

## CHAPTER TEN

### EXECUTIVE SUMMARY

The construction of a new road has the power to improve or damage the quality of life for a community. With proper planning and development, a street or road can compliment the area and be a positive addition to the city. Due to the impact of upcoming road improvements around Columbia, a small area plan was created to address impacted areas that lie outside the city limits. By studying the areas surrounding the KY 55 Bypass and the reconstructed portion of KY 61 and the new KY 61 Interchange, the city hopes to reduce or eliminate any negative effects that the pending road improvements might create.

The first recommendation is to rename the By-pass with a street name that will be a positive reflection on the City of Columbia. Calling it “the By-pass” suggests that it avoids the city or is away around the city rather than an integral part of the city’s future. Perhaps a naming contest for the public or schools could be held to spark interest in planning for the future of the city.

To insure that new development around the city will have a positive impact on the future of Columbia, the following measures are recommended:

- Annex the unincorporated areas within the planning area into the City of Columbia
- Preserve any existing wetlands and incorporate them into on site storm water drainage plans
- Reserve flood prone areas for open space uses, such as a Conservation Zone
- Protect the Rocky Hill Historic District from the impacts of development
- Require a 30 foot wide green space buffer zone around the bypass to minimize adverse noise and visual impacts

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- Adopt lighting, signage and fence standards for properties along the bypass and KY 61
- Require all new developments to have sidewalks or bikeways
- Develop a pedestrian/bikeway plan for the city
- Adopt design standards for all large scale retail developments
- Limit road access points to the bypass from any new developments
- Locate new commercial and light industrial developments near the Cumberland Parkway interchanges
- Prohibit new residential developments in high noise areas near the Cumberland Parkway
- Immediately update zoning and subdivision regulations to incorporate the above requirements

By preventing uncontrolled growth and strip development around the pending road improvements, Columbia can protect the character of the city. Quality new development can provide new economic development opportunities for the area, without sacrificing the safety or character of the city. The above recommendations will ensure that new infrastructure and associated developments enhance the quality of living in Columbia and Adair County.

## **BACKGROUND**

During the preparation of the update of the Columbia Comprehensive Plan in 2005, it was recognized that the pending road improvements around Columbia would have a significant impact on the surrounding properties. These road improvements include the construction of the KY 55 Bypass, the construction of a new interchange on the Louie B. Nunn Cumberland Parkway

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(Cumberland Parkway) at KY 61 and the reconstruction of KY 61 between the KY 55 Bypass and the new interchange. There was also concern that without zoning and implementation of additional land use policies, the new development around these improvements would likely be in the form of uncoordinated strip development and multiple new access points which would lead to traffic congestion and negative visual impacts. Alternatively, coordinated, quality new development is an opportunity to enhance the desirability of the area for residents and businesses and therefore improve economic development opportunities for Columbia.

As most of the area around these improvements was not within the Columbia city limits, future development had not been addressed in detail as part of the Comprehensive Plan update. Therefore, the Columbia Planning Commission decided to address these areas as small area plans that would be included in the Comprehensive Plan update. Small Area Plans (SAPs) are typically developed for designated areas within a city or county that require a higher level of land use study due to significant changes (road improvements, extension of utility services, annexation, etc) which are anticipated to occur within the planning period and have the potential to significantly impact the pattern of existing and future development as well as the quality of life within a community.

## SCOPE OF STUDY

This small area plan covers two areas. The first area is the land around the KY 55 Bypass on the west side of Columbia. The second area is the land around the new KY 61 interchange with the Cumberland Parkway and the land around the reconstructed portion of KY 61 from near the Cumberland Parkway to the KY 55 Bypass southwest of Columbia. As there was significant overlap of the land included in these two areas, they were combined into one planning area with the sub-areas addressed separately when appropriate. The specific properties included within the planning area boundary are shown on Figure 10-1, the Property Ownership Map.

