

# Crescent Springs Gateway Study

Kenton County Planning Commission  
Adopted August 2010





# Acknowledgements

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# 1

# Introduction

During the last several years the City of Crescent Springs has been interested in redevelopment of the area comprising this study. Prior to the last county-wide comprehensive plan update which was adopted in 2006, the city's Long Range Planning Committee identified that the study area was transitioning to commercial and industrial land uses and that a plan was needed as a guide. The 2006 plan update, entitled the *Comprehensive Plan Update 2006-2026: An Area-Wide Vision for Kenton County*, listed this plan as one of the future initiatives for the City of Crescent Springs.

In late 2008 the City of Crescent Springs contracted with the Northern Kentucky Area Planning Commission (NKAPC) and GEM Public Sector Services to conduct this study. GEM Public Sector Services prepared a market analysis that provided detailed information on existing and future economic conditions. NKAPC managed the project and provided the land use planning component for the study.

The following is a brief overview of some elements of this plan. The study area, which is almost completely developed, presents several challenges as the city moves forward with improvements. Understanding the components briefly described below will assist during the review of the remaining parts of this plan where more detail on each of these elements will be found.

## Study Boundary

The boundaries of the *Crescent Springs Gateway Study* are Interstate 71/75 on the east side, the Norfolk Southern railroad on the south and west sides, and the Crescent Springs city boundary on the north side. The area is primarily commercial with some single-family residential and warehouse industrial uses. For the purposes of this plan the study area is divided into two areas; Sub Area A is located on the south side of Buttermilk Pike, and Sub Area B is located on the north side of Buttermilk Pike (see Map 1).



Map 1: Crescent Springs Gateway Study boundaries



# 1 Introduction

## Vision and Goals

The Crescent Springs Gateway study area will redevelop into a mix of uses that are integral to an overall planned development. Future development may feature office, retail, highway retail, service or residential elements. These uses will compliment one another and be harmonious in regards to site and architectural design. Imaginative and thoughtful design within the study area will give a unified and impressive entrance into the city. The study area will be highly accessible and inviting for pedestrians, transit riders, and motorists. Redevelopment barriers will be removed to help make the study area an attractive place for developers to create a unique and vibrant gateway to the city. It is understood that the redevelopment of the study area will slowly evolve and each improvement, no matter how small, must be crafted with the future in mind.

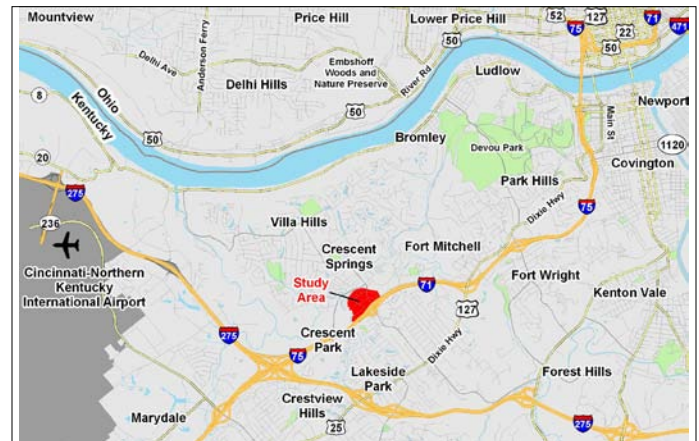
- Redevelop the study area into well-planned, sustainable, economically viable and productive uses.
- Improve the appearance and functionality of the study area by placing buildings close to streets preferably with parking areas in the rear.
- Use green infrastructure elements to improve infiltration of stormwater and improve air and water quality.
- Redesign the intersections to insure maximum traffic capacity.
- Improve connectivity within the study area and to adjoining areas by providing an optimal amount of sidewalks, and bikeways.
- Design a street system that improves access to the entire study area while eliminating excess right-of-way.

## Assets

The study area boasts many assets that provide significant appeal to potential redevelopment efforts. The very close proximity to I-71/75 provides major north/south interregional access by directly linking the state of Michigan to the state of Florida. The study area is located just off of a primary interchange to this highway and is positioned only a few miles from the core of the entire Greater Cincinnati metro region (see Map 2). This location provides the study area with high visibility and access to and from the Greater Cincinnati/Northern Kentucky metro region.

This interchange is also between the Cincinnati central business district and the Cincinnati/Northern Kentucky International Airport making it yet again, a prime location to attract a high volume of activity. From the study area it is easy to reach the numerous commercial and residential areas in northern Kentucky and southwest Ohio.

The area is also relatively flat providing ample room for a large concentration of development. Surrounding this area are economically vibrant residential neighborhoods. Bisecting the commercial area is Buttermilk Pike, a major artery extending from Dixie Highway (US 42/127) to the City of Villa Hills, and connecting the cities of Villa Hills, Crescent Springs, and Fort Mitchell. An average traffic volume of 32,000 vehicles drive through the study area each day providing a strong local base for commercial activity.



**Map 2: Location of study area within region**

The concentration of commercial development is well on its way with the new Crescent Springs Towne Center, the Buttermilk Crossing Shopping Center, and the original commercial center of Crescent Springs. Located to the north of the study area and just outside of the Crescent Springs city limits, Grandview Drive boasts a large amount of office space. Additionally, the industrial land uses on Crescent Springs/Erlanger Road within the City of Erlanger strengthens to the area as a regional commercial center.



# 1 Introduction



**Figure 1: Aerial image of study area**

## **Limitations**

In addition to all of these assets, there are some limitations. Much of this land is already developed and most of the existing structures have become functionally obsolete. Though these buildings are physically sound, the size and/or design of the building does not meet the needs of current commercial uses typically found in these locations. Removing these structures adds considerable cost to redeveloping the area. The high cost of redevelopment limits the type of businesses that can afford to locate within the study area. Modern development also requires large parcels to accommodate the buildings and parking areas necessary for current economic conditions. These redevelopment limitations are particularly evident within Sub Area A.

This area is divided into a large number of small parcels and many of the current structures are becoming functionally obsolete. The large number of parcels indicates that acquisition of property from a variety of owners could be an additional challenge during the development process (see Figure 1).

The high volume of vehicular traffic that flows along Buttermilk Pike provides a large customer base to the study areas, but also causes some limitations. The congestion that typically occurs during peak travel times has the potential to discourage people from visiting the area, reducing overall commercial activity. Additionally, the interstate and the railroad isolate the study area from the surrounding area further reducing commercial activity. This isolation and high volume of traffic entering and exiting Sub Area A on

# 1 Introduction

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Buttermilk Pike limits the number of vehicles that can exit Sub Area A to approximately 2,000 vehicles per hour. This restricted vehicular flow is likely to occur even after the recommended roadway improvements are made. This constraint places a limit on the amount of space that can be redeveloped within Sub Area A.

The scope of this plan and the difficulties outlined above will require the city to work patiently over many years to complete its recommendations. The Crescent Springs City Council will need to stay committed to the plan and be persistent in implementing changes to the road system while working with property owners and developers to fulfill the vision and goals of this study.

## **The Plan**

The *Crescent Springs Gateway Study* is a plan designed to provide the best uses for the study area given its assets and limitations. Currently the area is a mix of fast food restaurants, strip centers (with a variety of uses), single-family residences, warehouse and storage facilities, and office buildings. Since construction of the interstate, Sub Area A has developed in a haphazard manner. Commercial buildings were built amongst existing residences with little consideration of the area as a unified whole. Many of these commercial buildings are now functionally obsolete and difficult to reuse. A market analysis found the best uses of the study area to be highway retail and professional office. The market analysis also found that for redevelopment, many of the existing buildings will have to be removed and lots must be consolidated to create the larger tracts previously mentioned.

One of the main objectives of the plan is to create a place that can accommodate many different land uses while making effort an to alleviate traffic congestion. Interior roadway improvements and relocation of land uses are the primary recommendations in the plan to implement this component. Traffic flow should be simpler and more intuitive to provide a safer travel experience for both vehicles and pedestrians. The high traffic volume generated by highway retail uses should be confined to the area abutting Buttermilk Pike. Professional offices and general retail land uses will best be located in the middle of Sub Area A. Sub Area B is also best situated for professional office and general retail. Shared parking can aid in limiting the

total number of parking spaces needed and can minimize access points and allowing visitors to park centrally with access to many different uses at once. Industrial use will be located in the back of Sub Area A on the less valuable land in the study area and away from the more pedestrian oriented activities.

The study area is intended primarily to be a place of employment and retail services. Highway retail uses will likely remain at or about the same intensity that exists today. The amount of general retail is anticipated to increase as well with redevelopment. Retail land uses can help to enhance the area as a professional employment center by providing amenities within walking distance as well as provide goods and services to the local residents. Industrial uses have the potential to expand as well. The study area is intended to become a place where employers will want to locate to take advantage of convenient and easy to access to a variety of amenities within comfortable walking distances. Industry is not typically found within an area near an urban core because of high land values and the mix of retail and office uses. However with the limitations previously described with Sub Area A, light industry is a good use to fill space without adding significantly to traffic generation.

Single family residential land uses currently comprise a portion of land in the study area. Given the high value of the land it is expected that these uses will, over time, be replaced with commercial and/or industrial uses. This plan does allow for the potential of multi-family residential in the mixed use area; however this is not expected to be a large part of the future inventory of the study area. The high cost of redevelopment and noise generated by the interstate and railroad, may make multi-family units an unlikely addition.

## **Task Force**

A 16-member task force was formed to help guide the study and to make sure the study targeted the concerns of all interested bodies within the community. The Task Force consisted of business and property owners and residents of the study area, concerned residents of Crescent Springs, city employees, and city council members. The Task Force met once a month starting in March 2009 and worked with NKAPC staff on the issues facing the study area.



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The Task Force adopted a vision and a set of goals, then examined and discussed all of the information presented by the NKAPC staff. This group reviewed and debated the merits of the different redevelopment scenarios and took into consideration all public input gathered at the public meetings. This work culminated in the Task Force deciding on the final presented recommendations.

## Public Meetings

In addition to Task Force meetings, three public meetings were held to gather further public input. The first was held on March 27, 2009 to announce the study to the public and gather their concerns and opinions. The second public meeting was held on October 28, 2009. This meeting was presented as an open house designed to show the public the primary issues involved in the study and the various redevelopment options the Task Force was considering. NKAPC staff and Task Force members were present to explain the issues and options and hear people's comments. Comment sheets were also available for attendees to record their concerns and opinions. The final public meeting was held on March 17, 2010. This meeting took the form of a power point presentation with display boards. Task Force members and NKAPC staff presented the plans that had been chosen and worked to gather remaining public opinions and comments. Following each public meeting the Task Force met and discussed the comments and opinions collected and changes to the plan where made where deemed appropriate.

## Interim Report

The first step was a thorough review of current conditions of the study area and included a market analysis. This existing conditions review included a current land use evaluation, a review of the natural environment, transportation, demographics, community facilities and the utilities of the area, as well as a turn movement analysis for the principle intersections. Previous plans pertinent to the area were also reviewed. This information was presented to the Task Force and the public in the *Crescent Springs Gateway Small Area Study – Interim Report*. The Interim Report and Market Analysis can be reviewed and downloaded from the NKAPC website at <http://www.nkpc.org>.

