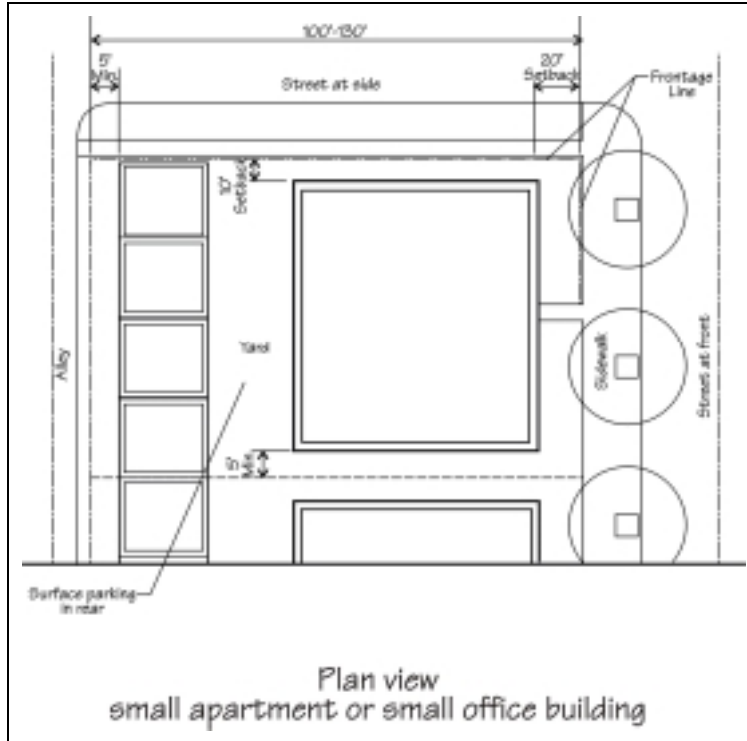
Building sections

CI8 **Civic Buildings**

Civic buildings are unique opportunities to contribute to the identity of a community or neighborhood and should be of high-quality design and construction. Civic buildings are not restricted in any way on building design, height, architectural style, or placement, although building elevations that face a street should relate to the human scale. Creative designs are encouraged.

Schools, churches, and government buildings should be built or situated so that they terminate a street vista whenever possible and should be of sufficient design quality to create visual anchors for the community.

CI9 Frontage Types

The frontage types described below indicate how buildings meet the street. Frontages are an integral part of the streetscape system. These general guidelines should be used in the design of new buildings in redevelopment areas. When frontages are combined with proper street design, a pedestrian-friendly streetscape will be the result.

Retail and mixed-use buildings should use an arcade, shopfront, dooryard, or forecourt design. Townhomes should use a stoop design, and higher-density single-family areas should use the porch and fence concept design.

‣ **Arcade**—The building overlaps the sidewalk above while the ground story remains set back at the lot line. This type is typical for retail use, but only when the sidewalk is fully absorbed within the arcade so that a pedestrian cannot bypass it. An easement for private use of the right-of-way is usually required. To be useful, the arcade should be no less than 12 feet wide.

Arcade
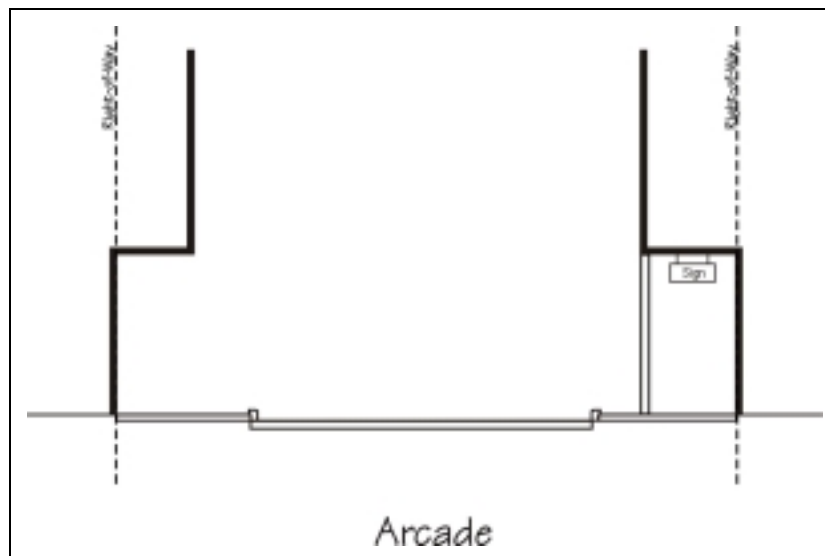
‣ **Shopfront**—The façade is aligned close to the frontage line with the entrance at sidewalk grade. This type is conventional for a retail frontage. It is commonly equipped with a cantilevered shed roof, awning, or an attached colonnade. The absence of a raised ground story precludes residential uses on the ground floor, although residential is appropriate above.

Shop
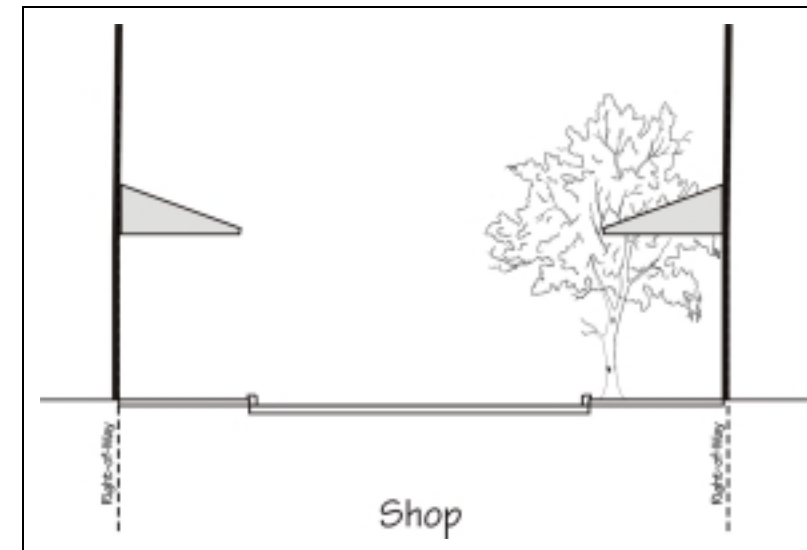
▸ **Stoop—**The façade is aligned close to the frontage line with the ground story elevated from the sidewalk securing privacy from the street. This type is suitable for ground floor residential uses with short setbacks such as with rowhouses and apartment buildings. An easement may be necessary to accommodate the encroaching stoop. This type may be interspersed with the shopfront type.
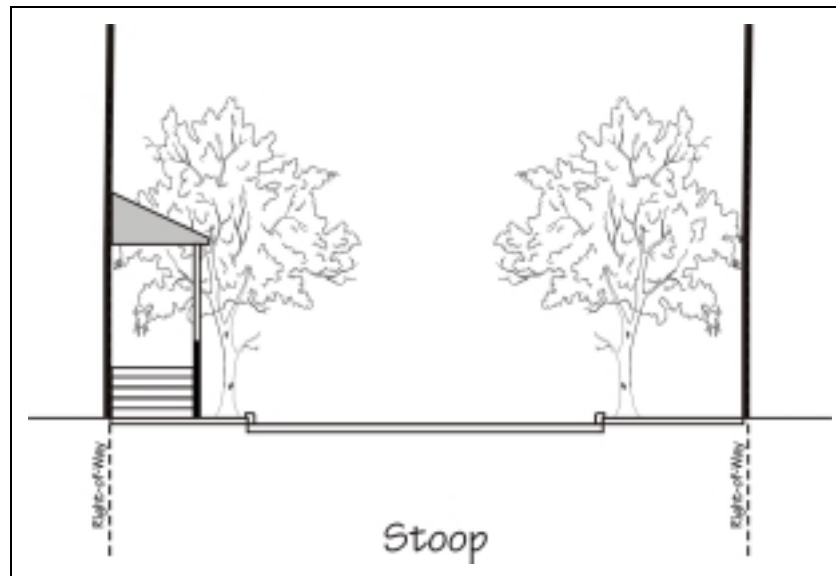
▸ **Forecourt—**The façade is aligned close to the frontage line. The forecourt thus created is suitable for gardens, vehicular drop-offs and service loading. This type should be used sparingly and in conjunction with the shopfront, as a continuous excessive setback is boring and unsafe for pedestrians. Trees within the forecourts should be placed to have their canopies overhanging the sidewalks.

Stoop

Forecourt
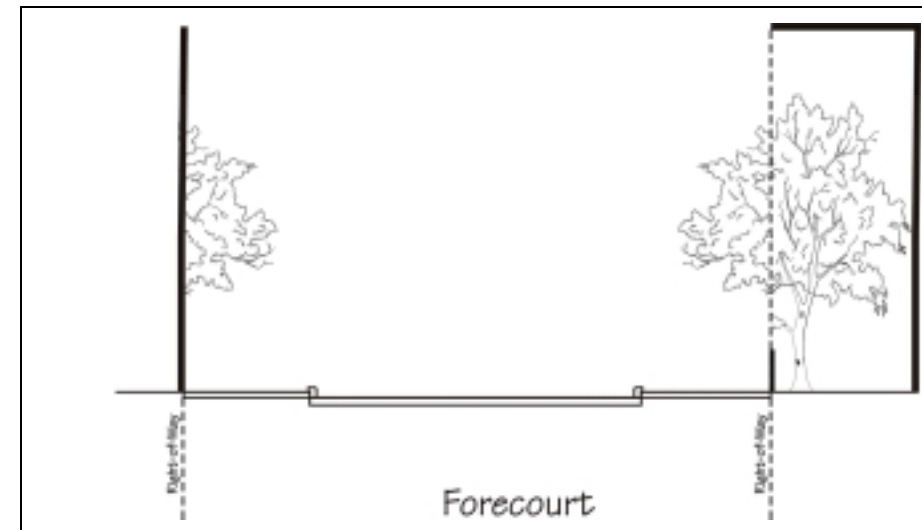
▸ **Dooryard—**The façade is set back from the frontage line with an elevated garden or terrace, or a sunken light court in between. This type can effectively buffer residential quarters from the sidewalk while removing the private yard from public encroachment. The terrace is suitable for restaurants and cafes as the eye level of the sitter is level with that of the passerby standing.

Dooryard
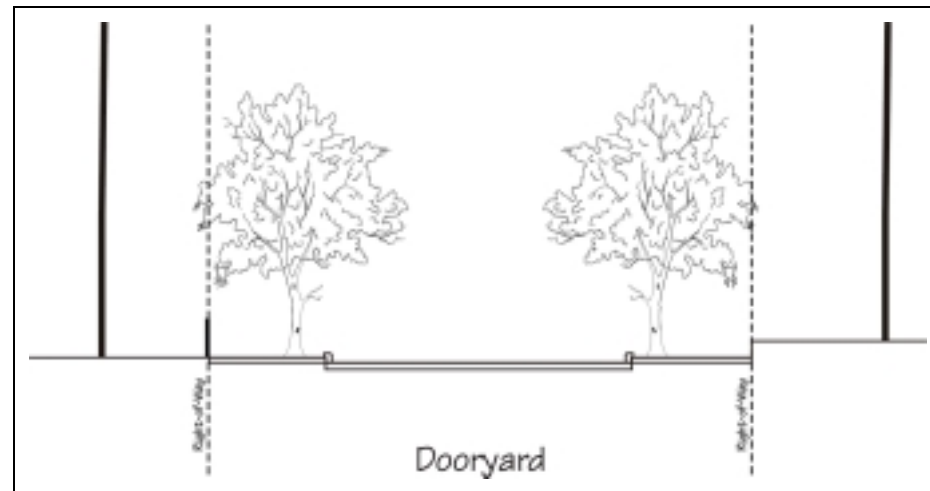
▸ **Porch and Fence—**The façade is set back from the frontage line with an encroaching porch appended. The porch should be within a conversational distance of the sidewalk while a fence at the frontage line maintains the demarcation of the transition from public space to semi-private space. To be useful, the porch should be no less than eight feet in depth in order to provide space for a table and chairs fitting nicely within the space, creating an outdoor room.

Porch and Fence
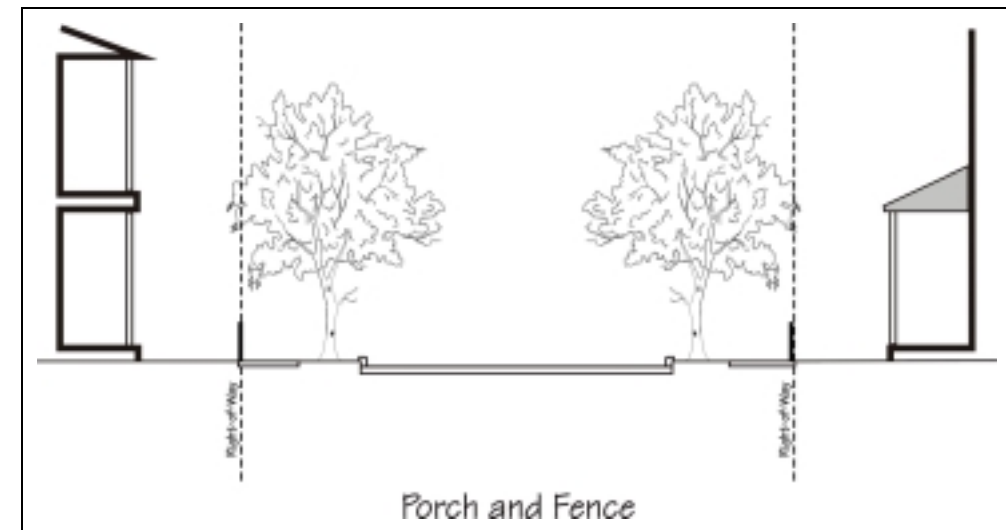
CI10 **Open Spaces**

Open spaces should provide a focal point for the neighborhood and should be designed based on their location within the neighborhood. More urban locations should have plazas and squares, while fewer urban locations should have greens, parks, and greenways. Passive or more rural open spaces and preserves should be part of a greenbelt system, located on the edge of the urban area or between neighborhoods.

Urban open space shall be planned, improved, accessible and usable by persons living nearby. Improved open spaces may contain landscaping, walls, fences, walks, statues, fountains, ball fields, and/or playground equipment. Walls and fences shall be made of brick, stone, wrought iron, or wood, and should not exceed 3.5 feet in height.

At least one open space should be designed and included within 600 feet of every residential unit. Each open space, except for rural preserves or greenbelts, should have 50 percent of its perimeter enfronting a thoroughfare.

Design Guidelines

Plaza

A plaza is an open area adjacent to a civic or commercial building. Plazas should only be used in very dense redevelopment settings. Plazas function as gathering places and may incorporate a variety of non-permanent activities such as vendors and display stands. Plazas are always paved in brick or another type of paver and should be level or gently sloping.

The typical minimum size preferred is 600 square feet and the maximum size preferred is 25,000 square feet. Plazas may be left unplanted. If planted, trees should form the geometric frame of the plaza space.

Plazas
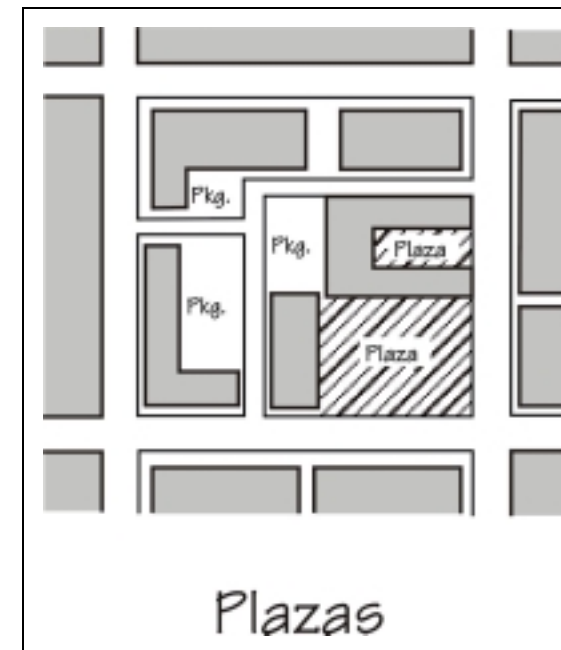
Forecourt or Close

Forecourts or closes are open space areas that act as buffers between residential buildings and non-residential buildings or streets. Forecourts are entirely bounded by streets and the internal street section should be smaller in scale and be a one way street. If planted, trees should form the geometric frame of the space.

Forecourts
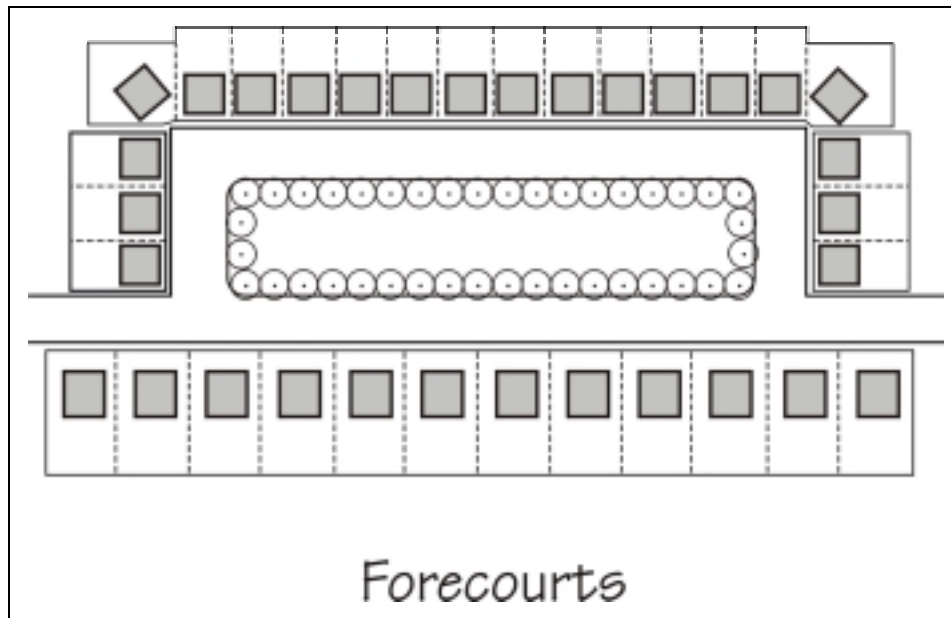
Squares and Greens

Squares and greens are areas for passive recreational use. Squares are for more urban locations and greens are for less urban locations. Both shall be bounded by streets on a minimum of 75 percent of their perimeter. The minimum size shall be approximately 500 square feet and the maximum size of one acre. Squares may be entirely paved in crushed gravel, brick paver or similar material; or they may be partially paved and partially soft grass.

