

City of Fort Wright, Kentucky

October 2004



## Madison Pike Corridor Land Use and Economic Development Study



Northern Kentucky Area Planning Commission  
Gem Public Sector Services

# City of Fort Wright

Gene Weaver, Mayor  
Larry Klein, Chief Administrative Officer

## City Council

Matt Barker  
Dave Hatter  
Paul Hiltz

Adam Feinauer  
Joe Nienaber, Jr.  
Jeffrey Wolnitzek

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Jim Brannon	Kentucky Transportation Cabinet, District 6
Gina Douthaut	TANK/Fort Wright Business Association
Frank Henn	Resident
Paul Hiltz	City Council, Economic Development Committee
Tom Jacober	Resident/ Vision Committee Chair
George Kreutzjans	Resident/ Property and Business Owner
Rudy Kreutzjans	Resident/ Residential and Commercial Builder
Joe Michels	Resident/Property and Business Owner
Roger Schroder	Business/Property Owner/Fort Wright Business Assoc.
Jeff Wolnitzek	City Council, Economic Development Committee
Rick Wolnitzek	Resident/Architect

## Stakeholder Committee

In addition, to those mentioned above every property owner within the Madison Pike (KY 17) Corridor was invited to participate as part of the Stakeholder Committee. The City thanks each of those who took the time and made the effort to attend meetings and assist with this project.



# **NORTHERN KENTUCKY AREA PLANNING COMMISSION STAFF**

---

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Gail Deatherage, Administrative Assistant  
Jan Crabb, Fiscal/HR Administrator  
Nicole Cullum, Bookkeeper

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Michael D. Schwartz, AICP, Deputy Director, Current Planning  
Melissa M. Jort-Conway, MCIP, Principal Planner  
Larisa Keith, AICP, Principal Planner  
Susan Conrad, AICP, Senior Zoning Administrator  
Edward L. Barger, Principal Zoning Administrator  
Bruce Wong, Associate Zoning Administrator  
Donna Bresser, Principal Secretary

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Michael Carpenter, Associate Building Official  
Steve Dahlheimer, Associate Building Official  
Richard D. McAllister, Associate Building Official  
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Becky Warnke, Principal Secretary  
Sharon Shinnars, Associate Secretary

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Robert Zwick, Senior Infrastructure Inspector  
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Steven Lilly, Associate Infrastructure Inspector  
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Thomas C. East, Senior GIS Specialist  
Kevin Linn, Principal GIS Specialist  
Kyle Snyder, GISP, Principal GIS Specialist  
Ryan Kent, Principal GIS Specialist  
Kathy Stephens, Associate GIS Specialist  
Robert N. Chandler, Principal GIS Analyst  
Marvin Benfield, Graphic Coordinator  
Gretchen Boyce, Associate Secretary

**MARKET AND DEMOGRAPHIC ANALYSIS:** Doug Harnish, GEM Public Sector Services

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# CHAPTER I

## BACKGROUND

### GENERAL

The Madison Pike (KY 17) Corridor is one of the primary (non-interstate) north-south routes serving Kenton County. This route, which generally bisects the county, east from west, runs from the Pendleton County line through Independence and into downtown Covington. Along the way this route connects several locations: the historic county seat and courthouse in Independence, I-275 within the City of Fort Wright, and new office, entertainment and convention development along the riverfront in the City of Covington. Much of the population generated by new development in central and south Kenton County travels along this route to reach jobs, shopping, and service destinations. **Map 1A** shows the location of the corridor in relation to the major road system.

The City of Fort Wright is primarily a residential community. The existing commercial core is comprised of retail, commercial, and office development along Dixie Highway. Recent commercial development, including a Wal-Mart super department store and numerous other new businesses, has signaled the emergence of the Madison Pike (KY 17) Corridor



*Madison Pike Corridor: South and North from I-275 Bridge*

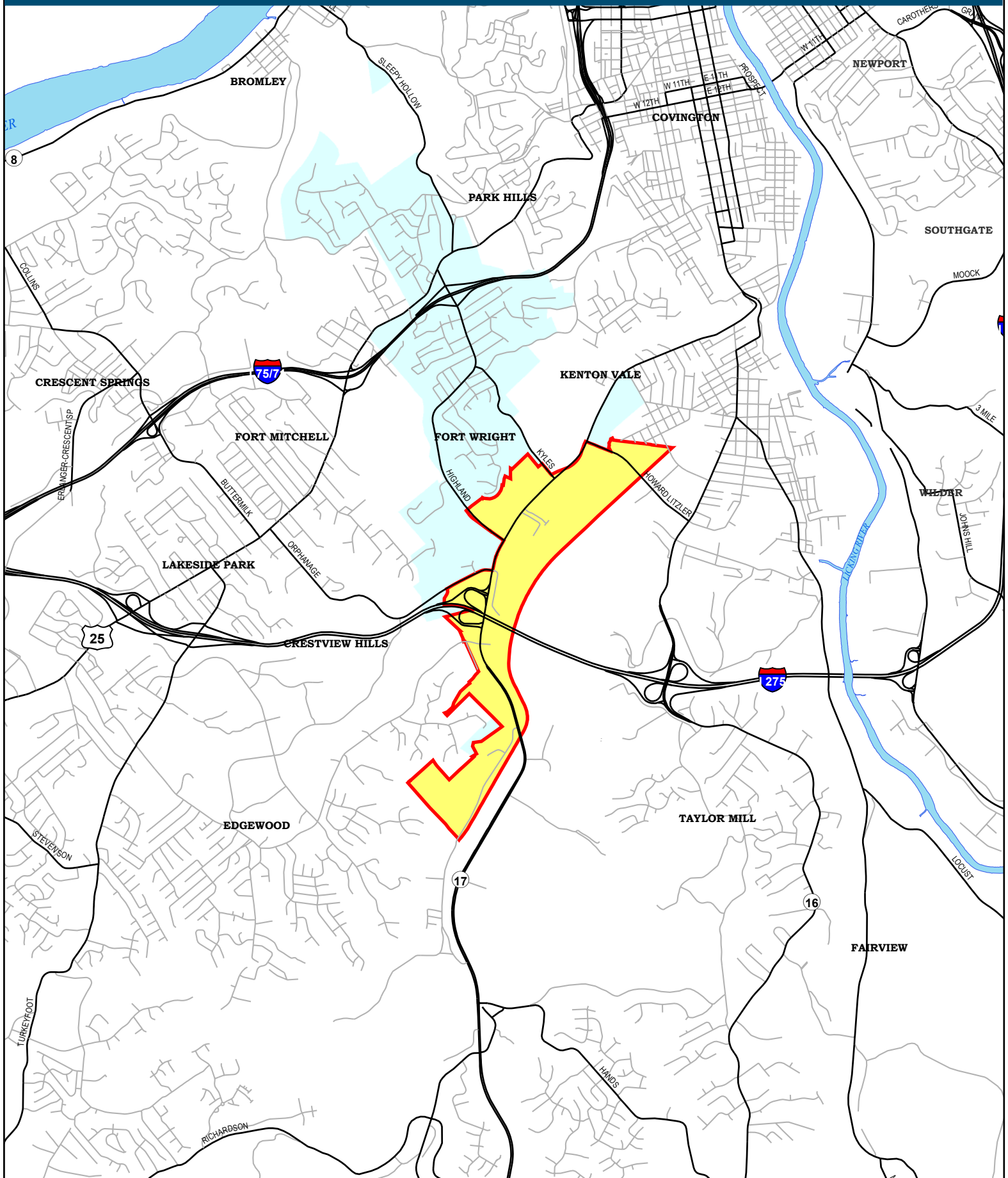
through the City of Fort Wright as the major growth area within the city. Historically, the Madison Pike Corridor was comprised of small local business and industrial enterprises. It is anticipated that new development spurred by the locational advantage of the Fort Wright section of the Madison Pike Corridor will transform it into one of the primary retail/service areas in Kenton County and Northern Kentucky.

Development of this corridor is vitally important to the City of Fort Wright since it contains the majority of land remaining in the city for new development. Land within the corridor is comprised of both vacant parcels and developed parcels that are likely to be redeveloped as the area continues to transform into retail/service uses. As previously mentioned, the existing commercial core along Dixie Highway has potential for redevelopment. However, Dixie Highway, unlike the Madison Pike Corridor, contains only limited vacant tracts.

The corridor identified for this study extends northward from the southernmost point of the city limits along Old Madison Pike to Howard Litzler Drive. The total length is just over three miles. Two and four tenths miles of the corridor lies along Madison Pike (KY 17) and the remaining eight tenths along Old Madison Pike.



# MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP

**1A**

Location



## PURPOSE

The purpose of this study is to prepare a *community-based plan* built on collaboration between city officials, residents, and stakeholders within the corridor. It is the desire of the city to provide a tool that can be used to guide public and private decisions and to *trigger new quality and sustainable development* along the corridor. With this in mind, the city requested that the Northern Kentucky Area Planning Commission (NKAPC), along with GEM Public Sector Services (GEM), undertake a detailed study of the corridor. GEM's role was to prepare a market analysis, including a detailed retail analysis, to help guide the other planning initiatives directed by the NKAPC. NKAPC Staff conducted an inventory of existing conditions, conducted public input and committee meetings, and developed planning alternatives and recommendations discussed throughout this plan.

## ORGANIZATION FOR PLANNING

To keep with its intent that the plan be “community-based”, the city organized two committees to work with NKAPC and GEM. A **Steering Committee** comprised of residents, property owners within the corridor, and representatives of the city, provided input and guidance during the planning process. A **Stakeholders Committee** comprised wholly of the property owners within the corridor was established to provide a forum for dissemination of information on the planning process to those most directly involved in the outcome of the planning process. During the planning process, the primary function of this committee was disseminating data from GEM's market analysis. As affected property owners, the city and NKAPC/GEM considered it to be of the utmost importance for these owners to be aware of and to benefit from this information on the potential use of their property.

## GUIDING THEMES

During the process of this study it became apparent that City of Fort Wright, stakeholders, residents, and other key players in the process of developing the corridor should embrace two guiding themes: a team approach, and form and function.

Team Approach: Teamwork among all participants both existing and future will assure the successful implementation of this plan and the long-term vitality of the corridor. In this context, teamwork is each participant identifying his or her role and following through. The city must move beyond the preparation of this plan and the adoption of zoning and other land use controls, to work directly toward implementing aspects of this plan that cannot be accomplished through zoning. First and foremost, the city needs to maintain its position as the coordinator and facilitator of development in the corridor. The city will have to stand firm in working within the development process to assure that improvements are made according to the intent of this plan. For example, many public improvements have been recommended within this study that will require the city to both coordinate the development as well as to seek methods for the funding of them.

Property owners within the corridor, both existing and future, must realize that the long-term success and sustainability of development and is reliant on coordinated actions. Success of this plan depends on development that is intricately connected and coordinated together. It is

intended that developing within the framework outlined in this plan will enhance the value of all development to both property owners and citizens using the corridor.

Form and Function: The form and function of the built environment may likely be the most important theme for development within the corridor. Typically, the mix of land uses becomes the focus of new development versus how buildings and land uses are shaped and function together within the environment. By managing and coordinating the form of the built environment, this plan hopes to attain an atmosphere that will attract people to the corridor for multiple activities such as shopping, entertainment, recreation and for other needed services. In other words, to create a vibrant and viable activity center. Within this built environment, specific uses become less important than the form of the buildings and function of the site. Well thought out design can be used to locate uses, often considered incompatible, adjacent to one another. Function refers to how the corridor operates in regards to building design and mobility provided by the transportation system (i.e., motor vehicles, pedestrian and bicycles, and mass transit). A key component of this plan is access control, which assures that each property is well served and that helps maintain the capacity of the major street system serving the corridor.

## **CHAPTER II**

### **GOALS AND OBJECTIVES**

#### **GENERAL**

The following goals and objectives were formed from input given during the public meeting process for the Madison Pike Corridor Land Use and Economic Development Plan held on March 9, 2004. A modified nominal group technique was used to determine the issues and ideas relative to the corridor. Overall goals were created from these comments that are specific for the corridor, as were objectives that will best achieve those goals.

#### **RELATIONSHIP WITH THE GOALS AND OBJECTIVES ELEMENT OF THE COMPREHENSIVE PLAN**

The following goals and objectives support the overall goals as adopted within the 2001 Area-Wide Comprehensive Plan Update; however, they are intended to be used specifically for the evaluation of land use recommendations and development proposals within the Fort Wright/Madison Pike (KY 17) Corridor.

#### **HOUSING**

**Goal:** *To provide a variety of housing opportunities and amenities where economically and physically feasible.*

**Objectives:**

- Determine the amount and type of housing primarily on the basis of what can be supported by the market.
- Ensure that residential uses are located in areas that are compatible with the built and natural environment.

#### **COMMERCIAL AND OFFICE**

**Goal:** *To provide for a variety of retail and office uses with consideration given to creating a sense of place.*

**Objectives:**

- Incorporate the market analysis results to identify most economically attractive uses.
- Attract retail that will diversify development in the corridor and yet be compatible with existing uses.



- Establish design criteria for “lifestyle” type development, with emphasis on green space and scale.

## **INDUSTRIAL/JOB CREATION**

**Goal:** *To identify the appropriate amount, type and location for industrial development.*

**Objectives:**

- Ensure that areas of existing industrial development, new development, and redevelopment are provided with all essential infrastructure, including access to transportation facilities.
- Establish adequate design criteria so that industrial uses are compatible with other uses such as retail, office, and recreation.
- Identify appropriate industrial uses that are sensitive to existing uses within the corridor, such as residential and commercial development and the Banklick Creek.

## **RECREATION AND OPEN SPACE**

**Goal:** *To locate and provide appropriate recreational opportunities within the corridor.*

**Objectives:**

- Provide a wide variety of recreational facilities, including indoor and outdoor recreation.
- Identify areas suitable for recreational use along Banklick Creek.
- Incorporate the design and location of recreation and open spaces as an integral part of new and existing development.
- Connect new and existing recreational facilities within the corridor to other recreational facilities in the area.

## **BANKLICK CREEK**

**Goal:** *To maximize the Banklick Creek as an asset to the Corridor and surrounding community.*

**Objectives:**

- Effort should be made to institute cleanup efforts and environmental education through local citizens and businesses.
- Coordinate efforts with EPA and SD #1 to mitigate existing water quality issues. This will require adequate control and monitoring of all potential contributors to pollution.

- Determine appropriate locations along the Banklick Creek for recreation and outdoor education.
- Select areas within the floodplain for recreational uses that can also assist in the preservation of flood control areas to reduce potential damage.
- Coordinate efforts with the Army Corps of Engineers and SD #1 on resolving issues of water quantity and flooding in the corridor.
- Establish design criteria for development in the corridor so as to make use of Banklick Creek (e.g. finished buildings with facades facing the Creek).

## TRANSPORTATION

**Goal:** *To provide transportation alternatives that will effectively move people and goods through and from place to place within the corridor in the most efficient manner.*

### Objectives:

- Provide frontage/access roads and eliminate curb cuts in order to improve traffic flow on KY 17 and the adjoining street system, where feasible.
- Incorporate appropriate traffic calming measures such as proper speed limits, traffic signalization, and turning lanes, in order to facilitate traffic flow.
- Implement capacity improvements when necessary.
- Encourage alternative modes of transportation such as walking, biking, and mass transit, through the development of convenient amenities and integrate alternate modes of transportation through design guidelines that create buffers, separation, safety, and compatibility.
- If economically and physically feasible, effort should be made to maintain and improve access, and encourage use of rail by locating industrial development adjacent to rail lines.

## DESIGN AND CURB APPEAL

**Goal:** *To develop design guidelines for future development within the corridor that will create aesthetic similarity, and that are sensitive to a diverse range of land uses.*

### Objectives:

- Encourage creative design in the built environment, through guidelines relating to scale, mass, and basic architectural features within the corridor. It is not the intent to prohibit national building identity or trademarked signage established by the business, but to integrate the design and maintain a general theme within the corridor.

- Incorporate landscaping and greenspace in the redevelopment of the corridor, especially the development of walking trails and pedestrian corridors and use of the natural environment surrounding Banklick Creek.
- Limit the impact of infrastructure in the corridor by providing internal access between properties through the use of frontage roads and by placing utilities underground wherever possible.

# **CHAPTER III**

## **MARKET ANALYSIS AND DEMOGRAPHIC STUDY**

### **SUMMARY**

The following is a basic overview of the report “A Market Study of The Madison Pike Corridor, Fort Wright, Kenton County, Kentucky,” prepared by Gem Public Sector Services on August 11, 2004. This overview is primarily the executive summary contained within the report. The report in its entirety contains more detailed analysis and should be referenced for clarification of these general observations.

The market study was conducted in the timeframe of the 1<sup>st</sup> Quarter, 2004.

### **DEFINITION OF THE STUDY CORRIDOR**

The study area has been defined as the land area adjacent to the Madison Pike corridor within the municipal boundaries of the City of Fort Wright, Kentucky (See Map 1).

### **PURPOSE OF THE ANALYSIS**

The purpose of the analysis is to determine the range of potential land uses that can be accommodated in the Madison Pike corridor in the City of Fort Wright, now and in the future, based on the needs demonstrated by the marketplace.

### **OBJECTIVE OF THE ANALYSIS**

The objective of the analysis is to provide market-based information that will enable officials of the City of Fort Wright to develop plans for the future of the city and its environs. The analysis will assist the City in developing strategies, initiatives, and plans to serve the needs of residents of the community and provide for business opportunities that meet market demand.

### **THE SPECIFIC QUESTIONS TO BE ANSWERED**

The analytical questions to be answered in the analysis are:

1. What is the current status of the Madison Pike corridor in the City and how competitive are existing developments?
2. What are the consumer needs in the community and the more general market?
3. What business opportunities could be developed on the basis of market demand?
4. How will trends for the future influence land use needs along the corridor in the City?

### **METHODOLOGY**

The methodologies applied during the course of the analysis include the use of both primary research and secondary data. Demographic data has been obtained from several public and

proprietary sources that have been identified throughout the report. Basic quantitative methods have been applied to develop useable information from the data that has been obtained. Of course, the analyst's observations, judgment and conclusions are also contained in the report.

## GENERAL OBSERVATIONS

Fort Wright is a suburban community in the Northern Kentucky portion of the Cincinnati Metropolitan Statistical Area (CMSA).

The total population of the City of Fort Wright grew from 5,533 persons in 1990 to 5,681 in 2000. Current estimates place the population at 5,696 in 2003 with projected growth to 5,724 persons by 2008. Population growth between 1990 and 2000 was only approximately two and a half percent (2.67%) in Fort Wright while the population of Kenton County grew by approximately six and a half percent (6.67%) and the Commonwealth of Kentucky grew by approximately nine and a half percent (9.67%). **Table 3-1** summarizes Fort Wright's recent growth:

**Table 3-1**  
**Population Estimates**

City	Census 2000	2003 Estimate	2008 Estimate
Fort Wright	5,681	5,696	5,724

Source: Experian/Applied Geographic Solutions via STDBonline

While Fort Wright has been urbanized for some time, the areas to the south of the city are beginning to experience significant urban development. Much of the growth projected in the vicinity of Fort Wright is along the Madison Pike corridor south of I-275. Growth trends in relation to I-275 are summarized in **Table 3-2**:

**Table 3-2**  
**Kenton County Population Projections**  
**2000 - 2020**

Area	2000 <sup>(1)</sup>		2020 <sup>(2)</sup>		% Change 2000 - 2020
	Population	% Total	Population	% Total	
North of I-275	91,993	61%	88,170	54%	-4.2%
South of I-275	59,471	39%	75,141	46%	26.3%
Kenton County Total	151,464	100%	163,311	100%	7.8%

Sources: (1) U.S. Bureau of the Census, 2000 Census

(2) OKI Population Projections by Traffic Analysis Zone (TAZ). TAZs are based on census tract boundaries.

This growth is intensifying the importance of the Madison Pike corridor as an urban arterial roadway in the City. In addition, an interchange with I-275 at Madison Pike and easy interconnecting access to I-75 via surface streets in Fort Wright make the study corridor an important transportation linkage for local traffic in Kenton County.

The City's proximity to Cincinnati/Northern Kentucky Airport is also important. The importance of the transportation routes in Fort Wright place additional significance on development sites in the City. It is the combination of growth in the vicinity of Fort Wright and the transportation routes that converge in the City that makes the study corridor the epicenter of some significant urban development. The potential for Fort Wright to maintain its development significance for the next few years appears strong based on projected growth for southern Kenton County between now and 2008. In essence, Fort Wright may not grow a great deal in terms of population or households, but the market significance of the City's location will expand its development significance to a much broader market in the next few years.

The City's growth mirrors the limited opportunities for new development relative to the County and Kentucky, in general. While development opportunities are limited the population and, more importantly, the number of households in the City is projected to grow. Current estimates indicate that there should be 52 more households in the City in 2003 than were in the City in 2000. By 2008, an additional 85 households should be expected in the City. Over seventy five percent (75%) of the estimated and projected household growth in Fort Wright is represented by growth in the rental occupancy segment of the housing market.

The study corridor is a mix of undeveloped land, marginal development land, prior generations of urban development, and current urban development. The undeveloped land and older, prior generations of development represent new development and urban redevelopment candidates in the current marketplace. Since, the current focus of development has been in the retail segment of the market (usually at the high end of the land value spectrum) there has been, and likely to continue to be, pressure on local officials to accommodate current market demands for retail sites.

The results of a market analysis shows that there is probably more unmet retail potential around the study epicenter of I-275 and Madison Pike (KY 17) than there are available retail sites to accommodate this demand, there are also other land uses that demonstrate market potential.

***Hopefully, the local community can balance the market opportunities for future development between the current retail focus of development and the longer term needs for a mix of land uses ...***

Hopefully, the local community can balance the market opportunities for future development between the current retail focus of development and the longer term needs for a mix of land uses among all four major categories; residential, retail, office, and industrial.

## HOUSING MARKET OBSERVATIONS AND CONCLUSIONS

Based on projections for household growth in Fort Wright, there is a market for freestanding, single family dwellings as well as multi-family dwellings. The market for a multi-family project appears to offer more potential. This type of project could represent the highest and best use of a limited number of specific sites in the study corridor. The sites that may be best suited to multi-family development are located toward the northern and southern limits of the study corridor.

This type of project may be a potential buffer between existing, single-family residential neighborhoods in close proximity to the corridor and other land uses within the corridor.

Between 2000 and 2008, approximately twenty four (24) new single-family residences are projected necessary to accommodate new owner-occupant households in Fort Wright. This projection could be addressed in one relatively small-scale subdivision, assuming suitable land can be found for development. This is not a land use that appears to be the highest and best use of most sites on the corridor, but there may be some sites at the ends of the study corridor that have sufficient depth and abut existing residential neighborhoods to permit single-family homes to be built on the backs of the sites with appropriate multi-family uses or less intense commercial uses on the frontage along the Madison Pike corridor.

Approximately 114 new multi-family residences have been projected to accommodate new renter-occupied households in Fort Wright. This projection could be addressed by one apartment project. The volume of units would allow for the project to be built in two phases, or could allow for two smaller scale projects in two separate locations along the study corridor.

The age demographics of Fort Wright, coupled with the relative stability of the owner-occupied housing market, suggest that households have chosen Fort Wright for the quality of life in the City and remain in Fort Wright for the long term. This observation also suggests that as people age they may wish to remain in Fort Wright beyond the point where they can maintain a single-family residence. This housing product, while it may be in the form of an owner-occupied condominium, appears to be consistent with the highest and best use of the sites identified for multi-family projects. The level of affluence in Fort Wright suggests that “upscale” ownership or rental projects could meet market demand.

The analysis of the housing market relative to the study corridor has focused on the projected needs of the City of Fort Wright. While there appears to be a robust housing market in the immediate vicinity of the City in Kenton County, the needs of the more concentrated market, based on projected City housing needs has been emphasized.

## **RETAIL MARKET OBSERVATIONS AND CONCLUSIONS**

Retail markets do not observe boundaries between political subdivisions. Retail markets can be segmented into levels of market area coverage (influence) based on the nature of the goods and services offered by the retailer(s). The point of this observation is that the location of a retail hub may be important to a community, but the market the retail businesses serve can be quite diverse from the community in which the retail epicenter is located. There is a significant expansion of retail market potential, otherwise called “consumer expenditure potential” in the vicinity of the study epicenter at Madison Pike and I-275. This expansion is the result of household income growth over time and the addition of new households projected to occur in the next few years. In essence, the retail market in the Madison Pike corridor appears to be in an expansion mode to serve the growing numbers of households in the vicinity.



The potential market for retail space is currently being addressed by the introduction of a new Wal-Mart Super Center in closer proximity to the interchange identified above. A review of the distribution of retail centers in the vicinity revealed a relative “retail void” in close proximity to the study corridor. Most existing retail centers in the vicinity are located in a loosely defined semi-circle around the study epicenter, north of I-275. Given the projected urban growth that will occur south of I-275, many current retailers in the vicinity may be poorly located to take advantage of this growth and expansion of overall market magnitude may attract new retailers to the area.

The Madison Pike (KY 17) study corridor is not the easiest area to develop. The corridor has many topographical challenges, flood hazard issues along a stream that truncates many potentially developable sites, and a railroad that represents a development issue and a definitive barrier to access. All of these development constraints notwithstanding, market magnitude and superior vehicular access have made even marginal sites developable for retail uses in the study corridor.

The amount of acreage that can be assembled into larger parcels for large-scale developments is limited, but there are sites that could be assembled that would be large enough for “big box” retailers. In addition, there are sites that are large enough to suit small scale, peripheral retailers.

Some sites are better developed for retailing than others. It is likely that the opening of the Wal-Mart Super Center could trigger significant retail interest in the study corridor in Fort Wright. It may be a challenge for the City to control the pace of retail development and to keep “marginal” parcels of land from being transformed into marginal retail locations. The

***It may be a challenge for the City to control the pace of retail development and to keep “marginal” parcels of land from being transformed into marginal retail***

points of the observations, above, is that the study corridor is well located to serve projected future growth in the vicinity and readily accessible from multiple interchanges on I-275 and via surface streets to I-75. Retail demand for sites in the corridor could overwhelm supply in the next few years.

There appears to be unmet market demand for large-scale retailers in the categories of general merchandise and apparel goods. On the other hand the market appears to be adequately served by home centers and super markets. The introduction of the super market as part of the Wal-Mart Super Center may destabilize the current competitive base of food stores in the vicinity.

There also appear to be markets for several types of specialty retail merchants including stores that offer sporting goods and bicycles, bookstores, stationery stores, jewelry stores, camera stores, and optical goods stores. Some general line retailers offer goods in the categories identified above; however, there are market niches that will not be served by the general merchandise stores, it is the true specialty retailer that can find a market in a scenario adjacent to major retailers.

In essence, the projected market for retail uses in the corridor appears to be strong. It will be up to the community to choose the segments of the retail market it wants to address and the

segments that it would prefer to avoid. Available, retail land will be one of the determinants in this policy decision.

The development of a major retail traffic generator in close proximity to a significant highway interchange is likely to result in a short term condition of undersupply of retail space in the immediate vicinity of the Madison Pike corridor. While a condition of undersupply may be created by demand for space in close proximity to Wal Mart, it is precisely this condition that can lead to the development of too many stores on marginal sites that will result in abnormal vacancies in the future. The initial development cycle is the community's only opportunity to control the pace of retail development in order to minimize the construction of marginal space that will ultimately become excess inventory; i.e., oversupply.

Retailers follow urban growth. As the county continues to urbanize south of I-275, future demand for retail outlets will grow. In the future, the new storerooms of today may be the functionally obsolescent space of tomorrow. Retail space has a relatively short economic life. As the major traffic generating stores migrate the stores that rely on the traffic generated will follow. It is better to limit the supply of space and focus development on sites that will be the best for redevelopment in the future than to be confronted with oversupply and obsolescence in the short term.

The challenge for Fort Wright will be to continue to optimize its interstate highway proximity in the future in order to retain a significant presence in an expanded retailing environment.

## **OFFICE MARKET OBSERVATIONS AND CONCLUSIONS**

The office market in Northern Kentucky appears to be in a general condition of oversupply. There do not appear to be significant opportunities to address the office market with new office projects in the study corridor at this time.

Land areas available for office development would appear to constrain this land use to projects that are positioned to address the needs of the local market rather than segments of the regional office market. This land use constraint is not necessarily bad for the community. Many regional office projects are designed to address the rental market. The rental office market can be volatile over time. Volatility manifests itself in two forms; actual vacancy and employment reductions in spaces under lease.

On the other hand, smaller office projects designed to meet the needs of the local community tend to be more stable over time. Some of these projects are actually owner-occupied, office condominiums. This office product has demonstrated popularity with medical, dental and optical practices along with insurance, real estate, and financial services businesses.

One other segment of the office market that appears to be expanding despite general office market conditions is in the category of health care services. This office product can range from medical office spaces to diagnostic services and rehabilitation centers. Medical services providers including hospitals are branching out to suburban locations in order to balance the locations where the population can access services with the sprawling population base. Older,

more affluent markets often exist in suburban locales far from the existing capacities of hospitals to serve these market segments.

