Final Report

I-64 to US 23 Ashland Connector Study

Submitted to

KY Transportation Cabinet

Submitted by

ENTRAN, PLC

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EXECUTIVE SUMMARY

The Kentucky Transportation Cabinet (KYTC) conducted the I-64 to US 23 Ashland Connector Study to seek improvement strategies for current and anticipated future transportation deficiencies within the western portion of Boyd County. The study demonstrated the need for a new facility to relieve traffic congestion on US 60 through Ashland and to provide more efficient travel routes connecting to US 23 west of downtown Ashland.

The need for an improved transportation corridor between I-64 and downtown Ashland was first identified in the early 1990's. The original concept for the "Ashland Penetrator" route envisioned the project beginning on US 60 near the area known as Meads, paralleling the CSX railroad, and terminating west of downtown Ashland. The Ashland Metropolitan Planning Organization (MPO) added the Urban Penetrator to the Transportation Improvement Program (TIP) in 1996 and it was also included in the KYTC Enacted 1997-2002 Six Year Highway Plan (SYP) in 1996. Construction was scheduled to being in 2001, with an estimated cost of $7,000,000. A project was advertised by KYTC and a consultant team selected, but no project activities took place. The 2003 *Ashland Comprehensive Plan Update* noted that the most significant transportation challenge in Ashland was the need for a major arterial facility in the western part of the community to provide congestion relief to US 60, provide improved access to Town Center Mall and the Wal-Mart shopping center on US 23, and improve circulation. The Ashland Urban Penetrator remained on the FY 2006 – FY 2012 SYP as a scoping study between I-64 and downtown Ashland. The KYTC initiated the current study in 2007, renaming it the I-64 to US 23 Ashland Connector Study. There are no further phases programmed for this project.

The study team worked with a diverse array of local officials, interested individuals, and other stakeholders throughout the course of the study. This group, referred to as the Ashland Connector Advisory Team (ACAT), assisted the study team in defining project goals and issues and identifying both short term and long term improvement projects. Two public meetings were also held over the course of the study. The first public meeting was held in April 2008 to inform the public of the planning study, discuss various environmental and technical issues concerning the project area, and solicit input. The second public meeting was held in November 2008 to summarize the key findings from the study and to present the preliminary short-term and long-range projects developed based on input from the ACAT and feedback from the first public meeting.

A number of improvement alternatives were developed and evaluated during the study. The recommended improvements are summarized on **Figure ES-1**. The short-term improvements, summarized in **Table ES-1**, include potential spot improvements, or projects that can provide much needed benefits at specific locations within the study area. Most of these projects are low-cost, safety oriented improvements that can be implemented in a relatively short time frame.

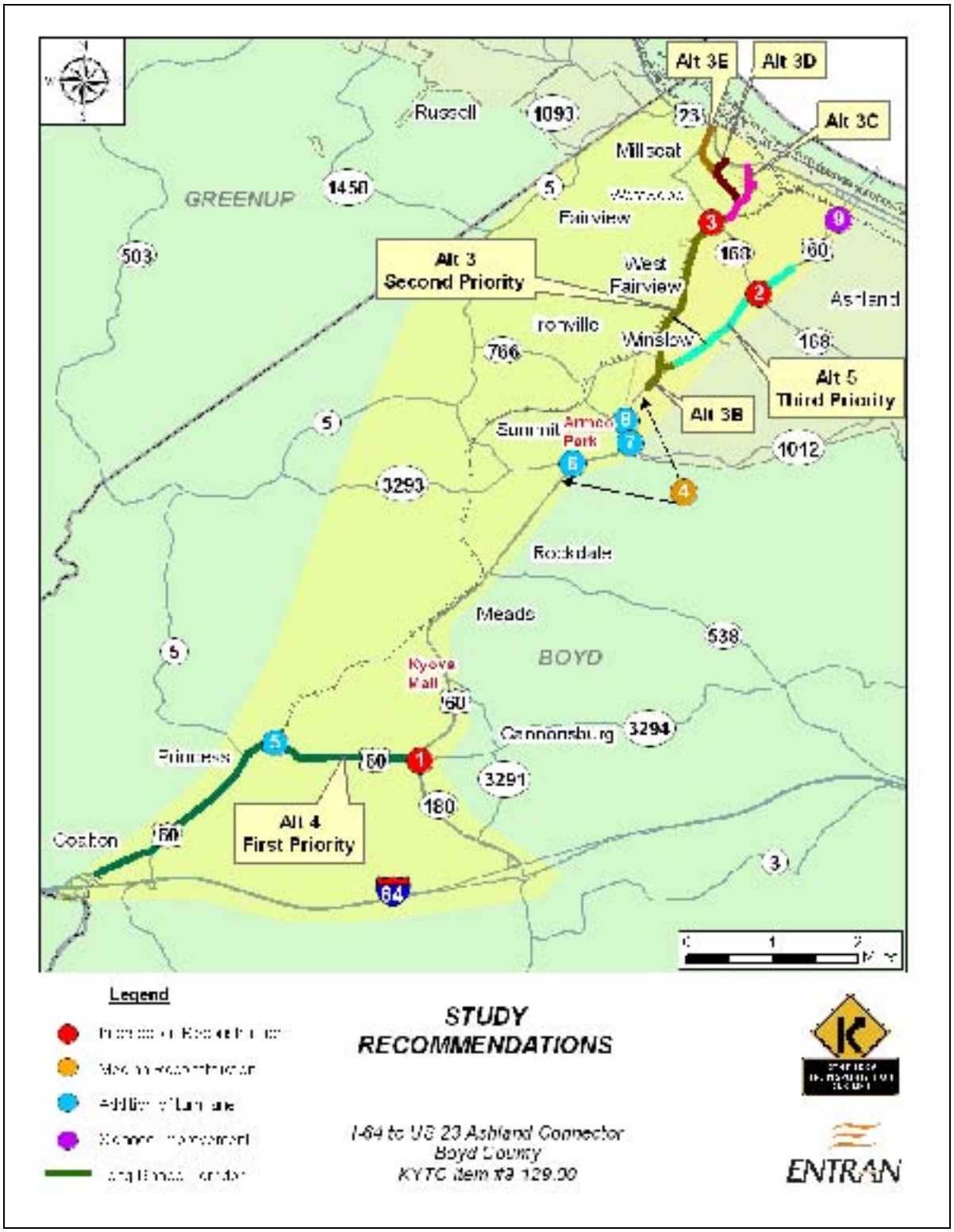


Figure ES-1: I-64 to US 23 Ashland Connector Recommendations

Table ES-1: Recommended Short-Term Improvements

Project #	Roadway / Intersection	Improvement Type	Description	Estimated Cost
1	US 60 @ KY 180	Intersection Reconstruction	Reconstruct grade on approaches	$1,000,000
2	US 60 @ KY 168 (Blackburn Ave.)	Intersection Reconstruction	Realign curved approach leg(s)	$750,000
3	Roberts Drive @ KY 168 (Blackburn Ave.)	Intersection Reconstruction	Improve at-grade railroad crossing on KY 168 west of Roberts Drive	$250,000 - $500,000
4	US 60 from south of KY 716 to KY 1012 (Boy Scout Rd.)	Median Reconstruction	Construct non-traversable median w/ selective median openings	$325,000
5	US 60 @ Paul Coffey Blvd	Addition of turn lane	Add NB left turn lane and SB right turn lane	$275,000
6	US 60 @ KY 716	Addition of turn lane	Add SB right turn lane	$125,000
7	US 60 @ KY 1012 (Boy Scout Rd.)	Addition of turn lane	Add NB right turn lane	$125,000
8	US 60 @ KY 766	Addition of turn lane	Add SB right turn lane	$125,000
9	US 60	Signage Improvement	Provide additional/improved signage for NB US 60 approaching bridge	$200,000

The recommended long-range corridor alternatives, summarized in **Table ES-2**, represent significant improvements to existing roadways or potential new roadways recommended for further consideration. Three primary projects are shown. Alternative 3, referred to as the "Westwood Connector", includes the construction of a new route between US 60 south of Rose Hill to US 23 west of downtown Ashland. Two options were developed for where the connector could tie into US 60 and four options for where it could connect to US 23. Of these options, Alternative 3B-3C, 3B-3D, and 3B-3E are considered to be preferable due to lower construction costs and right-of-way impacts. Constructing Alternative 3 is considered to be the second highest priority among the long-range corridor alternatives.

Alternative 4 includes the widening of US 60 to four lanes between the Coalton Interchange at I-64 and the KY 180 intersection. This project is included in the KYTC 2009 Highway Plan with design and right-of-way acquisition programmed in FY 2008-2009. This project is considered to be the highest priority among the long-range alternatives.

Table ES-2: Recommended Long-Range Corridor Improvements

Alternative	Length (Miles)	Construction Cost	POTENTIAL RELOCATIONS REQUIRED			
			Commercial	Residential - Single Family	Residential - Multi-family	School Buildings
Alt # 3B-3C	2.86	$ 20,600,000	5	58	5	1
Alt # 3B-3D	2.98	$ 22,600,000	8	65	5	1
Alt # 3B-3E	3.39	$ 24,470,000	11	70	5	1
Alt #4	3.80	$ 15,700,000	3	10	0	0
Alt #5		$ 1,100,000	0	0	0	0

Alternative 5 includes restriping US 60 (13th Street) between Rose Hill and downtown Ashland to three lanes (two travel lanes plus a center left-turn lane). This alternative should be implemented once Alternative 3 is constructed and open to traffic. Alternative 3 will divert traffic from this section of US 60, reducing the traffic volume enough for three lanes to accommodate the demand. Therefore, Alternative 5 is the third priority among the long-range corridor alternatives.

1.0 INTRODUCTION

The I-64 to US 23 Ashland Connector Study was initiated by the Kentucky Transportation Cabinet (KYTC) to seek improvement strategies for current and anticipated future transportation deficiencies within a portion of Boyd County. The project study area, shown in **Figure 1-1**, is completely within Boyd County and is about 24 square miles in size. At its southern boundary, this area includes I-64 between the US 60 and KY 180 interchanges. To the east, the study area follows KY 180 and then US 60 north to US 23. To the west, the boundary begins following US 60 to Princess, then proceeds northeast to the Greenup County line near Bellefonte and follows the county line to US 23. The study area is about 10 miles in length and varies from about 1.5 miles wide at its narrowest point to about 4.4 miles wide along I-64.

1.1 Project History

The need for an improved transportation corridor between I-64 and downtown Ashland was first identified in the early 1990's, at which time KYTC was also exploring the need for and feasibility of an Ashland Bypass. This improved corridor, referred to as the "Urban Penetrator", generally followed the CSX Transportation rail line from US 60 near Meads to US 23 west of downtown Ashland. The Ashland Metropolitan Planning Organization (MPO) added the Urban Penetrator to the Transportation Improvement Program (TIP) in 1996. The TIP, a list of multimodal transportation projects, is a short-range fiscal document that represents the first four years of the long-range plan and the highest transportation priorities of the region.

The Urban Penetrator was first included in the KYTC Enacted 1997-2002 Six Year Highway Plan (SYP) in 1996. The SYP, a fiscally constrained list of projects, represents the near-term KYTC funding commitments for transportation improvements statewide. At the time, $1,000,000 was designated for design in 1998, and right-of-way acquisition ($1,000,000) and utility relocation ($750,000) were listed for 2000. Construction was scheduled to being in 2001, with an estimated cost of $7,000,000. A project was advertised by KYTC and a consultant team selected, but no project activities took place. However, the project remained listed on the SYP.

The 2003 *Ashland Comprehensive Plan Update* included several transportation goals that supported the need for an improved connection through the study area. These goals included planning for a "vehicular bypass around the urban area", encouraging "alternate routes for US 60 commuter traffic", and encouraging "alternate routes for hazardous materials transport outside the urbanized area". The document noted that the most significant transportation challenge in Ashland was the need for a major arterial facility in the western part of the community to provide congestion relief to US 60, provide improved access to Town Center Mall and the Wal-Mart shopping center on US 23, and improve circulation.

More recently, the Ashland Urban Penetrator remained on the FY 2006 – FY 2012 SYP as a scoping study between I-64 and downtown Ashland. The KYTC initiated the current study in 2007, renaming it the I-64 to US 23 Ashland Connector Study. There are no further phases programmed for this project.

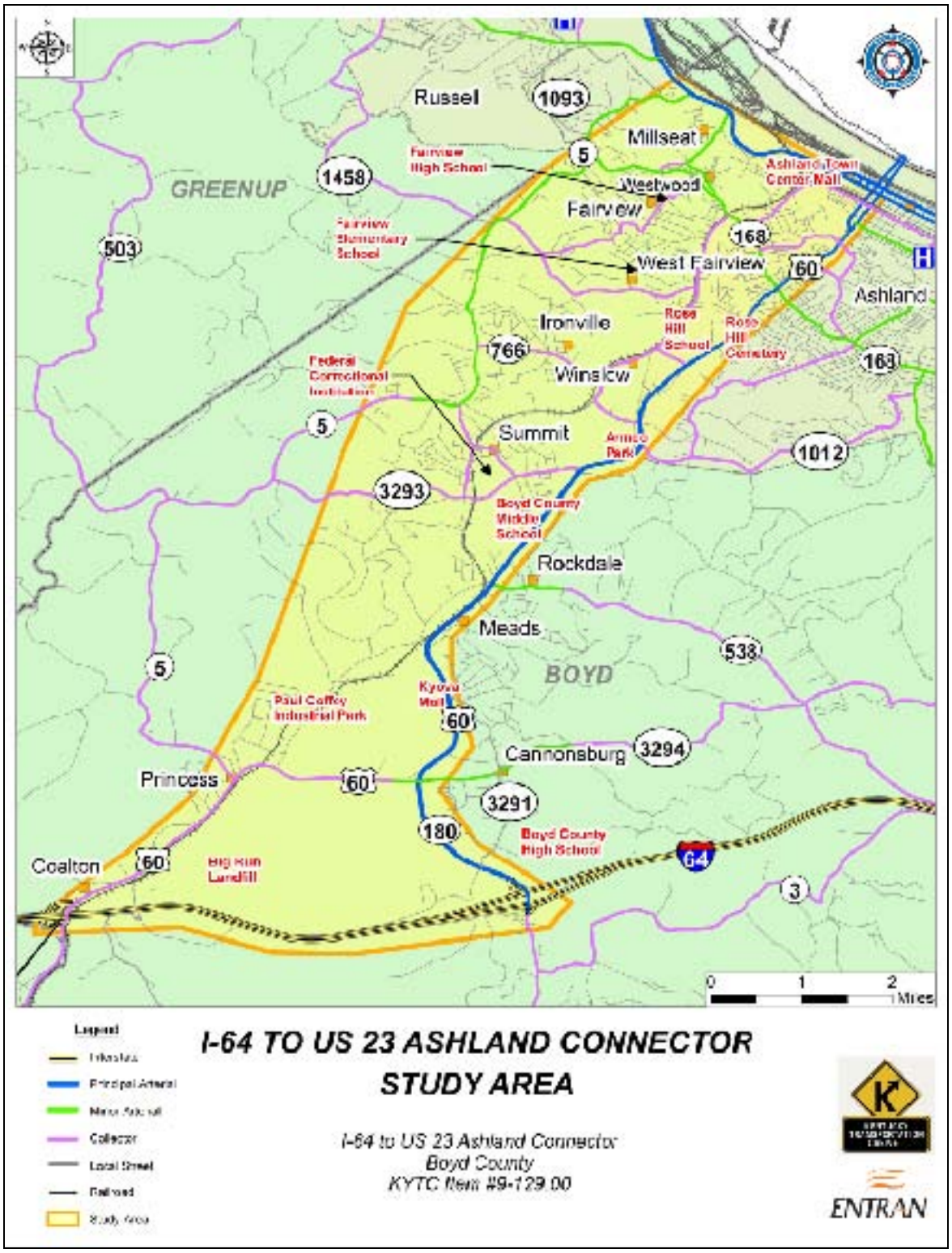


Figure 1-1: I-64 to US 23 Ashland Connector Study Area

1.2 Study Purpose and Need

The purpose of the I-64 to US 23 Ashland Connector Study was to identify community concerns and evaluate project alternatives to improve access and mobility between I-64 and Ashland. The study was intended to help define the location and purpose of the project and better meet federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA).

There is a need for improved mobility between I-64 and Ashland. Additionally, the area west of Ashland is densely populated and contains a series of narrow local roads with limited connectivity. Currently, the only direct routes to downtown Ashland from I-64 are US 23 (via the Catlettsburg interchange) and US 60. US 60 is accessed by utilizing either the KY 180 interchange or the US 60 interchange (known locally as the "Coalton" interchange) with I-64. US 60, a signalized arterial, currently carries close to 30,000 vehicles per day (vpd) and has access management issues that tend to increase congestion. This congestion has led to high crash rates within the corridor. South of Ashland, US 60 is four lanes with full outside shoulders and grass median with turn lanes at major intersections. Approaching Ashland, the roadway narrows to four lanes with no shoulder and limited turn lanes. Development along US 23 within and to the west of Ashland has increased travel demand, particularly to the northwest and near Russell.

The primary goals for the study include:

- Discuss the project needs with public officials, resource agencies, the general public and other groups which have an interest in the project.
- Define project goals, needs, and issues
- Identify any known environmental issues, including potential environmental justice issues
- Define project termini (the beginning and ending points of the project)
- Identify and evaluate short and long term projects, including access management, spot improvements, alternate corridors and design criteria

Major issues and concerns identified within the study area and addressed in the study include:

- Mobility and Connectivity
  - Lack of efficient north-south routes between I-64 and downtown Ashland
  - A need to improve connectivity to US 23 and US 60 from surrounding communities
  - Traffic congestion and safety along US 60 and US 23
  - Lack of multimodal facilities, including bicycle and pedestrian facilities. More efficient transit routing is also needed.
  - Truck routing
- Determination of Community Desire and Expectations
  - Project Costs and Schedule
  - Project Termini
- Environmental Issues
  - Community and Residential Impacts

  - Environmental Justice – Westwood and Fairview
  - Historical Properties
  - Natural Environment
- Access Management and Land Use
  - US 60 and US 23
  - Access management along any new routes to be proposed

1.3 Public Outreach

Comprehensive public involvement plays a critical role in the success of a planning study. The purpose of the public outreach component of the I-64 to US 23 Ashland Connector Study was to bring different groups of people together to express their ideas, clarify areas of agreement and disagreement, and to develop shared resolutions. KYTC seeks to build partnerships among stakeholders in order to better understand the relationship among problems and to bring more resources and expertise together to develop alternate solutions.

The public involvement component of this study was used to:

- Gauge the interest of the affected communities regarding the desire for a project
- Inform and educate the public on the project
- Identify the needs of the study area
- Identify the project issues and goals
- Identify potential corridor locations

Public involvement during the study was guided by the Ashland Connector Advisory Team (ACAT), made up of local officials, interested individuals, and other stakeholders. Invitations to serve on the ACAT were sent to a diverse array of individuals, and the following volunteered to serve on the ACAT:

Name	**Representing**
Mr. Phil Biggs	Chairman, FIVCO MPO
Chief Richard Cyrus	Cannonsburg Fire Chief
Ms. Paula Hogsten	Ashland City Commissioner
Capt. Todd Kelley	Police Department - City of Ashland, KY
Mr. James King	Ashland Cyclist Enthusiasts
Ms. Judy McCoy	Boyd County Public Schools-Trans Director
Mr. Bill Musick	Fairview Independent Schools
Mr. Jim Purgerson	Ashland Alliance
Chief Robert Ratliff	Police Department - City of Ashland, KY
Mr. Keith Robinette	Boyd County Road Supervisor
Mr. Kyle Robinson	Boyd County Cooperative Extension District
Mr. Michael Rogers	Ashland Bus System
Mr. Marion Russell	Ashland Public Works Director

Mr. Thomas Saylor	Industrial Authority
Chief Scott Penick	Fire Department - City of Ashland
Ms. Nickie Smith	Riverport Authority
Ms. Cheryl Spriggs	Ashland City Commissioner
J/E Bud Stevens	Boyd County Fiscal Court

Meetings were held with the ACAT at regular intervals over the course of the study and provided opportunities for the study team to provide information and listen to community concerns. Early meetings were held to introduce the study team members, begin to discuss study goals, and solicit input on transportation issues and needs. A group exercise was undertaken at the first meeting with the ACAT to provide attendees an opportunity to work with each other to identify existing transportation issues and potential improvements. The committee was divided into small groups and provided maps depicting some of the known environmental resources within the study area. The following discusses some of the items which were brought up during the exercise.

Transportation Issues

- US 60 north of Rose Hill
  - Lack of left turn lanes
  - High travel speeds
  - Trucks (HazMat)
  - Utility pole setbacks
- Potential impacts to low-income neighborhoods near Millseat

Short Term Projects

- Eliminate left turns from US 23 onto Ohio River Bridges
- New traffic signal on US 60 at Safe Harbor
- Intersection improvements at US 60 @ KY 180
- Delineation of wide medians on portions of US 60

Long Range Projects

- Defined future major corridor
  - US 60 south of Rose Hill through West Fairview and Millseat
  - Connector route from Industrial Parkway to US 60 north of Summit
- Improvements to KY 168 corridor
- US 60 – I-64 to KY 180 (Possible 3 lane)
- US 60 – Rose Hill to Downtown (Possible 3 lane)

As the study progressed, meetings were held to solicit feedback on potential projects. In addition, meetings with local officials and public information meetings were held at key intervals of the project.

The first public meeting was held on April 24, 2008 at the Kyova Mall in Ashland. The purpose of the meeting was to inform the public of the planning study, discuss various environmental and technical issues concerning the project area, and solicit input. The meeting was held in an open house format with KYTC and consultant

staff available to answer questions and discuss issues. Forty five (45) members of the public attended the meeting. A sign in table was set up where attendees signed in and were given a project brochure, meeting handout, and questionnaire. The following project exhibits were on display:

- Project Study Area
- Traffic and Safety
- Environmental Resources
- Advisory Committee Trouble Spots
- Advisory Committee Suggested Improvements
- KYTC Planning process
- Six year plan projects
- Aerial Map of Study Area with pictures

The second public meeting was held on November 18, 2008 at the Park Place Building in downtown Ashland. The purpose of this final public meeting was to summarize the key findings from the study and to present the preliminary short-term and long-range projects developed based on input from the ACAT and feedback from the first public meeting. Approximately 55 members of the public attended the meeting. In addition to the exhibits from the first public meeting, the following project exhibits were on display:

- Public Meeting #1 Identified Trouble Spots and Proposed Corridors
- Potential Short-Term Improvement Options
- Potential Long-Range Corridor Alternatives
- Alternative Corridors with Aerial Background

Meeting summaries for all meetings held throughout the I-64 to US 23 Ashland Connector Study are found in **Appendix A**.

2.0 EXISTING CONDITIONS

Conditions of the study area's existing transportation network are examined in the following section. The information compiled includes traffic facilities, roadway geometrics and capacity constraints, crash history, and planned projects within the study area. Data for this section was collected from the KYTC's Highway Information System (HIS) database and field review.

2.1 Roadway Characteristics

At the southern border of the study area, I-64 provides regional east-west connectivity to major destinations within the state, such as Lexington and Louisville, and extending to surrounding states. Two interchanges exist along I-64 within the study area, at US 60 and KY 180. US 60 traverses through rolling terrain to downtown Ashland, where it intersects with US 23.

Detailed roadway information for the major highways within the study area is located in **Table B-1** in **Appendix B**. Additionally, Lane Data, Median Type, Shoulder Width, Functional Classification, Truck Routes, Truck Weight Class, Horizontal Adequacy and Vertical Adequacy maps are located in **Appendix B**. Key information is summarized below.

KY 5 at KY 766

KY 5: State Route 5 (KY 5) is an undivided, two-lane highway with 11-foot lanes. The majority of the roadway has two-foot shoulders and parallels creek beds. From US 60 to the Ashland Urban Limits, the roadway is classified as a Rural Major Collector with 55 mph speed limit. From the Urban Limits to US 23, the roadway is an Urban Minor Arterial with speed limits ranging from 35 to 45 mph.

KY 180: Between I-64 and US 60, KY 180 is a four-lane divided highway with a depressed grass median. The functional classification is a Principal Arterial. Travel lanes are 11-feet wide and shoulder widths are 10 feet wide. The speed limit is 55 mph. KY 180 is part of the National Highway Network and designated with AAA Truck Weight Class.

US 60 at KY 180

US 23X: US 23X is an Urban Principal Arterial located in Ashland's central business district. This four-lane roadway has ten-foot travel lanes with a flush center median. The speed limit varies from 25 mph to 35 mph.

US 23: This divided roadway has four 12-foot wide travel lanes. US 23 parallels US 23X in the downtown area, and is also designated as an Urban Principal Arterial. From Town Center Drive to KY 168, the roadway's terrain is mountainous. The shoulder width varies from 2 feet to 10 feet wide. US 23 is part

of the National Highway Network and designated with AAA Truck Weight Class.

US 60: The physical characteristics of US 60 within the study area vary greatly. Between I-64 and KY 180, the facility is classified a Rural Major Collector, and is an undivided roadway with two travel lanes and 10- to 12-foot shoulders. From KY 180 to KY 168, the facility becomes an Urban Principal Arterial with four travel lanes. From KY 168 to the downtown area, the lane width narrows to 10 feet, shoulders are curbed, and the speed limit is reduced to 35 mph.

The Ashland Bus System currently operates five bus routes in the Ashland area. The routes are identified in **Figure 2-1**.

US 60 approaching Ashland

2.2 Traffic Volumes and Volume-to-Capacity Ratios

Existing average daily traffic (ADT) volumes were obtained for all state-maintained roadways within the study area using the KYTC HIS database. **Figure 2-2** shows the ADTs. The list below summarizes the vehicles-per-day (VPD) for the major roadways.

KY 5
- 2,290 VPD (West of US 60)
- 7,920 VPD (near Greenup County line)

KY 180
- 13,300 VPD (north of I-64)
- 33,400 VPD (east of US 31W)

US 23
- 35,600 VPD (at the Mall)

US 60
- 21,400 VPD (just south of Ashland)
- 28,100 VPD (north of KY 538)

The volume-to-capacity (V/C) ratio is a level-of-service measure, comparing the roadway's demand to the roadway's capability. Areas of concern are where the V/C values approach or exceed 1.0, in which limited capacity leads to congestion. As illustrated on **Figure 2-2**, the majority of the roadways are performing adequately, with V/C value of 0.8 or below. Portions of KY 5, KY 766, US 23, and US 60 are currently operating at or near capacity.

Table 2-1 summarizes the truck percentage data available from the KYTC for the major roadways within the study area.

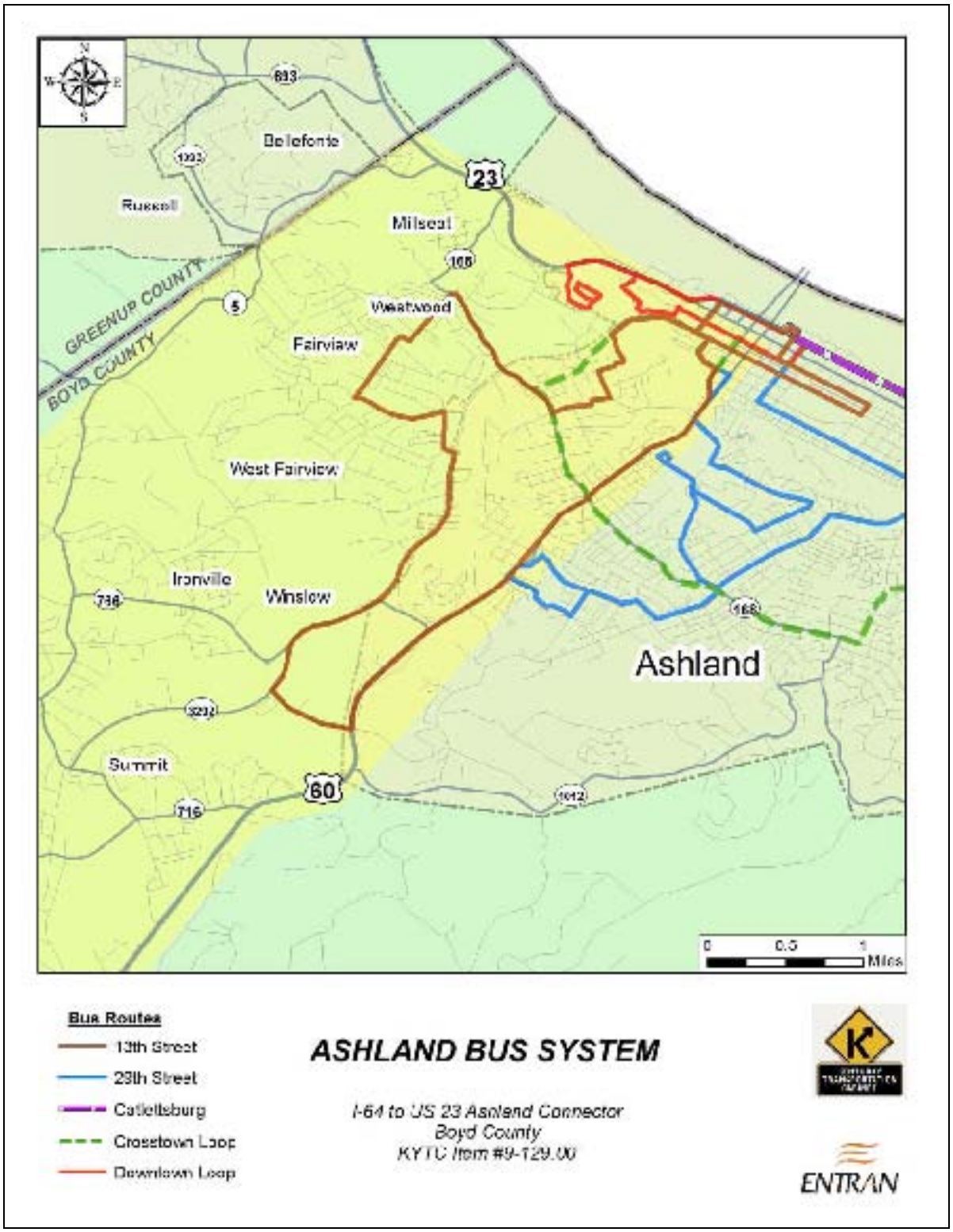


Figure 2-1: Ashland Bus System Routes

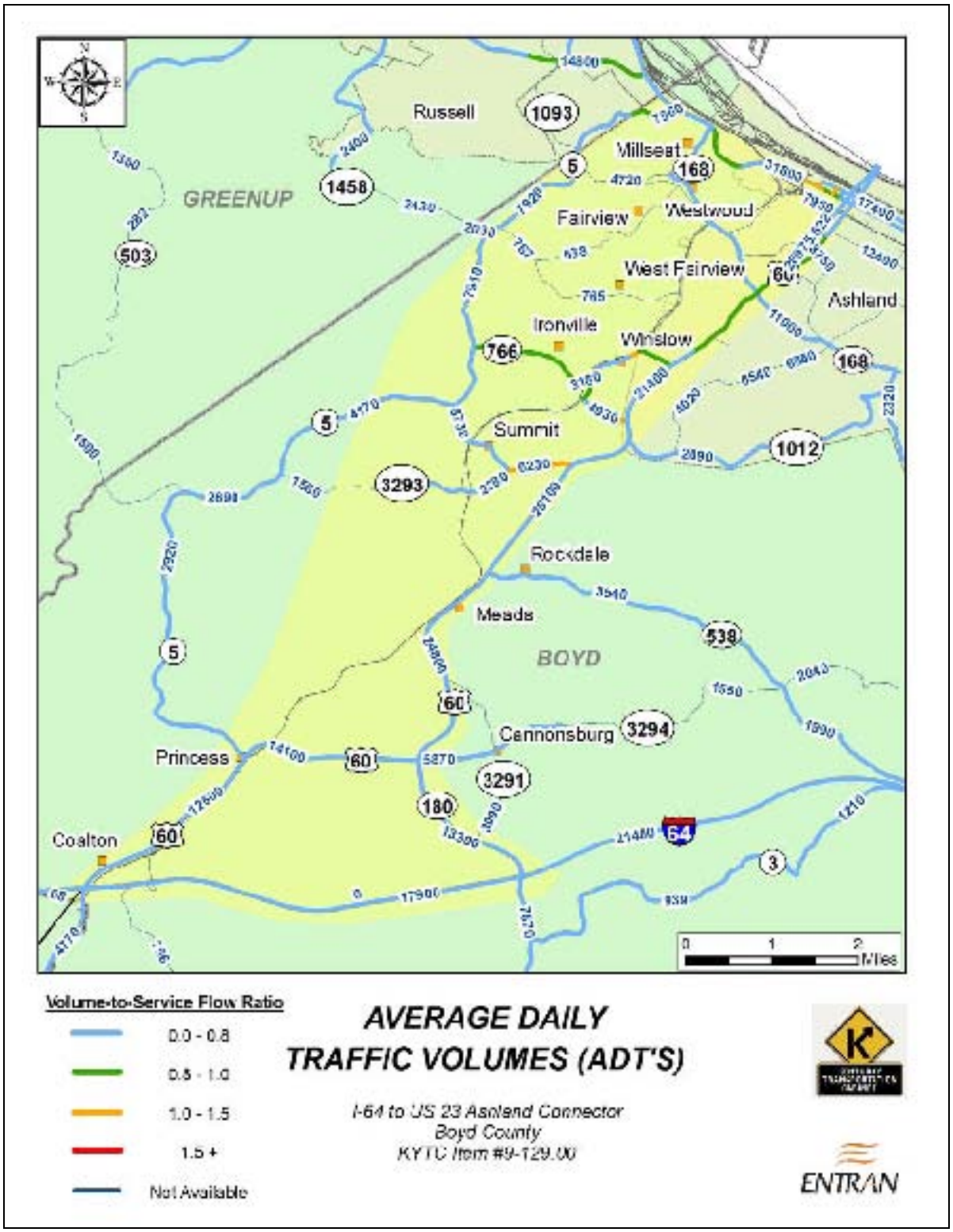


Figure 2-2: Average Daily Traffic Volumes

Table 2-1. Heavy Truck Percentages

Route	Count Station	Section Description	Total Heavy Truck %*	NB / EB %	SB / WB %
US 23	015	South of I-64	16.3	16.1	16.5
	D27	Between KY 538 & KY 3294	11.8	12.3	11.4
	D23	Between KY 3294 & US 60			
	D15	Between US 60 & KY 168	8.0	7.4	8.6
	A54	Between CS 2025 - CS 2024	13.8	13.7	13.8
	A52	Between CS 2024 - US 23X			
	B09	Between US 23X & US 60	7.5	7.8	7.3
	A96	Between US 60 & US 23X			
	B71	Between US 23X & KY 5	5.3	4.9	5.7
	A05	Between KY 5 & Co. Line	3.9	3.8	3.9
KY 5	813	Between US 60 & KY 503	10.0		
	759	Between KY 503 & KY 3293			
	C25	Between KY 3293 & KY 716			
	C08	Between KY 766 & KY 1458	5.0	5.0	5.1
	B29	Between KY 1458 & KY 1093			
	B81	Between KY 1093 & US 23			
KY 180	752	South of I-64			
	C49	at US 60	9.0	8.3	9.7
US 60	043	South of I-64			
	816	Between I-64 & North I-64 Ramps			
	756	Between KY 5 & KY 180			
	C41	Between KY 180 & KY 538	5.1	4.0	6.2
	C39	at KY 538			
	C36	Between KY 538 & KY 716			
	A82	Between KY 1134 & KY 168	5.2	5.1	5.3
	A21	Between KY 168 & US 60-1	3.8	3.5	4.2
	B34	Between US 60-1 & US 23X	11.1 (one-way)		
	A26	Between US 23S & US 60-1			
	B39	Between US 23 & US 23X			
	5	Between US 23 & Bridge	5.0		
US 23X	B16	Between US 23 & 17th St.	3.3	3.0	3.7
	B10				
	A25	Between US 60-1 & US 23	5.8	5.6	6.0

2.3 Crash History

Crash data were collected along existing roadways within the study area for a five-year period (2002 – 2006). A total of 3,548 crashes were reported along the following major routes: KY 5, KY 180, US 23, US 23X and US 60.