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## **KY 55 BYPASS DESIGN**

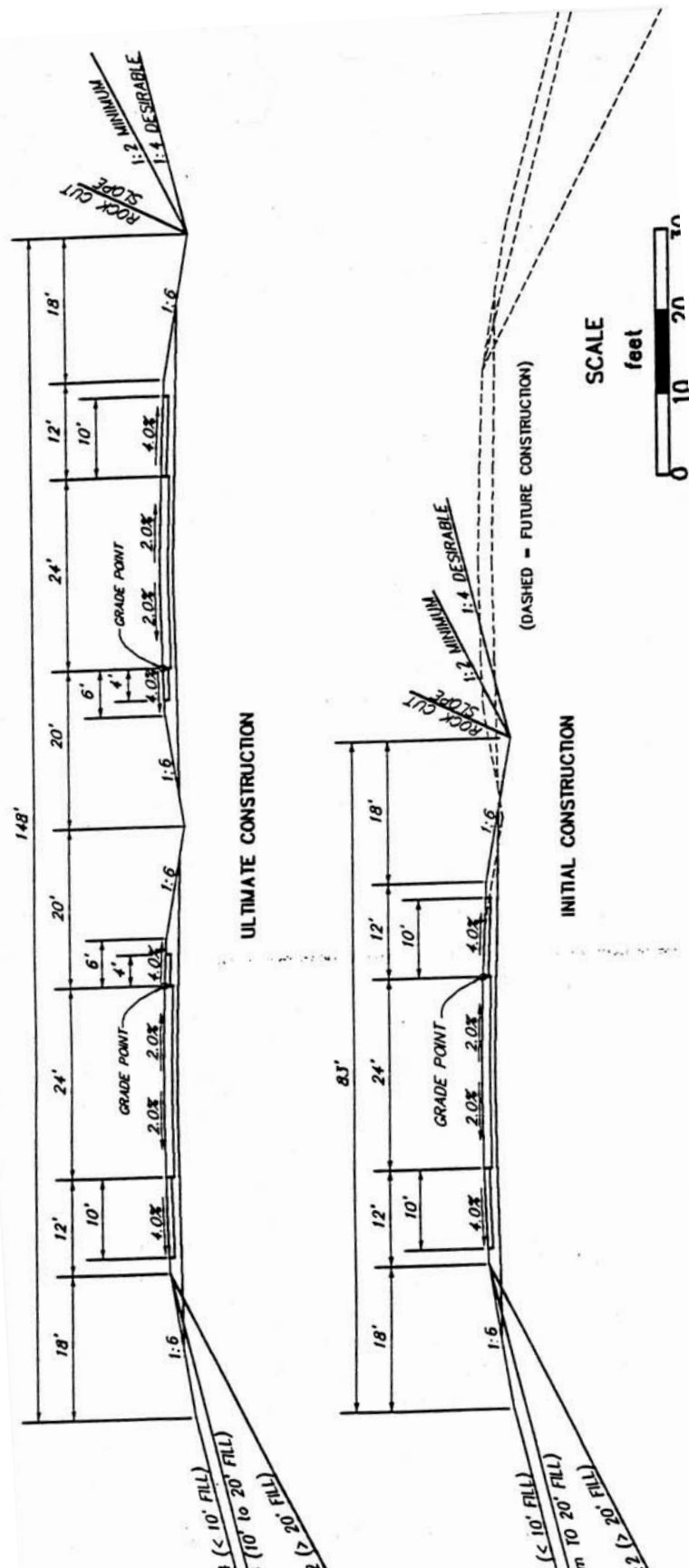
The 5.3 mile long KY 55 Bypass will begin at KY 55 to the north of Columbia. The bypass will form a half circle to the west of Columbia, ending back south of Columbia at KY 55 near the industrial park. Although the bypass will initially be a two lane road, its right of way will include 10-12 feet wide shoulders that will allow for future lanes if needed. Figure 10-2 shows a typical cross section. The construction of two overpasses will allow the bypass to cross over Cumberland Parkway and KY 61 near its intersection with KY 439 to the west of Columbia. The bypass will also intersect KY 439 and KY 767.

The bypass will be accessible by 20 planned access points placed approximately every 1,200 feet. These access points will include intersections at Industrial Drive, KY 61 (south of Columbia), KY 439 and KY 767, Seth Trace, Actor Lane, and KY 55 at both its south and north ends. The bypass plan also includes the placement of two new traffic lights at the intersections with KY 61 and KY 55 north. Although the bypass will not have direct access to the Cumberland Parkway, it will intersect KY 55 just south of the existing interchange in the south end of Columbia. Bidding for the construction of the bypass is expected in November of 2006 contingent upon completion of property acquisition. Once construction starts, it will take about two years to complete.