Currently active segments of the office market are more likely to need specialized spaces and/or build-to-suit space for the long term. These segments of the office market are more likely to come to Fort Wright if there are currently zoned, market ready sites for development than existing, speculative space for occupancy. Land that is ready for office development can be used to attract the active segments of the market today and will be poised to potentially accommodate the general office market when supply and demand stabilizes in the future.

## INDUSTRIAL MARKET OBSERVATIONS AND CONCLUSIONS

The City of Fort Wright has only a limited ability to address the industrial segment of the market without significant redevelopment of currently improved properties. The most suitable sites for industrial development, from a location perspective, suffer from substantial topographic and/or flood hazard constraints. The value of industrial land in the marketplace may render several of the potential industrial sites in the corridor infeasible for development at this time.

Similar to the conclusion for office land in the study corridor, the market appears to be in a current state of oversupply. The industrial marketplace is currently undergoing adverse economic conditions as well as a structural change in the global marketplace that has resulted in, what appears to be, the permanent loss of large numbers of manufacturing jobs. Industrial job losses are not limited to large-scale industries. Many small industrial companies supply the large-scale industrial companies with parts and subassemblies that eventually go into products that are sold to commercial enterprises and individual consumers. The shift of large-scale industries throughout the U.S. to offshore locations has caused many smaller industrial companies to move or to wither. The Cincinnati CMSA has been in one of the locations in the U.S. to see industrial jobs move away or be eliminated.

Not all segments of industry are in decline, some industrial companies are experiencing robust growth. Industrial companies typically need spaces configured to meet unique production layouts and capacity requirements. Most of these companies seek buildings on sites that can accommodate long-term growth. In essence, the owner-occupied, build-to-suit market segment appears to offer the most stable industrial companies for the City's economic development objectives.

Market ready sites that are already zoned for industrial uses attract the owner-occupied, build-to-suit market. In essence, the capacity to address the needs of industrial companies is better than speculative industrial buildings on the landscape.

This conclusion is not dissimilar to the conclusion reached above for office uses in the marketplace. It is not uncommon to see office and “light” industrial uses combined in “commerce park” settings in many communities. The breadth of permitted uses enables communities to meet the needs of various segments of the office and industrial markets so that the

***It is not uncommon to see office and “light” industrial uses combined in “commerce park” settings in many communities.***

strengths and weaknesses of specific markets do not inhibit development to occur on a, more or less, continuing basis. Nevertheless, it is not unusual for “commerce park” developments to take several years to build out.

Regional competition for economic development opportunities is fierce. The City must focus continuously on the task of economic development and strongly support in its efforts. The economic development staff must search for new businesses and industries as well as respond to the needs of growing companies already in the City. The City of Fort Wright must be competitive in its programs and initiatives to foster economic development. Any incentives for economic development must be competitive.

# CHAPTER IV

## LAND USE

### GENERAL

The following land use analysis was completed through a detailed on-site land use survey and with the use of Geographic Information Systems. Included in this analysis are current conditions regarding existing land use, zoning, and environmental and natural conditions that may affect development. The numbers, percentages, and acreages presented are estimates based on GIS analysis comparing available data layers including information pertaining to floodways, floodplains, canopy cover, zoning, parcels, and slopes for the Madison Pike (KY 17) corridor. Also included in this analysis are recommendations for the corridor regarding land use, greenways and comprehensive plan amendments.

### EXISTING CONDITIONS

#### EXISTING LAND USE AND ENVIRONMENTAL CONDITIONS

**Table 4-1** analyzes the land within the corridor based on its existing land use. The total area of the corridor, as identified for this study, is approximately 700 acres. Existing land uses within the corridor include single family, office, retail, service, industrial, public and semi public, and parks and recreation. **Map 4A** illustrates land uses based on these categories and their location within the corridor. Right-of-way makes up a significant portion of the corridor, approximately twenty five percent (25%), or 174 acres. Excluding this land area, the corridor land uses collectively total approximately 526 acres. Floodway, floodplain, or slope issues restrict approximately half of the land within the corridor. Floodway land alone is approximately ten percent (10%), or a little over fifty (50) acres. These three conditions are illustrated on **Map 4B**.

**Table 4-1** also identifies land by three categories: Non-Restricted, Restricted and Floodway. These are defined as follows:

Non-Restricted – land that can generally be developed without special permits, other than zoning. Land within this category does not have physical limitations that require special permits and/or geotechnical or other studies prior to development approval.

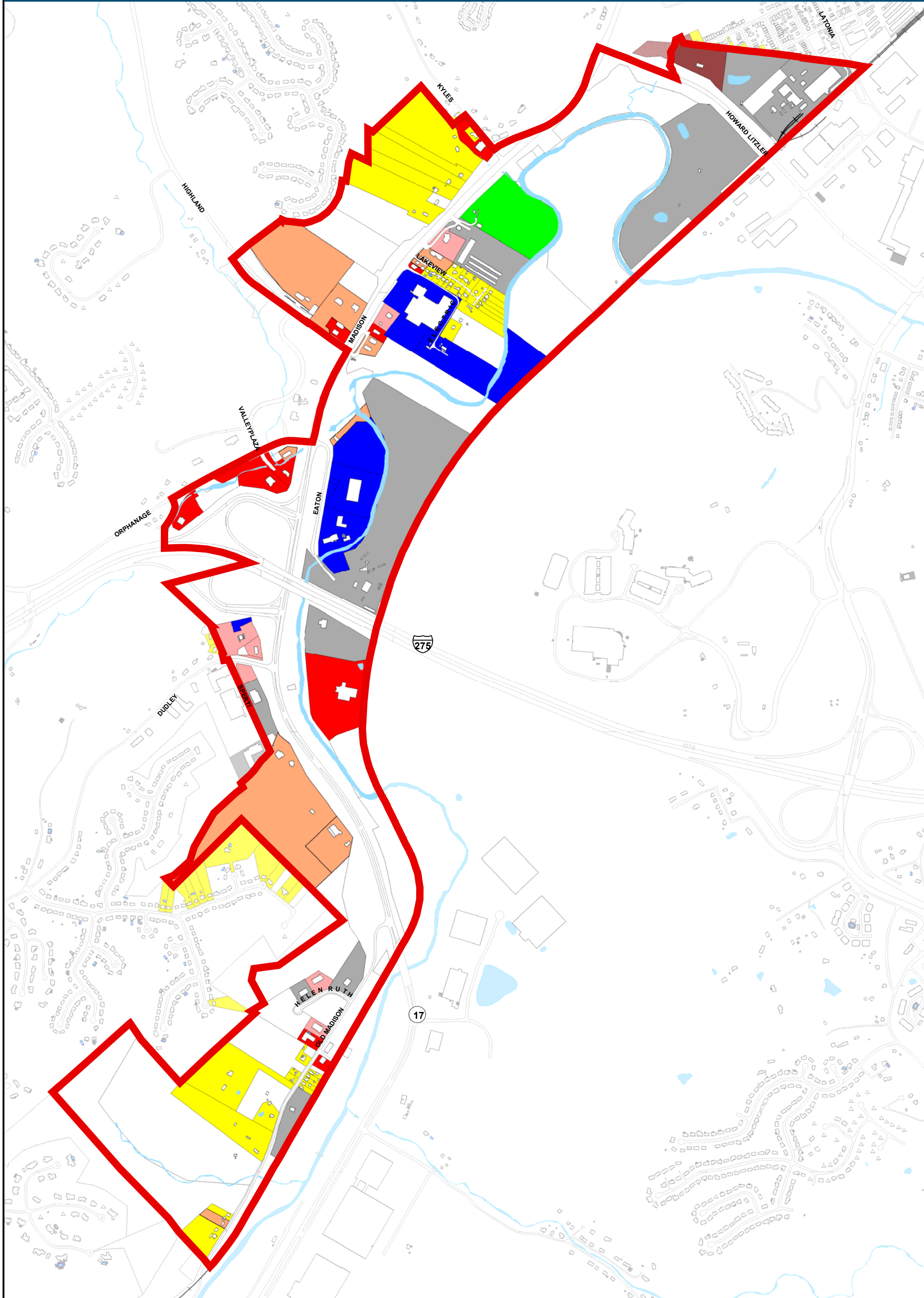
Restricted – Includes land within the floodplain, and areas with twenty (20%) slope or greater (Physically Restricted Development Area). Land in this category requires special permitting and/or geotechnical or other studies prior to development approval.

***Floodway, floodplain,  
or slope issues  
restrict half of the  
land in the corridor.***

Floodway – Areas identified by the Federal Emergency Management Administration (FEMA) and the Kentucky Division of Water where no filling or construction is permitted that would result in any increase in flood levels during the occurrence of a 100-year flood discharge. If a watercourse is to be changed, the flood carrying capacity must



MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
4A  
Existing Land Use

Legend

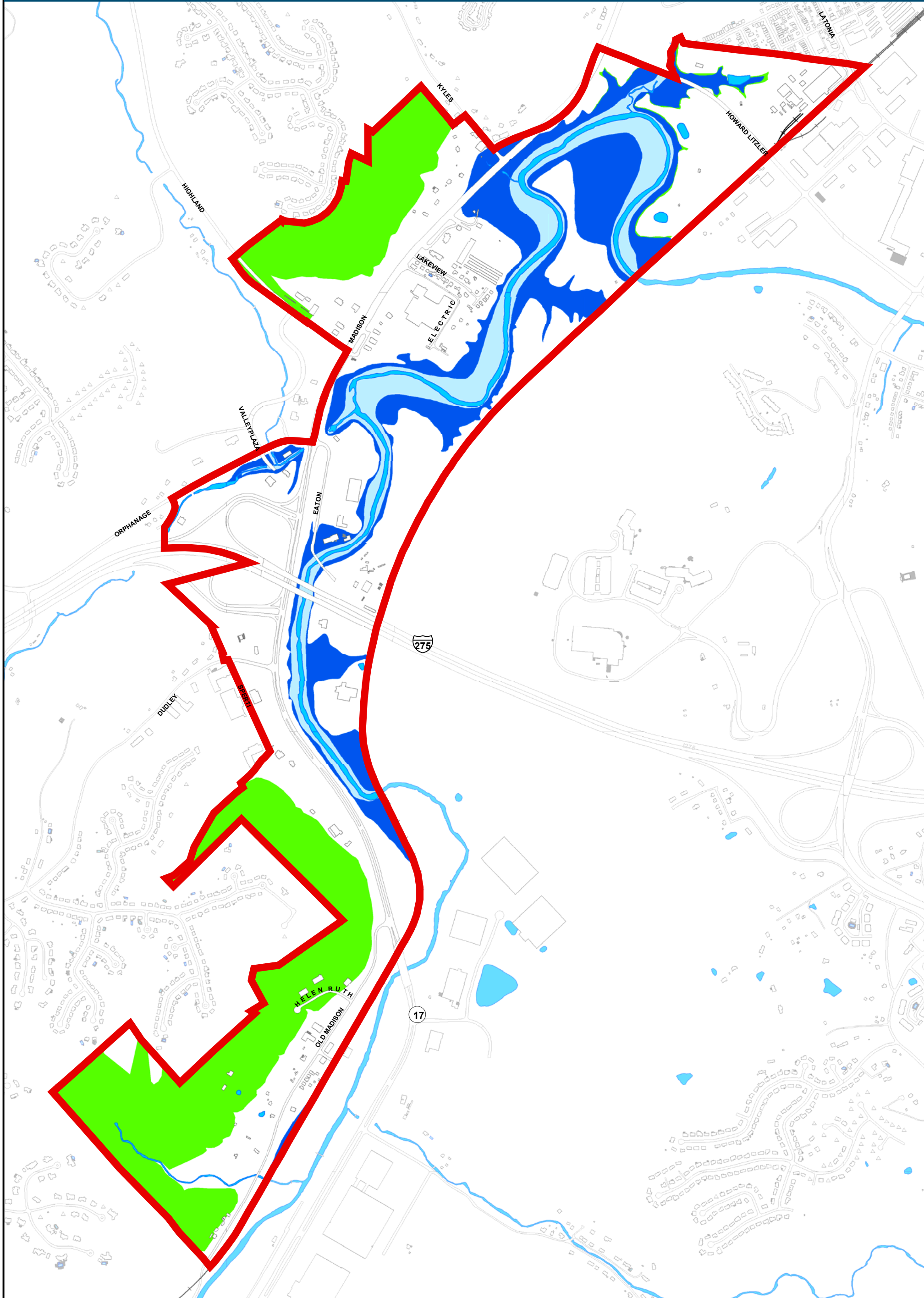
- |                 |              |                           |
|-----------------|--------------|---------------------------|
| Agricultural    | Multi-Family | Industrial                |
| Hoa Common Area | Retail       | Public/Semi-Public        |
| Single-Family   | Service      | Recreation and Open Space |
| Two-Family      | Office       | Right-of-Way              |

Vacant



**NKAPC**  
Northern Kentucky  
Area Planning Commission

MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**4B**  
Restricted Development  
Areas

**Legend**

- Creek
- Floodway
- Floodplain
- Physically Restrictive Development Area

0 500 1,000 Feet

**NKAPC**  
Northern Kentucky  
Area Planning Commission



**TABLE 4-1  
LAND USE AND AVAILABILITY ANALYSIS**

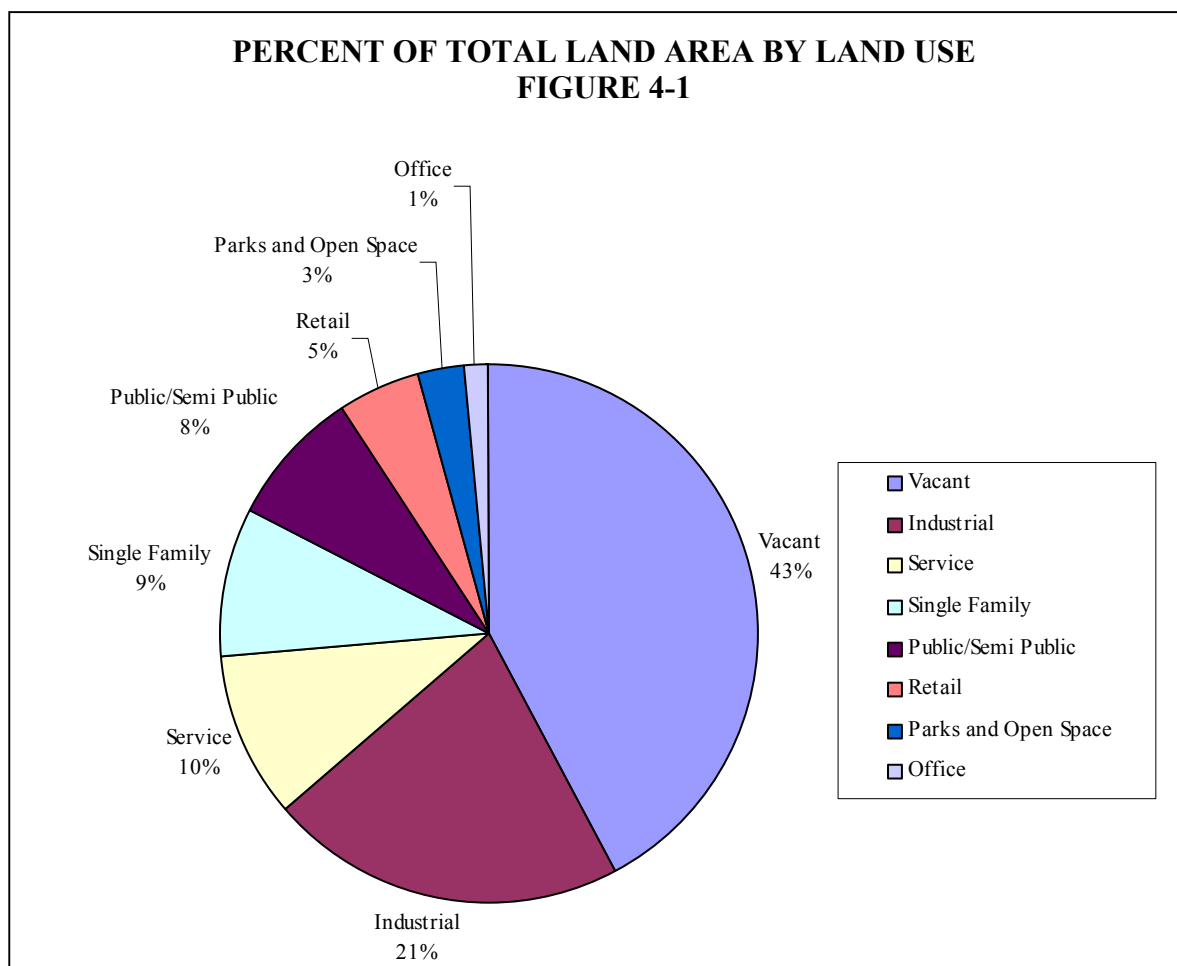
Land Use	Total Land		Non-Restricted Land			Restricted Land**			Flood Way		
	Acres	Percent of Total Land Area	Acres	Percent of Use	Percent of Total Land Area	Acres	Percent of Use	Percent of Total Land Area	Acres	Percent of Use	Percent of Total Land Area
Vacant	221.43	42.1%	70.36	31.8%	13.4%	123.69	55.9%	23.5%	27.37	12.4%	5.2%
Single Family	47.20	9.0%	24.21	51.3%	4.6%	21.54	45.6%	4.1%	1.45	3.1%	0.3%
Office	7.70	1.5%	6.54	85.0%	1.2%	1.15	15.0%	0.2%	0.00	0.0%	0.0%
Retail	26.17	5.0%	19.32	73.8%	3.7%	6.07	23.2%	1.2%	0.79	3.0%	0.1%
Service	52.62	10.0%	20.91	39.7%	4.0%	31.09	59.1%	5.9%	0.62	1.2%	0.1%
Industrial	112.71	21.4%	86.70	76.9%	16.5%	18.54	16.4%	3.5%	7.47	6.6%	1.4%
Public/Semi Public	43.77	8.3%	30.25	69.1%	5.8%	5.85	13.4%	1.1%	7.66	17.5%	1.5%
Parks and Open Space	14.08	2.7%	1.58	11.3%	0.3%	7.71	54.8%	1.5%	4.78	33.9%	0.9%
<b>Sub Totals*</b>	<b>525.67</b>	<b>75.1%</b>	<b>259.88</b>		<b>49.4%</b>	<b>215.64</b>		<b>41.0%</b>	<b>50.15</b>		<b>9.5%</b>
ROW	174.29	24.9%									
<b>Totals</b>	<b>699.96</b>				<b>37.1%</b>			<b>30.8%</b>			<b>7.2%</b>

\* Sub Totals used for restricted/non-restricted land calculations

\*\* Restricted land includes floodplain and 20% slopes

be maintained. Plans for such work shall be submitted to the city, to the NKAPC, and to the Kentucky Division of Water, for review and approval.

Vacant land comprises approximately forty-two percent (42%) of the total land area. It is not surprising, however, that a little over sixty-eight percent (68%), or 151 acres of vacant land, is restricted in some way, either by waterway or topography issues. Approximately twenty-seven (27) acres of vacant land (12.4%) are within the floodway. This indicates that approximately thirteen percent (13%), or seventy (70) acres, of the total land area within the corridor is vacant and non-restricted.



Significant land uses, also identified in **Table 4-1** within the corridor include industrial, commercial service, single family, and public and semi public lands. These four land uses comprise over one-half of the land within the corridor. The major areas of single family residential are located along Lakeview Drive, along the northern portion of the west side of KY 17, and along Old Madison Pike. Approximately half of this land (23 acres) is located within restricted areas, with one and a half percent (1.5%) actually being within the floodway. Major industrial areas include the land along Howard Litzler, and in the area of Eaton Asphalt. Approximately eighty-seven (87) acres or about seventy-seven (77%) of this land is non-

restricted. Public and semi public uses include the Transit Authority of Northern Kentucky (TANK), ULH&P, and Sanitation District No.1 properties. There are fourteen (14) acres of parks and open space within the corridor, which are all within the golf driving range property. Almost fifty five percent (55%) of that property is restricted and thirty four percent (34%) is within the floodway. Offices utilize the smallest portion of land within the corridor, at only one and a half percent (1.5%) of the total land area. **Figure 4-1** illustrates land use percentages based on the total land area in the corridor, not including right-of-way.

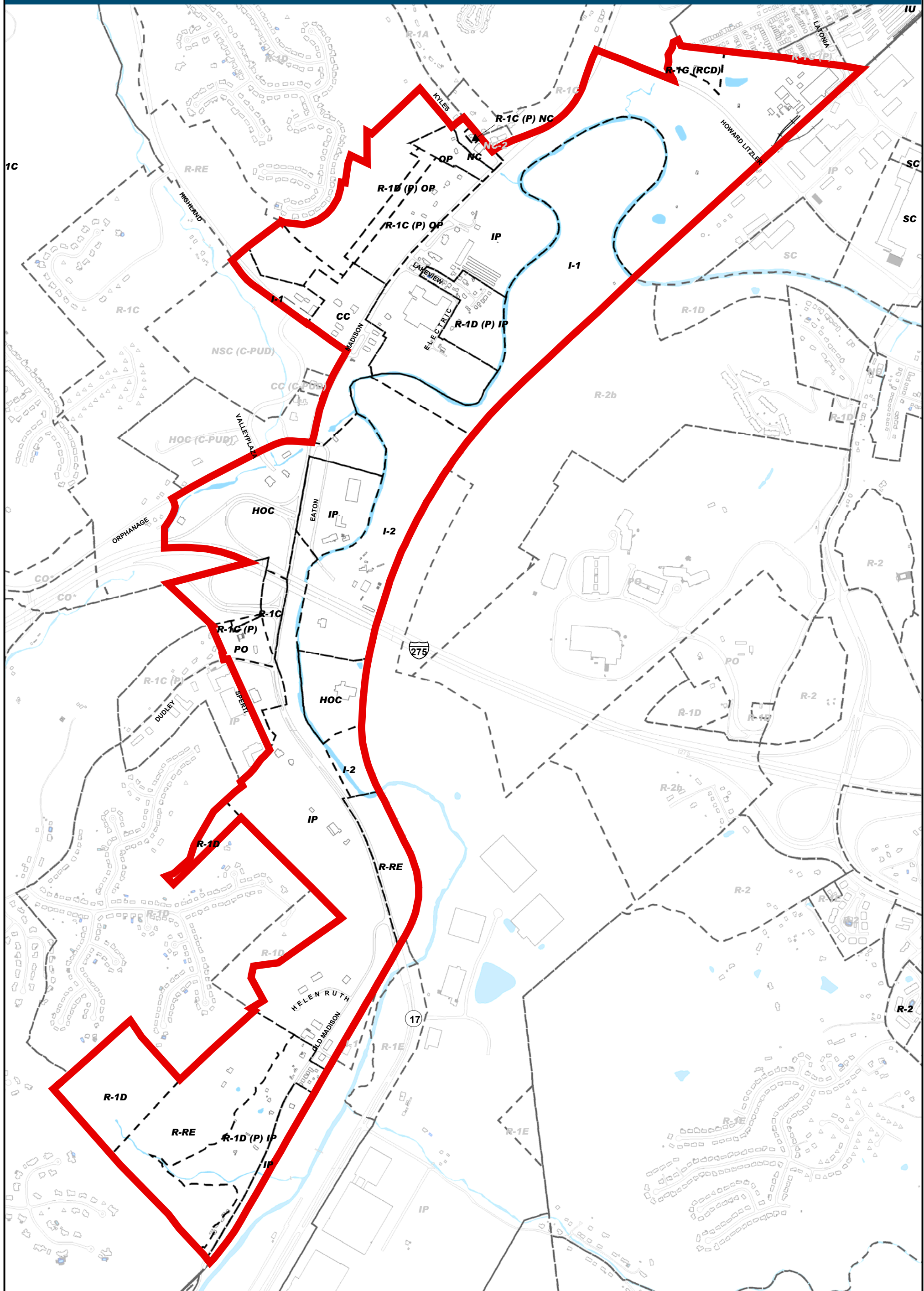
## EXISTING LAND USE AND ZONING

**Table 4-2** analyzes the land within the corridor based on its existing zoning designations. **Map 4C** shows the existing zoning districts within the corridor. Information in this table is also presented by total land area, non-restricted land, restricted, and flood way. Zoning districts within the corridor range from rural residential to highway oriented commercial and industrial. The majority of the corridor is zoned for industrial uses, I-1, I-2 or IP. **Figure 4-2** groups like zoning districts to show the percentages of each within the corridor. Those zones combined make up sixty two percent (62%) of the total land within the corridor, excluding right-of-way. The IP Zone alone makes up thirty seven percent (37%) of the land, or 197 acres; however, thirty-seven percent (37%) of that area is restricted, and nine percent (9%) is within the floodway. There are an additional thirty-six (36) acres identified to be phased to the IP Zone. There are eighty (80) acres within the I-1 zone, thirty-two (32) of which are restricted, twenty-one acres of which (25%) are within the floodway. There are eighty-five (85) acres with the R-RE Zone in the corridor; however, ninety three percent (93%) of that land is restricted, mostly by steep hillsides. Other residential zones are also small in area. Only a total of approximately nine (9) acres are zoned for residential uses, other than the previously mentioned R-RE Zones. Approximately eight percent (7.6 %) of the corridor is zoned for commercial uses. An even smaller percent is zoned for offices, only two percent (2%). However, eighteen (18) additional acres are identified to be phased to office uses. **Figure 4-3** illustrates the amount of vacant land per zoning district.

Looking at **Table 4-3**, which compares the existing land use to the existing zoning designation, it is interesting to see that non-conforming uses are at a minimum. Non-conforming uses are identified by the acreages under the existing land uses that do not conform to the zone districts identified under the Zoning District column. For example, the R-RE zone, which has a total of approximately sixteen (16) acres, is comprised of almost nine (9) acres of land being used for retail (.58 acres) and service uses (8.43 acres). The majority of nonconforming acreage is created as a result of properties being split by two or more zoning districts. Exceptions to this are an automobile service station within the I-2 Zone, commercial structures with residential units within the IP Zone, and an area within the OP Zone where a recent map amendment has occurred, yet the land is still occupied by a residential structure.