## Review and Adoption

The City of Crescent Springs adopted the Crescent Springs Gateway Study on June 14, 2010 with a unanimous vote by the city council. The NKPC recommended the study to the KCPC on June 17th with a unanimous vote. Information meetings were held on July 21st, at 12:00 pm and on July 29th at 6:00 pm for KCPC members to become more familiar with the study. The KCPC adopted the plan as part of the *Comprehensive Plan Update 2006-2026: An Area-Wide Vision for Kenton County* on August 5, 2010 with a unanimous vote.



Third public meeting at Crescent Springs City Building

# 1 Introduction

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# 2

# Market Analysis



The market analysis for this study was conducted by GEM Public Sector Services. The purpose of this analysis was to determine the range of potential land uses that can be accommodated in the study corridor now and in the future, based on the needs demonstrated by the marketplace. The objective of the analysis is to provide market-based information that will enable officials of Crescent Springs to develop realistic and achievable plans for the future of the city. 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 which meet current and potential market demand. The entire *Crescent Springs Gateway Study Area* market analysis can be found at the NKAPC project website. The full study provides detailed descriptions of the market as well as definitions of many of the terms found within this chapter of the *Crescent Springs Gateway Study*.

## Demographics

Crescent Springs is a rather affluent community with a median household income of \$73,361 in 2008 compared to \$56,479 for the Cincinnati metro area and \$52,599 nation wide. Per Capita income is also very strong in Crescent Springs with a city average of \$46,368 compared to \$26,426 for the Cincinnati metro area and \$26,464 for the nation in 2008. This strong level of income makes the area a desirable place for commercial development. Average household incomes in the City of Crescent Springs escalated well ahead of the pace of inflation and the estimated pace of household income growth between 2000 and 2008 has also escalated faster than the pace of inflation. Projected income growth for city households between 2008 and 2013 is also expected to outpace inflation. This indicates that Crescent Springs' households will have more income to spend in the future. This additional income could attract new businesses to the area and enable local businesses to expand.

## Residential

Land in such close proximity to an interstate highway interchange is typically of such high value that residential uses are often not feasible. The noise produced by the railroad and interstate also reduces the likelihood of residential development in the study area.

## Professional Office

The location dynamics of the study area provide prime opportunities for the development of office uses. Quality office buildings can typically afford the high cost of land along a major interstate interchange. The location provides a high level of public exposure and easy access into and out of the area for employees and customers. For these reasons professional office is a recommended use. The market analysis found a potential demand for 47,000 to 82,000 square feet of additional office space if the city aggressively recruits employers in "Advertising", "Health and Medical Services", "Other Business Services", and "Social Services" categories. An additional 9,000 to 27,000 square feet of office space could be needed in the consumer services categories of "Auto Repair/Services", "Beauty and Barber Shops", "Dry Cleaning and Laundry", and "Other Personal Service." These categories show unmet market demand in Crescent Springs or within the 15 minute drive time market.

Some of the growth in the consumer services sector could come from expansion of exiting businesses and not necessarily from the introduction of new businesses, especially in the near term. The City of Crescent Springs will be competing for these businesses with surrounding municipalities and should not expect to capture all the unmet demand. It is reasonable to reduce the amount of additional office space by 50 percent to accommodate for this competition. Therefore, the total estimated need for new office space is between 23,000 and 54,500 square feet.



# 2 Market Analysis

## Retail/Services

Similar to professional office use, the high visibility and ease of access make the study area well suited for retail/service uses. This is especially true for retail that targets the interstate user. The key to future growth will be to maintain and enhance the business base in the vicinity of the study area while attempting to create a sense of destination.

A detailed review of drive-time markets reveals a local market that has abundant competitive retail outlets for most categories of retail goods. However, there are a limited number of categories of retail goods which appear to be underserved in the local market. The local market is defined as households within the city and the “five minute, drive-time” areas (see Map 3). The following categories of retail goods appear to offer some opportunity to expand existing retail market capture or allow for the introduction of new competitors to the local market; “Clothing Stores,” “Electronics and Computer Stores,” “General Merchandise Stores,” and “Specialty Stores.” Given the unmet demand, the amount of income within Crescent Springs, and the five minute drive time area it is estimated that approximately 17,500 to 47,000 square feet of retail space could be needed. These numbers include a 50 percent reduction on the amount of space for a conservative estimate. Currently there appears to be sufficient vacant storerooms and developed retail lots to meet any expansion of retail enterprises in Crescent Springs at this time. However, retail space could become functionally obsolete long before it is physically worn out. This means that a building is structurally sound but its design and/or size makes it unsuitable for current commercial use.

## Industrial

Typically, industrial uses locate on lower valued land; however, given the traffic flow limitations entering and exiting Sub Area A, industrial uses may be necessary to achieve full development of the area. Industrial uses can take up quite a bit of space without generating much vehicular traffic. Low traffic generation will be the critical factor for industrial uses. These uses could include small manufacturing enterprises, wholesalers, small warehouses, and storage facilities.



Map 3: Five-minute drive time area

## Land Use and Transportation

The road network within Sub Area A is inefficient compared to comparable areas. There is more roadway than necessary for the size of the area due to the layout of existing uses. Many of the existing businesses found within the study area claim their own individual access points to existing roadways. Also, the current road system makes reaching some locations difficult, thus rendering them less desirable for development. The existing system is a combination of old residential streets, developed prior to construction of the interstate as well as later roadway additions as the area developed. A single road could provide more efficient access to the entire area while using less acreage for right-of-way.

Within Sub Area A the number of lots is high compared to the number of acres. This makes redevelopment more complicated due to increase acquisition costs and logistics. Currently there are 89 parcels averaging a little over a half acre per lot. A typical lot size for highway retail uses is one to two acres and three to five acre lots for office buildings. For redevelopment to take place, parcel consolidation will need to occur.



# Mobility



Transportation is always an important component of any planning or visioning process, but the location of the Crescent Springs Gateway study area makes transportation especially critical. Located at the intersection of Buttermilk Pike and Interstate 71/75 the study area is part of a larger commercial center that relies on vehicular access for customers. Serving as a primary access to large residential areas, Buttermilk Pike extends east to Dixie Highway into Fort Mitchell and west into the City of Villa Hills. Buttermilk Pike carries high volumes of traffic to serve both the commercial uses and the surrounding residential activities.

## **Buttermilk Pike**

Traffic congestion on Buttermilk Pike is a primary concern. The section of Buttermilk Pike between I-71/75 and its intersection with Anderson/Erlanger Crescent Springs Road, contains four stoplights within one-third of a mile. This concentration of traffic signals can cause significant delays and traffic can back up into the preceding intersection creating gridlock and safety concerns. The transportation analysis found the stretch of Buttermilk Pike running through the study area operates poorly during peak periods and it can be assumed this will only worsen as time progresses and traffic volumes increase (see Tables 1 and 2).

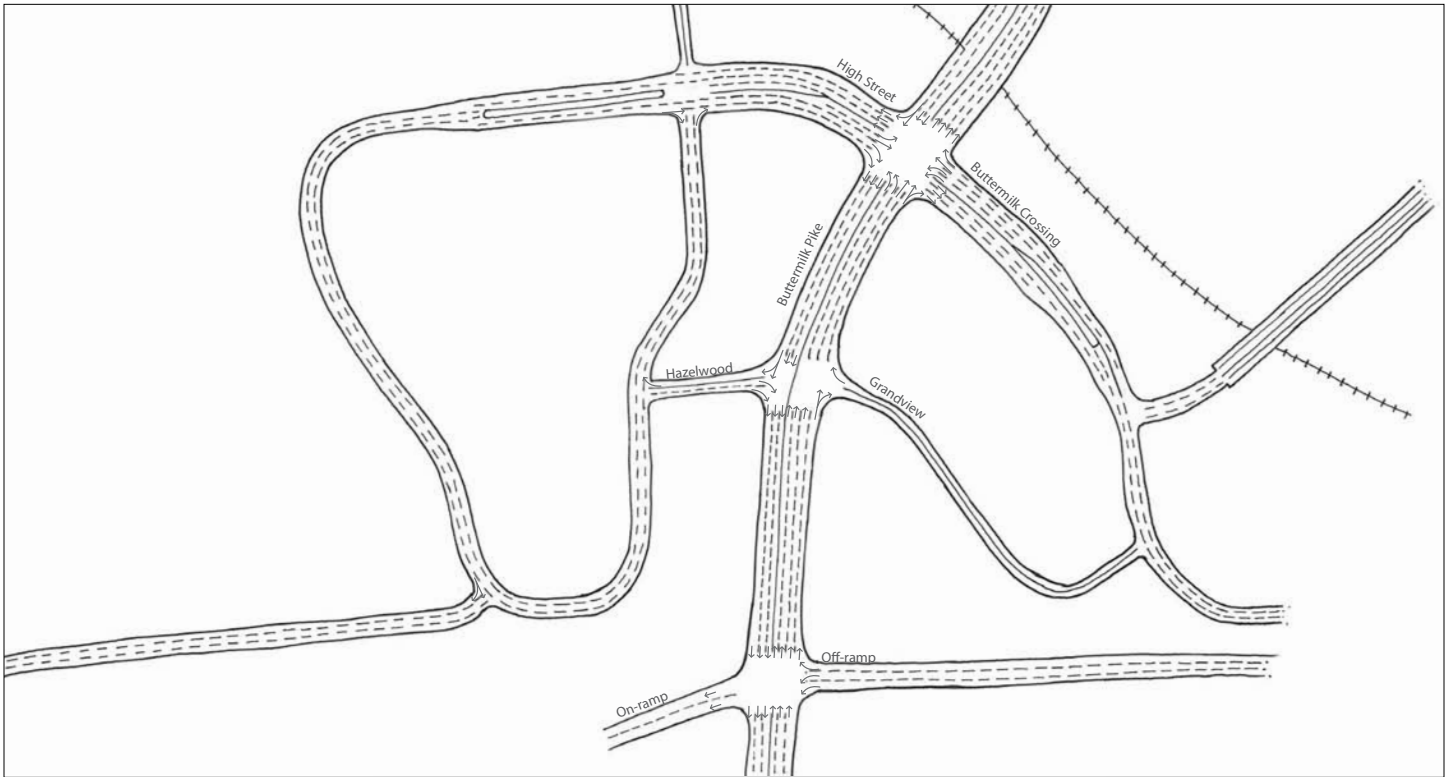
One of the major problems is a frequent queue (i.e. a line of traffic waiting for a green light) which extends from the intersection at Hazelwood Road/Grandview Drive to the I-71/75 southbound off-ramp onto Buttermilk Pike. To address this issue it is recommended to make the Hazelwood Road/Grandview Drive/Buttermilk Pike intersection right-in/right-out. This conversion would remove the traffic signal at Hazelwood Road eliminating queues starting at that location on Buttermilk Pike. The next intersection at Buttermilk Pike and High Street/Buttermilk Crossing is further away from the southbound off-ramp and therefore provides a longer collection area for traffic to queue before blocking the intersection (see Figure 2).