## **KY 61 RECONSTRUCTION & INTERCHANGE**

KY 61 reconstruction entails the construction of a new interchange at the intersection of KY 61 and the Louie B. Nunn Cumberland Parkway and the construction of new highway segments of KY 61 and KY 80 in adjacent areas. This new interchange will include four ramps for merging on and off of the parkway. A new access road to L. Willis Road will also be constructed to the south of the interchange. In addition to the parkway interchange, reconstruction will include the construction of five new access points to KY 61/80. These will include access points to Burnett Road, the sewer lift station, and

Figure 10-2 Columbia Bypass Typical Road Section



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three entrances to existing segments of old KY 61/80. This project is currently under construction. Work is expected to be completed in the spring of 2007.

## **PROPERTY OWNERSHIP**

Figure 10-1 shows the parcels of land included in the Small Area Plan. Ownership information for these parcels is included in Appendix B. This information is based on the records of the Adair County Property Valuation Office as of July, 2006. Ownership for small lots and residential lots within subdivisions is not included as it is unlikely that these properties will be subdivided in the future.

## **ENVIRONMENTAL CONSIDERATIONS**

The primary environmental considerations within the SAP are floodplains, steep slopes, noise and the proposed Rocky Hill Historic District.

***Floodplains and Wetlands*** - While to date FEMA floodplain maps have not been prepared for Adair County, flooding occurs along Russell Creek, Pettys Fork and some of their tributaries. Figure 10-3, the Wetlands Map, and Figure 10-4, the USGS topographic map, show the location of these streams. It should be noted that digitized FEMA floodplain maps are currently scheduled to be developed for Adair County as part of the Kentucky Flood Map Modernization program. It is anticipated that preliminary maps will be completed during the 2009 fiscal year (July 2008 to June 2009). In the absence of FEMA floodplain maps, the Soil Survey for Adair County was used to identify the location of flood prone soils within the planning area. Figures 10-5, 10-6 and 10-7 show the soils maps of the planning area. Flood prone soils include the following soil series and their map symbols:

Bruno – Br	Robertsville – Rb
Dunning – Du	Sequatchie – SeB
Huntington – Hf, Hg, Hu	Staser – Sg, Sm, St
Lindside – Ls	Whitwell – Wt
Melvin – Me	Wolftever - Wv
Newark – Ng, Nk	

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These soils were used to approximate the location of the 100 year floodplain. Wetlands within the planning area are shown on Figure 10-3. While some of these wetlands are found along adjacent streams and creeks, most are in the form of small ponds or sinkholes. These existing wetlands should be preserved and incorporated into the on site storm water storage and drainage plan for each new development.

**Steep Slopes** - As discussed in Chapter 4, Environmental Considerations, slopes in excess of 12 percent can have severe limitations for urban development. These limitations are greater for more intense uses such as commercial and industrial uses. While low density residential use can be developed on steeper slopes, site specific conditions must be evaluated to determine the appropriate house design to overcome these limitations. Steep slopes as identified on Figure 10-4 and Figure 4-2 were considered when determining the recommended future land use for specific properties.

**Noise** - Railroads, airports and highways are the major noise contributors to communities. There are no railroads within the planning area and the Columbia Adair County Airport does not carry commercial traffic, so they are not a concern. Highways are a concern, especially highways with continuous traffic flow such as the Cumberland Parkway. As the Cumberland Parkway is expected to eventually be upgraded to interstate road standards and become I-66, additional increased traffic can be expected in the future which will increase noise levels. Current average daily traffic counts (ADT) on the Cumberland Parkway in Adair County range from roughly 4,500 to 6,000 vehicles per day. Once the Parkway is converted to Interstate, these levels can be expected to increase to 14,000 ADT in 30 years. A preliminary noise analysis based on this ADT indicates that a site specific noise assessment should be conducted if any noise sensitive use such as residential use is proposed within 900 feet of the Cumberland Parkway.

Noise from the new bypass can also be a concern. The Environmental Assessment for the KY 55 Bypass included a noise analysis. As there were few residences or other noise sensitive uses near the proposed bypass route, no mitigation measures such as noise barrier walls were recommended. However,

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it was recommended that a buffer zone be required around the bypass to help minimize adverse noise impacts. The preferred method to mitigate noise is to locate noise sensitive uses out of the high noise area. The second method is to prevent noise from reaching the noise sensitive user through some sort of barrier. This barrier could be a wall, berm, hill or noise compatible land uses such as industrial or commercial uses where buildings act as a barrier. A vegetative buffer zone will help keep noise sensitive uses away from the bypass and will also act as a noise barrier to reduce noise levels.