**Table 4-4** identifies areas that have phased zoning within the corridor (designated by (P)). Phased zoning is used within the City of Fort Wright's Zoning Ordinance to identify areas where existing land uses are still integral to the area, but where future transition is anticipated into the land use identified on the Area-Wide Comprehensive Plan. The intent of the phased zoning regulation is to encourage redevelopment of a specified area for the use and/or density

# MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**4C**  
Existing Zoning

**Legend**

 Zoning Boundary



**TABLE 4-2  
ZONING AND LAND AVAILABILITY ANALYSIS**

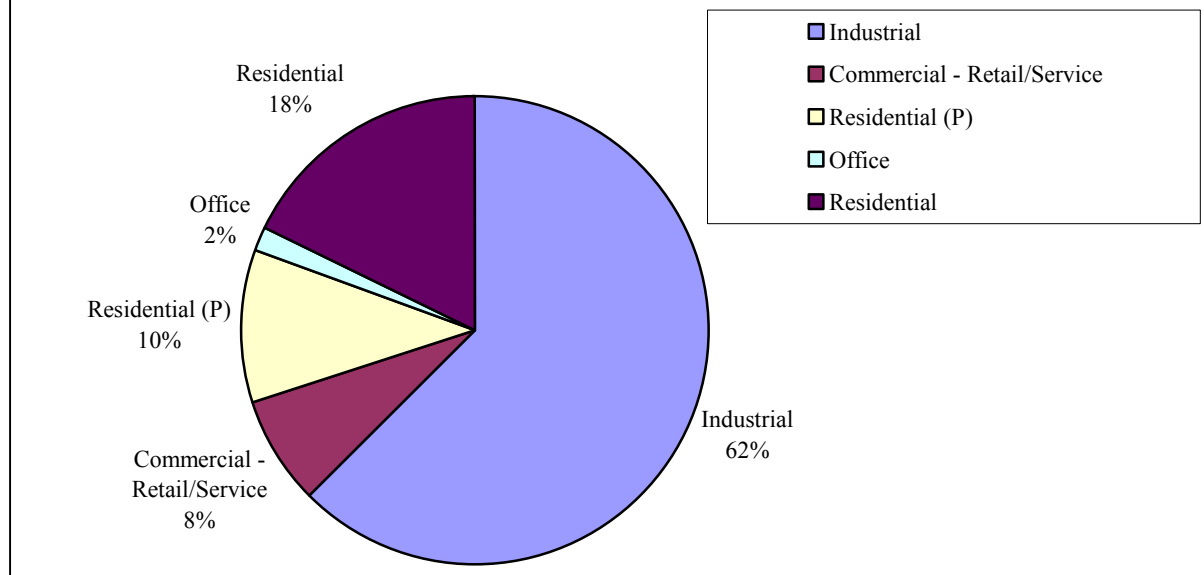
Zone	Total Land		Non-Restricted Land			Restricted Land**			Flood Way		
	Acres	Percent of Total Land Area	Acres	Percent of Zone	Percent of Total Land Area	Acres	Percent of Zone	Percent of Total Land Area	Acres	Percent of Zone	Percent of Total Land Area
R-RE	85.32	16.2%	5.89	6.9%	1.1%	79.15	92.8%	15.1%	0.29	0.3%	0.1%
R-1D	3.93	0.7%	3.93	100.0%	0.7%	0.00	0.0%	0.0%	0.00	0.0%	0.0%
R-1G (RCD)	4.69	0.9%	3.67	78.3%	0.7%	0.96	20.5%	0.2%	0.06	1.3%	0.0%
CC	9.93	1.9%	9.13	91.9%	1.7%	0.80	8.1%	0.2%	0.00	0.0%	0.0%
HOC	28.52	5.4%	19.64	68.9%	3.7%	6.54	22.9%	1.2%	2.34	8.2%	0.4%
I-1	80.19	15.3%	27.26	34.0%	5.2%	32.19	40.1%	6.1%	20.74	25.9%	3.9%
I-2	50.91	9.7%	32.81	64.4%	6.2%	11.82	23.2%	2.2%	6.28	12.3%	1.2%
IP	196.85	37.4%	108.18	55.0%	20.6%	71.76	36.5%	13.7%	16.91	8.6%	3.2%
NC	1.76	0.3%	1.39	78.9%	0.3%	0.37	21.1%	0.1%	0.00	0.0%	0.0%
OP	4.53	0.9%	3.55	78.4%	0.7%	0.98	21.6%	0.2%	0.00	0.0%	0.0%
PO	3.92	0.7%	3.92	100.0%	0.7%	0.00	0.0%	0.0%	0.00	0.0%	0.0%
R-1C (P)	0.46	0.1%	0.46	100.0%	0.1%	0.00	0.0%	0.0%	0.00	0.0%	0.0%
R-1C (P) NC	0.35	0.1%	0.35	100.0%	0.1%	0.00	0.0%	0.0%	0.00	0.0%	0.0%
R-1C & R-1D (P) OP	17.99	3.4%	8.42	46.8%	1.6%	9.56	53.2%	1.8%	0.00	0.0%	0.0%
R-1D (P) IP	36.31	6.9%	31.28	86.1%	6.0%	1.50	4.1%	0.3%	3.53	9.7%	0.7%
<b>Sub Totals*</b>	<b>525.67</b>	<b>75.1%</b>	<b>259.88</b>		<b>49.4%</b>	<b>215.64</b>		<b>41.0%</b>	<b>50.15</b>		<b>9.5%</b>
ROW	174.29	25%									
<b>Totals</b>	<b>699.96</b>				<b>37.1%</b>			<b>30.8%</b>			<b>7.2%</b>

\* Sub Totals used for restricted/non-restricted land calculations

\*\* Restricted land includes floodplain, 20% slopes



**PERCENT OF TOTAL LAND AREA BY ZONING TYPE**  
**FIGURE 4-2**



designated within the comprehensive plan when the necessary conditions for such development are realized. Areas with this designation are areas where redevelopment is likely to occur. The largest area with the phased designation is currently zoned R1-D (P) IP, which means it is phased for industrial park uses. Approximately fourteen (14) acres of land are designated such along Lakeview Drive, and almost twenty-five (25) acres are located along the west side of Old Madison Pike. Of this, only five acres are identified as restricted or within the floodway, all located along the Banklick Creek east of the terminus of Lakeview Drive. There are approximately eighteen (18) acres within the corridor that are identified to be phased from single family residential (R-1C and R-1D) to OP, for office park uses. This area is located along the west side of Madison Pike (KY 17) between Highland Pike and Kyles Lane. Nine and a half (9.5) acres of this land are designated as PRDA (Physically Restricted Development Area). A small amount of land within the corridor is zoned R-1C (P) NC, for neighborhood commercial uses. This property is immediately adjacent to Walt's Hitching Post, along Kyles Lane. **Table 4-5** identifies the total acreages and percentages of land that are within phased zoning districts versus those in other zoning districts.

**TABLE 4-3  
ZONING AND EXISTING LAND USE ANALYSIS**

Comparison of Existing Zoning and Existing Land Use										
Zoning District	Single Family	Office	Retail	Service	Industrial	Public/ Semi Public	Recreation and Open Space	Vacant	Total	Percent of Total Land Area*
R-RE	16.07		0.58	8.43				60.24	85.32	16%
R-1D				0.11				3.82	3.93	1%
R-1G (RCD)								4.69	4.69	1%
CC			2.78	4.46				2.69	9.93	2%
HOC			19.02	1.07		6.41		2.02	28.52	5%
I-1				3.82		4.73		71.65	80.19	15%
I-2				0.54	44.79	0.84		4.74	50.91	10%
IP	0.64	3.98	1.88	34.18	67.92	31.33	14.08	42.85	196.85	37%
NC			1.76						1.76	0%
OP	4.53								4.53	1%
PO		3.71						0.21	3.92	1%
<b>Totals:</b>	<b>21.24</b>	<b>7.70</b>	<b>26.02</b>	<b>52.62</b>	<b>112.71</b>	<b>43.31</b>	<b>14.08</b>	<b>192.90</b>	<b>470.57</b>	<b>89.5%</b>

\* Total Land Area = 525.5 Acres (Does not include ROW)

**TABLE 4-4**

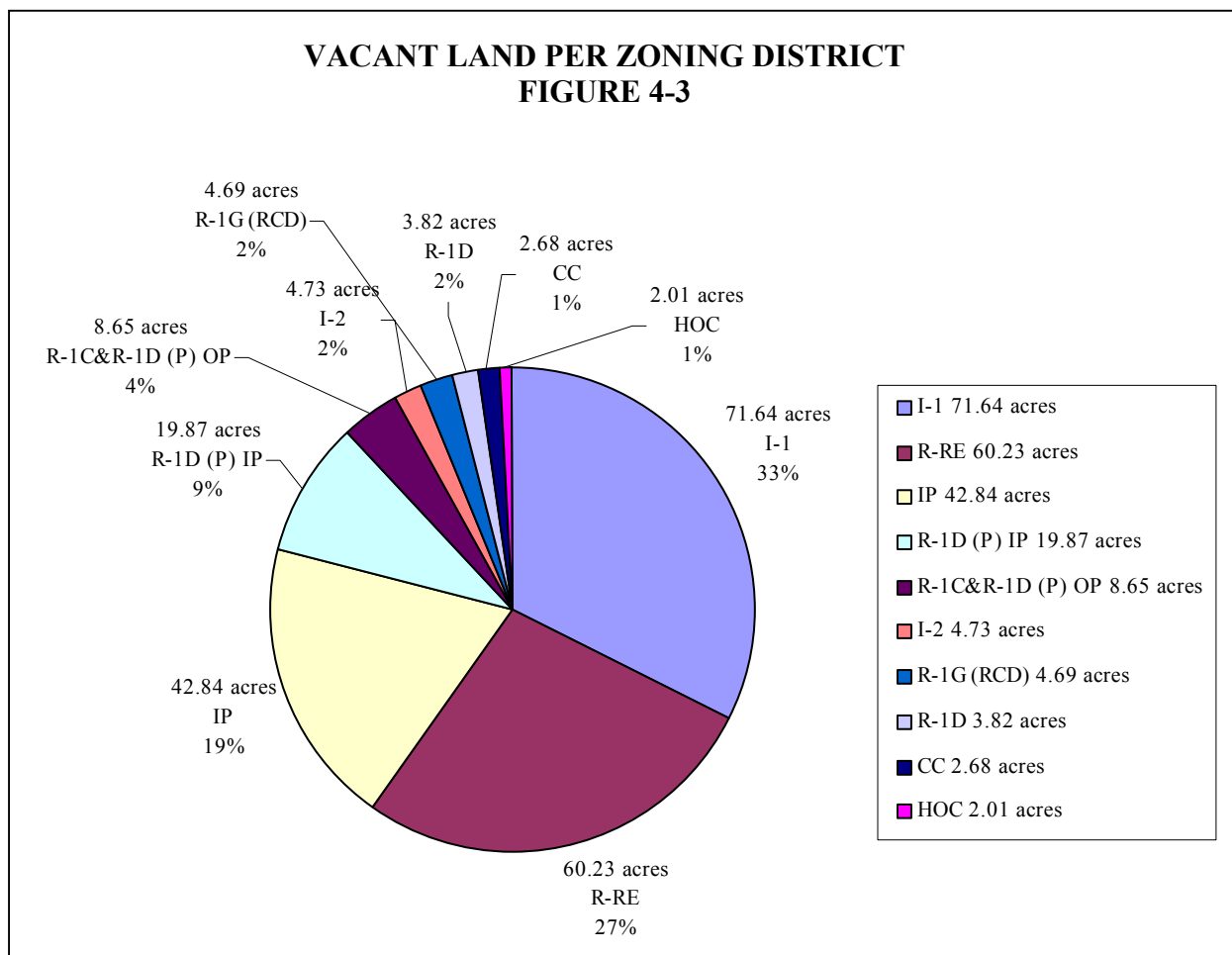
Comparison of Phased Zoning and Existing Land Use										
Phased Zones	Single Family	Office	Retail	Service	Industrial	Public/ Semi Public	Recreation and Open Space	Vacant	Total	Percent of Total Land Area*
R-1C (P)						0.46			0.46	0%
R-1C (P) NC	0.35								0.35	0%
R-1C&R-1D (P) OP	9.33							8.65	17.99	3%
R-1D (P) IP	16.29		0.15					19.87	36.31	7%
<b>Totals:</b>	<b>25.96</b>		<b>0.15</b>			<b>0.46</b>		<b>28.53</b>	<b>55.10</b>	<b>10.5%</b>

\* Total Land Area = 525.5 Acres (Does not include ROW)

**TABLE 4-5**

Total Acreages		
	Acres	% Of Total Land Area*
Total Land in Phased Zoning Districts	55.10	8%
Total Land in Other Zoning Districts	470.57	67%
Sub Totals	525.67	75%
Right Of Way	174.29	25%
Total Land Area	699.96	100%

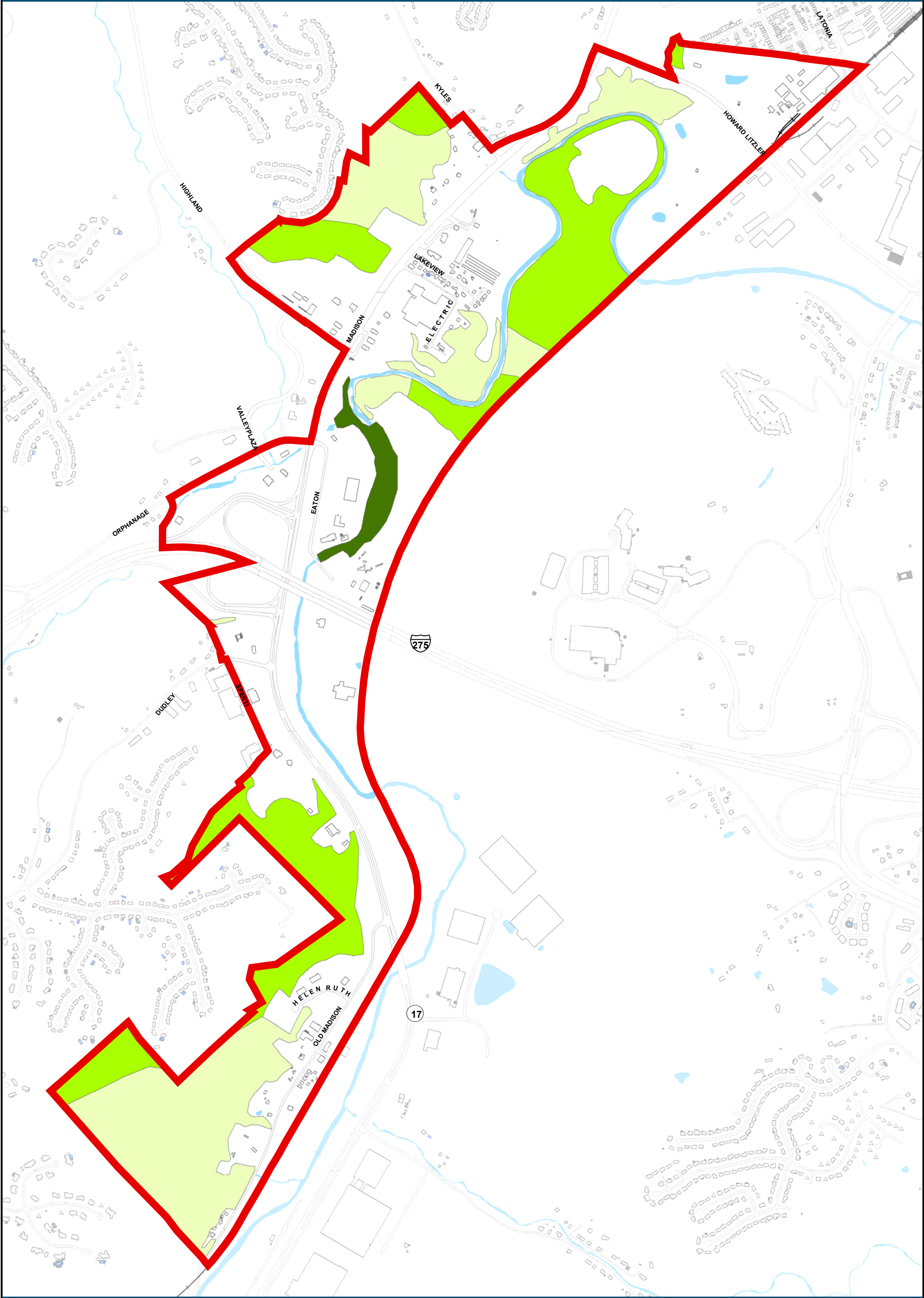




## EXISTING LAND USE AND CANOPY COVER

**Table 4-6** compares the land uses in the corridor with existing canopy cover. The canopy cover information was identified as part of a project completed by the Northern Kentucky Urban and Community Forestry Council, with assistance of a grant from the Greater Cincinnati Foundation. Davey Resource Group identified forest canopy cover with a minimum ten percent tree canopy covering five acres or more, and determined the ecological quality of the forest based on crown size. The crown is the head of the foliage of a tree or shrub in the uppermost spreading branchy layer of a forest. Of the approximately 700 acres of land within the corridor, thirty seven percent (37%) of the area (259 acres) is covered by forest canopy. Eighteen percent (18%) is small crown, seventeen percent (17%) is medium crown, and only two percent (2%) is large crown. The small crown areas are mostly found within the single family and vacant sites. The highest percentages of medium crown are within the service uses and vacant sites. Although only a small amount of large crown is located within the corridor, it is mostly located within industrial uses, public and semi public uses, and right-of-way. The largest total acreage of canopy cover is within the vacant lands within the corridor, although most of the canopy is small to medium in size. **Map 4D** identifies the three categories of crown cover and their locations within the corridor.

MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**4D**  
Canopy Cover

- Legend**
- Large Crown
  - Medium Crown
  - Small Crown



**TABLE 4-6  
EXISTING LAND USE AND CANOPY COVER**

Land Use	Canopy									Totals			
	Small Crown	% of Use	% of Canopy	Medium Crown	% of Use	% of Canopy	Large Crown	% of Use	% of Canopy	Total Acres	Total Acreage of Canopy	Total % of All Uses	Total % of Canopy
Vacant	78.69	36%	30%	77.13	35%	30%	0.00	0%	0%	221.43	155.82	70%	60%
Single Family	36.54	77%	14%	5.43	12%	2%	0.00	0%	0%	47.20	41.97	89%	16%
Office	0.04	1%	0%	0.00	0%	0%	0.00	0%	0%	7.70	0.04	1%	0%
Retail	0.01	0%	0%	0.00	0%	0%	0.00	0%	0%	26.17	0.01	0%	0%
Service	0.72	1%	0%	26.64	51%	10%	0.03	0%	0%	52.62	27.39	52%	11%
Industrial	2.05	2%	1%	1.40	1%	1%	5.10	5%	2%	112.71	8.55	8%	3%
Public/Semi Public	8.32	19%	3%	1.39	3%	1%	4.39	10%	2%	43.77	14.10	32%	5%
Parks and Open Space	0.00	0%	0%	0.00	0%	0%	0.00	0%	0%	14.08	0.00	0%	0%
ROW	2.47	1%	1%	7.15	4%	3%	1.15	1%	0%	174.29	10.77	6%	4%
<b>Totals</b>	<b>128.84</b>	<b>18%</b>	<b>50%</b>	<b>119.14</b>	<b>17%</b>	<b>46%</b>	<b>10.67</b>	<b>2%</b>	<b>4%</b>	<b>699.96</b>	<b>258.65</b>	<b>37%</b>	<b>100%</b>

## RECOMMENDED LAND USE

### METHODOLOGY

The following recommended land uses are based on data gathered for each of the areas in regard to several items including: (1) the economic analysis; (2) recent changes in land use within the corridor; (3) special environmental characteristics; and (4) transportation issues. The boundaries of each area were selected based on its situation in the corridor, current land use, transportation access, and topographic or geomorphic barriers.

The recommendations provided in this section are aimed at meeting several of the previously mentioned goals and objectives regarding land uses: identifying opportunities within the corridor for a variety of housing where economically and physically feasible; providing for a variety of retail and office uses with consideration given to creating a sense of place; and, providing for the appropriate amount, type, and location for industrial development.

### LAND USE

Dividing the area into twenty-three (23) sub-areas facilitated land use planning for the corridor. Each sub-area was evaluated in regards to existing and future land use and in how it related to all adjoining sub-areas. **Map 4E**, Recommended Land Use Guide, contains the location and identification for each of these sub-areas. Descriptions of future land use recommendations follow and are referenced based on **Map 4E**.

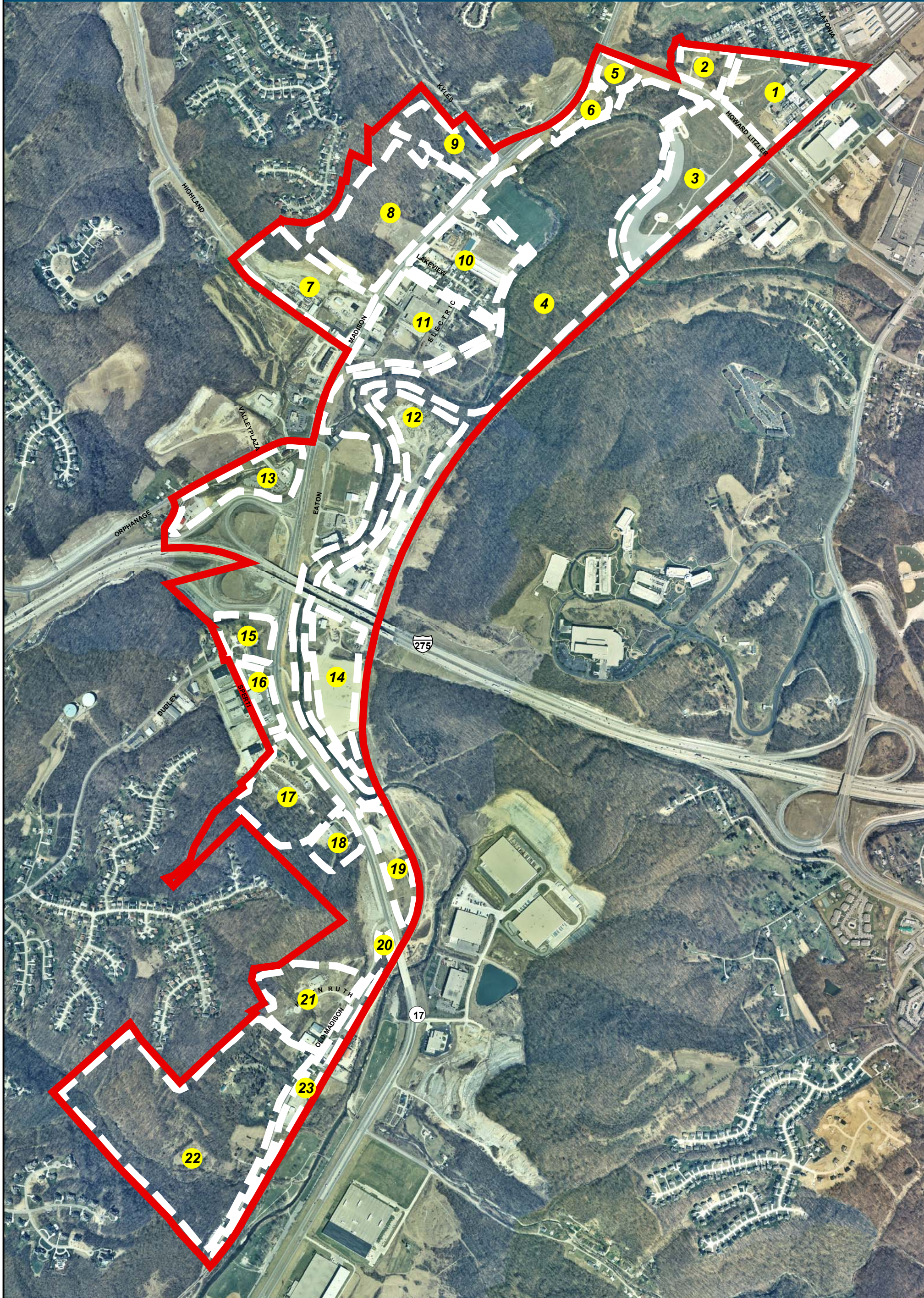
**Area 1**– This area is located along the north side of Howard Litzler Drive and is bounded to the east by the CSX Railroad. This area is recommended to remain identified for industrial uses. Redevelopment for any other use may potentially require environmental remediation factors, considering the past industrial use of the site.

**Area 2** – This site is located along the north side of Howard Litzler Drive and is bounded to the north by the City of Covington. There may be some potential in the long term for this site to develop with industrial uses. However, this property is adjacent to an existing single-family residential area within Covington and is therefore recommended to remain identified for multi-family residential land use. Any additional development or change in land use should be compatible with other existing surrounding development.

**Area 3** - This area is located along the south side of Howard Litzler Drive, adjacent to the railroad on the west. This site has been identified to be an existing brownfield. Environmental issues with this site make it likely that the most feasible reuse will be of an industrial type. It is critical that a buffer along Banklick Creek be maintained in order to reduce and, if possible eliminate further contamination from any environmental hazards that may be found on the site.



MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**4E**  
Recommended Land  
Use Guide



**Area 4** – This area extends along Banklick Creek, encompassing much of the floodplain areas. In Kenton County the Banklick Creek is the principal watershed containing over fifty (50) square miles of land area. Banklick Creek has been officially designated as an impaired waterway by the Commonwealth of Kentucky, due to its many problems stemming from untreated sewage, stormwater runoff, and erosion/siltation caused by construction. Each of these issues are worsened with floods, increased impervious surfaces, steep slopes, and low-permeability soils that cause pollutants to flow into the creek.

From the location of the Banklick Creek at the northern most tip of the corridor it is only approximately two miles from its confluence with the Licking River. At this point around one-third of Kenton County has drained directly into the Banklick Creek. Therefore, it is imperative to safeguard the floodplain areas for Banklick Creek along the corridor. To do this, it is recommended that riparian buffers of appropriate size and width protect Banklick Creek. Floodplain areas are most appropriate for recreational uses. Such uses as open space and public or private recreation, including trails, golf courses, playgrounds, ball fields, or soccer fields, are recommended for this area. These types of uses will least impact the Creek, and in turn, will be least impacted by periodic flooding that may occur. Potential exists for this area to develop in more intensive land uses, such as industrial or residential, if floodplain issues and access to the major road system are properly handled. Access to the major street system will be limited because of intersection spacing and turn movements. An option for access to this area may be to coordinate the development and access in conjunction with new development within Areas ten (10) and/or eleven (11).

A portion of this area is included within the *Doe Run Master Plan*, which includes areas within the cities of Fort Wright, Edgewood, Covington and Unincorporated Kenton County. Implementation of this plan has already begun within Area 4, with the application to the Kentucky Transportation Cabinet for monies from the Transportation Enhancement Program to install a multi-use bicycle and pedestrian path along Madison Pike (KY 17) and the Banklick Creek. This trail would connect Pioneer Park and the Sanitation District #1 Public Service Park.

**Area 5** – This area is located at the southeast corner of Madison Pike (KY 17) and Howard Litzler Drive. Being located at a major intersection, this area is prime to serve as an identifiable entry point for the corridor. Using this area as a gateway, clearly identified with signs and landscaping, will establish a distinct character that will continue throughout the corridor. This area should be designed in conjunction with Areas 4 and 6.

**Area 6** – This area is located along the eastern side of Madison Pike, and bounded on the west by the Banklick Creek, just south of Area 5. The location of this site creates a challenge in terms of access. The size of the site, condition of the fill, and the limits of the Creek also make the site questionable for development. The retail market for this site is somewhat weak due to these factors. Small-scale retail, if feasible, may be appropriate. The site is recommended to be designed in conjunction with activities in Area 4 and 5. Examples of recommended uses would be small-scale public parking in conjunction with uses in Area 4, or convenience retail serving nearby residential areas.

**Area 7** – This area is located on the northwest corner of Highland Pike and Madison Pike (KY 17). This area is recommended for retail, office, and residential mixed use to be designed in coordination with Areas 9 and 8 as the "Town Center" for the corridor. This site is envisioned to be a retail node comprised of small retail and service neighborhood type establishments. Pedestrian and vehicular access must be well coordinated throughout Areas 7, 8, and 9, as well as across Highland Pike and Madison Pike. Due to the close proximity of Wal-Mart and the I-275 interchange, this is the best location for additional specialty retail shops. Areas 7, 8, and 9 have potential to be the center of mixed-use lifestyle activity for the corridor. These three areas should focus on building design, connectivity, pedestrian orientation, amenities, and aesthetics that will enhance corridor and create that "Town Center" type atmosphere.

**Area 8** - This area is located along the west of Madison Pike (KY 17) between Highland Pike and Kyle's Lane. This area is recommended to be developed as part of the "Town Center" in coordination with Areas 7 and 9. This area should incorporate a mix of uses including retail, office, and residential development. However, this area is prime for the location of higher density residential, possibly senior housing, to be designed in conjunction with adjacent areas that provide access to retail services. Access to this area should be designed to incorporate cross access drives and accommodate pedestrian access along and across Madison Pike (KY 17).

**Area 9** – This area is located at the southwest corner of Kyle's Lane and Madison Pike (KY 17). This area is recommended to be designed in conjunction with Area 8 to include small-scale retail, office, and residential use mixes. Given the attractiveness of Area 7 for retail development, this area will be more appealing for development if it is coordinated with both Area 8 and Area 7. Access through this area should be via cross access drives, frontage roads, or cross access easements.

**Area 10** – This area is located along the east side of Madison Pike (KY 17) just north of the TANK facility. It is currently occupied by retail and service uses, including a long-term storage facility, and a residential area along Lakeview Drive containing several smaller residential lots. This residential area is zoned for residential development, phased to industrial development. This corridor study does not recommend a change for this area at this time, but rather recommends that the entire area be identified to be phased and marketed as one site due to the high redevelopment potential. Redevelopment should only occur in this area with a well thought out and coordinated plan that ensures that access and proposed land uses will work in conjunction with other nearby uses and that the overall project is not accomplished in a piecemeal fashion. Land must be assembled in an adequate quantity with a plan to show how access to all remaining land can be accomplished. This site has a high potential for redevelopment as retail service type facilities such as a sports complex or a movie theater, with orientation to open space uses identified for Area 4. Topography, access to fiber optic and relatively large size of the site if properties are consolidated, also make this a potential site for high tech business and industrial office, with ancillary retail and service uses. Both of these types of uses would be complimented by expanded function of TANK (see Area 11).

**Area 11** – This area is located along the east side of Madison Pike (KY 17) and is currently occupied by the Transit Authority of Northern Kentucky (TANK) and three businesses adjacent to Madison Pike (i.e., a professional office building, fast food restaurant, and gas station). The



existing location of TANK along this burgeoning corridor, with ready access to major highway networks in all directions make this site ideal for this facility to be broadened as a regional hub for transit service. Ancillary to this, other compatible and supporting retail and office uses are recommended. Benefits to the corridor include the provision for convenient mass transit access and "delivery" of customers and employees to retail, offices, and other uses located along the corridor. A key component of this will be the development of pedestrian access throughout Area 11 connecting to Area 10 and further across Madison Pike to Areas 7, 8 and 9, as well as the modification of the existing site and transportation network to accommodate increased bus traffic.

**Area 12** – This area is located along the east side of Madison Pike (KY 17), across Banklick Creek adjacent to the CSX Railroad and is currently occupied by the Eaton Asphalt Company. This area will likely redevelop more slowly than other nearby locations due to the fact it is a prime location for a business of this type. This site is a potential brownfield due to the nature of the existing business. However, at such time that this property is suitable or ready for redevelopment, the area is recommended to be office development or a combination office/industrial or technology based business center.

**Area 13** – This area is located between Orphanage Road and I-275, along the west side of Madison Pike (KY 17). This site is prime for retail uses, primarily restaurants, with some potential for “store front” office style development.

**Area 14** - This area is located along the eastern side of Madison Pike (KY 17) just south of I-275. It is anticipated that retail uses, compatible with the existing car dealership, will be most appropriate for this site.