## **Study Area Access**

Access to the Sub Area A is limited, primarily due to the area's isolation caused by the CSX railroad and Interstate 71/75. Ingress and egress is currently provided at two signalized intersections on Buttermilk Pike, one at Hazelwood Road and one at High Street. As a result of the Buttermilk Pike improvements identified above, this access is proposed to be reconfigured with a single signalized access point at High Street and Buttermilk Crossing (see Figure 2). Access to Hazelwood Road would operate as a right-in/right-out only intersection. Egress capacity at Hazelwood Road may remain largely unaffected as the critical turning movement served by the access is to I-71/75, i.e., a right turn movement. Left turn ingress from Buttermilk Pike into Sub Area A would be served at the High Street intersection. This intersection would also serve displaced left turn traffic from the conversion of Grandview Avenue to right turn movements only. As a long term impact of this reconfiguration, highway service land use, now concentrated on Hazelwood Road, would likely relocate to the High Street area. This relocation is discussed in Chapter 4.

Significant improvement will be required to accommodate the increase in traffic at the High Street/Buttermilk Crossing intersection caused by traffic displaced from Hazelwood Road and Grandview Avenue. At a minimum, these improvements would include the widening of the intersection of High Street and Buttermilk Crossing to a six lane section to accommodate dual left turns into and out of the study area. In addition, widening of the Buttermilk Pike/Norfolk Southern Railroad Bridge would also be required to accommodate an additional westbound lane. Even with the proposed improvements it is estimated that only about 2000 vehicles an hour can access the portion of the

# 3 Mobility



**Figure 2: Concept drawing of changes to Buttermilk Pike, Hazelwood Road, Grandview Avenue, High Street and Buttermilk Crossing**

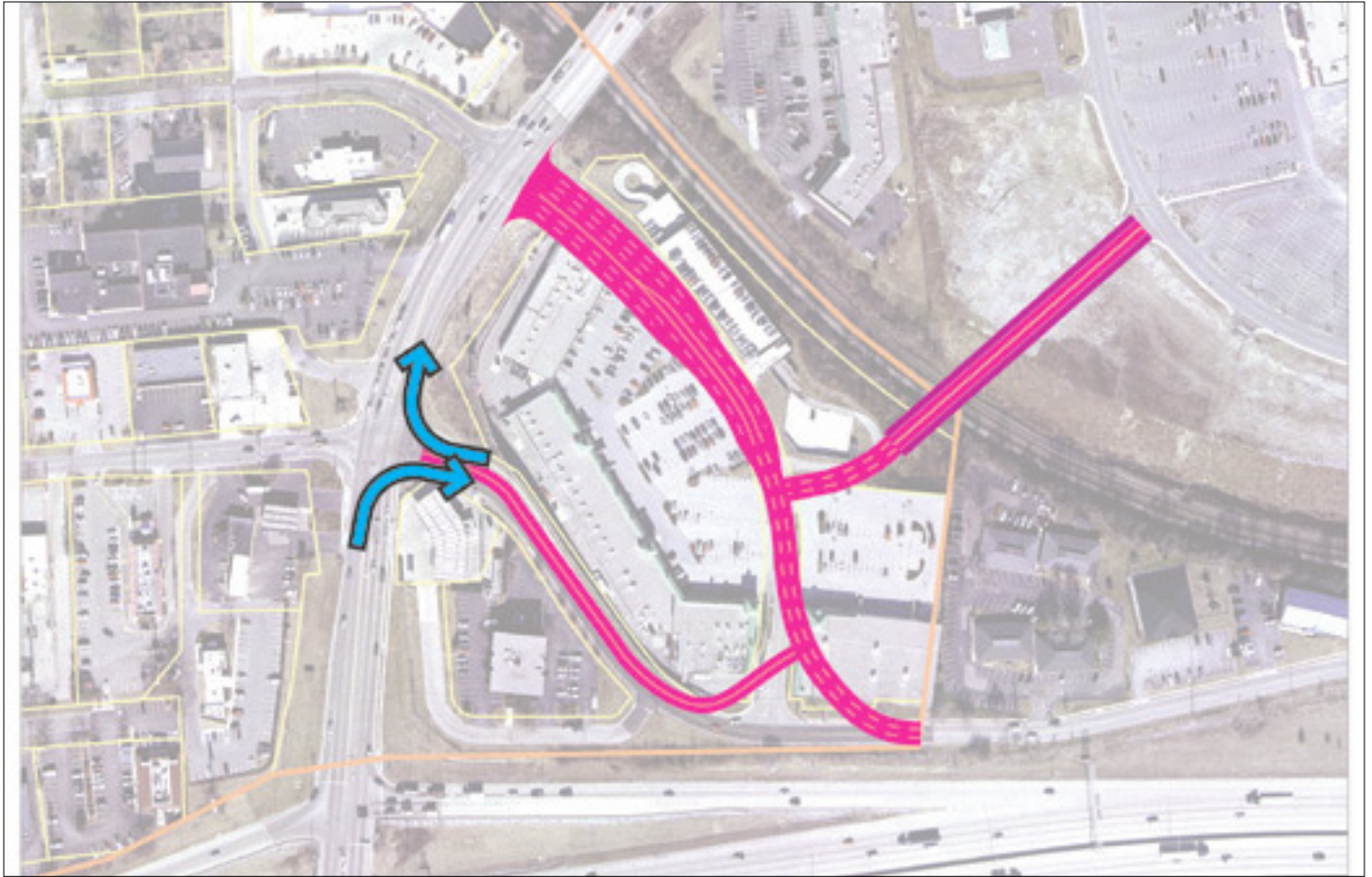
study area served by Hazelwood Road and High Street. This level of traffic flow places a limit on the amount of building space and activity levels that can occupy the study area. A full discussion of these constraints is provided in Chapter 4.

Sub Area B would also benefit from improvements to Buttermilk Pike. In order to improve flow, it is recommended that Grandview Avenue be redirected at its intersection with Buttermilk Crossing, to provide a continuous movement to/from Buttermilk Crossing. The extension of Grandview Avenue between Buttermilk Crossing and Buttermilk Pike would then “T” into the continuous movement (see Figure 3).

One option to increase capacity is to connect the western portion of Sub Area A to the Erlanger/Crescent Springs Road by constructing a bridge over the Norfolk Southern railroad and Pleasant Run Creek (see Figure 4). This connection would allow vehicles from Erlanger/Crescent

Springs Road to enter and exit the area without using Buttermilk Pike. The land uses in Sub Area A produce limited demand for access from Erlanger/Crescent Springs Road to this location. Instead, the majority of the traffic enters and leaves Sub Area A from I-71/75. It is anticipated that minimal exiting traffic from the study area would utilize this access. Therefore, it is likely that a bridge to access Erlanger/Crescent Springs Road would not significantly increase the capacity of the intersections on Buttermilk Pike. In fact, a bridge connecting Sub Area A with Erlanger/Crescent Springs Road may have the detrimental effect of providing a ‘cut-through’ route to the interstate, effectively decreasing capacity at the intersections at Buttermilk Pike. Adding the bridge could further limit the development capacity in Sub Area A because of the additional capacity generated by this cut through. This would further limit development because capacity would be generated from ‘cut-through’ traffic and not only from businesses within the study area.





**Figure 3: Concept drawing showing changes to Grandview Avenue and Buttermilk Crossing**



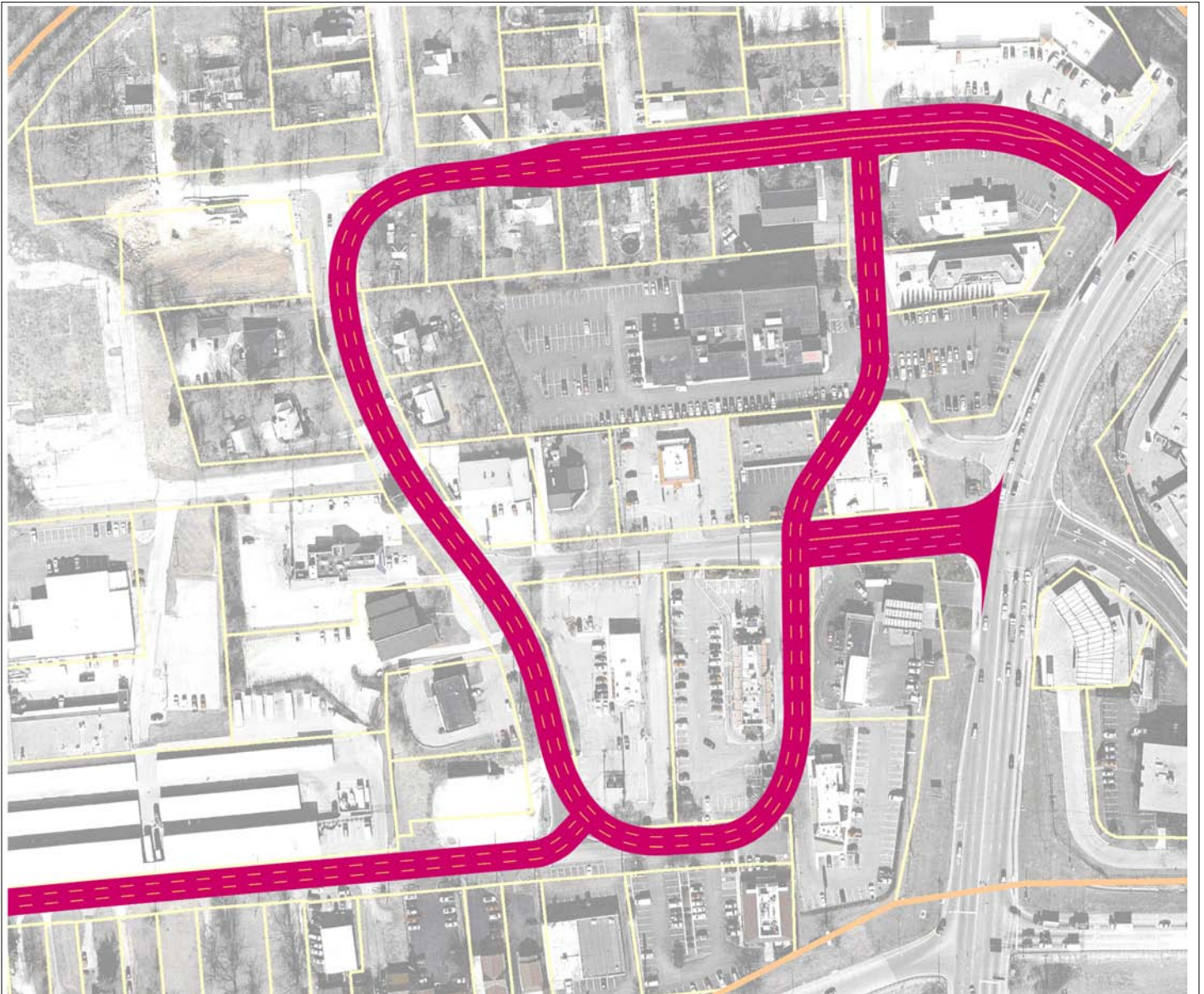
**Figure 4: Possible bridge over railroad and Dry Creek connecting Sub Area A to Erlanger/Crescent Springs Road**

### Internal Circulation

In order to accommodate the change in access proposed above, internal circulation within Sub Area A must be improved as well. Currently internal access is provided by High Street and Hazelwood Road with limited or poor access between the two streets. While Terry Lane does connect both streets, its condition and visibility is poor. Proper connectivity and circulation within the study area and between High Street and Hazelwood Road is critical if the access is to be maintained to properties on the south side of Sub Area A bordering the interstate after reconfiguration of the Hazelwood Road intersection (see Figure 3).