A closer review of the data found that four fatal crashes and 388 injury crashes were reported along US 60 during the five years. Eighty-eight percent of all crashes along US 60 were intersection crashes. Rear-end or angle crashes accounted for 72 percent of all crashes along US 60. Along KY 5, three fatalities and 111 injury crashes were reported. Of all the crashes along KY 5, forty-seven percent involved only one vehicle. For KY 180, one fatality and 33 injury crashes were reported for the five years. Twenty-seven percent of the KY 180 crashes occurred at intersections, and sixty-three percent were reported as rear-end or angle crashes.

Critical Rate Factors (CRFs) were also determined as part of this analysis. The CRF value is calculated by dividing the actual crash rate along a particular roadway segment by the critical rate, which is the maximum accident rate for which it can be said that crashes are occurring randomly based on roadway characteristics and traffic. A CRF less than 1.0 indicates that crashes occur at random, and greater than 1.0 suggests that conditions may exist that contribute to non-random occurrences.

Segment locations with CRF values greater than 1.0, shown on **Figure 2-3**, are listed below.

- KY 5: between US 60 (MP 0.00) and KY 716 (MP 6.862)
- KY 180: between KY 3 (MP 0.00) and US 60 (MP 2.518)
- US 23X: between Greenup Avenue (MP 0.00) and US 23 (MP 1.796)
- US 23: between KY 3 (MP 10.445) and north I-64 ramps (MP 10.667)
- US 23: between 12th Street Bridge (MP 18.643) and Winchester Avenue (MP 18.997)
- US 60: between Carter-Boyd Co. line (MP 0.00) and I-64 overpass (MP 0.195)
- US 60: between KY 168 (MP 10.819) and 13th Street (MP 12.217)

Additionally, roadway spots (a roadway length of less than 0.1 miles) with high crash rates were also identified. These locations, shown on **Figure 2-4**, are as follows:

- KY 5 at KY 3293 (MP 4.677)
- KY 5 at KY 716 (MP 7.007)
- KY 5 at KY 766 (MP 7.532)
- KY 5 at KY 1458 (MP 9.247)
- KY 168 at Roberts Drive (MP 6.756)
- KY 180 at I-64 (0.650)
- US 23 at I-64 (MP 10.695)
- US 60 at Lexington Avenue (MP 0.135)
- US 60 at Central Avenue (MP 0.298)
- US 60 at Winchester Avenue (MP 0.448)
- US 60 at KY 180 (MP 4.073)
- US 60 at Winslow Road (MP 9.774)
- US 60 at KY 168 (MP 10.810)
- US 60 at Pollard Road (MP 11.597)
- US 60 at Central Avenue (MP 12.048)
- US 60 at Carter Avenue (MP 12.150)

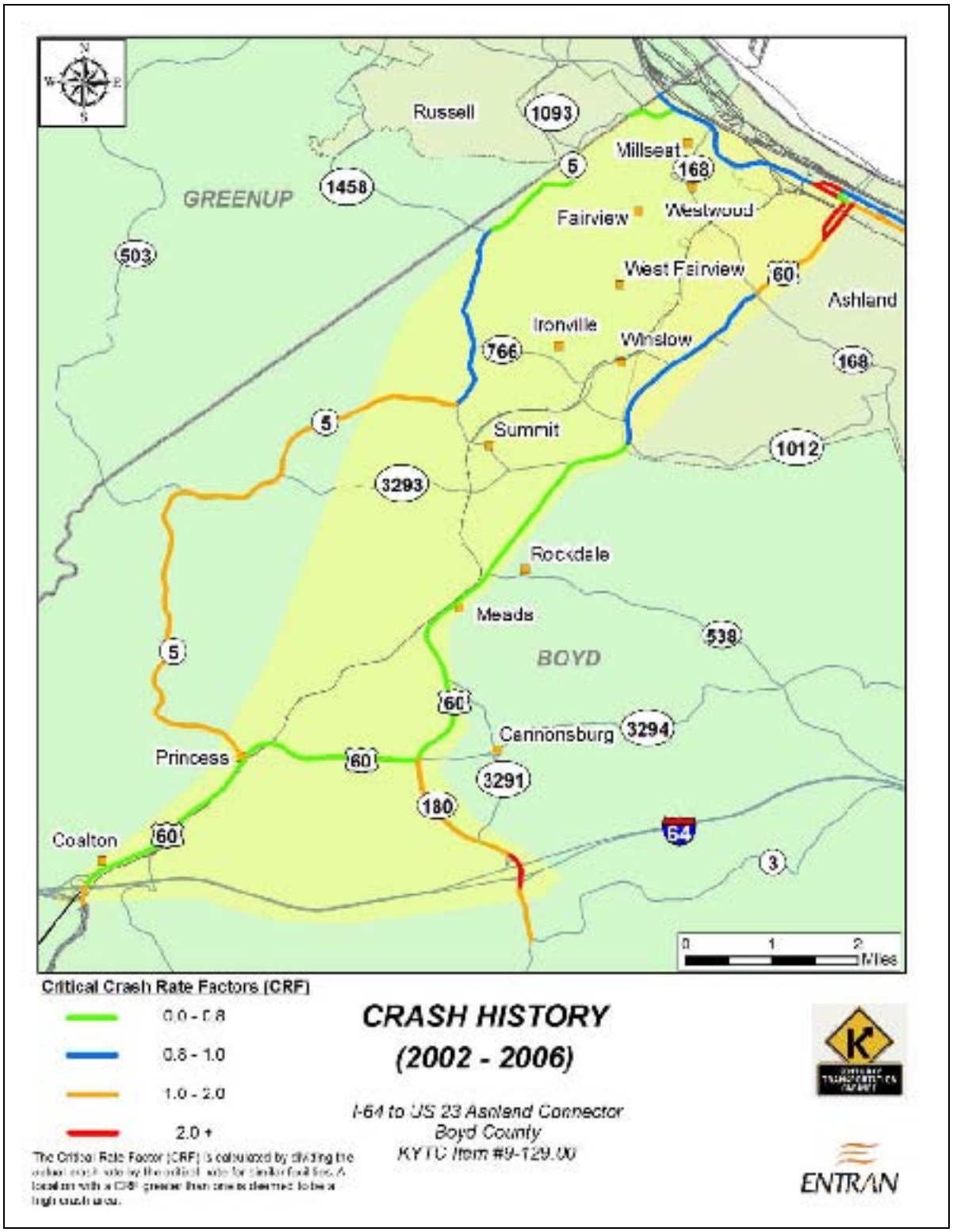


Figure 2-3: Crash History and Segments with High Crash Rates

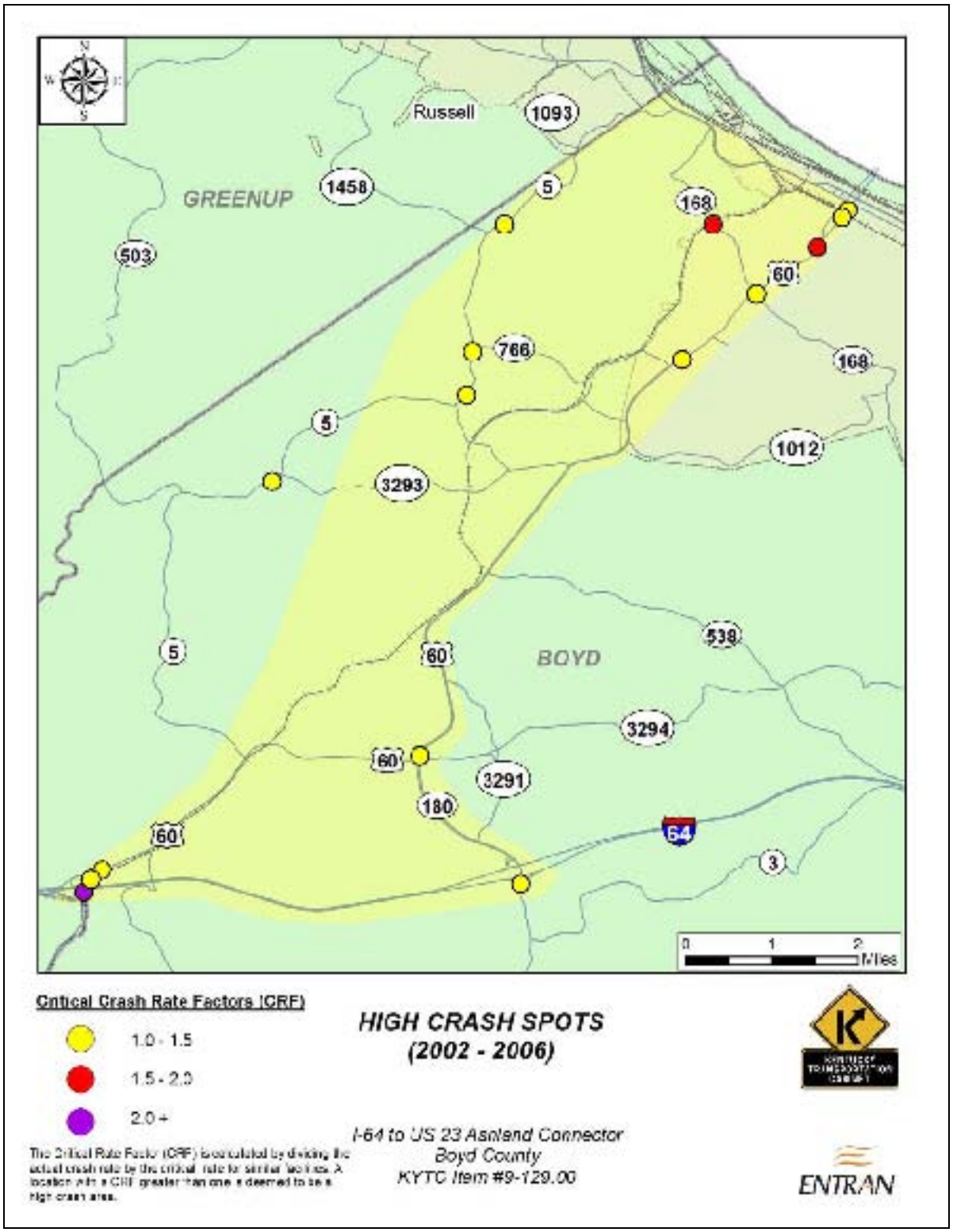


Figure 2-4: High Crash Spots

3.0 ENVIRONMENTAL RESOURCES AND ISSUES

Environmental resources and issues of concern identified in the project study area include those related to both the natural and human environment, and included the following: streams, floodplains, wetlands, ponds, water supplies, threatened, endangered and special concern species and habitat, woodland and terrestrial areas, parks, social and economic resources, historic and archaeological resources, hazardous materials concerns, agriculture, mining, environmental justices, and additional concerns. A brief summary of the environmental resources and issues requiring additional consideration in the project study area is presented below, with additional resource and issue information provided in the project *Environmental Overview*, included in **Appendix C**.

3.1 Resource Agency Coordination

A total of 120 letters were sent to federal, state, and local agencies to solicit input and comments on the I-64 to US 23 Ashland Connector Study. Twenty-one agencies responded, and their responses are included in **Appendix C**, **Attachment B**. The following agencies provided input or comments on the study:

- United States Fish and Wildlife Service (USFWS)
- Kentucky State Nature Preserves (KSNPC)
- Kentucky Department of Fish and Wildlife Resources (KDFWR)
- Kentucky Environmental and Public Protection Cabinet, Department for Environmental Protection (KEPPC-DEP) Clearing House
    - Division of Water
    - Division of Waste Management
    - Division of Air Quality
    - Kentucky Heritage Council
    - Department for Natural Resources
    - Division of Mine Reclamation and Enforcement
- Kentucky Bicycle and Bikeway Commission
- Kentucky Geological Survey (KGS)
- Centers for Disease Control and Prevention (CDC), Division of Emergency and Environmental Health Services
- Kentucky Cabinet for Economic Development
- Kentucky Cabinet for Health and Family Services
- Ashland Fire Department
- Boyd County Sheriff
- Kentucky Department of Education, Division of Facilities Management
- Department of Military Affairs
- Kentucky Heritage Council
- Kentucky Division of Waste Management (KDWM)
    - Underground Storage Tank Branch
    - Solid Waste Branch
- Kentucky Department of Agriculture
- Federal Aviation Administration (FAA)

- Kentucky Natural Resources Conservation Service (NRCS) Office

3.2 Natural Environment

Figure 3-1 presents a summary of the significant natural environment features located within the study area. Discussion on these features is found in the following sections.

Surface Streams

Through a combination of review of information from the Kentucky Environmental and Public Protection Cabinet Division of Water, United States Geological Survey (USGS) 7.5' topographic quadrangles and on-site field survey, it was determined that no Special Use Waters and no high quality stream corridors occur in the project study area. It was also determined that a total of 55 USGS blue-line streams occur in the project study area in two watersheds; the East Fork Little Sandy River and the Ohio River Near Greenup watersheds. The most prominent surface stream feature in the study area is the East Fork Little Sandy River, which flows east to west through the project study area. Additionally, numerous ephemeral non-USGS streams were identified in the study area during the September 2007 on-site field survey. A comprehensive stream survey and impact assessment, including evaluation of avoidance and minimization measures, will need to be conducted as this project further develops. Unavoidable impacts to the Little Sandy River and other USGS and/or ephemeral features will require coordination with the U.S. Army Corps of Engineers and the Kentucky Division of Water (KDOW).

Floodplains

Based on review of Federal Emergency Management Agency (FEMA) 100-Year floodplain information from the Kentucky Office of Technology Division of Geographic Information, 100-Year floodplains occur along a number of streams in the project study area. Avoidance and minimization of floodplain encroachment will need to be evaluated as this project further develops for compliance with Executive Order 11988 and United States Department of Transportation floodplain policies, and coordination and review of the project by Kentucky Division of Water (KDOW) and the local floodplain coordinator will need to be conducted if floodplain encroachment does occur.

Wetlands

Review of National Wetland Inventory (NWI) information from the U.S. Fish and Wildlife Service indicated that a total of 19 NWI-mapped wetlands occur in the project study area, most of which were located along the East Fork Little Sandy River and other FEMA 100-year floodplain areas. During the 2007 on-site field survey of the project study area, many of the NWI mapped wetlands were confirmed to be present, and a number of additional non-NWI-mapped wetlands were observed. Most of the wetlands were noted to be low-quality features associated with roadside ditches and drainage swales, however, several moderate quality wetlands were observed along the East Fork Little Sandy River. No extensive, high quality wetlands were noted in the study area. A comprehensive wetland survey and impact assessment, including evaluation of avoidance and minimization measures, will need to be conducted as this project further develops. Unavoidable wetland impacts will require coordination with the U.S. Army Corps of Engineers and the Kentucky Division of Water.

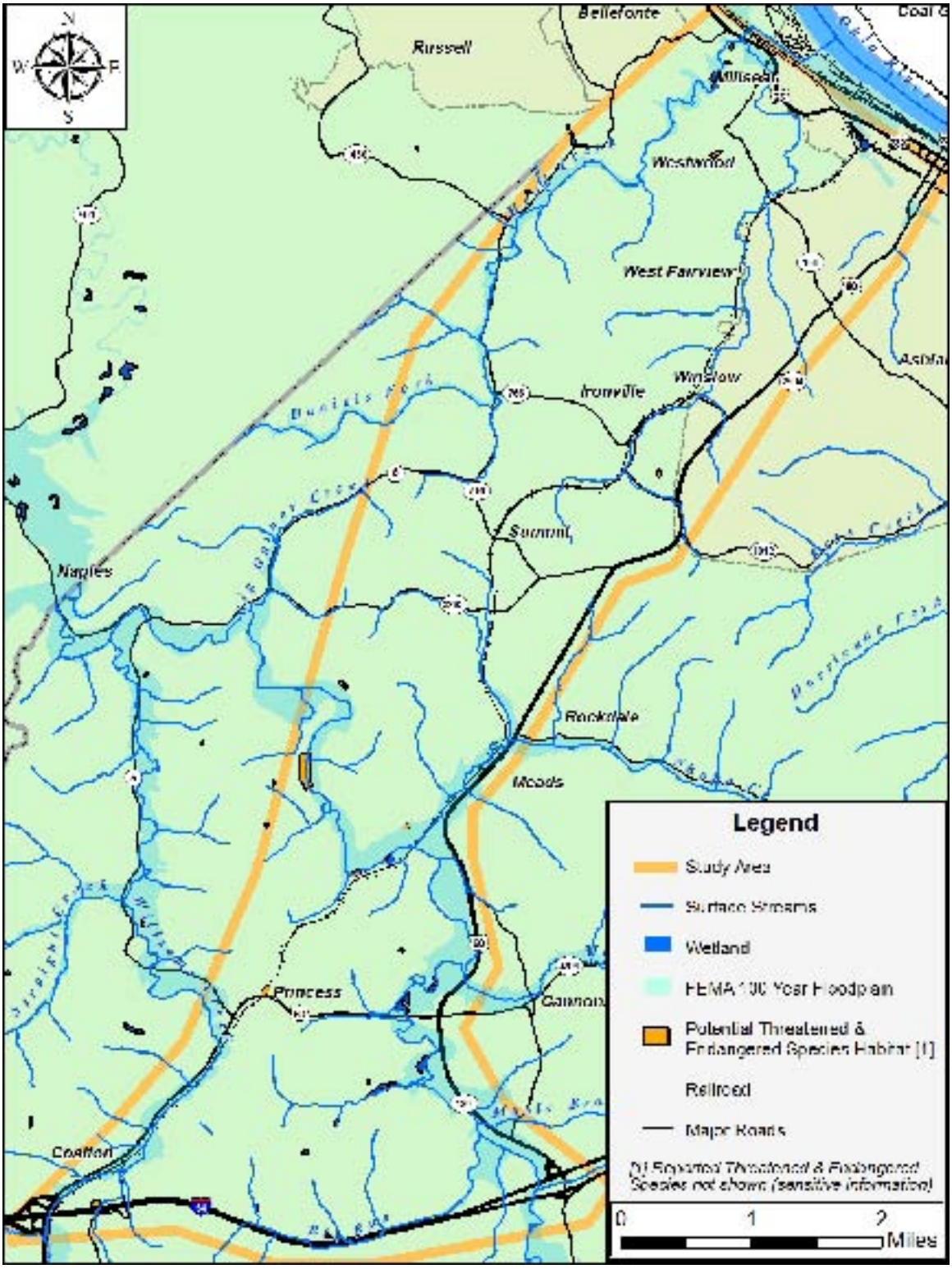


Figure 3-1: Significant Natural Environment Features

Groundwater Resources and Public Water Supplies

Review of information from the Kentucky Geologic Survey (KGS) and Kentucky Division of Water (KDOW) indicated that no wellhead protection areas, public water supplies, springs or karst areas occur in the project study area. Information from KGS and KDOW indicated that approximately 157 water wells occur in the study area, most of which were identified as monitoring wells, and that the northern half of the study area occurs in a Source Water Assessment and Protection Program area (SWAPP). As the project further develops, water wells encountered within the construction limits of an alternative selected for development will need to be sealed per Kentucky Transportation Cabinet standard specifications.

Threatened, Endangered and Special Concern Species

Information concerning the occurrence of federal and state threatened, endangered and special concern species and unique habitats in the project vicinity obtained from the United States Fish and Wildlife Service (USFWS), the Kentucky State Nature Preserves Commission (KSNPC) and the Kentucky Department of Fish and Wildlife Resources (KDFWR), indicated that no unique habitats occur in the study area, but that a total of 20 listed fish, mammals, birds and freshwater mussels were reported to occur or have suitable habitat in the general project area. Five of these listed species were reported to have occurrences of individuals from within the project study area boundaries, and included two federal species of management concern (salamander mussel and trout perch) and three state special concern species (little spectaclecase mussel, yellow troutlily and gray treefrog). No known occurrences of any federal threatened or endangered species were reported from within the study area boundaries. During the September 2007 on-site field survey of the project area, potential habitat for the federal endangered Gray and Indiana bats, as well as potential habitat for several mussel and fish species, listed above, was observed. Due to the occurrence of potential habitat for listed species in the project study area, a more thorough survey for these species should be conducted as the project further develops.

3.3 Human Environment

A summary of the significant human environment features in the study area is shown in **Figure 3–2**.

Public Parks - Section 4(f) and Section 6(f) Facilities - Through a combination of review of project aerial photographs, USGS maps, information from the National Park Service and on-site field surveys, a total of eight public parks were identified in the project study area. If any of these facilities are affected by the proposed project, then evaluation and coordination with the Federal Highway Administration will be necessary. Two of the above-listed facilities were additionally identified as having received grant assistance from the Land and Water Conservation Fund (LWCF), and, if impacted, would require evaluation and approval by the National Park Service.

Social and Economic Resources - Through a combination of review of information from the Environmental Systems Research Institute (ESRI) and on-site field survey, the following social and economic resources were identified in the project study area: 18 schools, institutions and learning centers, 38 churches, 15 cemeteries, three fire departments, three shopping centers/urban mall complexes, two public golf courses, one industrial park, and two federal facilities. These facilities are shown on Figure 4-2. Impacts to these social and economic resources will have to be taken into consideration once the project further develops.

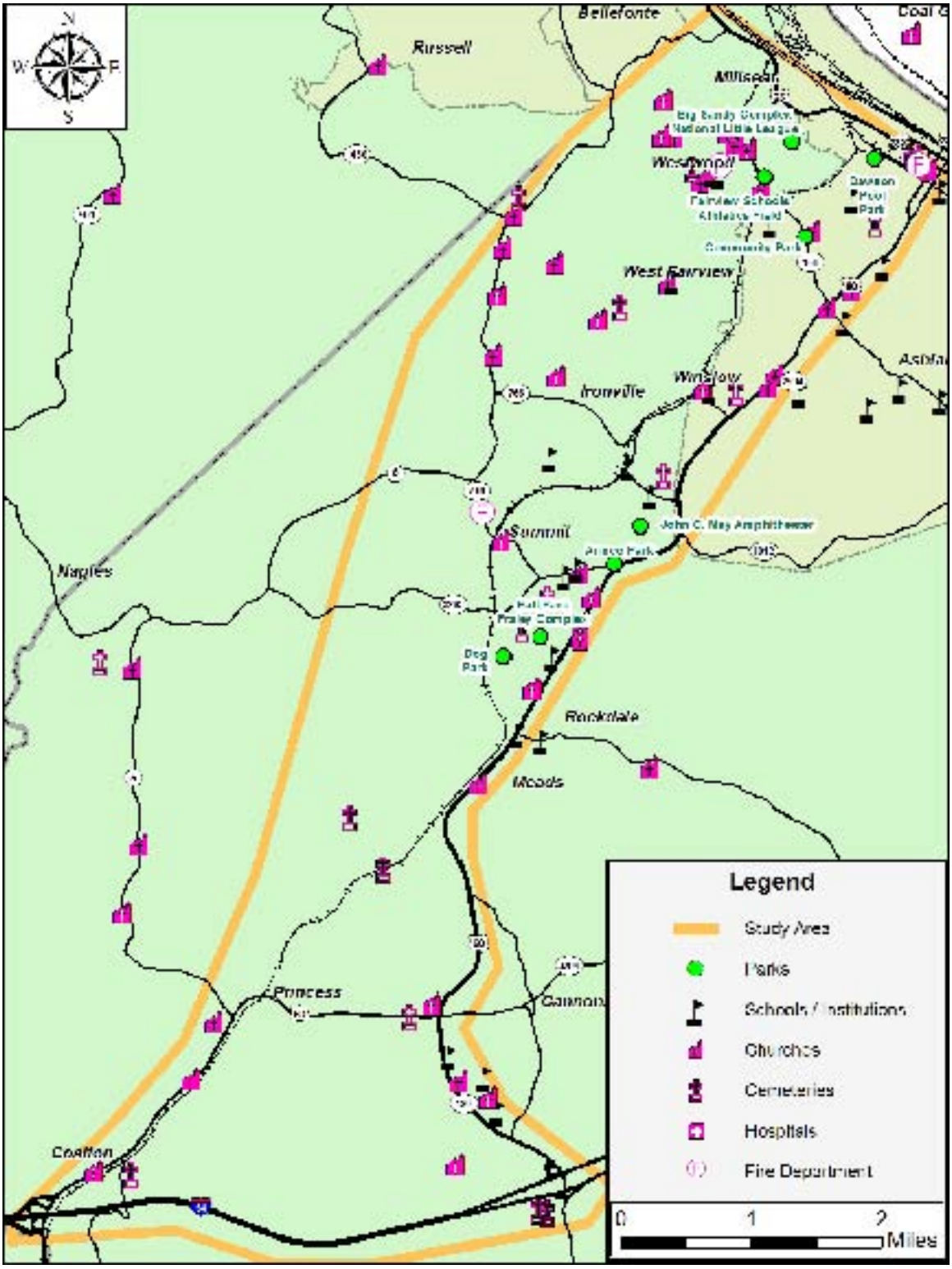


Figure 3-2: Significant Human Environment Features

Historic and Archaeological Resources - Section 106 and Section 4(f) Resources

Historic Resources - Cultural historic investigations indicated that the following historic resources occur in the project study area: a total of four National Register of Historic Places (NRHP) listed resources, a total of four historic resources determined to be eligible for inclusion on the NRHP, and a total of six districts and 26 individual properties determined to be potentially eligible for inclusion on the NRHP (pending additional research and consultation with the State Historic Preservation Office). These resources are shown on **Figure 3-3**. Section 106 review under the Historic Preservation Act and evaluation and coordination with the Federal Highway Administration under Section 4(f) of the Department of Transportation Act of 1966 will be required if any of these resources are impacted by the project. Additional information concerning historic resources in the project study area is provided in the project *Historic Resources Overview* in **Appendix D**.

Archaeological Resources - Archaeological studies indicated that approximately five percent of the project study area has been previously surveyed for archaeological resources, and review of information from the Kentucky Office of State Archaeology indicated that a total of three archaeological sites occur in the project study area. The study also noted that nearly half of all recorded archaeological sites in Boyd County have been found on floodplains or on stream terraces, suggesting that similar areas, along with upland flats located in ridge line saddles, within the project study area would have the greatest potential for the occurrence of archaeological resources. A more thorough survey for archaeological resources in the project study area should be conducted as the project further develops. Additional information concerning archaeological resources in the project study area is provided in the project *Archaeological Overview* in **Appendix E**.

Agriculture

Review of information from the Kentucky Natural Resources Conservation Service indicated that prime farmland soils occur at a number of locations throughout the project study area, primarily in low-lying, level stream bottomlands, and in level areas along chief transportation corridors. The 2007 on-site field survey revealed that the occurrence of agricultural land in the project study area was relatively sparse (estimated to account for less than ten percent of the total land area encompassed by the study area), and mostly in hay production. In response to a request for information, the Kentucky Department of Agriculture acknowledged the project, but offered no specific comments. Once the project further develops, coordination with the local Natural Resources Conservation Service office will be necessary to determine if the project will result in adverse impacts to farmland.

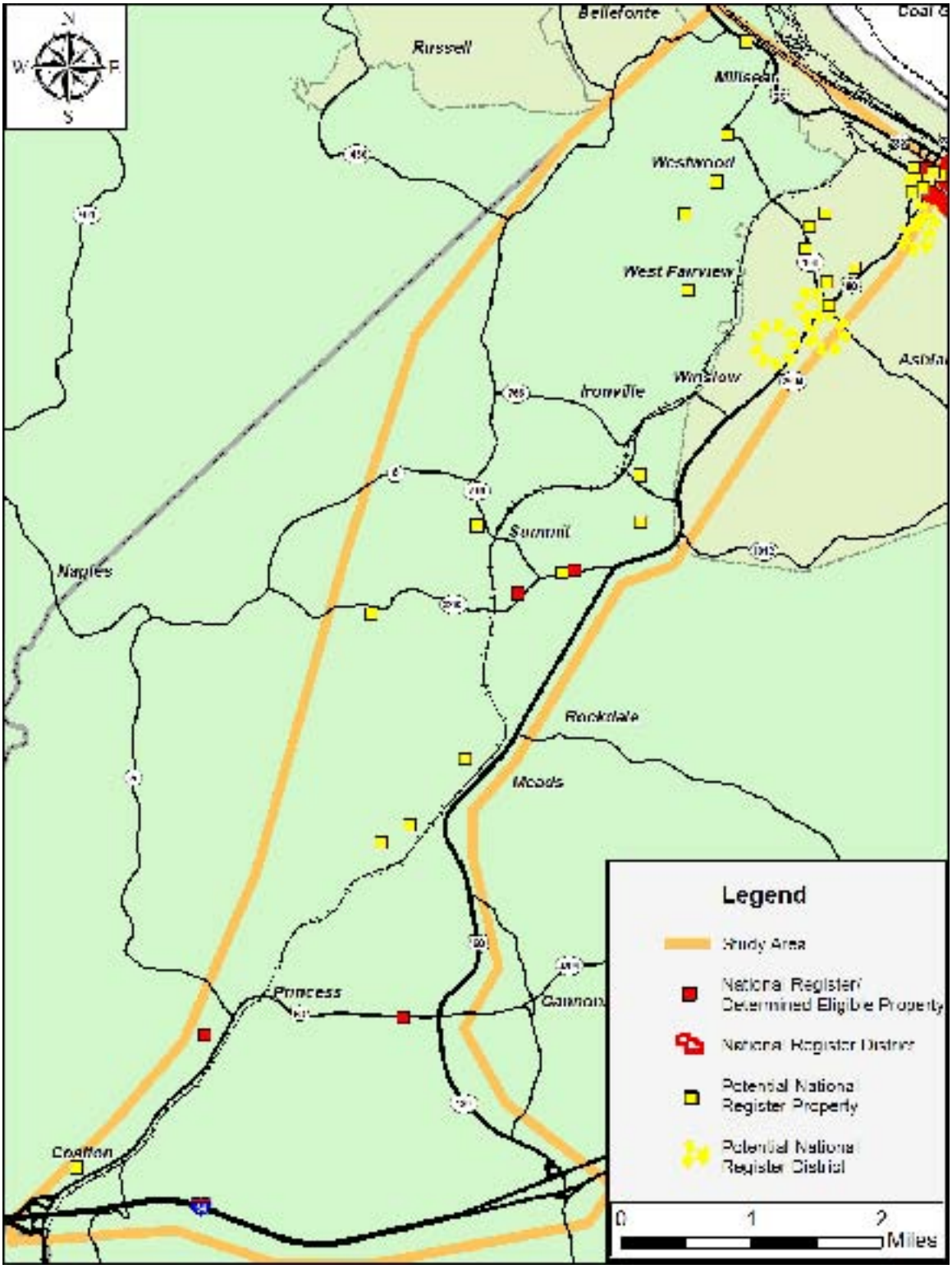


Figure 3-3: Cultural-Historic Resources

Hazardous Materials Concerns

A summary of the significant hazardous materials concerns in the study area is shown in **Figure 3–4**.

Underground Storage Tanks (UST's) - The occurrence of UST's in the project study area was determined through a combination of review of information from the Kentucky Division of Waste Management (KDWM) Underground Storage Tank Branch, the USEPA Envirofacts Data Warehouse for hazardous waste information and on-site field survey. In December 2007, KDWM reported that 39 facilities with UST's occur in the project study area. In general, the types of facilities with UST's included: gas stations, transportation, manufacturing, wholesale, service, government, information services, agriculture, and construction facilities. A Phase I survey for UST's in the project study area will need to be conducted as the project further develops.

USEPA Regulated Sites - A total of 46 USEPA regulated properties were identified in the project study area as hazardous materials concerns through review of information from KDWM and the USEPA Envirofacts Data Warehouse. Of the 46 USEPA regulated properties identified in the project study area, 13 of the sites were Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) Superfund properties and 33 were Resource Conservation and Recovery Information System (RCRIS), Toxic Release Inventory (TRI) or Brownfields properties. As a result, a Phase I survey for hazardous materials concerns in the project study area will need to be conducted as the project further develops.

Oil and Gas Wells - Through a combination of review of information from the Kentucky Office of Technology Division of Geographic Information and on-site field survey, a total of approximately 111 oil and gas wells were identified in the project study area. A more thorough survey for oil and gas wells should be conducted once the project further develops and any oil and gas wells determined to be impacted by the project will need to be sealed per KYTC standard specifications.

Landfills - Review of information from KDWM Solid Waste Branch indicated that eight known landfills occur in the project study area. A Phase I survey for hazardous materials concerns associated with these landfill sites will need to be conducted as the project further develops.

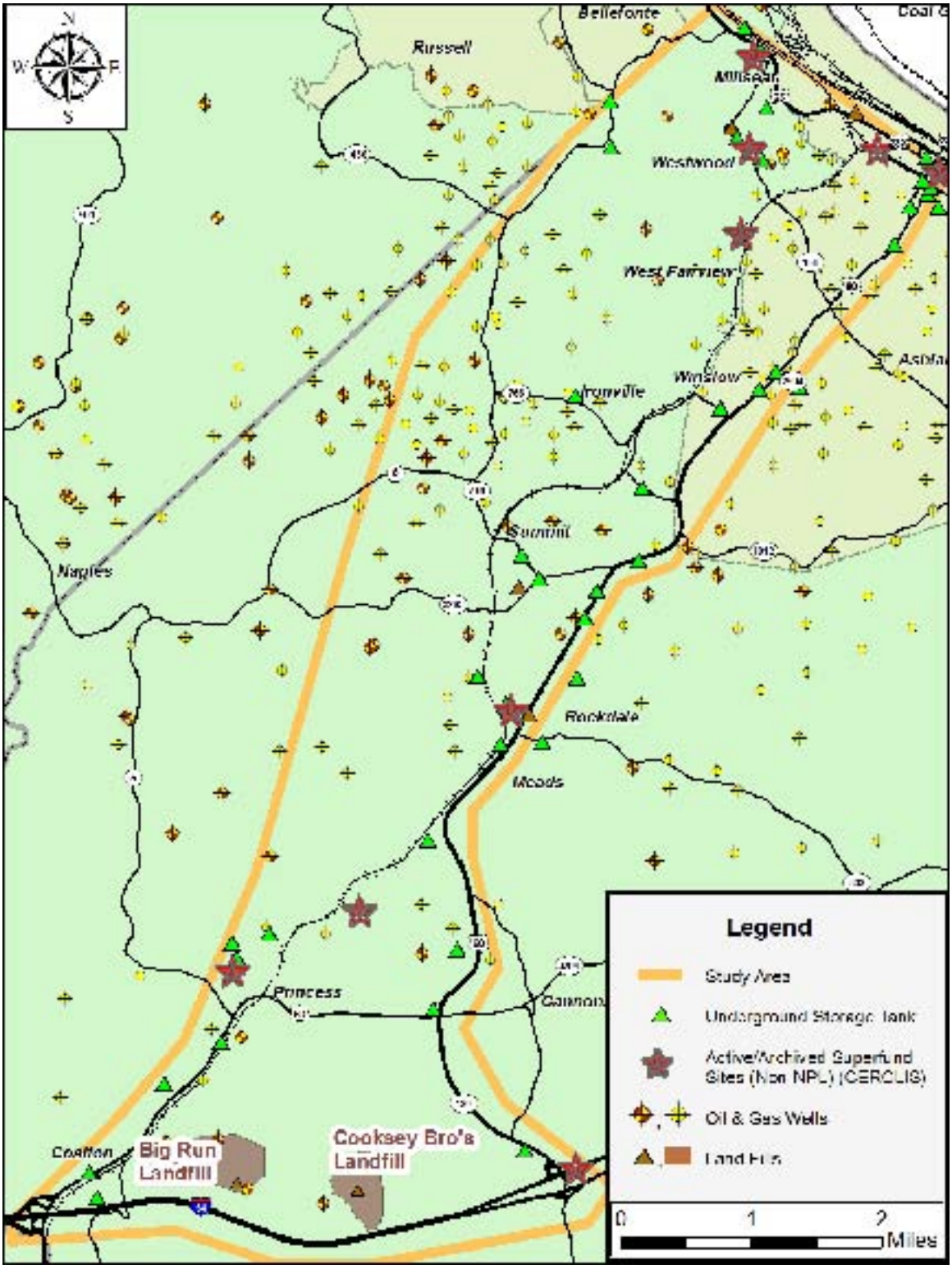


Figure 3-4: Hazardous Material Concerns

Geotechnical Issues

A geotechnical overview investigation conducted for the project in November and December of 2007 indicated that the study area has been extensively mined for coal, especially in the areas near the town of Princess and at several locations west of US 60. The study also indicated that bedded materials near surface elevations in the study area would be susceptible to landslides. The study recommended that available mining records be reviewed and that terrace deposits be avoided due to the potential for settling. The study also recommended that measures to increase safety such as flatter slopes, promotion of surface/subsurface drainage, re-vegetation and construction of retaining walls, be included in the design of the project. Additional information concerning geotechnical issues within the study area is found in the *Geotechnical Overview* in **Appendix F**.