**Area 15** – This area is located within the City of Edgewood, along the western side of Madison Pike (KY 17), between Dudley Road and I-275. No change is anticipated in the existing land use.

**Area 16** – This area is located on the southwest corner of Dudley Road and Madison Pike (KY 17) along Sperti Drive, within the City of Edgewood. This area should be designed and developed in conjunction with Areas 17 and 18 for retail and service uses. Coordinated access between these areas is vital. Another essential element for proper access to all three areas is the extension of Sperti Drive, which would accommodate access to the existing signalized intersection at Dudley Road. Cross access drives or similar designs could achieve this purpose.

**Area 17** - This area is located along the west side of Madison Pike (KY 17) at the southern terminus of Sperti Drive. This area has high potential for mixed retail, service, and office uses. Development can be fairly large in scale and should be designed in coordination with Areas 16 and 18. Access to this area is recommended to include access from Sperti Drive and is important to the development of this site. See Chapter 6 for further discussion of access to this site and to other areas south of I-275.

**Area 18** - This area is located along the west side of Madison Pike (KY 17) just north of its intersection with Old Madison Pike. This area can remain as is, although opportunity exists for the area to redevelop as retail and service uses in coordination with Area 17.

**Area 19** - This area is located along the east side of Madison Pike (KY 17), just north of its intersection with Old Madison Pike, and bounded to the east by the CSX Railroad. This area has the potential for pass-through and highway-oriented retail and service uses that may be targeted to those traveling from the southern portion of the County. The quality of retail development on this site is directly related to accessibility to an intersection or roundabout. See Chapter 6 for further discussion of access to this site and to other areas south of I-275.

**Area 20** – This area is located at the southern corner of the intersection of Madison Pike (KY 17) and Old Madison Pike, and it is wholly within the existing right-of-way. Being another identifiable intersection, this area is recommended to serve as the southern entry point for the corridor. Using this area as a gateway, clearly identified with signs and landscaping, will establish the distinct character that should continue throughout the corridor.

**Area 21** - This area is located along the western side of Old Madison Pike, along Helen Ruth Drive. This area is recommended to remain identified for office/industrial uses. Any additional development or change in land use should be sensitive to the potential effects on adjacent residential uses. Development in this area needs to be well buffered from adjacent properties and landscaped along Old Madison Pike in a manner consistent with the theme along Madison Pike (KY 16).

**Area 22** – This area is located along the western side of Old Madison Pike, just south of Helen Ruth Drive, and is at the southern terminus of the corridor. This area is recommended to be developed with residential uses. A variety of residential densities may be used on this site provided that site design is consistent with or sensitive to existing topographical features. It is recommended that clustering or other creative design techniques be used to blend future development into existing natural features in this area. This area is near existing and future recreational facilities, which should enhance its attractiveness for residential development.

**Area 23** – This area is located along the eastern side of Old Madison Pike, abutting the railroad to the west. Currently, the US Army Corps of Engineers (COE) is conducting a study relative to flood damage reduction and ecosystem restoration in this area. Alternatives recommended from this study may include buy-outs, clearing, and restoration of the area, which may provide for a possible trail connection from Pioneer Park. Existing development may be recommended to be relocated, or existing and future development to be flood-proofed. This is also a potential location for public service uses, such as a police/fire substation, or for the retention of open space if the COE recommends a buyout. Due to the ongoing study and existing potential for flooding, land use changes within this area may occur slowly over time.

## RECOMMENDED GREENWAY PLAN

Two major environmental characteristics are presented within the corridor: hillsides and waterways. Floodway, floodplain, and/or slope issues restrict approximately half of the land within the corridor. Floodway land alone is approximately ten percent (10%), or a little over fifty (50) acres. This section outlines these characteristics in more detail and includes recommendations for protection and utilization of these areas.

Recommendations in this section are aimed at meeting several of the goals and objectives set forth in this study. One objective is to provide a wide variety of recreational facilities, including indoor and outdoor recreation, particularly along Banklick Creek in areas that can also assist in the preservation of flood control areas to reduce potential damage. Another objective is to incorporate the design and location of recreation and open spaces as an integral part of new and existing development, especially in regard to Banklick Creek, and to connect new and existing recreational facilities within the corridor to other recreational facilities in the area. These objectives and recommendations attempt to maximize the Banklick Creek as an asset to the Corridor and surrounding community and to locate and provide appropriate recreational opportunities within the Corridor.

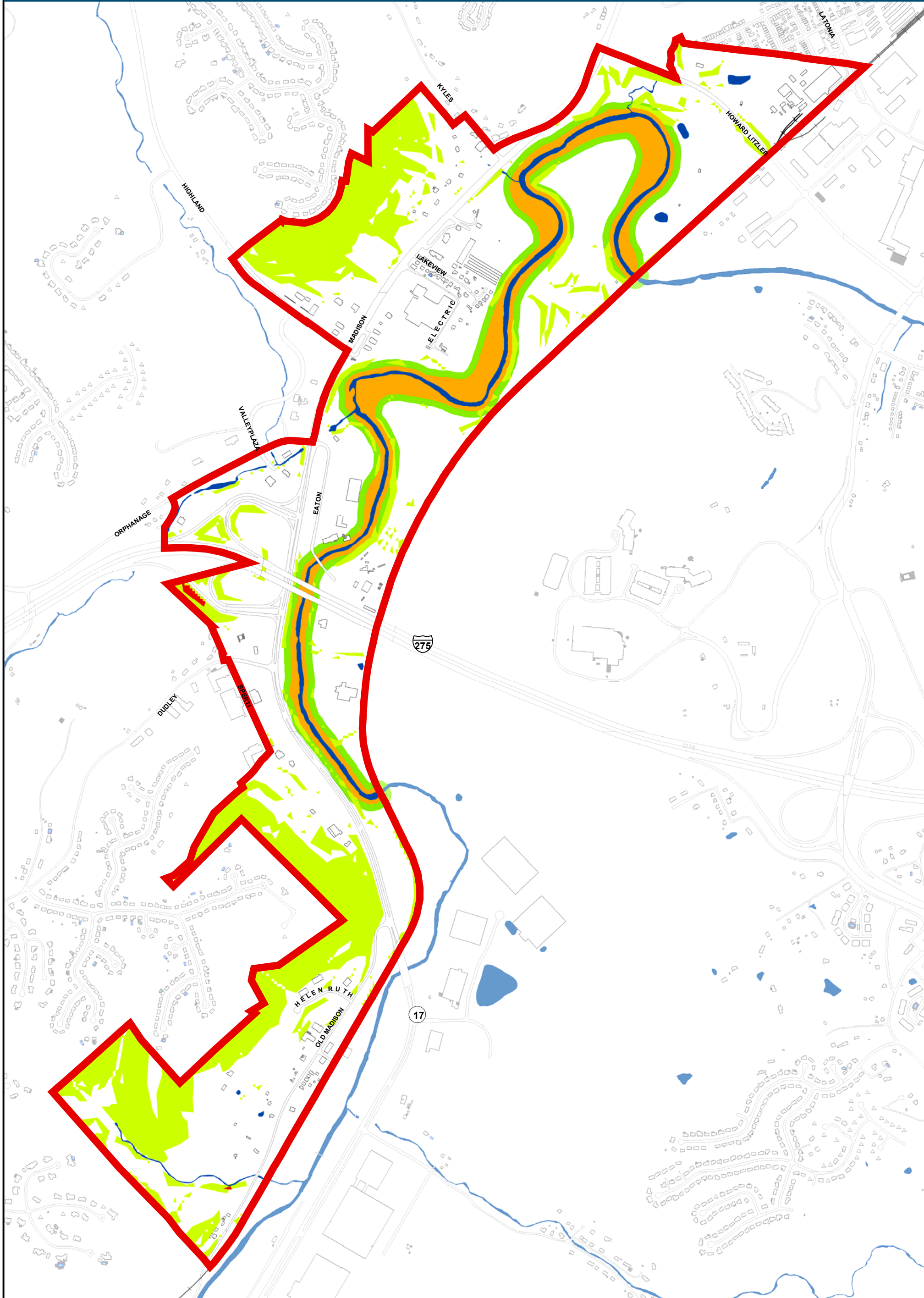


### Riparian Protection

As identified on the Greenway Map, **Map 4F**, Banklick Creek flows through the center of the corridor in a south-north direction, east of Madison Pike (KY 17). In Kenton County, Banklick Creek is the principal watershed and has been officially designated an impaired waterway by the Commonwealth of Kentucky as noted in Kentucky's Report to Congress on Water Quality (305b). The Creek is also identified on the 1<sup>st</sup> Priority Listing of Section 303(d) List of impaired waters with impaired uses being aquatic life and swimming. These impairments are largely due to the many problems dealing with untreated sewage, stormwater runoff, and construction. Each of these issues are worsened with floods, increased impervious surfaces, steep slopes, and low-permeability soils. The location of the Banklick Creek at the northernmost tip of the corridor is approximately two miles from its confluence with the Licking River. Around one-third of Kenton County drains directly into the Banklick Creek at this point. Therefore, it is imperative to protect the creek and its surrounding riparian corridors from any additional impairment.

Riparian corridors include stream banks and associated areas adjacent to a flowing waterway. Vegetated riparian areas function as stream buffer zones, performing many important functions including protection from erosion, flood abatement, groundwater recharge, and filtering water pollutants (e.g., toxic chemicals, nutrients, and sediment) from runoff entering streams.

MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**4F**  
Greenway

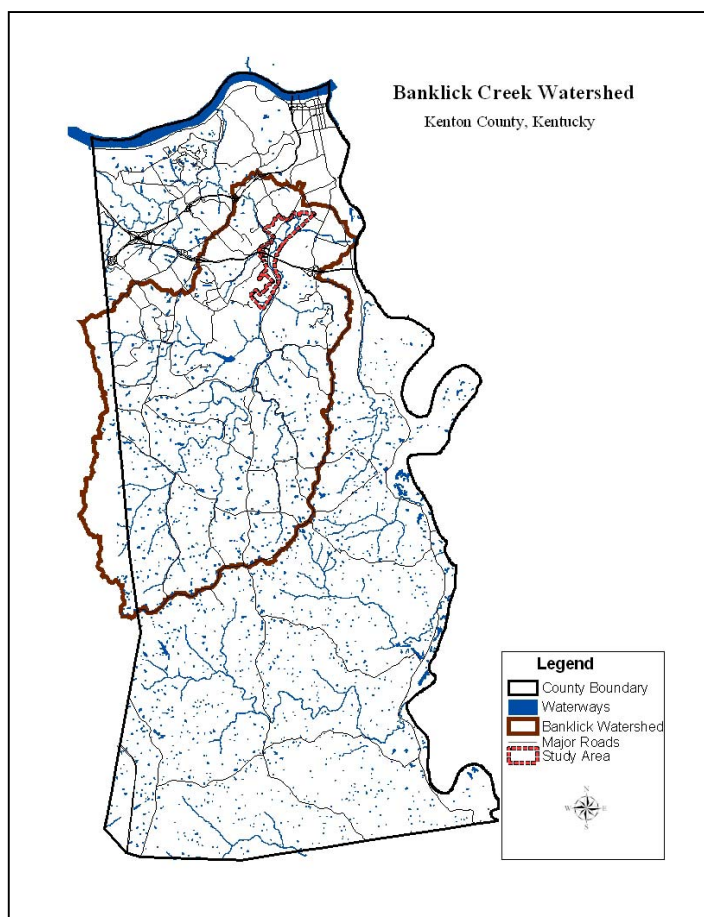
- Legend**
- Creek
  - Riparian Buffer
  - 15-35% Slope
  - 35% Slope and Greater
  - Recreation Corridor

0 500 1,000 Feet





Vegetated riparian areas also function to prevent stream warming and to provide food, cover, and habitat structure for wildlife. The linear corridors provided by stream bank setbacks enhance wildlife movement and migration for sensitive species. Protection of existing natural riparian corridors is critical to the long-term health of streams and downstream receiving waters and is also instrumental in adding aesthetic and economic well-being to the community. In addition to the environmental importance, riparian corridors also possess significant economic value. Riparian corridors provide for recreational and health benefits, non-consumptive secondary benefits, cultural enhancement, increased property values, and an improved quality of life. By contributing to human welfare, both directly and indirectly, riparian corridors represent part of the total economic value of natural resources.<sup>1</sup>



The Greenway Map identifies and recommends a riparian buffer of various sizes, based on the floodway boundaries that exist within the corridor. Currently, the City of Fort Wright Zoning Ordinance contains flood protection development controls, including the requirement that no filling or construction is permitted that would result in any increase in flood levels during the occurrence of a 100-year flood discharge. If a watercourse is to be changed, the flood carrying capacity must be maintained. Plans for such work are required to be submitted to the city to the

***The Commonwealth of Kentucky has officially designated Banklick Creek as an impaired waterway.***

NKAPC and to the Kentucky Division of Water for their review and approval. This plan recommends that more specific standards be put in place, including riparian setbacks or buffers, that will eliminate potential disturbance to the floodway sometimes caused by the

clearing of vegetation associated with construction. Furthermore, these areas are recommended to be ideal locations for stream restoration projects, wetlands mitigation projects, and other projects that would improve the environmental quality of the creek.

<sup>1</sup> Natural Resources Study, Summit County, Ohio, Pp 37-39, RIPARIAN CORRIDORS, Davey Resource Group, March, 2003.

## Recreational Corridors

Linked networks of important habitat or other sensitive resources are often sought to be preserved. Lands preserved for trail systems can provide additional protection for riparian areas and streams. High-quality natural resources enhance recreational opportunities and the livability of a community, which is often reflected in higher property values. Providing access to natural resources through recreational opportunities performs an educational function by increasing the exposure of residents to the County's important natural areas, increasing their sense of stewardship.

***This plan recommends that more specific standards be put in place, including riparian setbacks or buffers.***

Madison Pike and the Banklick Creek, which run through the study corridor, are a part of the Doe Run Park Master Plan, which was jointly commissioned by the City of Erlanger and The Drees Company. The mission of the Doe Run Lake Plan is to create a vision for Doe Run Lake and its environs that maximizes its potential as an asset to Northern Kentucky as a Regional Park Facility. Some of the goals and implementation strategies are specific to the study corridor. The Doe Run Park Plan identifies goals to integrate and connect adjacent communities, development, and open space through regional linkages such as trails, greenways, parkways, and stream corridors. The Madison Pike corridor has specifically been identified as a potential area for a greenway or "Parkway" system. The Concept Plan for Doe Run Lake and the surrounding areas include developing Madison Pike (KY 17) with bicycle and pedestrian trails and additional tree plantings, as well as conserving the Banklick Creek and restoring its value as a natural stream corridor.

The Greenway Map identifies an area along the Banklick Creek as a recreational corridor. This corridor is a seventy five (75) foot wide swath on both sides of the identified riparian buffer area. This area is not meant to be completely undisturbed, but rather developed into recreational facilities, particularly pedestrian and bicycle, that connect the corridor to other surrounding recreational facilities such as Pioneer Park and the Sanitation District No. 1 Public Service Park. This recreational corridor is recommended to be implemented in conjunction with redevelopment along the corridor. This recreational area is not intended to be disconnected from businesses or residences that may develop in the area; instead, it should be connected to

***A recreational corridor along the Banklick Creek is recommended to be used for trail linkages and to maximize the use of natural areas within the corridor.***

and enhanced by these facilities. Connectivity to the recreational corridor from parking areas, streets, sidewalks, and building entrances should be encouraged. Building facades should also be oriented in such a way as to enhance the aesthetics for patrons of the recreational corridor.

These recreational facilities should be implemented through public private partnerships, recreational trails grants, or transportation enhancement funds, and even potentially through congestion, mitigation and air quality (CMAQ) funds.

## Hillside Protection Areas

There are numerous hillsides within the Madison Pike (KY 17) corridor. In 1991, a report prepared by the Hillside Trust, entitled *A Hillside Protection Strategy for Greater Cincinnati*<sup>2</sup>, assessed the visual quality, landslide susceptibility, ecological conditions, and development susceptibility of hillsides within Hamilton and Kenton Counties. The following table summarizes the findings for the hillsides found within the corridor:

Criteria	Description	Rating	Location
Visual quality	Close proximity to water, natural undeveloped conditions, a viewing combination of forest, vegetation, agriculture, pasture, water, and/or parks.	Very High	West side of KY 17, except at I-275 interchange
Landslide susceptibility	Where certain geologic formations are found in combination with steep slopes and evidence of previous sliding activity.	Very High	Both sides of Madison Pike (KY 17)
Ecological conditions	High visual quality, subject to landslides, and are of high ecological quality.	Very High and High	West side of Madison Pike (KY 17)
Development susceptibility	Where high quality sensitive hillside areas are also very susceptible to future development	Moderate	Both sides of Madison Pike (KY 17)

The majority of hillsides in the corridor contain slopes that are less than fifteen percent (15%) grade. It is recommended that development take place on these lower hillside slopes in order to protect the valuable contribution that hillsides make to the visual and environmental quality of the corridor.

Areas containing slopes greater than fifteen percent (15%) are located between Highland Avenue and Kyles Lane along the west side of Madison Pike (KY 17) and from Dudley Pike to the southern limits of the corridor. These areas are identified as Hillside Protection Areas on the Greenway Map, where the amount of disturbance associated with development should be limited. This is due to the loss of vegetative cover on steep slopes during development, which can increase soil instability, the risk of erosion, and property damage. Soil erosion and sedimentation into waterways can increase the potential for flooding, reduce water quality, and pose several threats to public health and safety that are difficult and expensive to correct. It is necessary to minimize problems due to water runoff and soil erosion incurred in grading the landscape while preserving unique scenic resources and habitats<sup>3</sup>. For these reasons, it is recommended that grading for structures within the corridor be restricted to slopes thirty five percent (35%) or less in order to protect steep slopes during development and to protect public health and safety. An analysis of the hillside slopes in the corridor using geographic information systems did not reveal any hillsides greater than thirty five percent (35%) slope.

It is recommended that Hillside Protection Areas be addressed in conjunction with development along the corridor. In an effort to accurately define the slope of a property, it is recommended that the measuring method referred to as “actual slope” be used instead of averaging the slope of

<sup>2</sup> The Hillside Trust, Cincinnati, OH, Pp. 5-7, A HILLSIDE PROTECTION STRATEGY FOR GREATER CINCINNATI: IDENTIFYING GREATER CINCINNATI'S SENSITIVE HILLSIDES, 1991.

<sup>3</sup> Natural Resources Study, Summit County, Ohio, Pp 37-39, RIPARIAN CORRIDORS, Davey Resource Group, March, 2003.



a property into a single value. This entails breaking the property into detailed slope categories in order to determine a better representation of the actual slope. It is also recommended that the amount of hillside disturbance associated with development be limited in Hillside Protection

***It is recommended that Hillside Protection Areas be addressed in conjunction with development along the corridor.***

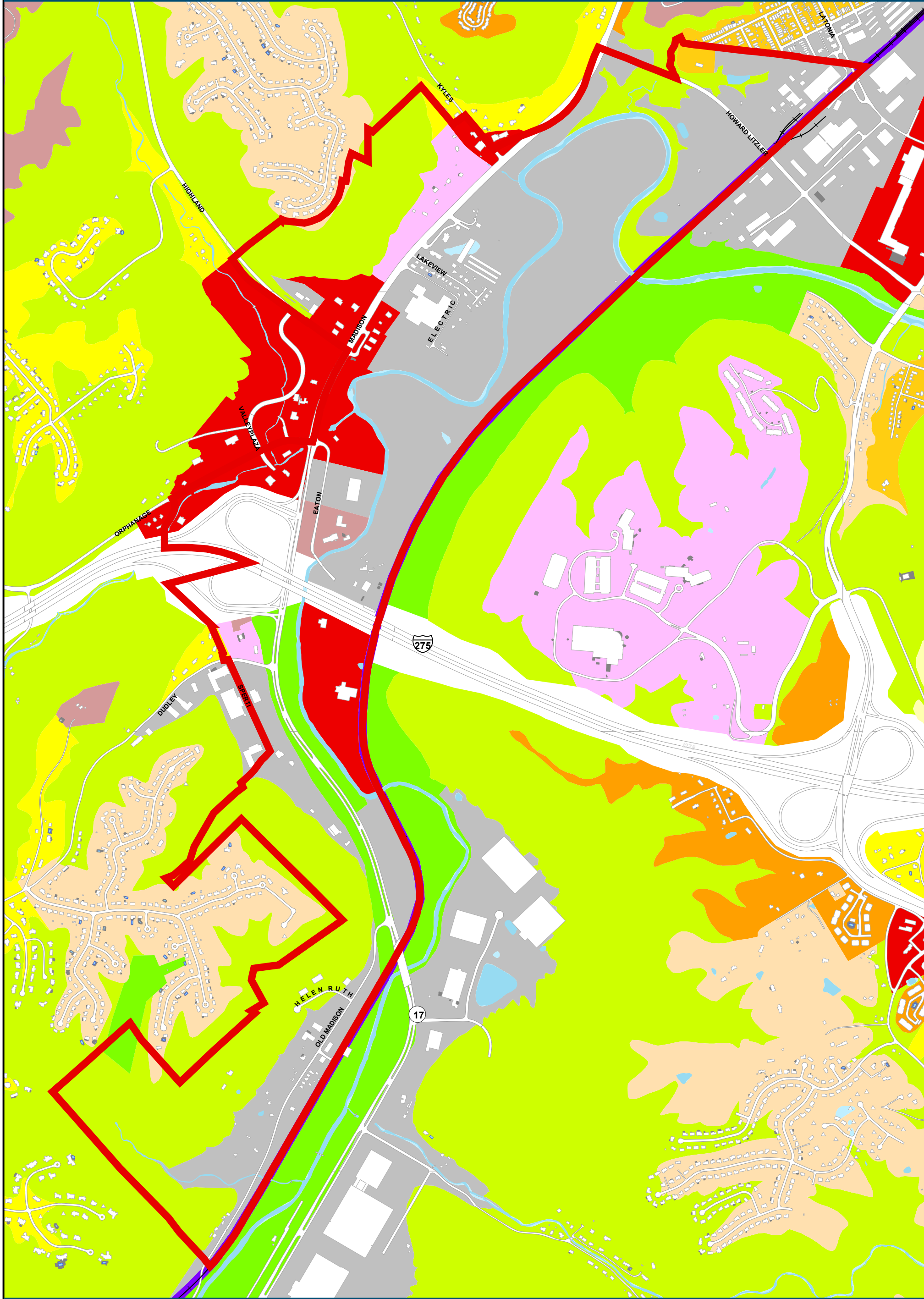
Areas, by factoring a disturbance limit according to each slope category. Lastly, it is recommended that the design of development retain as much as possible the natural topographic character of the hillside by minimizing grading and the creation of artificial slopes.

## COMPREHENSIVE PLAN RECOMMENDATIONS

The 2001 Area-Wide Comprehensive Plan update identifies the corridor to be recommended for several different uses, including Industrial, Commercial – Retail/Service, Commercial – Office, Recreation and Open Space, Physically Restricted Development Area, Community Facilities – Other Community Facilities, and Residential Development at a density ranging from 2.1 to 7.0 dwelling units per net acre. **Map 4G** illustrates these current land use categories.

The Plan Update also recognizes the designation of Special Development Areas. These areas identify locations that are appropriate for specialized activities including: entertainment and amusement-type functions, extensive commercial activities that require good access to the regional highway system, and areas with potential for mixed land uses (e.g., Commercial/Residential/ Recreational and Public/Semi-Public). Given all of the unique characteristics of the study corridor, the Recommended Land Use Map contained within the 2001 Area-Wide Comprehensive Plan Update should be amended to designate the majority of the corridor as a Special Development Area (See **Map 4H**). Along with this amendment, specifics regarding specific land use, greenway, and transportation issues should be included to compliment and clarify the findings of this study, and to provide a basis for future map and text amendments that may be necessary to the City of Fort Wright Zoning Ordinance in order to achieve the goals as set forth in this study.

MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN




MAP  
**4G**  
Existing Recommended  
Land Use (CPU)

**Legend**

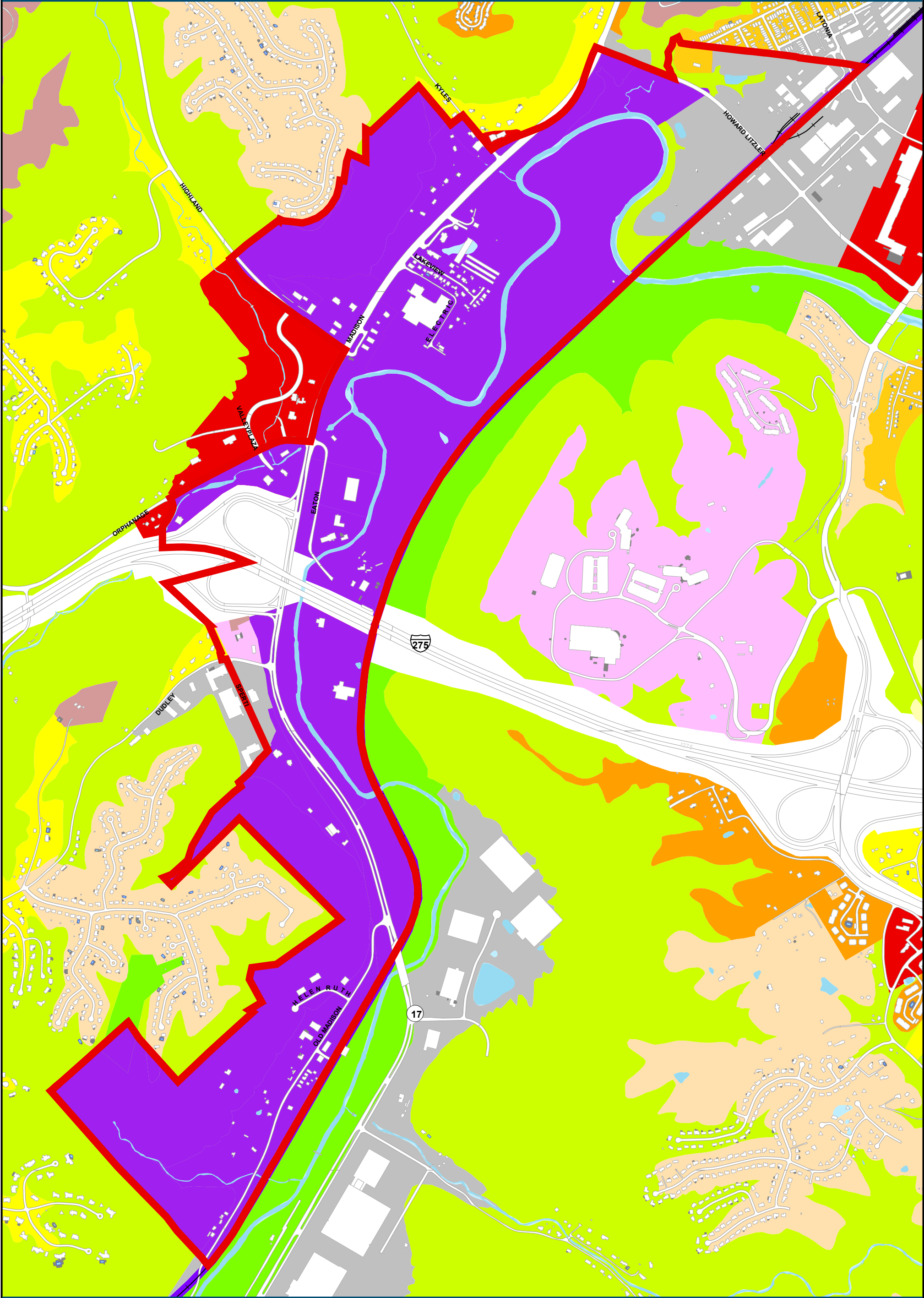
ROW	COMMERCIAL OFFICE	WATER
RESIDENTIAL UNDER 2.0	COMMERCIAL RURAL	SCHOOL PARKS
RESIDENTIAL 2.1 TO 4.0	COMMERCIAL PROPOSED SHOPPING CENTER	RECREATION AND OPEN SPACE
RESIDENTIAL 4.1 TO 7.0	SPECIAL DEVELOPMENT AREA	OTHER COMMUNITY FACILITIES
RESIDENTIAL 7.1 TO 14.0	INDUSTRIAL	
RESIDENTIAL 14.1 TO 30.0	RAILROAD	
RESIDENTIAL OVER 30.0	AGRICULTURAL AND RURAL USES	
COMMERCIAL RETAIL/SERVICE	PHYSICALLY RESTRICTIVE DEVELOPMENT AREAS	

0 500 Feet

 **NKAPC**  
Northern Kentucky  
Area Planning Commission



MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN




MAP  
**4H**  
Recommended Land  
Use Amendment (CPU)

**Legend**

ROW	COMMERCIAL OFFICE	WATER
RESIDENTIAL UNDER 2.0	COMMERCIAL RURAL	SCHOOL PARKS
RESIDENTIAL 2.1 TO 4.0	COMMERCIAL PROPOSED SHOPPING CENTER	RECREATION AND OPEN SPACE
RESIDENTIAL 4.1 TO 7.0	SPECIAL DEVELOPMENT AREA	OTHER COMMUNITY FACILITIES
RESIDENTIAL 7.1 TO 14.0	INDUSTRIAL	
RESIDENTIAL 14.1 TO 30.0	RAILROAD	
RESIDENTIAL OVER 30.0	AGRICULTURAL AND RURAL USES	
COMMERCIAL RETAIL/SERVICE	PHYSICALLY RESTRICTIVE DEVELOPMENT AREAS	

0 500 1,000 Feet

 **NKAPC**  
Northern Kentucky  
Area Planning Commission

# CHAPTER V

## COMMUNITY FACILITIES AND UTILITIES

### GENERAL

The following provides a summary of the community facilities and utilities located within an approximate three (3) mile radius of the corridor (see **Map 5A**). Community facilities provide a public service or interest function to the area, including private and parochial schools, park and recreational facilities, fire and police protection facilities, and other community facilities, such as government offices and historically significant features. For more information regarding community facilities, see Chapter 6, Community Facilities, within the 2001 Area-Wide Comprehensive Plan Update.