In order to accommodate internal circulation it is proposed that a loop road be constructed within Sub Area A. The proposed loop road would align along High Street and





**Figure 5: Concept drawing showing recommended road configuration in Sub Area A**

Ritchie Avenue in the north and south, along the general alignment of Terry Lane to the west and provide a frontage road along Buttermilk Pike. This configuration allows for maximum circulation between the north and south portions of Sub Area A, as well as opens up the back of the property to the west. As a result of the frontage road, outparcel lots would be created. This would require the closure of additional access points along Buttermilk Pike beyond those at Hazelwood Road and High Street (see Figure 5).

### **Land Use and Transportation**

As identified above, the proposed transportation plan has a significant impact on and is in response to the land use on the site. The full use of the entire study area is constrained by the maximum capacity of the access points; the proposed plan attempts to maximize this capacity by eliminating major queues and conflicts on Buttermilk Pike. The relocation of the major access point from Hazelwood Road to High Street will ultimately have the effect of



# 3 Mobility

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attracting highway commercial uses, such as fast food and service stations. The proposed loop road will improve the connectivity within the area and allowing for auxiliary uses, such as office, shopping, or light industrial uses to have improved access to the intersections at High Street and Hazelwood Road. A more in-depth discussion of these issues is provided in Chapter 4.

## Mass Transit

The study area contains a TANK Park and Ride facility. This facility provides express bus service (Route Number 17x) to and from the Villa Hills, Crescent Springs, Fort Mitchell area to the Covington and Cincinnati downtown areas. The service is a valuable asset providing another means of transport connecting the study area to local residential and more distant commercial centers. The facility is operating at near capacity, and it is recommended that at an appropriate time in the future the city work with TANK to expand the facility to ensure the continued bus service for the area.

## Pedestrian Activity

Currently there are few sidewalks in the study area and with high volumes of traffic the area is not pedestrian friendly. Buttermilk Pike has a sidewalk on its south side from east of the study area to Hazelwood Road. There is a sidewalk on the north side of Buttermilk Pike from Fort Mitchell to Grandview Avenue. This provides access to the study area from the surrounding neighborhood, but crossing Buttermilk Pike is not easy and therefore creates an impediment to pedestrian traffic. The five lane street does not have a pedestrian signal control to allow for comfortable crossing. The foot bridge across the railroad on the west side of the study area provides more convenient access into Sub Area A for pedestrians coming from the west side. The following are recommendations that can improve the area's walkability and accesses.

- The design recommendations of this plan calls for sidewalks along at least one side of every street in order to increase the walkability.
- Crosswalks with pedestrian islands should be created at the High Street, Buttermilk Crossing, and Buttermilk Pike intersection.
- A signal control for pedestrian should be considered for the High Street, Buttermilk Crossing, and Buttermilk Pike intersection.

- Extending the pedestrian bridge across Erlanger/ Crescent Springs Road should be considered.
- The design recommendations call for placing buildings close to the street to improve walkability.

## Bicycle Activity

The study area is not bicycle friendly because of the lack of bicycle lanes and routes within and into the study area. The Kenton County Bicycle Plan, prepared in 1999, routes bicyclists to alternate roadways due to high traffic volumes on Buttermilk Pike. It is, therefore, not considered very probable that there will be improved facilities for bicycle access into the area. However, placing bicycle racks and lockers at the TANK Park and Ride facility could be an enticement for some bicyclists. Bicyclists could use the bus to enter and exit the area with their bikes on the racks already provided on most TANK buses. Racks and lockers at the Park and Ride facility give the bicyclist a place to leave their bike safely while they walk to their destination.



# 4

## Land Use



The existing land uses in the study area is an unplanned mix of industry, single-family residential, retail and office uses. Industrial uses are concentrated in the area's southeast corner. Single-family residences are located primarily on the west side, with some located in the eastern portion adjacent to Interstate 71/75. Office and retail/services dominate the central and northern side of the study area, as well as some on the eastern side along Ritchie Street. Many of these parcels were previously residential properties.

The current pattern of land use exhibits the lack of planning throughout the original development process. The area appears cluttered and disorganized. The *Crescent Springs Gateway Study* seeks to take a closer look to determine the best land use pattern, given the area's many assets and limitations. These assets and limitations, discussed in the preceding chapters, form the basis for the types and locations of selected land uses.

### Conceptual Considerations

In order to determine the appropriate land use, an evaluation of the surrounding area has been considered. Located immediately adjacent to Interstate 71/75, the study area is the gateway into the City of Crescent Springs. It presents the city's first impression to visitors and locals alike. This highly visible location provides easy access both for customers coming into the area and to those traveling past to other commercial areas in the Cincinnati metro area. These attributes make the land within the study area expensive. In addition to the high land purchasing cost, the need for potential removal of existing structures limits the type of uses that can afford to locate within the study area.

As noted in the introduction, the study area is only a portion of a larger commercial area. A recent redevelopment across the Norfolk Southern Railroad from Sub Area B removed a residential enclave and replaced it with commercial land uses. The traffic generated by this new commercial development was a primary catalyst for this study. The addition of these new commercial land uses has significantly expanded the commercial center attracting customers from a much larger area than previously experienced.

Surrounding the study area is a large residential neighborhood which the market analysis has described as being more affluent than the average for the metro area. This neighborhood provides a strong market for retail and service uses, and potential employees to fill new or redeveloped office buildings. These three factors make the study area ideal for commercial uses.

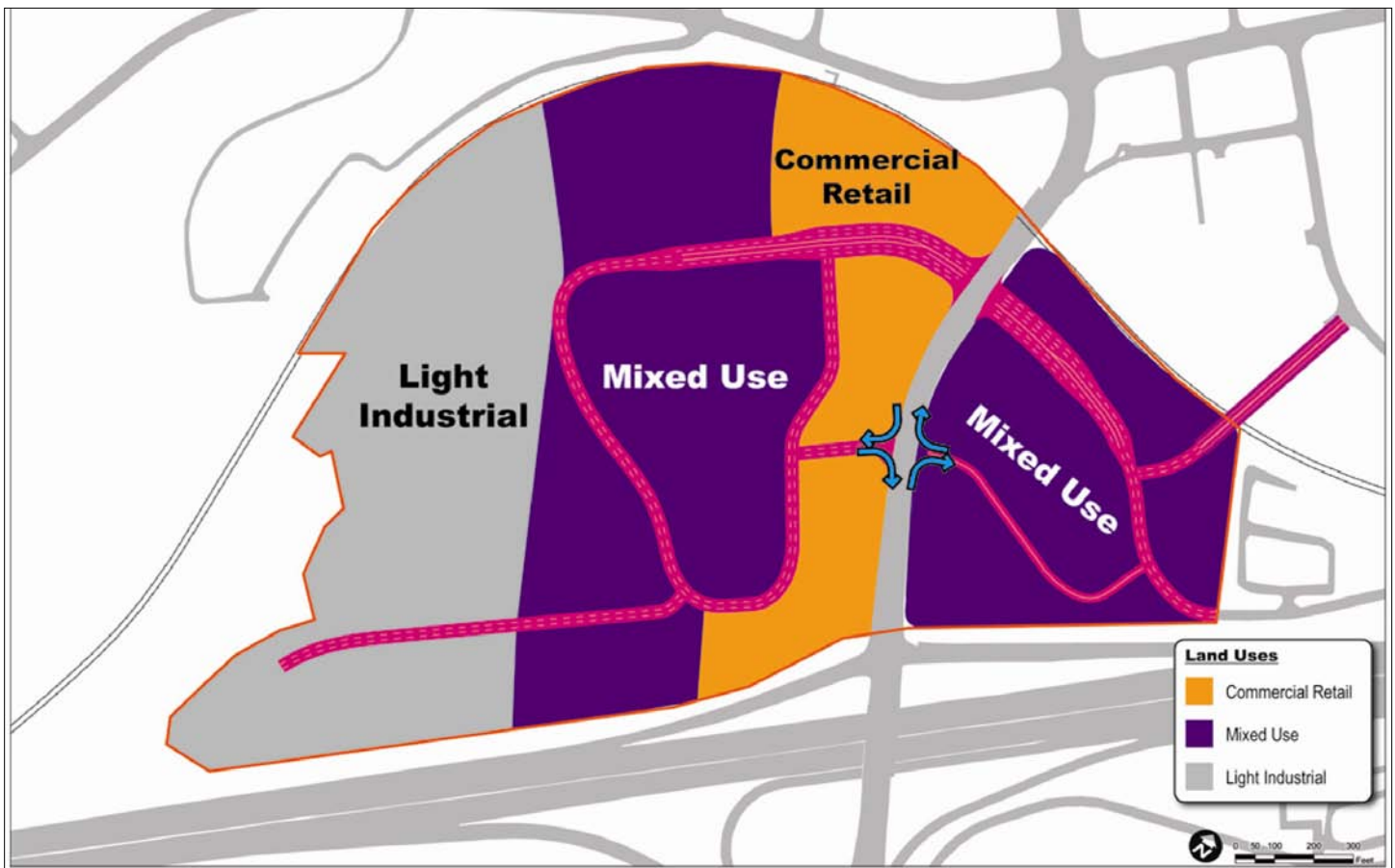
Sub Area A, as noted previously, has limitations on the amount of exiting traffic. See Chapter 3 for further information on traffic. In order to prevent intolerable traffic congestion, the amount of development within Sub Area A should be limited. In general, the more square footage of development that is built the more traffic is generated. However, not all uses generate the same amount of traffic. Highway retail generates the most traffic, with general retail and office a distant second. Residential and most industrial land uses tend to generate the least amount of traffic. Balancing these uses is important to obtain the most effective use of the land without causing traffic problems. For example, balance may be obtained by managing the uses to ensure that typical traffic generation does not exceed the projected capacity limits and/or the mix of uses can have peak traffic generation times that differ. The different peak traffic times helps to spread peak hour traffic through more of the day. The following recommendations are considered the best uses of the study area with a solid understanding of the areas assets and limitations.

# 4 Land Use

## Recommended Land Uses

The land uses described below take into account the assets and limitations previously discussed for both Sub Areas A and B. A key part of the land use designations are not only those uses identified, but the location strategy necessary to assist in managing redevelopment in light of the known and anticipated limitations. These factors primarily play a role in Sub Area A, but are also of importance for Sub Area B. The challenge before the City of Crescent Springs is to identify land uses consistent with anticipated market demand, but to also ensure that redevelopment is achieved in a manner that functions most appropriately for all those who utilize the area on a daily basis. The location strategy portrayed on the Recommended Future Land Use Map (see Map 4) is evaluated within the context of access limitations (i.e. traffic generation) to plan the area to ensure advantage is taken of the area's proximity to the interstate.