***Historic Resources*** - Eight structures which are eligible for listing on the National Register of Historic Places are located in the planning area. Five of these structures are located near each other along Rocky Hill Road. They are also similar in style and therefore constitute an eligible historic district. The proposed district is the Rocky Hill Historic District (called the Rock Hill Historic District in the Environmental Assessment). This district is located north of the bypass along Rocky Hill Road as shown on Figure 10-1. According to the Environmental Assessment, the Rocky Hill Historic District is a noteworthy example of an Adair County community that was agriculturally successful during the mid-nineteenth to mid-twentieth centuries. The Rocky Hill Historic District extends for about one mile along Rocky Hill Road. The road is narrow with a dry laid rock fence along much of the frontage. The district consists of three farm complexes and a one room school. The Samuel Feese Farm, which contains the site of an early gristmill, anchors the northeastern corner of the district. The George Washington Dohoney Farm anchors the southwestern end. The Willis-Murry Farm and tenant house are located on the high ground near the center of the district, as is the Rocky Hill School.

Three other individual structures which are eligible for listing on the National Register of Historic Places are within the planning area. The Dahoney House (which has since been demolished) was located near the intersection of KY 61 and KY 80 just north of the new interchange. The Cheatham House is located north of the lumber mill off of KY 61, just east of Pettys Fork. The William Trabue House is located on the south side of KY 767 just south of the bypass route.

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## EXISTING LAND USE

**KY 55 Bypass** - Existing Land Use around the KY 55 Bypass Corridor is shown on Figure 10-8 and Figure 10-9. On the north portion of the bypass along KY 55, there is an area of existing commercial development just south of the intersection of the bypass. The area just west of this commercial development remains in agricultural use as it is a low lying area within a horseshoe shaped loop of Russell Creek. Just west of this area, the land has been subdivided into single family lots. Houses have only been constructed on a few of these lots. There is a concentration of existing homes at the intersection of Murray Lane and the KY 55 Bypass route. The bypass crosses undeveloped land from KY 767 west to KY 61. There is a concentration of development near the intersection of KY 61 and KY 439 (Greensburg Street). The bypass will cross this area with an overpass. An existing lumber mill is located just west of the bypass and south of KY 61. The Christian Life Center, owned by the Columbia Baptist Church is located just southeast of the lumber mill. There are existing commercial and residential lots along KY 61 to the east of the bypass route.

There is also a mix of existing development along KY 61 near the intersection with the bypass. This area has a mix of residential, commercial and industrial uses. The land along the bypass between KY 61 and the Cumberland Parkway is largely undeveloped agricultural land. South of the Cumberland Parkway, the bypass passes near the Adair County Youth Development Center. There are also some existing residences and a church between the bypass and KY 55 south of the existing interchange. The Columbia Adair County Industrial Park is located east of KY 55 at the south end of the bypass.

**KY 61 Interchange** - Existing land use along the reconstructed portion of KY 61 and the new interchange is shown on Figure 10-10. The realignment of KY 61 passes through an area of industrial use just west of the intersection with the bypass. A mixture of strip residential and commercial uses lined the old route of KY 61 between the Columbia city limits and the intersection with KY 80. These properties will access the new route of KY 61 by way of the old existing road. Just west of KY 61 and north of KY 80 (Edmonton Road), there

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are existing residential subdivisions, the country club and the Columbia-Adair County Airport. South of the Cumberland Parkway, there are a few residences and one construction company office. The Adair County Transfer Station is located on the south side of L. Willis Road.

## **DEVELOPMENT RECOMMENDATIONS**

***Annexation*** - Due to the lack of zoning and subdivision regulations in the unincorporated areas of Adair County, it is recommended that all of the area within the Small Area Planning Boundary be annexed into the City of Columbia prior to providing sewer service to these areas. Annexation should occur before the land is subdivided as annexation is more cost effective and less complicated when fewer property owners are involved.