Squares
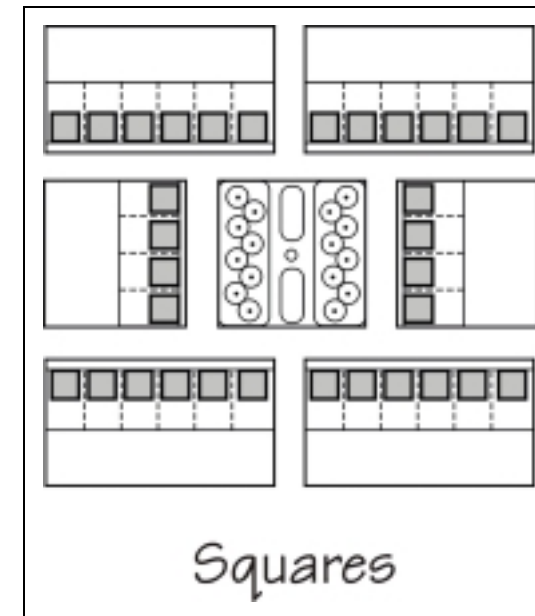
Parks

Parks may be designed for passive or recreational use. Parks shall be bounded by streets on a minimum of 50 percent of their perimeter and are encouraged to be enclosed by streets on all sides. Parks shall be a minimum of one acre and a maximum of three acres in size. Parks may exceed three acres in size if through design, the park creates a central open space that serves an entire neighborhood or group of neighborhoods; or incorporates physical features that are an asset to the community (lake, high ground, vista, or woodlands)

Parks
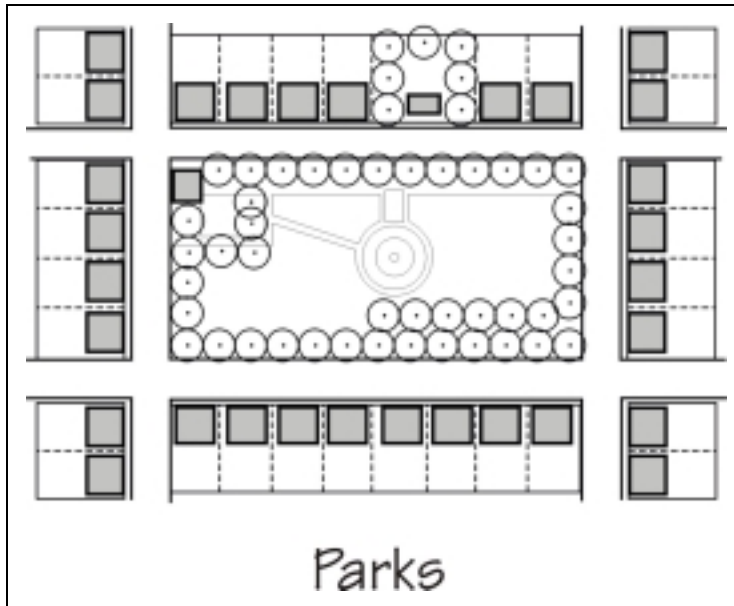
Greenbelts or Greenway

Greenbelts run along the perimeter of a neighborhood or between neighborhoods and serve to buffer a neighborhood from incompatible uses such as a highway or industrial area. Greenbelts are left natural but may include walking trails. In addition, schools located adjacent to greenbelts can provide all recreational and athletic fields within the greenbelt.

Greenbelts
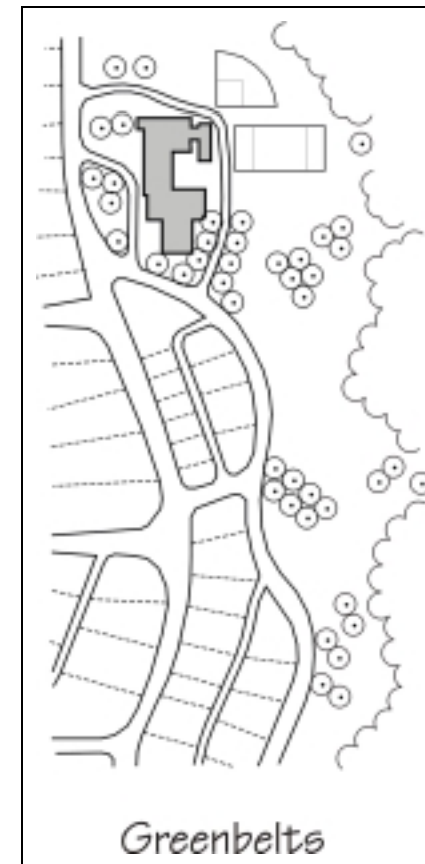
Implementation Strategy

The effectiveness of the comprehensive plan is measured by its ability to guide and affect desired change in development patterns and decision-making. Key issues identified during the planning process documented the desires of city residents for these changes. Change will occur over a period of time through a number of incremental actions and short-term decisions made by elected and appointed officials. The following implementation actions were identified as important steps in the implementation of the comprehensive plan.

▸ **Update the city zoning ordinance.** Recommendations within the Comprehensive Plan reveal a change in how development and redevelopment occur in Kettering. Emphasis is placed on a mixed-use, higher-density, pedestrian-oriented development patterns. Changes to the zoning ordinance will be needed to promote this type of development.

▸ **Prepare commercial district plans.** The future of Kettering's commercial areas is one of the top issues discovered during the planning process. General guidance for these areas is presented in the plan. The city should take a proactive approach to further study these areas by prioritizing them and conducting detailed market and land use and development plans.

▸ **Continue neighborhood planning program.** As the need arises, Kettering should conduct targeted plans that specifically address individual neighborhood issues. The comprehensive plan provides the overall framework for these neighborhood plans.

▸ **Prepare parks, recreation, and open space plan.** With the comprehensive plan complete, it is a good time to re-evaluate the city's parks and recreation plans and priorities. Updating recreation requirements and addressing the bikeway issue that was raised in the plan should be emphasized.

▸ **Prepare a Design Manual to provide design guidance and assistance for development and redevelopment.** The manual would present specific design principles consistent to the guidance provided in the Comprehensive Plan.

▸ **Cooperate regionally.** Cooperation with other governmental and quasi-governmental agencies within the Dayton region is essential to implement certain plan recommendations and to maintain Kettering's position within a healthy region. Increasingly, there will be situations where the city should consider cooperative efforts with other entities within the region to ensure an equitable distribution of resources and responsibility. Transportation, economic development, and public services are just a few of the areas where the city will need to continue regional collaborative efforts.

The analysis of existing conditions, responses from public participation, and formulation and evaluation of new land use patterns form the basis for a sustainable vision for the City of Kettering. This plan is intended to be a dynamic document and should be referred to, discussed, and revised as needed over time. Revisions to the plan could be based on changes in the economy, population, or other indicators.

Plan
Kettering

City of Kettering
Comprehensive Plan

Appendix: Plan Background

DEMOGRAPHIC OVERVIEW

The population of Kettering and the Dayton-Springfield metropolitan area has declined over the past 30 years. This trend, which is summarized in Table A-1 and Table A-2, is comparable with many other metropolitan areas in the "rust belt" of the United States. However, the suburban areas (which includes Kettering) in the Dayton-Springfield metropolitan area have grown in the same thirty-year period.

Table A-1
Total Population

Year	Dayton-Springfield, Ohio, MSA	Suburban Place of Kettering, Ohio	Suburbs[1]
1970	972,493	69,632	614,905
1980	942,083	61,186	636,447
1990	951,270	60,569	667,439
2000	950,558	57,502	686,969

[1]Suburb data are defined as the total for the Dayton-Springfield, Ohio MSA less the sum of data for these cities: Dayton, Ohio; Fairborn, Ohio; and Springfield, Ohio.

Source: United States Census.

Table A-2
Change in Total Population (Percent)

Year	Dayton-Springfield, Ohio, MSA	Suburban Place of Kettering, Ohio	Suburbs[1]
1970-80	-3.1	-12.1	3.5
1980-90	1.0	-1.0	4.9
1990-00	-0.1	-5.1	2.9
1970-00	-2.3	-17.4	11.7

[1]Suburb data are defined as the total for the Dayton-Springfield, Ohio MSA less the sum of data for these cities: Dayton, Ohio; Fairborn, Ohio; and Springfield, Ohio.

Source: United States Census.

The decline in the population was most significant in the decade of 1970-1980 when the most dramatic decline occurred for both the metropolitan area and for Kettering. Population for the metropolitan area has remained relatively static over the past 20 years, while Kettering has shown a continued decline. After a relatively benign decade in the 1980s, when a minimal drop in population occurred, the years between 1990 and 2000 have revealed another significant decline in population for Kettering. Suburban population growth as a whole has been relatively constant over the past 30 years with the migration of urban residents and some in-migration from other regions.

The population decline for the metropolitan area can generally be attributed to the downturn in the manufacturing sector, limited physical growth potential and the migration outward from Dayton to those suburban communities. The City of Kettering can also look to the downward trend in manufacturing employment for part of the story in population decline; however, there are other factors, not entirely unique to this city for the rest of the story.

The distribution of Kettering's population by age categories provides some indications to probable causes to the decline. In analyzing the age distribution in the decade from 1990 to 2000, noticeable changes are evident. While the same basic form (highest percentage of population in the 25-54 age groups) holds for both decades the percentage for each of the age categories is changing. The most noticeable change is in the age group of 75+. As mentioned above, this is not a unique situation to Kettering. The median age of the United States population continues to increase as the baby boomer era ages and in general, people live longer. Looking at the increase in the 75+ group would likely lead one to believe that all categories of older residents would be increasing, but that is not the case in Kettering. The 55-64 and 65-74 age groups are showing a significant decrease by the year 2000. This could be attributed to many reasons, such as a change in workforce needs and the relocation of residents looking for new opportunities in other cities. In some cases it could be Kettering residents taking early retirement and moving to another city, particularly now that their children have grown up and moved out of the house. The 45-54 age group has increased in the past 10 years, which likely accounts for a portion of the small increase in the population of the 5-19 age group. Most troubling is the decline of Kettering residents in the 20-24 and 25-44 age groups. These are the age groups that typically account for the highest number of school age

children and are considered the future of a community. This decline is also reflected in the decline of children in the age category of five and under. The ratio of males to females has not changed in the past ten years. In 1990, there were 10 percent more females living in Kettering than males. That ratio had not changed significantly by the year 2000 (see Table A-3).

Table A-3
Age Distribution of Population in Kettering, 1990 to 2000

Year	<5	5-19	20-24	25-44	45-54	55-64	65-74	75+
1990	3,738	10,432	3,965	19,201	6,267	6,717	6,216	4,033
2000	3,363	10,756	3,157	16,919	7,512	5,297	5,344	5,154
% Change	-10%	+3%	-20%	-12%	+17%	-20%	-14%	+22%
Source: United States Census.								

The ratio of males to females has remained constant, and the population of the city is declining; however the diversity of the population is increasing. The number of white residents has dropped from 59,222 in 1990 to 54,757 in the year 2000. This decline accounts for the overall population decline for the city. The decline in the number of white citizens in Kettering has been offset to a degree by the increase in the number minority populations. Black residents increased from 437 in 1990 to 955 in 2000, Asian residents increased from 746 to 795; Native Americans increased from 79 to 105 and those choosing the category "other or multi-racial" account for 876.

The distribution of the city's population is also important in equitable distribution of community facilities and decisions by the school board about allocation of resources. Most of the city's population is east of Far Hills Avenue. This is due to some limited topographic constraints in western Kettering and historic development patterns that reveal higher-density residential development east of Far Hills. This development pattern will not likely change in this planning time frame. Another factor in the decline of population in Kettering and the constant growth of other suburban communities has been the limited potential for physical growth of the city. The city is close to total build-out of its existing land area, and there are few

opportunities for annexation. Many of the outlying suburbs have had the opportunity to physically grow and accommodate increases in population.

Housing data from the 2000 Census is becoming increasingly available. Looking at the number of total housing units in the city there has been consistent positive growth over the past thirty years (see Table A-4). The growth in the number of housing units, though, has slowed considerably over the last decade as land available for new construction has become rare and the overall population of Kettering has declined. Kettering has generally kept pace with the region in terms of new housing until the last decade. This again reflects Kettering's built-out status while developable land still remains in other portions of the region.

Table A-4
Total Housing Units

	1970	1980	% Change	1990	% Change	2000	% Change
Kettering	22,780	25,335	10.08%	27,056	6.36%	27,096	0.15%
Dayton-Springfield MSA	311,170	362,428	14.14%	384,678	5.78%	408,277	5.78%
Source: United States Census.							

An issue frequently raised about the city is the increasing number of renter-occupied housing units. From 1970 through 1990, Kettering consistently saw lower shares of owner-occupied housing in the community (see Table A-5).

Table A-5
Owner Occupied Residential Units
(As a Percentage of All Occupied Units)

	1970	1980	% Change	1990	% Change	2000	% Change
Kettering	72.3	68.9	-4.93%	65.9	-4.55%	66.6	1.05%
Dayton-Springfield MSA	66.5	67.3	1.19%	65.7	-2.44%	67.2	2.23%
Source: United States Census.							

Kettering dropped from a high of 72.3 percent of all occupied units being occupied by the owner in 1970 to a low of 65.9 percent owner-occupied units in 1990. It appears, though, that some of the efforts that the city has initiated to address this issue have begun to work. The percentage of owner-occupied units actually increased from 1990 to 2000 to 66.6 percent. While modest, this increase may indicate that programs the city has initiated, like the Neighborhood Improvement Program and the First Time Homeowner assistance, are beginning to work.

Additional housing information and analysis will be included in a subsequent submittal.

NATURAL RESOURCES

Because Kettering in almost built-out, there is little land available for development and natural resource constraints are minimal. This overview will be limited to groundwater, surface water, and air quality.

Ground Water

Kettering straddles two watershed basins—the Lower Great Miami River Basin to the west and the Little Miami River Basin to the east. Both basins are characterized by buried valley aquifers designated as sole source aquifers by the U.S. Environmental Protection Agency. Generally, Kettering is not located over critical groundwater recharge or production zones for either aquifer.

Areas roughly west of Far Hills Avenue are within the Class 2 boundary of the Great Miami Buried Valley Aquifer. A very small area west of Tait Road in western Kettering is within the Class 1 boundary of the aquifer and partially overlays the outer management zone for a small well supplying potable water to a mobile home park. An area north of the GM Delphi Chassis Systems Plant extending eastward along the southern boundary of the Miami Valley Research Park is within a Class 2 area of the Little Miami River (within the drainage of Little Beaver Creek). A small area extending northward through Miami Valley Research Park is a Class I area for the Little Miami River Buried Valley Aquifer. Class 1 areas are those with high to high-intermediate potential well productivity based on aquifer characteristics and proximity to recharge areas. Class 2 areas have low-intermediate to low potential productivity and are farther from recharge areas.

A small portion of northwest Kettering in the vicinity of the Kettering Business Park is within the protection zones of the Oakwood Well Field, which extends into the Little Miami River Basin. The Oakwood Well Field provides potable water to approximately 10,000 people.

Surface Water

There are no large waterways that flow through Kettering. Surface water is limited to a few narrow creeks and impoundments. These creeks include Penn Creek, Middle Branch Little Beaver Creek, and Little Beaver Creek. The creeks are not wide, but they do have delineated 100-year floodplains (Figure A-1). These creeks will not be raging rivers during a flood event, but they can result in significant damage to property. These floodplains affect several residential neighborhoods in the eastern portion of Kettering. The Wiles Creek neighborhood is the most significantly affected area; approximately 50 percent of the neighborhood is within the 100-year floodplain. The City of Kettering has enacted an ordinance to minimize flood damage to property.

Air Quality

Kettering is within the jurisdiction of the Regional Air Pollution Control Agency (RAPCA) covering Clark, Preble, Darke, Greene, Miami, and Montgomery Counties. The multi-county region is currently in compliance with all National Ambient Air Quality Standards for particulates, sulfur dioxide, lead, carbon monoxide, nitrogen dioxide, and ground-level ozone. If proposed changes in the ozone standards are implemented, the region will be out of compliance for this pollutant. Currently, the ozone standard is 0.12 part per million (ppm) for one hour. The proposed new standard for ozone will be 0.08 ppm for 12 hours, which is considerably more stringent.

Summary

There are few constraints to development in Kettering, primarily because the city is almost entirely built-out. Constraints to development are limited to creeks and their floodplains and wellfield protection in a small portion of the city.

City of Kettering

Comprehensive Plan

City of Kettering, Ohio
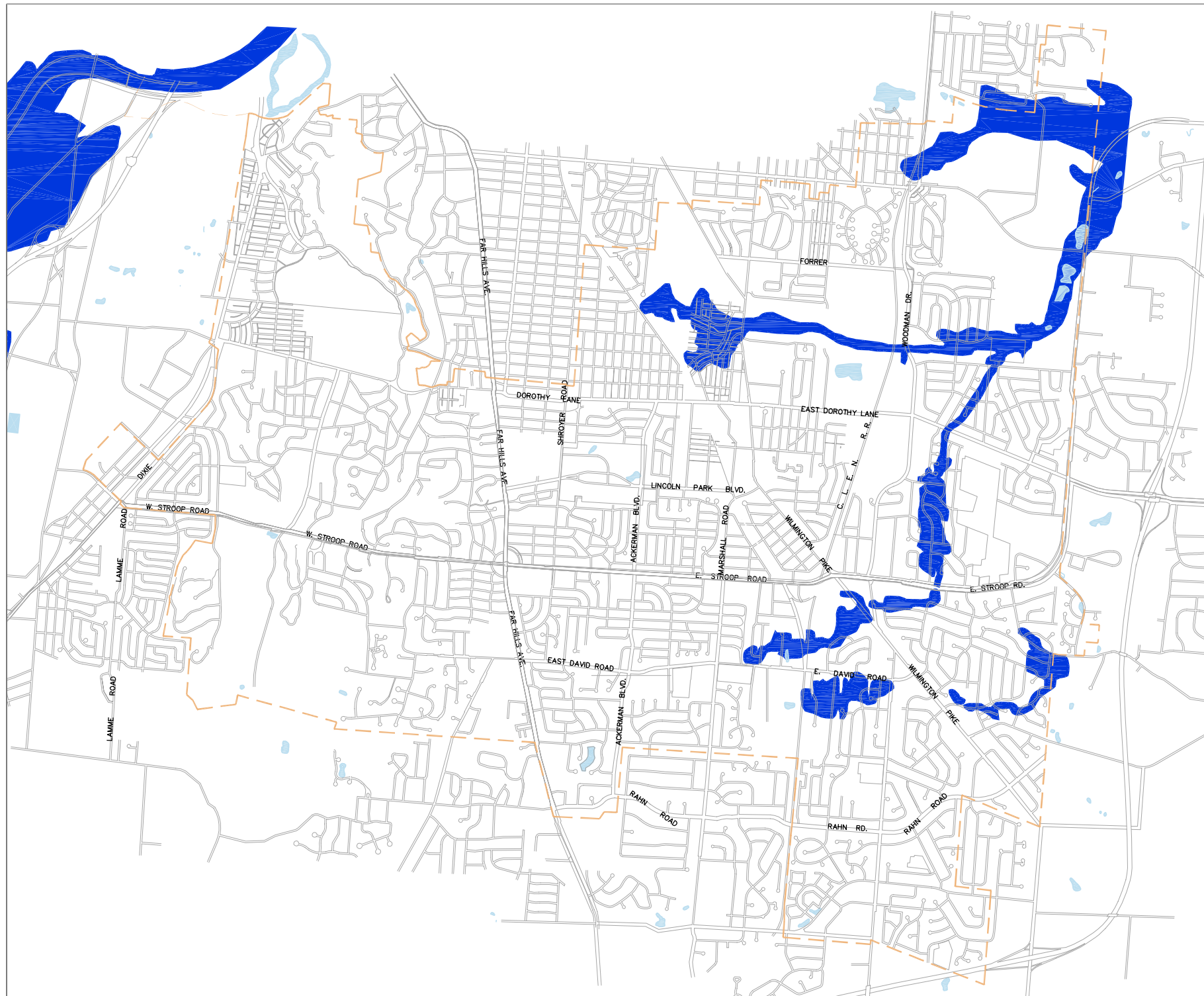
Figure A-1
Floodplain

North

1"=4000'

EXISTING LAND USE

Introduction

The City of Kettering's land use patterns have been influenced by the proximity to the City of Dayton central business district and large industrial facilities in the region. Dayton has been and will continue to be the economic and cultural center of the region, and although industrial uses may be less predictable, they will also continue to influence land use patterns. Kettering evolved initially as a bedroom community due to its location close to downtown Dayton and General Motors' decision to locate manufacturing facilities in and around Kettering. Kettering grew steadily from the 1940s to the 1970s, and is near total build-out of existing land.