**Commercial Retail/Services** allow for a wide variety of commercial and office land uses. This designation is primarily intended for highway retail land uses, such as fast food restaurants, service stations, and other businesses. These business types tend to locate near major roadways to capture more of the travelling public. The market analysis (see Chapter 2) recommends these uses and considers them to be a good fit for the study area. Locating these types of land uses along Buttermilk Pike will provide businesses the high visibility they need and limit the high volumes of traffic these uses generate to the front of Sub Area A. This location along Buttermilk Pike is planned to try and reduce as much traffic as possible on the interior of Sub Area A. It is anticipated that many customers to these highway retail businesses will be interstate highway travelers in need of fast service and a quick return onto the highway.



Map 4: Recommended future land use map

# 4 Land Use

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**Mixed Use** will be located in the middle of Sub Area A and will comprise all of Sub Area B covering the largest amount of land within the study area. Mixed use allows for a wide variety of uses including retail/service, professional office, and multi-family residential. It is intended that professional office will dominate this area with general retail land uses supporting office uses. The market analysis recommends professional office as one of the “highest and best” uses, given the combination of location and development costs. It is expected that this will limit drive-thru windows and keep those uses in the commercial retail/service area.

Professional office uses can typically afford the high price of the land and the high costs of redevelopment. Professional offices also typically provide higher tax revenues than other land uses. Multi-family structures are included but given the high cost of redevelopment in the study area, residential uses are not expected to be a major component. The mixing of uses can occur in individual buildings of single uses located adjacent to each other in separate buildings (horizontal) or by stacking different uses within the same building (vertical). This allows for a great deal of flexibility in redeveloping the area as both styles of mixing land uses can be utilized to create a viable area that functions well both economically and physically (see Chapter 6).

**Industrial** uses are not typically found near highway interchanges in dense suburban communities. This is due to the high cost of the land and the fact that they do not generally benefit from high visibility sought by other land uses. In Sub Area A, however, industrial land uses become both viable and desirable given the ingress/egress limitations of Sub Area A. Traffic volumes generated by industrial uses are typically lower than commercial uses. Increasing the amount of land within Sub Area A for mixed land uses would cause traffic to exceed that which the existing and proposed road systems could handle. Industrial land uses, therefore, have been identified for the southern portion of Sub Area A. Many industries generate very low volumes of traffic compared to the size of the business. These industries are a good fit for the southern side of the study area. The area recommended for industrial use is rather small and it is expected that businesses will be small in scale, further reducing the expected vehicular traffic. These uses may include small manufacturing businesses, wholesalers, warehouses, and storage facilities.

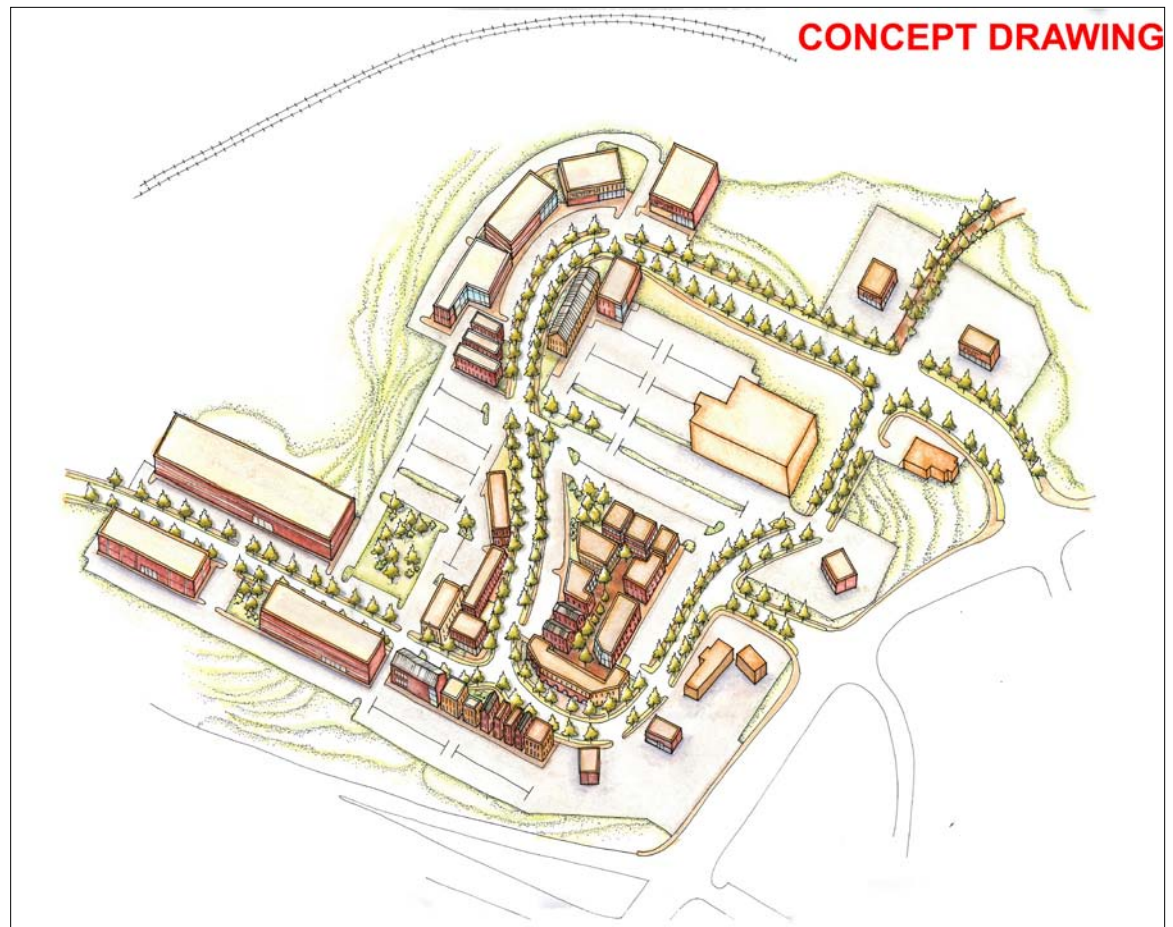


# 4 Land Use

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# Design Recommendations

To ensure that the study area becomes more integrated, well functioning, and cohesively developed, some design recommendations have been prepared for consideration. These recommendations address a variety of issues such as, walkability, landscaping, parking, building location and appearance, access and signage. These recommendations are intended to assist the city in guiding the redevelopment of the Crescent Spring Gateway study area.



**Figure 6: Concept drawing perspective of Sub Area A**

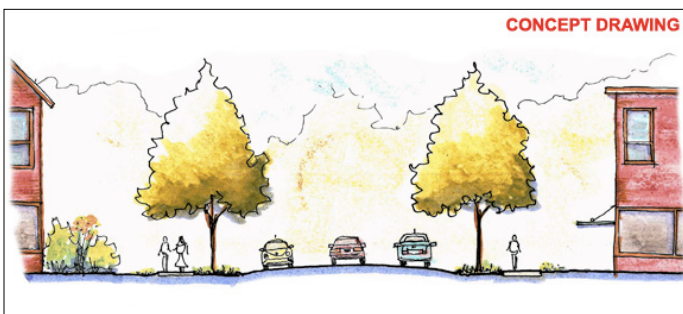
## Sidewalks

The study recommends that as a minimum there should be sidewalks on both sides of the street where traffic is anticipated to be heavy and a sidewalk on at least one side of the street where traffic is anticipated to be light. Furthermore, wherever sidewalks are provided along a street, a planted tree lawn strip should be included to provide pedestrian with some separation from traffic and provide shade and stormwater management benefits (see Figure 6).

# 5 Design Recommendations

## Landscaping

There should be landscaping on the site of each new building. Landscaping should be adjacent to each building providing separation from parking areas and between adjacent buildings. Parking lot landscaping should also be provided in islands large enough to accommodate planted materials. These landscaped areas should be designed to assist with traffic control, stormwater management and aesthetics for the site, but together with other sites will benefit the entire redeveloped area of comprising this study (see Figure 7).



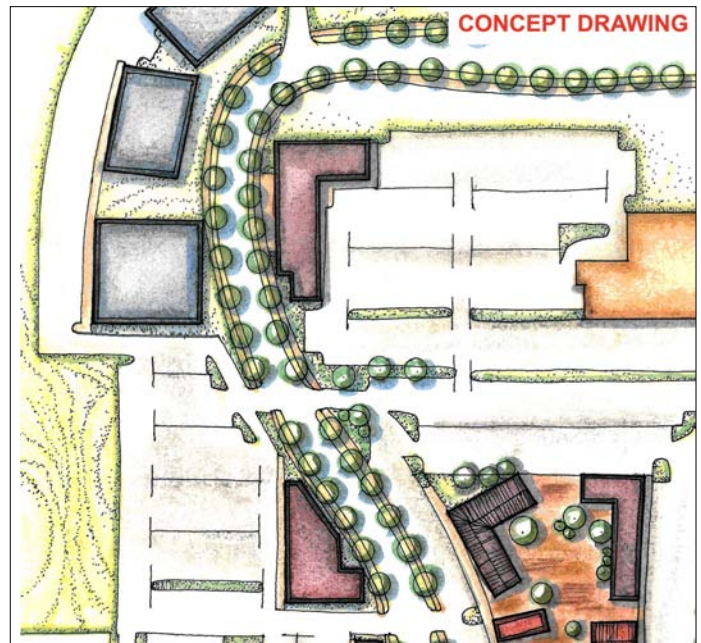
**Figure 7: Concept drawing showing recommended sidewalk and landscape treatments**

## Parking

Most parking should be located behind or to the side of the buildings. Parking lots should be shared to help reduce the amount of space between buildings, reduce the number of curb cuts and potentially decrease the total area necessary for parking. The amount of spaces necessary to provide sufficient parking for all businesses and other uses within the area should be evaluated. Typically it is thought that parking regulations require more spaces than necessary. This should be reviewed along with the types of uses and their respective parking needs. For example, a mix of uses whose peak traffic generation times do not occur at the same time of day significantly improves the opportunity for both shared parking and reduced numbers of parking spaces (see Figure 8).

## Building Location

Buildings are to be located close to the street to improve walkability of the area and make the area inviting. This recommendation does not exclude having a small amount of parking in front of the building. One objective is to have



**Figure 8: Concept drawing showing recommended parking location and configuration**

the buildings close enough to the streets and sidewalks along the streets so that pedestrians do not need to traverse long distances through parking to enter buildings. It is also understood that buildings may need to be located further from the street in the commercial retail/service area than in the other two areas to accommodate such activities as drive-thru windows and on-site interior vehicle circulation (see Figure 9).