***Floodplain/Environmentally Sensitive Use*** - Any land with flood prone soils is considered environmentally sensitive and the construction of new structures should generally not be allowed within this area. The environmentally sensitive area is shown on the Future Land Use maps (Figure 10-11, 10-12 and 10-13). Once final floodplain maps are available, any floodplain areas not previously identified should be added to this use. The floodplain/environmentally sensitive land use as shown on the Future Land Use maps, includes the estimated 100 year floodplain (based on soils information), wetlands near the floodplain and a buffer area along the major creeks and natural drainage systems. These areas are recommended to be included in a Conservation Zoning District. Open land uses such as agriculture and open recreational uses should be permitted. Walking paths and bike paths should also be allowed within this land use.

***Green Space Buffer Zone*** - In order to reduce the impacts of noise and visual impacts on adjacent land uses and to maintain the scenic rural nature of the area around the Columbia Bypass and the reconstructed portion of KY 61, it is recommended that a green space buffer zone be required along both sides of the bypass. A 30 foot wide buffer zone should be required between the bypass and adjacent residential uses. The buffer zone should consist of densely planted material with at least 50 % evergreens. An enhanced landscape strip or 25 foot buffer zone is recommended between the bypass and KY 61 for

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development other than residential. When existing natural vegetation and/or topography exists in a sufficient height and density to provide a visual screen between the bypass and the adjacent land use, an option to leave the existing vegetation should be considered if the required width of the buffer zone is increased to 50 feet when adjacent to residential use and 30 feet for other uses. While no permanent structures should be allowed within the buffer zone, bike paths and walking paths should be allowed. Clearings will be necessary at street intersections for safety and visibility.

A buffer zone should also be maintained between residential uses and the Cumberland Parkway. The width of the buffer zone will depend on site specific conditions. It is recommended that a minimum width be established based on currently available traffic information. Reductions in this width would only be allowed if a site specific noise assessment is conducted to show that noise levels are acceptable if the width of the buffer zone is reduced or noise barriers are present or constructed.

***Lighting, Signage and Fence standards*** - It is recommended that lighting, signage and fence standards be adopted for properties along the bypass and KY 61. This could be done as an overlay zone or by amendments to the zoning ordinance. Lighting in commercial or public/semi-public uses should not infringe upon adjacent residential areas. Lighting should be directed away from and shielded from residential uses. It should be focused on the intended property only. Specific lighting styles could be required for a coordinated visual impact.

High quality fences should be required along the bypass and KY 61. Example standards are to require 4-rail plank fencing, masonry columns with wood panels, stone or decorative masonry. Signs should be limited in the buffer zone. Signage should have a design which coordinates with structures on the property being developed. High quality sign materials such as stone, brick, decorative block, high quality plastic, finished wood or metal should be required.

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***Pedestrian and Bikeway Facilities*** - It is recommended that the all new developments within the planning area be required to have sidewalks and/or a paved ten foot wide walking path/bikeway. The green space buffer zone and the floodplain/environmentally sensitive areas can serve as corridors for these multi-modal facilities. These facilities should also be provided along any new streets within the planning area. It is recommended that a Pedestrian/Bikeway Plan be developed and adopted for the City of Columbia and Adair County and be amended into the Comprehensive Plan. Contractors can then be required to construct bike paths that follow the recommended routes. Including a Pedestrian/Bikeway Plan in the Comprehensive Plan will also help to ensure that these facilities are considered by the Kentucky Transportation Cabinet when future road improvements are designed.

***Commercial Development Policies*** - It is recommended that design standards be adopted and required for all commercial developments with retail space of 50,000 square feet or more. This requirement can be added to the existing commercial zones for all new developments. These design standards should require facades and exterior walls which incorporate wall projections or recesses instead of long, continuous blank walls. Arcades, display windows, entry areas or awnings should be incorporated into the facade design to add interest. Smaller retail spaces which separate exterior entrances should be mixed into the development. Buildings should have architectural features and patterns that provide visual interest at a pedestrian scale. These features should reflect the local character of the community. Variations in roof lines should be used to add interest to the buildings and reduce the massive scale. Exterior building materials and colors should be aesthetically pleasing and compatible with surrounding neighborhoods. Building entrances should be highly visible to customers and have architectural interest.

Design standards should also address site design. Large retail buildings should have multiple entrances. The parking areas should surround the building rather than be located only in front. Parking areas should be landscaped with parking islands which include trees. Buildings should be located close to streets with parking on the sides or rear to allow convenient access to pedestrians as well as vehicles. The visual impact of the rear of the building

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should be addressed if the rear is visible from a public or private right of way. Outdoor storage, trash collection and loading areas should be screened from surrounding areas to reduce negative visual, noise and light impacts. Commercial developments should incorporate sidewalks, walking paths and bike paths into the overall design to provide safe access to and from surrounding residential areas.