Mines and Quarries

Mines and quarries in the project study area, shown in **Figure 3-5**, were identified through a combination of review of information from the Kentucky Department for Natural Resources Division of Mine Reclamation and Enforcement, the Kentucky Office of Technology Division of Geographic Information and on-site field survey of the study area. No active mining operations were determined to occur in the study area, although, a total of 18 inactive mine sites were identified from secondary sources. Two active quarries were identified in the southern portion of project study area in the vicinity of Princess. Impacts to previously mined or quarried areas in the study area will need to be taken into consideration for the development of project alternatives once the project further develops.

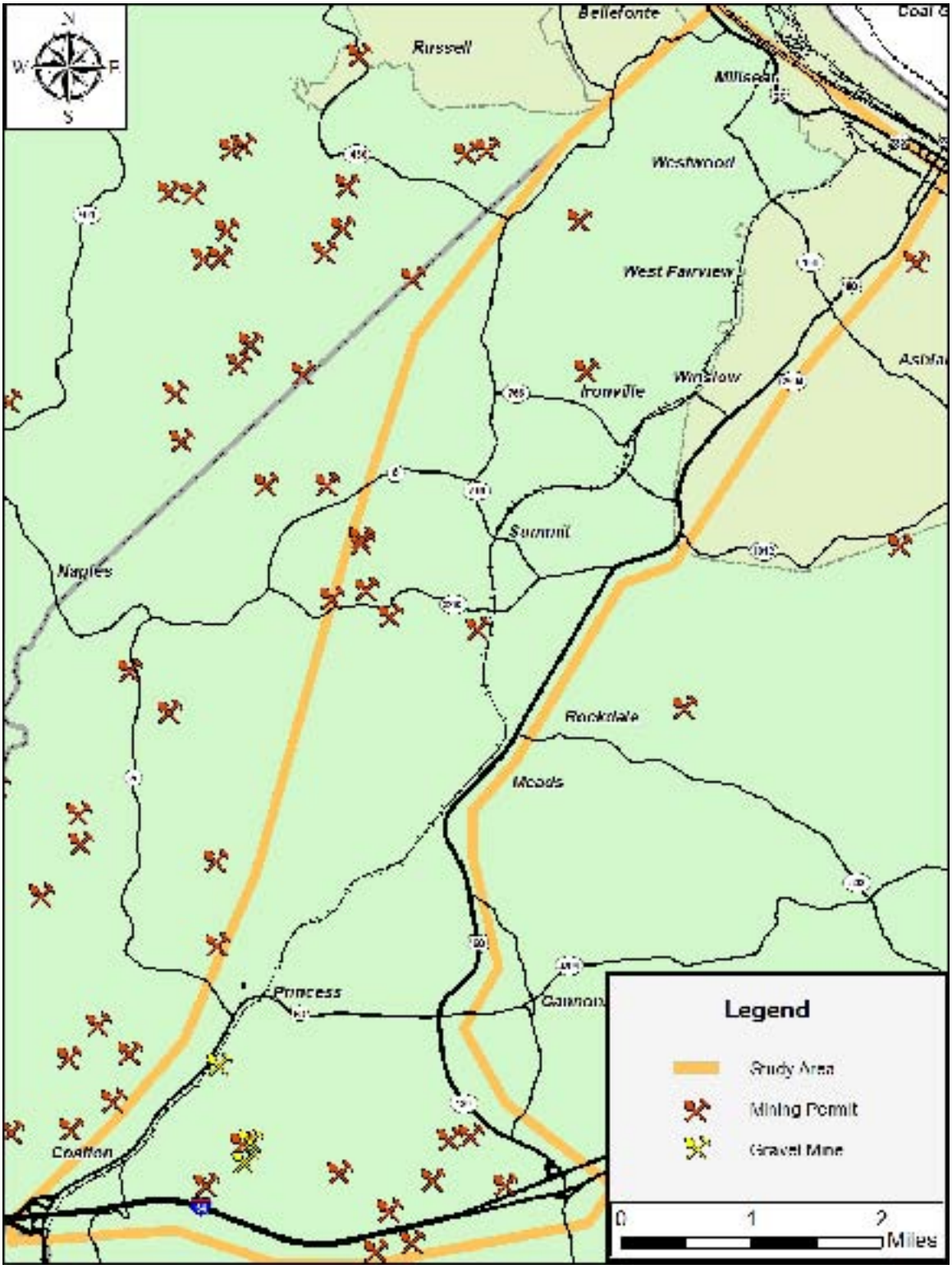


Figure 3-5: Mines and Quarries

3.4 Environmental Justice

Issues pertaining to minority, elderly, disability and low income (persons living in poverty) populations in the project study area were evaluated and documented in a May 2008 report entitled *Environmental Justice and Community Impact Report*. The EHI report concluded that Environmental Justice populations above the state and county averages occur in several Census Tracts and Block Groups in the study area generally in proximity to the City of Ashland, and the communities of Summit, Westwood and Fairview. The occurrence of these Environmental Justice populations in the project study area should be taken into consideration as the project further develops. Additional information concerning Environmental Justice issues in the project study area is provided in the project *Environmental Justice Overview* in **Appendix G**.

3.5 Additional Items of Concern

Air Quality - Boyd County is currently (June 2008) reported by the USEPA as a non-attainment area for Particulate Matter (size < 2.5 micrometers), and a PM2.5 analysis will need to be conducted as this project further develops.

Noise - The study area includes a number of sensitive noise receptors, including parks, schools, churches, golf courses and residential neighborhoods. A project specific traffic noise impact analysis will need to be conducted to identify and mitigate traffic noise impacts as this project further develops.

Utility Corridors - A number of major utility corridors, as well as the CSX rail road, occur within the project study area. These facilities will require consideration as this project further develops.

4.0 FUTURE CONDITIONS

In order to determine the need for and purpose of potential transportation improvement projects, it is necessary to estimate future conditions within the study area. This chapter summarizes the anticipated future conditions within Boyd County.

4.1 Population Projections

According to projections provided by the Kentucky State Data Center, Boyd County's population is in decline. Projections developed in 2004 (available during the study) suggested that population would decrease between 2005 and 2010, but would increase slightly between 2010 and 2030. More recent population projections, released in April 2009, indicate that Boyd County will continue to lose population for the foreseeable future. These recent population projections are summarized in **Figure 4-1**.

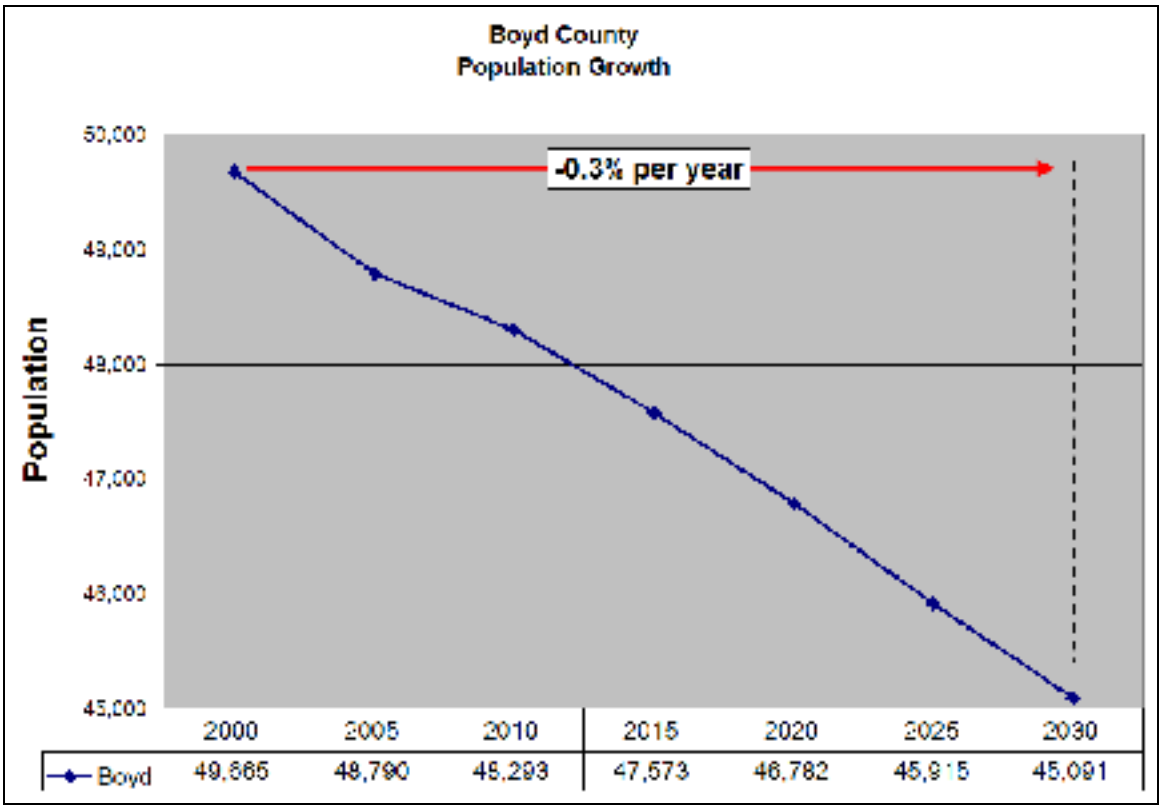


Figure 4-1: Boyd County Population Forecasts
(Source: Kentucky State Data Center, April 2009)

The Kentucky State Data Center predicts that Boyd County will continue to lose population at an average rate of 0.3 percent per year. The estimated population in July 2008 was 48,560 and is expected to decrease to 45,091 by the year 2030.

4.2 Committed Projects

A number of transportation improvements are currently underway or are programmed for implementation in Boyd County within the coming years. These projects, most of which were listed in the KYTC FY 2006 – FY 2012 SYP, that are located within the study area are summarized in **Figure 4-2**.

Work on the I-64 interchange at KY 180 (KYTC Item #9-60.00 and #9-60.01) began in the summer of 2006 and was completed in 2008. This project included reconstructing the interchange and correcting sight distance issues on KY 180.

The KYTC initiated a congestion mitigation project in 2007 to construct turn lanes at various locations along US 60 north of KY 180 (KYTC Item #9-199.00). Crash data from this study were provided to KYTC to assist in determining priority locations for left-turn lane needs between KY 180 to KY 716.

Two intersection reconstruction projects are planned within the study area. The first project includes reconstructing the KY 766 intersection with Dawson Lane (KYTC Item #9-8302.00 and #9-8201.00). The second project includes adding left-turn lanes and a new traffic signal and realigning the US 60 intersection with Highland Avenue (KYTC Item #9-993.00).

One additional project has been introduced that was not listed in the FY 2006 – FY 2012 SYP. Originally listed on the Kentucky House version of the 2008 Highway Plan, the project includes widening US 60 to four travel lanes between the I-64 interchange near Coalton to the KY 180 intersection. The 2009 Highway Plan, enacted by the Kentucky Legislature in March 2009, includes funding for this project beginning with design in FY 2009.

The only remaining projects in the vicinity of the study area, not shown on **Figure 4-2**, include two pavement rehabilitation projects along I-64 from west of the US 60 interchange to the KY 180 interchange (KYTC Item #9-2019.00) and from the KY 180 interchange to the West Virginia state line (KYTC Item #9-1018.00). These projects will not add capacity to I-64 but will provide for resurfacing and corrections to adjacent fill slopes to remedy existing slide issues.

4.3 Traffic Forecasts

The KYTC maintains a regional travel demand model, covering all of Boyd and Greenup County, developed using the TransCAD travel demand software. The model uses socioeconomic data, namely households and employment, to estimate current and future traffic volumes along all major roadways within the two-county area. The model was updated in 2007 and early 2008 by the KYTC Division of Planning with the assistance of a consultant, and has a base year of 2007 and forecast year of 2030. The updated travel demand model was made available for use in the study in late April 2008.

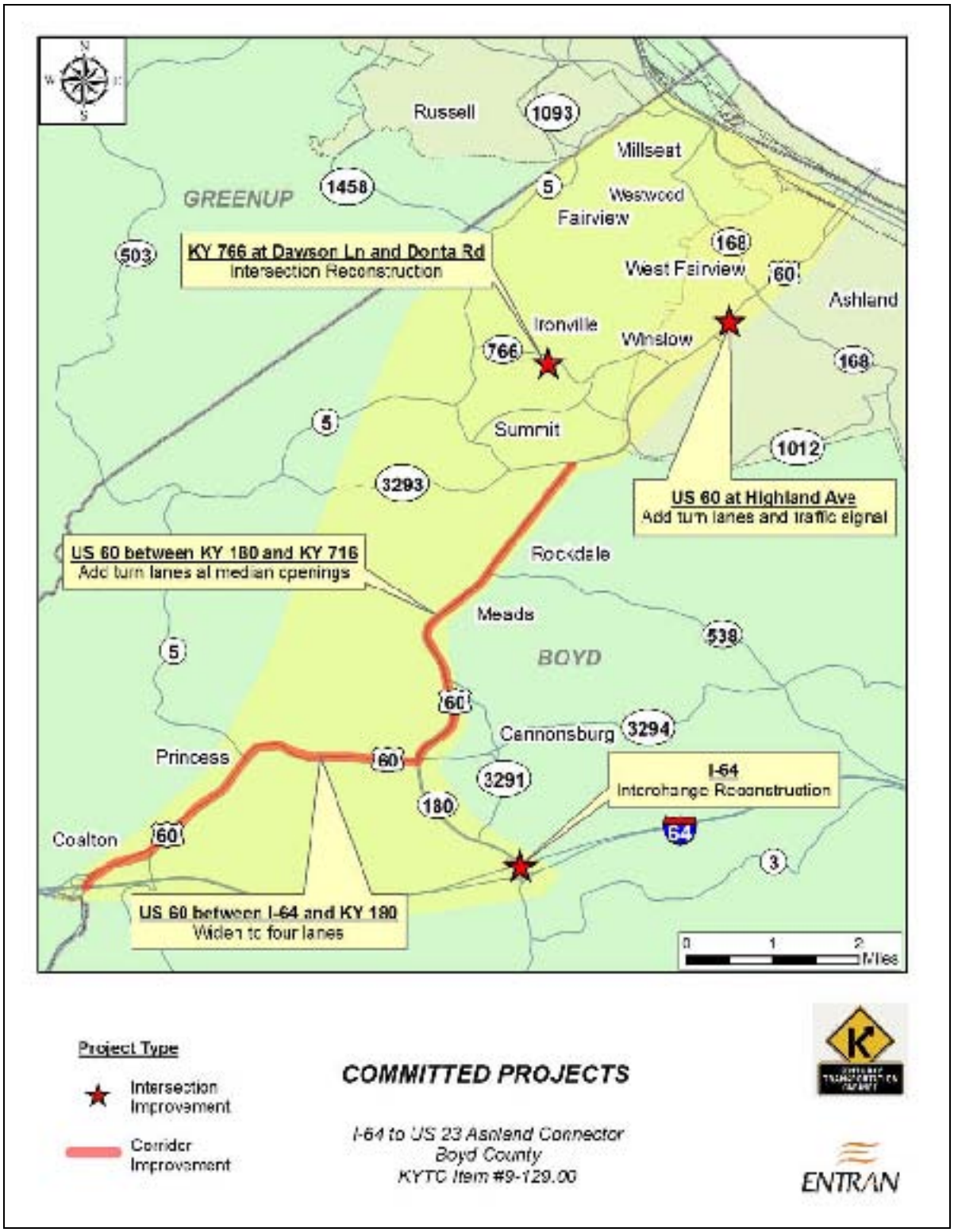


Figure 4-2: Programmed Transportation Improvements
(Source: KYTC Six-Year Plan FY 2006- FY 2012 and 2009 Highway Plan)

The updated 2008 version of the model includes revised socioeconomic data forecasts. **Table 4-1** presents a comparison of the data contained in the 2002 version of the model and the 2008 (current) version. The previous version of the model indicated a 16.9 percent increase in population and 12.4 percent increase in employment between 2000 and 2025. These forecasts included negative population growth in and around Ashland and Catlettsburg, low growth near Russell, and significant growth in rural Greenup County and in Boyd County south of I-64. Employment growth in the 2002 version of the model was focused on the areas adjacent to the Industrial Parkway and north of I-64 in Greenup County (there was no growth elsewhere in the model area).

Table 4-1: Socioeconomic Data Comparisons between the 2002 and 2008 Ashland MPO Regional Travel Demand Models

Model	Year	Population	Employment
2002 Model	2005	86,643	35,954
	2025	101,289	40,396
	Growth	*16.9%*	*12.4%*
2008 Model	2007	86,504	47,675
	2030	86,055	69,333
	Growth	*-0.5%*	*45.4%*

According to the model update report (available under separate cover from the KYTC Division of Planning), the Kentucky State Data Center was the source for countywide population forecasts and Woods & Poole Economics (http://www.woodsandpoole.com) was the source for countywide employment forecasts. KYTC and its consultant estimated the distribution of population and employment within each individual traffic analysis zone (TAZ). A TAZ is a geographic area within a demand model that is based on U.S. Census blocks and is used to allocate socioeconomic data (namely households and employment) throughout a model area. The distribution of these socioeconomic data was discussed and refined with the assistance of local officials and stakeholders, including staff from the Ashland MPO, Boyd County, Greenup County, and KYTC.

Figure 4-3 presents a summary of the estimated population growth in the current version of the regional travel demand model, disaggregated by TAZ. The updated 2008 version of the model predicts a 0.5 percent decline in population between the 2007 base year and 2030.

The TAZ's shaded in dark gray in **Figure 4-3** depict areas where population is expected to decrease between 2007 and 2030. Negative growth is anticipated all along the US 23 corridor, in and around Ashland and Catlettsburg in Boyd County and near Russell in Greenup County. Moderate growth, shaded in pink, is anticipated in the middle portion of the study area and to the west and south. Significant population growth, in red and dark red, is expected near the south end of the Industrial Parkway (KY 67) in Greenup County and in Boyd County south of I-64.

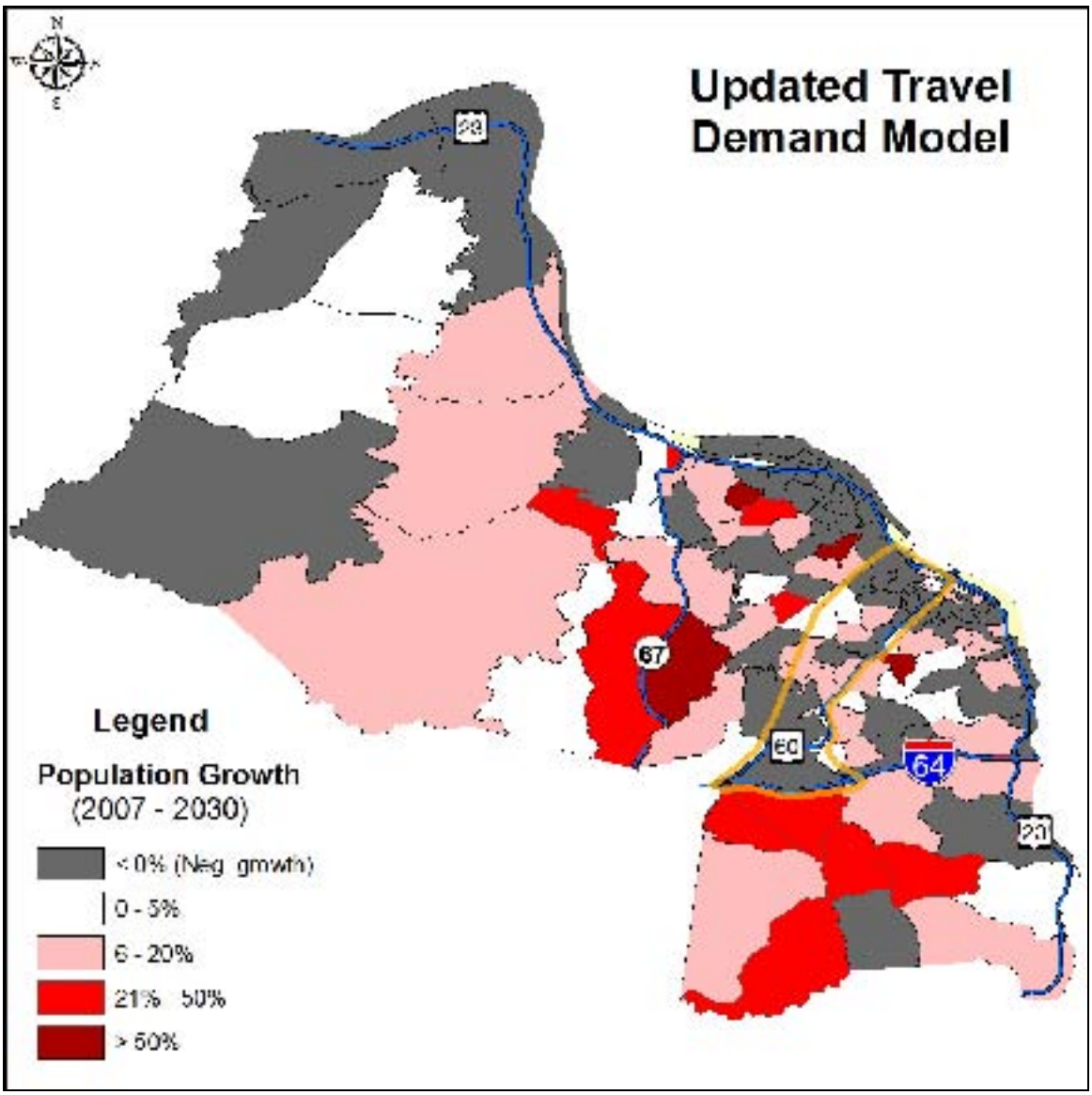


Figure 4-3: Population Growth in Boyd County and Greenup County
(Source: Ashland MPO Regional Travel Demand Model, 2008)

Employment growth, shown in **Figure 4-4**, is higher in the current version of the model, with an increase of 45.4 percent anticipated by 2030. Base year 2007 employment is also significantly higher in the updated 2008 model than in the previous 2002 version. Negative employment growth is anticipated southwest of Ashland and near Catlettsburg, but significant growth is anticipated elsewhere in the study area, near the south end of the Industrial Parkway, and near Russell.

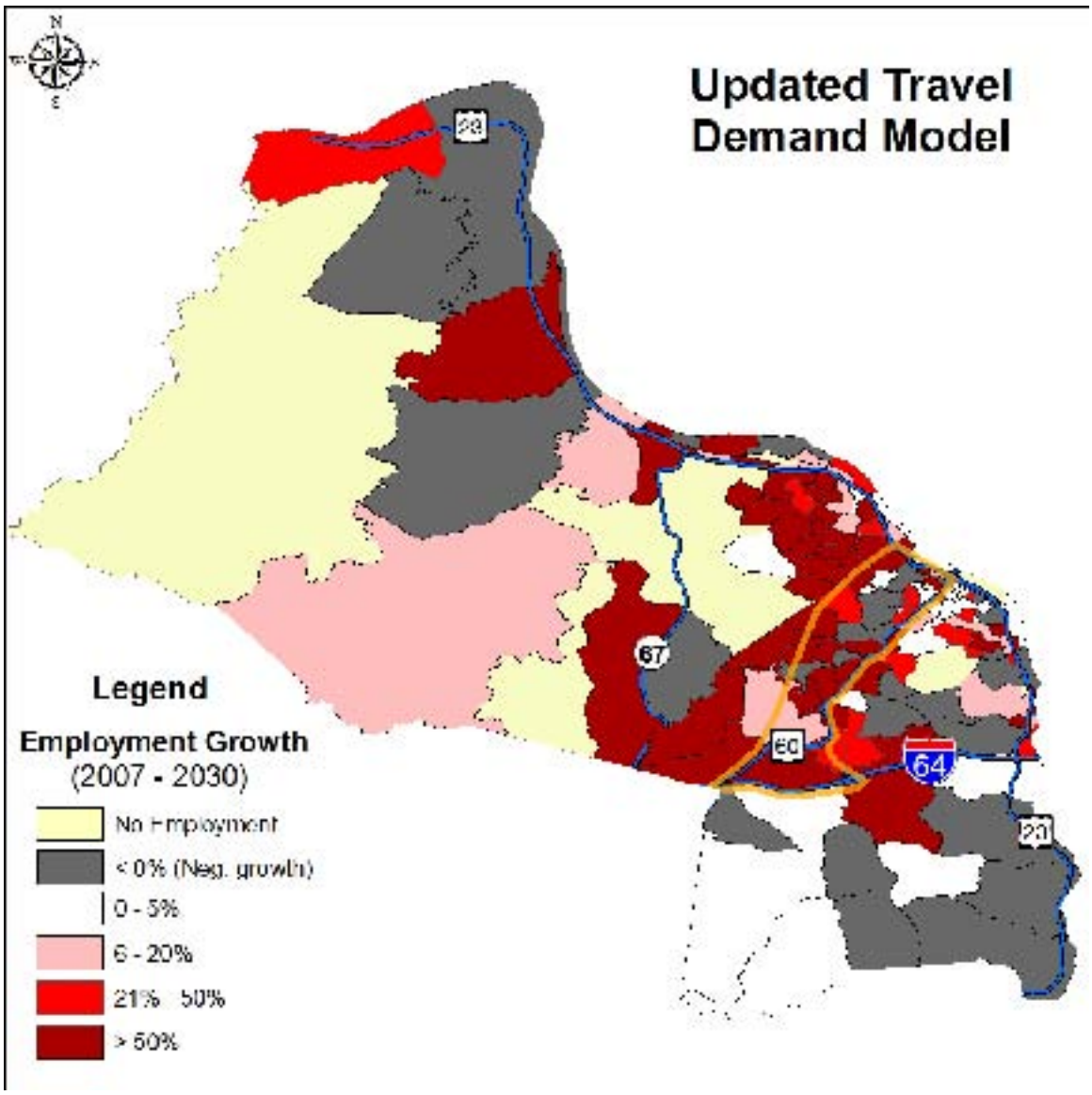


Figure 4-4: Employment Growth in Boyd County and Greenup County
(Source: Ashland MPO Regional Travel Demand Model, 2008)

The KYTC Division of Planning provided all model files for the updated travel demand model in April 2008. The model was used to develop a 2030 No-Build daily traffic assignment, depicted in **Figure 4-5**. The average daily traffic volumes shown represent typical weekday traffic volumes expected in 2030. Volume to Capacity (V/C) ratios were calculated to determine where congestion would likely be an issue in the future, assuming no improvements are implemented prior to 2030. A V/C ratio of 1.0 indicates a roadway segment will operate at its intended capacity. V/C ratios exceeding 1.0 indicate a roadway will carry more traffic than it was intended to, resulting in congestion during some periods of the day.

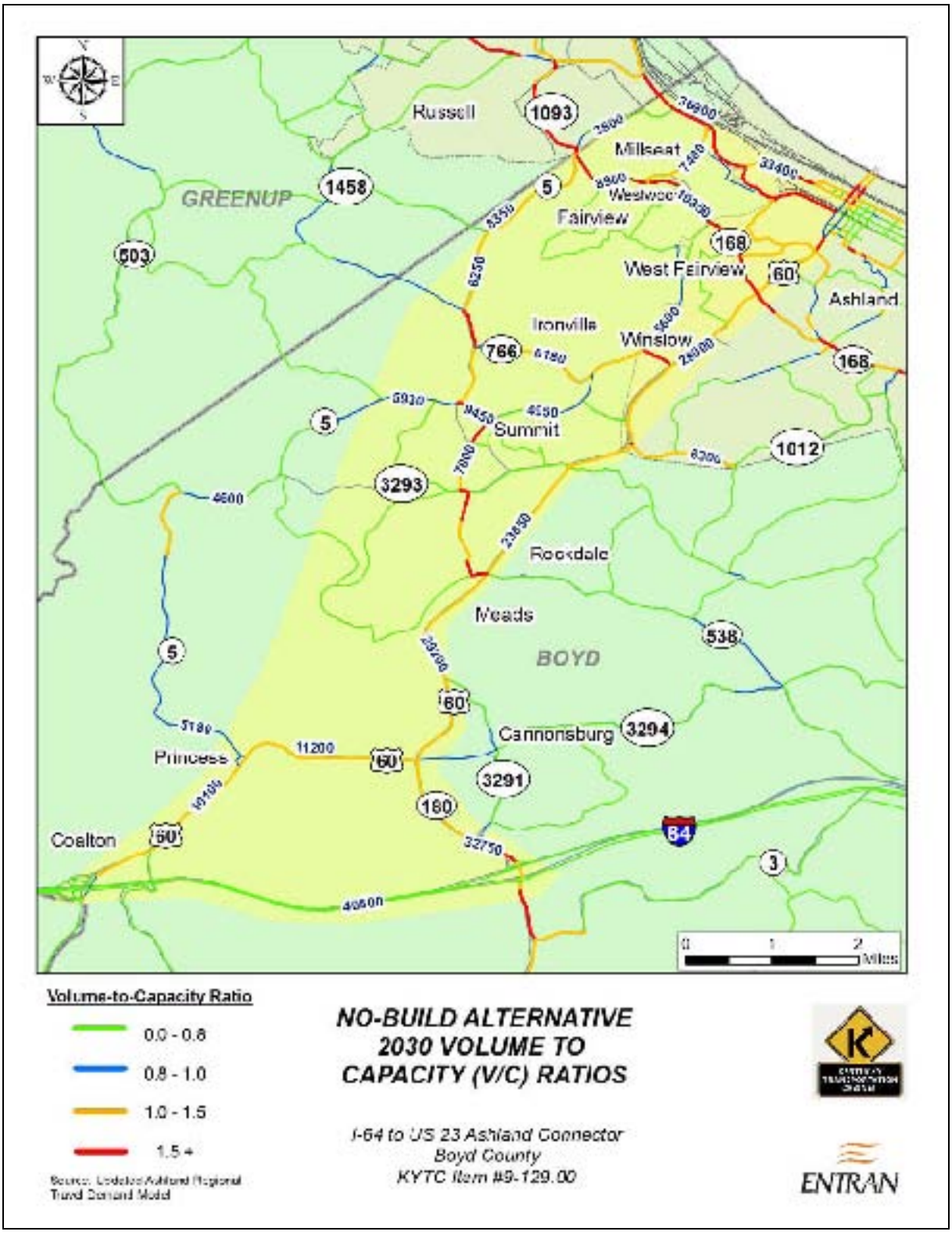


Figure 4-5: 2030 No-Build 2030 Traffic Forecasts

In general, the 2030 traffic volumes forecast by the updated travel demand model tend to be similar to or in some cases lower than existing traffic volumes within much of the study area. This is consistent with what would be expected with decreasing populations in Boyd County and limited areas of employment growth. However, the model predicts significant growth along I-64, KY 180, KY 5, and portions of US 60 south of Ashland, as shown in **Figure 4-6**.

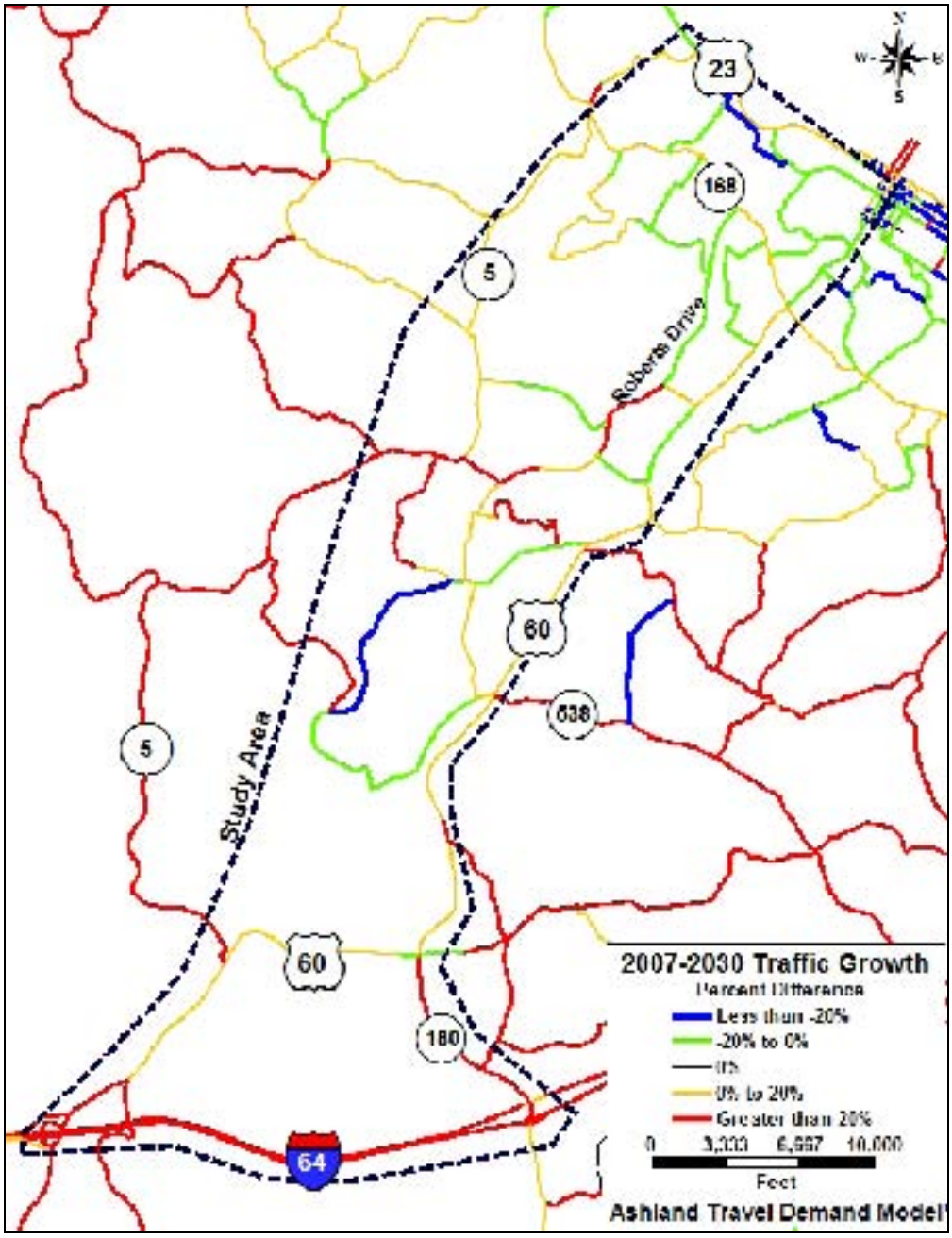


Figure 4-6: Percent Increase between 2007 and 2030 Traffic Assignments

Traffic along US 23 within the study area is not expected to increase significantly but much of this section is already at or near capacity. I-64 between the US 60 and KY 180 interchanges is expected to grow by nearly 126 percent between 2007 and 2030, and KY 180 north of US 23 is expected to increase by 146 percent. North of the KY 180 intersection, traffic volumes on US 60 are expected to increase by approximately 18 percent. All of US 23, US 60, and KY 180 are anticipated to experience V/C ratios greater than 1.0, indicating they will be congested during some portions of the day.