The inventory and analysis of existing land use distribution in the city will help complete an understanding of historic land use patterns, identify land use conflicts, and to provide a basis for establishing future land use and development scenarios. Several sources were used for this task including field reconnaissance, discussions with city staff, and review of previous studies. The existing land uses for the city have been categorized into the following categories: single-family residential, multi-family residential, commercial, industrial, public/civic, parks, commercial recreation, and open space. Existing land uses in Kettering are illustrated in Figure A-2.

Single-Family Residential

Single-family residences are located throughout the city. In fact, approximately 7,277 acres, or 61 percent of the city's land area is made up of single-family neighborhoods. These neighborhoods have varying lot sizes and housing styles. Large homes constructed on large lots are the primary characteristic of the neighborhoods in the western portion of Kettering, although a few neighborhoods such as Southern Hills along South Dixie Highway are more typical of Kettering with single-family structures on small

lots. In the northeastern portion of Kettering, there are older neighborhoods, with small homes on small lots. The land use pattern in central and eastern areas of Kettering is more fragmented, resulting in neighborhoods in close proximity to shopping areas and parks. The land use pattern in western Kettering is dominated by single-family residential, golf courses, and public/institutional areas, resulting in limited proximity to shopping areas and parks.

Undeveloped land is scarce in Kettering, limiting opportunities for construction of new single-family housing. Some small-scale development of single-family homes has occurred in recent years in the vicinity of Wilmington Pike. New single-family homes are being constructed along South Dixie Highway.

City of KETTERING

Comprehensive Plan

City of Kettering, Ohio
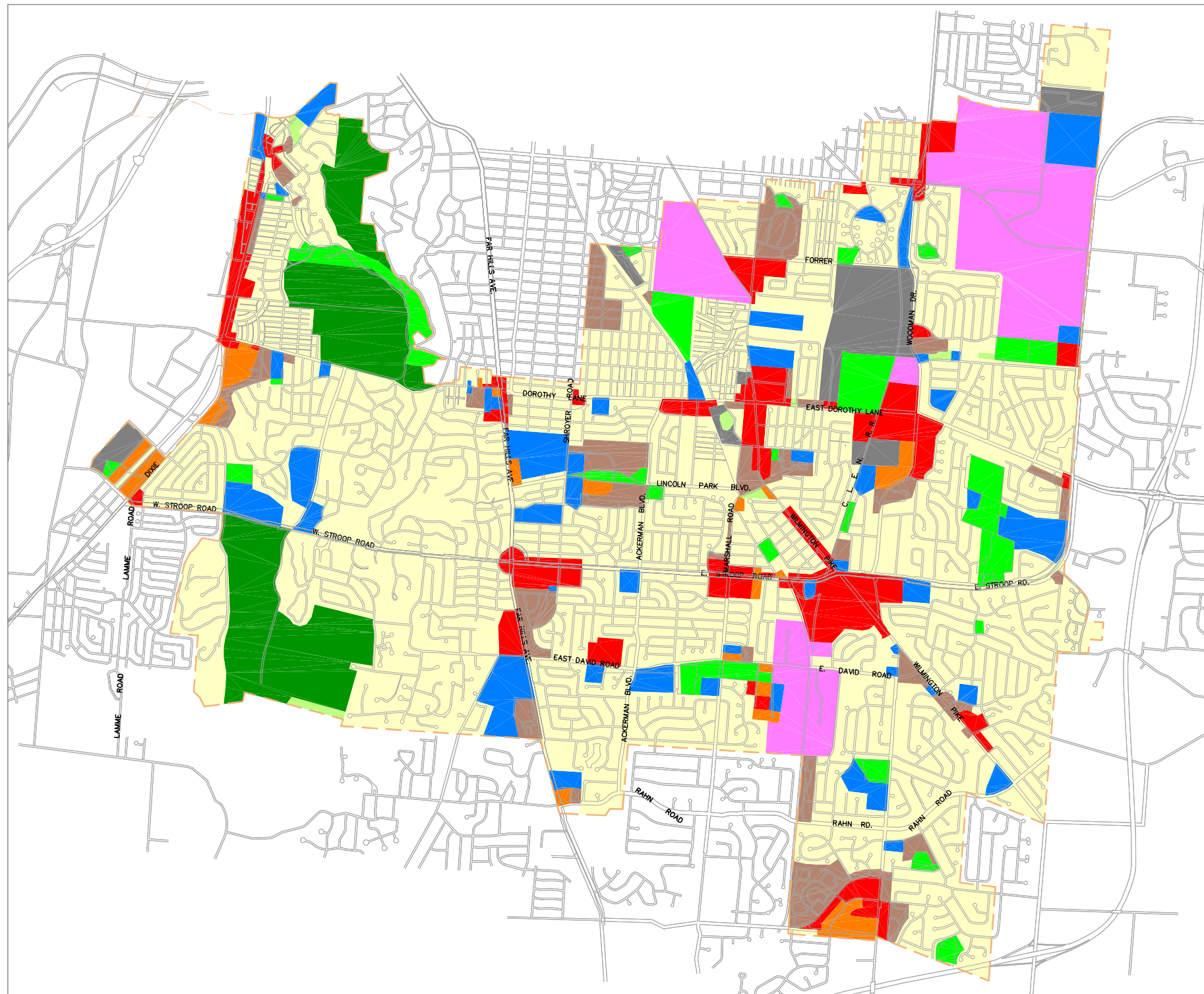
Legend:
- Business Park
- Commercial
- Golf Course
- Industrial
- Multi-Family
- Office
- Open Space
- Public/Institutional
- Recreation
- Single-Family

Figure A-2
Existing Land Use

North
1"=4000'

43

Multi-Family Residential

Multi-family developments are defined as housing that contains two or more attached living units. Many of Kettering's multi-family housing units are small apartment buildings and duplexes that were constructed in the 1950s and 1960s. Because of the scale of most multi-family structures, their design is compatible in scale to single-family neighborhoods nearby. Approximately 548 acres, or five percent of the land area of Kettering, contains multi-family units. Many of the multi-family units are located along major thoroughfares such as Dorothy Lane, Wilmington Pike, and Far Hills Avenue, as well as on Shroyer Road. On the east side of South Dixie Highway, there are numerous four-unit buildings and some new construction of duplexes.

There are several garden-type apartment complexes located south of the Town and Country mall and on the north side of Rahn Road.

The provision of a variety of housing opportunities is important to consider as Kettering continues to evolve. Smaller housing units such as those offered in townhouses and duplex building types, may be desirable for empty nesters and/or young couples. This is an issue as the baby boomer demographic approaches retirement age in the next five to ten years. The Strathmore Crossing development on Far Hills is an excellent example of developing a small-scale multi-family development next to single-family neighborhoods.

Commercial

Commercial development is defined as retail or service businesses. Kettering has significant commercial development along the major thoroughfares such as Wilmington Pike, Stroop Road, Far Hills Avenue, Dorothy Lane, and South Dixie Highway. Commercial development occurs in the form of strip malls along Wilmington Pike and South Dixie Highway or shopping centers such as Van Buren, Town and Country, and Oak Creek.

The combination of retail land uses make up approximately 830 acres or seven percent of the land area of Kettering. These areas serve both local residents and commuters traveling through the city. Commercial and retail land uses service the city on major thoroughfares; however, due to competition with regional shopping areas outside Kettering and changes in demographics, retail square footage in some areas of the city may be greater than what is needed. Due to these shifts in the market some of the older commercial areas may be prime candidates for redevelopment.

The commercial development patterns are predominantly strip mall building types that require the use of automobiles for consumers to access the shopping area. Additional connections and links to adjacent uses for transportation modes other than the automobile may add additional value to the shopping area itself and adjacent uses as well.

Industrial

Industrial areas include manufacturing (both light and heavy), warehousing, distribution, and developments that mix office with industrial operations. Kettering has approximately 316 acres of industrial land, two percent of the land in Kettering. Major industrial facilities in Kettering include the Delphi plant, located on Woodman Drive in the northeastern quadrant of the city, and a portion of the General Motors production facility on West Stroop. These facilities are served well by transportation, including rail lines and Interstates 75 and 675. Automobile-related manufacturing facilities such as this are a major industry in the Dayton region and the employment opportunities and tax base they provide is very important to Kettering and the region.

Large industrial uses tend to gravitate to areas served by good infrastructure such as railroad lines, large roads, interstate access, and utility capacities as well as areas with a skilled worker base. Smaller industrial users that make benign neighbors (such as a small-scale research and development facility), may be more flexible in their location and may want to be close to various amenities.

Business Park/Office

Business park and office areas include service companies, research and development, and other forms of high-tech businesses. Miami Valley Research Park, located in the northeastern portion of the city, is the largest contiguous area in this category. It accounts for most of the total business park/office categories. These two categories account for 1,095 acres, nine percent of the land in the city. Although several companies are already located in Miami Valley Research Park, and the Reynolds and Reynolds corporate campus continues to expand there is still a significant portion of land available for development. Other significant areas include Kettering Business Park, which is located on Wilmington Pike, the Cornerstone Business Park on Woodman Drive, and Lincoln Park.

Office uses are scattered in many locations throughout Kettering. Most are located along major thoroughfares such as Woodman Drive, South Dixie Highway and Far Hills Avenue, or along arterials such as Bigger Road in the Oak Creek area. This land use accounts for 125 acres of land in Kettering, a relatively small percentage of the city. Because this type of land use is less obtrusive, they are typically located next to multi-family residential areas, that provides a transition to nearby single-family neighborhoods. Recent developments such as Governors' Place and the Cornerstone Business Park are increasing the acreage of these land use categories. Governor's Place is the city's first large-scale attempt at redevelopment. The site was a former shopping center that was no longer viable and the city took the lead in

redeveloping the site into a business park. The office development along Lincoln Park Boulevard is also expanding, providing more opportunities for employment in the city.

Business park and office areas typically have a higher density of higher salaried employees than commercial or industrial areas, resulting in higher revenues for the city and hopefully increasing demand for higher value homes in the vicinity.

Public/Institutional

Public/institutional uses include schools, government buildings, and churches. These uses in Kettering include numerous elementary schools, Van Buren and Kettering Middle Schools, Fairmont High School and Alter High School. In addition to Alter High School, there are several more private schools throughout the city. Kettering's government center, centrally located along Shroyer Road, anchors this land use category, which accounts for 640 acres, or five percent of land in the city. These buildings are important for residents of the city and the region as they reinforce the identity of the community and can be a focal point for neighborhoods.

Recreational

Public parks are included in this land use category. The city has a variety of parks to serve various needs; however, most of the city parks are located in the eastern portion of the city. Delco Park, located on Dorothy Lane, anchors the park system. This park was recently redesigned and provides both passive and active recreational opportunities for city residents. The eastern portion of the city has the Kettering Recreation Center, which is a very well-used facility providing swimming, outdoor and indoor sports, and sports leagues and facilities for all ages. The Kettering Recreation Center is collocated with the Charles Lathrem Senior Center, Indian Riffle Park, and the Rosewood Art Centre to create a recreational area that draws people

from around the Dayton metro area. Fraze Pavilion and Lincoln Park are located in the central segment of the city and draw crowds from the Dayton region and southwest Ohio for concerts and other cultural events. Although there are a number of parks in Kettering, there are areas that are under-served. There are only three neighborhood parks west of Shroyer Road.

Commercial Recreation

There are portions of four golf courses (both private and public) in Kettering that serve the local and regional population. These golf courses account for 371 acres, or three percent of land in Kettering. The courses are the NCR Country Club, Moraine Country Club, Dayton Country Club, and Community Golf Course. Although the City of Kettering owns none of these golf courses, there are numerous benefits for city residents from having such high-quality golfing opportunities so close to work or home. This type of amenity is also attractive to businesses considering relocating or expanding in Kettering.

Open Space

The open space land use category is undeveloped land in the city. This land is usually undeveloped because of natural constraints such as a floodplain or steep slopes. Kettering is over 90 percent built-out and; therefore, does not

have much vacant land. Although there are scattered parcels of vacant land, care must be taken to ensure that development is compatible with adjacent land uses and/or with the goals of this comprehensive plan.

Summary

From its origins as a bedroom community to downtown Dayton and several manufacturing facilities, Kettering has grown into a mature inner-ring city dominated by single-family neighborhoods. Although single-family neighborhoods form the backbone of the city, redevelopment of several large parcels for office and business parks will have a long-term positive affect on the community by providing more employment options for city residents and others living outside Kettering. There are numerous commercial areas that served a bustling region in the past and continue to function in that role; however, some of these areas are not as vital as they once were, and they may provide opportunities for redevelopment. The city is blessed with an excellent park and recreation system that serves Kettering residents and in some cases, the southwest portion of Ohio. However, there are portions of the city that are under-served for neighborhood parks. These issues will be part of the foundation for development of long-term land use and redevelopment recommendations for Kettering.

TRANSPORTATION

Introduction

The transportation system in Kettering originated years ago when Native Americans created footpaths through the area. The Great Miami River also served as a regional transportation route. The early settlers began using these same trails and rivers until the 1800s, when the first roads through the area were cut through the area connecting Dayton to Kettering (which was originally known as Van Buren Township) and points to the south, including Cincinnati. These roads still provide access and commuting routes for travelers and residents of the area. In the 1950s, the federal interstate highway system opened Interstate 75 just to the west of Kettering, providing high volume capacity for north/south travelers. I-675 provides a connection from I-75 to I-70 on the east side of Kettering.

The goal of any transportation system is to allow for safe, efficient movement for city residents, visitors, and those commuting to or through the city. This section will provide an overview of the current transportation system in Kettering, the transportation issues that could influence transportation planning recommendations and investments that are proposed in the thoroughfare plan.

Roadway System

The roadways in Kettering serve different functions depending on their location and surrounding land use. To provide a framework for establishing a logical and efficient circulation system, roads are classified in a hierarchical method. The hierarchy ranges from roads or lanes within neighborhoods that carry low volumes of traffic, to high volume interstate highways. The thoroughfare classification for Kettering includes primary thoroughfares, secondary thoroughfares, primary arterials, secondary arterials, collectors,

and local streets. These classifications are illustrated in Figure A-3 and summarized below.

▸ **Primary thoroughfare.** This road functions as a primary traffic artery throughout the city. The purpose of this type of road is to move traffic to and through the city. These roads connect to other primary thoroughfares and freeways. This classification includes Far Hills Avenue and Dorothy Lane, which serve local and regional travelers. The typical right-of-way is 120 feet and contains at least four lanes of traffic.

▸ **Secondary thoroughfare.** This road functions also as a high volume traffic artery throughout the city. These roads connect to primary thoroughfares and arterials. This classification includes Wilmington Pike, a major north-south corridor for local and regional travelers. The typical right-of-way is 100 feet and contains at least four lanes of traffic.

▸ **Primary arterial.** The purpose of this type of road is to move traffic from the collectors to the primary and secondary thoroughfares. Lincoln Park Boulevard and Research Boulevard serve as primary arterials. A primary arterial has a right-of-way of 90 feet, and many have four lanes of traffic.

▸ **Secondary arterial.** The purpose of this road is to collect traffic from local access streets and distribute it to major thoroughfares. These roads, which include Shroyer Road, Marshall Road, and David Road, supplement the major arterial system by facilitating through traffic. The right-of-way for a secondary arterial is 80 feet.

▸ **Collector.** This road provides access from local streets to higher volume arterials and thoroughfares. Collectors are typically the main streets in a residential subdivision, although they could also be roads that are used for short trips in a small portion of the community. This classification includes Winding Way and Vale Drive, and has a right-of-way of 60 feet.