### COMMUNITY FACILITIES

#### SCHOOL FACILITIES

School facilities in proximity to the corridor are located in the Beechwood Independent and Kenton County School Districts. Fort Wright Elementary is located to the north of the corridor near Kyles Lane. No existing or proposed schools are identified in the corridor.

#### RECREATION AND OPEN SPACE

The Area-Wide Comprehensive Plan Update identifies the need to ensure a sufficient supply of land is reserved for recreational needs, including parks and other open space, in order to provide a high quality of life for families and individuals.

#### Recreation Facilities

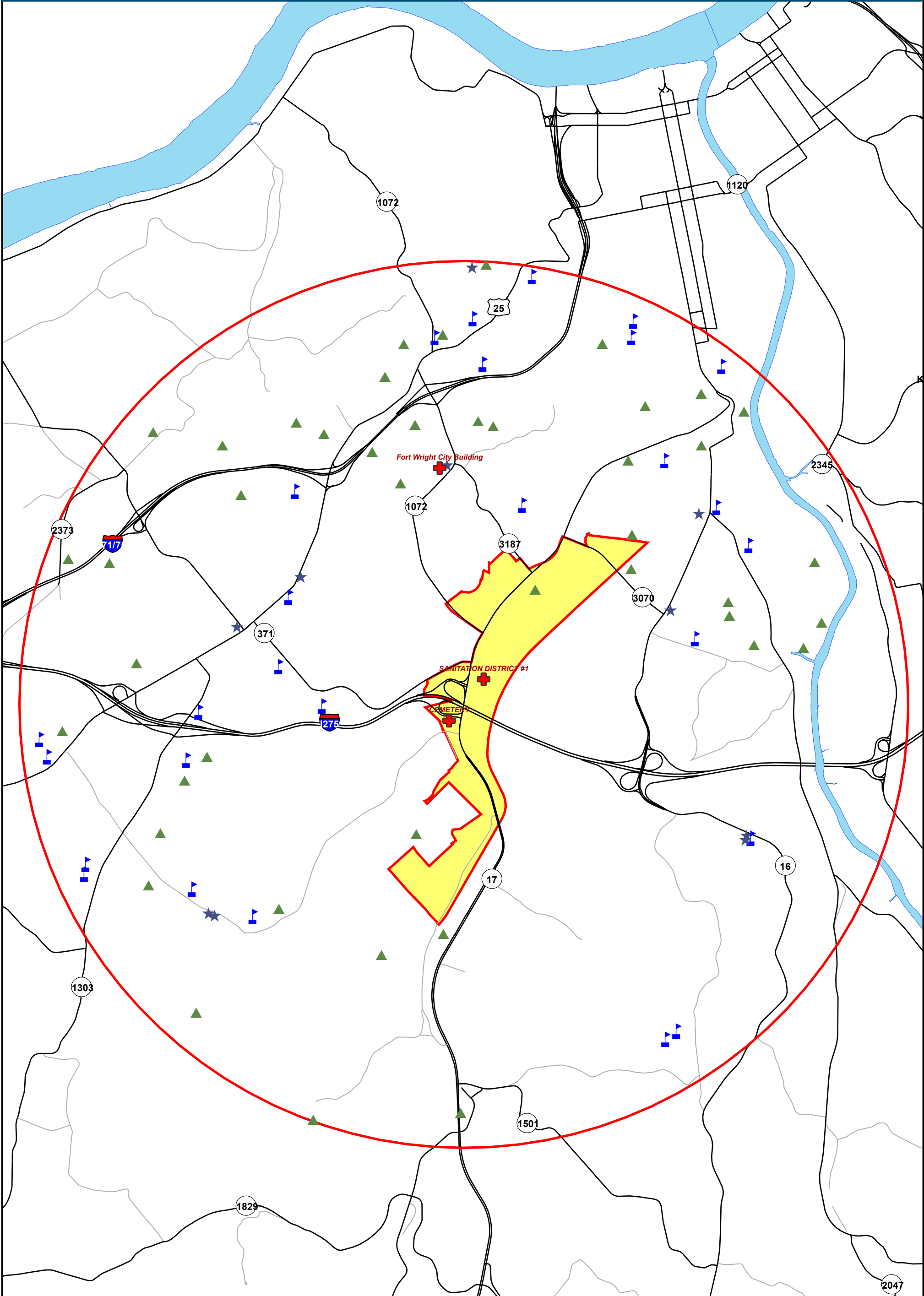
**Table 5-1** summarizes the public and private recreation facilities, which are located, near the corridor (i.e. within 2 miles), both for active and passive recreation. Active recreation refers to functions such as sports, games, and play activities. Passive recreation refers to functions such as walking, hiking, bird watching, and picnicking. Public parks in proximity to the corridor are defined as follows:

*Neighborhood Parks* – Typical size from 5 to 15 acres with a ½ to 1 mile service radius. Intended to serve a population of 5,000. Parks in proximity to the corridor with this classification include the Fort Wright City Building Site and the Fort Wright Nature Center.

*County and Community Parks* – Typical size from 25-50 or more acres, 1 to 2 mile service radius. Intended to serve several neighborhoods with populations of 20,000 or more.

*Linear Parks* – Parks which are the foundation of the “park-link system”, which is intended to connect existing and proposed parks, historic sites and districts, and scenic areas, with hiking trails, bike paths, and pedestrian walkways along streams and rivers.

MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**5A**  
Community Facilities

- Legend**
- ★ Police or Fire Station
  - 🚩 School
  - ⛶ Other Community Facilities
  - ▲ Recreation Facilities
  - 📐 3 Mile Radius

**TABLE 5-1**  
**EXISTING PUBLIC AND PRIVATE PARK AND RECREATION FACILITIES NEAR THE MADISON PIKE/KY 17 CORRIDOR**

Public Facilities					Private Facilities			
Facility	Address/Location	Type <sup>(1)</sup>	Facilities	Acres	Facility	Address/Location	Facilities	Acres
Doe Run Lake	Bullock Pen Road, Kenton County	CO	Hiking trails, fishing, picnic shelters, grills, boat ramp	182.6	TSI	Boron Avenue, Covington	Baseball	2.5
Pioneer Park	Madison Pike, Kenton County	C	Basketball, baseball, tennis, soccer, 2 shelter houses, restrooms, picnic tables, grills, bleachers, paved shared-use trail, horseshoes; and a fenced-in area for dogs	42.5	Brookwood Country Club	Fair Oaks Lane, Edgewood	Clubhouse, swimming pool, tennis courts	10.4
F.O.P.A / Youth Sports Complex	43 <sup>rd</sup> Street, Covington	C	Baseball fields, grand stands, parking lots, soccer fields	30.5	Ft. Wright Civic Club	Kennedy Road, Ft. Wright	Basketball, baseball, playground equipment	2.6
Ft. Wright City Building Site	Kyles Lane, Ft. Wright	N	Playground equipment		South Hills Civic Club	Henry Clay & Bluegrass Avenues, Ft. Wright	Baseball, meeting hall, playground equipment	2.2
Ft. Wright Nature Center	Highland Pike, Ft. Wright	N	Trails, parking, wooded hillside		Bluegrass Swim Club	Bluegrass & Highland Avenues, Ft. Wright	Swimming pool, bathhouse, concessions	4.6
(1) N = Neighborhood Park, C = Community Park, CO = County Park, SUL = Special Use					Ft. Wright Driving Range	Madison Pike, Ft. Wright	Driving Range	14.1
					Central Church of the Nazarene	Pieck Drive, Ft. Wright	Basketball, volleyball	3



## Open Space Facilities

Open space consists of either publicly or privately owned property that retains significant areas of open or “green” space. For example, undeveloped hillsides and stream valleys, golf courses, and cemeteries are all considered open space. The following summarizes the open space facilities in the corridor.

### Banklick Creek

The Banklick Creek bisects the study area in a south-north direction. This section of the Banklick Creek comprises part of a linear park and is part of the “park-link system,” which stretches from the Boone/Kenton County line and extends along the Ohio and Licking riverfronts and south along Banklick Creek. The purpose of the park-link system is to connect existing and proposed parks, historic sites and districts, and scenic areas with hiking trails, bike paths, and pedestrian walkways along streams and rivers.

### Doe Run Lake

Doe Run Lake was designed and built by the US Army Corps of Engineers and the USDA Soil Conservation Service in the late 1970’s to control flooding along Banklick Creek. In 1992, the Doe Run Lake Advisory Committee, with assistance from the Northern Kentucky Area Planning Commission, completed a recreational feasibility study for the area. In September 2001, the Doe Run Lake Nature Trail opened, consisting of two miles of footpath on the south side and one mile of roadway trail on the north side.

In 2003, the *Doe Run Park Master Plan* was jointly commissioned by the City of Erlanger and The Drees Company. The mission of the project is to create a vision for Doe Run Lake and its environs that maximize its potential as an asset to Northern Kentucky. The document was created by Human Nature and contains two primary elements--the concept plan and the funding matrix. The master plan has now been adopted by the City of Erlanger and has become the top priority for new projects in the *Kenton County Parks Master Plan*.

The final vision for Doe Run Lake and its environs includes “Greenway Linkages” to Doe Run Lake along Madison Pike (KY17) as a “Parkway” with bicycle and pedestrian walkway, additional tree plantings connecting the Banklick Creek corridor, recreational areas, and public facilities. Additionally, a concept plan for Doe Run Lake proposes a number of recreational amenities including an outdoor classroom, trails, shelters, and a nature center.

The City of Fort Wright along with the Doe Run Steering Committee is currently pursuing an application for TEA-21, Transportation Enhancement Funds, for the construction of a bicycle and pedestrian walkway along Madison Pike (KY 17) and the Banklick Creek from the Sanitation District No. 1 property to Pioneer Park. Completion of this project would be the first step in the implementation of the Doe Run Park Master Plan.

## Cemeteries

The area at the northeast corner of Dudley Pike and KY 17 was once the site of the Holy Guardian Angels parish. The parish no longer exists, however, a small cemetery remains on the site, approximately one half (1/2) acre in size. The cemetery is now under the care and operation of St. Pius Church in Edgewood. Dating back to the late nineteenth Century, the property at one time contained a church and most likely a priest house and a convent. A second cemetery, Mother of God Cemetery, is located just outside the corridor, north of Howard Litzler on Madison Pike (KY 17) in Covington. It contains approximately fifty-six (56) acres.

## FIRE AND EMS PROTECTION

The corridor is located within the Fort Wright Fire District and is served by the Fort Wright Fire/EMS Department, with backup service available from surrounding city departments. The Fort Wright Fire/EMS Department is located approximately one (1) mile west of the corridor along Kyles Lane at the Fort Wright City Building Site. The department currently employs three (3) full-time and eight (8) part-time fire and EMS personnel. The Fort Wright Fire Department also serves the cities of Park Hills and Kenton Vale. Advanced life support (ALS) service is provided under a Countywide contract with TransCare, which is operated by St. Elizabeth and St. Luke Hospitals.

Emergency backup service is provided to the City of Fort Wright through a mutual aid agreement with the surrounding fire and EMS departments. Those in closest proximity to the Study Area include Fort Mitchell, Edgewood, and Covington.

## POLICE PROTECTION

Police protection is provided by the Fort Wright Police Station located at the Fort Wright City Building Site on Kyles Lane. The Fort Wright Police Department has eleven (11) full time police officers and twelve (12) police cruisers.

## LIBRARIES

The Kenton County Public Library currently maintains facilities in Covington, Erlanger, and Independence. The Covington and Erlanger branches are located within two (2) miles of the corridor. The Kenton County Library Board is currently in the process of acquiring a new site in Unincorporated Kenton County to serve as the future Independence branch library.

The Library Plan within the Area-Wide Comprehensive Plan Update recommends the addition of a new library facility to the east of the corridor on Taylor Mill Road, north of I-275.

## OTHER COMMUNITY FACILITIES

### Fort Wright City Building

The Fort Wright City Building is located approximately one (1) mile west of the corridor on Kyles Lane. The site houses the offices of the city administration, police, fire, EMS, and public

works department. A neighborhood park is located on the site and is maintained by the local Garden Club. The City Building serves as a community education and training site for CPR and first aid training programs as well as a forum for public meetings. A veteran's memorial is also located on the site.

### Sanitation District Number 1

The main office of Sanitation District No. 1 is located in the center of the corridor on the east side of Madison Pike. The office has been expanded over the past two years with a three-story addition to the existing office building. The existing two-story office building was redeveloped and houses the offices of the Kenton County Board of Education.

Upon completion, the site will incorporate innovative storm water best management practices (BMPs) for education and demonstration, as well as a Public Service Park and outdoor recreational and educational facility. Plans for this new recreational facility include walking trails, outdoor educational classrooms, picnic areas, and an amphitheatre.

## UTILITIES

This chapter provides an overview of public utilities that are present in the Madison Pike (KY 17) corridor. Generally, the corridor is well equipped with public utilities including water, electricity and gas, sanitary sewer, storm sewer, and telecommunications facilities.

### WATER

Water service is provided to the corridor by a primary distribution water main extending north and south along Madison Pike (KY 17) and Old Madison Pike, and east and west along Dudley Pike, Orphanage, Electric Drive, Lakeview, Highland Avenue, and Kyles Lane (see Map 5B). Water services are operated and maintained by the Northern Kentucky Water District. The Dudley Pike Ground Storage tank is a water storage facility located just south of the I-275 eastbound off-ramp. A water pumping station is located east of the corridor along Dudley Pike. The *2001 Area-Wide Comprehensive Plan Update* identifies a proposed distribution main extending north of the water storage facility running parallel with the Banklick Creek before turning east near Kyles Lane.

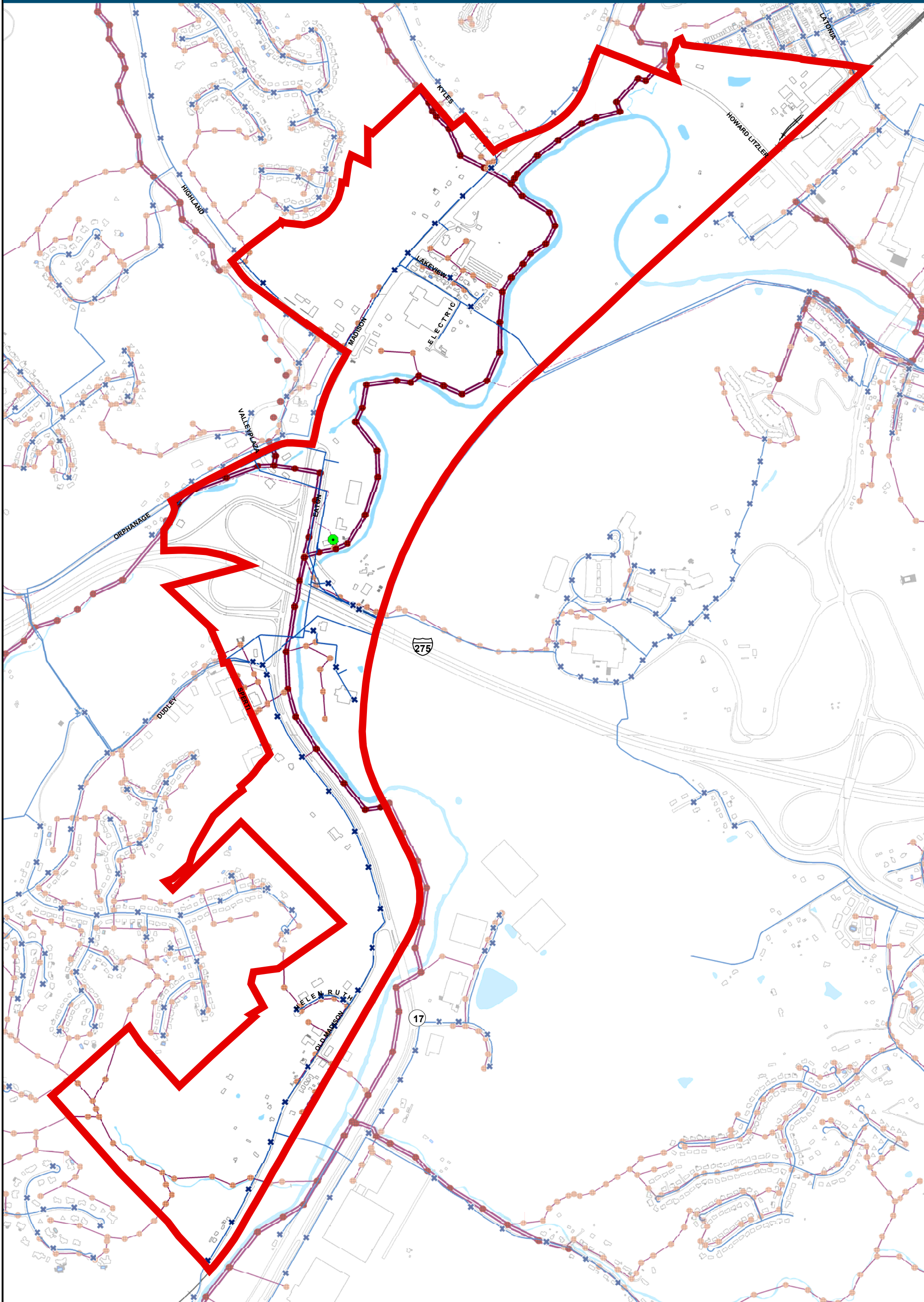
### SANITARY SEWER

A north-south sanitary trunk line enters the corridor at Howard Litzler and runs parallel to the Banklick Creek and connects with trunk lines along Kyles Lane and Orphanage Road (see **Map 5B**). Sanitary lines extend from these trunk lines to serve residents and businesses within the corridor. Old Madison Pike is served by sanitary lines that are connected to the trunk line along KY 17 in two locations.

Average daily sewer flows in the corridor are currently distributed to the Dry Creek Treatment Plant from the Lakeview Pumping Station on Madison Pike (KY 17). A force main runs from the pumping station across Madison Pike (KY 17) and along Orphanage Road. Adequate capacity is served for sanitary service during dry weather conditions; however, during wet weather



MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**5B**  
Utilities

**Legend**

**Manholes**

- Sanitary Manhole
- Trunk Manhole
- Diversion Manhole

- Pump Station
- Lift or Flood Station
- Treatment Plant

**Sanitary Sewer Lines**

- Sanitary Line
- Force Main
- Trunk Line



conditions the capacity is problematic and could pose potential capacity problems at the Lakeview Pumping Station depending on the volume of rainfall received.

Sanitation District No. 1 is responsible for the collection and treatment of Northern Kentucky's wastewater and for regional storm water management. The District serves thirty-three (33) communities in Boone, Campbell, and Kenton Counties of Northern Kentucky. They are working on a long-term strategy to increase the capacity of the sanitary system in West-Central Kenton County by diverting flows from the Lakeview Pump Station to the new Western

Regional Collection System and Treatment Plant in Boone County, including upgrading sanitary sewer lines from twelve (12) inch to forty-eight (48) inch and adding another pump station. The sanitary system in the Corridor must therefore be timed appropriately so as to coincide with any future development (i.e. that would tie into the existing system).

Portions of the sanitary and storm sewer systems in the City of Fort Wright are currently being rehabilitated in response to a Notice of Violation issued to the city by the Kentucky Division of Water in 2001. The violation cited the presence of untreated sewage in local waterways. The streets included in this project include Werner Drive, Lorup Avenue, Olivia Lane, Kentucky Drive, and Barbara Circle. Raw sewage can enter waterways through illicit discharges from sanitary and storm water systems (both public and private). These discharges have led to public health and environmental concerns due to the presence of high fecal bacteria counts in local streams.

## ELECTRICITY AND GAS

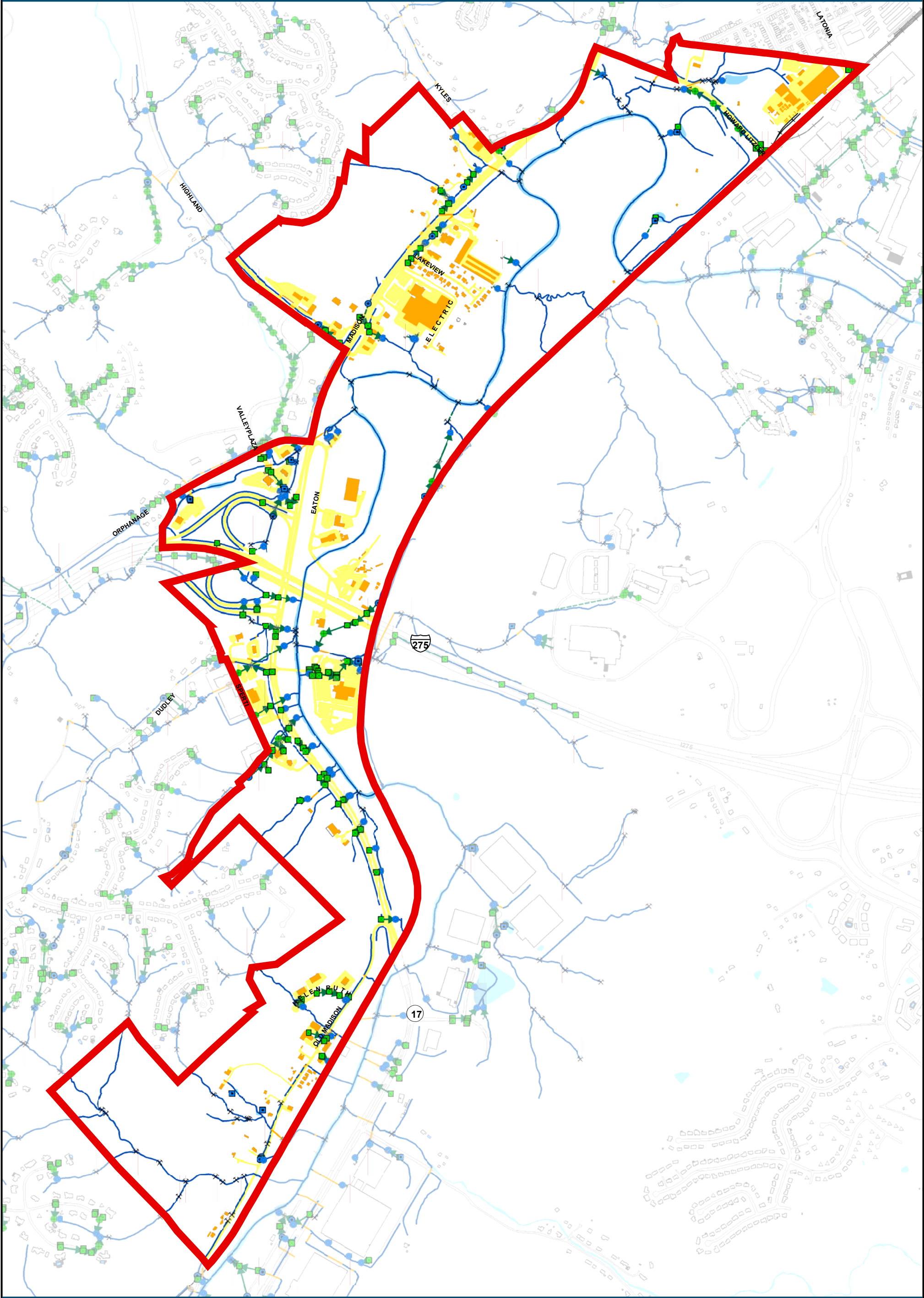
Electricity and gas in the corridor are provided by Cinergy Corporation. Service is provided by both overhead and underground utility lines. A transformer station operated by Union Light Heat and Power Corporation is located on the east side of Madison Pike (KY 17) behind TANK. The depth of Cinergy's underground gas mains is generally thirty-six (36) inches, while service lines are generally at a depth of eighteen (18) inches.

## STORM SEWER

Stormwater is fed through numerous catch basins, inlets, pipes, culverts, and channels within the corridor to nearby creeks, streams, and the Banklick Creek. As would be expected, the more impervious surface there is in any given area, the more urban runoff there will be during wet weather events. NKAPC has determined, using GIS analysis, that the amount of impervious surface attributed to roads and buildings (in square feet) within the corridor to be in the range of seventeen percent (17%) of the total area of all parcels (see **Map 5C**). The federal government now requires communities across the nation to apply for a storm water discharge permit and to develop a storm water management program. Sanitation District No.1 is assisting the cities in Northern Kentucky in developing a cooperative storm water management program for the region. They are developing an effective program and enacting policies that can enhance the quality of runoff, control the quantity of runoff, reduce erosion, and prevent flooding.



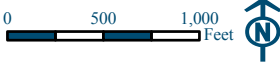
MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
**5C**  
Impervious Surface  
Storm Water

**Legend**

■ C_BASIN	⊗ DITCHPT	→ PIPE	■ Impervious Surface Building
● MANHOLE	⊕ SPLICE	--- INFERRED	■ Impervious Surface Road
● PIPEINLET	✓ stub	— CULVERT	
● PIPEOUTLET	■ DET_RET	— CHANNEL	





## TELECOMMUNICATIONS / FIBER OPTIC CABLE

Cincinnati Bell's Lakeside Park Central Office serves the corridor from a point near Latonia Avenue south to Rolling Hills Drive. Service to the north along Madison Pike is provided from the Covington Central Office. Service to the south is provided from the Independence Central Office.

Cincinnati Bell Telephone maintains an extensive network of copper and fiber optic communications cables to serve the area. Customers using traditional telephone services and high-speed services including DSL (Digital Subscriber Line) and T1 (1.544 Megabit/sec) are generally served via the copper network that is installed along all roadways and into all customer buildings.

For customers who require higher bandwidths, service can be delivered over fiber optic cables, which run parallel to the copper cables along Dudley Pike, Orphanage Road, and Madison Pike, north to Highland Pike and south to the industrial area south of Holds Branch Road. Fiber optic lines are strands of optically pure thin glass that carry digital information over long distances. The fiber optic network has been expanded to accommodate additional customer requirements such as high-quality, high-speed transmission of voice, video, and data. The fiber optic cable currently provides such services as DS3, a high-capacity channel that can be used for voice, data, video, and switched services, eliminating the need to maintain multiple dedicated lines for different applications. LAN Advantage, a Local Area Network emulation service, is also available. LAN enables a company to connect within one site or over multiple, geographically diverse sites to share files, transmit data, and send email over the highly secure network.

# CHAPTER VI

## TRANSPORTATION

### GENERAL

The study area comprises approximately two and four tenths of a mile along Madison Pike (KY 17) extending from the bridge over Banklick Creek and the railroad near the intersection of Old Madison Pike on the south to Howard Litzler Drive on the north. This study also extends approximately six tenths of a mile south on Old Madison Pike to the city limit line at the railroad bridge overpass. The total length of the corridor is approximately three (3) miles.

The Madison Pike (KY 17) and I-275 interchange is located near the midpoint of the corridor. Its close proximity to several nearby collector and arterial streets that serve employment centers generates significant volumes of traffic within the corridor.

Madison Pike (KY 17), along with Taylor Mill Road (KY 16) and Turkeyfoot Road (KY 1303), which generally run parallel to it on the east and west, serve the areas within Kenton County where most new growth and development have occurred within the last three census periods from 1980 through 2000. Furthermore, population projections indicate that by the year 2020, over 6,000 additional new residential dwelling units will be constructed within this growth area south of the corridor. All three of these routes



have improvements underway as a result of new growth. Improvements for Taylor Mill Road (KY 16) are currently in the planning phases, while Turkeyfoot Road (KY 1303) and Madison Pike (KY 17) are under construction. Construction on Madison Pike (KY 17) is south of Fort Wright. Madison Pike (KY 17) improvements began at Hands Pike and will terminate at the intersection of Taylor Mill Road (KY 16) in Nicholson. This includes a new alignment and bypass to the east of the town center in the City of Independence. To date, improvements are completed from Hands Pike to Pelly Road in the City of Independence. Within the City of Fort Wright construction was completed in early 2004 on improvements required by the development of the “Shoppes of Fort Wright”. These improvements involved construction of additional lanes, including left and right turn lanes, along Madison Pike (KY 17) and along Highland Pike (KY 1072), Orphanage Road (KY 371), and improvements to the entrance/exit ramps to I-275.