## Access

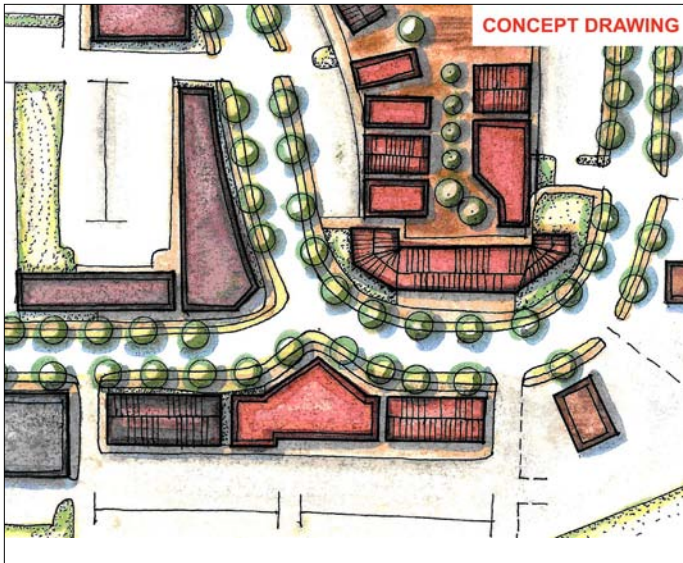
All buildings should be easily accessible for pedestrians and vehicles. There should be a sidewalk connecting the building entrance with the sidewalk. Curb cuts should be minimized especially along the proposed loop road to reduce the intermingling of pedestrians and motorized vehicles (see Figure 9).

## Signage

Signage can have a profound impact on the appearance of an area. A large number of signs in a variety of styles usually gives an area a cluttered and unappealing appearance. This plan recommends restricting the types of signage to be used; i.e. limiting or not allowing pole signs, allowing only a monument sign and a sign on the building.



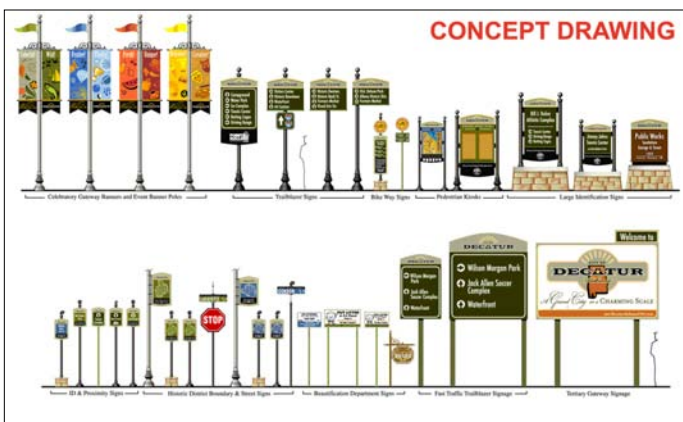
# 5 Design Recommendations



**Figure 9: Concept drawing showing recommended limited vehicular access and buildings located close to the street**

## Wayfinding

Wayfinding is a signage system designed to advertise and give direction to businesses, important services, attractions, and street names within a municipality. A typical approach is to have a single design element for all the different types of signs, helping to unify and mark that which is unique to the area or municipality. This plan recommends the city explore the possibilities of developing a wayfinding system for the entire city (see Figure 10).



**Figure 10: Wayfinding signage for a town**

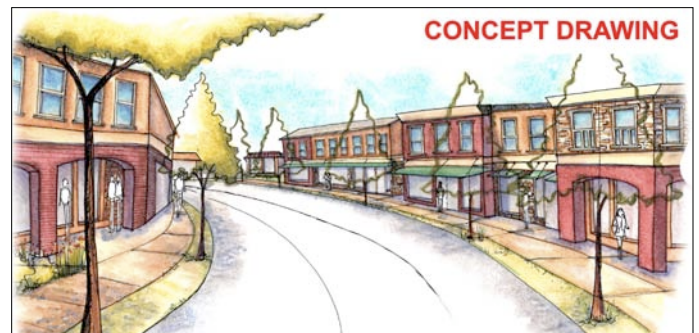
## Exterior Appearance of Buildings

### Mixed Use Area

Exteriors should be clad in brick, stone or a combination of both. This will give the area a more upscale appearance.

*Fenestration* is the design and disposition of a building's windows and other exterior openings. Buildings should have plenty of windows to make it and surrounding environs look inviting. Windows should be on all sides of the floors most frequently seen by the public.

*Roofs* provide a component of character to an area similar to materials that comprise the exterior of buildings. There should be a variety of roof styles pitches to help give the area a unique feel and appearance (see Figure 11).



**Figure 11: Concept drawing showing recommended exterior finishes, multi-storied buildings with large amount of windows**

### Industrial Use Area

Exterior finishes of industrial buildings, particularly those located adjacent to the loop road and across from the mixed land use area, should be compatible with and complement materials used for buildings within the mixed use area. For example, this could include using the same exterior finishes and use of windows in the front of the industrial buildings to give the appearance that the two areas contain similar land uses.

# 5 Design Recommendations

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## **Commercial Retail/Service Use Area**

Many of the buildings in the commercial retail/service area adjacent to Buttermilk Pike are expected to be chain restaurants or similar uses. Many of these tend to use “formula” buildings. The most familiar of these are the fast food restaurants. These buildings look the same throughout the nation and are recognizable by their design and color. Unfortunately, these buildings also tend to create an atmosphere that looks and feels like all such areas in every other city. Crescent Springs desires this area to be unique and that buildings complement those within the adjacent mixed use area. These buildings should use the same, or similar exterior finishes that would compliment buildings in the mixed use area (see Figure 12).



**Figure 12: Example of a national franchise building with brick exterior**



# Utilities and Green Infrastructure



## Utilities

The study area has adequate utilities to meet the needs of nearly any use. The utility providers within the study area are not planning on making any improvements to the area in the near future. In general, the amount and type of redevelopment envisioned in this study should not require major changes to the utilities. The Northern Kentucky Water District will review their system if a use with a high water demand is planning to locate within the study area. Currently electrical power is conveyed using overhead lines. To reduce the cluttered appearance, it is recommended for the city to work with Duke Energy to bury the power lines as redevelopment occurs. The cost of this change would be a part of the overall redevelopment cost of each project.

## Green Infrastructure

Green infrastructure is a concept that elevates the importance of the natural environment to the level of the built environment, requiring careful consideration and planning. Green infrastructure utilizes land and water that supports native species, maintains natural ecological processes, sustains air and water resources and contributes to the health and quality of life of our citizens. It also includes community initiatives integrating the natural ecosystem with the built environment using elements such as parks, tree lined streets, rain gardens, bio-retention systems and green roofs. Sanitation District Number One is currently working with communities and citizens to incorporate green infrastructure techniques into their overall stormwater and water quality management plans.

The study area is heavily developed and has few green infrastructure measures being practiced. The primary elements of green infrastructure are the wooded hillside along Dry Run Creek in the vicinity of the railroad, and the tree canopy found within the residential area. It is expected that the hillside will remain wooded into the future due to its steep slope and the challenges it presents to potential development. With the expected replacement of the residential uses with commercial or industrial uses (see Chapter 4), the amount of tree canopy may be further reduced. This plan recommends landscaping around buildings, in parking lots, and along the streets to help compensate for the loss of these natural benefits. It is the intent of this plan that the amount of green infrastructure not be diminished due to the redevelopment, but rather increased whenever possible.

## Stormwater Control

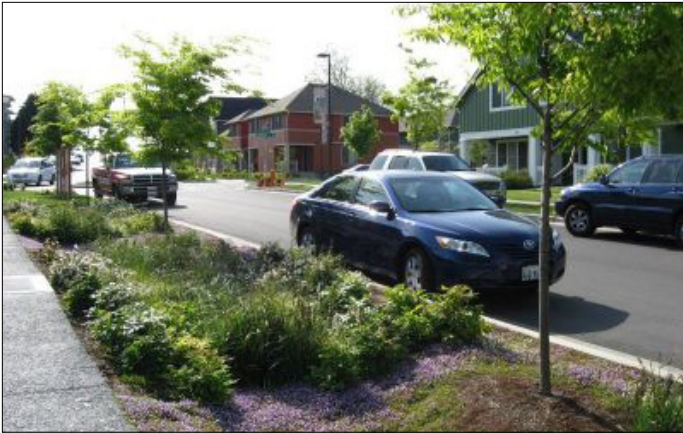
Stormwater control is typically an issue with developed areas. The large amount of impervious pavement channels large amounts of surface water into the man-made stormwater system. This system of pipes is expensive to build and to maintain system of pipes, and the large volume of water they discharge can cause flooding and severe erosion. The goal of using green infrastructure stormwater management techniques is to reduce the amount of water flowing into the man-made system. This is accomplished by allowing stormwater to infiltrate the ground using such methods as biofiltration swales, retention ponds and vegetated swales, stormwater gardens, and green roofs. These techniques can reduce the potential for flooding and reduce the size, and thus the cost, of man-made stormwater systems.

Currently Sanitation District Number One does not identify any flooding issues within the study area. Instead, it does identify only those issues or potential issues typically involving stormwater runoff occurring immediately after heavy rainstorms. Proposed redevelopment increases the likelihood that the area may experience stormwater issues with redevelopment the following recommendations are offered.



# 6

## Utilities and Green Infrastructure



**Figure 13: Example of a rain garden**



**Figure 14: Retention pond and rain garden**



**Figure 15: Example of another pervious surface**



**Figure 16: Pervious concrete allows water to flow through it into the ground below**

- A portion of the landscaping around structures, in the planting strip (area between the sidewalk and street), and in and around the parking lots should be designed for stormwater infiltration. These specially designed rain gardens usually require improving the soil for faster infiltration and the use of native plants instead of typical grass. The amount and location of these rain gardens will be determined as the redevelopment of the area occurs. The city and property owners should work with Sanitation District Number One to determine the amount and best placement of these elements.
- Use pervious surfaces (allows water to penetrate through and into the ground) where possible: parking lots, sidewalks, and courtyards
- Redirect roof drains from emptying into the stormwater system by diverting into retention ponds and/or swales, infiltration landscaping, and cisterns.

# 6 Utilities and Green Infrastructure

## Tree Canopy

The amount of tree canopy is the current standard for measuring green infrastructure. Trees help cool the air temperature, absorb pollutants, and increase the value of the land. Trees also provide habitat for a wide range of native fauna. Approximately 13 acres of tree canopy comprises 18 percent of the study area. While there is no standard minimum amount of tree canopy for a suburban commercial area, the study area is above the American Forests Organization's recommendation of 15 percent for an urban business district. As noted previously, there is a good possibility the recommended redevelopment will reduce the amount of tree canopy unless careful measures are taken to add trees. The following recommendations are potential actions to be taken by the city or a developer to introduce more trees into the existing urban landscape.