The regional travel demand model was also used to estimate future travel patterns and to evaluate potential improvement alternatives. (More discussion on the evaluation of alternatives is found in **Chapter 5**.) **Figure 4-7** presents a summary of the origins for daily trips traveling along US 23 in the vicinity of Town Mall, west of downtown Ashland. These results were developed by performing a "select-link" analysis using the TransCAD software. The select-link analysis provides information on the sources of every trip that uses any given link in the model network. Based on output from the regional travel demand model, the vast majority of the trips along this section of US 23 begin in Ohio and cross one of the Ohio River bridges from Ironton or Coal Grove. Unfortunately, no travel alternatives exist for these trips other than US 23.

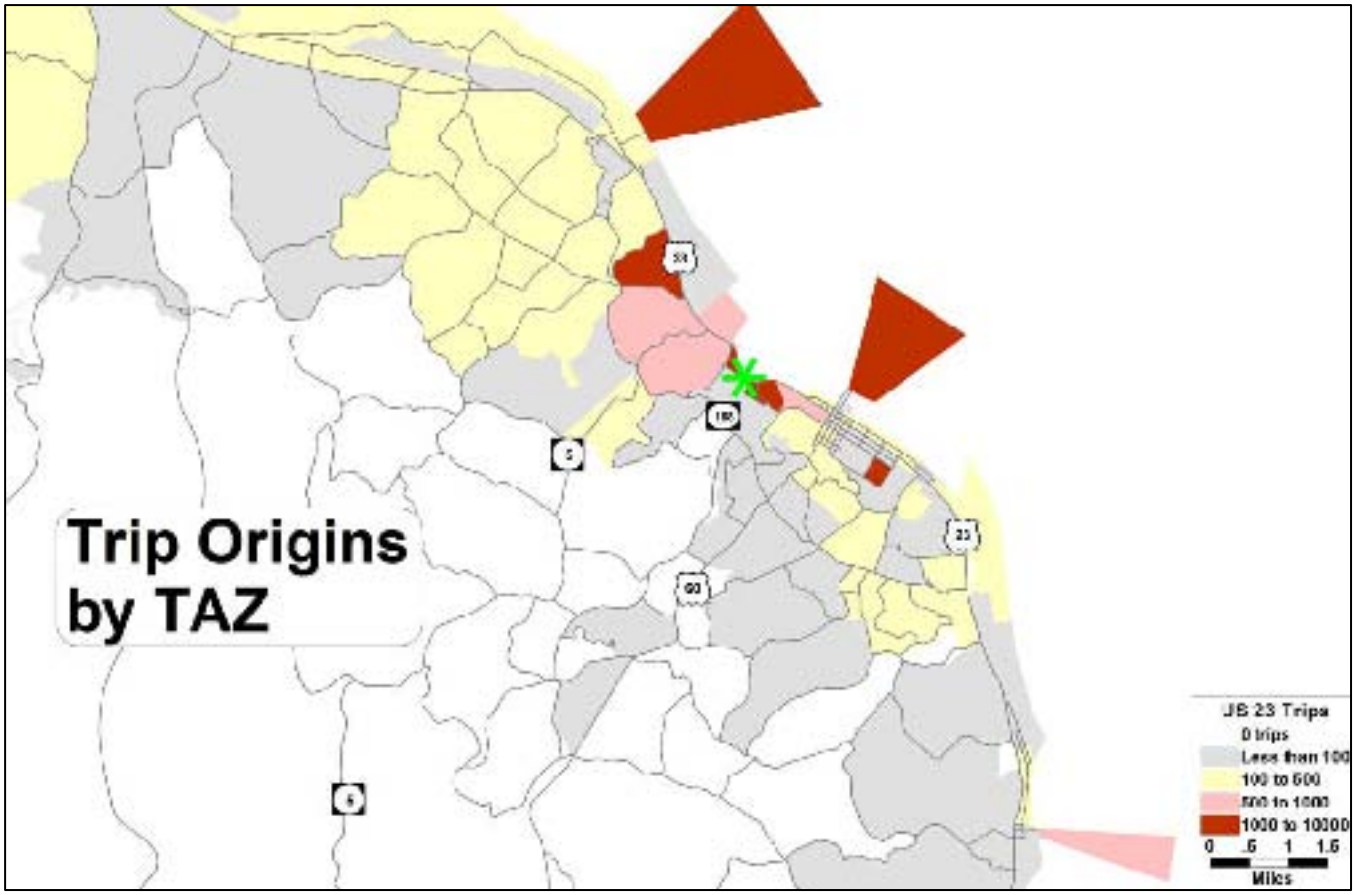


Figure 4-7: 2030 Travel Patterns for Trips Destined for US 23 west of Downtown Ashland

Figure 4-8 presents similar findings for trips that travel along US 60 just north of the KY 168 intersection and south of downtown Ashland. This location was selected as it is near the north end of the narrow four-lane section, a segment recommended for improvement by the ACAT. The majority of trips that travel this section each day begin across the Ohio River from downtown Ashland or west of the network model area on I-64. This suggests that a new corridor could possibly divert some trips from this section of I-64, provide that such a corridor could provide similar or improved travel opportunities.

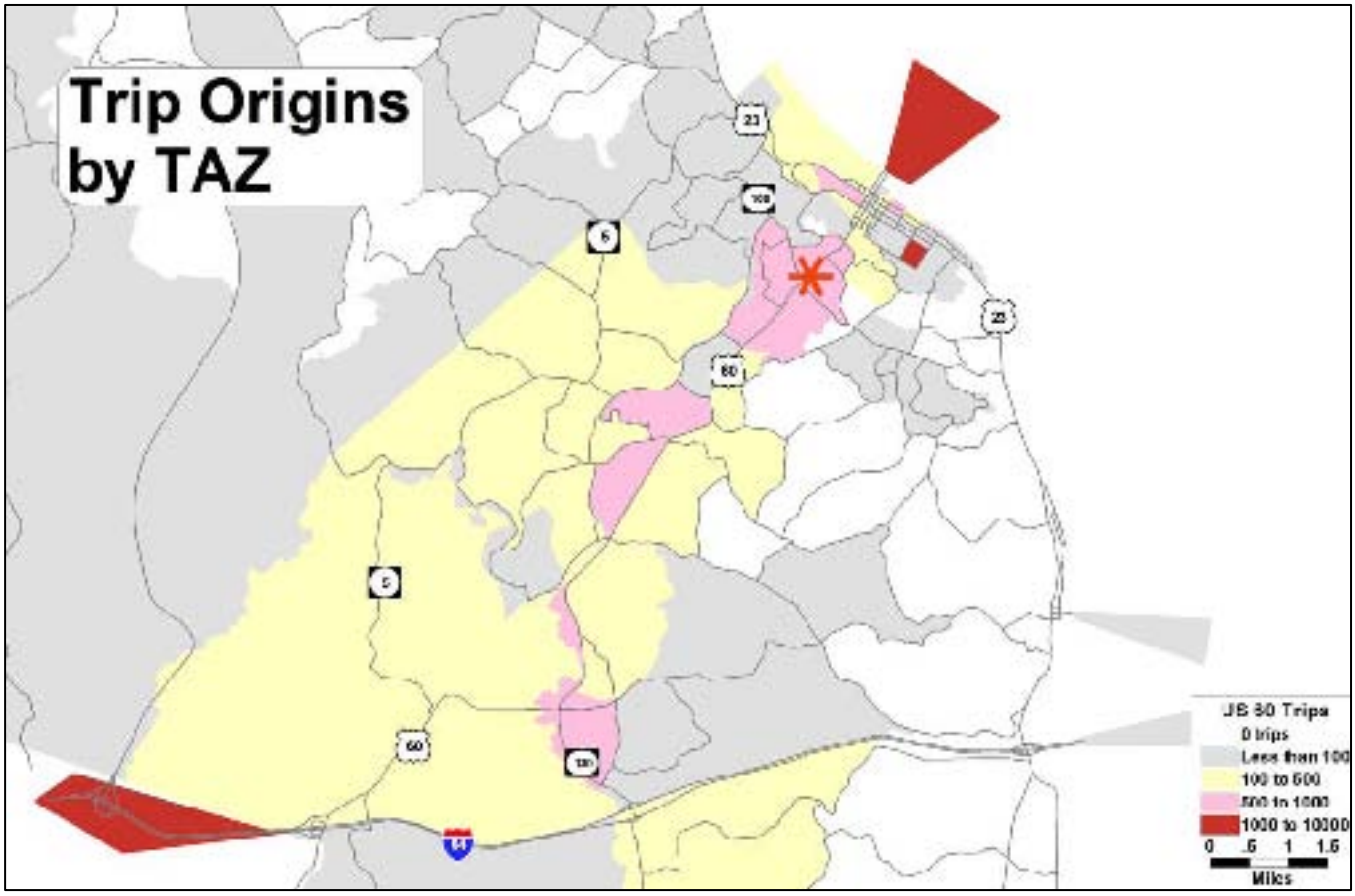


Figure 4-8: 2030 Travel Patterns for Trips Destined for US 60 south of Downtown Ashland

5.0 DEVELOPMENT OF ALTERNATIVES

A number of transportation alternatives were developed and evaluated in the I-64 to US 23 Ashland Connector Study. This includes both short-term projects that could potentially be implemented in the near term with minimal cost and long-range corridor alternatives that would require significant resources to implement. This chapter discusses how improvement concepts were conceived and then developed into feasible roadway improvement projects.

5.1 Stakeholder Input

One of the primary goals of the public involvement component of the study was to solicit input on the location of existing transportation deficiencies and needed improvements. To that end, the first meeting with local officials was used as an opportunity to ask focused questions concerning locations that could be considered "trouble spots" and areas where new or significantly improved routes are warranted. **Figure 5-1** presents the results from the identification of trouble spots.

Three locations were mentioned as being an issue along US 60. The segment with the traversable median, north of Armco Park and south of Rose Hill Cemetery, was discussed because of significant turning traffic and the presence of signage in the median. The median, while traversable, causes confusion among some drivers who decelerate rapidly to enter the median or even attempt to turn left out of the left travel lane. Two intersections along US 60 were discussed as needing significant improvement, including the KY 168 (Blackburn Avenue) and KY 180 intersections.

Along US 23, three problem spots were mentioned. The first was the area around Town Center Mall. Left turns were prohibited from westbound US 23 some time ago in an effort to improve traffic flow in the area, but the circuitous travel required to access the mall is confusing for those unfamiliar with the area. At the onset of the study, it was noted that the existing signage indicating no left turns are allowed and how to access the mall by turning right was too small to be legible from a distance. The KYTC replaced the signs during the study with larger, more legible versions. The second location was west of the new Wal-Mart on River Hill Drive. This section lies in a long curve and is on a grade approaching the KY 168 intersection. The final location was outside the study area, near the 47th Street Park.

The final problem spot mentioned at the first meeting with local officials was the area near the KY 168 intersection with Roberts Drive. The CSX rail line runs parallel to Roberts Drive and crosses KY 168 at-grade just west of the Roberts Drive intersection. The grade crossing is at a much higher elevation than the KY 168 approaches and Roberts Drive, which restricts sight distance.

The ACAT was asked to complete a similar exercise early in the study, the results of which are shown in **Figure 5-2**. Two segments of US 60 were discussed, including the segment between Rose Hill and Ashland Community College and near the KY 5 intersection and Paul Coffey Boulevard. The northern segment through Ashland is a narrow, four-lane section with no shoulders. Some of the issues discussed along this portion of US 60 included a lack of turn lanes, high travel speeds, significant truck volumes, and minimal utility pole setbacks. Issues with the segment near KY 5 and Paul Coffey Boulevard involved the need for turn lanes at Paul Coffey Boulevard to accommodate trucks.

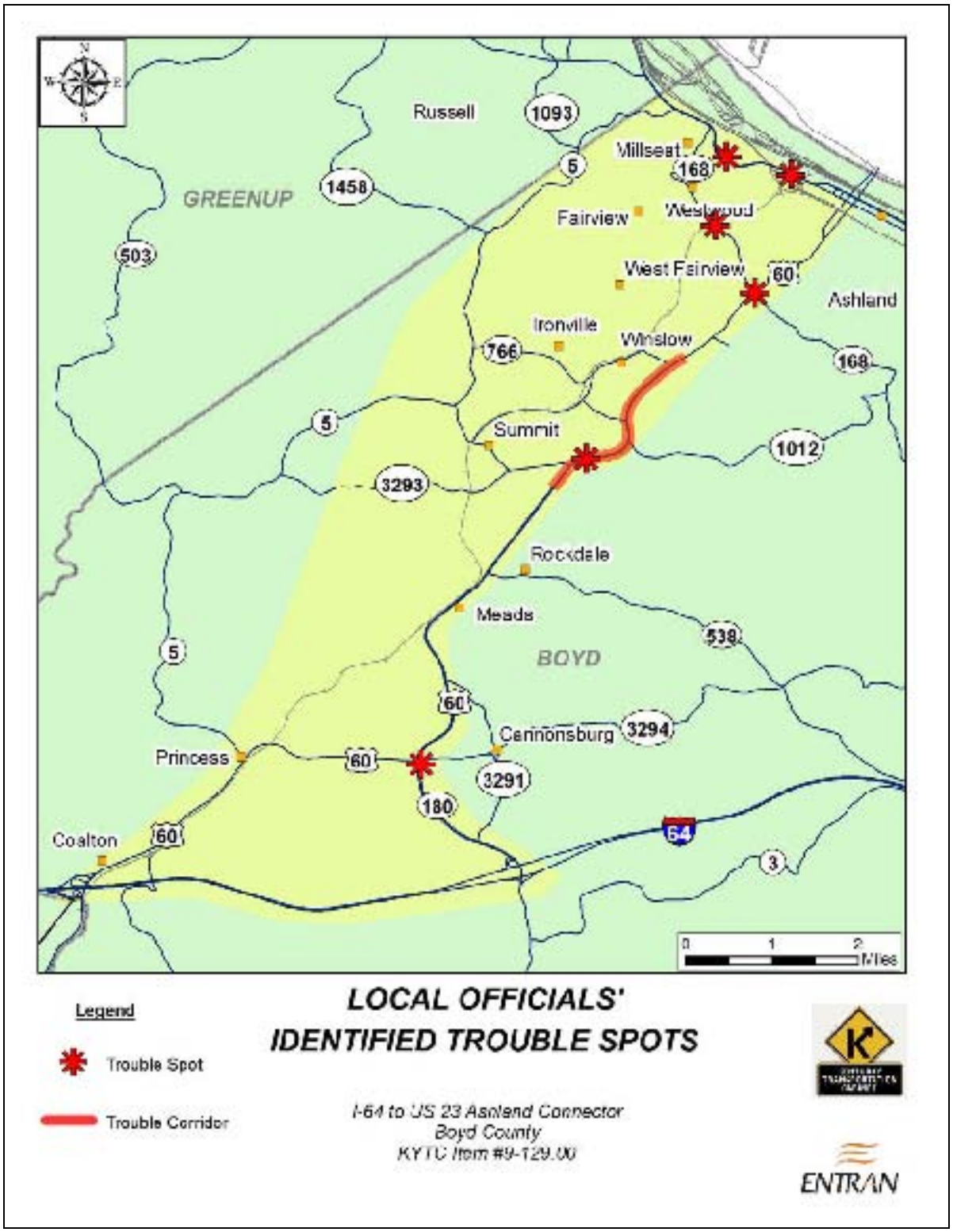


Figure 5-1: Trouble Spots Identified by Ashland Local Officials

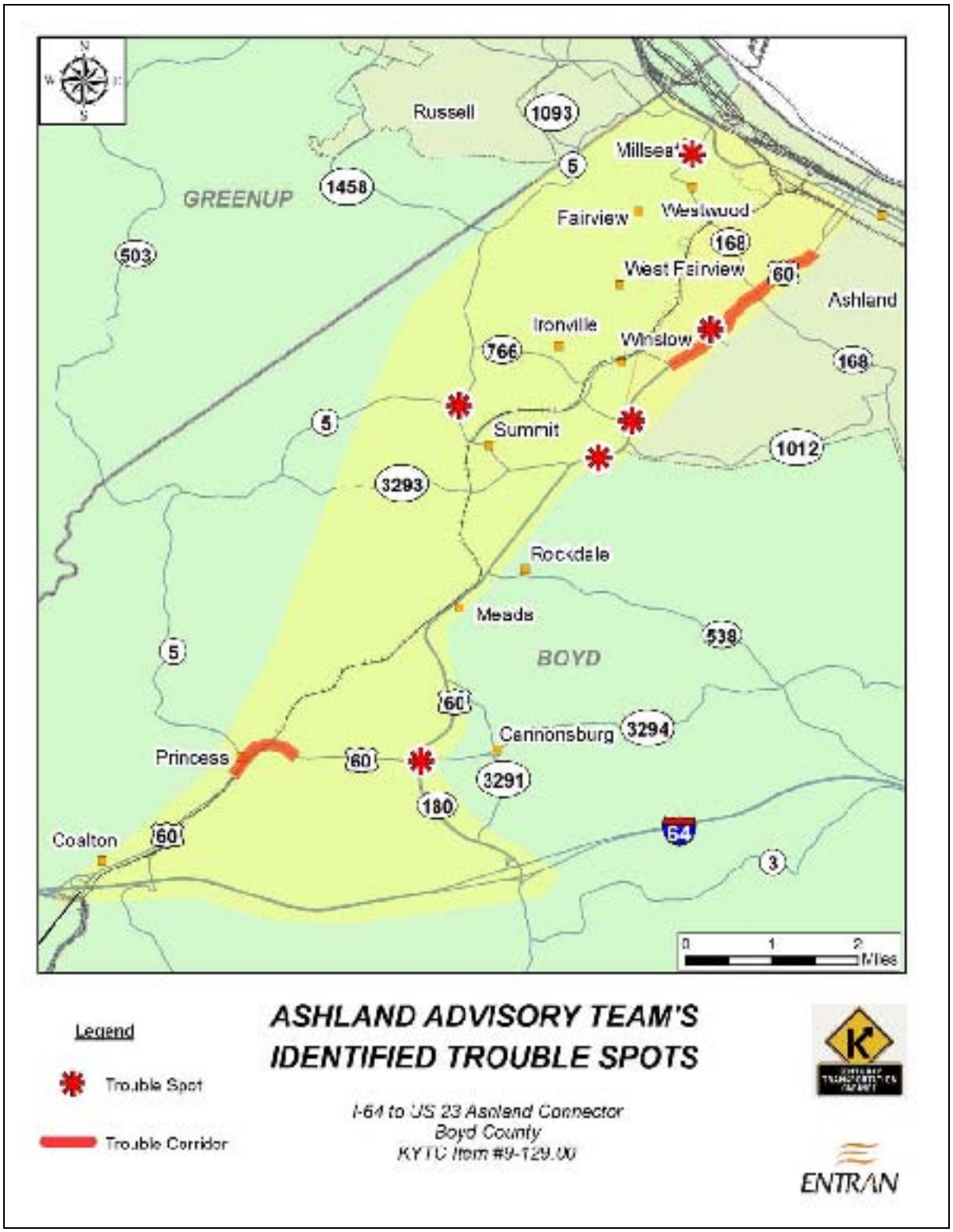


Figure 5-2: Trouble Spots Identified by the Ashland Connector Advisory Team (ACAT)

Several trouble spots were identified by the ACAT, including the US 60 intersections with KY 180, KY 716 (Summit Road), Highland Avenue, and KY 168. Other locations mentioned included the KY 5 intersection with KY 716 and KY 168 near Millseat, south of US 23.

At those early meetings, the local officials and ACAT were also asked to identify potential new routes for consideration in the study. The local officials' suggestions are shown on **Figure 5-3**. Two new routes were recommended. The first begins on US 60 near the community of Princess and near the intersection with KY 5. The route runs northeast and connects to KY 168, tying into US 23 at or near the existing US 23/KY 168 intersection. The second route begins on US 60 north of Armco Park and south of Rose Hill Cemetery and runs northeast, roughly paralleling the existing CSX rail line and Roberts Drive, connecting to US 23 near Town Center Mall. The local officials also suggested intersection improvements at the US 60 intersections with KY 180, KY 716, and KY 168.

At the first ACAT meeting, the attendees worked in groups to identify a number of potential new or improved routes and spot improvements, shown on **Figure 5-4**. A recommendation was made to consider widening US 60 between the I-64 Coalton interchange and KY 180, perhaps adding a center turn lane to create a three-lane section. A similar improvement was also recommended for the section between Rose Hill Cemetery and the Ashland Community College, restriping the exiting narrow four-lane section as a three-lane section with a continuous center left-turn lane. Improvements to the entire KY 168 corridor were suggested. Two new routes were discussed, including a connection from US 60 to Industrial Parkway (outside the study area) and a new route connecting US 60 north of Armco Park to US 23 near the KY 5 intersection. Intersection improvements were recommended at the US 60 intersections at KY 180, KY 716, and US 23.

At the conclusion of the first ACAT meeting, the attendees were asked to put additional thought into needed improvements or potential new routes for discussion at the next meeting. At the second meeting, attendees again worked in groups to refine those concepts and to develop a brief list of projects for further consideration. The results of these discussions are shown on **Figure 5-5**. The ACAT's recommendations included improvements to US 60 between I-64 and KY 180. Three new routes (or route combinations) were recommended for further consideration. Two options that used much of the existing KY 5 corridor were suggested, including one using the KY 716 corridor and another using the KY 766 corridor to connect to an improved KY 5. An additional recommended route connects to US 60 north of Armco Park, roughly paralleling the existing CSX rail line and Roberts Drive, connecting to US 23 near Town Center Mall. This corridor could also connect to US 23 west of River Hill Drive and the Wal-Mart development or use the KY 168 corridor to connect to US 23.

The ACAT's recommended corridors were presented to the public at the first public meeting on April 20, 2008. The purpose of this meeting was to provide information concerning the existing conditions within the study area, discuss study activities to date, and to provide an opportunity for the public to voice their concerns and suggest additional locations for which they felt improvements are needed. **Figure 5-6** presents the public's input. The public recommended two new routes not previously discussed, including an improved connection from US 60 near Princess and KY 5 to US 60 north of the Kyova Mall and a new route from US 60 north of the Kyova Mall to US 23 near the KY 5 intersection.

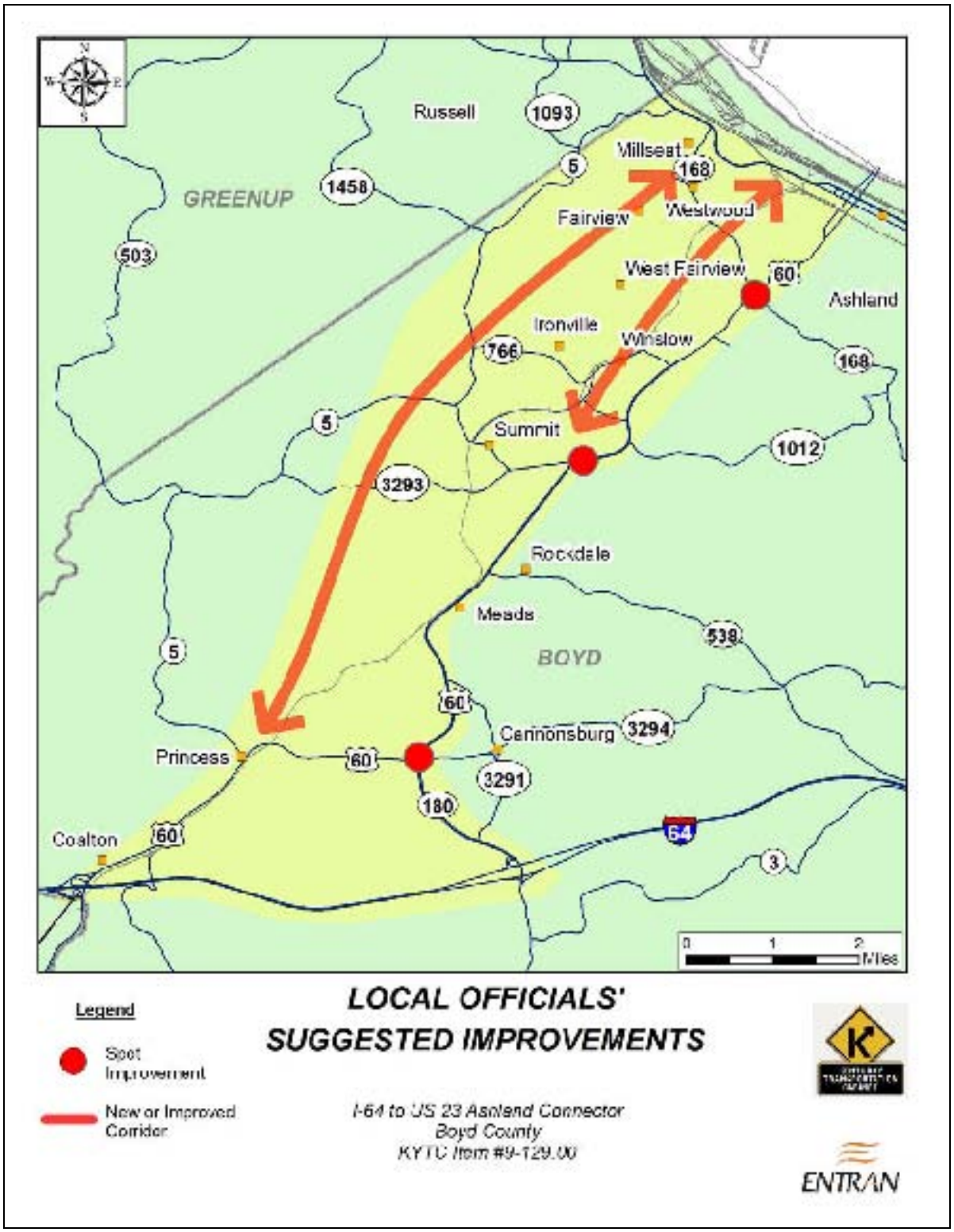


Figure 5-3: Suggested Improvements Identified by Ashland Local Officials

Figure 5-4: Suggested Improvements Identified by the Ashland Connector Advisory Team (ACAT)

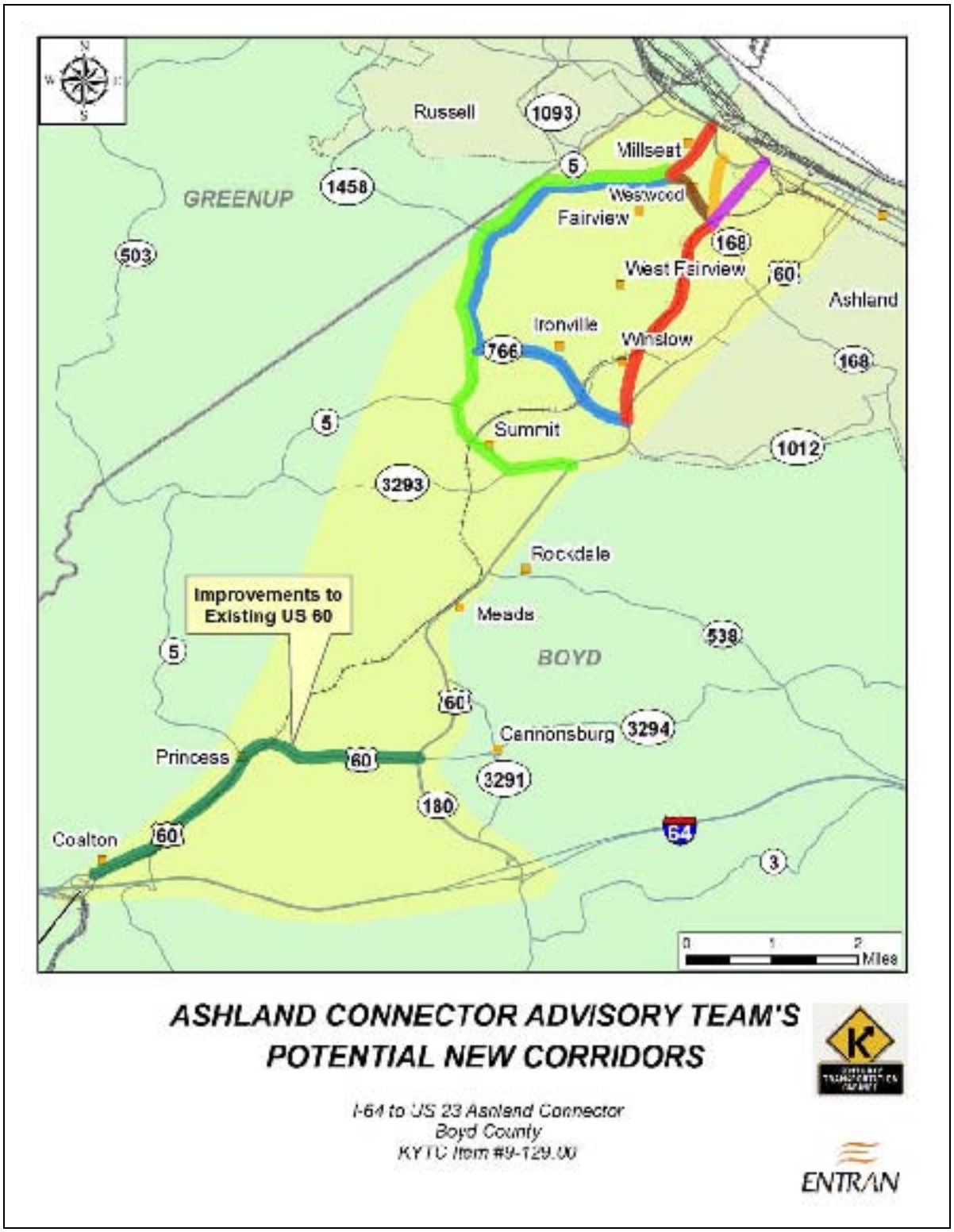


Figure 5-5: Potential New Routes Identified by the Ashland Connector Advisory Team (ACAT)

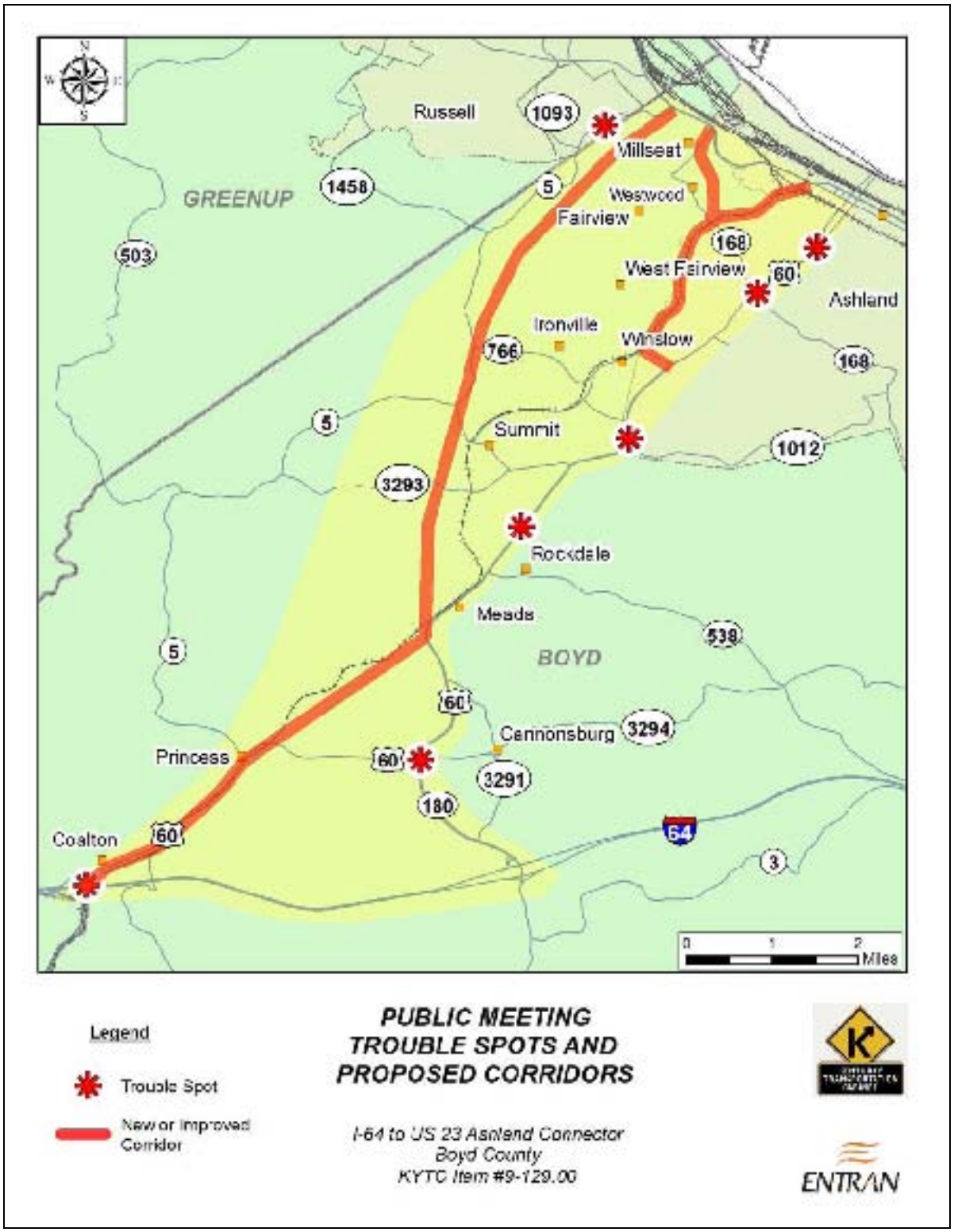


Figure 5-6: Trouble Spots and Potential New Routes Identified at the First Public Meeting

5.2 Short-Term Improvement Alternatives

A number of short-term improvements (also referred to as "spot improvements") were developed based on stakeholder input, investigation of crash data, and site reconnaissance. These projects, most of which were developed to improve traffic safety, are shown on **Figure 5-7**. Descriptions of each of these projects follow.

Intersection Reconstruction

US 60 at KY 180: This intersection lies in a curve along KY 180 and US 60, and the alignment currently has significant superelevation (i.e. banking of the roadway) of approximately 9 percent to accommodate the travel speeds. The improvement is to reconstruct the north-south approaches of KY 180 and US 60 to decrease the amount of necessary superelevation.

KY 168 at Roberts Drive: There is an at-grade crossing of the CSX rail line on KY 168 immediately west of the Roberts Drive intersection. This grade crossing is at a much higher elevation than the street approaches, resulting in poor sight distance. Fifty-six (56) crashes were reported between 2002 and 2006 along KY 168 in this area. Over 41 percent were rear end crashes and approximately 23 percent resulted in one or more injuries. The improvement is to raise the grades on KY 168 and Roberts Drive to better match the elevation of the grade crossing.