### CONNECTING ROUTES

The Madison Pike (KY 17) Corridor through the City of Fort Wright, as previously described, is a major crossroads within Kenton County and Northern Kentucky. Traffic using Madison Pike is comprised of two types of users: those passing through primarily to reach other destinations and those primarily traveling to the corridor as a destination for shopping or other services. Currently, most traffic that uses the corridor is comprised of “pass through” traffic. Traffic volume provides a measure of the corridor usage. High volumes are indicative of the use of the corridor as a through access to other destinations, as well as to uses within the corridor. **Table 6-1** provides information on average daily traffic (ADT) using Madison Pike (KY 17). The area

labeled ‘South of Banklick Creek Bridge’ is the only location in the table that is not within the corridor.

**TABLE 6-1**  
**TRAFFIC COUNTS ON MADISON PIKE/ KY 17**

Count Location	ADT/Year	ADT/Year
South of Banklick Creek Bridge	28,800(2001)	31,200(2003)
Banklick Creek Bridge and Highland Avenue	36,100(2001)	34,500(2003)
Highland Pike and Howard Litzler Drive	20,300(2001)	21,200/2002(E)

SOURCE: Kentucky Transportation Cabinet

PREPARED BY: Northern Kentucky Area Planning Commission, 2004

(E) Estimated Count (All other counts are actual)

Evaluation of this information helps confirm the importance of the corridor as a major roadway. High volumes alone indicate the importance of the corridor. However, it is also clear from the increase in volume for the ‘Banklick Bridge to Highland Pike’ location, which measure traffic beginning at the southern part of the corridor in includes I-275, that traffic is coming into the corridor from the connecting roads such as Dudley Pike and Highland Pike. Most likely, however, the majority of the traffic is from I-275. The lower decrease in volume on the section from Highland Avenue to Howard Litzler Drive further helps to confirm the crossroads nature of the corridor. This decreased volume indicates that traffic has moved through the corridor toward destination points using other roadways leading to and from Madison Pike.

This trend is evident in **Table 6-2**, which displays average daily traffic counts for connecting roads. The Kentucky Transportation Cabinet (KYTC) has provided these counts. In addition to the roads listed, Dudley Road and Eaton Drive also connect to the corridor. KYTC does not provide traffic counts on these two roads.

Review of destinations beyond the boundaries of the corridor help provide better understanding of the existing nature of the corridor. While decisions on route selection are wholly individual and travel time analysis was beyond the scope of this study, identification of some of the major destinations helps provide an understanding of the traffic volumes impacting the corridor.

**Table 6-3** lists some of the major destinations that can be reached via roadways connecting to the Madison Pike (KY 17) corridor. This list portrays the fact that travel to just about any location in Kenton County is possible using roads that lead to/from the Madison Pike (KY 17) Corridor within the City of Fort Wright.

In addition to the connecting routes it is important to note that significant traffic remains on Madison Pike into Covington toward destinations to the north. While important destinations, identified in **Table 6-3**, encourage use of the connecting roadways, traffic can remain on Madison Pike to destinations such as downtown Covington and Cincinnati. In fact, the high volume that remains (see **Table 6-2**) indicates that many travelers choose this route into Covington versus a route such as Highland Avenue or Kyles Lane, which provide access to the interstate system.

**TABLE 6-2**  
**TRAFFIC COUNTS ON CONNECTING ROADS**

Road Name	KY Route Number	Count Location	ADT/Year	ADT/Year
Old Madison Pike	NA	KYTC Maintenance Garage and KY 17	1,120/1999	1,220/2003
Orphanage Road	KY 371	Valley Plaza Drive and Horsebranch Road	14,000/2003(E)	14,608/2004
Highland Pike	KY 1072	KY 17 and Werner	13,700/2001	14,000/2003(E)
Kyles Lane	KY 3187	KY 17 and Highland Pike	7,260/2000	5,973/2003
Howard Litzler Drive	KY 3070	Boron Drive and KY 17	9,420/1999	10,600/2003
I - 275 East	NA	West of KY 16 Interchange	91,100/2001	99,700/2003
I- 275 West	NA	KY 17 Interchange and Dixie Highway	86,000/1995	108,000/2003(E)

SOURCE: KYTC and OKI

Prepared By: Northern Kentucky Area Planning Commission, 2004

(E) Estimated Count (All other counts are actual)

**TABLE 6-3**  
**MAJOR DESTINATIONS VIA CONNECTING ROADS**

Road Name	Major Destinations
Old Madison Pike	Businesses along Helen Ruth Drive and Old Madison Pike, residential properties, Doe Run Lake
Orphanage Road	Fort Mitchell/Dixie Highway, businesses along Orphanage/Shoppes of Fort Wright, Horsebranch Road (St. Elizabeth Medical Center, Medical offices on Thomas More Parkway, Thomas More College, Cities of Edgewood and Crestview Hills)
Highland Pike	Kyles Lane Interchange/I-71/75 (north and south), Ft. Wright City Hall/Fire Dept., Dixie Highway
Kyles Lane	Same as Highland Pike
Howard Litzler Drive	Connecting Road between KY 17 and KY 16, Latonia Shopping Center and environs, Fidelity Investments Campus, The Cities of Covington and Taylor Mill.
I - 275 East	Campbell County (NKU, I-471), Eastern Hamilton County, Cities of Taylor Mill and Covington (via KY 16 interchange)
I- 275 West	I-71/75, Northern Kentucky/Cincinnati International Airport, Business and industry areas in Boone County, Dixie Highway



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## OTHER TRANSPORTATION MODES

Transportation in Northern Kentucky and the general Cincinnati Metropolitan Area is primarily based on the use of single occupant vehicles. Other modes of transportation are also important and, to some extent, currently use the corridor. The following discussion will briefly describe the current status of these other modes.

**Mass Transit:** The Transit Authority of Northern Kentucky (TANK) has its headquarters within the corridor just north of the intersection of Highland Pike. Bus service is provided throughout the corridor and is enhanced by the location of a park and ride lot at TANK headquarters. TANK is currently in the process of expanding the park and ride capacity at its headquarters location. Numerous bus stops are located within the corridor and generally are modified as necessary to meet demands.

**Pedestrian/Bicycle:** Currently pedestrian transportation is limited within the corridor to areas of new development where sidewalks are constructed as part of requirements for new development projects. A sidewalk connection exists along Highland Pike from residential areas at the top of the hill to Madison Pike (KY 17). The city has recently applied for grant funds from the Kentucky Transportation Cabinet through the Transportation Enhancement program for construction of a multi-use trail. The plan is to construct a trail from the Sanitation District Offices on Eaton Drive to Pioneer Park.

Currently there are no bicycle facilities within the corridor. Madison Pike (KY 17), Old Madison Pike, Highland Pike, Orphanage Road and Horsebranch Road are all identified as primary bikeways within the *Kenton County Bicycle Plan*.

## TRANSPORTATION INFRASTRUCTURE

Transportation infrastructure refers to elements of the highway that manage or control the flow of traffic and accommodate other modes of transportation within the corridor. These include: signalized and unsignalized intersections/curb cuts, left and right turn lanes, traversable and non-traversable medians, transit stops, sidewalks, and signage. Several of these have been discussed previously, such as transit stops and sidewalks.

Madison Pike (KY 17) within the corridor contains four (4) travel lanes, two (2) in each direction, with a center traversable median/left turn lane throughout the corridor. Recent improvements made to manage traffic for the *Shoppes of Fort Wright* included the addition of a fifth lane, with right and left turn lanes between the I-275 interchange and Highland Pike. Left turn movements from Madison Pike (KY 17) to connecting streets and adjoining properties are accommodated throughout the corridor by turn lanes within the traversable median.

The Madison Pike (KY 17) corridor within Fort Wright currently contains seven (7) signalized intersections. The KYTC recommended standard is three (3) signalized intersections per mile of urban roadway. There are no signalized intersections on Old Madison Pike. Within the corridor the Old Madison Pike intersection with Madison Pike (KY 17) is the only connecting roadway without a traffic control signal. There are numerous existing unsignalized curb cuts serving both developed and undeveloped land. The most problematic locations using an unsignalized curb cut

seem to be Lakeview Drive and TANK. These locations serve uses that generate several left-turn movements, which are difficult to accomplish during the peak traffic period without traffic control signals to stop traffic on Madison Pike (KY 17).

## TRANSPORTATION NOISE

Noise associated with traffic often impacts properties adjacent to major transportation networks. Because the Madison Pike (KY 17) corridor contains numerous connecting routes, including I-275, and currently handles significant traffic, this study included a “snapshot” measurement of traffic noise. The intent is to establish ambient noise levels at several locations throughout the corridor, which can be re-measured periodically as development and traffic flow increases. In the future, if more detailed noise evaluation becomes necessary, this data can provide a baseline for evaluation.

Noise measurements for this study were taken during both the morning and afternoon peak hour of travel on Madison Pike, I-275, and the connecting street system. **Table 6-4** indicates the decibel ranges measured at ten (10) locations. Generally, the measurements attained did not indicate levels high enough to be a concern that would warrant further investigation.

<b>TABLE 6-4</b> <b>NOISE MEASUREMENTS ON</b> <b>MADISON PIKE (KY 17)</b> <b>(in decibels)</b>		
<b>Location</b>	<b>AM Peak</b>	<b>PM Peak</b>
Old KY 17 at Chisel Bridge	52 - 62	58 - 62
Old KY 17 south of Helen Ruth Dr.	52 - 62	58 - 76
Old KY 17/Madison Pike	70 - 76	56 - 76
Dudley Pike/Madison Pike	70 - 76	64 - 70
Orphanage Road/Madison Pike	62 - 66	62 - 68
Highland Pike/Entrance to Shoppes of Ft. Wright	64 - 66	62 - 68
Lakeview Drive	54 - 58	54 - 60
Kyles Lane/Madison Pike	64 - 66	68 - 74
Howard Litzler/Madison Pike	66 - 80	66 - 74
Howard Litzler/ Entrance road to apartment building	56 - 58	56 - 60

SOURCE: Northern Kentucky Area Planning Commission, 2004

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## TRANSPORTATION RECOMMENDATIONS

Information above clearly verifies the importance of the Madison Pike (KY 17) corridor through the City of Fort Wright as a major component of the transportation system in Kenton County and Northern Kentucky. The successful implementation of land use and other components of this plan will rely significantly on the manner in which transportation needs within the corridor are handled. As noted in Chapter III, population is projected to increase significantly by the year 2020 within the central portion of Kenton County south of the corridor (See Table 3-2). Since Madison Pike (KY 17) provides one of the primary routes to this growth area, it is anticipated that traffic volume within the corridor will continue to increase. The utilization of this route as a crossroads will continue. Furthermore, the projected increase in retail/service, office, recreational, and industrial land development within the corridor will require this area to handle higher levels of traffic. Improvements will need to be made within the corridor to accommodate both types of traffic: pass-through traffic to other destinations and traffic seeking destinations within the corridor. To meet these identified needs, transportation recommendations for the corridor are intended to create a travel environment that enhances mobility through the corridor for all modes and that will efficiently provide access to all properties within the corridor.

### ACCESS MANAGEMENT

Access management throughout the corridor is the key to successfully addressing anticipated transportation needs. Recommended improvements have been developed in conjunction with recognized principles of access management. The following list displays the ten principals of access management as identified by the Transportation Research Board.

#### Ten Principles of Access Management

1. Provide a specialized roadway system

*Different types of roadways serve different functions. It is important to design and manage roadways according to the primary functions that they are expected to serve.*

2. Limit direct access to major roadways

*Roadways that serve higher volumes of regional through traffic need more access control to preserve their traffic function. Frequent and direct property access is more compatible with the function of collector and local roadways.*

3. Promote intersection hierarchy

*An efficient transportation network provides appropriate transitions from one classification of roadway to another.*

4. Locate signals to favor through movements

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*Long, uniform spacing of intersections and signals on major roadways enhances the ability to coordinate signals and to ensure continuous movement of traffic at the desired speed. Failure to carefully locate access connections or median openings that later become signalized, can cause substantial increases in arterial travel times. In addition, poor signal placement may lead to delays that cannot be overcome by computerized signal timing systems.*

5. Preserve the functional area of intersections and interchanges

*The functional area of an intersection or interchange is the area that is critical to its safe and efficient operation. This is the area where motorists are responding to the intersection or interchange, decelerating, and maneuvering into the appropriate lane to stop or complete a turn. Access connections too close to intersections or interchange ramps can cause serious traffic conflicts that result in crashes or congestion.*

6. Limit the number of conflict points

*Drivers make more mistakes and are more likely to have collisions when they are presented with the complex driving situations created by numerous conflict points. Conversely, simplifying the driving task contributes to improved traffic operations and fewer collisions. A less complex driving environment is accomplished by limiting the number and type of conflicts between vehicles, vehicles and pedestrians, and vehicles and bicyclists.*

7. Separate conflict points

*Drivers need sufficient time to address one set of potential conflicts before facing another. The necessary separation between conflict areas increases as travel speed increases, to provide drivers adequate perception and reaction time. Separating conflict areas helps to simplify the driving task and contributes to improved traffic operations and safety.*

8. Remove turning vehicles from through traffic lanes

*Turning lanes allow drives to decelerate gradually out of the through lane and wait in a protected area for an opportunity to complete a turn. This reduces the severity and duration of conflict between turning vehicles and through traffic and improves the safety and efficiency of roadway intersections.*

9. Use nontraversable medians to manage left-turn movements

*Medians channel turning movements on major roadways to controlled locations. Research has shown that the majority of access-related crashes involve left turns. Therefore, nontraversable medians and other techniques that minimize left turns or reduce the driver workload can be especially effective in improving roadway safety.*



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10. Provide a supporting street and circulation system.

*Well-planned communities provide a supporting network of local and collector streets to accommodate development, as well as unified property access and circulation systems. Interconnected street and circulation systems support alternative modes of transportation and provide alternative routes for drivers, pedestrians, and bicyclists. Alternatively, commercial strip development with separate driveways for each business forces even short trips onto arterial roadways, thereby reducing safety and impeding mobility.*

To the extent possible, these principals should be used as a basis for roadway recommendations and multi-modal accessibility recommendations within the corridor. The intent is to maximize capacity of the existing roadway for the benefit of all users, including adjoining property owners reliant on access for business success and development. Maximizing capacity entails maintenance of traffic flow even while traffic volumes increase, a situation anticipated to occur within the corridor. The challenge for the development of the corridor is to accomplish this without further widening the existing roadway. The current roadway configuration may be difficult to widen because of physical and structural constraints (e.g., Banklick Creek, expense of modifying the I-275 bridge, etc.). Furthermore, significant widening of the existing roadway may negatively impact other existing features of the corridor that this plan recommends to be enhanced as a benefit to the city, such as Banklick Creek.

The following recommendations have been formed to enhance capacity while at the same time create a multi-modal system to support anticipated land development. It is important to note that these recommendations are intended to function as an integrated system. The effectiveness of implementation of any single recommendation will be minimized without implementations of others. **Map 6** identifies the recommendations.

#### HIGHLAND AVENUE (KY 1072) EXTENSION

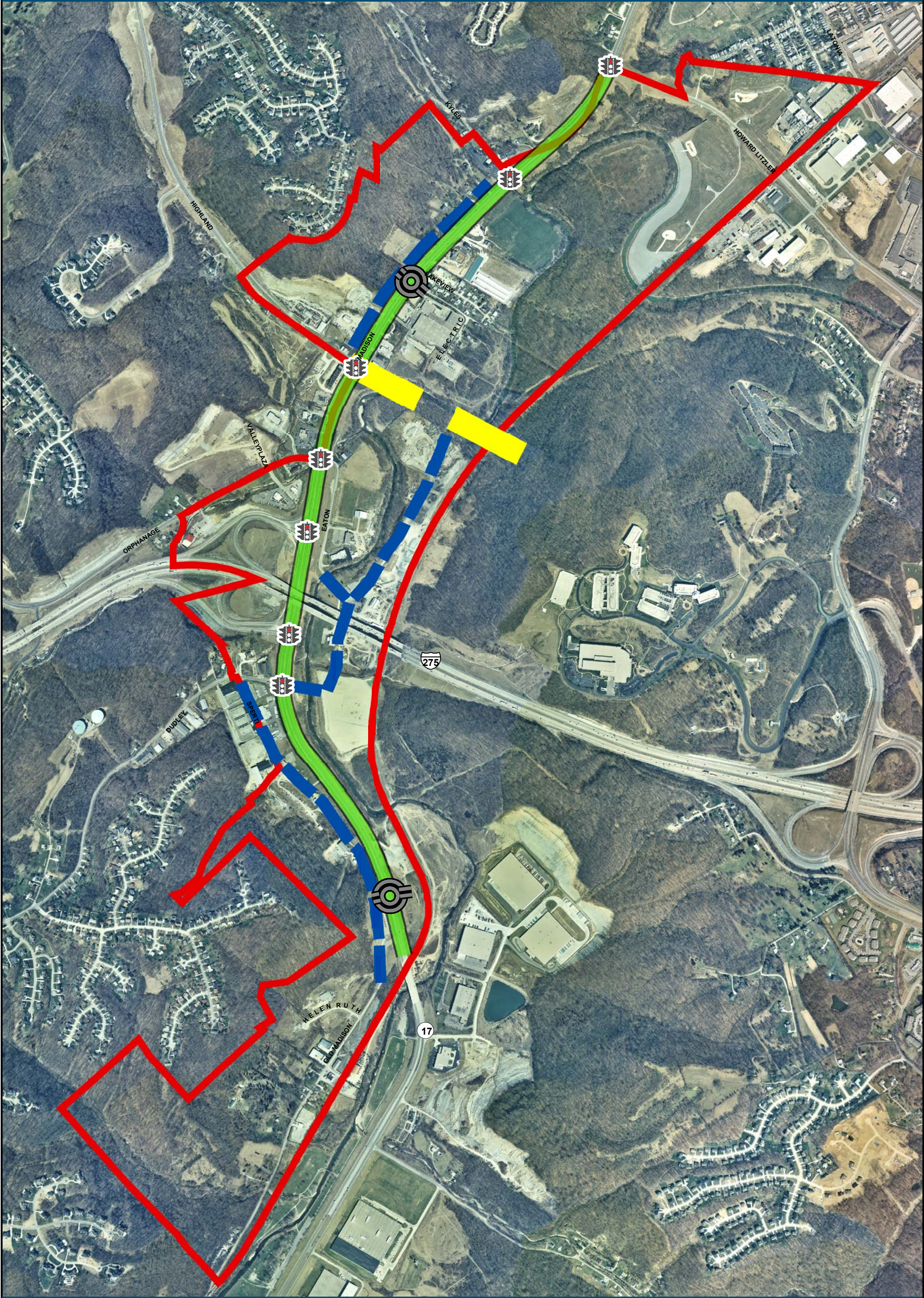
The extension of Highland Avenue, which is currently in the Ohio-Kentucky-Indiana Regional Council of Government's *2030 Regional Transportation Plan* and the Kentucky Transportation Cabinet's *Six-Year Plan*, is considered one of the key improvements for the corridor. This extension, which will provide access to Fidelity Investments and to Taylor Mill Road (KY 16), will also provide access and accommodate the construction of a system of interconnecting access roads to serve land on the eastern side of Banklick Creek (See **Map 6**).

#### NON-TRAVERSABLE MEDIAN

It is recommended that a non-traversable (also known as a non-mountable median) be constructed through the entire extent of Madison Pike (KY 17) within the corridor. This median would extend from the existing median on the bridge over Banklick Creek northward to Howard Litzler Drive. The purpose of this median is to eliminate left-turn movements onto the roadway, except at designated locations. It is anticipated that this access control measure alone will significantly increase capacity by minimizing left-turn conflict points. Another feature of this median, previously discussed in Chapter 4, is the aesthetic enhancement for the corridor derived from landscaping.



MADISON PIKE CORRIDOR LAND USE AND ECONOMIC DEVELOPMENT PLAN



MAP  
6  
Transportation

Legend

- Roundabout
- Existing Stop Light
- Cross Access Connections/Frontage Roads
- Proposed Highland Extension
- Non-Traversable Median





**Three-Quarter Intersections:** In conjunction with the non-traversable median there may be potential for the use of a limited number of three-quarter intersections. Three-quarter intersections would have one left-turn movement from Madison along with right-in/right-out. Left turn movements exiting a site along Madison would be prohibited at these locations. These intersections should work well in locations where access to a signalized intersection or to another intersection allowing the full range of left turn movements is available via cross access drives or frontage roads.

## MINIMIZING AND ELIMINATING TRAFFIC CONTROL SIGNALS

Seven (7) traffic control signals currently exist within the corridor. This amount is approximately equal to the KYTC recommended number of three (3) per mile for this 2.4 mile section of Madison Pike (KY 17). Traffic control signals add to traffic congestion by increasing delays in traffic movement. Delays typically result from providing all movements sufficient time. This creates longer waiting periods as traffic flow increases because signal timing is set to allow sufficient numbers of vehicles to make their movements through the intersection. Furthermore, traffic signals create numerous potential for traffic accidents.

**Figure 6-1** (from roundabouts.net) shows that thirty-two (32) vehicle-to-vehicle conflict points exist at four-way intersections.

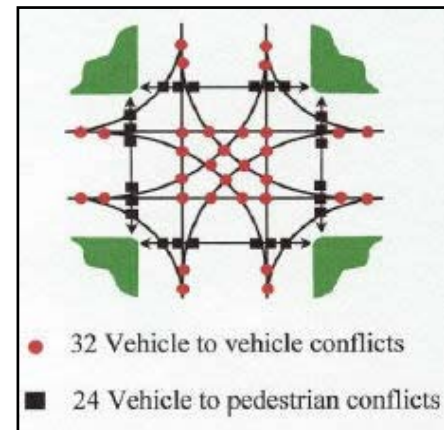


Figure 6-1: Traffic Control Signal Conflicts

It is recommended that no additional “permanent” traffic control signals be located within the corridor. During the development of the corridor, while other transportation recommendations are being implemented, there may be a need for “temporary” traffic control signals to accommodate left-turn movements. Temporary signalization accommodates land development while other access control measures, to be discussed in following sections, are being implemented. It will be important that the city, in conjunction with KYTC District 6, clearly identifies that such signalization is temporary. It is further recommended that initiatives be

***It is recommended that no additional “permanent” traffic signals be located within the corridor.***

undertaken by the city, in conjunction with KYTC District 6 that may accommodate the removal of existing traffic control signals. As the corridor develops and traffic control and access measures are implemented, conditions may arise allowing existing signals to be removed. One location that looks promising in this regard is Kyles Lane, where traffic

volume has decreased since the reconstruction of Highland Pike.

## Cross Access Drives/Frontage Roads

Interconnectivity of land uses that minimize the need to traverse between land uses using the arterial street system is a key component of these access control recommendations. **Map 6** identifies general locations where these facilities are to be located. It is important to note that this plan does not stipulate whether interconnectivity is accomplished via cross-access drives or

frontage roads. That decision should be based upon site design parameters during the land development process. The important element of this recommendation is that all property developed within the corridor be connected to adjoining properties within the corridor. Cross

***Cross access/frontage  
interconnectivity must also  
accommodate pedestrian  
transportation ....***

access/frontage interconnectivity must also accommodate pedestrian transportation, either along the roadway or via separate pedestrian/multi-use paths. The following is a description of the recommended cross access/frontage roads:

Highland Pike to Kyles Lane – This connection, along the west side of Madison Pike (KY 17) extending from Highland Pike to Kyles Lane, has been in city plans for several years. A portion of this connection, including pedestrian access, has been started in conjunction with the development of the United Dairy Farmers store at the intersection of Highland Pike and Madison Pike (KY 17).

East Side of Madison Pike from Proposed Highland Extension to Lakeview Drive – Preliminary planning for the proposed extension of Highland Pike indicates that the existing frontage road now serving the Speedway Gas Station and Arby's Restaurant will be disconnected from the signalized intersection. Due to the volume of traffic generated by these uses and a stated need by TANK that they have a left turn at a signalized intersection, it may be necessary to provide an extension of this frontage road northward. In order to get adequate separation of any new intersection from the existing Highland Pike intersection, the location of a new signalized intersection would likely have to be in the vicinity of Lakeview Drive and the main entrance to TANK. At the time of this study, TANK is collaborating with KYTC for an exit only access onto the proposed Highland Avenue extension. This would provide them with left turn movements onto Madison Pike at the existing signalized intersection at Highland Pike.

Dudley Road to Highland Pike – This connection along the east side of Madison Pike (KY 17) extends from the existing bridge across Banklick Creek at Dudley Road to an existing private bridge at the southern end of Eaton Drive and the proposed Highland Pike Extension. Portions of this route currently exist as private roads providing access to local businesses. These existing private roads would need to be upgraded to public standards. Connection to the proposed Highland Pike extension is a key component to maximize cross access for properties along the east side of Banklick Creek. Access at this location allows the use of a third existing signalized intersection, which may be important if significant traffic is generated by future uses in this area.

Dudley Road/Sperti Drive to Old Madison Pike – This connection along the west side of Madison Pike (KY 17) involves several potential alternatives. The manner in which these connections are made, including improved intersections on Madison Pike (KY 17), are important to how the southern portion of the corridor from Dudley Road south to Old Madison Pike will function. The challenge along this section of the corridor will be to properly provide access to all properties, minimize the number of new signalized intersections, and manage anticipated increases in pass-through traffic on Madison Pike (KY 17). Consideration of access along the west side of Madison Pike (KY 17) must also include access to property along the east side, identified as Area 19 on Map 4A. This is



important because any new intersection should be shared by properties on both sides of the corridor in order to minimize intersections. Existing topographic conditions will also play a role the accommodation of access. The location of Banklick Creek and the hill on the north side of the intersection of Old Madison Pike will be factors in access development.

To best describe potential alternatives for this section of the corridor, it will be necessary to refer to Map 4A and the identified sub-areas for the corridor. The sub-areas involved with these recommendations are: Area 16, currently occupied by the Frito-Lay Distribution Center; Area 17, currently occupied by Michel's Construction Company; Area 18, currently occupied by Highland Motors; and Area 19, on the east side of Madison Pike (KY 17), which is currently vacant. The following is a description of the various components and alternatives for this section of the corridor:

#### Dudley Road/Sperti Drive

Utilizing Sperti Drive, which is a public street within the City of Edgewood, as access for Areas 16 and 17 eliminates the need for curb cuts/access directly on to Madison Pike (KY 17) from Area 16. Furthermore, left-turn movements could be accommodated at an existing signalized intersection (Dudley Road). From the terminus of Sperti Drive, access across Area 17 can be provided internally to an access location to be shared with Areas 18. The location of this intersection within Area 18 will accommodate the use of this intersection by Area 19, which is directly across Madison Pike. Conversely, the location within Area 17 will likely eliminate its use by Area 19 due to the location of Banklick Creek. It would be possible with access via Sperti Drive that neither Area 17 nor Area 18 would need left-turn access out onto Madison Pike. This could be managed by the signalized intersection at Dudley Pike.

#### Old Madison Pike

During the course of this study, several options have been investigated regarding the intersection of Old Madison Pike and Madison Pike. An improved intersection, including a traffic control signal, at Old Madison Pike is one alternative. However, in conjunction with an intersection described above to serve Areas 17 and 18, this would be the second additional traffic signal south of the existing signal at Dudley Pike. One alternative to eliminate a signal at this location is to realign the intersection of Old Madison Pike northward to connect with the previously described intersection serving Areas 17 and 18. This alternative entails major grading of the hill north of the Old Madison Pike intersection. A significant portion of this hill is already within the right-of-way of Madison Pike (KY 17). This is a benefit for this option because there may be no need to purchase additional rights-of-way. Construction of this option also enables a continuous cross access drive/frontage road to be connected south from Dudley Pike to Old Madison Pike. Another alternative, discussed in the following section, is the construction of a modern roundabout instead of a signalized intersection

## ROUNDAOBOUTS

Modern roundabouts are a form of intersection control, commonly used throughout the world. Until fairly recently, transportation professionals in the United States have been hesitant to

recommend these for a variety of reasons. One is the experience in this country with “traffic circles,” which are entirely different from modern roundabouts, and which have a history of confusion. Modern roundabouts differ from traffic circles in many respects. Roundabouts require a yield prior to entering, while traffic circles give priority to entering high-speed traffic, not exiting traffic. Also, modern design slows vehicular speed within the roundabout and guides them through to a desired exit points. More recent roundabout experience in the United States is yielding positive results. The Kentucky Transportation Cabinet is beginning to look favorably on roundabout use in Kentucky. Conversations during the preparation of this plan with KYTC District 6 indicate that the use of roundabouts on Madison Pike (KY 17) has a high potential for success. Therefore, KYTC District 6 is very supportive of recommendations involving roundabouts.

As stated above, transportation access and maintaining traffic capacity along Madison Pike are vital to development of the corridor. One dynamic of access management this plan stresses is the minimization and/or elimination of signalized intersections. Alternative options described above to provide access along Madison Pike may need the addition of up to three (3) new signalized

*This plan is recommending the use of modern roundabouts because they have several characteristics that will be advantageous to the corridor....*

intersections at Old Madison Pike, between Old Madison Pike and Dudley Pike, and in the vicinity of Lakeview Drive. While cross-access drives/frontage road systems also described above will provide effective access management, the need to add signalized intersections may diminish positive gains of these connections.