City of KETTERING

Kettering

Comprehensive Plan
City of Kettering, Ohio

THOROUGHFARE

ARTERIAL

COLLECTOR

120   RIGHT—OF—WAY WIDTHS

Figure A-3
City of Kettering
Official Thoroughfare Plan, 2001

North

1"=4000'
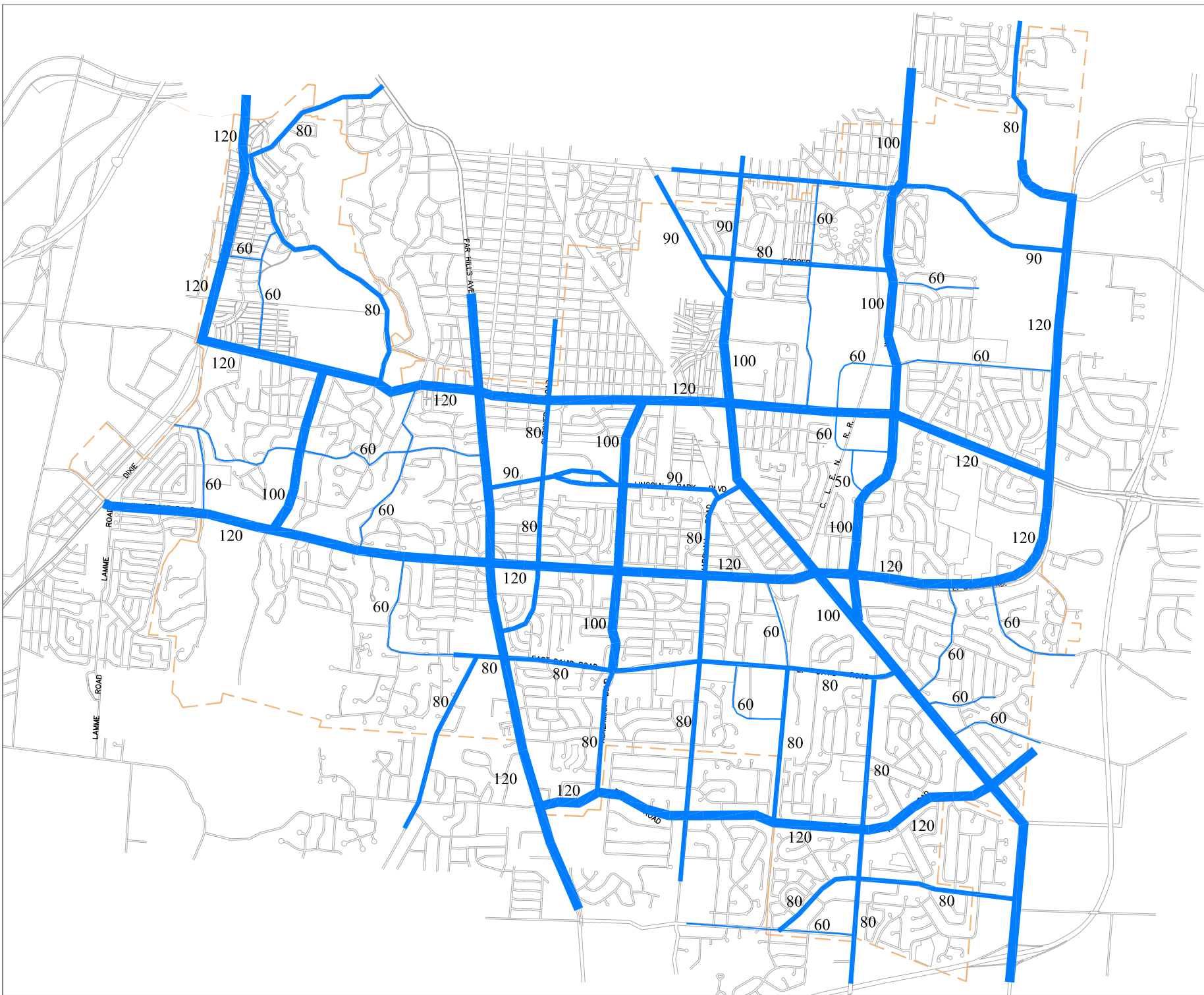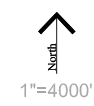
- ▸ **Local streets.** These streets provide direct access to property abutting roadways but do not carry heavy traffic volumes. The are intended to serve traffic with origins or destinations along that street and traffic originating on one local street and travelling to another local street. They are not generally intended for through traffic. Most roads in residential subdivisions are local streets.

Different classifications could be added for more flexibility to the transportation network. These may include rear lanes, avenues, boulevards, roads, and streets. The appropriate location for each is based on its position in the city and its purpose.

Pedestrian Circulation

Pedestrian connections are limited throughout the city. There are limited connections between subdivisions, between residential areas and offices, or between residential areas and shopping. There are locations including Far Hills Avenue and Lincoln Park Boulevard where sidewalks provide access to parks, offices, and shopping. Neighborhood plans and street improvement projects include recommendations for construction of new sidewalk and repairing old sidewalks.

Bicycle Circulation and Greenways

With the exception of a portion of a bike path along Rahn Road and a short path around the perimeter of Delco Park, there are no dedicated bike paths or greenways in the city. Bicyclists can travel along roadways, but unless they feel comfortable on streets with heavy traffic, their trips will be limited to the local roads and streets in their own neighborhood. A bikeway does exist along the Great Miami River to the west of Kettering, although there are not any connections other than along existing surface streets. The city has identified potential bikeways throughout Kettering. These proposed bikeways will link Kettering residents with regional bike trails (see Figure A-4).

Rail

Two rail lines traverse the city and a third is located west of the city. The Norfolk Southern Railroad line services the Delphi Plant in the northeast quadrant, and the abandoned Penn Railroad line right-of-way cuts north and south through the city. The CSX Railroad parallels I-75 to the west of Kettering. The nearest passenger service available is in Cincinnati.

Transit

The Regional Transit Authority (RTA) provides public transportation service to most neighborhoods and commercial areas in Kettering. The RTA also provides service to the Kettering Recreation

Center and the Charles Lathrem Senior Center. The routes RTA buses follow is illustrated in Figure A-4.

Transportation Issues

Three different types of travel are considered when making road improvement recommendations. Internal travel could be defined as travel within Kettering. These trips are generally short in length and are typically generated by residential uses. External travel is a trip where one end of the trip is in Kettering and the other end is outside the community. These trips are longer than internal trips and have a greater effect on the arterials in the community. Through travel are trips that start and end outside the community. These trips affect major arterials and freeways.

Kettering experiences all of the types of travel described above. Most residents will at some time travel from their home to the store, or a park, generally in the evenings and weekends. External travel is most likely to occur during the business week, particularly during rush hour when Kettering residents commute to or from their place of employment outside the city. Another example is when people living in other communities travel to Kettering to work. Through travel occurs at any time, day or night, particularly on Far Hills, Wilmington Pike, Dorothy Lane, and South Dixie Highway.

Growth and land use patterns influence transportation efficiency in a community. Kettering has several employment areas, such as the Delphi Plant and the Miami Valley Research Park, that contribute to external trips. Residential areas also contribute to external trips. A balance of both types of trip generators could allow for efficient use of roads as traffic uses incoming and outgoing routes. Residential growth has leveled off; however, there are still areas of congestion on the major roads in Kettering as a result of the external trips. The intersections of Wilmington Pike and Dorothy Lane, Wilmington Pike and Stroop Road, and Far Hills Avenue and Stroop Road are congested during peak travel times.

The City of Kettering annually takes traffic counts on most thoroughfares and some arterials. The number of vehicles driving on Kettering roadways has varied in the past ten years. In some cases, the number of vehicles has gone down. Along Wilmington Pike, north of Dorothy Lane, the number has gone down. Although the number of vehicles has fallen slightly along some portions of these roads, there are still 40,000 vehicles per day on Wilmington Pike, north of Dorothy Lane. Many of the vehicles traveling this corridor are commuters from the southern suburbs. There are fewer vehicles on Far Hills between Stroop Road and Dorothy Lane; however, there has been an increase in vehicles south of Stroop Road. There are fewer vehicles traveling east-west on Dorothy Lane, but east-west travel on Stroop has increased in the past ten years. The number of vehicles on David Road has risen. The growth of Miami Valley Research Park, most notably the Reynolds and Reynolds campus, has resulted in more vehicles on Research Boulevard. Increases in the number of vehicles will likely increase the probability of accidents. The number of accidents at Dorothy Lane intersections with Wilmington Pike and Woodman Drive might be showing some correlation with an increase in vehicles at these intersections. Table A-6 summarizes traffic accidents in the year 2000.

Table A-6
High Accident Intersections

Intersection	Number of Accidents in 2000
East Dorothy Lane and Wilmington Pike	39
East Dorothy Lane and Woodman Drive	39
Woodman Drive and Patterson Road and Research Boulevard	28
Far Hills Avenue and East Dorothy Lane/West Dorothy Lane	25
East Stroop Road and Wilmington Pike	24
Far Hills Avenue and East David/West David	24
Marshall Road and East Stroop Road	23
East Dorothy Lane and County Line Road	19
Far Hills Avenue and East Stroop/West Stroop Road	18
Shroyer Road and East Stroop Road	18
Source: City of Kettering.	

CITY of KETTERING

Kettering
Planning

Comprehensive Plan
City of Kettering, Ohio

TRANSIT ROUTES
SELECTED TRIPS ONLY
PROPOSED BIKEWAYS
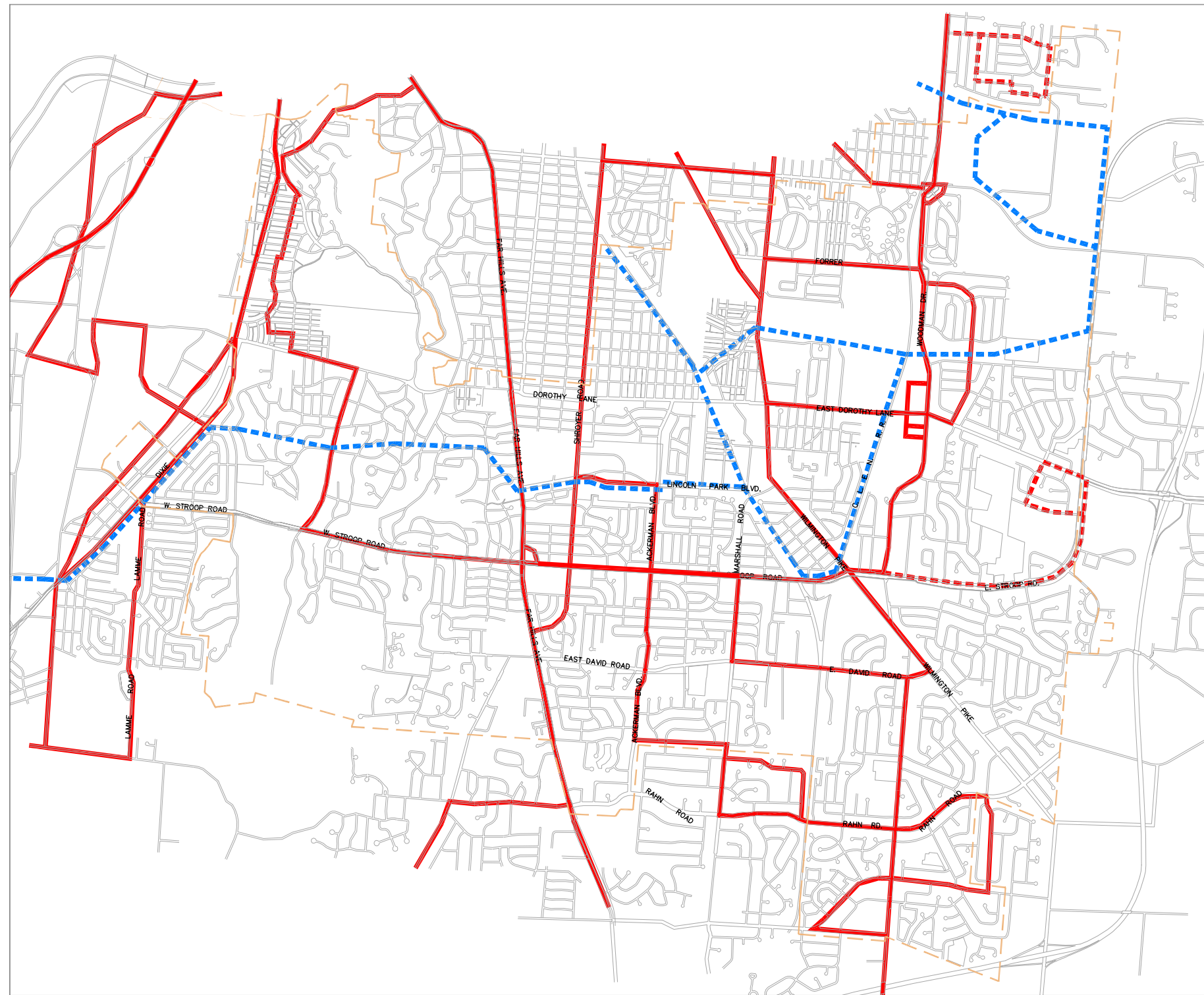
Figure A-4
Transit Routes

North

1"=4000'

FORRER

DOROTHY LANE

EAST DOROTHY LANE

LINCOLN PARK BLVD.

W. STROOP ROAD

W. STROOP ROAD

E. STROOP ROAD

LAMME ROAD

EAST DAVID ROAD

E. DAVID ROAD

ACKERMAN BLVD.

MARSHALL ROAD

SHROYER ROAD

WILMINGTON PIKE

RAHN ROAD

RAHN RD.

RAHN ROAD

Summary

Roads in the city can be congested during peak hours, but some roadways
have experienced a reduction in the number of vehicles per day. East-west
travel within and through the city has risen in the past ten years, which has
resulted in even more congestion at intersections such as Wilmington Pike
and Dorothy Lane. Increased congestion has likely resulted in higher
instances of traffic accidents, since the Wilmington Pike/Dorothy Lane had
the most accidents in the year 2000. The RTA does provide an option for
commuters, especially those traveling to downtown Dayton and for those that
are traveling to places like the Kettering Recreation Center and Lathrem
Senior Center. Pedestrian travel is limited to some neighborhoods and along
some thoroughfares and arterials.

COMMUNITY FACILITIES

Introduction

Community facilities such as schools, libraries, parks, public safety services, and utility systems are important factors that contribute to a high quality of life. Kettering's community facilities are quite strong and add to the attractiveness of Kettering as a place to live, work, and play. The inventory of services will lay the groundwork for any enhancements that may be needed based on land use recommendations and population growth. Figure A-5 illustrates the location of community facilities in Kettering.

Educational Facilities

The City of Kettering is served by the Kettering City School District. There are 12 public schools from this system located in the City of Kettering. There is one high school (Fairmont HS), two middle schools, and nine elementary schools. Figure A-5 illustrates school locations in Kettering.

Kettering City School District passed 19 of 27 indicators as outlined in the State Report Card in the year 2000. Revenue streams to support the school are stable, and the most recent bond issues both for operating and permanent improvements passed in 2000 and 1996.

The district continues to garner awards as four teachers (one in elementary school, one in middle school, and two in high school) received the prestigious Montgomery County Excellence in Teaching award last year. This award is given to a total of ten teachers throughout the 16 school districts in the county.

There are also several private schools located throughout Kettering including Alter, St. Albert's, St. Charles, Lang School, and Dayton Christian.

Libraries

The City of Kettering is serviced by two branches of the Dayton/Montgomery County Public Library system. One branch is located at 3496 Far Hills Avenue and the second branch is located at 2980 Wilmington Pike. Both of these branches are located on busy commercial roads and in close proximity to residential neighborhoods. Sidewalks provide access from these neighborhoods to the libraries. Residential neighborhoods are in close proximity to each library.

Public Safety

The City of Kettering Fire Department has an authorized full time staff of 52, including one chief, two assistant chiefs, nine career captains, and 42 fire fighters. The city also has 140 volunteer fire fighters. Kettering fire fighters operate out of seven fire stations. Figure A-5 illustrates fire station locations in Kettering. Response times are low and coverage of the city is good due to the fire station locations throughout the city.

Most fire stations were constructed decades ago and are showing their age. The stations are essentially garages that were not designed to house many fulltime fire fighters. The fire stations are structurally lacking due to age and changes to modern fire fighting equipment. Although the response times for fire and EMS calls is good, the number and location of stations could be evaluated.

Figure A-5
Community Facilities

CITY OF KETTERING
Kettering

Comprehensive Plan
City of Kettering, Ohio
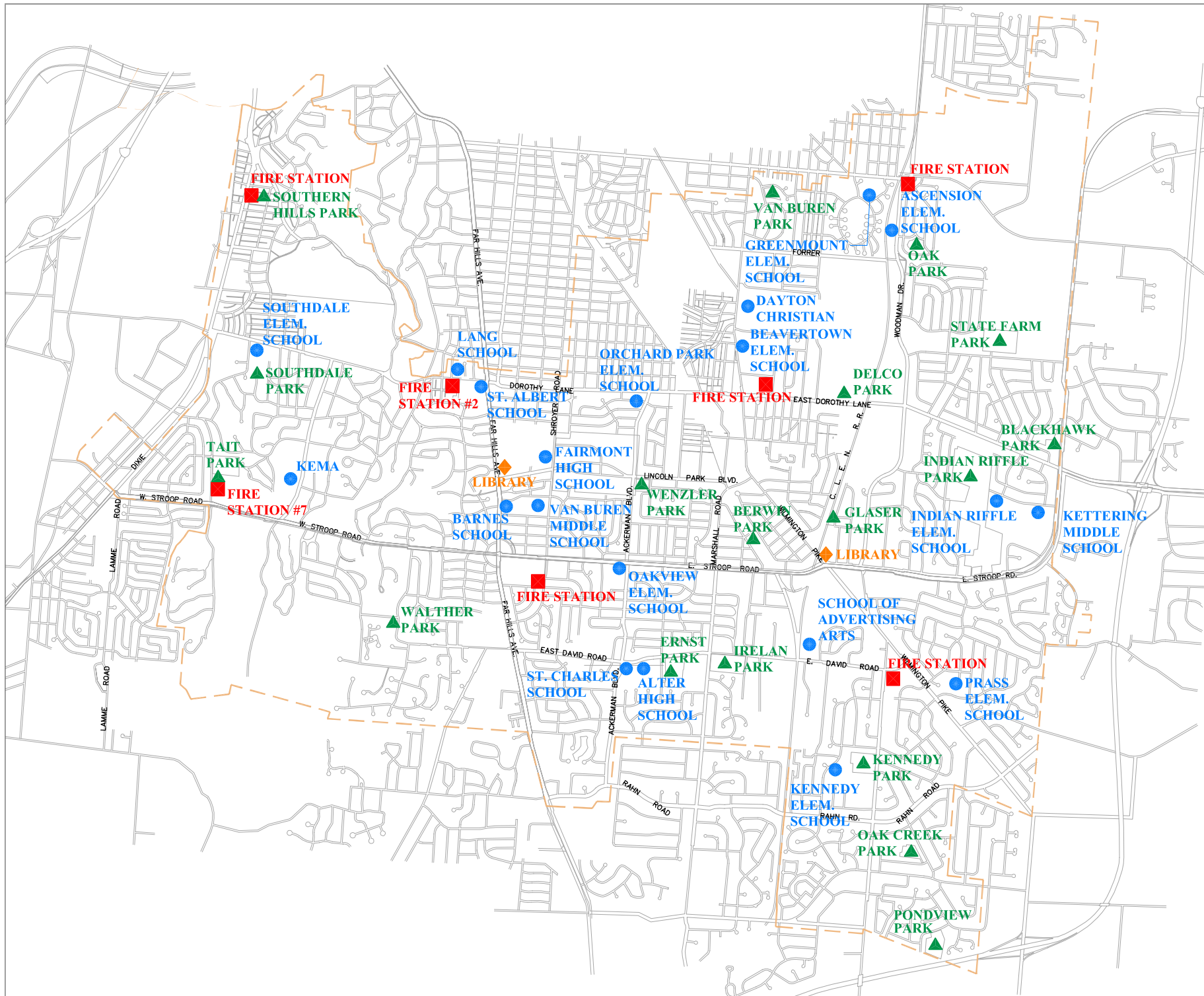
■ FIRE STATION
◆ LIBRARY
▲ PARKS
● SCHOOL

FIRE STATION
SOUTHERN HILLS PARK

SOUTHDALE ELEM. SCHOOL
SOUTHDALE PARK

LANG SCHOOL
FIRE STATION #2
ST. ALBERT SCHOOL

TAIT PARK
KEMA
FIRE STATION #7

BARNES SCHOOL
LIBRARY
FAIRMONT HIGH SCHOOL
VAN BUREN MIDDLE SCHOOL

WALTHER PARK

FIRE STATION
OAKVIEW ELEM. SCHOOL

ERNST PARK
IRELAN PARK
ST. CHARLES SCHOOL
ALTER HIGH SCHOOL

VAN BUREN PARK
GREENMOUNT ELEM. SCHOOL
DAYTON CHRISTIAN BEAVERTOWN ELEM. SCHOOL
ORCHARD PARK ELEM. SCHOOL

FIRE STATION
ASCENSION ELEM. SCHOOL
OAK PARK
STATE FARM PARK
DELCO PARK

WENZLER PARK
BERWIN PARK
GLASER PARK

BLACKHAWK PARK
INDIAN RIFFLE PARK
INDIAN RIFFLE ELEM. SCHOOL
KETTERING MIDDLE SCHOOL

LIBRARY

SCHOOL OF ADVERTISING ARTS
FIRE STATION
PRASS ELEM. SCHOOL

KENNEDY PARK
KENNEDY ELEM. SCHOOL
OAK CREEK PARK

PONDVIEW PARK

North
1"=4000'

The City of Kettering Police Department is headquartered in the justice building at the government center and has a full time staff of 83 sworn officers. The staff includes one chief, two assistant chiefs, six lieutenants, ten sergeants, and 64 patrol officers. Police headquarters is also showing some signs of age. Building infrastructure, most notably the water distribution system, is in poor condition.