US 60 at KY 168 (Blackburn Avenue): The US 60 approaches to this five-legged intersection are skewed as buildings are located adjacent to the right-of-way at the southwest and northeast corners. The building located in the southwest corner is eligible for inclusion on the National Register of Historic Properties. The improvement is to realign the US 60 approaches by moving the US 60 alignment slightly to the east, resulting in the removal of the building (or portions of the building) on the northeast corner. It was suggested that closing the Algonquin Avenue approach, which forms the fifth leg of the intersection to the southwest, be given consideration.

Median Reconstruction

US 60 between KY 716 (Summit Road) and KY 1012 (Boy Scout Road): This section of US 60 has a raised, traversable median and is fronted by various commercial developments. The "roll" curb forming the raised median causes some drivers to slow significantly before mounting the median. Approximately 25 percent of the crashes that occurred over the five years between 2002 and 2006 were angle crashes (involving one or more turning vehicles) and another 40 percent were rear end crashes. The improvement is to replace the traversable median with a non-traversable median with selective median openings and turn lanes.

Addition of Turn Lane(s)

US 60 at Paul Coffey Boulevard: There were 13 reported crashes at the US 60 intersection with Paul Coffey Boulevard between 2002 and 2006, and seven (54 percent) of those were rear-end crashes. Significant truck traffic utilizes this intersection to access the industrial park. The improvement is to add a northbound left-turn lane and a southbound right-turn lane to better accommodate truck traffic.

US 60 at KY 716 (Summitt Road): There were 25 reported crashes on the southbound approach to the US 60 intersection with KY 716 between 2002 and 2006, and 19 (76 percent) of those were rear-end crashes. Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a southbound right-turn lane.

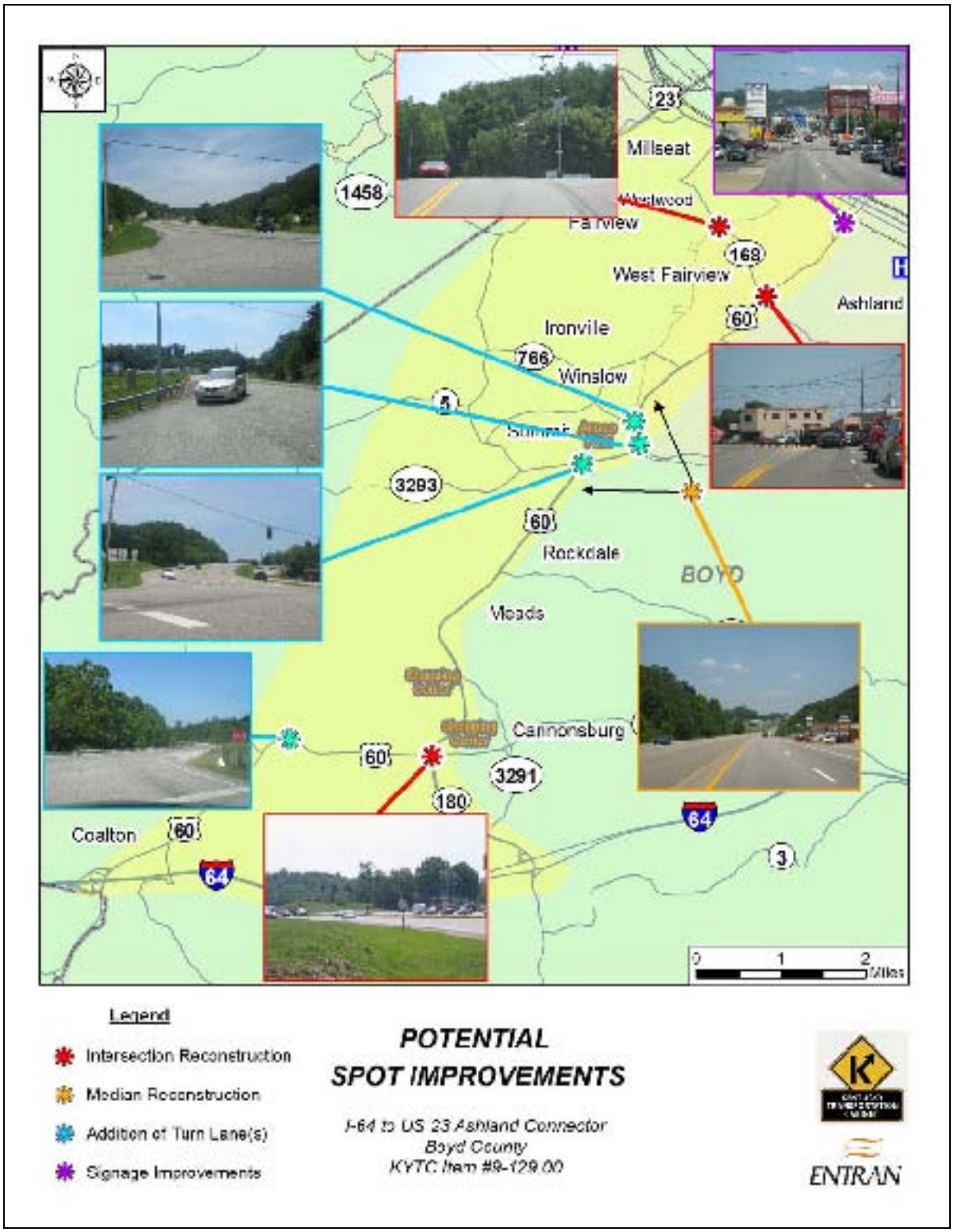


Figure 5-7: Preliminary Short-Term Improvement Alternatives

US 60 at KY 1012 (Boy Scout Road): There were 14 reported crashes on the northbound approach to the US 60 intersection with KY 1012 between 2002 and 2006, and eight (57 percent) of those were rear-end crashes. Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a northbound right-turn lane.

US 60 at KY 766 (Bob McCullough Drive): There were 27 reported crashes on the southbound approach to the US 60 intersection with KY 766 between 2002 and 2006, and 14 (52 percent) of those were rear-end or same-direction sideswipe crashes. Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a southbound right-turn lane.

Signage Improvement

US 60 (13th Street) approaching downtown Ashland: As drivers are approaching the 13th Street intersection with US 23, there is no signage to indicate which lanes lead to the bridge to Coal Grove, OH. However, opportunities for improved signage are limited. The improvement is to provide overhead signage directing bridge traffic to use the middle lanes and traffic destined for northbound US 23 (Winchester Avenue) to use the left lane. Consideration was also given to restriping the northbound US 60 (13th Street) approach to US 23 in order to provide a left-turn only and shared through and left-turn lane for traffic turning left onto northbound Winchester Avenue.

A summary of the Short-Term Improvement Alternatives is provided in **Table 5-1**.

Table 5-1: Summary of the Short-Term Improvement Alternatives

Roadway / Intersection	Improvement Type	Description	Estimated Cost
US 60 @ KY 180	Intersection Reconstruction	Reconstruct grade on approaches	$1,000,000
US 60 @ KY 168 (Blackburn Ave.)	Intersection Reconstruction	Realign curved approach leg(s)	$750,000
Roberts Drive @ KY 168 (Blackburn Ave.)	Intersection Reconstruction	Improve at-grade railroad crossing on KY 168 west of Roberts Drive	$250,000 - $500,000
US 60 from south of KY 716 to KY 1012 (Boy Scout Rd.)	Median Reconstruction	Construct a traversable median w/ selective median openings	$325,000
US 60 @ Paul Coffey Blvd.	Addition of turn lane	Add NB left turn lane and SB right turn lane	$275,000
US 60 @ KY 716	Addition of turn lane	Add SB right turn lane	$125,000
US 60 @ KY 1012 (Boy Scout Rd.)	Addition of turn lane	Add NB right turn lane	$125,000
US 60 @ KY 766	Addition of turn lane	Add SB right turn lane	$125,000
US 60	Signage Improvement	Provide additional/improved signage for NB US 60 approaching bridge	$200,000

5.3 Long-Range Corridor Alternatives

The long-range corridor alternatives for the I-64 to US 23 Ashland Connector Study were developed based on stakeholder outreach and a comprehensive investigation of existing conditions. These alternatives, shown on **Figure 5-8**, involve both improvements to existing sections of the transportation corridor between I-64 and the city of Ashland as well as new routes. For the purpose of discussion and comparison, the alternatives will be split into two different groups: the South Alternatives (Alternative 1 and 4) located on the I-64 end of the project, and the North Alternatives (Alternatives 2, 3 and 5) located on the US 23 end near Ashland. (These two groups correspond to the two large exhibits shown at the second public meeting held on November 18, 2008.) Specific alignments have not yet been developed, but planning level alignments have been estimated in order to examine the feasibility for constructing a roadway within each corridor and to estimate costs, likely impacts, and potential relocations. For purposes of this study, a four-lane divided typical section was assumed for all projects, with the exception of Alternative 5.

South Alternatives

The alternatives at the southern end of the project corridor seek to improve the existing two-lane US 60 between the I-64 Coalton interchange and the four-lane section of US 60. This two-lane road is the preferred route for vehicles traveling between Ashland and I-64 to and from the west. Input from the first public meeting suggests many drivers choose to travel this unimproved section of US 60 to get to I-64, instead of using KY 180, because the US 60 route decreases travel distance by about 2 miles (3.8 miles versus 5.8 miles).

Alternative 1, referred to as the "Princess Connector", was proposed by the public as an improved connection between I-64 and US 60 through the Paul Coffey Industrial Park. As shown on **Figure 5-9**, two potential corridors were developed, and both alternatives begin at an existing sharp curve just south of the Paul Coffey Industrial Park and take off on a new route from that point. Both alternatives end at a tangent on the multilane section of US 60, approximately half a mile to the north of the Kyova Mall.

Alternative 1A runs parallel and to the northwest of the existing CSX railroad line along the first half of its alignment. After crossing the East Fork of the Little Sandy River, it then travels over an existing golf course while running parallel to the Meade/Springer Road. Finally, the alignment bridges over the CSX railroad line before tying into US 60. The first half of the alignment involves some impacts to the Paul Coffey Industrial Park. An overpass bridge would be needed for Lynn Avenue to maintain the existing connection between the west and east sides of this industrial park. Impacts on this area would involve the relocation of one commercial building and significant impacts to three other parcels at the industrial park. Along the second half of the alignment, the proposed road encroaches into the floodplain for the East Fork of the Little Sandy River. The proposed road would have to keep well above the flood plain elevation for the river, which according to FEMA, ranges between 593 and 595 feet for this section of the river. Along this second half of the alignment, Alternative 1A stays clear of two potentially historic houses adjacent to the Meade/Springer Road, but it may impact several trees on the golf course that are considered "bat habitat". Finally, the alignment crosses over the CSX railroad with a twin-bridge structure before tying back into US 60. An estimated two commercial and one residential relocation would be required along the last section of this alternative immediately after bridging over the railroad. The estimated construction cost for this alternative is $24 million.

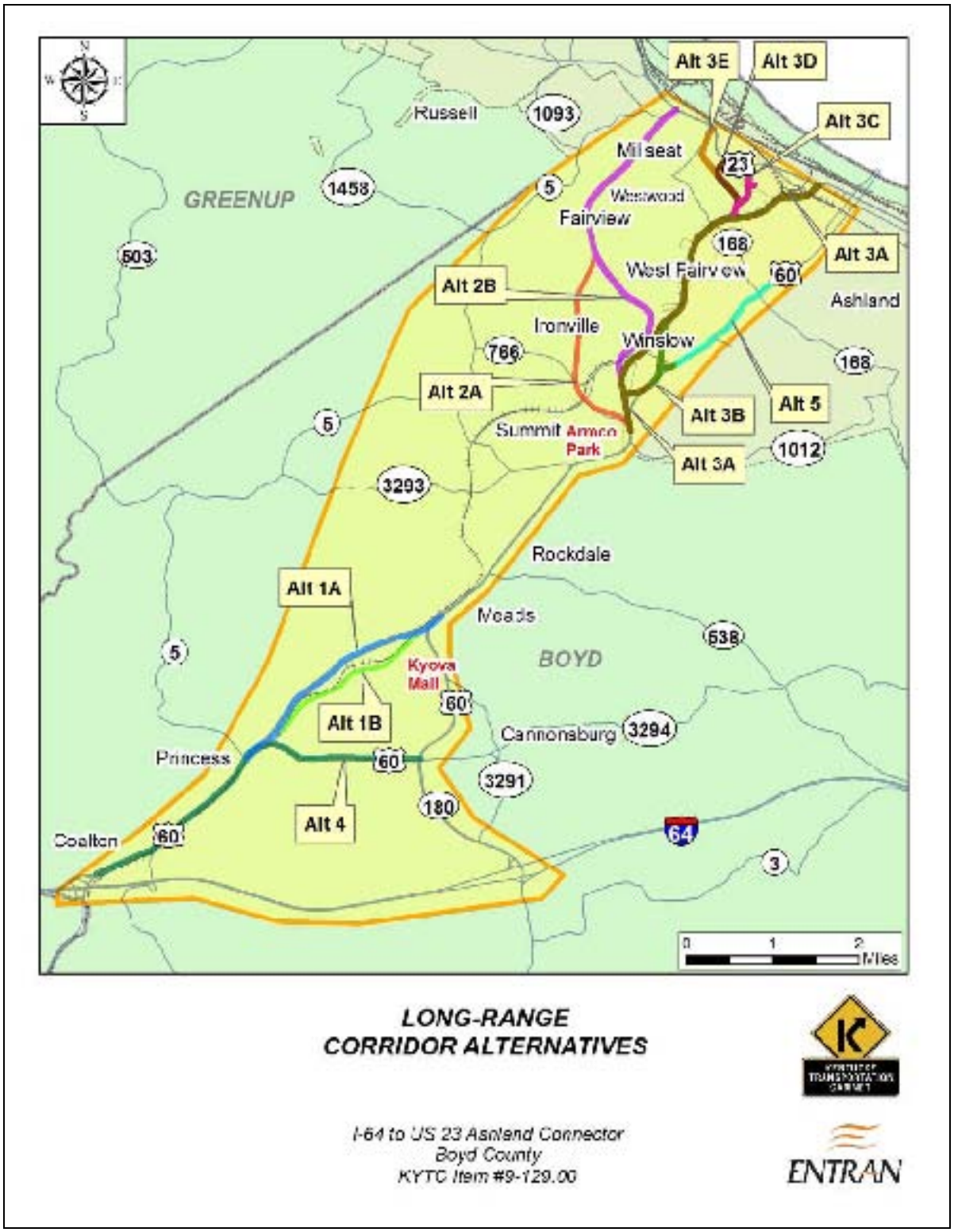


Figure 5-8: Preliminary Long-Range Corridor Alternatives

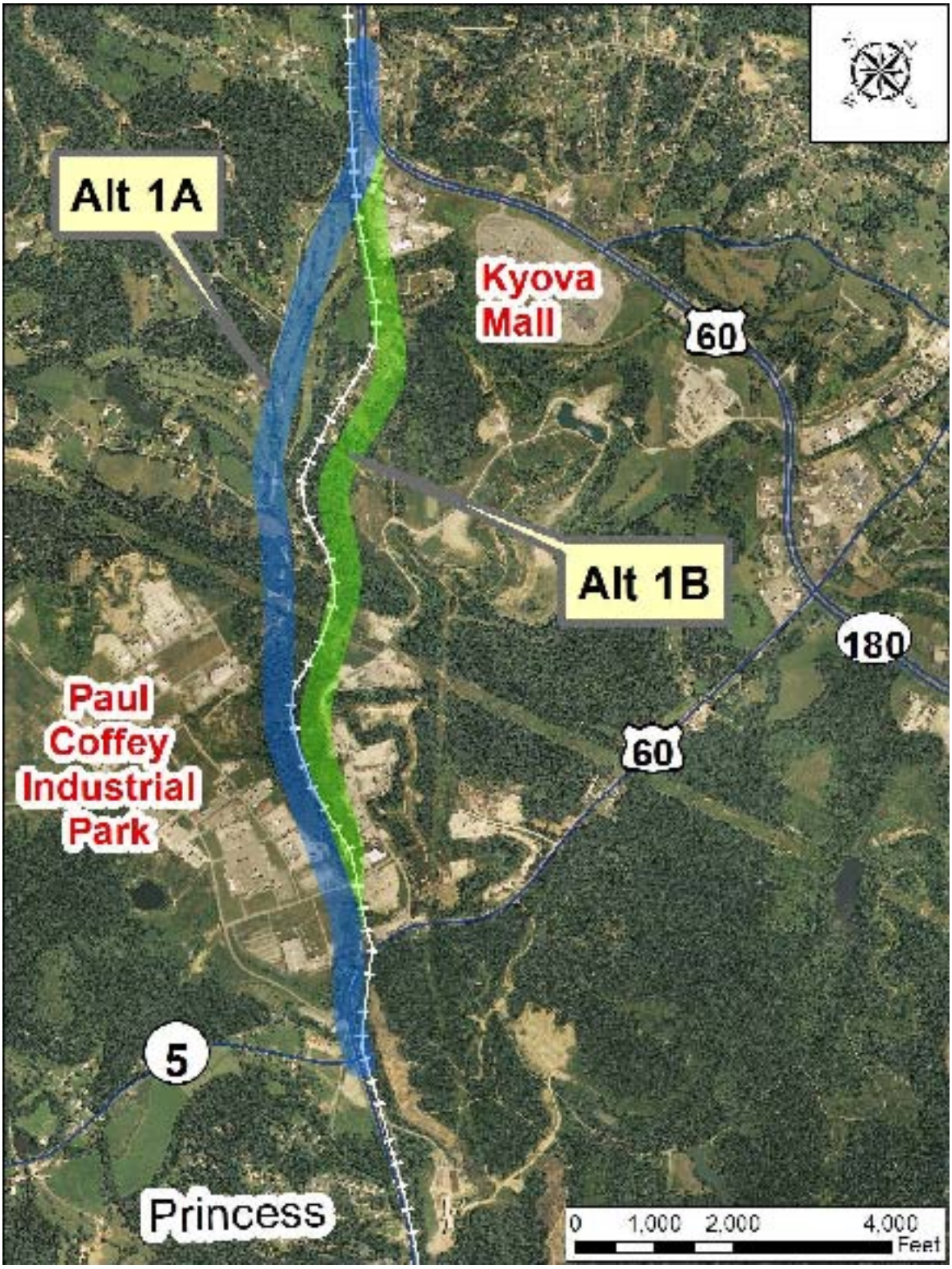


Figure 5-9: Alternative 1

Alternative 1B begins at the same point as 1A but it soon crosses over the CSX railroad line in the vicinity of Lynn Avenue. After the crossing, it runs parallel and to the southeast of the CSX line for the remainder of the alignment. The crossing over the railroad will need to be studied in much more detail in future phases of design to determine the best way to bridge over the CSX line. This crossing represents a challenge because there is an existing railroad tunnel at the point where Alternative 1B crosses over the railroad. If geotechnical studies determine that excavating material over this tunnel is not a viable option, the existing short tunnel would have to be removed entirely and a set of twin bridges would be needed for the proposed alignment to bridge over the railroad. It was assumed for purposes of this study that this last option would be the case and the existing tunnel would have to be removed and a set of twin bridges would be required to cross over the railroad. As is the case with Alternative 1A, an overpass bridge may also be needed for Lynn Avenue at this location to maintain the existing connection between the two sides of the industrial park. After the railroad line is crossed, Alternative 1B mimics the alignment of the railroad as closely as possible, following the contours along a hillside on the east section of the industrial park to minimize excavation and right of way impacts. This alternative also encroaches into the floodplain for the East Fork of the Little Sandy River, although not as much as Alternative 1A. The profile for this alternative would also need to be well above the floodplain as well. Finally, the alignment ties back into US 60 at the same point as Alternative 1A. However, its right of way impacts along the last section of this alignment would be higher than those of Alternative 1A, requiring an estimated four commercial and one residential relocation along this last section. The estimated construction cost for this alternative is $25.6 million.

The two Alternative 1 corridors studied have many similarities and further studies would be needed to be able to make a clear choice between the two. Factors unknown at this time would need to be explored in more detail, such as the feasibility of a cut over the railroad tunnel on Alternative 1B or the exact amount of environmental impacts likely to occur with the construction of Alternative 1A. From the presentaly available information, Alternative 1A seems to be preferable over Alternative 1B. It yields a lower construction cost and involves less relocations. It also offers a much straighter alignment without the multiple reverse curves used for Alternative 1B, this last one being much more controlled by the twists and turns of the existing railroad alignment.

Alternative 4, shown on **Figure 5-10**, involves the widening of the existing two-lane portion of US 60, from the I-64 Coalton interchange to the intersection with KY 180 at Cannonsburg. The alignment for Alternative 4 would follow the existing road closely. The existing alignment appears to comply with 55 mph standards for its entire length, even at the sharpest curve on the road located along the south boundary of the Paul Coffey Industrial Park. All widening would have to be done to the northwest of the existing road for about the first half of this alignment to avoid impacts to the existing CSX railroad line running parallel to US 60 along this section. The existing bridge over the CSX line may remain in place if it is found to be structurally and functionally sound. In that case, only a parallel bridge would be needed to accommodate the additional lanes. For this study, it was assumed that the bridge would need to be replaced with a set of twin bridges for the widened road. The existing bridge over East Fork of the Little Sandy River, considered a potentially historic bridge, would have to be replaced with a set of twin structures. Alternative 4 would result in an estimated three commercial and 10 residential relocations. The estimated construction cost for this alternative is $15.7 million.

Figure 5-10: Alternative 4

North Alternatives

The alternatives at the northern end of the project corridor provide new connecting routes between US 60 south of Ashland and US 23 west of downtown. The intent of these alternatives is to alleviate congestion along the existing US 60 by diverting a significant amount of traffic to a new connector road (Alternatives 2 and 3). In turn, the reduction of traffic along the existing US 60 may create an opportunity to restripe US 60 from the existing four-lane section to a 3-lane urban typical (Alternative 5).

Alternative 2, referred to as the Bellefonte Connector, begins on US 60 near its intersection with KY 766, located at the north boundary of ARMCO Park, and end at the intersection of US 23 with KY 5. As shown on **Figure 5-11**, two alternatives were developed to study an entirely new corridor for the new connector road that did not use any existing routes. The alignments for these alternatives generally wrap around various hillsides following the outer boundaries of established Ashland neighborhoods (West Fairview, Fairview and Westwood). The main goals behind the planning-level alignments that were developed were to minimize earthwork costs, reduce right of way impacts and avoid splitting existing neighborhoods.

Alternative 2A follows the existing KY 766 for about half a mile, veering off to the north after crossing the CSX railroad line and a blue line stream. A set of twin bridges would be used to cross over both the railroad and the stream. On the west side of the railroad the alignment wraps around a hillside, it then cuts through a second hill and, afterwards, runs roughly parallel and to the west of Hood Creek all the way to the KY 5 intersection. This alternative involves an estimated two commercial and 91 residential relocations. The estimated construction cost for this alternative is $48 million.

Alternative 2B starts at the KY 766 intersection and then follows to the north cutting through a hill, generating a very large amount of excavation on this first cut (up to three million cubic yards). After the cut, the alignment crosses over the CSX railroad line and the blue line stream with a set of twin bridges. On the other side of the crossing, the alternative wraps around a hillside and joins the Alternative 2A alignment near Hood Creek, sharing a common alignment all the way to the end at US 23. This alternative involves an estimated one commercial and 111 residential relocations. The estimated construction cost for this alternative is $60 million.

Alternative 2A offers a number of advantages compared to Alternative 2B. It would cost about 20 percent less than Alternative 2B, mainly due to the large cut at the beginning of Alternative 2B. It also potentially follows a better, less curvy alignment than that for Alternative 2B. Finally, it would involve fewer right of way relocations. Its main disadvantage would be the potential impacts it could cause to a historical structure and a vocational school located on opposite sides of KY 766 near US 60. Both these buildings would be spared with Alternative 2A, but the encroachment into these two properties and their future access to the higher new connector road may be problematic. Further studies with more detailed mapping would be needed to determine the extent of these issues.

Alternative 3, referred to as the Westwood Connector, consists of a large number of possible corridors. As shown on **Figure 5-12**, this set of alternatives follows Roberts Drive for a significant portion of their alignments. The differences between the alternatives have to do with their termini. Essentially, they comprise a single corridor alternative along the existing Roberts Drive, with two possible beginning points and four possible ending points.

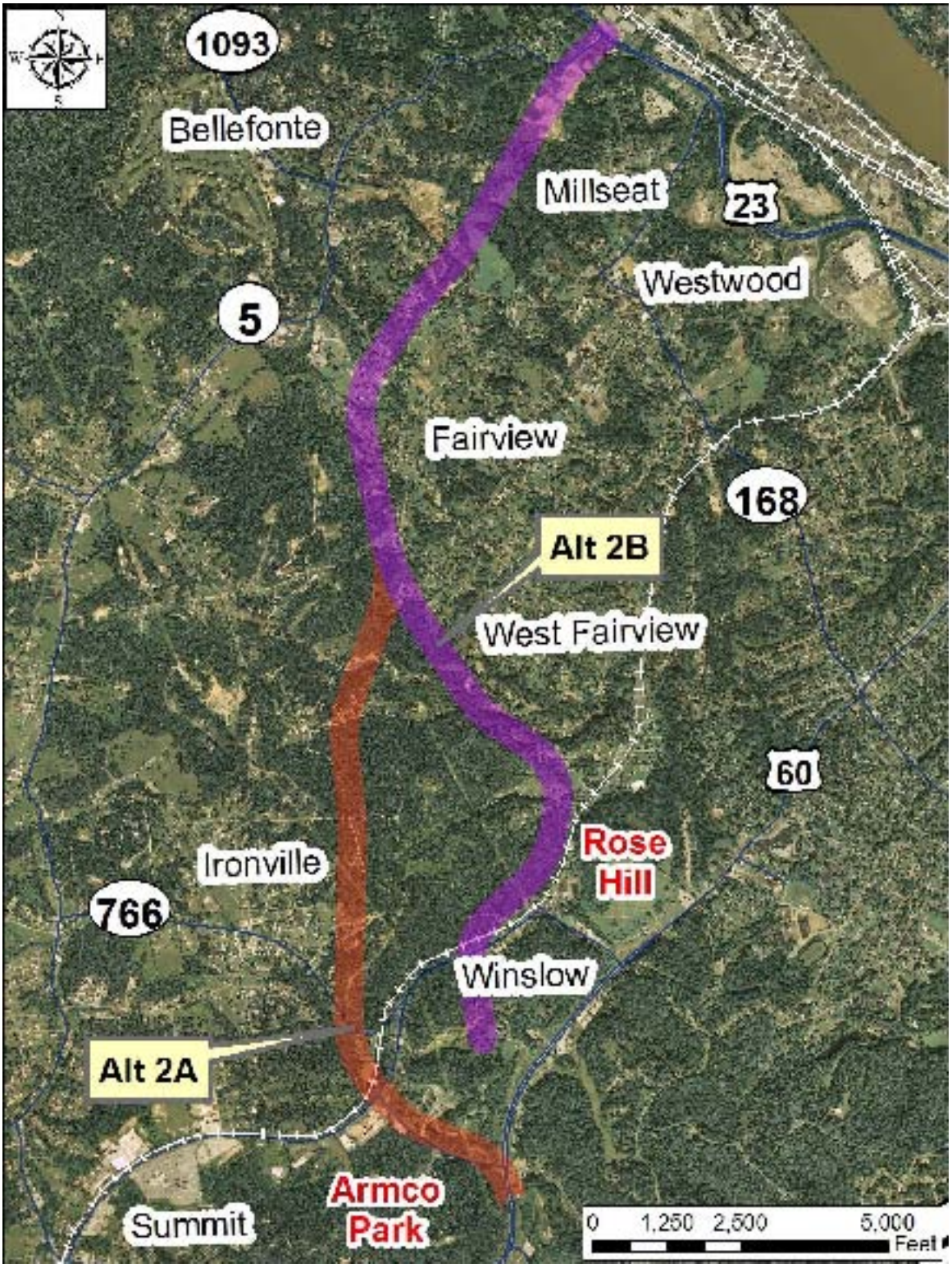


Figure 5-11: Alternative 2

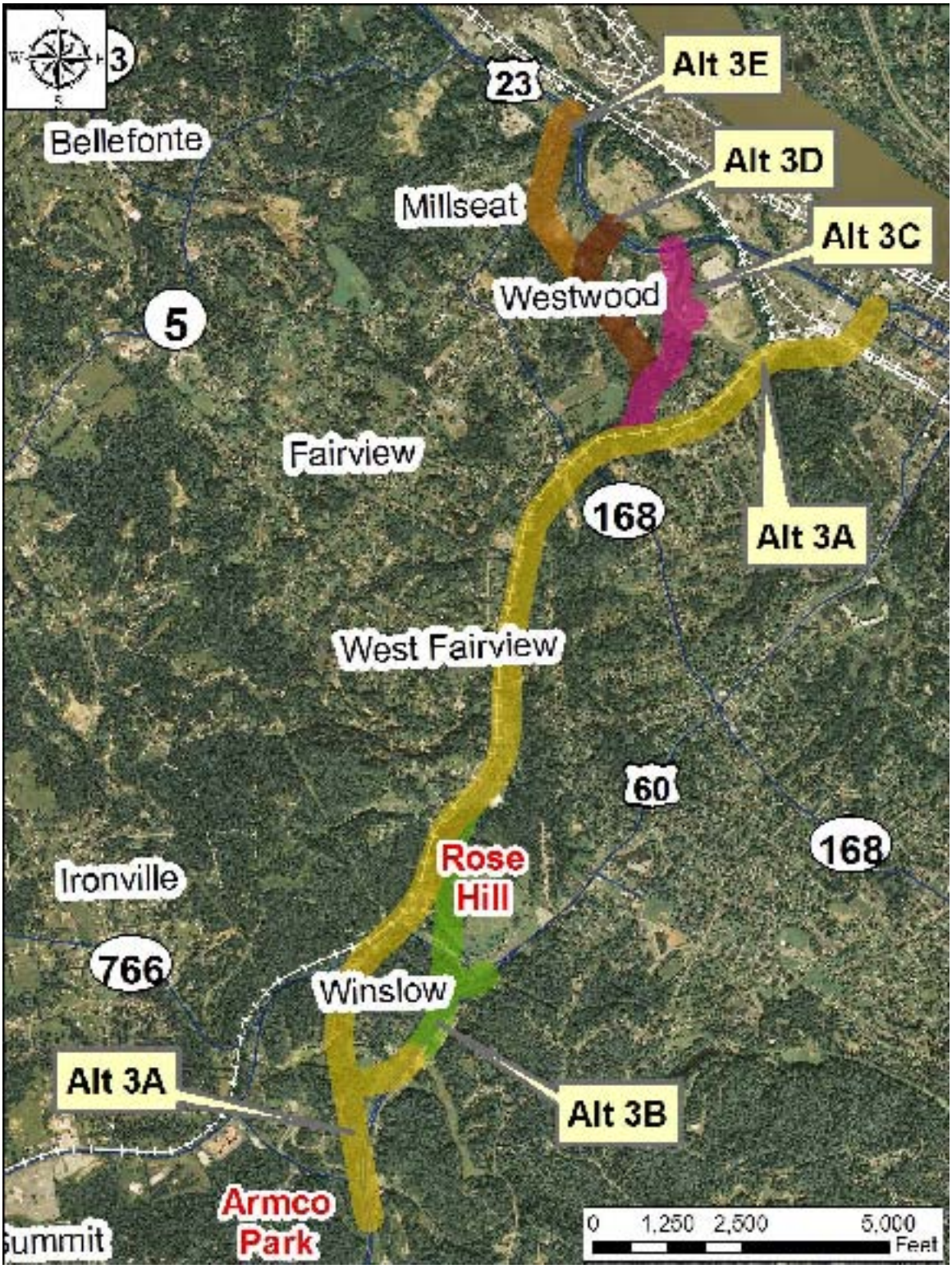


Figure 5-12: Alternative 3

There is a limited number of suitable areas where an alignment can be fit that connects the existing US 60 with Roberts Drive without introducing significant environmental or right of way impacts. The following two alignments have been investigated in this area:

1. Alternative 3A avoids significant environmental and right of way impacts at the cost of requiring a significant amount of excavation. It shares its beginning point and its first half mile with the alignment for Alternative 2B, described a few paragraphs above. As was the case with Alternative 2B, Alternative 3A begins at the KY 766 intersection and then heads north, cutting through a hill and generating a very large amount of excavation with this cut (up to three million cubic yards). By making this cut, the alignment completely avoids impacts to Armco Park and the Rose Hill cemetery. However, this alignment causes major impacts to the Rose Hill School located on Roberts Drive.

2. Alternative 3B has a different beginning point with the intent of avoiding the large cut at the beginning of Alternative 3A. It starts on US 60 just to the south of the Rose Hill Cemetery and immediately crosses to the west side of the cemetery before heading north. The initial intent was to squeeze this alignment between the Rose Hill cemetery and the Rose Hill school and avoid impacts to both. As it turns out, due to the limited space available, those impacts would be unavoidable. The final alignment for Alternative 3B through this area, if pursued, would have to be moved further to the west over the Rose Hill School, taking the whole school parcel to avoid encroaching into the larger cemetery parcel. Again, more accurate mapping will be needed to determine how far west the alignment would need to be moved.

The middle section is common among all the Alternative 3 alignments, running parallel and to the east of the existing CSX railroad line, following along Roberts Drive until its intersection with KY 168 (Blackburn Avenue). This middle section of the corridor involves the acquisition of many residential and commercial buildings that sit close to Roberts Drive along the east side of the road. Additionally, the final right of way impact could be more significant than current estimates due to the partial control access nature of the proposed connector. The provision of frontage roads to maintain the conventional 1,200-foot access spacing would likely require the relocation of additional buildings along this area.

North of the KY 168 intersection, the Alternative 3 alignment continues on a course parallel to the CSX railroad line until it splits into four different optional directions:

1. Alternative 3A continues further parallel to the railroad line until, near the end, it breaks east steering around the Ashland Town Center shopping mall. Alternative 3A ends at the intersection of US 23 with Greenup Avenue.

2. Alternative 3C bridges over the CSX railroad line just north of the KY 168 intersection. It then wraps around two hillsides in an attempt to avoid impacts to existing residences. Finally, it ties to River Hill Drive joining this road until its intersection with US 23. This road was recently relocated during the construction of the Wal-Mart development.

3. Alternative 3D breaks from Alternative 3A at the same location as Alternative 3C. It bridges over both the railroad and a blue line stream, continuing west through an existing baseball field complex. Finally, it curves to the north to intersect US 23.

4. Alternative 3E follows the same alignment as Alternative 3D for the first 0.6 miles. It then continues west and ends at the intersection of KY 168 (Hoods Creek Pike) with US 23. This switch to the west results in three additional crossings over the mentioned blue line stream, which would require two additional sets of twin bridges as compared to Alt 3D.

Alternative 5, shown on **Figure 5-13**, involves overlaying and restriping US 60 (13th Street) between Rose Hill and downtown Ashland to three lanes (two travel lanes plus a center left-turn lane). This alternative must be combined with Alternative 2 or Alternative 3 because both of those alternatives can potentially divert future traffic from this section of US 60, reducing the traffic volume enough for three lanes to accommodate the demand. The estimated construction cost for this alternative is $1.1 million and it would not require any additional right of way.