Furthermore, the recommendation to use a non-

traversable median throughout the corridor means that several properties will have access to signalized intersections for exiting left-turn movements only via cross-access drives/frontage roads across adjoining properties. To resolve these access issues, this plan is recommending the use of two (2) **modern roundabouts** within the corridor. One is proposed to be located north of Highland Pike to serve TANK, Lakeview Drive and other properties in the vicinity. The second roundabout is proposed to be located south of Dudley Pike.

Northern Roundabout: The location of this proposed roundabout would be at the existing main entrance to TANK. At this location, the features of the roundabout would provide left-turn movements necessary for TANK. It is hoped that this roundabout will replace the need for access directly on to the proposed Highland Pike Extension for TANK. Redevelopment of Area 10 would entail access be designed to utilize this roundabout for all exiting left-turn movements.

Southern Roundabout: The exact location of this roundabout is flexible, as it depends on options available after the potential relocation of Old Madison Pike, as previously discussed. In the event that topographic conditions associated with the hillside adjacent to the existing intersection preclude relocation northward, the southern roundabout would have to be located at the existing intersection. If the Old Madison Pike intersection can be relocated, the roundabout can be located further northward. A more northward location that can more directly serve Areas 17, 18 and 19 (See Map 4A) is more desirable because its closer proximity would enhance the development potential of those sites.

This plan is recommending the use of modern roundabouts because they have several characteristics that will be advantageous to the corridor and will address issues previously identified. The following is a brief discussion of some characteristics that make modern roundabouts an appropriate feature for the corridor.

**Continuous traffic flow:** Traffic flow through roundabouts is controlled by yields versus stoplights/signs. Geometric design of the roundabout typically reduces speed to approximately 25 to 30 miles per hour. This provides for large numbers of vehicles to pass through the device, with equal priority to all vehicles from all directions. Experience from other cities that have used roundabouts indicates that vehicles require a significantly reduced waiting time to pass through a roundabout than through a signalized intersection. This is because signalized intersections require that opposing turn movements and directional flow be stopped to allow access to the intersection. Continuous flow of traffic, albeit at slower speeds, increases the capacity of the intersection and the roadway.

**Minimization of traffic conflict points:** Figure 6-1 shows traffic conflict points at signalized intersections. There are thirty-two (32) conflict points at a signalized intersection. As conflict points increase, so does the likelihood of traffic accidents and subsequent traffic delays. Conversely, modern roundabouts have only eight (8) conflict points (See Figure 6-2 from roundabouts.net). The minimized number of conflict points results in fewer accidents and less intersection and roadway congestion.

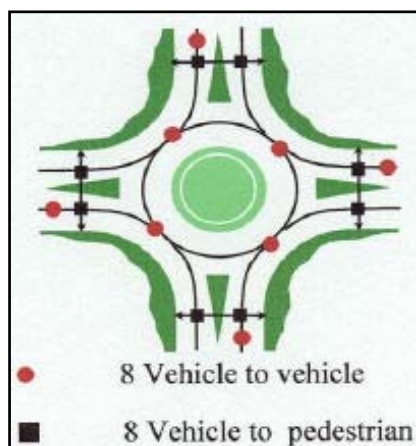


Figure 6-2: Modern Roundabout Conflict Points

**Accommodation of Left Turns/Reduction of Signalized**

**Intersections:** Modern roundabouts provide a unique way of accommodating left-turn movements in association curb-cuts that do not allow left-turns, which will be the case in the Madison Pike corridor because of the non-traversable median. Vehicles simply turn right out of the curb-cut and proceed to the roundabout where they make a complete U-turn to travel in the opposite direction. This provides the advantage in the corridor for many properties, even those without direct access to one of the legs of the roundabout, will have effective left turn availability. This will minimize negativity directed toward the non-traversable median and reduction of signalized intersections.

**Benefit to pedestrian traffic:** As previously noted, modern roundabouts are designed so traffic speed is reduced as vehicles negotiate the circle. This traffic calming feature benefits pedestrian crossing at the legs of the roundabout because traffic is slow and steady, allowing gaps that are easy to cross. It must be noted that modern roundabouts utilize non-traversable traffic islands or non-traversable medians to guide traffic into and out of the circle. These medians can easily double as pedestrian refuge islands so that only two lanes of traffic are crossed at a time.

**Unique identifying feature for corridor:** Modern roundabouts at each end of the corridor will provide a unique identification feature. Typically interior circles of roundabouts are landscaped.

In conjunction with the landscaped non-traversable median, they will provide a sense of place for travelers to the area. Travelers will know that this is a special and unique place.

**Learning curve for users:** The most commonly stated concern regarding the use of roundabouts appears to be the ability or time of motorists to learn how to use them. Given the limited experience at this time with roundabouts in the United States, it appears that motorists master the nuances of using them rather quickly. However, it is recommended that prior to the completion of a roundabout that a public educational outreach is provided. This could include publicity in local newspapers, city newsletters, cable TV, or even the publication of a brochure.

## TANK TRANSIT HUB

This plan recommends the expansion of the existing TANK facility into a regional transit hub. The location of TANK in this burgeoning corridor, along with the corridor's central location and access to the major highway transportation network make expansion of the existing facility a logical measure. Furthermore, the need to develop transit as a more utilized mode of transportation is an important element of the overall transportation plan for Kenton County. A transit hub at this location, near where this plan is recommended concentrations commercial, recreation and other uses be should help encourage use of transit as a transportation alternative. Hopefully, if more activities are provided in the area of the transit hub, people will be encouraged to choose this mode of transportation. See the discussion in Chapter 4 (Area 11) for more details on transit-oriented development within the vicinity of TANK.

## PEDESTRIAN AND BICYCLE ACCESSIBILITY

Pedestrian and bicycle accessibility is a recommended component of connectivity throughout the corridor. The proposed multi-use pathway along the Banklick Creek is the major component of this effort. However, it is also important that pedestrian and bicyclists have the ability to navigate between land uses within the corridor. Pedestrian accessibility helps create an atmosphere within the corridor that enhances the corridor as a destination and a place to spend time, not merely a "pass-through" highway oriented area. The most challenging element of providing pedestrian access is the design of pedestrian access across Madison Pike. As previously mentioned, the recommended roundabouts and non-traversable median will accommodate good design of this system because they provide locations for refuge islands.

## I-275 INTERCHANGE

The location within the Madison Pike (KY 17) corridor of an I-275 interchange is a benefit to the future use of land within the area. Recent improvements have been made to all the intersections providing access to I-275 as a result of the development of the *Shoppes of Fort Wright*. However, the concentration of signalized intersections within the vicinity of I-275 extending from Dudley Pike to Orphanage Road may pose future traffic congestion problems. It is recommended that the city maintain dialogue with and support from KYTC in regards to making future operational improvements and modifications to these intersections that would further enhance the capacity of Madison Pike (KY 17).



# CHAPTER VII

## IMPLEMENTATION

### GENERAL

This chapter summarizes and provides information on implementation tools and strategies for the Madison Pike (KY 17) corridor. The recommendations of the plan, based on **Map 4E**, are condensed within various tables. Following the tables are sections that outline other potential funding sources for implementing specific recommendations in the plan.

### SUMMARY OF LAND USE AND ZONING RECOMMENDATIONS

Potential zoning designations, including the priority and timing of these changes appropriate for the implementation of recommendations, have been identified. The potential zoning designations that are identified within the corridor include the zones identified in **Table 7-1**. These zones are currently contained within the City of Fort Wright Zoning Ordinance. Modifications to these zones may be necessary to further implement the recommendations of this plan (i.e., specific permitted uses and development plan review process). In conjunction with these zones, one of the primary recommendations of this plan is the creation and use of Form District Zoning (See Form District Standards discussion in a following section). Form Districts are proposed as overlay zones, which will incorporate uses from these underlying zones with design elements and special ancillary uses to create the desired physical appearance and function described in **Table 7-2**. **Table 7-1** outlines these potential underlying zones, the purposes of these zones, and the current locations within the city. The timing and priorities for potential zoning amendments fall within three (3) timeframes: immediate, short-term, and long-term. These timeframes will be used in **Table 7-2** following the discussion of potential zoning designations. They are defined below:

**Immediate:** Amendments should be implemented as soon as possible to minimize or eliminate the possibility of development that is not in conformance with the recommended land uses.

**Short-term:** Amendments should occur more slowly because of specific conditions within the area that may change more slowly over time. An example of this is the Lakeview area that is currently occupied by several different types of land uses that would be non-conforming if the zoning were changed immediately. Areas like this are best identified on the zoning map with the (P) Phased zoning overlay; therefore, at the proper time of development, the appropriate land uses and corresponding zones will be implemented. Phased zoning is used within the City of Fort Wright's Zoning Ordinance to identify areas where existing land uses are still integral to the area but where future transition of the land use is anticipated into the land use identified on the *2001 Area-Wide Comprehensive Plan*. The intent of this regulation is to encourage redevelopment of a specified area for the use and/or density designated within the comprehensive plan when the necessary conditions for such development are realized.

**Long-term:** These areas are not likely to redevelop in the near future. Amendments are not appropriate immediately because of existing businesses, or because market conditions identify that more than one zone may be appropriate for the area. The use of phased zoning may also be appropriate in some these areas.

**PROPOSED ZONES**  
**TABLE 7-1**

Zone	Purpose	Current Location
CC (Community Commercial)	To allow businesses, within a planned and architecturally unified development, which provide convenience goods and services to the work population and the residences of adjacent neighborhoods; To allow development at a small scale with a town-like setting; And to supplement or serve adjacent areas without having an adverse impact on adjacent areas, but always with the intention of furthering the public health, safety, and general welfare.	Corner of Highland Pike and Madison Pike (KY 17) (UDF and Ratermann property)
HC (Highway Commercial)	To provide for a zoning district that would allow the development of individual retail and service businesses that are primarily oriented towards serving the traveling/transient public; or that require immediate access to the regional transportation system.	None
OP (Office Park)	To allow professional, research, and similar uses within a planned and architecturally unified development; To allow development in a low intensity/low rise setting; And to supplement or serve adjacent areas without having an adverse impact on adjacent areas, but always with the intention of furthering the public health, safety, and general welfare.	West side of Madison Pike, just south of Walt's Hitching Post (Kyles Lane). Includes the Ashley property.
CO (Conservation)	To provide for a zoning district that would permit appropriate open space and recreational activities within specialized areas having unique natural characteristics; And to supplement specialized areas with outdoor amenities or gateway areas.	None
Residential	All existing residential zones, as appropriate to ensure compatibility with adjoining and nearby land uses and the goals of this plan.	

**Table 7-2** summarizes the recommended land use and zoning district designations, along with transportation, greenway, form and function, and timing recommendations. The Recommended Land Use column references the previously discussed area map (**Map 4E**, in Chapter IV) and is a general description of the areas depicted on that map. The Greenway column identifies whether or not a property, in some part, is within the areas identified on the Greenway Map. This includes areas within the riparian buffer, the recreational corridor, or areas of hillside protection. The Transportation column summarizes information from Chapter VI regarding access and roadway improvements. The Form and Function discussed in the table identifies the recommended and optimum operations that are expected from the implementation of this

chapter. The Implementation Strategy, as previously discussed, is also included for the specific areas in this table. The zones outlined within the Implementation Strategy in **Table 5-4** are representative of that which would best implement the recommended land use. However, any of the zones listed within Table 5-3 may be appropriate for implementation of this plan.

**SUMMARY OF RECOMMENDATIONS**  
**TABLE 7-2**

					<b>Implementation Strategy</b>	
<b>Area Number</b>	<b>Recommended Land Use</b>	<b>Greenway</b>	<b>Transportation</b>	<b>Form and Function</b>	<b>Timing and Priority</b>	<b>Zoning</b>
1	Industrial	N/A	N/A	Potential brownfield site may have remediation issues for other type uses.	Long Term	No Change
2	Remain as Residential. There may be some potential in the long term for this site to develop with industrial uses.	N/A	N/A	Any additional development or change in land use should be compatible with other existing surrounding development.	Long Term	No Change
3	Industrial	Riparian Buffers and Recreational Corridor	N/A	Potential brownfield site may have remediation issues for other type uses.	Long Term	No Change
4	Public and/or private recreation and open space uses. Floodplain areas are most appropriate for recreational uses, such as open space and public or private recreation, including trails, golf courses, playgrounds, ball fields, or soccer fields. Potential exist for this area to develop in more intensive land uses such as industrial or residential.	Riparian Buffers and Recreational Corridor	Access to portions of this site on the east side of Banklick Creek may be limited to pedestrian bridges/multi-use trails. If area is developed into other uses, access to the major street system will be limited because of intersection spacing and turn movements. An option for access may be to coordinate the development and access of this area with Area 10 and or 11.	These areas should maximize the potential for connections to and from surrounding recreational areas, should stand out as an amenity, and be prominent aesthetic markers for the corridor. These areas should provide protection and enhancement of the natural features of the area. This area will set off the distinct character to be continued throughout the corridor. Uses should compliment the Doe Run Master Plan and Banklick Creek Watershed.	Long Term	No Change
5	This is a major identifiable entry point for the corridor. Should be developed with a gateway clearly identified with signs and landscaping, and especially designed in conjunction with Areas 4 and 6.	Riparian Buffers and Recreational Corridor	This site is too close to the intersection of Madison Pike and Howard Litzler Drive to have direct access. Access, if provided, should be from Area 6.		Immediate	CO

					Implementation Strategy	
Area Number	Recommended Land Use	Greenway	Transportation	Form and Function	Timing and Priority	Zoning
6	Small-scale retail, if feasible, or designed in conjunction with activities within Area 4 and 5, for example, small-scale public parking.	Riparian Buffers and Recreational Corridor	Due to its proximity to the intersection of Madison Pike and Howard Litzler Drive access is to be provided via right-in and right-out turns.	The location of this site creates a challenge for access. The size of the site, condition of the fill and limits of the creek limit the market.	Immediate	CC
7	Retail, office, and residential mixed use to be designed in coordination with Areas 8 and 9. This site is a prime retail node location and is to be comprised primarily of small retail and service neighborhood type establishments. This is the best location for additional specialty shops.	Hillside Protection	Access to areas 7, 8, and 9 is to be coordinated to utilize the existing intersection of Highland Pike and Valley Plaza Drive and the planned cross-access/frontage road along Madison Pike. Full access, including left-hand turns, is to be provided at an intersection/roundabout located in the vicinity of Lakeview Drive and the entrance to TANK.	These areas are recommended to be the "Town Center" for the corridor. Areas 7, 8 and 9 have potential to be the center of mixed-use lifestyle activity. Basic elements of that include: coordinated access, connectivity, pedestrian oriented environments, shared parking, mixed uses, open space and outdoor amenities that compliment development, more traditional type buildings that are 2-4 stories in height with interesting building facades and that are set closer to the roadway, identifiable landscaping, signage and lighting that are similar in character.	Immediate	CC
8	Part of the "Town Center" in coordination with Areas 7 and 9. This area is recommended to incorporate a mix of uses including retail, office, and residential development. However, this area is prime for the location of higher density residential, possibly senior housing, to be designed in conjunction with adjacent areas to provide and permit retail services.	Hillside Protection	Additional right-in and right-out access may be utilized within this area provided adequate spacing is available between intersections. Pedestrian access throughout this area and to adjoining areas across Highland Pike and Madison Pike are important features of the transportation network.		Immediate	CC
9	This area is should be designed in conjunction with Area 8; to include small-scale retail, office, and residential use mixes. Given the attractiveness of Area 7 for retail development, this area will be more appealing for development if it is coordinated with both Area 7 and Area 8.	Hillside Protection			Immediate	CC



					Implementation Strategy	
Area Number	Recommended Land Use	Greenway	Transportation	Form and Function	Timing and Priority	Zoning
10	This corridor study does not recommend a change for this area at this time but rather recommends that the entire area be identified to be phased and marketed as one site due to its high redevelopment potential. This site has a high potential for redevelopment for larger retail and service type facilities such as a sports complex or a movie theater, with orientation to open space uses identified for Area 4. Topography, access to fiber optic and relatively large size of the site if properties are consolidated, also make this a potential site for high tech business and industrial office, with ancillary retail and service uses.	Riparian Buffers and Recreational Corridor	Full-access, including both left and right turns is to be provided by the signalized intersection/roundabout at Lakeview Drive and the entrance to TANK. Within this area there should be potential for an additional right-in and right-out access.	This area is recommended to function in relation to the existing transit center and to benefit from the environmental characteristics. This area is prime for a transit oriented type development that will connect with and compliment the town center. Larger scale development with coordinated access oriented toward and connected to the Banklick Creek. Redevelopment should only occur in this area	Long term	CC, OP
11	Transit Authority of Northern Kentucky (TANK) facility should be broadened as a regional hub for transit service. Ancillary to this, other compatible and supporting retail and office uses are recommended.	Riparian Buffers and Recreational Corridor	TANK will have access via a full intersection/roundabout at their entrance road. In addition, there is potential for right-in and right-out movements to better accommodate the use of this area.	with a well thought out and coordinated plan due to the number of properties involved.	Immediate	CC, OP
12	This area will likely be redeveloped more slowly than other nearby locations due to the nature of the business currently occupying the site. This site is a potential brownfield and will be a challenge to access for a major development. However, at such time that this property is suitable for redevelopment the northern end of the area is recommended to be office development, while the southern area should remain industrial type uses.	Riparian Buffers and Recreational Corridor	An interior access road connecting to the proposed extension of Highland Pike and to existing private roads is the key component for the development.	This area has the potential to be redeveloped in the future with office or business industrial type uses. These uses should not be “heavy” industrial type uses. The character of these uses should more resemble campus type development that will be able to accomplish similar aesthetic characteristics that are compatible with other recommended redevelopment in the area.	Long term	OP, HC

					Implementation Strategy	
Area Number	Recommended Land Use	Greenway	Transportation	Form and Function	Timing and Priority	Zoning
13	This site is prime for retail uses, primarily restaurants, with some potential for “store front” office style development.	N/A	N/A	This area is currently mostly developed. Uses in this area affect the overall traffic flow and customer attraction to the corridor and should be incorporated and considered as part of other development.	Long term	HC
14	It is anticipated that retail uses, compatible with the existing car dealership, will be most appropriate for this site.	Riparian Buffers and Recreational Corridor	Existing access via the bridge over Banklick Creek and future extension of public access to the private bridge at the terminus of Eaton Drive will provide access to properties within this area.	This area is physically located such that access can only be reached through the existing business. Therefore it is logical that the business in this area be complimentary to adjacent businesses.	Immediate	HC
15	No change is anticipated in the existing land use.	N/A	Access per Dudley Road	N/A		Edgewood
16	This area should be designed and developed in conjunction with Areas 17 and 18 for retail and service uses.	Hillside Protection	Access is to be provided by cross access/frontage roads, which should be connected to existing Sperti Drive. Using Sperti Drive will provide access to the signalized intersection at Dudley Pike and Madison Pike. Full access, via right and left turns, will be provided by a shared intersection/roundabout.	They key to the development of these areas depends on the access provided. The extension of Sperti Drive via cross access drives or similar designs will assist to create a campus style retail area. The location of one traffic signal or access to the proposed roundabout will determine the level of use that these areas will encounter. The coordination of parking, access, as well as landscaping, signage and lighting will also be essential.		Edgewood
17	This area has high potential for mixed retail, service and office uses, fairly large in scale, to be designed in coordination with Areas 16 and 18.	Hillside Protection	It is also desirable for this intersection/roundabout to be located for use by Area 19. In conjunction with a single full intersection/roundabout serving these areas, it should be feasible to allow a 3/4 intersection, restricting outbound traffic to right-in and right-out only.		Immediate	HC, OP
18	This area has the potential to remain as is, although opportunity exists for the area to redevelop as retail and service uses in coordination with Area 17.	Hillside Protection			Short term	HC

					Implementation Strategy	
Area Number	Recommended Land Use	Greenway	Transportation	Form and Function	Timing and Priority	Zoning
19	This area has the potential for pass through type retail and service.	Riparian Buffers and Recreational Corridor	Access should be provided by a shared intersection/roundabout with Areas 16, 17, and 18 or Old Madison Pike. In the event that access is not shared, access to this site should be restricted to right-in and right-out only. There would be a potential for a 3/4 intersection that restricted outbound traffic to right-out only. Pedestrian access across this area is a key component of the Greenway Plan and its potential to connect to Pioneer Park and Doe Run Lake.	Given the location of this site, uses that may be oriented to those traveling from the southern portion of the County to I-275 should be accommodated. Access to this site is key for development success.	Short term	HC
20	This area is prime to serve as the southern entry point for the corridor. Using this area as a gateway, clearly identified with signs and landscaping.	N/A	No access is to be provided except for maintenance of right-of-way and proposed gateway feature.	This area should be another prominent aesthetic marker for the corridor. Signage and landscaping will set off a distinct character to be continued throughout the corridor.	Short term	CO
21	This area is recommended to remain identified for office/industrial uses.	Hillside Protection	N/A	Any additional development or change in land use should be sensitive to the potential effects on adjacent residential uses. Development in this area needs to be well buffered from view both from adjacent properties and along Old Madison Pike.	Short term	OP
22	This area should be developed with residential uses, low to medium in density.	Hillside Protection	N/A	The design of this area should compliment the existing topographic conditions, through clustering techniques or other mechanisms.	Immediate	Residential
23	The Corp of Engineer's Study for this area may include recommendations for buy-outs, clearing, and restoration of the area, which may provide for a possible trail connection from Pioneer Park. This area is also a potential location for public service uses, such as a police/fire substation. Due to the ongoing study, land use changes within this area may occur slowly over time.	N/A	N/A	This area is seen to be a key connection for the parks and recreation system in the area. Its location relative to existing parks, residential development and the anticipated improvements to Doe Run Park make this area important for connectivity.	Long term	CO

## GREENWAYS IMPLEMENTATION

As previously identified in **Table 7-2**, certain areas should be required to have riparian and hillside protection, as well as to implement portions of the recreational corridor. The following section outlines the implementation of those tools, the basis for implementation, and how they may be addressed within the zoning ordinance.

### RIPARIAN BUFFERS AND RECREATION CORRIDORS

#### Riparian Buffers

Riparian buffers assist in protecting water quality and water quantity for creeks and rivers. There are two typical methods to determine the appropriate buffer widths for riparian areas: uniform and variable widths. The Center for Watershed Protection suggests that a three-zone buffer system may be the best option for providing development flexibility (See **Figure 7-1**)<sup>1</sup>. Based on the majority of scientific findings, the minimum sizes of appropriate buffer strips vary based on the desired benefits, as shown below (measurements are approximate):<sup>2</sup>

80 feet	Nutrient and pollutant removal
100 feet	Temperature and microclimate regulation and sediment removal
160 feet	Loose material input (as rock fragments or organic particles that results directly from disintegration) and bank stabilization
330 feet	Wildlife habitat, water quality protection

The recommended Greenway Map (**Map 4F**, Chapter IV) illustrates a riparian buffer along the main stem of Banklick Creek through the corridor study area. Based on presented research, this plan recommends the use of a combination of both variable and uniform widths for riparian buffering. This recommended buffer is reflective of and interpreted from the Federal Insurance Administration's Flood Insurance Study floodway boundaries. These boundary lines are currently shown on the City of Fort Wright Zoning Map. Section 9.25 of the city's zoning ordinance identifies the designated floodway widths measured in feet. The width of riparian buffers proposed in this plan should be identical to the identified floodway boundary widths, and in no case smaller than fifty (50) feet. As these widths are measured intermittently and vary in size, any proposed construction on a parcel in the corridor that is located within the identified floodway (even in part) should be required to demonstrate that no disturbance will occur within the designated boundaries.

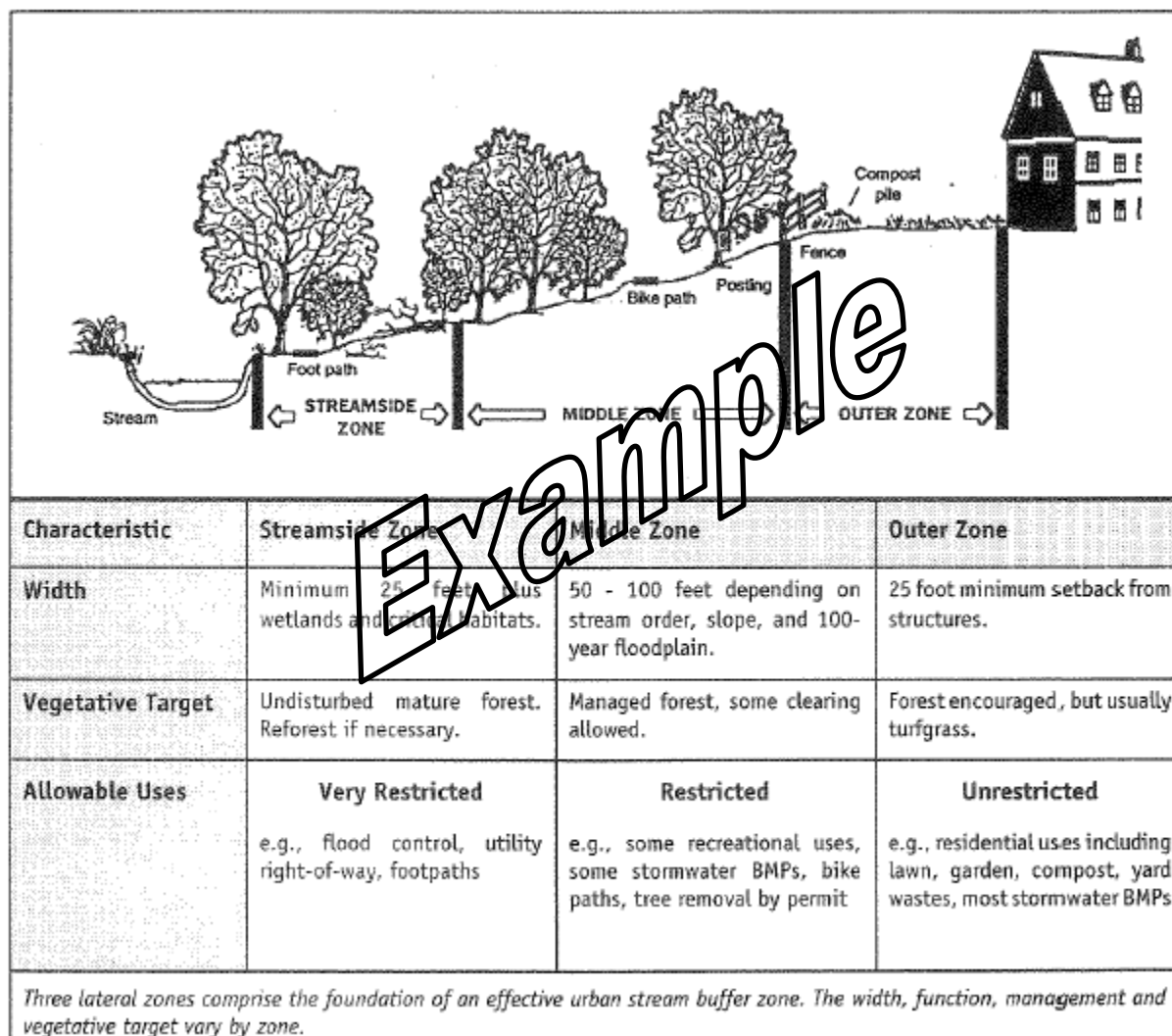
<sup>1</sup> Center for Watershed Protection. 1998. *Better Site Design: A Handbook for Changing Development Rules in Your Community*. Self-published.

<sup>2</sup>The Environmental Law Institute. 2003. *Conservation Thresholds for Land use Planners*. Environmental Law Institute, Washington D. C. Pp.19. ([http://www.elistore.org/reports\\_detail.asp?ID=10839&topic=Conservation](http://www.elistore.org/reports_detail.asp?ID=10839&topic=Conservation).)



### THE THREE ZONE URBAN STREAM BUFFER SYSTEM<sup>3</sup>

#### FIGURE 7-1



The riparian buffers (setbacks) should be designated within the Fort Wright Zoning Ordinance and referred to specifically within the area and height regulations of the zoning ordinance, or within the text of any special district that may be formed for the corridor.

#### Recreational Corridors

The recommended Greenway Map, **Map 4F**, also identifies a recreational corridor adjacent to the proposed riparian buffer. This recreational area will serve many functions for the corridor. It will serve as an additional buffer for Banklick Creek with managed clearing for recreational uses. This area is proposed to be approximately seventy-five (75) feet in width to accommodate trail improvements as well as outdoor seating and other appropriate amenities. This area should

<sup>3</sup> (Adapted from Welsch, 1991)

not be completely restricted like the riparian buffer. Disturbance should be permitted in this area for recreational uses. Additionally, in areas where businesses are located adjacent to, or on the same property as the identified recreational buffer, they should be required to orient the building to make use of and connect to the recreational corridor. This can be accomplished through zoning requirements for double-faced or double-entrance buildings, in addition to connecting typical pedestrian and bicycle access (sidewalks and bike lanes) to the recreational corridor. This will enhance retail business use by increasing foot traffic and providing outdoor spaces convenient to workers. This design will assist in achieving the sense of place and quality of life that is identified in the goals and objectives of this plan. It is imperative that design be facilitated for these types of connections.