Medical Facilities

Kettering Medical Center, located on Southern Boulevard, is the only hospital in the City of Kettering. The hospital contains 450 beds and has been serving Kettering and the Dayton region since 1959.

Parks and Recreation Facilities

The city adopted the Kettering Park and Open Space 2000 Plan in 1996. This document outlines goals and strategies related to preserving and enhancing Kettering's parks and open space.

Kettering has 18 parks totaling 284.6 acres. Figure A-7 illustrates the park locations in Kettering. Over 1,500 activities are conducted annually for those of all ages (from pre-school to senior adults) in the parks and their accompanying facilities. The parks include 32 tennis courts, 41 baseball/softball diamonds, 20 football/soccer fields, six self-guided fitness trails, a BMX track, and quiet spots to relax. Table A-7 outlines the classification of the developed parks and their sizes and type of park and comparison to industry standards for parks. Table A-8 summaries recreational facilities in Kettering.

Table A-7
Park Classifications

Name of Park	Size in Acres	Classification
Glaser	0.8	Mini
Berwin	1.7	Mini
Southern Hills	2.0	Mini
Oak Park	3.6	Neighborhood
Walther	4.5	Neighborhood
Wenzler	4.6	Neighborhood
Kantner	5.0	Neighborhood
Oak Creek	5.0	Neighborhood
Van Buren	5.5	Neighborhood
Blackhawk	7.3	Neighborhood
Southdale	8.0	Neighborhood
Tait	9.1	Neighborhood
Ernst	13.6	Community
Kennedy	15.0	Community
Irelan	16.0	Community
State Farm	21.7	Community
Delco	66.0	Community
Indian Riffle	95.2	Community
Total	**284.6**	

Kettering's Park and Open Space 2000 Plan uses a standard range of 6.25-10.5 acres per 1,000 people to determine the city's needs for parks and open space. This standard reveals a deficiency for city-owned park and open space acreage. City-owned park and open space acreage is 365 acres.

Adding public school lands and special use areas such as private golf courses the acreage rises to 928, exceeding the standards for a city the size of Kettering. The plan makes recommendations for expansion of certain parks and also describes the issue related to under-served areas of the community.

Table A-8
Recreational Facilities

Facility	Available activities
Kettering Recreation Complex	Indoor swimming pool, water park, gymnasium, indoor track, fitness room and leisure programs
Kettering Ice Arena	Ice skating
Charles Lathrem Senior Center	Senior adult activities
Polen Farm	19th century farm house and barn that may be rented for weddings, conferences and other social and business events
Rosewood Arts Centre	Community arts programs and tot lot preschool program
Fraze Pavilion for the Performing Arts	Outdoor performance facility

Utilities

Sewer service in the City of Kettering is provided by both the City of Dayton and the Montgomery County Sewer District. According to Montgomery County, capacity is available for additional flows at the Eastern and Western Regional Wastewater Plants. Some sewer pipes, based on the particular site, may need to be upsized if there are significant increases in flows.

Water for Kettering is provided by the City of Dayton Water System. The source of the water is groundwater wells to the north of Dayton. The water quality is high. There is potential for additional flows to Kettering, although depending on the demands for a particular site, pipes may need to be upsized to accommodate those demands.

Summary

Kettering has provided residents a high level of quality public safety, school system, and parks throughout its history. The fire and police departments continue to perform at high levels, although some facilities are beginning to show their age. In particular, some fire stations are fast becoming outdated to house modern equipment and the buildings are no longer adequate to meet the needs to firefighters. The location of fire stations has provided adequate response times to emergencies; however, with the changes in fire fighting equipment and techniques, the location of fire stations may need to be addressed.

The Kettering park system provides recreational opportunities to a great many city residents and people throughout the region. Partnerships with the city school system enable the city to meet park and open space needs, but some areas of the city, particularly the area west of Shroyer, is under-served for neighborhood parks.

URBAN FABRIC ANALYSIS

Introduction

The urban fabric analysis outlines general trends and characteristics within the development pattern of the City of Kettering. Analysis of neighborhoods, landmarks, gateways, edges, land use transitions, how they relate to each other, and analysis of potential redevelopment opportunities are part of the discussion. Urban fabric issues are illustrated in Figure A-6.

Neighborhoods

Kettering is dominated by residential neighborhoods located throughout the city. The single-family residential neighborhoods are generally located within large superblocks formed by the major vehicular thoroughfares that traverse the city such as Stroop, Far Hills, Wilmington Pike, and Dixie. Multi-family residential units are generally located along major roads such as Far Hills or Wilmington Pike.

The majority of Kettering's neighborhoods contain very well maintained homes and yards. The most common residential building type is ranch homes finished in brick. Most homes are set back from the street and few have front porches. In many neighborhoods east of Far Hills Avenue, homes were built in the 1940s through 1960s and

have one-car garages. This portion of Kettering could be characterized as small homes on small lots. In western Kettering, the neighborhoods could be characterized as large homes on large lots.

Sidewalks do not exist in many residential neighborhoods. Sidewalks are an important component of the streetscape in a neighborhood and serve several purposes. Sidewalks provide recreational opportunities for walkers and bikers that are buffered from cars. Sidewalks also serve as an alternative transportation mode by helping reduce vehicular traffic, especially if there are connections between neighborhoods and to nearby schools, shopping and entertainment areas.

Landmarks

Landmarks are some of the most recognizable icons in a community. They reinforce the community's character, help contribute to a sense of place, and serve as guideposts for visitors and residents alike. Schools and other civic buildings, water towers, significant buildings and parks, and

Commuter Traffic

Commuter Traffic

TO DOWNTOWN DAYTON

To U.S. 35

Gateway

Gateway

Commuter Traffic

Highway Interchange

Gateway

Commercial Recreation Node

Underutilized Area

Gateway

Vibrant Retail Node

Gateway

Entertainment Node

Potential Redevelopment

School

Potential Redevelopment

Miami Valley Research Park

Gateway

Kettering Medical Center

Moraine Farm

Fairmont High School

Civic Node

Delco Park

Rec. Center

Highway Interchange

Vibrant Retail Node

David Cemetery

Large Scale Commercial Node

Polen Farm

Highway Interchange

Potential Redevelopment

Gateway

To I-675

Gateway

Highway Interchange

I-75

I-675

City of Kettering

Comprehensive Plan

City of Kettering, Ohio

	LANDMARKS
	GATEWAYS
	HIGHWAY INTERCHANGE
	NODES
	POTENTIAL REDEVELOPMENT
	SCHOOLS
	MAJOR TRANSPORTATION CORRIDORS
	EDGES

Figure A-6
Urban Fabric Issues

North

1"=4000'

even individual stores in a shopping center are the types of icons that serve as landmarks. Kettering has numerous landmarks including Lincoln Park, Fraze Pavilion, Delco Park, the government center, the Research Park, the Patterson Monument at Hills and Dales Park, Town and Country shopping center, Books and Company retail store, Fairmont High School, Polen Farm, Kettering Medical Center, and Kettering Recreation Center. These landmarks contribute to the identity of Kettering as a quality place to live. Although they function as citywide landmarks, there is not a consistent theme regarding building materials or architectural style.

Edges

Edges are either natural or man made boundaries between neighborhoods. In Kettering, major roads form the edges of many neighborhoods. For example, Wilmington Pike south of David Road, is the edge between the neighborhoods to the east and west. Roads that serve as edges could become seams that tie the neighborhoods together, if the land fronting the road is developed in a more walkable pattern. This walkable pattern, if designed properly, could include shops and public spaces that become amenities to the adjacent neighborhoods.

Gateways

Gateways are the main entryways into a city or town. In Roman times, many cities had an actual wall with a gate that was closed at night for security purposes. Today, walls are not necessary, but key entry points into a city are still

an important focal point for the city. Several key entryways into Kettering are located on the major roads such as Far Hills Avenue, Wilmington Pike, Dorothy Lane, South Dixie Highway, and Stroop Road. Access to I-75 from Stroop Road and Springboro Pike is another key gateway into Kettering. Most of this gateway is in Moraine, so coordination will be required to ensure consistent aesthetics along the corridor. These roads serve as the first image of Kettering for those traveling to and through the city. Gateway locations on these important and highly traveled roads are opportunities to promote the image of Kettering to the region and contribute to the identity of Kettering.

These opportunities, in some cases, extend outside of the actual city limits. For example, on the northern boundary, along Far Hills Avenue, and on the western boundary, along Dorothy Lane, coordination of design guidelines and planning efforts with adjacent municipalities Oakwood and Moraine could yield improved gateways for all cities.

Several key transportation routes like Stroop, contain boulevards with landscaped medians that add a sense of identity to the city. Conversely, other roads in the city do not have boulevards, and function more like airport runways with fast-moving traffic. Efforts to create designs that strike a balance between pedestrians and cars along key locations could enhance the gateway elements of the city.

Potential Redevelopment Areas

Many of the main thoroughfares in Kettering such as South Dixie Highway, Stroop Road, Wilmington Pike, and Far Hills Avenue contain commercial development in strip mall pattern. At one time, all of these areas were fully leased and provided shopping opportunities for residents and commuters. However, today some of these shopping centers have numerous vacancies and are under-used. These under-used sites are part of a general overbuilding of commercial space in the city and could be redeveloped into usable, productive spaces. Potential uses for these sites include residential, retail, office, and/or public spaces that meet new market demands and also

create a more pedestrian-oriented housing and mixed-use development pattern. Not all potential redevelopment opportunities are commercial shopping areas. There are residential neighborhoods that could be considered for redevelopment. The older highway density development south of Town and Country shopping center has a high vacancy rate for second floor units and could be redeveloped as a higher-density residential area more suited to the needs of today's residents. Another opportunity is the Wiles Creek neighborhood, where a large portion of the residential structures are in the floodplain.

Transition Areas

Proper transitioning from commercial areas to residential neighborhoods is important to preserving a high quality of life and property values. This can be accomplished through landscape buffering or developing mixed-use commercial areas with spaces for offices, apartments, and

studios. In addition, attached single-family units, like townhouses, could also be mixed into the block structure. Through building typology and design, a block of mixed uses can be a transition from a strip shopping center area. It is important to connect the residential areas to shopping and mixed-use areas because this will provide the opportunity to walk to some of these areas.

Mixed-use buildings, such as live over work buildings with studio space on the first floor and living space above, provide the opportunity for transitions between incompatible land uses.

Public Art

Public amenities provide a sense of place in a community and adds character to public spaces. Kettering is currently funding a "Percent for Public Art Program" that is funded through one percent of total capital improvement fund distributions on an annual basis. The first work of art will be installed at Lincoln Park the summer of 2001.

ECONOMIC DEVELOPMENT

Economic Trends

Method

The main dataset for this and other parts of the report came from the Regional Economic Information System (REIS) data[1]. This data was used to calculate location quotients—ratios showing the relative import or export nature of a particular sector which were used to make judgments regarding the economy of Kettering. The metropolitan statistical area (MSA) of Dayton-Springfield was used as a base of information, while the smallest geography for comparable data is the county. The MSA includes the counties of Clark, Greene, Miami, and Montgomery in Ohio. Montgomery County, home of Kettering, was separately examined to calculate some location quotients for comparison and perspective close to the City of Kettering.

Employment Trends

Table A-9 shows the employment by industry from 1990 to 1998 in the Dayton-Springfield metropolitan area.

The four largest employers in Kettering are Delphi, Bank One, Victoria Secret Catalogue, and the Kettering Medical Center[2]. These represent large contributions to a diversified base of manufacturing, financial services, retail, and services sector of the Dayton-Springfield region.

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[1]U.S. Department of Commerce, Bureau of Labor Statistics, 2000.

[2]Kettering Ohio website http://www.mvcc.net/Kettering/kfacts.htm. The website lists these four as the largest employers for the City of Kettering but does not provide specific employment numbers.

Table A-9
Employment by Industry, 1990-98
Dayton-Springfield Metropolitan Area

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total Fulltime and Parttime Employment	543,938	539,506	534,632	539,619	553,783	565,655	567,078	575,316	580,245
Wage and Salary Employment	479,642	470,478	467,744	472,105	483,239	493,257	493,478	500,236	503,372
Proprietors' Employment	64,296	69,028	66,888	67,514	70,544	72,398	73,600	75,080	76,873
Farm Proprietors' Employment	4,257	4,066	3,957	4,053	3,932	3,851	3,730	3,766	3,876
Non-Farm Proprietors' Employment	60,039	64,962	62,931	63,461	66,612	68,547	69,870	71,314	72,997
Farm Employment	5,353	5,098	4,904	5,050	4,875	4,741	4,620	4,746	4,739
Non-Farm Employment	538,585	534,408	529,728	534,569	548,908	560,914	562,458	570,570	575,506
Private Employment	449,370	445,793	440,636	448,000	464,501	477,477	481,249	490,685	496,707
Ag. Services, Forestry, Fishing, and Other	3,735	3,912	3,995	4,288	4,475	4,797	4,716	4,835	5,111
Mining	703	758	702	729	748	724	618	591	622
Construction	22,698	21,297	21,353	22,911	24,209	24,438	24,892	25,380	26,316
Manufacturing	104,754	99,890	97,586	96,491	99,482	103,856	102,040	101,671	101,547
Transportation and Public Utilities	20,858	20,649	20,257	20,866	21,847	22,076	22,515	24,203	24,911
Wholesale Trade	21,495	21,193	20,579	20,607	21,504	22,119	22,697	22,878	23,259
Retail Trade	93,466	94,511	94,355	96,372	101,318	103,103	103,126	103,888	103,798
Finance, Insurance, and Real Estate	29,280	29,363	28,593	29,228	31,388	29,999	31,299	32,245	33,426
Services	152,381	154,220	153,216	156,508	159,530	166,365	169,346	174,994	177,822
Government and Government Enterprises	89,215	88,615	89,092	86,569	84,407	83,437	81,209	79,885	78,799
Federal, Civilian	28,583	27,225	27,020	25,380	24,077	23,439	21,162	19,874	19,299
Military	12,841	12,717	12,431	11,688	10,884	10,209	9,800	9,366	8,530
State and Local	47,791	48,673	49,641	49,501	49,446	49,789	50,247	50,645	50,970
State	8,145	8,343	8,551	8,249	7,929	7,746	7,243	7,056	7,051
Local	39,646	40,330	41,090	41,252	41,517	42,043	43,004	43,589	43,919

Source: Regional Economic Information System 1998, *U.S. Department of Commerce.*

The metro area increased its wage and salary jobs by 36,307 between 1990 and 1999. Montgomery County increased its job base by 17,594 during the same period, or 48 percent of the increase for the metro area as a whole. This would indicate that Montgomery County remains the largest job creation center in the metro area.

The services sector makes up the largest percentage of employment in the Dayton area at 35.8 percent, which is similar to many other metropolitan areas and is a little less than one percent behind the national figure of 36.9 percent. Retail and manufacturing contribute 20.9 percent and 20.4 percent, respectively, to the employment pool. The manufacturing sector, however, holds greater importance to the employment economy than the other two sectors. Why? Because its employment location quotient is the highest at 1.41. This means that the greater Dayton area employs relatively more than the nation when it comes to the manufacturing sector. Not surprising, since many of the employers in Dayton are related to the motor vehicle assembly industry.

In 1998, most of the employees in the Dayton MSA, approximately 73 percent, worked in service-producing sectors[3]. The other 27 percent were in goods-producing sectors[4]. The segment with the largest number of employees in 1998 was the separately defined services sector (which includes, for instance, personal, business, and health services) with 177,822 jobs (35.8 percent of the all wage and salary employment)[5]. This was followed by retail trade with 103,798 jobs and manufacturing with 101,547 jobs.

One remarkable aspect of Table A-10 is the steady decline in the percentage of people employed by the manufacturing sector and the steady increase in the numbers employed by the services sector. Part of the reason for this is the increase in so called business services, things like cleaning, printing, legal, etc., that used to be handled by a department within each company, but is now being outsourced. Another reason is the decline in manufacturing production workers themselves, and the rise of a service based economy in the U.S.