***Streets and Access Management*** - The bypass was constructed to address congestion and safety problems associated with increasing regional highway traffic using existing main city streets and the courthouse square. The purpose of the bypass is to move traffic around the city in a quick, safe and efficient manner. The bypass also provides access to local commercial and residential areas. When a bypass is constructed, new development is drawn to it. Unless properly controlled, this new development can result in safety and operational problems that impair the road's performance and recreate the conditions it was designed to correct.

One way to ensure that the bypass continues to function primarily as a highway to move regional traffic is to limit access to the road. As the bypass is considered a rural highway, the Kentucky Transportation Cabinet limits access points to not closer than 1200 feet. There are 20 access points along the bypass. These access points range from existing road intersections to farm access points. This does not mean that the Columbia Planning Commission has to allow new roads to access the bypass at these points. New developments should be required to access the bypass by way of existing roads whenever possible. Existing roads should be upgraded between new developments and the bypass to increase the safety and carrying capacity of existing roads. Frontage roads, rear roads and other access management techniques can be used in new developments to avoid multiple new access points.

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## **FUTURE LAND USE**

The proposed future land use within the SAP is discussed below. It should be noted that any new development within the planning area should be contingent upon municipal wastewater service being available or constructed at the time of development. Each new development should be required to submit a development plan and follow the subdivision regulations. Road improvements should be required to be in place prior to or as part of the development.

***KY 55 Bypass*** - Figures 10-11 and 10-12 show the proposed future land use around the bypass. Commercial and medium density residential development are recommended east of Russell Creek. Access to these areas should be by way of existing streets or the existing route of KY 55, not the bypass. Low density residential development is recommended between KY 767 and the Russell Creek conservation area. Any new development in this area should use existing streets to access the bypass, no new access points should be required. No new development should be allowed to the north east of KY 767 to protect the Rocky Hill Historic District and the rural nature agricultural nature of this area. Low density residential development is recommended at the south west intersection of KY 767 and the bypass. However, development of this land should only be allowed if KY 767 is widened and improved between the development and the bypass and the access to the development is off of KY 767. When new residential development occurs along the bypass, the developer should consider having the first row of houses face the bypass with an access street to the rear of the property.

Public/semi-public use is recommended for the school owned properties. The school property will have direct access to the bypass which will greatly reduce bus and school traffic on narrow city streets. Low density residential development is also recommended between the school and the Rocky Hill area the reconstructed KY 61 although steep slopes will limit development in this area. Very steep areas should remain undeveloped open space. Commercial development is recommended on the north side of the bypass between KY 61 (Burkesville Road) and the Cumberland Parkway. Most likely one new access point will be needed in this area. The land to the southwest of the bypass in

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this area is very steep and should remain undeveloped or have very low density residential use. Public/semi-public and commercial use is recommended between the Cumberland Parkway and KY 55 north of the bypass. Due to steep topography the remaining land in this area should remain undeveloped or have limited low density residential use.

***KY 61 Interchange*** - The proposed Future Land Use along the reconstructed portion of KY 61 and near the new Cumberland Parkway interchange is shown on Figure 10-13. Due to steep slopes, the area between Pettys Fork and the intersection with the old portion of KY 61 is recommended for low density residential development only. Development in this area should use existing access roads such as the old loop of KY 61. The land near the Cumberland Parkway interchange is where commercial, office and public/semi-public uses should occur. Higher density residential uses are suitable as a buffer between commercial uses and lower density residential uses. Residential development should not occur immediately adjacent to the Cumberland Parkway due to the noise concerns addressed previously. Light industrial uses are suitable along L. Willis Road due to the existing industrial use (the transfer station), close access to the Cumberland Parkway and the lack of residential development in this area.

## IMPLEMENTATION

The first step to implementing this SAP should be to annex the land within KY 61 Interchange planning area into the City of Columbia. As the interchange and road improvements in this area will soon be completed, the pressure to develop the area is imminent. The Comprehensive Plan, with this SAP incorporated into it, should be finalized and adopted by the end of 2006. The next step will be to update the zoning regulations and subdivision regulations as necessary to implement the changes recommended by as part of the Comprehensive Plan update and this SAP.

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