This corridor has also been identified within the Doe Run Park Master Plan as a potential area for a greenway or “Parkway” system. The Concept Plan for Doe Run Lake and its surrounding environs includes developing Madison Pike (KY 17) with multi-use recreational trails, additional tree plantings, and stream restoration efforts to conserve the Banklick Creek. This will work to restore the Banklick Creek’s value as a natural stream corridor. The city has recently applied for Transportation Enhancement monies to begin this portion of the project.

## HILLSIDE PROTECTION AREAS

The following recommendations are intended to preserve the natural character of hillsides within the corridor to the greatest extent possible. Implementation of the recommendations contained in this section are intended to achieve the goal of preserving the visual and environmental quality of the corridor while encouraging development that conforms with the terrain instead of altering it. These recommendations are in addition to the existing hillside protection regulations contained within the Fort Wright Zoning Ordinance as well as the Kenton County Subdivision Regulations. Further assistance is available from organizations such as the Hillside Trust that provide limited professional review of complex development proposals on hillside sites.

### Hillside Disturbance

It is recommended that areas identified for Hillside Protection be addressed in conjunction with development within the corridor. A geology and soil type of the typical hillside in Kenton County makes slippage an issue whenever hillside property is disturbed. This could potentially impact adjacent property owners. It also potentially increases the siltation of streams and waterways draining the sites.

Significant views of and from hillsides as seen from I-275 and along Madison Pike should be protected as much as possible. For this reason, priority should be given to development on lower hillside slopes in order to protect the scenic and ecological contribution that hillsides make to the corridor.

In an effort to accurately define the slope of a property, it is recommended that the measuring method referred to as “actual slope” be used instead of averaging the slope of a property into a single value. This entails breaking the property into detailed slope categories in order to determine a better representation of the actual slope. The amount of hillside disturbance associated with development should be limited in Hillside Protection Areas by factoring a

disturbance limit according to each slope category. Disturbance limitations should increase with the steepness of the actual slope.

Areas containing slopes equal to or greater than fifteen percent (15%) are identified as Hillside Protection Areas on the Greenway Map. The design of development in these areas should retain as much of the hillside's natural topographic character as possible by minimizing grading and the resulting creation of artificial slopes. Development within these areas should consolidate all disturbance areas where there is the least slope. Development should also minimize grade changes, cleared areas, and the volume of cut or fill. It is recommended that the amount of disturbance associated with development be limited in these areas through reductions in the proportion of a property that can be graded.

### Grading

Grading for structures in the corridor should be restricted to slopes thirty five percent (35%) or less in order to protect steep slopes during development and protect public health and safety. Although an analysis of the hillside slopes in the corridor using geographic information systems did not reveal any hillsides greater than thirty five percent (35%) slope, it is recommended that deep or extensive excavations and fills be minimized. When grading operations are necessary on hillside sites, the smallest practical areas of land should be exposed at any one time during development and the length of exposure should be kept to the shortest practicable amount of time. Restrictions should be placed on construction or site development in, or immediately adjacent to, areas determined to be prone to land sliding.

Any necessary hillside cuts should be limited and any hillside scars resulting from grading should be concealed, to the extent possible. The grade at the top of any cuts should be maintained in its natural slope. The retention of existing trees should be maximized on hillside development sites and any slopes exposed in Hillside Protection Areas should be replanted with native trees and plants. The practice of terracing hillsides should be regulated in order to provide additional or larger building sites and minimize negative impacts of grading.

### Roads and Utilities

Road construction on hillsides should be designed parallel to slope contours with consideration given to consolidating areas of natural topography and vegetation. Access should be located in the least sensitive area that is feasible. Utilities and other facilities should be located to utilize common corridors wherever possible. Shared driveway access and private roads should be utilized where significant reduction of grading can be accomplished compared to separate driveway access for each individual lot.

### Commercial, Industrial and Multi Family Development

It is recommended that structures be clustered to retain as much of the natural topographic character of the slope as possible. Development should be designed with a foundation type that is compatible with existing slope conditions to minimize disturbance and modification of the topography of the site. Where feasible, earth retention measures should be incorporated into the structure. Standard prepared building pads such as slab on grade which would result in the

grading of more than 10 feet outside the building footprint area should be minimized. The use of common access drives is recommended where possible to minimize disturbance. Development should be designed to minimize lot coverage and incorporate under-structure parking and multilevel structures where permitted. The use of retaining walls which allow the maintenance of existing natural slope areas is preferred over graded artificial slopes. The use of pole-type construction that conforms to the existing topography is recommended where feasible and piled deck support structures are preferred for parking or garages rather than fill-based construction types. Buildings built on the steeper portions of hillsides should be sized and located so that they least disrupt the natural character of the hillside

### Single-Family Dwellings

Single-family structures should conform to the natural contour of the slope. The foundation should be tiered to conform to the existing topography and step down the slope with earth retention incorporated into the structure where feasible. Standard prepared building pads such as slab on grade should be avoided. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. On slopes in excess of twenty five percent (25%), driveways should be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street. Changes in existing grade outside the building footprint should be minimized. Building foundation walls should be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. The structure should be tiered to conform to the existing topography and to minimize hillside disturbance.

## FORM DISTRICT STANDARDS<sup>4</sup>

Section 100.203 of the Kentucky Revised Statutes gives cities and counties the power to enact zoning text, which must be uniform throughout the zone. This text may contain regulations such as: (1) the activity on the land including the use of watercourses, and other bodies of water, as well as land subject to flooding; (2) the minimum or maximum areas or percentages of areas, courts, yards, or other open spaces or bodies of water which are to be left unoccupied, and minimum distance requirements between buildings or other structures; (3) the intensity of use and density of population, floor area to ground area ratios, or other means; (4) districts of special interest to the proper development of the community, including, but not limited to, exclusive use districts, historical districts, planned business districts, planned industrial districts, renewal, rehabilitation, and conservation districts; planned neighborhood and group housing districts; (5) fringe areas of each district, by imposing requirements which will make it compatible with neighboring districts; and (6) the activities and structures on the land at or near major thoroughfares, their intersections, and interchanges, and transportation arteries, natural or artificial bodies of water, public buildings and public grounds, aircraft, helicopter, rocket and spacecraft facilities, places having unique interest or value, flood plain areas, and other places having a special character or use affecting or affected by their surroundings.

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<sup>4</sup> Land Development Code, Pp 5.6-1-5.6-12, Chapter 5 – FORM DISTRICT REGULATIONS, Jefferson County, KY, March 1, 2003



Essential nexus should be established within the Form District regulations in regard to the conditions as set forth by Kentucky Revised Statute. In response to this, the language of the Form District regulations will specifically include the purpose of protecting the use of watercourses and areas subject to flooding, specifying what areas are to be left unoccupied for open spaces, the intensity of uses including setbacks and impervious surface area ratios, as well as requirements that will directly impact major thoroughfares, intersections, and transportation arteries. The elements that should be included within the Form District that will be used to achieve these purposes include:

- Streets and sidewalks
- Greenways and Trails
- Transit
- Pedestrian and Vehicular Connection
- Traffic Impacts
- Streetscape
- Dimensional Standards
- Accessory Structures
- Retail and Office Design Standards
- Signs
- Parking
- Outdoor Amenities
- Use Mix

Form Districts provide the benefit of combining the city's current zoning districts with special requirements for those areas with special characteristics. Form District regulations are a graphic based and design approach to outlining regulations, including design typologies for homes, shop fronts, public spaces, streetscapes, and other details. It outlines exactly what is expected of development, especially in regard to form and function. Regulations downplay uses and dimensional standards. Advantages to Form Districts are that graphics are more readily understood by public, public officials and professionals, and that the prescriptive approach outlines design visually. Principles of mixed use and pedestrian orientation are also integrated into regulation. The key to successful implementation is clear and concise standards, style neutral, easy to read format, and streamlined permitting. Vague language should be avoided.

Regulations should be tailored to meet the unique needs of the corridor, and to meet requirements as set forth in KRS 100.203, under districts of special interest to the development of the community. The corridor has many unique characteristics that should be addressed on a

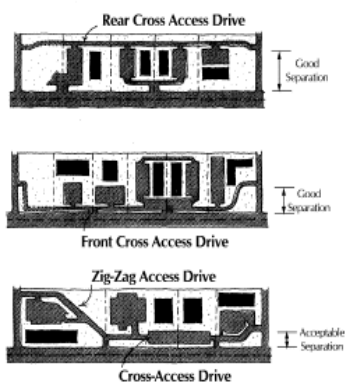


Figure 4. Cross access.

Source: Ten Ways to Manage Roadway Access in Your Community, Center for Urban Transportation Research. U. of South Florida

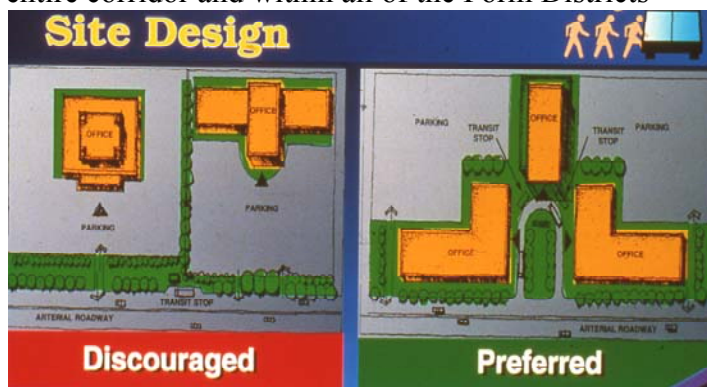
particular scale. These include the topography, location of a major waterway (the Banklick Creek), the intersection of two major transportation arteries (I-275 and KY 17), limited areas for development in an area of high demand for retail and service uses, and an the unique location of the corridor that is one of the most visible part of the community.

Form districts generally govern the design of land uses permitted in various zoning districts. The form districts promote compatibility of adjacent uses and preservation of desirable elements of existing development patterns. Form districts address various aspects such as:

- Including an identifiable core.
- Providing a mixture of uses including civic shopping restaurants, offices and residences.
- A focal point for several neighborhoods.

- A high level of roadway, transit, bicycle and pedestrian access.
- Special attention to compatibility of infill and redevelopment of individual and integrated sites.

The Form District regulations will focus on form and not necessarily use. The overall elements are recommended to three or four Form Districts to address special areas and create unique development. Three major land use themes or “forms” are logical within the corridor. These include potential for an identifiable core or “Town Center”, intensive commercial corridor uses, and some residential potential. Details common throughout these land use forms that are appropriate to be continued throughout the entire corridor and within all of the Form Districts include elements of multi-modal connectivity, the creation of great public spaces through recreation opportunities, outdoor amenities and streetscapes, interesting architectural design and access management. All of the elements referred to herein are recommended to be evaluated for the specific characteristics within the corridor and included as Form District regulations within the city’s zoning ordinance.



## FUNDING MECHANISMS

The following mechanisms represent only a partial list of “tools” that may be used in conjunction with more traditional implementation tools, such as zoning. It will be important for the city, in conjunction with other public agencies and private developers, to locate and utilize a variety of methods to proactively influence the future development of the Madison Pike (KY 17) corridor.

## CAPITAL IMPROVEMENT PROGRAM/BUDGET

Part of being proactive about the development of the corridor is the inclusion of public improvements in capital improvement plans and future budgets, along with the identification of appropriate sources of funds to finance such improvements (e.g., current revenues, special funds, bond issues, etc.). Detailed recommendations set forth in this document allow development of a set of priorities to identify which public improvements will be necessary to implement at what stage. Cost estimates for each of these priority items should be established and a schedule of capital improvements projects needs to be developed. Effort should then be directed toward coordinating a schedule of capital improvements projects with the ability to finance such improvements over the period covered by the capital improvements program. A well designed capital improvements program is kept current by yearly reevaluation of priorities and additions of future projects, with the first year incorporated into the current operating budget.

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## PERFORMANCE BONDS

Several areas throughout the country have enacted performance standards related to hillside and riparian protection or sidewalk and transportation improvements.<sup>5</sup> Compliance with local regulations is encouraged through performance bonds. A performance bond is a bond issued to a contractor or other responsible party conducting land development, forfeiture of which is risked if the party does not comply with the terms of the bond (i.e., performance standards). In this case the city would be authorized, in the event of any default on the part of the developer, or the performance of any work or construction of any improvements for which such guarantees have been deposited, to cause the required work to be done or repairs be made and to withdraw that amount required for payment of all associated costs.

A performance bond guarantees that a contractor will faithfully perform the duties set out in the construction contract. If the contractor fails to do so, the owner can require the surety (the company issuing the bond) to pay for damages caused by the contractor's failure to perform. The contract determines whether the owner or the contractor pays for the performance bond.

A performance bond is somewhat like an insurance policy, but it differs from insurance because it doesn't spread a risk across many policyholders. Performance bonds are more akin to a financial guarantee that a particular developer/contractor will properly perform a particular project. If the developer/contractor does not perform, the surety must find someone else to perform the work or pay the owner's damages.<sup>6</sup>

## REDEVELOPMENT BONDS

The development of certain uses, big box for example, often comes with the increased chance that the market will shift, causing the business to relocate, leaving a large structure that may not be well suited for sale or lease to another business. Often in these cases, the structures remain vacant and the sites are difficult or too expensive to redevelop. The concept of redevelopment bonds includes an agreement by the developer at the time of development approval that if vacated, the developer would have a fixed amount of time to sell or lease the building for active business. If unable to sell or lease the building for active business, that bond would be used to demolish the building. This process would aid the city to ensure that the private developer removes unused buildings, increasing the probability that the site would be redeveloped for new business.

It should be noted that the use of this mechanism has not been investigated in regards to its legal use or how it could be legally used within Kentucky. Therefore, prior to initiating the use of redevelopment bonds the city will need to thoroughly review the legal aspects of them.

## ESCROW DEPOSITS

For facilities such as median landscaping, recreational corridor enhancements, or road improvements, the city may wish to permit the payment of an escrow deposit. This amount should be sufficient to cover any and all expenses associated with the improvements. It should

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<sup>5</sup> [http://www.mde.state.md.us/programs/waterprograms/sedimentandstormwater/stormwater\\_design/index.asp](http://www.mde.state.md.us/programs/waterprograms/sedimentandstormwater/stormwater_design/index.asp)

<sup>6</sup> [http://www.sio.org/html/why\\_bonds\\_reqd.html](http://www.sio.org/html/why_bonds_reqd.html)

be implemented in a timely manner when the city has formalized plans or has gathered enough property/funds to make a project more feasible and cost-effective. Sufficient funds to accomplish improvements should be coordinated between the developer and the city. Criteria should be established outlining when escrow is appropriate versus immediate construction. The amount of escrow should be determined by a registered professional engineer, at the developer's expense, and approved by the city. The amount should be sufficient to cover any and all expenses associated with the improvements, and any increase in cost that may be anticipated, based on the estimated timing of the implementation of the improvement.

## TAX INCREMENT FINANCING

Tax increment financing (TIF) is a technique, permitted by Kentucky Revised Statute 65.680-65.699, which is applicable to residential, commercial, industrial, public, recreational, or other uses, or for open space, or any combination thereof, which is determined to be contributing to economic development of the area. The program includes methods to assist in paying for the costs of publicly provided project improvements. TIF uses increases in real estate tax revenues resulting from increased property values to pay off bonds, sold to finance qualifying redevelopment costs. The following is a summary of the program.<sup>7</sup>

### TIF Basics

TIF is a method of financing redevelopment activities that is directly tied to the success of those activities. With some exceptions, an economically depressed area of a local government brings in much less tax revenue than an economically healthy area of equivalent size and population. If such an area can be made attractive to developers, and tax-generating private development occurs where it has not in recent years, then the tax revenue collected from the area should rise.

Tax increment financing taps into this increase in tax revenue to finance the improvements and activities that make redevelopment occur. The local government determines the property tax revenue it is collecting in the given area before redevelopment occurs. The local government then borrows money, with loans or by the sale of bonds.

The borrowed funds are used in various ways to improve the development prospects of the area: loans to new businesses, capital improvements, new services such as improved street cleaning and security patrols, advertising and marketing. As development occurs in the area, tax revenue increases, and the excess above pre-redevelopment property tax revenue in the area is used to pay off the loans or bonds and to finance further redevelopment activities. That excess is the "tax increment" in tax increment financing.

### TIF Issues

Tax increment financing sounds very attractive -- the local government is (theoretically) not giving up any revenue, as the tax increment would not (again, theoretically) exist were it not for the redevelopment activities financed by that increment. However, there are potential problems with TIF.

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<sup>7</sup> [http://www.thinkkentucky.com/kyedc/pdfs/TIF\\_2002.pdf](http://www.thinkkentucky.com/kyedc/pdfs/TIF_2002.pdf)



If tax increment financing is imposed where it is not needed to encourage development -- where development would have occurred in the absence of TIF -- then the tax increment does not represent (or only a portion represents) local government revenues that would not have otherwise been collected. Instead, the tax increment cuts into general revenue that the local government would have otherwise received.

This is especially problematic when the tax increment consists not only of the “additional” property tax revenue otherwise payable to the local government but of a general cap at pre-TIF levels on property valuations or tax assessments. If tax increment financing is structured in this manner, and is imposed when not necessary, the tax increment also deprives other governmental bodies that receive property tax revenue -- school districts, other special districts, the county, and so forth -- of the increase they would otherwise have received.

Kentucky allows taxing units to exempt themselves -- a taxing unit must agree with the local government for its tax revenue to be subject to the tax increment.

Tax increment financing is intrinsically linked to the broader redevelopment program it is intended to finance. A TIF ordinance cannot be adopted unless there is a redevelopment area plan in place and an ordinance to implement that plan has been adopted. As with all other land development regulations, a TIF ordinance must be consistent with the development area plan. In this manner, TIF is coordinated with the broader efforts to redevelop a “depressed” or underdeveloped area. Unlike the TIF statutes of some states, this model does not describe how TIF money is to be spent; this is determined by the redevelopment area plan and the redevelopment area ordinance implementing it.

Tax increment financing must be found to be essential; that is, without TIF, the redevelopment area plan could not be implemented. As discussed above, tax increment financing is a special tool to be used only where necessary.

New legislation enacted during the Regular Session of the 2002 General Assembly clarifies previous TIF legislation enacted by the General Assembly during the 2000 and 2001 Regular Sessions. The new legislation outlines three (3) distinct TIF programs, as follows:

**1. Local Revenue Only Development Areas**—(For development projects not utilizing state revenues and requiring no review or authorization from the state.) Basic criteria includes the following:

- Eligible projects include any public purpose project being developed for residential, commercial, industrial, recreational, or any other use, that makes a contribution to economic development
- Eligible costs may be covered by up to 100% of incremental property taxes, excluding state, school and fire district taxes, and by employee wage assessment to be credited against local occupational license taxes not otherwise used as an incentive under a state tax credit program
- Limited to no longer than a 20 year time period
- Limited to no more than 500 acres approved in a twelve (12) month period
- Limited to previously undeveloped land

- Allows wage assessment of no more than 2% of gross wages, including wage assessments fees imposed under programs administered by KEDFA
- Available for facilities that contribute to economic development as determined by local government
- Development areas established before July 15, 2002 are grandfathered under existing law (KRS 65.680-65.699) prior to 2002 HB 372

## **2. Infrastructure Development Areas**

Applications for approval of development areas are submitted to the Cabinet for Economic Development. The Cabinet determines whether the development area application should be assigned to Kentucky Economic Development Finance Authority (KEDFA) or the Tourism Development Finance Authority (TDFA) for further consideration and approval. Basic criteria includes the following:

- Eligible projects include those projects meeting the requirements of the KREDA, KIDA, KJDA, or KEOZ programs, or requirements under the Tourism Development Act
- Limited to a geographic area of at least 50 acres of undeveloped land, unless otherwise approved by KEDFA or TDFA, or one acre for brownfield sites
- Eligible costs may be covered by up to 100% of incremental real estate taxes, excluding school and fire district taxes
- Maximum eligible costs and the percentage of the state's portion of the increment negotiated prior to approval; state participation is limited to a proportional share of the incremental taxes to be used
- Each development area is approved for a period not to exceed 20 years
- Each subsequent project locating in the development area may be approved for a period not to exceed 20 years and is subject to approval for both apportioned increment and eligibility
- The development area must initially be owned and under the control of a public entity
- Infrastructure development includes real estate acquisition and the construction or improvement of roads or facilities needed for improvements to the real estate including site preparation and utility extensions
- Local government ordinance must be adopted establishing the development area prior to approval by the appropriate finance authority

## **3. Project Specific Development Areas**

Applications for approval of development areas are submitted to the Cabinet for Economic Development. The Cabinet determines whether the development area application should be assigned to KEDFA or the TDFA for further consideration and approval. Basic criteria includes the following:

- Eligible projects include transportation services, the availability of information technology, or a commercial, industrial, recreational, tourism, or education related project
- Development area must be tied directly to a single project or investment resulting in a unique contribution to or preservation of economic vitality and quality of life of a region in the state
- Must represent new economic activity in the state

- Must result in a net positive economic impact to the state, considering any adverse impacts on existing businesses
- Minimum capital investment \$10 million
- Minimum of twenty five (25) new full-time jobs created for Kentucky residents within two (2) years of final authorization
- Limited to no longer than a 20 year time period
- Twenty five percent (25%) of project revenues must originate outside of Kentucky
- Eligible incremental taxes include: personal income; sales and use; property taxes, excluding school and fire district property taxes; local insurance premium taxes; occupational license fees; and other state taxes as may be determined by the Revenue Cabinet
- Limited to 80% of incremental revenues collected not to exceed 25% of approved project costs
- Project must not be primarily devoted to retail sale of goods

KEDFA or TDFA will hire a qualified independent consultant to analyze data related to the project and development area and to prepare a project report. The consultant is to be paid by the primary project entity, defined as the project expected to generate the greatest amount of new revenues. The report shall determine the percentage of revenues generated from business not located in Kentucky and the estimated amount of net incremental taxes to be generated for 20 years. The consultant shall make a determination that if not for the designation of the development area and granting of increments, the project or development area would not occur. The Office of State Budget Director, the Finance and Administration Cabinet, and the Revenue Cabinet shall agree to the methodology and assumptions made by the consultant in preparing the report. Based on the consultant's report and prior to approval by the appropriate finance authority, the Office of State Budget Director, the Finance and Administration Cabinet, and the Revenue Cabinet shall certify the net positive economic impact of the project, and the expected amount of incremental state revenues to be generated. Approval shall not be granted if it is determined that there is no projected net positive economic impact to the state.

## INDUSTRIAL REVENUE BONDS (IRB)

IRB's issued by state and local governments in Kentucky can be used to finance manufacturing projects and their warehousing areas, major transportation and communication facilities, most health care facilities, and mineral extraction and processing projects. Bond funds may be used to finance the total project costs including engineering, site preparation, land, buildings, machinery and equipment, and bond issuance costs.

## CONSERVATION OPTIONS FOR RECREATION AND OPEN SPACE<sup>8</sup>

A conservation easement is a legal agreement between a landowner and a private, nonprofit organization or a government agency that permanently limits a property's uses to protect conservation values. This program is based on the concept that property owners have a bundle of different rights including some that may be conveyed to another person or entity. When a

<sup>8</sup> Conservation Options for Private Landowners, Land Trust Alliance, 2002

property owner donates or sells a conservation easement, he or she permanently gives up some of those rights. This legal agreement is tailored to protect conservation values and to meet the financial and personal needs of each landowner. In some cases, a conservation easement may apply to just a portion of the property, leaving the option of development open for the remaining part. Enforcement of the easement is the responsibility of the non-profit or government organization. If a conservation easement meets federal tax code requirements, the value of the easement can be treated as a charitable gift and deducted from income tax. The value of the land is the difference between the land's value with the easement and its value without the easement. These easements values vary greatly. Because a conservation easement lowers a property's fair market value, it can also result in lower property taxes.

These agreements can be written to include the permission of passive recreational uses, such as pedestrian and bicycle paths. They can be more restrictive in areas of greater conservation value, and less restrictive in other areas. For example, significant areas such as the riparian corridors and flood ways of a stream could be restricted to permit no active uses, but areas within the floodplain may be used only for more intrusive uses, such as recreational soccer fields etc. Additionally, easements may be used only in certain areas of a property, such as within the floodplain or along riparian corridors, leaving the remainder of the property open to development.

Outright land donations and bargain sales of land are also options. The bargain sale combines income-producing benefit of sale with tax reducing benefit of donation for the property owner. This is an option if the property owner needs to realize some immediate income from the land.

#### TRANSPORTATION ENHANCEMENT PROGRAM

The Kentucky Transportation manages the Federal-Aid Transportation Enhancement Program for projects specifically relating to surface transportation for perpetual public use. Activities eligible under these funds that may assist in implementation of this plan include: (1) facilities for pedestrians and bicycles; (2) safety and educational activities; (3) landscaping and other scenic beautification; (4) control and removal of outdoor advertising; and (5) mitigation of water pollution due to highway runoff or to reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.

This corridor has also been identified within the Doe Run Park Master Plan as a potential area for a greenway or "Parkway" system. The Concept Plan for Doe Run Lake and the surrounding includes developing Madison Pike (KY 17) with multi-use trails and additional tree plantings, as well as conserving the Banklick Creek and working to restore its value as a natural stream corridor. The city has recently applied for Transportation Enhancement monies to begin this portion of the project.

#### RECREATIONAL TRAILS PROGRAM (RTP)

The RTP was authorized by TEA-21 and is managed by the Federal Highway Administration (FHWA). These funds are made available for trail development and maintenance from the RTP. The eligible activities include any recreational trail, for both motorized and non-motorized use.



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City governments may request grants from \$2,500 to \$50,000. The project sponsors must contribute 50% of the total project cost. The Governor's Office for Local Development (GOLD) is the Kentucky agency responsible for administering the RTP. The Kentucky Trails Advisory Board (KYTAB) works with GOLD to review the project applications, to ensure the uses are permissible under the enabling legislation, and to make funding recommendations.

### CMAQ (CONGESTION MITIGATION AND AIR QUALITY) FUNDING

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) was passed by Congress, authorizing the CMAQ program. In 1998, the CMAQ program was reinstated under TEA-21 (Transportation Equity Act for the 21<sup>st</sup> Century). The CMAQ program is jointly administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). It now provides over \$8.1 billion to invest in projects that help to improve air quality by lowering the amount of criteria air pollutants. CMAQ funding through various multi-modal transportation programs is available through the Kentucky Cabinet of Transportation.

There are a variety of activities that are eligible for funding, and several are applicable to the Madison Pike (KY 17) Corridor. Eligible projects include programs for improved public transit, HOV lanes, employer-based transportation management plans, rip reduction ordinances, traffic flow improvement programs, fringe and transportation corridor parking facilities that serve multiple occupancy vehicle programs or transit service, programs that limit portions of road surfaces to the use of non-motorized vehicles or pedestrian use, programs for securing bicycle storage facilities and bike lanes, programs to control extended idling of vehicles, and programs for new construction of paths for the use of pedestrian or non motorized transportation. Programs geared toward improving traffic flow with the roundabouts and encouraging pedestrian and bike transportation methods in addition to vehicular transportation will be important for the corridor.

### WETLANDS COMPENSATORY MITIGATION/MITIGATION BANKING

Negative impacts to wetlands are sometimes unavoidable for development, but they should always be minimized. Any adverse impacts to wetlands needs to be offset by improving, saving, or creating new wetlands. The ISTEA Act of 1991 allows federal funding for wetlands banking mitigation, which includes conservation, restoration, enhancement, and creation of wetlands. It is the goal of federal policy to suffer no net loss of wetlands, and in the long-term, improve the quality and quantity of wetlands.

An important point in wetlands mitigation banking is the involved areas are usually large tracts of wetlands that may not be directly affected by KYTC road projects, rather than the smaller tracts of wetlands that may be affected by a particular KYTC road project. Ideally, mitigation is provided on-site, but that is not always feasible. So banking allows the mitigation to occur away from the development, and it must occur before development, when proper wetlands compensation cannot be provided at the site or would not be as environmentally beneficial. Establishment periods vary widely, as wetlands may take time to mature and be considered properly mitigated.

The Kentucky Transportation Cabinet (KYTC) implements the mitigation banking projects from federal funding from the Federal Highway Administration (FHWA).

#### STREAM STABILIZATION PROGRAM

The Kentucky Transportation Cabinet (KYTC) administers this stream stabilization program to mitigate adverse impacts to streams from road developments. The program intends to improve stream and water quality through reduced stream erosion.

The Clean Water Act requires several actions if stream loss results from road development, such as requiring that stream degradation be offset by restoration. KYTC engineers and stream biologists determine what areas qualify for stream restoration. Qualified areas include eroding streams and steep banks, streams without trees on its banks, streams with slumping banks, and dredged/channelized streams.

If a stream area does qualify, the KYTC takes ownership of design and construction of the stream stabilization, and will pay the landowner for necessary easements along the stream. Streams can be stabilized with several techniques: re-sloping steep and eroding banks, installing rock banks and erosion blankets on banks, reshaping the stream channels, and planting trees.