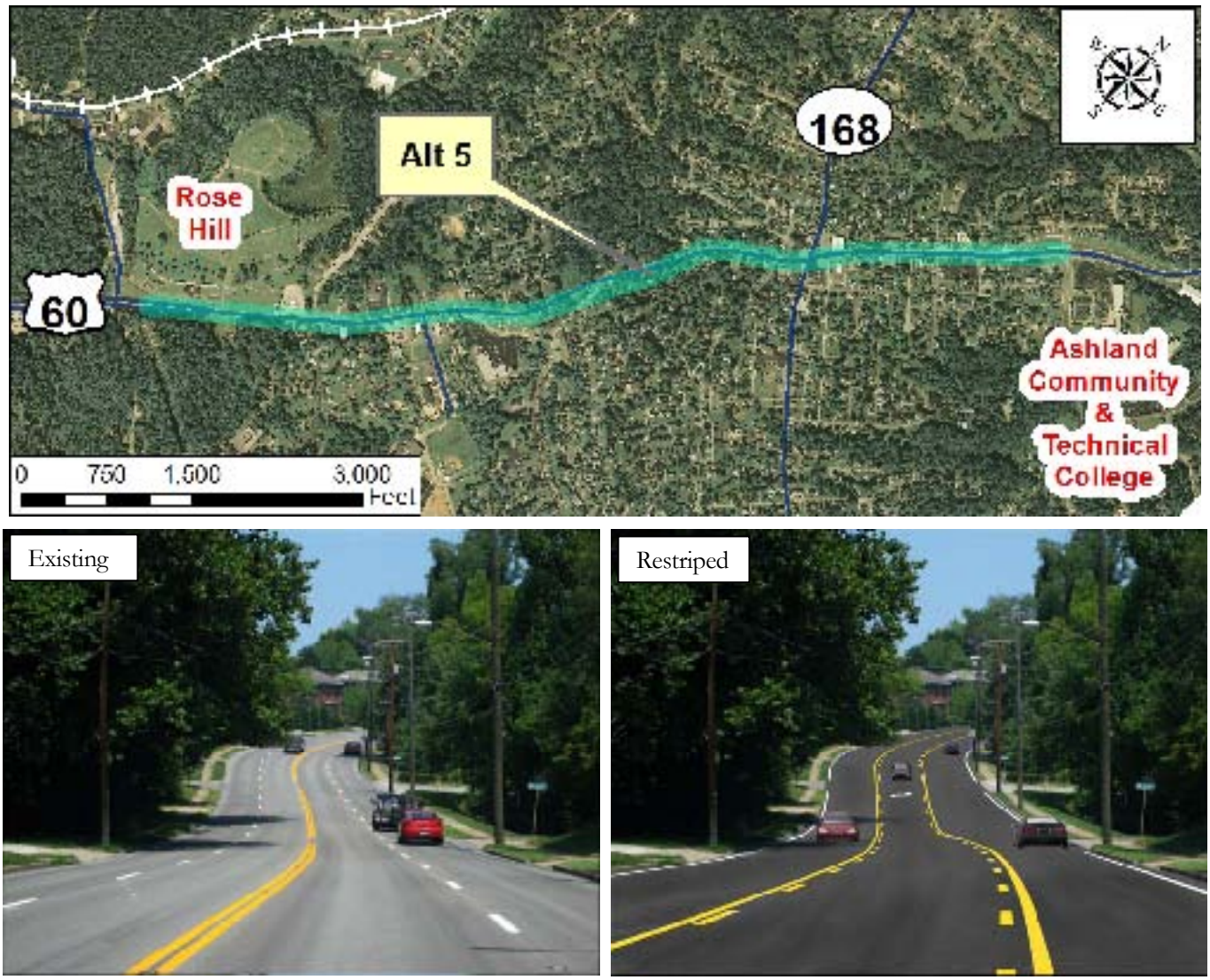


Figure 5-13: Alternative 5

Table 5-2 presents a summary of all the alternatives as well as combinations of alternatives in the case of Alternative 3.

Table 5-2: Summary of the Long-Range Corridor Alternatives

Alternative	Length (Miles)	Construction Cost	POTENTIAL RELOCATIONS REQUIRED			
			Commercial	Residential - Single Family	Residential - Multi-family	School Buildings
Alt # 1A	2.50	$ 23,960,000	3	2	0	0
Alt # 1B	2.49	$ 25,570,000	7	4	0	0
Alt # 2A	4.23	$ 48,360,000	2	91	0	0
Alt # 2B	4.25	$ 60,300,000	1	111	0	0
Alt # 3A	3.73	$ 37,790,000	8	65	17	1
Alt # 3B	3.15	$ 24,560,000	8	62	17	1
Alt # 3A-3C	3.44	$ 35,820,000	5	61	5	1
Alt # 3A-3D	3.55	$ 37,900,000	8	69	5	1
Alt # 3A-3E	3.96	$ 41,690,000	11	73	5	1
Alt # 3B-3C	2.86	$ 20,600,000	5	58	5	1
Alt # 3B-3D	2.98	$ 22,680,000	8	66	5	1
Alt # 3B-3E	3.39	$ 24,470,000	11	70	5	1
Alt #4	3.80	$ 15,700,000	3	10	0	0
Alt #5		$ 1,100,000	0	0	0	0

6.0 EVALUATIONS OF THE LONG-RANGE CORRIDOR ALTERNATIVES

The I-64 to US 23 Ashland Connector Study resulted in a number of short-term and long-term alternatives to improve travel opportunities between I-64 and US 23 west of downtown Ashland. This chapter summarizes the evaluation methodology and results for evaluating the long-range corridor alternatives.

6.1 Traffic Forecasts

The regional travel demand model, discussed in detail in Chapter 4, was used to estimate the future demand for travel along each of the new routes proposed over the course of the study. A representative corridor was developed for each new route and was modeled as a four-lane roadway. The estimated future traffic volumes were then compared to the 2030 No-Build (No-Action) alternative to determine the impacts each alternative may have on future travel conditions throughout the study area, including the amount of traffic that may be diverted from existing roadways to the new routes.

The 2030 traffic forecasts and estimated volume to capacity (V/C) ratios for Alternative 1 are shown on **Figure 6-1**. Alternative 1, also referred to as the Princess Connector, would be expected to carry approximately 11,300 vehicles per day (VPD) in 2030. Much of US 60 north of the connector will be over capacity in this scenario, but US 60 between KY 180 and the connector will be at or below capacity.

Figure 6-2 depicts the 2030 forecasts for Alternative 2, the Bellefonte Connector. The connector route is expected to serve 13,100 VPD on its north end near KY 5 and US 23 to 17,100 VPD at the south end near US 60.

The 2030 traffic forecasts for Alternative 3, the Westwood Connector, are shown on **Figure 6-3**. As modeled, this corridor would carry approximately 9,300 VPD at the south end near US 60 and 18,600 VPD approaching US 23.

The 2030 traffic forecasts for Alternative 4, which includes widening US 60 between I-64 and the KY 180 intersection to four lanes, is shown on **Figure 6-4**. A widened US 60 would be expected to serve 17,900 VPD north of the I-64 interchange and 19,000 VPD near KY 180.

Table 6-1 presents a summary of the 2030 forecasts, by alternative, for the major roadways of interest in the study area, including I-64, KY 180, US 60, KY 5, KY 168, and US 23. These forecasts are compared to the 2030 No-Build traffic volumes in an effort to estimate how much traffic may divert to the new connector routes from existing facilities. With respect to KY 180, Alternative 1 reduces travel demand on the section immediately north of the I-64 interchange by 11 percent, and Alternative 4 reduces traffic along this section by over 20 percent. These alternatives also reduce traffic volumes along I-64 between the US 60 Coalton interchange and the KY 180 interchange, with Alternative 1 reducing demand by about 10 percent and Alternative 4 by 21 percent.

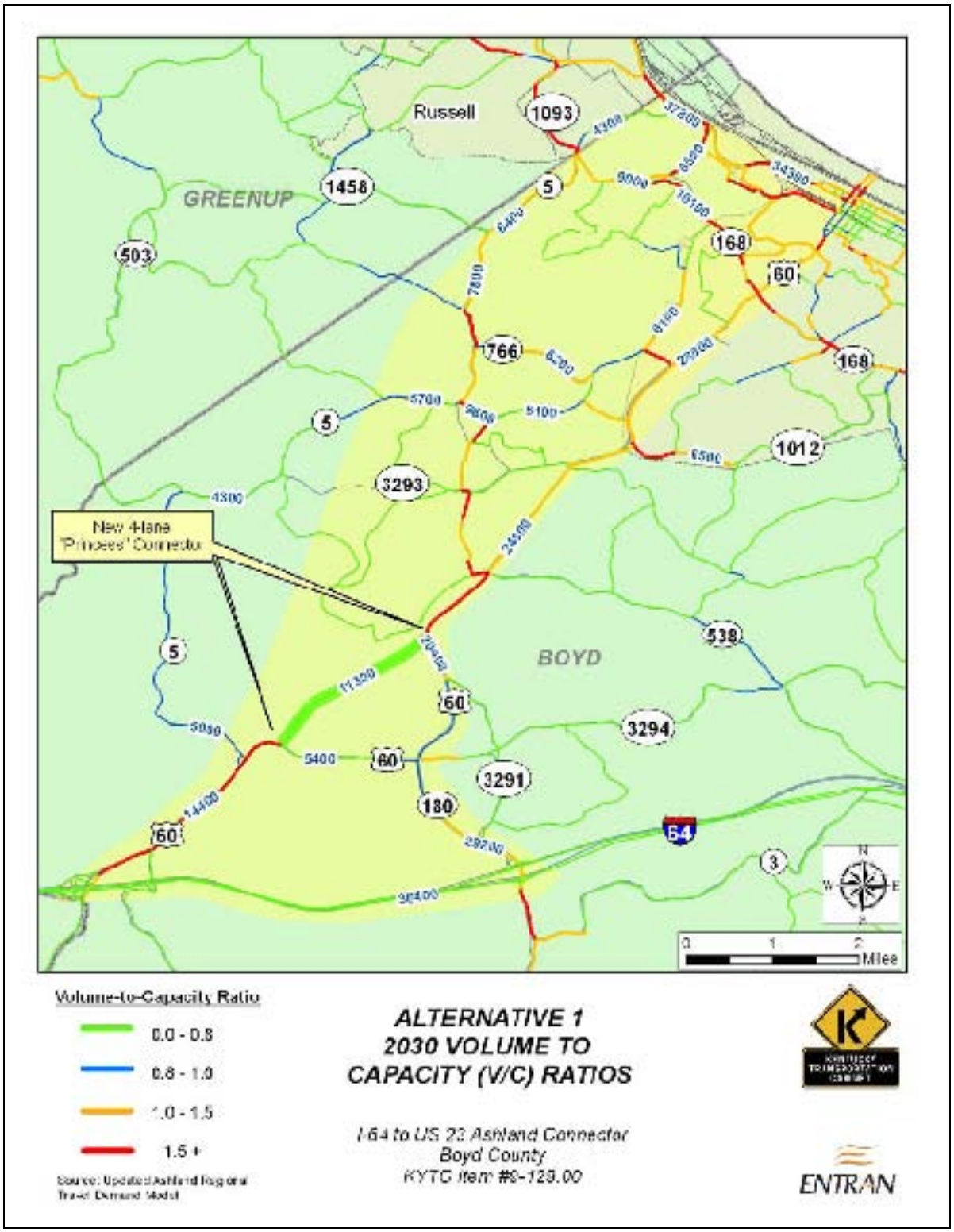


Figure 6-1: 2030 Traffic Forecasts for Alternative 1

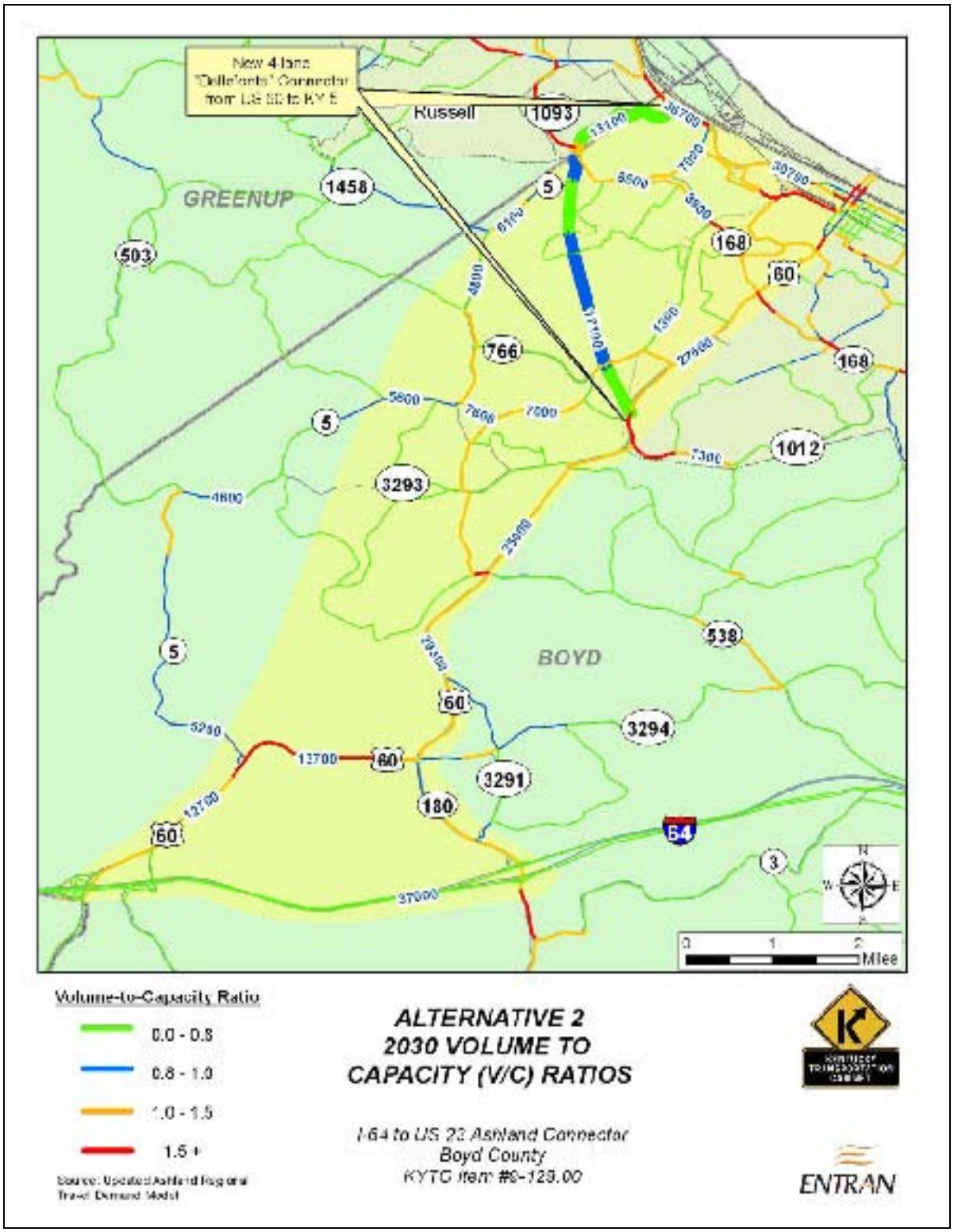


Figure 6-2: 2030 Traffic Forecasts for Alternative 2

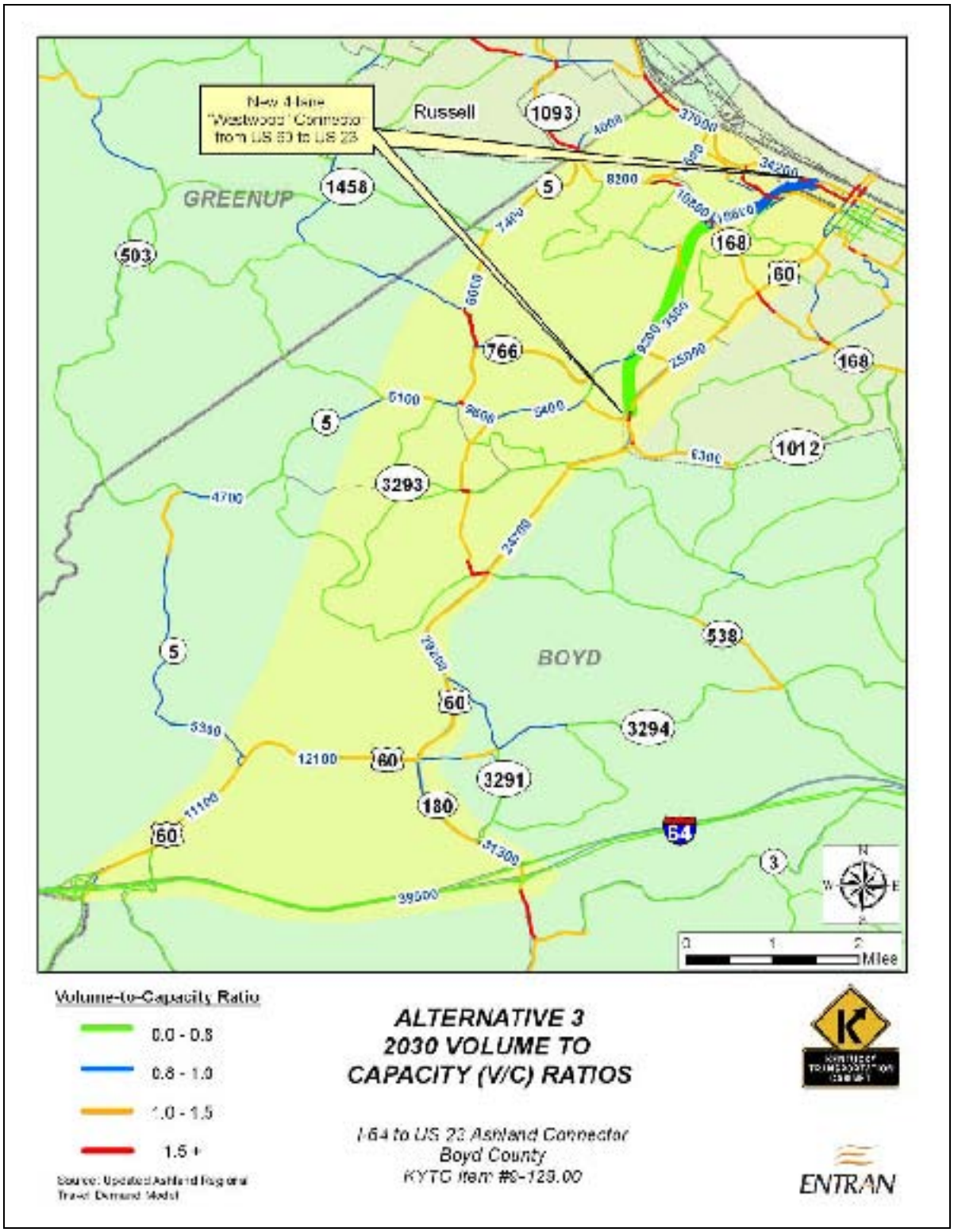


Figure 6-3: 2030 Traffic Forecasts for Alternative 3

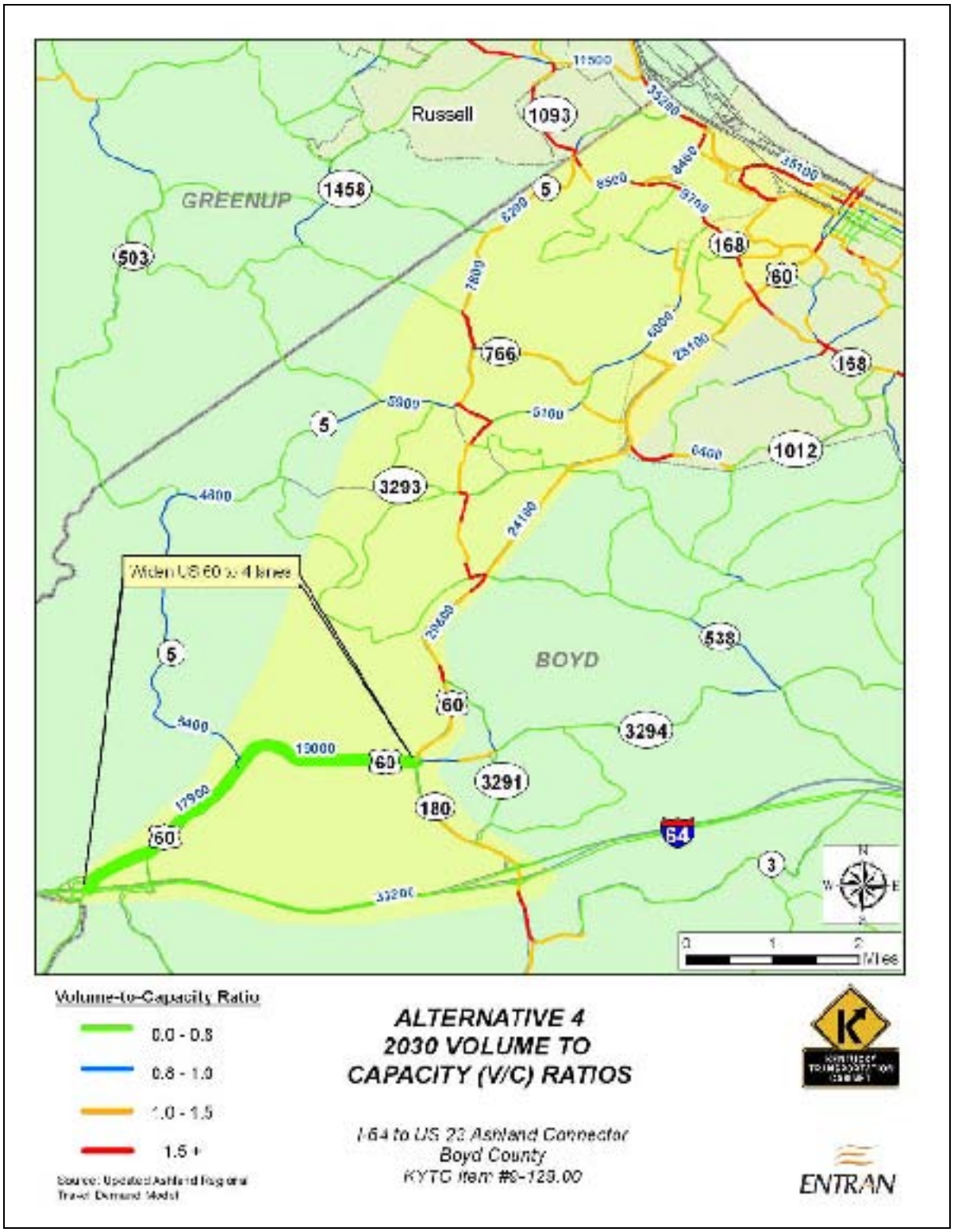


Figure 6-4: 2030 Traffic Forecasts for Alternative 4

Table 6-1: 2030 Traffic Forecasts and Traffic Diversion from Major Roadways in the Study Area

Roadway	Segment	No-Build	Alt 1	*Growth*	Alt 2	*Growth*	Alt 3	*Growth*	Alt 4	*Growth*
I-64	West of US 60	47,000	47,100	*0.2%*	45,900	*-2.3%*	47,000	*0.0%*	47,200	*0.4%*
	Between US 60 & KY 180	40,500	36,400	*-10.1%*	37,000	*-8.6%*	39,500	*-2.5%*	32,000	*-21.0%*
	East of KY 180	41,400	41,200	*-0.5%*	40,600	*-1.9%*	39,900	*-3.6%*	41,300	*-0.2%*
KY 180	North of I-64	32,800	29,200	*-11.0%*	29,700	*-9.5%*	31,300	*-4.6%*	26,100	*-20.4%*
US 60	North of I-64	10,100	14,200	*40.6%*	12,700	*25.7%*	11,200	*10.9%*	17,900	*77.2%*
	West of KY 180	9,200	8,400	*-8.7%*	12,600	*37.0%*	11,900	*29.3%*	21,100	*129.3%*
	North of KY 180	25,300	17,200	*-32.0%*	23,700	*-6.3%*	22,900	*-9.5%*	25,800	*2.0%*
	South of KY 766	27,300	27,700	*1.5%*	31,800	*16.5%*	29,200	*7.0%*	27,600	*1.1%*
	North of KY 168 (Blackburn Ave.)	27,700	28,000	*1.1%*	27,000	*-2.5%*	26,200	*-5.4%*	27,900	*0.7%*
	South of 12th Street	33,000	32,900	*-0.3%*	32,000	*-3.0%*	29,800	*-9.7%*	33,400	*1.2%*
KY 5	North of US 60	5,200	4,900	*-5.8%*	5,100	*-1.9%*	5,200	*0.0%*	5,300	*1.9%*
	South of US 23	3,800	4,200	*10.5%*	13,100	*244.7%*	4,000	*5.3%*	4,000	*5.3%*
KY 168	South of US 23	6,400	9,900	*54.7%*	5,300	*-17.2%*	7,700	*20.3%*	8,800	*37.5%*
	West of US 60	10,700	9,900	*-7.5%*	8,600	*-19.6%*	6,900	*-35.5%*	9,900	*-7.5%*
US 23	West of KY 5	35,100	35,700	*1.7%*	38,100	*8.5%*	36,100	*2.8%*	35,200	*0.3%*
	East of KY 168 (Hoods Creek Rd.)	30,300	28,300	*-6.6%*	28,700	*-5.3%*	29,100	*-4.0%*	37,100	*22.4%*
	At Towne Mall	33,400	34,300	*2.7%*	30,600	*-8.4%*	34,200	*2.4%*	35,000	*4.8%*
	North of I-64	33,200	33,000	*-0.6%*	33,800	*1.8%*	33,300	*0.3%*	33,300	*0.3%*

All alternatives increase traffic on US 60 north of the I-64 Coalton interchange. Alternative 1 would increase traffic along this section of US 60 (and therefore the use of the interchange) by nearly 40 percent, and Alternative 4 would increase traffic along this section by nearly 77 percent. Only Alternative 3 significantly reduces travel demand along US 60 approaching downtown Ashland, with an expected decrease of nearly 10 percent. This represents traffic that would divert from this section of US 60 to the proposed connector route. Alternative 2 decreases the demand for travel along this section of US 60 as well, but only by three percent.

Two alternatives reduce travel demand along the southern section of KY 5, with Alternative 1 resulting in a reduction of approximately six percent and Alternative 2 a reduction of about two percent. Traffic diversion from KY 168 varies by alternative. Each alternative reduces traffic on the section immediately west of US 60, with Alternative 3 resulting in the greatest reduction of over 35 percent. Only Alternative 2 reduces travel demand along the section immediately south of US 23 (17 percent).

As none of the proposed connector routes provide a true east-west alternative for travel along US 23, the amount of diversion from US 23 is minimal. Alternatives 1, 2, and 3 result in a slight decrease in travel along the section east of KY 168. Alternative 2 also decreases 2030 traffic volumes along the section adjacent to Town Center Mall by approximately eight percent.

Alternative 5 was not modeled as a standalone project as a three-lane section on US 60 north of Rose Hill Cemetery would not be capable of accommodating existing demand, let alone 2030 traffic. Therefore, Alternative 5 was modeled in combination with Alternative 3 to determine a best case scenario for potential diversion of traffic from US 60. Alternative 1 was also included in this scenario based on suggestions received by the ACAT, including widening US 60 between I-64 and the proposed Princess Connector. The results of this scenario are shown on **Figure 6-5**.

This scenario suggests a significant amount of US 60 traffic would divert to a proposed connector paralleling the existing route, particularly if the capacity were reduced on US 60 as would occur if it were restriped as a three-lane section. Traffic volumes along the section of US 60 south of KY 168 would decrease to approximately 14,000 VPD, which could be accommodated reasonably well with a three-lane section. Much of this traffic diverts to the proposed Alternative 3 connector, increasing traffic in that corridor to over 22,000 VPD. Widening US 60 south of the Princess Connector also increases travel demand along that section as well as along the proposed connector.

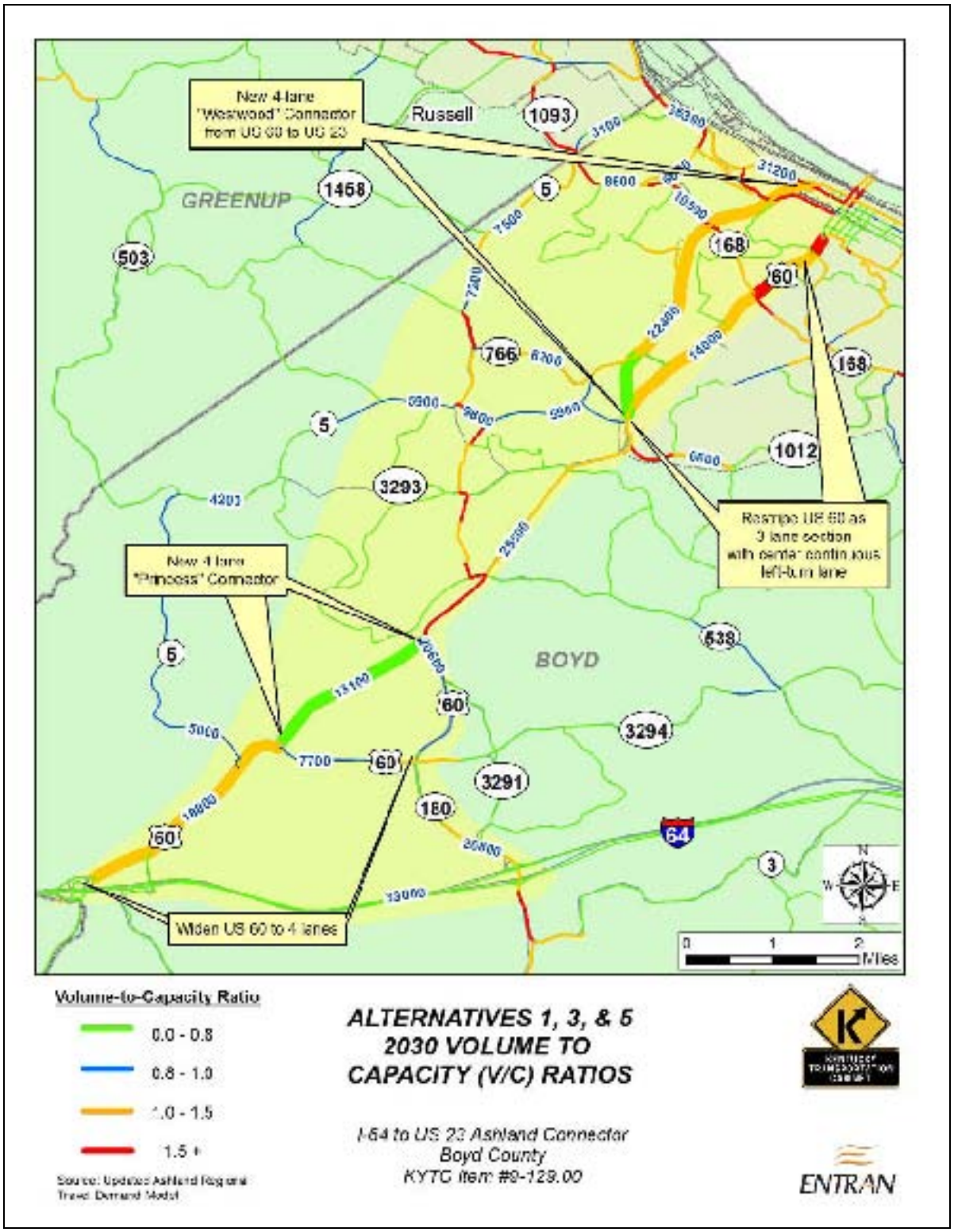


Figure 6-5: 2030 Traffic Forecasts for a Combination of Alternatives 1, 3, and 5

6.2 Evaluation Methodology and Results

A comprehensive approach was utilized to provide some insight as to which alternatives perform better than others. This evaluation process was not intended to necessarily determine which corridors should be pursued for further study, but rather provide a relative comparison between all alternatives in terms of traffic relief, adverse impacts, and public sentiment. Each alternative was evaluated based on 10 criteria that were based on the Purpose and Need for the study and input from the ACAT. These criteria and how they were applied are as follows:

1. **Connectivity between I-64 and downtown Ashland** – Based on the Purpose and Need Statement, this criterion considers how much traffic relief would be likely for existing routes or how much traffic can be diverted from existing routes and how much traffic might be carried by the proposed alternative.
2. **Traffic volume on new corridor** – Based on the highest traffic volume carried by any segment of a proposed alternative corridor.
3. **Traffic diversion from US 60** – Based on the estimated amount of traffic that could be diverted from US 60 near Rose Hill Cemetery (north of KY 716), the beginning of the narrower four-lane section. Traffic volumes were compared to the No-Build Alternative.
4. **Environmental impacts** – Includes a number of potential impacts to the natural environment (i.e. impacts to streams, encroachment on wetlands, etc.) and the manmade environment (i.e. proximity to historic sites, parks, etc.)
5. **Community impacts** – Considers the adverse effects that a new route may introduce, such as dividing an existing community, impacting community resources (i.e. churches, schools, etc.) or requiring a significant number of residential relocations within a densely populated area. Also considers the potential benefits that could be realized by a community, such as increased mobility from additional travel alternatives.
6. **Business relocations** – Based on estimates of the total number of businesses that would be taken by each alternative.
7. **Residential relocations** - Based on estimates of the total number of residences that would be taken by each alternative.
8. **Public input** – Based on the results of the questionnaire from the second public meeting, where attendees were asked if they were in favor of or opposed each alternative.
9. **ACAT input** - Based on the results of a group exercise where the ACAT was divided into groups and asked if they were in favor of or opposed each alternative.
10. **Construction cost** – Based on the total estimated construction cost.

Actual values that could be quantified or estimated for each alternative, such as construction cost or relocations, were used where possible. Average values were used where alternatives have multiple options, such as in the case of Alternative 1, 2, and 3. Where actual measures were not possible to estimate, the potential level of impacts were rated as high (significant adverse impacts), medium (some impacts), or low (little or no impact). With respect to public input, favorable responses were given a score of "10" and negative responses a "0", and the average scores were used in the evaluation. A summary of the values used in this process are summarized in **Table 6-2**.

Table 6-2: Summary of the Application of the Evaluation Criteria

CRITERIA	Connectivity between I-64 and Downtown Ashland	Traffic Volume on New Corridor	Traffic Diversion from US 60	Environmental Impacts	Community Impacts	Business Relocations	Residential Relocations	Public Input	ACAT Input	Total Construction Cost
SCALE	H, M, L	Vehicles per Day (VPD)	28,020	H, M, L	H, M, L	Approx. number of businesses	Approx. number of homes	Based on input from Public Mtg #2	Based on input from ACAT Mtg #3	Average cost
No Build	L	11,000	0	L	M	0	11	0	11	$0
Alternative 1	M	11,300	280	M	M	5	3	3.33	2.5	$24,000,000
Alternative 2	M	17,100	6,100	H	H	2	101	4.28	0	$54,000,000
Alternative 3	H	15,600	4,600	H	M	5	66	8.90	10	$31,200,000
Alternative 4	M	7,800	-3,200	M	M	5	10	4.74	10	$16,700,000
Alternative 5*	L	22,400	14,020	L	L	0	11	7	5	$1,100,000

Alternatives that provided significant congestion relief to US 60 south of downtown Ashland, providing a feasible travel alternative, were ranked high in terms of connectivity between I-64 and downtown Ashland. Those that provided some congestion relief to US 60 were rated a medium. Traffic diversion from US 60 was compared to raw model output from the regional travel demand model for the No-Build Alternative, and Alternative 5 resulted in the highest level of diversion. Most other alternatives, with the exception of Alternative 3, resulted in little or no diversion.