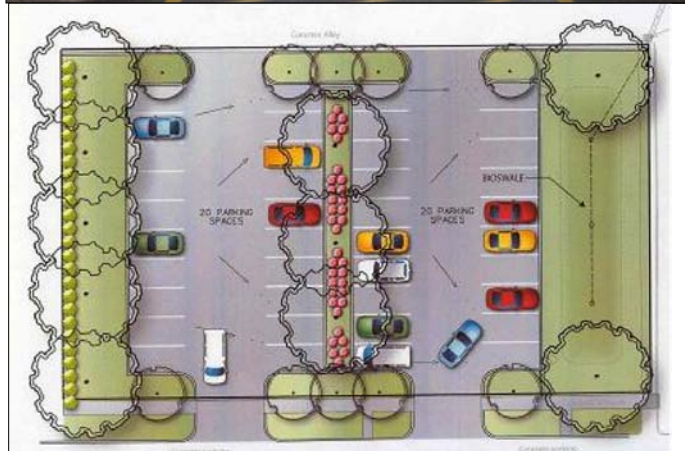


Figure 17: Examples of landscaping parking lots

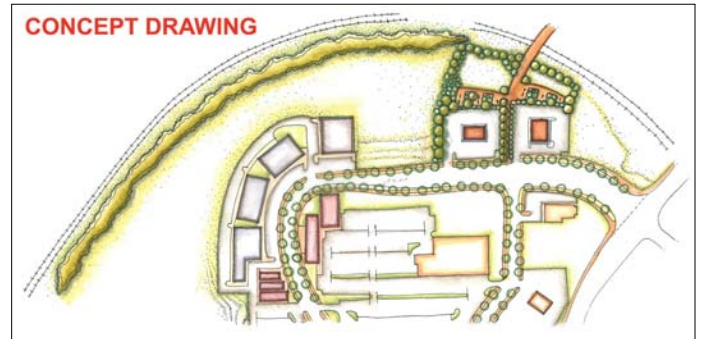


Figure 18: Concept drawing showing possible park at foot bridge and tree buffer along railroad

Not only will these measures increase the amount of tree canopy, they will also improve stormwater management and help beautify the area.

- Trees should be a part of the landscaping along roads, around buildings, and in parking lots. The Northern Kentucky Urban and Community Forestry Council is a good resource to determine the best trees for this region (see Figures 17 and 19).
- A narrow strip of land bordering the railroad could be set aside as a tree buffer. The railroad is a low point where stormwater gathers during heavy rain events. This buffer would serve as a stormwater infiltration strip and provide an attractive screen helping to minimizing the railroads negative visual impact (see Figure 18).
- A small park could be created near the foot bridge that crosses the railroad. This bridge connects Sub Area A to the older part of Crescent Springs and provides convenient access for nearby residents. A small park would also be an attractive amenity for workers in nearby office buildings and other businesses to eat and relax (see Figure 18).



Figure 19: Example of landscaping around building



# 6 Utilities and Green Infrastructure

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# 7

# Implementation

Briefly stated, this plan recommends significant changes to the roadway system, relocation of much of the highway retail uses, and the redevelopment of most of the study area. These recommendations are extensive and will very likely require decades to complete. For the primary components of this plan to come to fruition there will need to be extensive coordination between the public and private sector; and the city will need to stay focused and pursue the goals of the plan. While the full implementation of this plan is likely to span many years, the efforts to accomplish the goals and objectives outlined herein should begin immediately upon approval and adoption of this plan.

## **Gateway Implementation Committee**

To assist the city in fulfilling these goals, it is recommended a committee be formed to oversee these activities. This group should be formed soon after the *Crescent Springs Gateway Study* is approved by the Kenton County Planning Commission (KCPC). It is recommended that this committee be made up of property and business owners in the study area and from other nearby commercial areas along with concerned and interested city residents. The make up of the committee is important because it gives residents and business owners most impacted by the study authority, responsibility and some control in its implementation. It would also be advisable for city council to establish an ongoing liaison with such a committee by appointing a member to sit in on meetings and to serve as an established communication link with city council. One of the first items for the committee would be to review the current zoning and work on rezoning the study area.

## **Zoning**

Although not directly discussed in the study, zoning is the logical next step after a plan has been conducted. It is expected the zoning will follow the three recommended land uses identified in the plan. Included in the work on zoning is the plan recommendation that all existing uses be considered conforming regardless of whether or not the zoning district within which they lie would permit the existing use. This will insure that current property owners, both residential and commercial, can continue to use their properties and make improvements without hindrances. However, this plan recommends that land area for these existing uses not be able to expand onto other parcels.

The zoning for the commercial retail/service land use area is expected to be fashioned for highway retail type businesses. The needs of these users are convenient access and parking with drive-thru windows. The zoning will need to take into consideration the design recommendations made in the study which includes reducing curb cuts, locating businesses close to the street, sidewalks, landscaping, signage and exterior finishes that correspond to those in the mixed use area. Additionally, shared parking requirements and an overall evaluation of parking standards should be undertaken to see if space devoted to parking can be reduced.

The zoning for the mixed use area is expected to reflect the desire to have a vibrant center attractive to businesses and individuals as a place to work, shop, and dine. The design recommendations for this area call for multi-storied buildings, stone and brick exteriors with plenty of windows. The general design recommendations for the entire area should be followed such as locating buildings close to the street with the majority of parking to the side or rear of the building, landscaping around the buildings, and sidewalks.

The industrial land use area should follow many of the recommendations found in the other two areas such as reduce curb cuts, shared parking to the side and/or in the back of the building, locate the building close to the street, with landscaping and sidewalks.



# 7 Implementation

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## Land Use Redevelopment

The changes necessary for the study area to reach its full potential are extensive and complex. The changes to the roadway system and the recommended land uses will motivate many of the existing highway retail businesses to relocate within the study area. Many of these businesses are located in the middle of Sub Area A along Hazelwood Road. It is expected these businesses will want to move closer to High Street and Buttermilk Pike as a convenience for their customers. The majority of the existing structures do not conform to current commercial needs and will have to be removed. Additionally, the study area is divided into many small parcels. These issues add cost and complexity to the redevelopment process. These changes will take time, patience, and perseverance to successfully accomplish.

The Gateway Implementation Committee, previously described, will play an active role in redeveloping the study area. This group could transition into a community investment corporation (CIC) or a similar non-profit corporation. This would give the city some advantages in redeveloping the study area and could also be utilized for future redevelopment of other areas in the city. Typically a CIC is a non-profit organization established to develop commercial and industrial activity by investing in property. The Crescent Springs CIC could pursue strategic land procurement, consolidate parcels, work with developers to insure the plan is followed, and negotiation with current businesses to relocate.

The advantages of a CIC are many:

- Although it works for the interest of the city, it has a separate governing board and has the ability to leverage debt without a pledge of the full faith and credit of the city.
- It is not obligated to adhere to the public procurement process. It operates more as a private sector entity.
- They are typically tax exempt, and can borrow at a lower cost and can pass these savings on through CIC sponsored real estate transactions.
- The city can use the CIC as a development corporation; broadening the scope of its mission by providing professional training, employment services, technical services, and marketing strategies.

Upon adoption of this plan and creation of the Gateway Implementation Committee, the city should begin the process of researching the legal and organizational requirements for this type of entity.

## Roadway Network Changes

This plan calls for three major changes to the roadway system in the study area:

- Building a loop road and removing some of the existing roads within the Sub Area A,
- Realigning the intersection of Buttermilk Crossing and Grandview Avenue, and
- Changing the full service signal intersection at Hazelwood Road/Grandview Avenue and Buttermilk Pike into a right-in/right-out only intersection.

To ensure the quickest possible development of the alterations to Buttermilk Pike, Crescent Springs' city officials should work with the Kentucky Transportation Cabinet. This stretch of Buttermilk Pike is controlled by the Commonwealth of Kentucky. Any improvements must be coordinated with and approved through processes established by the Cabinet and the Ohio, Kentucky, Indiana Regional Council of Governments.

For these major alterations to the roadway system to materialize many smaller changes have to occur. These changes are outlined below in three general time frames. Those listed first are the changes that can be achieved early in the process and some of them must happen before other changes can occur.

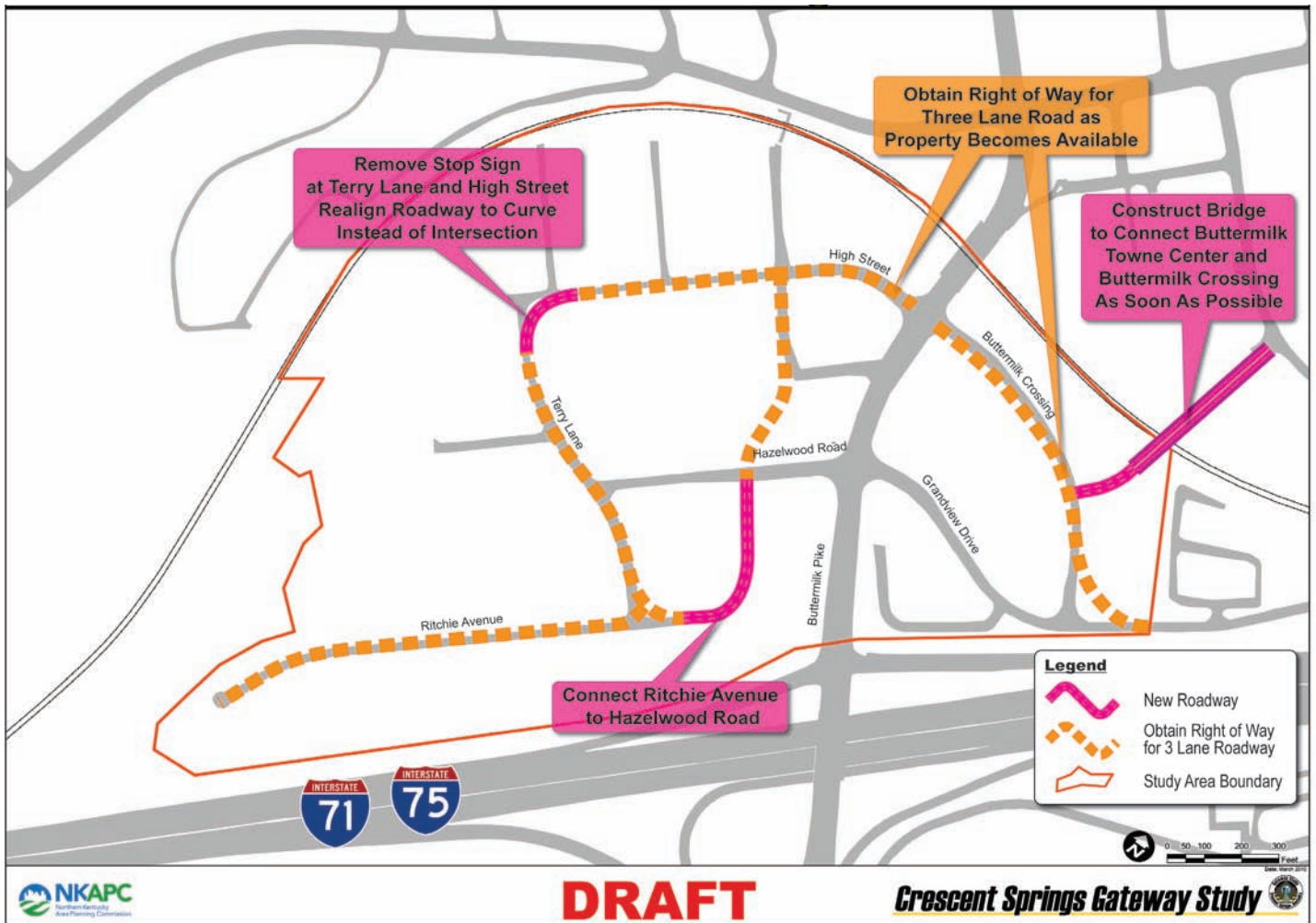
### Short-term Changes (See Map 5)

Roadway changes that can occur early in the redevelopment process are those that do not interfere with the current roadway system. To begin the process there are some changes that can be started fairly soon if funds are available.