[3]Services producing sectors are defined as Agriculture Services, Transportation and Public Utilities, Wholesale, Retail, Finance Insurance and Real Estate, and the broad Services category.
[4]Goods producing sectors are defined as Agriculture, Mining, Construction, and Manufacturing.
[5]U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System.*

Table A-10
Employment by Industry as Percent of Total: Dayton Metro Area

Private Employment	1970	1980	1990	1998
Ag. Services, Forestry, Fishing, and Other	0.4%	0.5%	0.8%	1.0%
Mining	0.2%	0.2%	0.2%	0.1%
Construction	5.2%	5.3%	5.1%	5.3%
Manufacturing	40.6%	29.3%	23.3%	20.4%
Transportation and Public Utilities	4.4%	4.5%	4.6%	5.0%
Wholesale Trade	4.2%	4.6%	4.8%	4.7%
Retail Trade	18.6%	20.2%	20.8%	20.9%
Finance, Insurance, and Real Estate	6.4%	7.8%	6.5%	6.7%
Services	20.1%	27.6%	33.9%	35.8%
Source: Regional Economic Information System 1998, *U.S. Department of Commerce.*				

Economic Sectors Creating Personal Income Growth

This approach to identifying the key economic sectors that most affect Kettering's potential economic growth is to review the amount of personal income generated in sectors defined by two-digit SIC codes and to rank them according to a location quotient procedure. The source of this information is the Regional Economic Information System, or REIS, of the U.S. Department of Commerce, the latest data for which is 1998[6].

The percent of income from each sector is compared to the percent in the U.S. for the same sector. This creates a ratio of percent generated locally to a percent generated nationally. This ratio is the location quotient where a value of greater than 1.0 shows a sector that is likely to be important as an export sector—or one that brings more money into a jurisdiction than it leaks out. Export sectors are supposed to be those that economic developers should focus on in order to shore up and diversify a local economy. Those sectors with increasing or strong location quotients tend to indicate areas of growth potential.

[6]New annual information through 1999 will be available in June 2001.

While there is excellent recent and annual data on this topic, the smallest jurisdictional level is the county. This report evaluates both the larger Dayton-Springfield MSA area and the county of Montgomery as a proxy for the City of Kettering. Kettering resides in Montgomery County and Montgomery County falls within the Dayton-Springfield MSA.

Dayton-Springfield MSA

As Graph 1 shows, Dayton-Springfield has several location quotients well over 1.0—an indication of particular economic strengths, to be sure, but also of potential significant economic downturn vulnerability if those sectors have problems nationwide or worldwide. Indeed, the top sector for Dayton-Springfield is industrial machinery and equipment manufacturing with a high LQ of 3.96. This certainly reflects the importance and scale of a company like Delphi, among others in that cluster. When things in that sector go sour, however, as they did in the mid-80s with problems persisting even today, the Dayton-Springfield area can suffer disproportionately.

Still, it is a vital sector and it would be best if the number and types of companies within that sector could be both increased and diversified. After all, the local labor skills are present. Can similar companies be attracted or expanded given the strength of the local labor market? That depends on the growth potential of that sector.

The next four top sectors are not as vulnerable as the industrial machinery area. It can be shown how the non-governmental sectors are connected to the top sector, industrial machinery, and equipment.

▸ Rubber and miscellaneous plastics products is a very strong sector at a 2.78 LQ and is certainly connected with Delphi and the other automotive suppliers in the area.

**Top 15 Personal Income Location Quotients 1998
Dayton - Springfield, Ohio**
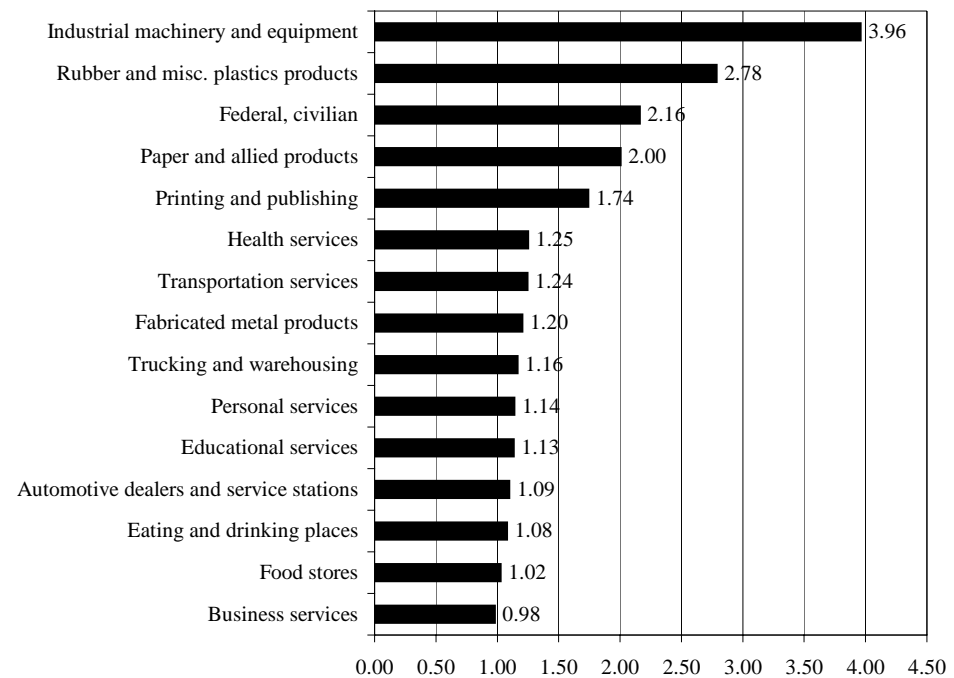
Source: Regional Economic Information System 1998, U.S. Department of Commerce. Calculations by Development Strategies.

▸ Federal, civilian, with an LQ of 2.16, highlights the importance of Wright Patterson Air Force Base, at least as far as personal income is generated in the federal civilian employment sector. This LQ is somewhat high and therefore potentially vulnerable to any future decision by the U.S. government to cut back on support of military bases.

▸ Paper and allied products is a strong sector with a 2.0 LQ and reflects southwest Ohio's traditional strengths in paper technology.
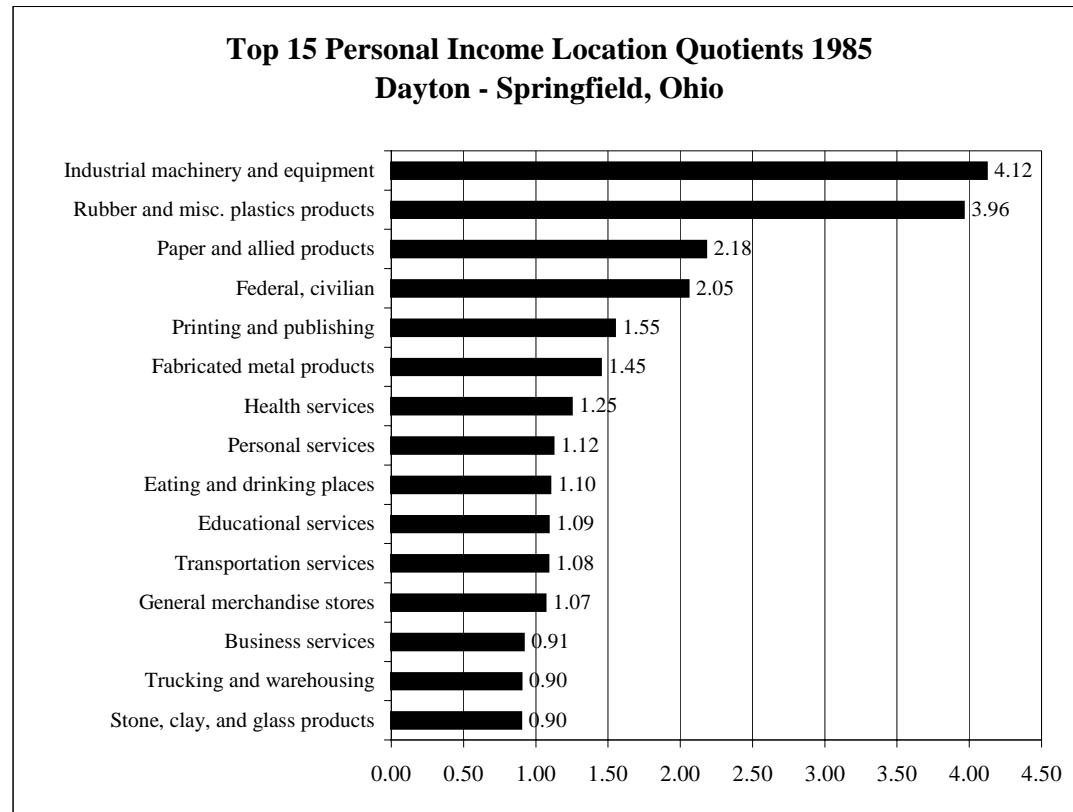
▸ Printing and publishing is also an important sector for Dayton-Springfield with an LQ of 1.74, and is a sector that also supports many different kinds of businesses in the area. This indicates that these industries are tied closely with the services producing nature of the Dayton-Springfield area and any downturn in the businesses that services takes care of will affect these areas adversely.

Despite the high location quotient for the top sector, industrial machinery and equipment manufacturing, it was higher in 1985 at 4.12, as shown on Graph 2. And the rubber and misc. plastics products was also higher in 1985, at

3.96. Both sectors have reduced these quotients, thus reducing the region's high dependence on them.

The top six sectors in 1985 all stressed manufacturing and government enterprises. By 1998, however, health services and transportation services moved into the top six. Health services actually retained the same location quotient, 1.25, which is not surprising when dealing with this sector, and its move up the list was facilitated because of the lowered dependence on manufacturing during the 1980s and early 1990s. What is surprising is that normally, health services would have a 1.0 LQ because, in any area, health services typically serves only the immediate community. The higher than normal LQ could be the result of the location of the Kettering College of Medical Arts in the area. Transportation services had a large increase from 1.08 LQ (1985) to 1.24 LQ (1998). With the reduced dependence on manufacturing, the trend seems to indicate a balancing of the Dayton-Springfield economy, though more needs to be done.

Montgomery County[7]

Now turn to Montgomery County, with its blended top 15 sectors illustrated on Graph 3. It is notable that industrial machinery and equipment manufacturing also leads this list with a 4.4 location quotient. This is still higher than for the metro area as a whole, reflecting the economic strength of Montgomery County and cities of Dayton and Kettering. However, the federal civilian sector, which was number two for the metro area, falls to number 11 with an LQ of 1.03. These findings begin to suggest that employment downturns in Montgomery County might be absorbed by jobs created in other counties or sectors elsewhere in the metro area. But the size of the LQs also hints that there are strong multiplier effects (i.e., the effects of spending and respending of dollars in the local economy) such that a downturn in one of the major sectors could have a sharp effect on all other sectors.

Top 15 Personal Income Location Quotients 1985
Dayton - Springfield, Ohio

Sector	LQ
Industrial machinery and equipment	4.12
Rubber and misc. plastics products	3.96
Paper and allied products	2.18
Federal, civilian	2.05
Printing and publishing	1.55
Fabricated metal products	1.45
Health services	1.25
Personal services	1.12
Eating and drinking places	1.10
Educational services	1.09
Transportation services	1.08
General merchandise stores	1.07
Business services	0.91
Trucking and warehousing	0.90
Stone, clay, and glass products	0.90

Source: REIS—Calculations by Development Strategies.

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[7]**Note**—Montgomery County is one of the four counties that make up the Dayton—Springfield MSA.

Top 15 Personal Income Location Quotients 1998
Montgomery County, OH

Sector	Value
Industrial machinery and equipment	4.40
Rubber and misc. plastics products	2.99
Paper and allied products	2.44
Printing and publishing	2.16
Transportation services	1.64
Health services	1.28
Transportation by air	1.27
Educational services	1.13
Personal services	1.13
Business services	1.06
Federal, civilian	1.03
Fabricated metal products	1.03
Eating and drinking places	0.98
Trucking and warehousing	0.98
Home furniture and furnishings stores	0.94

Manufacturing sectors clearly lead the overall Montgomery County economy, but it is notable that there is also important strength in the transportation services and health services. Educational services enters the top 15 for the first time and shows the concentration of higher learning institutions like Wright State, University of Dayton, Miami-Jacobs, etc., in the greater Montgomery County area. Services seem to dominate the lower tier of the top 15 but not in such a way that any one dominates the economy.

This lack of dominance in any one sector for Montgomery County emphasizes the importance of the Dayton-Springfield area to the welfare of the county as a whole. In this sense, Dayton's manufacturing and government based economy is a key to the health of the county as a whole.

Interim conclusions

In light of this quick analysis, it appears that sectors to emphasize in the comprehensive plan for Kettering should continue to focus on manufacturing, particularly durable goods sectors. Manufacturing remains a critical component of the American economy and it generally pays high wages, helping to create a great deal of personal income. Both Montgomery County and the greater MSA hold a greater share of the manufacturing pie than the nation as a whole, and this translates into a critical area for Kettering to develop and support. On the downside, U.S. manufacturing is increasingly capital driven and less job driven. Jobs in manufacturing increasingly favor higher skills, particularly computer-related skills, but also problem-solving skills, teamwork skills, and most skilled trades. Machines increasingly do work that was historically performed by unskilled labor. Thus, the jobs are good, well-paid positions, but are relatively few in number.

Thus, manufacturing in Kettering would need to emphasize high-tech manufacturing. Not making computers and such, but using advanced technology. No doubt, much of this transition has already taken place. A critical economic development and comprehensive planning goal may be to work toward enhancing and diversifying the skills of the already trained manufacturing work force in Kettering so that companies like Delphi will be encouraged to invest their commercialization applications resulting from research and development into manufacturing processes in Kettering.

Clearly, also, there is a very strong federal government presence in the Dayton-Springfield area attributable to Wright Patterson Air Force Base. It is, therefore, very important that federal government policies and budget projection be closely monitored by Kettering officials to stay abreast of the long-term future of Wright Patterson and the potential economic impacts even in Kettering.

In light of the present heavy dependence on just a couple of sectors, it is also important that Kettering focus on attracting investment funding to the area so that new businesses can be encouraged to grow and old businesses

can be encouraged to change toward more efficient processes, higher-skilled labor, and more commercially viable products. This suggests that a program aimed at attracting more of the transportation services industry could lead to greater local investment. The Dayton-Springfield area already receives a large portion of its income from this area and as will be shown later, transportation services is projected to grow the fastest of any area between 1996 and 2006. The City of Kettering must determine if it is attracting its fair share of investment from those companies.

Relative to retail, it is usually not recommended that retailing, per se, be an economic development priority. Retail should respond to consumer market opportunities. Let economic development attract those critical export industries that create new jobs and new money for the local economy. Retailers will show up. At the same time, retailing is not just a Kettering market. It can draw from the whole of Montgomery County, if done well enough, as well as from the broader urban and rural areas for many miles around. And the retailing industry continues to evolve very quickly into more efficient economic facilities that, in total, can support much larger market geographies. These efficiencies, however, also require the retail sector to build facilities that are readily abandoned when the market shifts—and the retail market has a very volatile history. This causes land use and building reuse challenges for planners and community leaders.

Kettering should certainly assure that there are sites available to capture retailers, but shouldn't necessarily place retailing as a high economic development priority. If it does, it runs the risk of merely attracting the bulk of its growth from shoppers living in other communities or encouraging those communities to capture their shoppers back eventually. Much better to work on attracting and retaining high paying jobs that serve a global marketplace while making sites available (principally through planning and zoning) for retailers, but not devoting scarce resources to retail attraction. Thus, while retail centers are very obvious signs of improvements in the quality of life and that retail sales can be an important tax base, without more jobs and/or more personal income, there will not be more sales and more tax base.

National and State Employment and Output Projections

Every two years, the U.S. Department of Labor makes ten-year projections of employment trends by sector in the nation as a whole[8]. Some states use the national projections to benchmark their own projections. This allows economic development officials, labor force advisors, educators, and others to adjust planning and targeting programs that will be most beneficial for individual workers and, as a consequence, local, state, and national economic progress.

Fastest Growing National Sectors and Occupations

Table A-11 highlights those economic sectors that are projected to have the fastest rates of employment growth in the United States. Leading the list are

Table A-11
The 10 Sectors with the Fastest Projected Wage and Salary Employment Growth, 1998-2008, in the United States

	1998	2008	Change	Percent Change
Computer/Data Processing Services	1,599,000	3,472,000	1,873,000	117%
Health Services, NEC	1,209,000	2,018,000	809,000	67%
Residential Care	747,000	1,171,000	424,000	57%
Management/Public Relations	1,034,000	1,500,000	466,000	45%
Personnel Supply Services	3,230,000	4,623,000	1,393,000	43%
Misc. Equipment Rental and Leasing	258,000	369,000	111,000	43%
Museums, Botanical and Zoos	93,000	131,000	38,000	41%
Research and Testing Services	614,000	861,000	247,000	40%
Misc. Transportation Services	236,000	329,000	93,000	39%
Security and Commodity Brokers	645,000	900,000	255,000	40%
Source: U.S. Department of Labor, Bureau of Labor Statistics.				

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[8]Most recent projections are in the November 1999 issue of *Monthly Labor Review* published by the U.S. Department of Labor.

computer and data processing services with a 1998-to-2008 growth rate of 117 percent (more than double), resulting in 1,873,000 additional jobs in this sector.

Note that none of the fastest growing national sectors is in manufacturing. Again, this reflects the declining role of manufacturing as a job sector, although other data clearly shows that manufacturing jobs are increasingly well paid and manufacturing is an important generator of personal income due to the sector's success in creating machine-based processes and very high productivity.

The nation's second and third fastest growing sectors are in health care. While health services tends to be a strong sector in most metro areas; however, it is rarely an export sector. For the Dayton-Springfield MSA, the personal income location quotient for the health services sector was an unusual 1.25, indicating that health services is indeed an export sector for that area. Not only does that sector serve its surrounding community, but also it draws a significant level of people outside the area for care. This is probably due to the presence of the Kettering College of Medical Arts, which would provide a ready workforce for any health care facilities in the metro area.

The growing importance of health services is evident in the projections. As the population ages and becomes more prosperous, health care services become increasingly important and accessible. Assuring that a sufficient number of workers is well trained in the rapidly evolving health services sector should be an important economic development goal that increases the quality of life in the Kettering area. It is evident that Kettering is well positioned to take advantage of this opportunity.

Most of the national sectors shown on Table A-12 are in the services sector, again evidence of the shift in employment in the U.S. Taking heed, Kettering would assure that people who are skilled in various services could be attracted to the Kettering area.

Table A-12
The 10 Sectors with the Largest Projected Job Growth, 1998-2008, in the United States

	1998	2008	Change	Percent Change
Systems Analysts	617,000	1,194,000	577,000	94%
Retail Salespersons	4,056,000	4,620,000	564,000	14%
Cashiers	3,198,000	3,754,000	556,000	17%
General Managers/Top Executives	3,362,000	3,913,000	551,000	16%
Truck Drivers, Light and Heavy	2,970,000	3,463,000	493,000	17%
Office Clerks, General	3,021,000	3,484,000	463,000	15%
Registered Nurses	2,079,000	2,530,000	451,000	22%
Computer Support Specialists	429,000	869,000	440,000	103%
Personal Care/Home Health Aides	746,000	1,179,000	433,000	58%
Teacher Assistants	1,192,000	1,567,000	375,000	31%
Source: U.S. Department of Labor, Bureau of Labor Statistics.				