In general, the alternatives that require significant new construction result in more adverse effects in terms of environmental and community impacts and were rated high or medium in those categories. Alternative 3 would require the highest number of business relocations, and Alternative 2 and Alternative 3 would result in the most residential relocations. Alternative 5, which requires no new construction, has no impacts in these areas. However, Alternative 5 must be combined with Alternative 2 or Alternative 3 in order to be feasible.

The public indicated overwhelming support for Alternative 3 at the second public meeting (17 respondents were in favor and two in opposition to Alternative 3), giving it an average score of 8.95. Alternative 5 was also given relatively strong support, with an average score of seven. The ACAT gave unanimous support to both Alternative 3 and Alternative 4, but were in complete opposition to Alternative 2 and showed little support for Alternative 1.

The values in **Table 6-2** were normalized on a scale of 0 (zero) to 10 by giving the best performer for each criterion a score of 10, and the worst performer a score of 0. The alternatives that fell between the best and worst performers were given scores based on their relative performance. Those that were near the bottom received scores closer to 0, and those that were near the top received scores closer to 10. The results are shown in **Table 6-3**.

Table 6-3: Alternative Scores Based on Application of the Evaluation Criteria

Criteria	Connectivity between I-64 and Downtown Ashland	Traffic Volume on new Corridor	Traffic Diversion from US 60	Environmental Impacts	Community Impacts	Business Relocations	Residential Relocations	Public Input	ACAT Input	Total Construction Cost
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
No-Build	0.0	0.0	0.1	10.0	3.0	10.0	10.0	0.0	0.0	10.0
Alternative 1	5.0	5.0	0.1	5.0	5.0	3.0	9.7	7.0	2.5	5.1
Alternative 2	5.0	7.6	0.1	3.0	3.0	0.1	3.0	4.0	0.0	3.0
Alternative 3	10.0	4.5	2.7	3.0	3.0	0.0	1.0	3.0	10.0	4.0
Alternative 4	5.0	3.0	0.0	5.0	3.0	0.3	3.0	4.7	10.0	7.1
Alternative 5*	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	0.0	9.0

*Note: Alternative 5 must be combined with Alternative 2 or 3.

The scores from **Table 6-3** were summed and the alternatives were ranked based on those scores. The results are summarized in **Table 6-4**.

Table 6-4: Preliminary Evaluation Results

Alternative	*Total Score*	*RANK*
No-Build	*45.1*	3
Alternative 1	*39.8*	5
Alternative 2	*20.4*	6
Alternative 3	*40.3*	4
Alternative 4	*50.6*	2
Alternative 5*	*81.8*	1

*Note: Alternative 5 must be combined with Alternative 2 or 3.

Alternative 5 was the strongest performer in the preliminary evaluation of alternatives. Again, it should be noted that Alternative 5 is not a standalone alternative and would require Alternative 2 or Alternative 3 to be constructed before US 60 could be restriped to a three-lane section. Alternative 4 was the second best performer, and the No-Build Alternative was the third best.

The ACAT was asked to prioritize the evaluation criteria prior to the evaluation process. The meeting attendees were divided into groups and asked to indicate how important each criterion was to the community, on a scale of 1 to 5. The results are summarized in **Table 6-6**.

Table 6-5: ACAT's Input on the Importance of the Evaluation Criteria

Evaluation Criterion	Group 1	Group 2	Group 3	Group 4	Average Rating
Divert traffic from existing US 60	5	5	2.5	5	4.4
Minimize the number of residential relocations	4	4	3	3	3.5
Minimize the number of business relocations	4	3	5	4	4.0
Minimize community disruption	4	3	3	4	3.5
Minimize environmental impacts	4	5	1.5	3	3.4
Public input/support	4	5	4	4	4.3
Minimize Cost	3	3	4	4	3.5

The ACAT indicated that diverting traffic from existing US 60 was the most important criterion to consider, followed by public input/support and minimizing the number of business relocations. This input was considered in the evaluation process by applying the ACAT's priorities to the score in **Table 6-3**. Each raw score was multiplied by the ACAT's average criteria rating divided by the maximum possible score of 5. The results are shown in **Table 6-6**.

Table 6-6: Alternative Scores Based on Application of the Evaluation Criteria with ACAT's Input

Criteria	Connectivity between I-64 and Downtown Ashland	Traffic Volume on new Corridor	Traffic Diversion from US 60	Environmental Impacts	Community Impacts	Business Relocations	Residential Relocations	Public Input	ACAT Input	Total Construction Cost
ACAT Priority	5	4.4	4.4	3.4	3.5	4	3.5	4.3	4.3	3.5
No-Build	1.0	0.0	0.0	5.0	5.0	10.0	10.0	10.0	10.0	10.0
Alternative 1	5.0	4.7	0.1	5.4	5.0	10.0	9.5	9.8	9.7	9.5
Alternative 2	5.0	6.1	0.5	10.0	10.0	10.0	10.0	9.7	10.0	10.0
Alternative 3	10.0	7.3	1.0	0.0	3.0	0.0	1.1	7.7	8.0	3.0
Alternative 4	5.0	3.1	0.0	3.1	3.0	0.0	0.2	1.1	0.0	5.0
Alternative 5*	10.0	8.8	0.0	5.0	7.0	10.0	10.0	9.0	10.0	9.0

*Note: Alternative 5 must be combined with Alternative 2 or 3.

The scores from **Table 6-6** were summed and the alternatives were ranked once again based on those scores. The results, representing the final evaluation results, are summarized in **Table 6-7**.

Table 6-7: Final Evaluation Results

Alternative	*Total Score*	*RANK*
No-Build	*32.3*	4
Alternative 1	*30.0*	5
Alternative 2	*17.2*	6
Alternative 3	*33.1*	3
Alternative 4	*38.9*	2
Alternative 5*	*63.6*	1

*Note: Alternative 5 must be combined with Alternative 2 or 3.

Alternative 5 remained the best performer among the alternatives, followed again by Alternative 4. However, Alternative 3 scored better than the No-Build Alternative and ranked third once the ACAT's priorities were applied to the evaluation process.

7.0 RECOMMENDATIONS

The I-64 to US 23 Ashland Connector Study resulted in a number of short-term and long-term recommendations to improve travel opportunities between I-64 and US 23 west of downtown Ashland. These recommendations include implementing nine short-term projects, widening US 60 to four lanes between the Coalton Interchange at I-64 and the KY 180 intersection, and building a new route between US 60 south of Rose Hill to US 23 west of downtown Ashland. These recommendations are shown on **Figure 7-1**. This chapter summarizes the recommendations from the study and provides some suggestions on direction for future study.

7.1 Short-Term Improvement Alternative Recommendations

All of the Short-Term Improvement Alternatives received favorable public support at the second public meeting and are recommended for implementation. These ten projects range in cost from $125,000 to $1 million, with a total cost of $3.2 million to $3.4 million.

The intersection improvement projects are the most expensive short-term projects. The US 60 intersection with KY 180 is expected to cost approximately $1 million to reconstruct, and the US 60 intersection with KY 168 approximately $750,000. There are options to be explored further for the Roberts Drive intersection with KY 168 and the railroad grade crossing west of the intersection. Any increases to the grades along KY 168 will certainly improve the situation and lack of adequate sight distance at the rail grade crossing. An ultimate "fix" for the area will cost as much as $500,000.

The turn lane projects are expected to cost approximately $125,000 each, with the Paul Coffey Boulevard project expected to cost $275,000 as it includes two turn lanes. The projects on US 60 north of KY 180 should be implemented as soon as funding is available. The turn lane project at the US 60 intersection with Paul Coffey Boulevard should not be implemented if the US 60 widening is to occur in the foreseeable future.

The signage improvement on US 60 approaching downtown Ashland may cost up to $200,000 if overhead signage is provided. Other signage may be added at a lower cost. Opportunities for increased signage are limited on the US 60 approach to Winchester Avenue and the bridge, but this improvement will eliminate some of the confusion for motorists unfamiliar with the area.

Most of the short-term improvement alternatives were recommended to address existing safety issues. As such, they may be eligible for Highway Safety Improvement Program (HSIP) funding. Otherwise, other traditional funding sources will be required.

7.2 Long-Range Corridor Alternative Recommendations

One South Alternative, Alternative 4, and one North Alternative, Alternative 3, are recommended for further study. The evaluation process summarized in Chapter 6 indicated that Alternative 4 should be the highest priority long-range project, followed by Alternative 3. The following sections discuss the rationale behind these recommendations, as well as recommendations for the future consideration of Alternative 5.

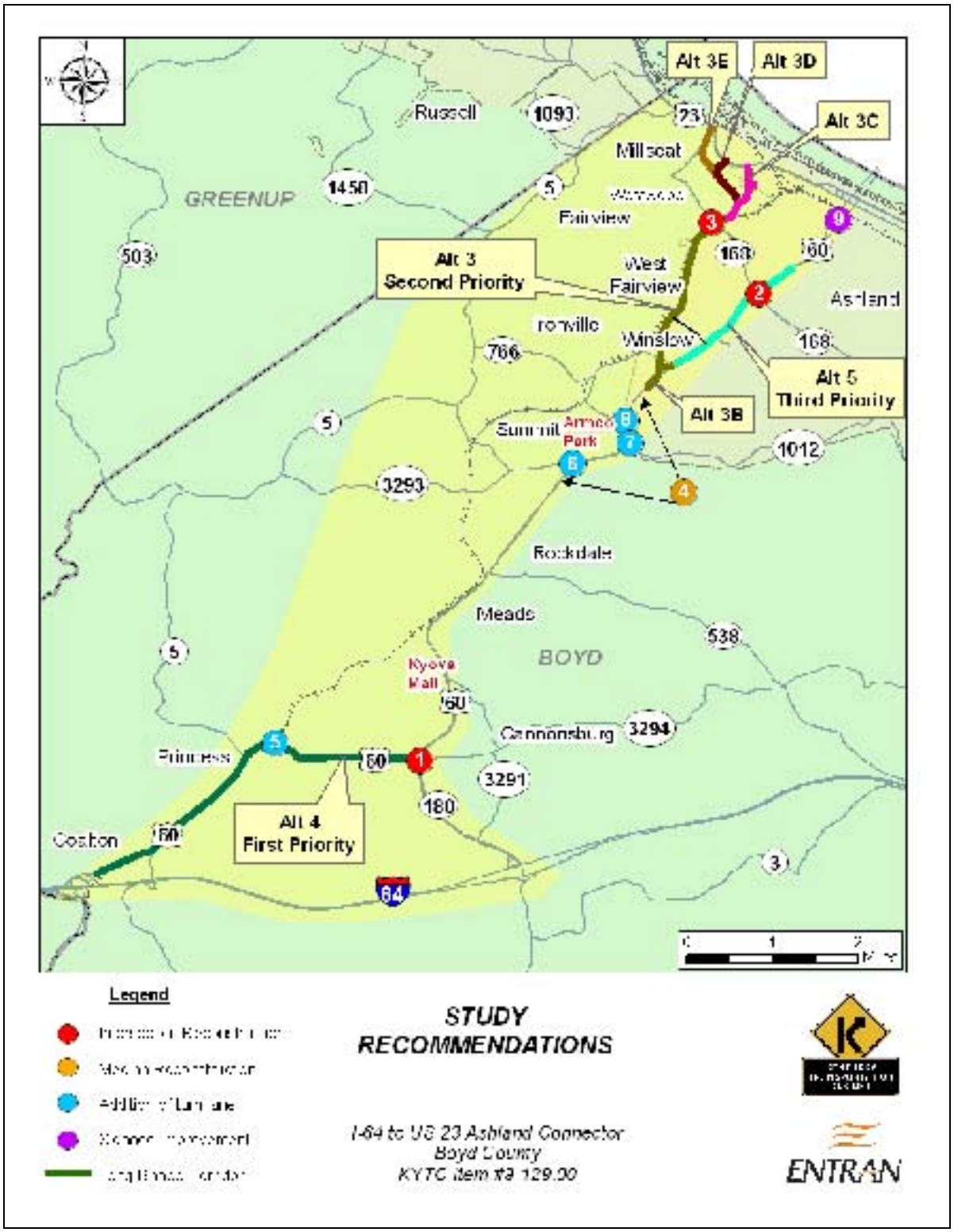


Figure 7-1: Study Recommendations

South Alternatives

The Alternative 1 options have a significantly higher construction cost than Alternative 4. However, both Alternative 1 corridors provide for a shorter connection between I-64 and the four-lane section of US 60, resulting in 1.1 miles less overall distance between Ashland and the Coalton interchange compared to Alternative 4. With respect to right of way impacts, the Alternative 1 options will likely cause significant disturbance through the Paul Coffey Industrial Park. However, overall impacts are in line with those of Alternative 4. The figures for both Alternative 1A and 1B only reflect the estimated costs and relocations involved with the new corridors. They do not take into account the improvements that would also be needed along the two-lane portion of US 60 between the industrial park and I-64. When those improvements are considered, the overall right of way impacts for the Alternative 1 options end up being in line with those for Alternative 4.

Alternative 1 finished in the bottom half of the evaluation process. Finally, input expressed at public involvement meetings and the opinion of the ACAT both favor keeping improvements to US 60 along the existing route. Therefore, based on all these reasons, Alternative 1 is not recommended for further development and Alternative 4 is recommended for further consideration. Alternative 4 is considered to be the highest priority among the long-range alternatives.

North Alternatives

The Alternative 2 corridors have a higher construction cost than Alternative 3. Alternative 2 also involves many more single family residential relocations than Alternative 3. However, when the right of way cost is calculated in more detail, Alternative 2 ends up being very similar to Alternative 3. The Alternative 3 options involve more commercial relocations and take more apartment complex buildings than Alternative 2. With respect to cost, each apartment building could be the equivalent of four or more single unit residences and the same applies to commercial relocations. Taking this into account, the overall right of way impact of Alternative 2 is comparable to that of Alternative 3. Therefore, when comparing Alternative 2 and Alternative 3, the main factors that come into play for choosing a preferred alternative are the construction cost and determining which of these two different routes better addresses the traffic issues along US 60 and best meets the overall traffic needs of the area. Based on these two factors, Alternative 3 offers the best solution to Ashland's transportation problems at a lower construction cost.

Alternative 2 finished last in the evaluation process. In addition, Alternative 2 did not receive public support at the second public meeting (only Alternative 1 received less support). The ACAT unanimously voted against Alternative 2. Therefore, Alternative 3 is recommended for further consideration and is considered to be the second highest priority among the long-range corridor alternatives.

There are some issues that must be considered during subsequent phases of study for Alternative 3. With respect to the beginning point, Alternative 3A is much more expensive than Alternative 3B. The large cut at the beginning of Alternative 3A drives up the cost by more than $13 million compared to Alternative 3B. Any Alternative 3 combination will be much less expensive using Alternative 3B at the beginning. As for the alternative ending points studied, Alternatives 3C, 3D and 3E involve significantly less right of way impacts than Alternative 3A. The Alternative 3A corridor, the closest to downtown Ashland, takes 12 apartment complex buildings that are unaffected by the other alignment options, as well as two large commercial buildings near its intersection with US 23.

From all the options analyzed in this study, the preferable Alternative 3 options with respect to construction cost and right of way impacts are 3B-3C, 3B-3D and 3B-3E. From all these, Alternative 3B-3C seems to offer the best solution because it would end the new connector road at an existing busy intersection closer to downtown than the other alternatives. If option 3B-3D were to be built, it would result in a series of three signals closely spaced along US 23 that would further disrupt through traffic along this route. At any rate, selecting the best of these three options will only be possible after further studies are conducted for each of these routes using more accurate mapping.

Alternative 5 should be considered for implementation once Alternative 3 is constructed and open to traffic. Output from the regional travel demand model suggests restriping the narrower four-lane section of US 60 north of Rose Hill Cemetery would be feasible if significant portions of the traffic along that corridor were diverted elsewhere. However, there are no feasible alternatives currently available that could carry the additional traffic. Once Alternative 3 is available, some of the traffic from existing US 60 will move to that route, likely making the restriping feasible.

Appendix A – Meeting Summaries

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item # 9-129.00
Advisory Team Meeting #1 Minutes
Ashland Central Fire Station
March 4, 2008
12:00 pm

An Ashland Connector Advisory Team (ACAT) meeting was held on Tuesday, March 4, 2008 at 12:00 p.m. in the Ashland Central Fire Station in downtown Ashland. The focus of the meeting was to discuss the I-64 to US 23 Ashland Connector Study. The following individuals were in attendance:

Phil Biggs	Chairman, Ashland MPO
Richard Cyrus	Cannonsburg Fire Chief
Bob Hammond	Ashland Alliance
Paula Hogsten	Ashland City Commissioner
Todd Kelley	City of Ashland Police Department
Judy McCoy	Boyd County Public Schools
Bill Musick	Fairview Independent Schools
Robert Ratliff	City of Ashland Police Department
Keith Robinette	Boyd County Road Supervisor
Michael Rogers	Ashland Bus System
Marion Russell	Ashland Public Works
Terri Sicking	Ashland MPO
David Sloan	City of Ashland Fire Chief
Nickie Smith	Riverport Authority
Cheryl Spriggs	Ashland City Commissioner
Bud Stevens	Boyd County Fiscal Court
Katrina Bradley	KYTC D9
Jason Dean	KYTC D9
J.R. Hamm	KYTC Central Office
Jack Litton	KYTC D9
Deanna Miller	KYTC D9 Planning
Karen Mynhier	KYTC D9
Robin Ramey	KYTC D9
Daran Razor	KYTC D9
Randy Stull	KYTC D9
Randi Vint	KYTC D9
Brent Wells	KYTC D9
Jim Wilson	KYTC Central Office
Brian Aldridge	ENTRAN, PLC
Brian Cash	ENTRAN, PLC

The meeting began at approximately 12:30 p.m. Deanna Miller, KYTC's Project Manager, began the meeting with a brief introduction and then introduced Brian Cash, Project Manager for

ENTRAN, PLC. Brian Cash delivered a brief presentation that provided an overview of the project. The presentation began with some discussion of the purpose for planning studies, which help define the issues within the study area and the ultimate goals for the study by initiating coordination between agencies and communication with the public.

The purpose of the project was explained as follows:

> *The purpose of the I-64 to US 23 Connector Study is to identify community concerns and evaluate project alternatives to improve access and mobility between I-64 and Ashland. The study is intended to help define the location and purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA).*

With that purpose in mind, the I-64 to US 23 Ashland Connector Study has four underlying goals. These are to discus the project with stakeholders, define project goals and needs, identify environmental issues, and to identify both short and long-term projects for construction. This study may result in a number of different projects to be pursued, such as general recommendations (i.e. access management), more short term projects such as intersection spot improvements, and long term projects such as a new transportation corridor. The ultimate recommendations will likely include a combination of smaller improvement projects and segment(s) of new roadway. The smaller projects could be programmed and constructed in a shorter timeframe while any new construction (which will likely be significantly more costly) could potentially take several years to be implemented.

The study schedule was briefly discussed. The study will follow an 18 month schedule, which began in June of 2007 and will conclude in November of 2008. The purpose of the public involvement plan for the project was discussed and will serve a number of purposes. These include: assisting the study team in gauging public interested in the project; informing and educating the public: and identifying the needs, issues and goals, and potential new corridor locations within the study area.

The approximate study area was discussed. The southern portion of the study area includes I-64 between the US 60 and KY 180 interchanges. To the east, the study area follows KY 180 and then US 60 north to US 23. To the west, the boundary begins following US 60 to Princess, then proceeds northeast to Greenup County line near Bellefonte and follows the county line to US 23. Brian noted the study area does not include any portion of Greenup County.

Brian Cash then discussed a series of photographs and map graphics that depicted the existing conditions within the study area, including existing traffic volumes, the recent crash history along the study area roads, and relevant projects found in the KYTC Six Year Plan. Attendees were provided a booklet containing all the maps discussed in the presentation as well as other graphics depicting the existing conditions in the study area. It was mentioned that the KYTC is currently working on a project to add left turn lanes at 13 locations in the median along US 60 south of Ashland.

A local officials meeting was held in September. At that meeting, a series of questions were asked to obtain input from the attendees. The consensus was that US 60, particularly the section between Rose Hill and downtown Ashland with its narrow lanes, lack of turn lanes, and heavy traffic volumes, is a significant transportation issue. Impacts to communities in general and especially low-income communities could be an issue depending on the scope of improvements

recommended as a result of this study. The attendees at that meeting noted locations that should be avoided should new construction be pursued, such as low-lying areas adjacent to Roberts Drive and the landfill area near Coalton. Finally, some recommendations were given for where a new corridor might connect to US 60 and US 23.

A group exercise was undertaken to provide the ACAT an opportunity to work with each other to identify existing transportation issues and potential improvements. The attendees were divided into small groups and were provided maps depicting some of the environmental resources within the study area. The following discusses some of the items which were brought up during the exercise.

Transportation Issues

- US 60 north of Rose Hill
  - Lack of left turn lanes
  - High travel speeds
  - Trucks (HazMat)
  - Utility pole setbacks
- Potential impacts to low-income neighborhoods near Millseat

Short Term Projects

- Eliminate left turns from US 23 onto Ohio River Bridges
- New traffic signal on US 60 at Safe Harbor
- Intersection improvements at US 60 @ KY 180
- Delineation of wide medians on portions of US 60

Long Range Projects

- Defined future major corridor
  - US 60 south of Rose Hill through West Fairview and Millseat
  - Connector route from Industrial Parkway to US 60 north of Summit
- Improvements to KY 168 corridor
- US 60 – I-64 to KY 180 (Possible 3 lane)
- US 60 – Rose Hill to Downtown (Possible 3 lane)

Brian Cash discussed the National Environmental Policy Act (NEPA) process and the many different issues that must be investigated. Two maps were discussed that depict the natural and manmade environments (copies were included in the booklets provided to each attendee). It was noted that six individual properties or districts are currently on the National Register of Historic Places (NRHP) within the study area and six additional properties or districts appear to meet NRHP criteria. Final determinations on the eligibility of these properties will take place during subsequent project phases.

The next ACAT meeting will be held in the Ashland Central Fire Station on Thursday, March 20 at 12:00 p.m. The ACAT members were provided a smaller version of the environmental resources map from the group exercise and were asked to sketch some improvement alternatives on the map for discussion at the March 20 meeting.

The meeting adjourned at approximately 2:00 p.m.

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item # 9-129.00
Advisory Team Meeting #2 Minutes
Ashland Central Fire Station
March 20, 2008
12:00 pm

An Ashland Connector Advisory Team (ACAT) meeting was held on Thursday, March 20, 2008 at 12:00 p.m. in the Ashland Central Fire Station in downtown Ashland. The focus of the meeting was to discuss the I-64 to US 23 Ashland Connector Study. The following individuals were in attendance:

Phil Biggs	Chairman, Ashland MPO
Richard Cyrus	Cannonsburg Fire Chief
Paula Hogsten	Ashland City Commissioner
Todd Kelley	City of Ashland Police Department
Jim Purgerson	Ashland Alliance
Robert Ratliff	City of Ashland Police Department
Kyle Robinson	Boyd County Extension District
Michael Rogers	Ashland Bus System
Marion Russell	Ashland Public Works
David Sloan	City of Ashland Fire Chief
Nickie Smith	Riverport Authority
Cheryl Spriggs	Ashland City Commissioner
Allen Blair	KYTC D9
Jason Dean	KYTC D9
Darrin Eldridge	KYTC D9
Vickie Griggs	KYTC D9
J.R. Hamm	KYTC Central Office
Deanna Miller	KYTC D9 Planning
Karen Mynhier	KYTC D9
Robin Ramey	KYTC D9
Randi Vint	KYTC D9
Brent Wells	KYTC D9
Jim Wilson	KYTC Central Office
Brian Aldridge	ENTRAN, PLC
Brian Cash	ENTRAN, PLC

The meeting began at approximately 12:15 p.m. Deanna Miller, KYTC's Project Manager, began the meeting with a brief introduction and asked the attendees to introduce themselves. Deanna added that a change in personnel has taken place in the District 9 office and Bart Bryant is now serving as Executive Director/Chief District Engineer.

Brian Cash, Project Manager for ENTRAN, PLC, delivered a brief presentation that provided a recap of the first ACAT meeting. The presentation began with discussion of the group exercise from the first meeting, which included maps depicting the trouble spots and potential improvements proposed by the group. These maps were provided as handouts.

At the March 4 meeting, the ACAT members were provided a map depicting known environmental resources and were asked to sketch some improvement alternatives on the map for discussion at the March 20 meeting. With this information in hand, the attendees were divided into small groups and were provided larger versions of those maps. They were asked to discuss possible corridor locations and sketch the group's recommendation(s) on the larger map for presentation. While each group had different ideas, all the recommendations had a common theme that a new or improved corridor should be constructed west of the US 60 to relieve congestion on the section of US 60 approaching Ashland. A map depicting the Committees corridors is attached.

Brian Cash reiterated the purpose of the project as follows, emphasizing the core purpose of improving access and mobility:

> *The purpose of the I-64 to US 23 Connector Study is to identify community concerns and evaluate project alternatives to* ***improve access and mobility between I-64 and Ashland.*** *The study is intended to help define the location and purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA).*

All alternatives and recommendations from the study must meet the Purpose and Need. In addition, several other criteria will be considered during the development of alternatives. All alternatives will be evaluated using the following criteria:

- Purpose and Need
- Costs
- Community Impacts
- Environmental Impacts
- Traffic and Safety Impacts
- Public Input
- Engineering Considerations

Community impacts include residential relocations and impacts to existing businesses, as well as impacts to low income residences (i.e. environmental justice issues). Environmental resources such as landfills, superfund sites, historic properties, and wetlands will also need to be considered.

When considering potential new corridors, issues such as the function of the roadway, number of lanes, median type, travel speed, and roadway edge treatment (i.e. shoulder, curb, etc.) must be taken into consideration. Access management will be an important item to consider as well. It was noted that arterial roadways, such as US 60, tend to provide greater mobility but provide less direct access to adjacent parcels. Local streets provide a higher degree of land access but do not provide the same level of mobility. Collector roadways provide a balance of access and mobility.

A draft questionnaire was passed out to the Committee. The questionnaire will be used as a tool to gather public input at the first public meeting and assist the study team in identifying the critical

elements that should be considered when developing and comparing alternatives. The Committee was asked to review the questionnaire and provide comments as soon as possible.

The time and location for the first public meeting was discussed for the Ashland Connector study. Deanna Miller stated that the meeting should occur within the next month, if possible. It was decided the meeting would be held on Thursday, April 24 at the KYOVA Mall on US 60 south of Ashland. Meeting flyers and study questionnaires will be mailed to the ACAT members for distribution prior to the meeting.

The next ACAT meeting will be scheduled at a later date. The meeting attendees suggested email worked well as a notification tool.

The meeting adjourned at approximately 1:30 p.m.

Meeting Summary

TO: Darrin Eldridge, P.E.
KYTC – District 9

FROM: Brian Aldridge, P.E.
Project Manager
ENTRAN, PLC

DATE: October 17, 2008

SUBJECT: I-64 to US 23 Ashland Connector, Boyd County
Item No. 09-129.00

A joint meeting of the Ashland Connector Advisory Team (ACAT) and local officials was held on Monday, October 13, 2008 at 11:30 a.m. in the Ashland Central Fire Station in downtown Ashland. The focus of the meeting was to discuss the I-64 to US 23 Ashland Connector Study. The following individuals were in attendance:

Richard Cyrus	Cannonsburg Fire/ Boyd County Schools
Tony Grubb	City of Ashland
Kevin Gunderson	City of Ashland
Paula Hogsten	City of Ashland
Judy McCoy	Boyd County Schools
Timothy Moore	City of Ashland
Bill Musick	Fairview Schools
Scott Penick	Ashland Fire Department
Jim Purgerson	Ashland Alliance
Robert Ratliff	City of Ashland Police Department
Mike Rogers	Ashland Bus System
Thomas Saylor	EastPark
Nickie Smith	Boyd County
Cheryl Spriggs	City of Ashland
Carl Tolliver	BCFG
Allen Blair	KYTC D9
Jay Dean	KYTC D9
Robyn Ramey	KYTC D9
Darrin Eldridge	KYTC D9
J.R. Ham	KYTC Central Office
Phil Mauney	KYTC D9
Danny Mineer	KYTC D9
Brent Wells	KYTC D9
Brian Aldridge	ENTRAN
Jason Bricker	ENTRAN
Glenn Hardin	ENTRAN
Karim Siahkoohi	ENTRAN
Ashley Williams	ENTRAN

The meeting began at approximately 12:00 p.m. Darrin Eldridge, KYTC's Project Manager, began the meeting with a brief introduction, adding that a change in personnel has taken place in the District 9 office. Deanna Miller, who had been serving as Project Manager, has accepted a different position with KYTC and Phil Mauney is now heading up planning in the district.

Brian Aldridge, Project Manager for ENTRAN, delivered a presentation that provided a recap of the first public meeting, discussion of the preliminary long-range alternative concepts, and the proposed short-term improvements. He began by saying that Brian Cash, formerly ENTRAN's Project Manager for the I-64 to US 23 Ashland Connector Study, recently accepted a position with the U.S. Army Corps of Engineers.

Public Meeting #1

The first public meeting was held on April 24 at the Kyova Mall on US 60 south of Ashland. A total of 45 attendees signed in during the course of the evening. It was noted that the turnout was not uncommonly low for the early stages of a planning study such as this. There was some discussion about changing the location for the second public meeting to increase the turnout.

Public meeting attendees were asked to mark "trouble spots" on maps of the study area. Areas that were identified included the following:

- US 60/KY 180 intersection
- Portions of US 60 lacking turn lanes
- US 60/KY 168 intersection
- US 60 interchange at Coalton (exit 181)
- US 60 near Downtown Ashland
- Portions of KY 5 near Bellefonte

On the same maps, attendees were asked to draw new transportation corridors they believed should be considered or existing corridors in need of significant improvement. The following new corridors were identified:

- Connector between US 60 near Princess to US 60 north of the Kyova Mall (near Meads)
- Connector between US 60 near Meads to US 23 at KY 5
- Connector between US 60 near Winslow (south of Rose Hill cemetery) to US 23 east of Town Mall or at KY 168

Brian discussed the findings from the 30 completed surveys that were returned. The surveys asked a series of questions concerning existing transportation deficiencies, travel routes, and improvement options. The US 60 intersection with KY 168 (Blackburn Street) and US 60 (13th Street) in Ashland were the primary trouble spots included in the responses. With respect to improvement options, 10 surveys indicated a new route, 7 indicated improving existing facilities, and 15 indicated a combination of improvements to existing facilities and new corridors were the most desirable options. When asked which I-64 interchange was used most frequently, 18 respondents said they utilized the Coalton interchange most frequently and 13 said they used the KY 180 interchange most frequently. It was noted that the KY 180 interchange was (and is) undergoing reconstruction, possibly skewing the responses.

When asked where a new connector should connect to US 60, 12 respondents indicated a connection near Princess would be desirable, 7 said near Rose Hill, and 5 said near Armco Park. On where a new connection with US 23 should occur, 13 respondents near Town Mall, 7 near Melody Mountain, 7 near KY 5, and 1 near KY 168.

When asked what was most important when considering a new road, 80 percent of the respondents indicated traffic relief was important, followed by impacts to residential properties, 73%, and impacts to businesses, at 50%. With respect to ranking existing transportation issues in the area from 1 to 5, with 5 indicating it is a serious problem, traffic congestion was rated as the most significant issue, with an average

rating of 4.4. Pedestrian safety and a lack of turn lanes were the second highest rated issues, with an average rating of approximately 4.0. Improved truck routes and vehicle safety were also rated high, with an average rating of approximately 3.9.

A map was provided on the survey and respondents were asked what route they would use to travel between two identified locations within the study area. The first two locations were from US 23 near Town Mall to US 60 at the KY 538 (Shopes Creek Road) intersection. Sixteen respondents indicated they would travel through downtown Ashland to US 60 to reach the destination, five said they would use KY 168 to US 60, and two said they would use Roberts Drive. The second set of locations began at US 23 just west of the KY 168 intersection and ended at the same location on US 60, near the KY 538 intersection. Nine respondents said they would use KY 5 for a portion of their trip, six said they would drive through downtown Ashland, three said they would use KY 168 to access US 60, and three said they would use a combination of KY 168 and Roberts Drive. These results indicate that people utilize a variety of routes when traveling to and from US 23 west of Ashland.

Traffic Forecasts

Brian discussed the preliminary traffic forecasts developed for the study. He noted that the regional travel demand model, covering all of Boyd and Greenup County, has been recently updated. The updated travel demand model was made available for use in the study in late April. The updated model includes revised socioeconomic data forecasts. The revised data include a 0.5 percent decline in population for Boyd County between the 2007 base year and 2030. However, employment growth is higher in the updated model, with an increase of 45.4 percent anticipated by 2030. Negative employment growth is anticipated southwest of Ashland and near Catlettsburg, but significant growth is anticipated elsewhere in the study area and near Russell.

In general, the 2030 traffic volumes forecast by the updated travel demand model tend to be similar to or lower than existing traffic volumes within the study area. However, the model predicts strong growth along I-64, KY 180 and portions of US 60 south of Ashland.

Brian discussed four conceptual alternatives developed to estimate future traffic volumes and impacts to US 60. The current draft of the Six Year Highway Plan includes widening US 60 from the Coalton interchange to KY 180, and it was decided that this should be considered as an alternative for the purposes of this study (as proposed in Alternative 4). These new or improved corridors, developed based on input provided by the Advisory Committee or the public, and their anticipated range of 2030 traffic volumes based on the updated model are as follows:

- Alternative 1 (Princess Connector): connecting US 60 near Princess through the Paul Coffey Industrial Park to US 60 north of the Kyova Mall - 11,200 vehicles per day
- Alternative 2 (Bellefonte Connector): connecting US 60 north of Armco Park to KY 5 near Bellefonte -13,000 to 17,000 vehicles per day
- Alternative 3 (Westwood Connector): connecting US 60 north of Armco Park to US 23 east of Town Mall - 9,200 to18,500 vehicles per day
- Alternative 4 – widening US 60 to four lanes from I-64 to KY 180 – 17,900 to 19,000 vehicles per day

It was noted that all alternatives are anticipated to increase traffic on US 60 north of the Coalton interchange, with Alternative 4 resulting in the highest increase of nearly 78 percent. Alternative 3 resulted in the highest decrease in traffic along US 60 through downtown Ashland with a 10 percent reduction in traffic. Most alternatives will reduce traffic on the south end of KY 5 near Princess, and the impacts on KY 168 and Roberts Drive vary for each alternative.

Brian indicated that after previous discussions with the Study Team, it was decided that a combination of Alternative 1 and Alternative 3 should be examined for anticipated traffic impacts. In an effort to improve safety and mobility along 13th Street, it was decided to include in this alternative a “road diet” option for US 60 north of Rose Hill, restriping the existing four-lane section as a three-lane to provide two travel lanes

(one per direction) and a continuous center left turn lane. This scenario, which assumes US 60 would be widened to four lanes between I-64 and the Princess Connector, increased traffic on the Princess Connector and reduced traffic on US 60/13th Street through downtown Ashland. The resulting volumes through the downtown area appear to be low enough that US 60 could be re-striped as a three-lane section.

Long-Range Improvement Options
Brian presented maps depicting the preliminary long-range corridor alternatives (see attached). It was noted that although potential alignments were shown on the maps, each should be considered as much wider corridors inside which one or more alignments are feasible for implementation. Alternative 1 resembles the Princess Connector, connecting US 60 near Princess to US 60 north of Kyova Mall. Two options were shown for Alternative 1. The first, Alternative 1A, parallels the CSX rail line to the west. The second, Alternative 1B, would roughly follow the existing Paul Coffey Boulevard route as it departs US 60 on the south end.