- To begin building the loop road within Sub Area A Ritchie Avenue could be connected to Hazelwood Road by enlarging the currently private entrance of the Chipotle restaurant. This new road will need to be exit only until the intersection is changed to right-in/right-out only to prevent vehicles from backing up into the Hazelwood Road/Buttermilk Pike intersection.

# 7 Implementation

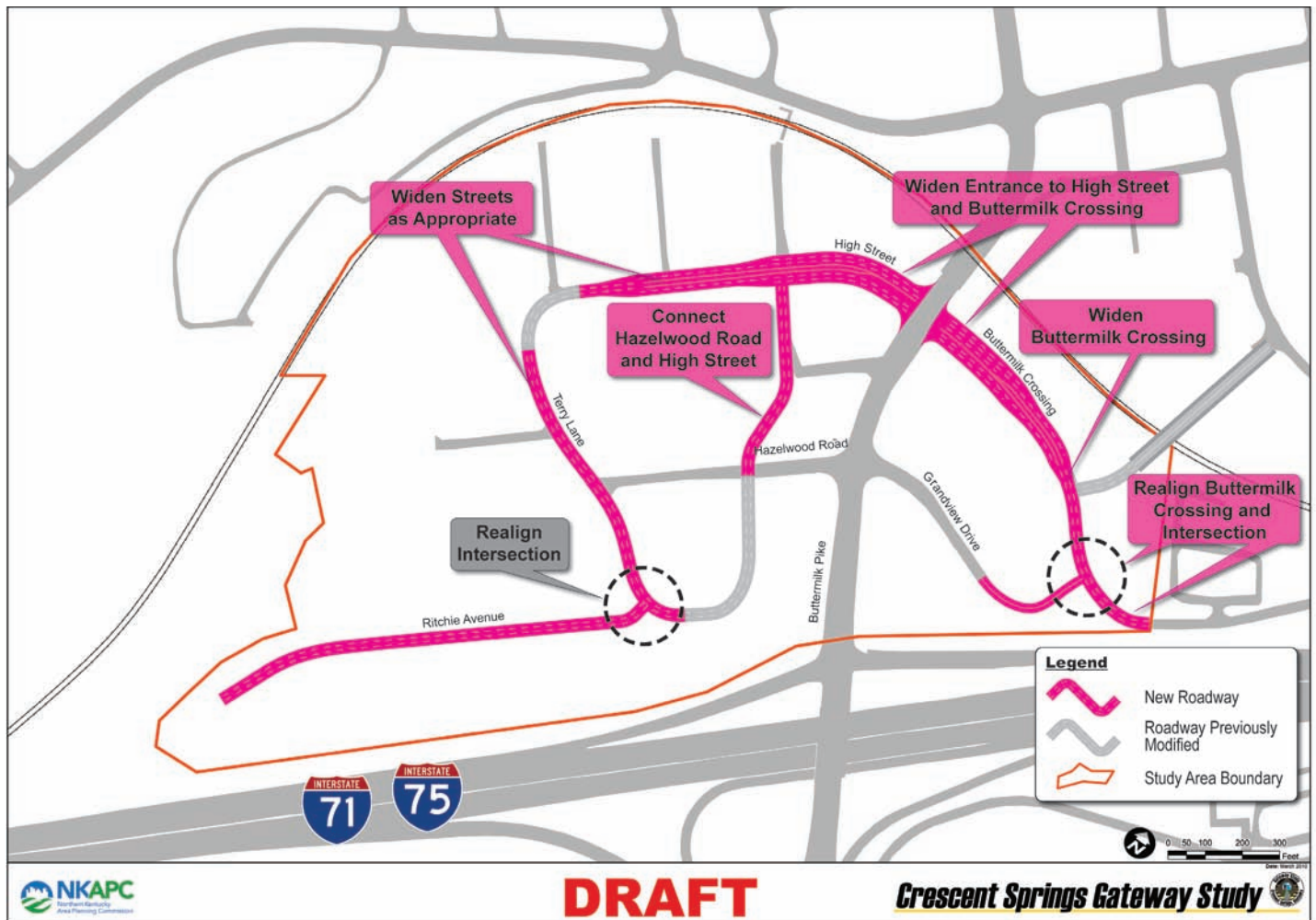
Map 5: Illustration of short-term changes



- Remove the stop sign at the Terry Lane/High Street intersection and construct a more gradual curve connecting the two streets. This change may increase the speed of traffic traveling this route. To prevent this, traffic calming measures may need to be implemented along with this change.
- Build a connecting road and bridge between Buttermilk Crossing and Clock Tower Way. This bridge could significantly increase traffic on Buttermilk Crossing requiring the addition of an extra lane or two on Buttermilk Crossing. This bridge helps reduce traffic on Buttermilk Pike by providing a direct connection between the two commercial centers. Directly connecting the two areas also creates a stronger commercial center and a more desirable destination.
- Acquire land along the expected right-of-way of the proposed loop road as redevelopment occurs within the area. To begin this process it may be necessary for the city to provide engineering services to determine just exactly how much rights-of-way are needed for these improvements. As noted within the study the portion of the roadway near its intersection of Buttermilk Pike will be a six to eight lane cross-section that will transition to a three lane cross-section as it progresses into the interior of the area. This item can be started as redevelopment starts and continue for many years as redevelopment progresses.

# 7 Implementation

Map 6: Illustration of mid-term changes



## Mid-term Changes (See Map 6)

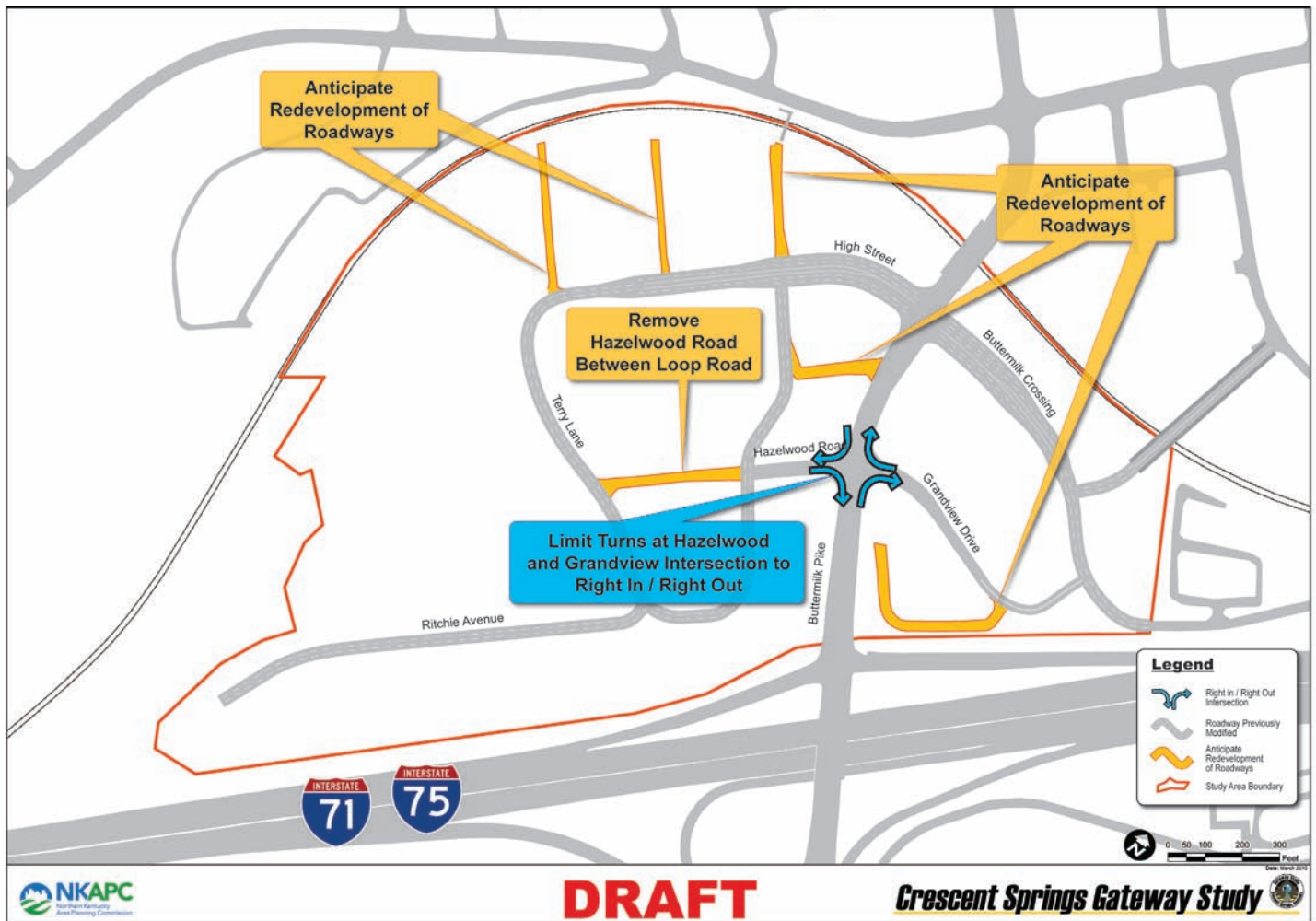
This next group of changes can be undertaken only after rights-of-way have been secured:

- Widen the targeted roads to three lanes. Currently the roadway away from the intersections with Buttermilk Pike is two lanes. This widening cannot occur until all of the right-of-way is secured. This widening does not have to occur until the additional lane is needed.
- Widen the entrances of High Street and Buttermilk Crossing to six to eight lanes. This widening is in anticipation of the increase in traffic using this intersection to access Sub Areas A and B once the Hazelwood Road/Grandview Avenue, Buttermilk Pike intersection becomes right-in/right-out.
- Connect Hazelwood Road to High Street with the connection of Ritchie Avenue to Hazelwood Road. This connection completes the loop road and is necessary for vehicular ease of movement within Sub Area A.
- Realign the Ritchie Avenue/Terry Lane intersection. This change removes the stop sign on Terry Lane easing the flow of traffic along the loop road. This change could occur earlier but needs to occur eventually to allow the loop road to be stop free.



# 7 Implementation

Map 7: Illustration of long-term changes



## Long-term Changes (See Map 7)

These final changes will occur at the end of the process, only after the previous changes have been completed:

- Realigning Buttermilk Crossing and Grandview Avenue intersection. This change must be made before the Hazelwood Road/Grandview Avenue, Buttermilk Pike intersection becomes right-in/right-out. Once this change is made and the High Street/Buttermilk Crossing, Buttermilk Pike intersection becomes the primary entrance into Sub Areas A and B. This increase in traffic will require Buttermilk Crossing to connect with Grandview Avenue without a stop.
- Abandon the section of Hazelwood Road between Terry Lane and the extension of Ritchie Avenue. This eliminates the full intersection at Hazelwood Road and the extension of Ritchie Avenue providing land for redevelopment and removing a potential bottleneck in the loop road.
- Changing the Hazelwood Road/Grandview Avenue intersection with Buttermilk Pike into a right-in/right-out. This is the final element and can not happen until most of the changes listed above have occurred. This will entail a central median down the middle of Buttermilk Pike making a left hand turn impossible and raised triangles at the entrance of Hazelwood Road and Grandview Avenue to direct the traffic entering or leaving the street.