Another way to look at national projections involves occupations as opposed to industries or sectors. Table A-12 shows the ten occupational categories in the U.S. with the largest projected job increases.

Leading the list are systems analysts, a high-skill occupation involved with the development and use of high technology, particularly in the computer industry—the fastest growing sector from Table A-12. But second and third on the list are relatively low skilled jobs in the retail sector. As noted in many sources, retailing is a growing sector for job creation owing to the increasing spending power of the American public, which is increasingly able to purchase quality of life amenities. To date, the retail sector has not had to create extensive capital means for serving the retail buyer, partly because of the number of people willing to work at the low-wage jobs in retail stores.

There is also going to be strong growth in management jobs that typically require extensive experience and skill—if not high technology skill. As more people are in the labor force, more people are needed in their management and effective deployment. Schools of business administration and related professions should continue to be in high demand.

Throughout the occupational projections, there is a back-and-forth movement between various levels of skills and educational requirements. This reflects a diverse economic future that will demand plenty of workers. Many future highly skilled workers, however, may take the low skilled jobs for a short time as they work their way through school or probe the labor market for jobs that best meet their education and expectations. Indeed, a potential economic development goal for Kettering could be to aggressively use incentives for people in low-skill positions to participate in training and educational programs that result in a generally high-skilled and adaptable work force, while taking advantage of the need for workers in a broad range of occupations.

Table A-13, which also reflects occupations, but instead of numerical growth, as Table A-12 shows, it reflects the fastest rates of national growth. These are the occupations projected to add proportionally more jobs than all others.

Table A-13
The Projected 10 Fasted Growing Occupations,
1998-2008, in the United States

	1998	2008	Change	Percent Change
Computer Engineers	299,000	622,000	323,000	108%
Computer Support Specialists	429,000	869,000	440,000	103%
Systems Analysts	617,000	1,194,000	577,000	94%
Database Administrators	87,000	155,000	68,000	78%
Desktop Publishing Specialists	26,000	44,000	18,000	69%
Paralegals and Legal Assistants	136,000	220,000	84,000	62%
Personal Care/Home Health Aides	746,000	1,179,000	433,000	58%
Medical Assistants	252,000	398,000	146,000	58%
Social and Human Service Assistants	268,000	410,000	142,000	53%
Physician Assistants	66,000	98,000	32,000	48%
Source: U.S. Department of Labor, Bureau of Labor Statistics.				

These occupations, almost universally, require advanced training and high skills, many in high technology areas. Computer engineers and computer support specialists would each double in number in the U.S. But the skills needed in the top ten fastest growing occupations also extend to human relations, medicine, and law. To hold a good paying, challenging job in the future increasingly requires advanced and, almost certainly, on-going training in a wide range of fields.

Dayton-Springfield Projections

The state of Ohio follows up the national projections of employment with its own projections, breaking them down by metropolitan areas within the state. Ohio authorities do not make projections of employment and output in Montgomery County, but the county is included within the Dayton-Springfield MSA.

Fastest Projected Employment by Sector

Table A-14 reflects the 15 economic sectors in the Dayton-Springfield MSA that are projected to add the greatest numbers of jobs between 1996 and 2006. Transportation services leads the list with a 57.1 percent projected increase by the year 2006. However, the job growth in numbers is much smaller than the number two position held by business services. That category is expected to add 14,100 new jobs by 2006 and given the steady growth in the main services sector, this is a reasonable projection. Business services includes a wide range of business types including professional service firms, temporary help agencies, and so on. As business grows—which includes manufacturing, by the way—the need for business services increases as well.

Manufacturing, as a case in point, is a major sector that has led the way in using outside business services rather than incorporating such employees in the manufacturing companies. This has helped much of

Table A-14
The 15 Sectors with the Fasted Employment Growth,
Dayton-Springfield MSA, 1996-2006

	1996	2006	Change	Percent Change
Transportation Services	2,800	4,400	600	57.1%
Business Services	30,100	44,200	14,100	46.8%
Social Services	7,300	10,000	6,300	37.0%
Utilities and Sanitary Services	2,700	3,400	700	25.9%
Auto Repair Services and Parking	3,700	4,600	900	24.3%
Legal Services	2,100	2,600	500	23.8%
Nondepository Institutions	1,900	2,300	400	21.1%
Private Health Services	46,300	55,900	9,600	20.7%
Wholesale Trade, Nondurable Goods	7,400	8,900	1,500	20.3%
Transportation by Air	3,800	4,500	700	18.4%
Amusement and Recreation Services	3,500	4,100	600	17.1%
Insurance Agents/Brokers/Services	1,800	2,100	300	16.7%
Eating and Drinking Places	33,100	38,100	5,000	15.1%
Engineering/Management Services	10,200	11,700	1,500	14.7%
Source: Ohio Job and Family Services—Office of Research, Assessment, and Accountability.				

manufacturing to become more efficient, even though downsized—a factor probably equally as important as shifting from low-skill jobs to machines in the reduction of employment inside manufacturing firms.

Further reflecting the relative prosperity of Kettering residents is a projected increase in the jobs in eating and drinking places, which are often used as places of entertainment to enjoy a good time with friends and family. Amusement and recreation services complements eating and drinking places as 11th on the list. Again, health services shows up as a growing job sector for the Kettering; it is increasingly important to have well trained people in this diverse sector.

Other sectors, like the number one transportation services and the number ten transportation by air, further support Kettering's key position on major

transportation and distribution networks. With prosperity and buying power, more and more goods need to be stored and distributed from key centralized locations.

While the state of Ohio did not provide projections for dollar outputs of the various sectors, there are still assessments that can be made regarding which sectors Kettering should focus on for economic development.

Conclusions: Key Sectors for Economic Development

Combining the independent projections of employment with knowledge about the income-producing capabilities identifies those sectors that might comprise priorities for planning in Kettering. Looking at just the projections for the Dayton-Springfield portion, Table A-15 emerges to show the top nine sectors that consistently appeared on the previous tables. Those sectors, listed below, combine high job growth projections with the 1998 personal income location quotients.

Table A-15
The 8 Sectors with the Fastest Employment Growth
in the Dayton-Springfield MSA 1996-2006
and Highest Personal Income Location Quotients 1998

	Employment Growth Rate	Income LQ 1998
Transportation Services	57.1%	1.67
Business Services	46.8%	1.05
Auto Repair Services and Parking	24.3%	1.13
Nondepository Institutions	21.1%	1.27
Private Health Services	20.7%	1.34
Transportation by Air	18.4%	1.21
Insurance Agents/Brokers/Services	16.7%	1.31
Eating and Drinking Places	15.1%	1.12
Source: Previous tables.		

The transportation services sector clearly emerges as one that should be pursued as a leading opportunity for Kettering. It has the ability to attract strong income growth as well as a high percentage increase in the number of jobs. Moreover, it is part of a cluster of sectors that includes wholesale trade and, to a degree, manufacturing, already strengths in the greater Kettering area. In short, Kettering can position itself even more strongly as a transportation hub for the movement and distribution of goods, particularly in land-based vehicles.

The business services sector also emerges with the fastest rate of job growth, the largest number of jobs to be created, and a modest location quotient greater than 1.0. In many ways, this sector could be considered part of the same cluster as trucking and warehousing because they both exist to serve the strong manufacturing firms in the area. Business services, however, is also a sector that can serve a broader array of firms and, therefore, become a force for diversification and adaptability in the Kettering economy.

While both of these sectors, and perhaps specialty trade contractors, are likely to be heavy users of computer and information technology, they are not going to be the sectors where such technology is created. That is, Kettering is not likely to be another Silicon Valley. But it can be a leader in the application of high technology in manufacturing, especially of heavy equipment.

While not creating the jobs it once did, manufacturing creates jobs with relatively high incomes and requires the input of intensive amounts of technological innovations. This input, in turn, requires highly trained and skilled technicians, engineers, scientists, and programmers as well as managers who can convert the technology and skills to profitable (i.e., income producing) enterprises. Thus, a business and labor retention strategy as part of an economic development plan could focus on investments in modernization of both labor skills and manufacturing processes.

Private health services should also be considered very closely. With the second highest number of jobs to be created in the Dayton-Springfield area and a high LQ of 1.34, this area is one that Kettering should build upon. The location of the Kettering College of Medical Arts puts the city at an advantage to provide professionals to fill the expected job growth in this area. In turn, those people should be encouraged to stay in the City of Kettering.

The comprehensive plan could, in turn, lead to a strategic economic development plan for the city. None of this is possible in isolation, however. Kettering is not an independent city but, instead, is part of a much larger and complex labor market and conglomeration of economic activities that, together, are stronger than the sum of the parts.

Thus, targeting economic development efforts, including land use planning, solely on Kettering may not be as fruitful as cooperative economic growth strategies that encompass the collective competitive strengths of the entire Dayton-Springfield area. Even so, Kettering has a crucial role in the region due to its place as the second largest city in Montgomery County, its physical proximity to Dayton, and the leadership it takes in the health services field with the Kettering Medical Center. These facts all add to the importance of Kettering to the greater Dayton area.

Summary

Kettering, with a 2000 Census population of 57,502, was the second largest city in Montgomery County, Ohio, using 1999 population estimates (latest year for which rankings exist). It did, however, lose 5.4 percent of its population from 1990-1999 based on population estimates released in October of 2000.

The just-released 2000 census population counts show Montgomery County with a population of 559,062, which places it 99th among counties in the United States. Montgomery County lost 2.6 percent of its population, or 14,747 residents between 1990 and 2000.

Despite the population loss, the Dayton-Springfield metro area (consisting of Clark, Greene, Miami, and Montgomery Counties), increased its wage and salary jobs by 36,307 between 1990 and 1999. Montgomery County increased its job base by 17,594 during the same period, or 48 percent of the increase for the metro area as a whole. Increases were seen in every sector except for mining. This would indicate that Montgomery County is a large job creation center for the Dayton-Springfield metro area

A decreasing unemployment rate, however, may hinder job growth in the future without some population increases—though it need not hinder income and productivity growth if labor skills are generally upgraded. Unemployment for the metro area was reported at 3.6 percent in March of 2001, compared to 4.1 percent for the U.S. as a whole.

In 1999, the preponderance of employees in the MSA, approximately 73 percent, worked in service-producing sectors. The other 27 percent were in goods-producing sectors (manufacturing, construction, mining, and agriculture). The largest single segment in 1999 was the separately defined services sector with 177,822 jobs (35.8 percent of the all wage and salary employment). Retail trade, with 103,798 jobs, and manufacturing, with 101,547 jobs followed this.

The metro area has several sectors with personal income location quotients (LQ)[9] well over 1.0—an indication of particular economic strengths, to be sure, but also of potential significant economic downturn vulnerability if those sectors have problems nationwide or globally.

Indeed, the top sector for Dayton-Springfield is industrial machinery and equipment manufacturing with a high LQ of 3.96. This certainly reflects the importance of Delphi, among others in that cluster. This sector, therefore, is a great strength for the Kettering area and efforts to diversify the economic base of the area should grow from there.

Still, it is a vital sector and it would be best if the number and types of companies within that sector could be both increased and diversified. After all, the local labor skills are present.

Rubber and miscellaneous plastics products holds the number two position with regard to importance of income generation. At 2.78, its LQ showcases the region's strength in and dependence on the motor vehicle assembly industry, which has a historically cyclical nature. Location quotients also highlight the importance of Wright Patterson Air Force Base, at least as far as personal income is generated in the federal civilian employment sector (LQ of 2.16). Other sectors that lead Dayton-Springfield's economy are paper and allied products manufacturing (2.0), printing and publishing (1.74), and health services (1.25).
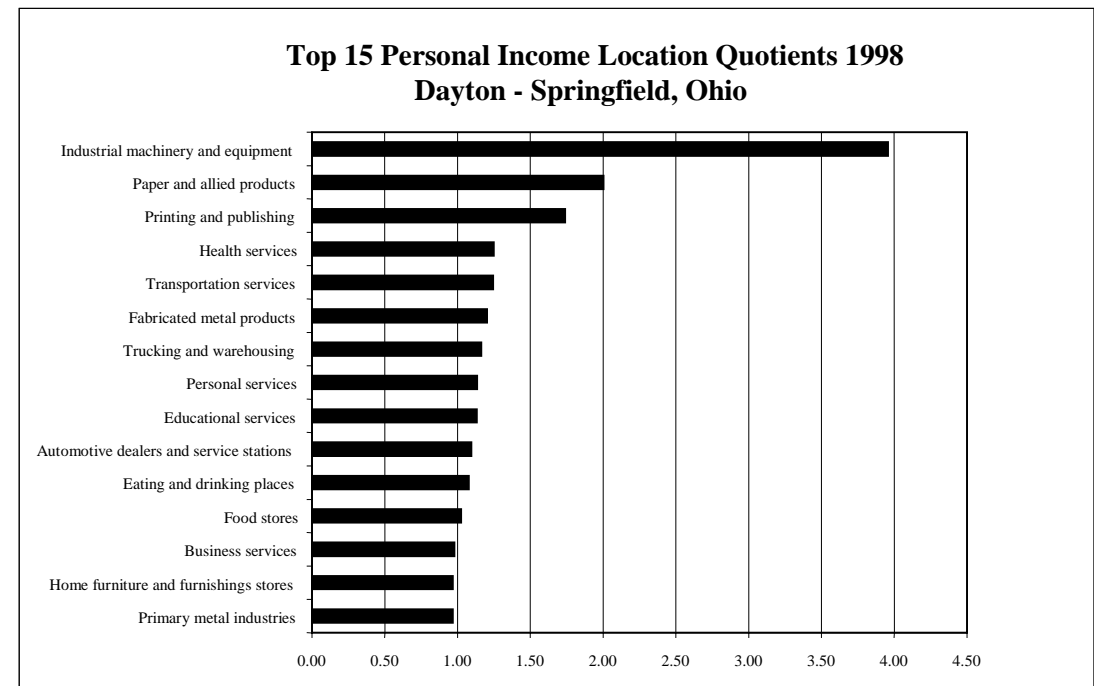
**Top 15 Personal Income Location Quotients 1998
Dayton - Springfield, Ohio**

Source: Regional Economic Information System 1998, U.S. Department of Commerce. Calculations by Development Strategies.

[9]Personal income from jobs in a sector divided by all personal income in the county compared to the same calculation for the nation as a whole. A quotient of 1.0 means parity with the country.

Despite the high location quotient for the top sector, industrial machinery and equipment manufacturing, it was higher in 1985 at 4.12. And the rubber and miscellaneous plastics products sector was also higher in 1985, at 3.96. Both sectors have reduced these quotients, thus reducing the high dependence on them within the Dayton-Springfield economy.

Independent projections of employment, however, suggest a somewhat different set of sectors that represent the best future opportunities for Kettering. Lead sectors in the Dayton-Springfield metro area with respect to employment, include business services, social services, and engineering and management services.

CITIZEN INVOLVEMENT

Community Image Survey

A community image survey was conducted as part of the public input meetings to develop a common vision of what residents of Kettering would like their community to look like. Based on a process first developed by Anton Nelessen and Associates of Princeton, New Jersey, the survey is a process by which a community can participate in evaluating its environment and developing a common vision for the future.

Each person in the community has a vision of what they like. When planners use words like mixed-use or pedestrian-oriented, they partly portray an idea of what that looks like. The community image survey helps to further visualize those kinds of choices. The underlying premise is that to create a credible, responsive plan, the citizens of the community need to see, participate in, and understand the vision.

The participants in the survey were shown 40 images. These images included various types of residential, commercial, industrial, and infrastructure development. The participants were asked to rate each image on a scale of 1 to 10. One (1) would indicate what the participant felt was a planning/design failure. Ten (10) would indicate a great place to live or work.

Results of the survey were tabulated and analyzed to determine what kinds of development are preferred in Kettering. This is then the type of development that should be encouraged in the plan. Conversely, the images that scored the lowest represent the types of development that should be discouraged in the plan.

Figure A-7 shows the top five scoring images in Kettering. These represent the favorite images, regardless of category, among the participants. At each meeting where the survey was administered, the participants were asked why they preferred these images. Responses include:

- An abundance of landscaping and mature trees
- A pedestrian-friendly environment
- Architectural details
- Quality building materials such as brick
- Tree lined streets
- Minimal visual clutter (overhead lines/signage)
- Smaller/neighborhood scale development (particularly commercial)

Participants found that the highly rated images exhibited common elements. In general, the preferred images presented significant amounts of landscaping and a higher level of streetscape/building aesthetics. It is interesting to note that all of the top five images depicted public open space of some sort. This seems to indicate a strong desire within the community for additional or enhanced open space amenities.

Figure A-8 includes the lowest scoring images from the survey. We also asked participants why they did not like the development depicted in these images. Some of the responses include:

- Too much visual clutter including overhead utilities and signage
- Too much asphalt and not enough landscaping in parking lots
- Lack of pedestrian connections on streets and in shopping areas
- No planting strip between sidewalks and street, unsafe for pedestrians
- Lack of architectural detail

The participants in the survey are very clearly saying that they do not like strip commercial development characterized by wide roads, lack of pedestrian orientation, lack of landscaping, excessive signage, and general visual clutter. They prefer more architectural detail and character. Also, their standards for the quality of industrial/commercial development are much higher than what is depicted in the lower rated images, and in some cases, what is being developed in Kettering.

Figure A-7
Highest Rated Images

Figure A-8
Lowest Rated Images

The results of the survey were also tabulated based on the type of development represented in the photograph. The most positive and negative responses for single-family residential, multi-family residential, commercial, office development, and road corridors were compiled and are presented below.

Single-Family Residential Development
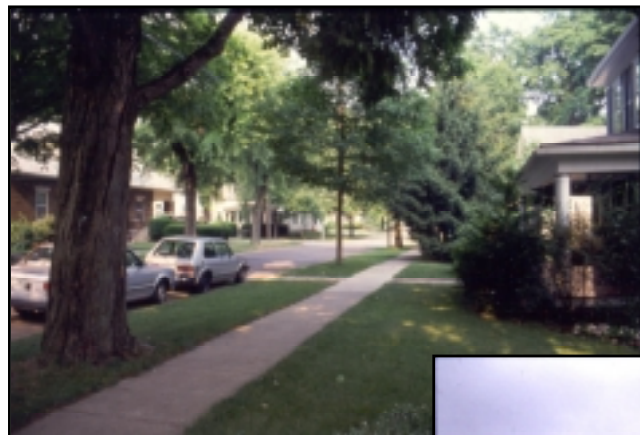
Most Positive—Score: 7.65

Most Negative—Score: 6.70

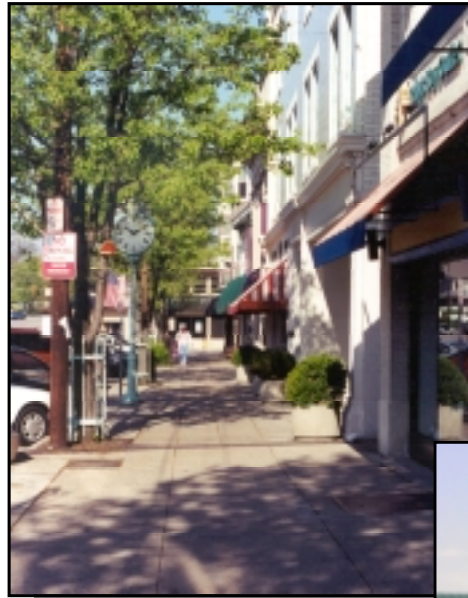## Multi-Family Residential Development

Most Positive—Score: 8.05

Most Negative—Score: 5.63

Commercial Development

Most Positive—Score: 7.27

Most Negative—Score: 3.28

Office Development

Most Positive—Score: 7.28

Most Negative—Score: 5.37

Roads

Most Positive—Score: 8.67

Most Negative—Score: 2.87

Summary of Public Comments on Issues

From February 28 through March 8, 2001, a series of four public meetings was held to gain input from the citizens of Kettering for the development of the comprehensive plan. These meetings were held at Southdale Elementary School, Beavertown Elementary School, Kennedy Elementary School, and Fairmont High School. At the meetings, attendees, working within groups, were asked to discuss and report on the major issues facing the community in terms of community image and quality, transportation, and land use and development. Below is a summary of the input from the meetings.

Issue: Community Image/Quality

▸ Aesthetics:

- ▸ Gateways into the city need to be improved with classy signage (no metal signs) and unique welcome signs as well as landscaping.
- ▸ Overhead wires should be eliminated over time; new developments should definitely have underground utilities.
- ▸ Traffic lights should be located on posts and arms, like in the research park, rather than hanging on wires over the street.
- ▸ The population is aging—how do we attract new, younger wage earners and diversify the city?

▸ Streets and Public Spaces:

- ▸ Some streets should be designed with landscaped medians with trees and flowers.
- ▸ Both neighborhood and busy streets should have mature trees lining them in the tree lawn.
- ▸ There are too many boulevards.
- ▸ There should be more streets with boulevards.

- Maintain and preserve the excellent recreational opportunities such as Fraze, Delco Park, and the recreation center.
- Public spaces like parks and other green spaces should have flowers, trees, and fountains.

- Development/Buildings:

  - Emphasize blending new buildings with the existing character of surrounding neighborhood.
  - Shopping malls should be unique and attractive; less sterile, less industrial in appearance.
  - Buildings like the government center and Fraze should be promoted.
  - The current allotment of big boxes is fine; we don't need any more.
  - The redevelopment of Van Buren and Wilmington Heights shopping center sites should be a priority.
  - The Town and Country and Kettering Town Centers should be maintained the way they are.
  - The H and H on Wilmington needs to be improved.
  - Create better buffers between residential and commercial, small business, or apartment areas.
  - There should be more landscaping in parking lots such as Meijer.
  - Redevelopment of old tracts into patio homes should be encouraged.
  - Green spaces within neighborhoods should be developed.
  - A plan for the vacant acreage by Kettering Hospital needs to be established.
  - Aggressive redevelopment of older residential areas should be encouraged.
  - There are too many drug stores (you are only five minutes from a drug store).

- Schools/Education/Community Facilities:

  - Access to higher-tech facilities will attract new residents.
  - The quality/excellent education system should be maintained and enhanced to make sure it addresses the needs of the community

(adult education, primary, secondary, and college levels); a quality school system is important in attracting residents and companies to the city.
- The government center is urban design (out of sight, but functional) is good.
- The excellent medical facilities should be preserved and are an amenity to the city.
- The governmental facilities are good.
- The churches are good.
- The people in Kettering are good.

- Other:

  - Limit time that a residential home can stay vacant and boarded up.
  - Home ownership should be promoted over rental.
  - No additional public art at Fraze Pavilion.
  - Eliminate ugly, large intrusive billboards.
  - Adult entertainment uses should be prohibited.
  - Kettering has a good community image but not a community feel (how do you get it?).
  - Block party and other community events should be encouraged.
  - Neighborhood watch programs should be encouraged.
  - Better identification of neighborhoods is important.
  - Diversification of the city should be encouraged.
  - Absentee landlords for rental properties contribute to declining maintenance.
  - The government actively seeks community involvement.
  - The Holiday at Home program is good.
  - The city may not appear open and friendly to minority population segments.
  - Let's return race relations to a positive for the community.
  - The city is perceived as hard to deal with for commercial and residential development.
  - Volunteerism is high.
  - Safety services are excellent (police and fire).

- The city has good recycling programs (yard debris).
- Home renovation should be encouraged.
- Environmentally friendly landscape.

▸ Policies:

- Existing curbs should be fixed.
- Tax abatements should not be used for economic development.
- There should be efforts to promote small businesses; the dot com market.
- A ban on grocery carts in residential areas should be implemented.
- There should be increased penalties for littering and/or better enforcement of existing littering laws to help clean up public spaces such as our creeks.
- Codes to clean up apartment areas/complexes should be enforced.
- Be more flexible on home/commercial improvements.

Issue: Transportation

▸ Street Design:

- A balance between efficient movement of traffic and the comfort of pedestrians is needed.
- Speed limits should be enforced and narrower streets should be encouraged to help protect neighborhoods from fast cut-through traffic.
- Speed limits should be re-evaluated citywide, especially on Ackerman (25 mph).
- Some streets are too narrow for parking on both sides.
- Curbs and sidewalks should not be required in all areas.
- Sidewalks should be paid for in an equitable manner.
- Pedestrian walkways around Lincoln Park should be developed.
- Better walking opportunities should be developed.
- Walkways over major autoroutes should be developed.

- The intersection of Wilmington and Dorothy as well as that of Stroop and Shroyer are bad intersections and need to be redesigned.
- Public transportation should be provided for those without cars.
- Far Hills is congested, especially south of Stroop.
- Transportation systems need to be flexible to accommodate an aging population.
- Tree-lined boulevards should be developed.
- There should be more bikeways and bike lanes (like Wilmington, Ohio), and they should tie into a regional system as well as connect the city together. Bike racks should be provided at destinations and at shopping areas.
- There should be more sidewalks in residential areas.
- The ability to walk to shopping should be developed.
- Pedestrian-friendly sidewalks should be encouraged, but not like Wilmington over Beaver Creek. If the street has a traffic light, it should have a sidewalk.
- Sidewalk access to shopping centers like Dorothy Lane and Kroger should be part of the street designs of main roads and connections between residential and commercial.
- Planning to accommodate a high speed subway between Dayton and Cincinnati should be considered.

▸ Enhancements:

- Traffic lights are needed at intersections such as Wilmington and Farrington.
- There should be better use of computer timing systems for lights during peak times and flashing lights for slow times.
- Installation of trigger mechanisms in the ground to turn lights should be implemented for low flow roads.
- Alternative public transportation such as mass transit, cycling and pedestrian connections should be promoted at a citywide level and as part of the regional system.

‣ A shuttle to key locations such as the Kettering Recreation Center, Fraze Pavilion, and Town and Country shopping center should be developed.

‣ More parking in some areas, such as at Fraze Pavilion and behind Books and Company, is needed.

‣ Truck routes should be developed to restrict truck traffic in residential areas.

‣ Traffic calming techniques should be implemented, especially on Hilton Road.

‣ Roads where utility digs are cut should be properly repaved.

‣ More streetlights are needed.

‣ Bus routes and times should provide the same level of service throughout the city.

‣ School zones should have flashing lights.

‣ Bus service should include Dorothy Lane between Shroyer and Wilmington.

‣ Parking and Congestion:

   ‣ There is too much traffic congestion at schools (Oakview and Southdale), the post office, Meijer, and on Bigger between David and Wilmington.

   ‣ There is too much cut-through traffic in the neighborhoods.

   ‣ The fire station at David is poorly located for traffic flow.

   ‣ The benefits of Fraze Pavilion should be translated throughout the city.

   ‣ Service roads should be developed on Stroop and Dorothy.

   ‣ School zones and major thoroughfares don't mix.

   ‣ The 25-mph speed limit on Ackerman is unrealistic.

   ‣ Eliminate on-street parking on reasonably busy streets.

   ‣ Adequate parking should be provided for new commercial buildings.

   ‣ Reflector tape on signs should be encouraged.

   ‣ Street signs should be more legible.

   ‣ Parking should be prohibited on curves on residential streets.

‣ There is double parking at Fairmont High School on Shroyer and congestion during school pick-up.

‣ Access to the interstates from Kettering should be improved.

‣ Business signage should not restrict vision during driving.

‣ Street maintenance on Hilton Drive needs to be improved; our gutters are eroded and it becomes a river when it rains preventing on-street parking.

‣ Designate parking spots based on car type (SUV, compact, and minivans) to eliminate blind spots.

Issue: Land Use and Development

‣ Redevelopment Patterns and Land Uses:

   ‣ There should not be any more drug stores.

   ‣ There should not be any more big boxes or strip malls.

   ‣ The Van Buren shopping center should be upgraded or redeveloped with affordable housing, nice retail shops, and a small grocery store.

   ‣ Under-used shopping areas and those with vacant buildings should be redeveloped with mixed uses with attractively designed architecture and green spaces; new uses should be invented for old shopping centers.

   ‣ A city center area should be created.

   ‣ High-tech uses should be promoted as a replacement for manufacturing.

   ‣ Condominiums should be promoted like one level units.

   ‣ Rental housing should be discouraged.

   ‣ More good restaurants should be developed.

   ‣ Older, established neighborhoods should be protected from incompatible commercial development.

   ‣ The character of older housing should be maintained.

   ‣ Industry should be stable.

   ‣ The Kettering Recreation Center is great; it brings families together and provides recreational opportunities for young people.

▸ A recreation center in the central or western part of the city would be nice.

▸ Recreational areas such as Delco Park should be encouraged.

▸ New buildings should be aesthetically pleasing; they should fit or blend with the surrounding area (color, sign level, landscaping).

▸ No new buildings should be built until all the old empty options and previously developed lands have been explored (create incentives to occupy existing spaces).

▸ Apartment-zoned areas should be restricted.

▸ Industrial uses should be located in appropriate places and should be environmentally clean.

▸ A variety of house styles should be encouraged on each street.

▸ Sidewalks on main roads should be developed.

▸ Smaller buses in residential areas should be used.

▸ Natural areas should be enhanced.

▸ A skateboard facility should be developed similar to the one at Yellow Springs; grants could be used to pay for land, cement, fence, and wood.

▸ More parks, bikeways, and connected green spaces should be developed.

▸ Small retail areas with specialty shops should be developed.

▸ Housing opportunities for seniors should be developed.

▸ Big box uses rather than industry should be promoted.

▸ Incentives to encourage people to recycle aging properties should be offered.

▸ The ability or opportunity to walk to neighborhood shopping should be developed.

▸ Good planning projects such as Hills and Dales should be encouraged.

▸ Businesses should be clustered around small green spaces.

▸ Projects like Lincoln Park and the Research Park should be promoted.

▸ Residential uses should remain the primary focus of the community.

▸ There is a need for convenient and desirable amenities to attract and retain residents.

▸ Shopping centers—which way are they headed? What will meet consumer demand?

▸ Policies and Enforcement:

　▸ Homeowner associations should be regulated.

　▸ The Kettering Recreation Center should be more expensive to outsiders.

　▸ Who should pay for upgraded sidewalks? Where should sidewalks be located (what streets)?

　▸ There should be improved enforcement of building maintenance codes for both residential and commercial uses, more inspectors, and low interest loans for investments.

　▸ The entrances to Kettering should be improved.

　▸ There should be more independent businesses, such as mom and pop stores.

　▸ Some development decisions seem to be based on the ability to get federal grant money, even when they are not in the best interest of the city.

　▸ Improved publicity of zoning hearings to ensure public input should be implemented.

　▸ Businesses should be held accountable when they move out and don't clean up.

　▸ There should be better landscape regulations for commercial development.

　▸ Encourage the refurbishment of private property.

　▸ Signage should continue to be regulated and be at ground level.

　▸ Commercial and residential buildings should be required to have easy-to-read numbers.

　▸ Trees—plant them and keep them!

　▸ Green spaces such as those around Fraze Pavilion should be encouraged.

　▸ Experiment with minimum lease terms for retail uses.

　▸ Unobtrusive neighborhood lighting should be developed.

　▸ Input from local groups should be sought.

- Blighted old buildings should be eliminated.
- Old neighborhoods should be maintained.
- Parking lots should be broken into smaller areas with landscaping.
- A balance between quality of life and economic development should be achieved.
- What will make it attractive to live and work here?
- Is zoning too cumbersome or restrictive; does the development process work or does it discourage development?
- Is the real estate tax a discouragement or encouragement to attract people?

Community Issues

At its March 28, 2001, meeting, the Comprehensive Plan Steering Committee reviewed the public input comments received in February and March. The meeting focused on digesting the comments received and prioritizing the issues according to their relative importance to the Steering Committee. Completing this task is extremely important as the prioritization of issues lays the groundwork for where the Steering Committee's attention will be focused later in the planning process.

To assist in the prioritization process, the Steering Committee participated in an exercise wherein each member of the Steering Committee received a set of green or red stickers that were used to assign the relative importance of this issue to the Committee member. Green stickers indicated a strong or positive vote regarding an issue while red stickers were vetos of those issues that, in their opinion, were not an important issue to address as part of the comprehensive plan process. When a red sticker was placed next to a specific issue, it cancelled out the voting impact of the green stickers. In a small number of cases, an issue received several red stickers, resulting in a negative vote total.

After the conclusion of the meeting, the Woolpert team tabulated the voting using Table A-16.

Table A-16
Steering Committee Votes

Number of Votes Cast	Importance
+8 or higher	*Highest importance*—issue to address as part of the comprehensive plan
+4 to +7	*High importance*
+1 to +3	*Moderate importance*
0 or fewer (-1, -2, etc.)	*Low importance*

For the purposes of this report, those issues receiving zero or fewer votes cast are not indicated in this summary since those issues have been determined to be of low importance to the comprehensive plan. The relative importance of each issue is provided below according to the issue topic area—land use and development, transportation, and community image/quality issues.

Land Use and Development Issues

Highest Importance

- Under-used shopping areas (Van Buren, Wilmington Heights, etc.) and those with vacant buildings should be redeveloped with mixed uses and attractively designed architecture and green spaces.

- A skateboard facility should be developed.

- Incentives to encourage people to recycle aging properties should be offered.

▸ A balance between quality of life and economic development should be achieved in Kettering.

▸ Blighted, old buildings should be eliminated.

High Importance

▸ New uses should be invented for old shopping centers such as affordable housing and nice retail shops.

▸ Condominiums should be promoted like one level units.

▸ Older established neighborhoods should be protected from incompatible commercial development.

▸ Businesses should be held accountable when they move out and don't clean up.

Moderate Importance

▸ A city center should be created.

▸ The character of older housing should be maintained.

▸ No new buildings should be built until all the old empty buildings and previously developed lands have been considered. Create incentives to occupy existing spaces.

▸ Limit construction of new apartments.

▸ Industrial uses should be located in appropriate places and should be environmentally clean.

▸ A variety of house styles should be encouraged on each street.

▸ Small retail areas with specialty shops should be developed.

▸ Housing opportunities for seniors should be developed.

▸ Residential uses should stay a primary focus of the community.

▸ Some development decisions seem to be based on the ability to get federal grant money, even when they are not in the best interest of the city.

Transportation Issues

Highest Importance

▸ A balance between efficient movement of traffic and the comfort of pedestrians is needed.

▸ Curbs and sidewalks should not be required in all areas.

▸ There should be more bikeways and bike lanes throughout the city and they should connect to the regional bikeway system.

▸ There should be better use of computer timing systems for traffic signals during peak times and flashing lights for slow times.

▸ Alternative public transportation such as mass transit, including shuttles to key locations such as the Kettering Recreation Center, Fraze Pavilion, and Town and Country shopping center, should be developed.

▸ Parking lots should be broken into smaller areas with landscaping regulations.

High Importance

▸ The intersections of Wilmington Pike and Dorothy Lane and Stroop Road and Shroyer Roads are unsafe and need to be redesigned.

▸ Bike racks should be provided at destinations like shopping areas.

Moderate Importance

▸ Speed limits should be enforced and narrower streets should be encouraged to help protect neighborhoods from fast cut-through traffic.

▸ Some streets are too narrow for parking on both sides of the street.

▸ Sidewalks should be paid for in an equitable manner.

▸ Pedestrian walkways around Lincoln Park should be developed.

▸ Transportation systems need to be flexible to accommodate an aging population.

▸ Truck routes should be developed to restrict truck traffic in residential areas.

▸ School zones should have flashing lights.

▸ Additional parking is needed in some areas such as Fraze Pavilion and the Town and Country shopping center.

▸ There is too much cut-through traffic in some neighborhoods.

▸ The fire station at David Road is poorly located.

Community Image/Quality Issues

Highest Importance

▸ Gateways into the city need to be improved with nice signs and landscaping.

▸ Overhead wires should be eliminated over time; new developments should have underground utilities.

▸ Both neighborhood and busy streets should have mature trees lining them in the tree lawn.

▸ Shopping areas should be unique and attractive, less sterile and less industrial in appearance.

▸ There should be more landscaping in parking lots like Meijer's.

▸ Aggressive redevelopment of older residential areas should be encouraged.

▸ The excellent education system should be maintained and enhanced to make sure it addresses the needs of the community.

▸ Home ownership should be promoted over rental properties.

▸ There should be efforts to promote small businesses.

▸ Codes to clean up apartment areas/complexes should be enforced.

High Importance

▸ Traffic lights should be located on posts and arms, like in the Research Park, rather than hanging on wires over the street.

▸ Some streets should be designed with landscaped medians.

▸ Create better buffers between residential and commercial uses.

Moderate Importance

▸ There should be more streets with boulevards.

▸ New buildings should be consistent with the character of surrounding neighborhoods.

▸ Establish green spaces within neighborhoods.

▸ There are too many drug stores.

▸ Limit the time a residential home can stay vacant and boarded up.

▸ Better identification of neighborhoods is important.

▸ The city may not appear open and friendly to minority populations.

▸ The city is perceived as hard to deal with for commercial and residential development.