Two options for Alternative 2 were depicted. Alternative 2A departs US 60 near KY 766 (Bob McCullough Drive), just north of Armco Park. The corridor follows KY 766 to the west, turning northwest towards KY 5. Alternative 2B begins on US 60 at the same location as Alternative 2A, but heads northwest towards KY 5 rather than following KY 766. Both alternatives tie into KY 5 just south of US 23.

Several options were presented for Alternative 3. On the south end, Alternative 3A connected to US 60 at KY 766 (Bob McCullough Drive) and Alternative 3B connected to US 60 about midway between KY 766 and KY 1134 (Winslow Road). Both Alternative 3A and 3B roughly followed existing Roberts Drive corridor to north of KY 168 and then provided four different locations for a terminus at US 23, with one alternative connecting to US 23 east of Town Mall (Alternative 3A), one connecting to US 23 at the existing traffic signal near Melody Mountain (Alternative 3C), one connecting to US 23 midway between the traffic signals at Melody Mountain and KY 168 (Alternative 3D), and one alternative connecting to US 23 at the KY 168 intersection (Alternative 3E).

Evaluation Exercise
The ACAT members were divided into small groups and asked to evaluate the alternatives that had been previously shown. With the detailed alternative corridor maps at each group's table, they were asked to reach a consensus on which alternatives should be considered as part of the study and if any additional alternatives should be added. They each completed a group evaluation form based on their discussions. The following summarizes the four groups' conclusions for the alternatives evaluation exercise.

Alternative #1: Three of the four groups felt that Alternative 1 should not be considered. One group stated that the negative land impacts were reasons to exclude the alternative. Another stated that it would be less expensive to widen US 60 through the Princess area instead of carrying Alternative 1 forward.

Alternative #2: All groups decided that Alternative 2 should not be considered. Reasons included the relatively high costs anticipated, the distance away from the city, and the limitations to segment the construction phases. One group expressed that the widening of US 60 through the area was unnecessary.

Alternative #3: Every group felt that Alternative 3 should be considered, however, each group had different preferences as to which variation of Alternative 3 was preferred. One group expressed concerns with Alternative 3A because of the possible increase in congestion around the Town Mall. Alternatives 3A, 3B, 3C, 3D, and 3E were mentioned by one or more groups as being the preferred choice for Alternative 3. A comment was given by one of the ACAT members regarding the ability of Alternative 3 to be constructed in multiple phases. The possibility of bike trails along the Alternative 3 corridor was also mentioned.

Alternative #4: Alternative 4 was discussed amongst the groups as already being in the Six-Year Highway Plan and it was decided by all groups that it should remain as a considered Alternative for the study.

Alterative #5: The decision to consider Alternative 5 was split amongst the four groups. The groups that expressed strong opposition to Alternative 1 were also against Alternative 5.

No additional corridor alternatives were discussed as part of the group evaluation exercise.

The second part of the evaluation exercise involved rating specific evaluation criteria to be used in the evaluation of the study alternatives. Each criterion was to be rated from 1 to 5, with 5 being the most important and 1 being the least important. The groups were also asked to add any criteria that they felt should be considered. The following table summarizes the results of the exercise:

Evaluation Criterion	Average Rating
Divert traffic from existing US 60	**4.4**
Minimize Cost	**3.5**
Minimize the number of residential relocations	**3.5**
Minimize the number of business relocations	**4.0**
Public input/support	**4.3**
Minimize community disruption	**3.5**
Provide improved access to the industrial park	**2.5**
Minimize environmental impacts	**3.4**

The majority of the criteria listed were given high ratings, with "Divert traffic from existing US 60" and "Public input and support" receiving the highest ratings. Only one group gave the "Provide improved access to the industrial park" criterion a high rating.

Short-Term Improvement Projects
Brian presented a preliminary list of short-term improvement projects, or "spot" improvements, that can be implemented in the nearer term and at a lower cost than the long-range alternatives. These projects, most of which were developed to improve traffic safety, are as follows:

Intersection Reconstruction

US 60 at KY 180: This intersection lies in a curve along KY 180 and US 60, and the design resulting in significant superelevation (i.e. banking of the roadway) to accommodate the travel speeds. The improvement is to reconstruct the north-south approaches to decrease the amount of necessary superelevation.

KY 168 at Roberts Drive: There is an at-grade crossing of the CSX rail line on KY 168 immediately west of the Roberts Drive intersection. This grade crossing is at a much higher elevation than the street approaches, resulting in poor sight distance. The improvements it to raise the grades on KY 168 and Roberts Drive to better match the elevation of the grade crossing.

US 60 at KY 168 (Blackburn Avenue): The US 60 approaches to this five-legged intersection are skewed as buildings are located adjacent to the right-of-way at the southwest and northeast corners. The building located in the southwest corner is eligible for inclusion on the National Register of Historic Properties. The improvement is to realign the US 60 approaches by moving the US 60 alignment slightly to the east, resulting in the removal of the building (or portions of the building) on the northeast corner. It was suggested that closing the Algonquin Avenue approach, which forms the fifth leg of the intersection to the southwest, be given consideration.

Median Reconstruction

US 60 between KY 716 and KY 1012 (Boy Scout Road): This section of US 60 has a raised, traversable median and is fronted by various commercial developments. The "roll" curb forming the raised median causes some drivers to slow significantly before mounting the median. Approximately 25 percent of the crashes that occurred over the past five years were angle crashes (involving one or more turning vehicles) and another 40 percent were rear end crashes. The improvement is to replace the traversable median with a non-traversable median with selective median openings and turn lanes.

Addition of Turn Lane(s)

US 60 at Paul Coffey Boulevard: The improvement is to add a northbound left-turn lane and a southbound right-turn lane to better accommodate truck traffic.

US 60 at KY 716 (Summitt Road): Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a southbound right-turn lane.

US 60 at KY 1012 (Boy Scout Road): Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a northbound right-turn lane.

US 60 at KY 766 (Bob McCullough Drive): Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a northbound right-turn lane.

Signage Improvement

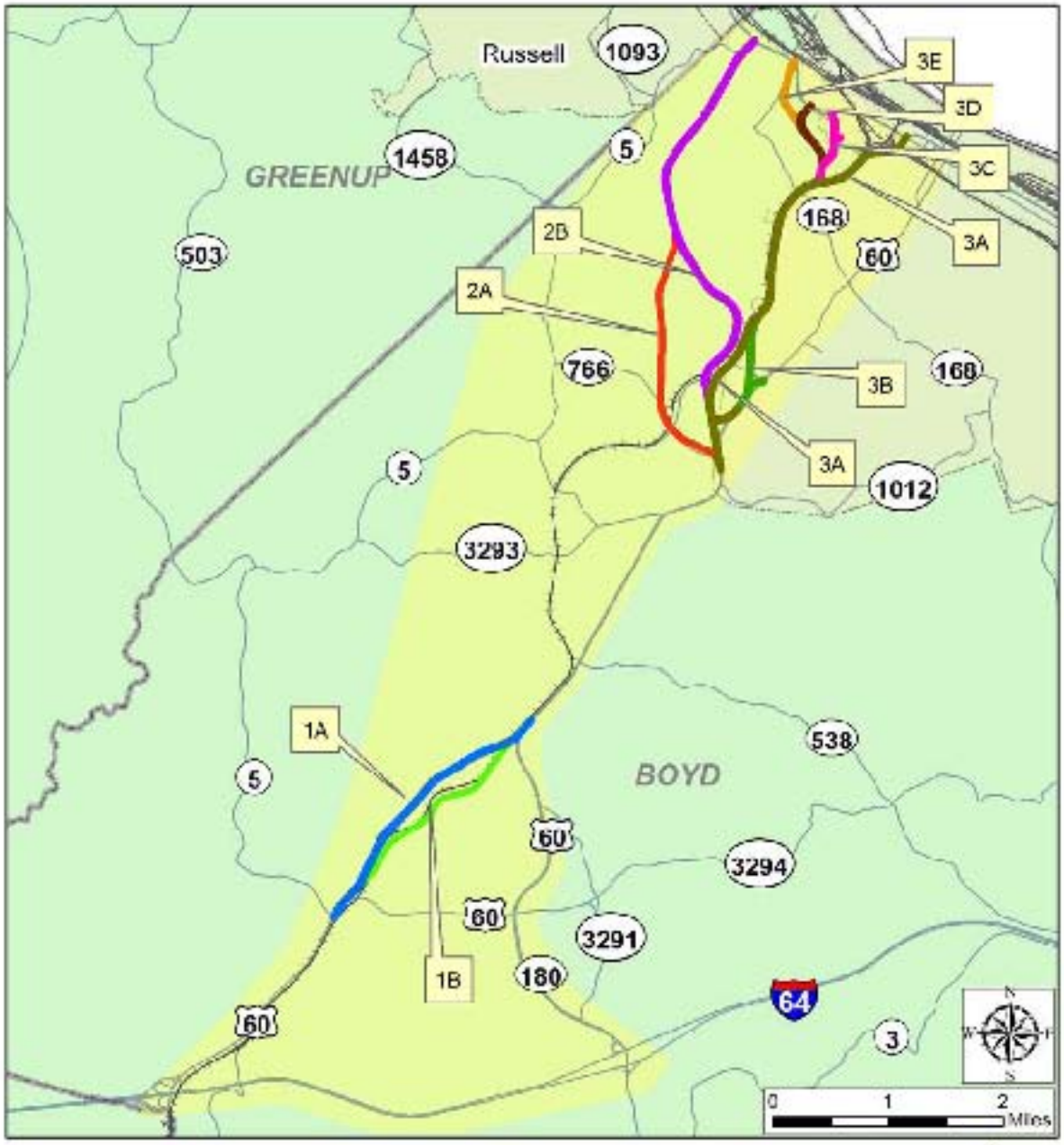
US 60 (13th Street) approaching downtown Ashland: As drivers are approaching the 13th Street intersection with US 23, there is no signage to indicate which lanes lead to the bridge to Coal Grove, OH. However, opportunities for improved signage are limited. The improvement is to provide overhead signage directing bridge traffic to use the middle lanes and traffic destined for northbound US 23 (Winchester Avenue) to use the left lane.

It was noted that consideration had been given to restriping the northbound 13th Street approach to provide a left-turn only and shared through and left-turn lane for traffic turning left onto northbound Winchester Avenue. Additional signage improvements were suggested for US 23 to better direct traffic through downtown Ashland.

Public Meeting #2

There was some discussion regarding the time and location for the second public meeting for the Ashland Connector study. Brian stated that the meeting should occur within the next month, if possible. dates and locations were discussed, and it was decided the meeting would be held on Thursday, November 18 at Park Place (formerly known as the American Electric Power building) on Central Avenue in downtown Ashland. Meeting flyers and study questionnaires will be mailed to the ACAT members for distribution prior to the meeting.

The meeting adjourned at approximately 2:00 p.m. The next ACAT meeting will be scheduled at a later date.



PRELIMINARY ALTERNATIVES

I-64 to US 23 Ashland Connector
Boyd County
KYTC Item #9-129.00

ENTRAN

Meeting Summary

TO: Darrin Eldridge, P.E.
KYTC – District 9

FROM: Brian Aldridge, P.E.
Project Manager
ENTRAN, PLC

DATE: March 13, 2009

SUBJECT: I-64 to US 23 Ashland Connector, Boyd County
Item No. 09-129.00

A joint meeting of the Ashland Connector Advisory Team (ACAT) and local officials was held on Friday, February 20, 2009 at 11:30 a.m. in the Ashland Central Fire Station in downtown Ashland. The focus of the meeting was to discuss the preliminary recommendations resulting from the I-64 to US 23 Ashland Connector Study. The following individuals were in attendance:

Larry Brown	City of Ashland
Steve Corbitt	City of Ashland
Richard Cyrus	Cannonsburg Fire/ Boyd County Schools
Todd Kelley	Ashland Police Department
Tom Kelley	Mayor – City of Ashland
Bill Musick	Fairview Schools
Scott Penick	Ashland Fire Department
Jim Purgerson	Ashland Alliance
Robert Ratliff	City of Ashland Police Department
Mike Rogers	Ashland Bus System
Nickie Smith	Boyd County
Bud Stevens	Boyd County Fiscal Court
Allen Blair	KYTC D9
Bart Bryant	KYTC D9
Rachel Catchings	KYTC D9
Jason Dean	KYTC D9
J.R. Ham	KYTC Central Office
Phil Mauney	KYTC D9
Deanna Miller	KYTC D9
Danny Mineer	KYTC D9
Karen Mynhier	KYTC D9
Robyn Ramey	KYTC D9
Daran Razor	KYTC D9
Terri Sicking	Ashland MPO
Randi Vint	KYTC D9
Brent Wells	KYTC D9
Brian Aldridge	ENTRAN
Jason Bricker	ENTRAN

Glenn Hardin	ENTRAN
Ashley Williams	ENTRAN

The meeting began at approximately 12:00 p.m. Brent Wells began the meeting with a brief introduction. Brian Aldridge, Project Manager for ENTRAN, delivered a presentation that provided a recap of the second public meeting, discussion and evaluation of the long-range corridor alternatives, and the preliminary recommendations from the study.

Public Meeting #2

The second public meeting was held on November 18 at the Park Place Building (formerly the AEP Building) in downtown Ashland. A total of 55 attendees signed in during the course of the evening.

Public meeting attendees were asked to mark "trouble spots" on maps of the study area. Areas that were identified included the following:

- US 60/KY 180 intersection
- Portions of US 60 lacking turn lanes
- US 60/KY 168 intersection
- US 60 interchange at Coalton (exit 181)
- US 60 near Downtown Ashland
- Portions of KY 5 near Bellefonte

On the same maps, attendees were asked to draw new transportation corridors they believed should be considered or existing corridors in need of significant improvement. The following new corridors were identified:

- Connector between US 60 near Princess to US 60 north of the Kyova Mall (near Meads)
- Connector between US 60 near Meads to US 23 at KY 5
- Connector between US 60 near Winslow (south of Rose Hill cemetery) to US 23 east of Town Mall or at KY 168

Brian discussed the findings from the 27 completed surveys that were returned. The surveys asked a series of questions concerning existing transportation deficiencies, travel routes, and improvement options. The US 60 intersection with KY 168 (Blackburn Street) and US 60 (13th Street) in Ashland were the primary trouble spots included in the responses. With respect to improvement options, 10 surveys indicated a new route, 7 indicated improving existing facilities, and 15 indicated a combination of improvements to existing facilities and new corridors were the most desirable options. When asked which I-64 interchange was used most frequently, 18 respondents said they utilized the Coalton interchange most frequently and 13 said they used the KY 180 interchange most frequently. It was noted that the KY 180 interchange was (and is) undergoing reconstruction, possibly skewing the responses.

When asked where a new connector should connect to US 60, 12 respondents indicated a connection near Princess would be desirable, 7 said near Rose Hill, and 5 said near Armco Park. On where a new connection with US 23 should occur, 13 respondents near Town Mall, 7 near Melody Mountain, 7 near KY 5, and 1 near KY 168.

When asked what was most important when considering a new road, 80 percent of the respondents indicated traffic relief was important, followed by impacts to residential properties, 73%, and impacts to businesses, at 50%. With respect to ranking existing transportation issues in the area from 1 to 5, with 5 indicating it is a serious problem, traffic congestion was rated as the most significant issue, with an average rating of 4.4. Pedestrian safety and a lack of turn lanes were the second highest rated issues, with an average rating of approximately 4.0. Improved truck routes and vehicle safety were also rated high, with an average rating of approximately 3.9.

A map was provided on the survey and respondents were asked what route they would use to travel between two identified locations within the study area. The first two locations were from US 23 near Town Mall to US 60 at the KY 538 (Shopes Creek Road) intersection. Sixteen respondents indicated they would travel through downtown Ashland to US 60 to reach the destination, five said they would use KY 168 to US 60, and two said they would use Roberts Drive. The second set of locations began at US 23 just west of the KY 168 intersection and ended at the same location on US 60, near the KY 538 intersection. Nine respondents said they would use KY 5 for a portion of their trip, six said they would drive through downtown Ashland, three said they would use KY 168 to access US 60, and three said they would use a combination of KY 168 and Roberts Drive. These results indicate that people utilize a variety of routes when traveling to and from US 23 west of Ashland.

Traffic Forecasts

Brian discussed the preliminary traffic forecasts developed for the study. He noted that the regional travel demand model, covering all of Boyd and Greenup County, has been recently updated. The updated travel demand model was made available for use in the study in late April. The updated model includes revised socioeconomic data forecasts. The revised data include a 0.5 percent decline in population for Boyd County between the 2007 base year and 2030. However, employment growth is higher in the updated model, with an increase of 45.4 percent anticipated by 2030. Negative employment growth is anticipated southwest of Ashland and near Catlettsburg, but significant growth is anticipated elsewhere in the study area and near Russell.

In general, the 2030 traffic volumes forecast by the updated travel demand model tend to be similar to or lower than existing traffic volumes within the study area. However, the model predicts strong growth along I-64, KY 180 and portions of US 60 south of Ashland.

Brian discussed four conceptual alternatives developed to estimate future traffic volumes and impacts to US 60. The current draft of the Six Year Highway Plan includes widening US 60 from the Coalton interchange to KY 180, and it was decided that this should be considered as an alternative for the purposes of this study (as proposed in Alternative 4). These new or improved corridors, developed based on input provided by the Advisory Committee or the public, and their anticipated range of 2030 traffic volumes based on the updated model are as follows:

- Alternative 1 (Princess Connector): connecting US 60 near Princess through the Paul Coffey Industrial Park to US 60 north of the Kyova Mall - 11,200 vehicles per day
- Alternative 2 (Bellefonte Connector): connecting US 60 north of Armco Park to KY 5 near Bellefonte -13,000 to 17,000 vehicles per day
- Alternative 3 (Westwood Connector): connecting US 60 north of Armco Park to US 23 east of Town Mall - 9,200 to18,500 vehicles per day
- Alternative 4 – widening US 60 to four lanes from I-64 to KY 180 – 17,900 to 19,000 vehicles per day

It was noted that all alternatives are anticipated to increase traffic on US 60 north of the Coalton interchange, with Alternative 4 resulting in the highest increase of nearly 78 percent. Alternative 3 resulted in the highest decrease in traffic along US 60 through downtown Ashland with a 10 percent reduction in traffic. Most alternatives will reduce traffic on the south end of KY 5 near Princess, and the impacts on KY 168 and Roberts Drive vary for each alternative.

Brian indicated that after previous discussions with the Study Team, it was decided that a combination of Alternative 1 and Alternative 3 (referred to as Alternative 5) should be examined for anticipated traffic impacts. In an effort to improve safety and mobility along 13th Street, it was decided to include in this alternative a “road diet” option for US 60 north of Rose Hill, restriping the existing four-lane section as a three-lane to provide two travel lanes (one per direction) and a continuous center left turn lane. This scenario, which assumes US 60 would be widened to four lanes between I-64 and the Princess Connector, increased traffic on the Princess Connector and reduced traffic on US 60/13th Street through downtown Ashland. The resulting volumes through the downtown area appear to be low enough that US 60 could be

re-striped as a three-lane section.

Long-Range Improvement Options
Brian presented maps depicting the preliminary long-range corridor alternatives (see attached). It was noted that although potential alignments were shown on the maps, each should be considered as much wider corridors inside which one or more alignments are feasible for implementation. Alternative 1 resembles the Princess Connector, connecting US 60 near Princess to US 60 north of Kyova Mall. Two options were shown for Alternative 1. The first, Alternative 1A, parallels the CSX rail line to the west. The second, Alternative 1B, would roughly follow the existing Paul Coffey Boulevard route as it departs US 60 on the south end.

Two options for Alternative 2 were depicted. Alternative 2A departs US 60 near KY 766 (Bob McCullough Drive), just north of Armco Park. The corridor follows KY 766 to the west, turning northwest towards KY 5. Alternative 2B begins on US 60 at the same location as Alternative 2A, but heads northwest towards KY 5 rather than following KY 766. Both alternatives tie into KY 5 just south of US 23.

Several options were presented for Alternative 3. On the south end, Alternative 3A connected to US 60 at KY 766 (Bob McCullough Drive) and Alternative 3B connected to US 60 about midway between KY 766 and KY 1134 (Winslow Road). Both Alternative 3A and 3B roughly followed existing Roberts Drive corridor to north of KY 168 and then provided four different locations for a terminus at US 23, with one alternative connecting to US 23 east of Town Mall (Alternative 3A), one connecting to US 23 at the existing traffic signal near Melody Mountain (Alternative 3C), one connecting to US 23 midway between the traffic signals at Melody Mountain and KY 168 (Alternative 3D), and one alternative connecting to US 23 at the KY 168 intersection (Alternative 3E).

Evaluation Exercise
The ACAT members were divided into small groups and asked to evaluate the alternatives that had been previously shown. With the detailed alternative corridor maps at each group's table, they were asked to reach a consensus on which alternatives should be considered as part of the study and if any additional alternatives should be added. They each completed a group evaluation form based on their discussions. The following summarizes the four groups' conclusions for the alternatives evaluation exercise.

Alternative #1: Three of the four groups felt that Alternative 1 should not be considered. One group stated that the negative land impacts were reasons to exclude the alternative. Another stated that it would be less expensive to widen US 60 through the Princess area instead of carrying Alternative 1 forward.

Alternative #2: All groups decided that Alternative 2 should not be considered. Reasons included the relatively high costs anticipated, the distance away from the city, and the limitations to segment the construction phases. One group expressed that the widening of US 60 through the area was unnecessary.

Alternative #3: Every group felt that Alternative 3 should be considered, however, each group had different preferences as to which variation of Alternative 3 was preferred. One group expressed concerns with Alternative 3A because of the possible increase in congestion around the Town Mall. Alternatives 3A, 3B, 3C, 3D, and 3E were mentioned by one or more groups as being the preferred choice for Alternative 3. A comment was given by one of the ACAT members regarding the ability of Alternative 3 to be constructed in multiple phases. The possibility of bike trails along the Alternative 3 corridor was also mentioned.

Alternative #4: Alternative 4 was discussed amongst the groups as already being in the Six-Year Highway Plan and it was decided by all groups that it should remain as a considered Alternative for the study.

Alterative #5: The decision to consider Alternative 5 was split amongst the four groups. The groups that expressed strong opposition to Alternative 1 were also against Alternative 5.

No additional corridor alternatives were discussed as part of the group evaluation exercise.

The second part of the evaluation exercise involved rating specific evaluation criteria to be used in the evaluation of the study alternatives. Each criterion was to be rated from 1 to 5, with 5 being the most important and 1 being the least important. The groups were also asked to add any criteria that they felt should be considered. The following table summarizes the results of the exercise:

Evaluation Criterion	Average Rating
Divert traffic from existing US 60	**4.4**
Minimize Cost	**3.5**
Minimize the number of residential relocations	**3.5**
Minimize the number of business relocations	**4.0**
Public input/support	**4.3**
Minimize community disruption	**3.5**
Provide improved access to the industrial park	**2.5**
Minimize environmental impacts	**3.4**

The majority of the criteria listed were given high ratings, with "Divert traffic from existing US 60" and "Public input and support" receiving the highest ratings. Only one group gave the "Provide improved access to the industrial park" criterion a high rating.

Short-Term Improvement Projects

Brian presented a preliminary list of short-term improvement projects, or "spot" improvements, that can be implemented in the nearer term and at a lower cost than the long-range alternatives. These projects, most of which were developed to improve traffic safety, are as follows:

Intersection Reconstruction

US 60 at KY 180: This intersection lies in a curve along KY 180 and US 60, and the design resulting in significant superelevation (i.e. banking of the roadway) to accommodate the travel speeds. The improvement is to reconstruct the north-south approaches to decrease the amount of necessary superelevation.

KY 168 at Roberts Drive: There is an at-grade crossing of the CSX rail line on KY 168 immediately west of the Roberts Drive intersection. This grade crossing is at a much higher elevation than the street approaches, resulting in poor sight distance. The improvements it to raise the grades on KY 168 and Roberts Drive to better match the elevation of the grade crossing.

US 60 at KY 168 (Blackburn Avenue): The US 60 approaches to this five-legged intersection are skewed as buildings are located adjacent to the right-of-way at the southwest and northeast corners. The building located in the southwest corner is eligible for inclusion on the National Register of Historic Properties. The improvement is to realign the US 60 approaches by moving the US 60 alignment slightly to the east, resulting in the removal of the building (or portions of the building) on the northeast corner. It was suggested that closing the Algonquin Avenue approach, which forms the fifth leg of the intersection to the southwest, be given consideration.

Median Reconstruction

US 60 between KY 716 and KY 1012 (Boy Scout Road): This section of US 60 has a raised, traversable median and is fronted by various commercial developments. The "roll"

curb forming the raised median causes some drivers to slow significantly before mounting the median. Approximately 25 percent of the crashes that occurred over the past five years were angle crashes (involving one or more turning vehicles) and another 40 percent were rear end crashes. The improvement is to replace the traversable median with a non-traversable median with selective median openings and turn lanes.

Addition of Turn Lane(s)

US 60 at Paul Coffey Boulevard: The improvement is to add a northbound left-turn lane and a southbound right-turn lane to better accommodate truck traffic.

US 60 at KY 716 (Summitt Road): Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a southbound right-turn lane.

US 60 at KY 1012 (Boy Scout Road): Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a northbound right-turn lane.

US 60 at KY 766 (Bob McCullough Drive): Right-turning traffic at this intersection sometimes uses the shoulder to decelerate while moving out of the traffic stream. The improvement is to add a southbound right-turn lane.

Signage Improvement

US 60 (13th Street) approaching downtown Ashland: As drivers are approaching the 13th Street intersection with US 23, there is no signage to indicate which lanes lead to the bridge to Coal Grove, OH. However, opportunities for improved signage are limited. The improvement is to provide overhead signage directing bridge traffic to use the middle lanes and traffic destined for northbound US 23 (Winchester Avenue) to use the left lane.

It was noted that consideration had been given to restriping the northbound 13th Street approach to provide a left-turn only and shared through and left-turn lane for traffic turning left onto northbound Winchester Avenue. Additional signage improvements were suggested for US 23 to better direct traffic through downtown Ashland.

Public Meeting #2

There was some discussion regarding the time and location for the second public meeting for the Ashland Connector study. Brian stated that the meeting should occur within the next month, if possible. Dates and locations were discussed, and it was decided the meeting would be held on Thursday, November 18 at Park Place (formerly known as the American Electric Power building) on Central Avenue in downtown Ashland. Meeting flyers and study questionnaires will be mailed to the ACAT members for distribution prior to the meeting.

The meeting adjourned at approximately 2:00 p.m. The next ACAT meeting will be scheduled at a later date.

Elected/Public Officials Meeting #1
I-64 to US 23 Ashland Connector
Item # 9-129.00
Ashland Central Fire Station
September 25, 2007
10:00 am

A local officials meeting for the I-64 to US 23 Ashland Connector Project (Item No. 9-129.00) was held on Tuesday, September 25, 2007 at 10:00 a.m. in the Ashland Central Fire Station in downtown Ashland. The purpose of the meeting was to discuss the draft project purpose and need, project issues, existing conditions, and upcoming public involvement activities with the local elected officials. Attendees for the meeting are listed below:

Steve Corbitt	Ashland City Manager
Bud Stevens	Boyd County Judge Executive
David Salisbury	Boyd County Commissioner
Kyle Weatherholt	FIVCO ADD
John D. Clarke	Boyd County Deputy Judge Executive
J.R. Reed	Cong. Geoff Davis's Office
Paula Hogsten	Ashland City Commissioner
Cheryl Spriggs	Ashland City Commissioner
Marion Russell	City of Ashland Public Works Director
Keith A. Robinette	Boyd County
Deanna Miller	KYTC D9 Planning
Sandy Caudill Mattox	KYTC D9 Permits
Darrin Eldridge	KYTC D9 Pre-Construction
Karen Mynhier	KYTC D9 Environmental Coordinator
Robyn Ramey	KYTC D9 Right of Way
Jack Litton	KYTC D9 Right of Way
Vickie Griggs	KYTC D9 Traffic
Katrina Bradley	KYTC D9 Executive Director
JR Ham	KYTC Central Office Planning
Brian Aldridge	ENTRAN, PLC
Brian Cash	ENTRAN, PLC

Deanna Miller, KYTC's Project Manager, began the meeting with introductions and then introduced Brian Cash, Project Manager for ENTRAN. Mr. Cash delivered a brief presentation that provided an overview of the project. This project is in the planning study phase with the main objective to identify issues in the study area, establish projects for advancement in the Cabinet's Six Year Highway Plan, and initiate public involvement activities. The various elements of the planning study were explained.

The approximate study area boundary was described. The southern portion of the study area includes I-64 between the US 60 and KY 180 interchanges. To the east, the study area follows KY 180 and then US 60 north to US 23. To the west, the boundary begins following US 60 to Princess, then proceeds northeast to Greenup County line near Bellefonte and follows the county line to US

23. This study does not include any portion of Greenup County. This study is on an approximate 18 month schedule to be completed by December of 2008.

The purpose of the project was explained as follows:

> *The purpose of the I-64 to US 23 Ashland Connector Study is to identify community concerns and evaluate project alternatives to improve access and mobility between I-64 and Ashland. The study is intended to help define the location and purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA).*

It was discussed that historically, this project has been perceived as a single new corridor connecting I-64 and US 23. However, this study is looking at a more comprehensive approach that may result in a number of projects to be pursued. The ultimate recommendations may include a combination of smaller improvement projects and segment(s) of new roadway. The smaller projects could be programmed and constructed in a shorter timeframe while any new construction (which will likely be significantly more costly) would take many years to be studied and implemented. This study has a clean slate and no preconceived notions as to what improvements (if any) should be pursued. A series of graphics that depicted the existing conditions within the study area, including existing traffic and the recent crash history along the study area roads was presented.

Brian Cash and Brian Aldridge then began a facilitated exercise to gather input from the local officials. A series of questions were asked of the group with a discussion period following each. The section below includes a summary of the discussions.

Question 1: What are the most significant transportation issues that exist within the study area?

- US 60 north of KY 168
  - Traffic speeds
  - Truck volumes (hazardous material trucks)
- Maintaining traffic while construction us underway
- Need for turn lanes along US 60
- Town Center Mall traffic
- Need for modal alternatives

Question 2: What are the most significant non-transportation issues that exist within the study area?

- Impacts to low-income communities (Environmental Justice)
- Impacts to communities (particularly relocations) that exhibit a high level of community cohesion
- Potential for diverting traffic away from existing commercial areas

Question 3: Where are the "trouble spots" within the study area?

- US 60
  - Traversable median south of Ashland (turning traffic and signage in median)
  - Intersection of US 60 (13^{th} Street) and KY 168 (Blackburn Avenue)
  - Intersection of US 60 and KY 180

    - Near the State Police Barracks and Borders' stores
- US 23
    - Near the Town Center Mall
    - West of the new Wal-Mart
    - 47th Street Park
- Roberts Drive
    - Near the intersection of Roberts Drive and KY 168 (sight distance).
    - During the recent closure of Roberts Drive due to the bridge replacement there were problems with traffic diversion onto US 60 and other surrounding streets.
- Other
    - There are connectivity issues in Westwood and Fairview. The County has discussed improving the streets in the past

Question 4: If a new corridor is pursued or major reconstruction is to occur, are there locations that should be avoided?

- Several areas have been mined; subsidence near the Paul Coffey Industrial Park
- Landfill area near Coalton
- Low-lying areas that flood are present

Question 5: If a new corridor is pursued, where should it connect?

- To US 60
    - New alignment north of Princess that parallels the CSX railroad line
    - New alignment beginning south of Rose Hill, west of existing US 60
- To US 23
    - Near the bridge west of the Town Center Mall
    - Near the KY 168 intersection

The meeting was concluded by discussing the Public Involvement Plan. There are approximately 20 meetings planned over the course of the study. The public involvement will be led by an Advisory Team consisting of approximately 15 to 20 members representing a cross section of the study areas stakeholders, such as representatives from local government, potentially affected communities, and emergency response agencies. The group was asked to consider who should serve on the Advisory Team and to let Deanna Miller know their recommendations or if they would like to serve on the committee. A few names were mentioned, including Charles Holbrook, local bicycle coordinator, the state police and Boyd County Sheriff, and other emergency management personnel. The meeting adjourned at approximately 11:30 a.m.

Action Items	**Due**
Local officials to assist in selecting Advisory Committee members	ASAP

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item # 9-129.00
Public Information Meeting #1 Minutes
Kyova Mall
April 24, 2008
4:00 – 7:00 pm

A public information meeting for the I-64 to US 23 Connector project was held on Thursday, April 24, 2008 from 4:00 to 7:00 pm at the Kyova Mall in Ashland. The purpose of the meeting was to inform the public of the planning study, discuss various environmental and technical issues concerning the project area, and solicit input from the public. The following individuals from the Kentucky Transportation Cabinet and the consultant staff were in attendance:

Allen Blair	KYTC D9
Darrin Eldridge	KYTC D9
Lisa Grimes	KYTC D9
Robin Ramey	KYTC D9
Jim Wilson	KYTC Central Office
J.R. Hamm	KYTC Central Office
Mike deVilliers	ENTRAN, PLC
Jason Bricker	ENTRAN, PLC
Glenn Hardin	ENTRAN, PLC
Tom Creasey	ENTRAN, PLC
Brian Cash	ENTRAN, PLC

The public information meeting was held in an open house format with display boards. KYTC and consultant staff were available to answer questions and discuss issues. Forty five (45) members of the public attended the meeting. A sign in table was set up where attendees signed in and were given a project brochure, meeting handout, and questionnaire. The following project exhibits were on display:

- Project Study Area
- Traffic and Safety
- Environmental Resources
- Advisory Committee Trouble Spots
- Advisory Committee Improvements (Potential Corridors)
- KYTC Planning process
- Six year plan projects
- Aerial Map of Study Area with pictures

A table was set up with environmental footprint maps for attendees to draw on. Markers were provided and attendees were asked to draw existing trouble spots and potential new corridor locations. Five attendees drew on the maps. Areas identified include:

Trouble Spots

- US 60 and KY 180 intersection
- Lack of turn lanes at various locations along US 60
- US 60 and KY 168 intersection
- I-64 Coalton Interchange
- US 60 in Downtown Ashland
- KY 5 in Bellefonte

Potential Corridors

- New Connector from Princess to US 60 near Meads
- New Connector from US 60 near Meads to US 23 at KY 5
- New Connector from US 60 at Winslow to Town Mall or KY 168

A total of 30 questionnaires were returned from the meeting and the Advisory Team. The results of the questionnaire are summarized below:

1. Do You Live\ Work\ Drive through the study area?
    a. 19 – Live
    b. 13 – Work
    c. 17 – Drive

2. Top Three Trouble Spots
    a. US 60 and KY 168 intersection
    b. 13th Street within City Limits (Rose Hill to US 23)
    c. Various

3. Which type of improvement do you think would be most beneficial?
    a. 10 – New Route
    b. 7 – Existing Road Improvements
    c. 15 – Combination of the Two

4. Which I-64 Interchange do you most frequently use?
    a. 13 – KY 180 (Exit 185)
    b. 18 – US 60 (Exit 181)

5. If a new route is built, would you use it:
    a. 8 – Daily
    b. 7 – 3 to 4 per week
    c. 6 – 1 to 2 per week
    d. 7 – 3 to 4 per month
    e. 0 – 1 time per month
    f. 1 – Rarely or never

6. If a new Connector is built where should it begin on:
   US 60?
    a. 12 – Princess Area
    b. 7 – Near Rose Hill
    c. 5 – Near Arco Park
    d. 1 – Other

US 23?

a. 13 – Near Town Mall
b. 7 – Near Melody Mountain
c. 1 – Near KY 168
d. 7 – Near KY 5
e. 1 – Other

7. Which of the following are the most important when considering a new route?
    a. 73% - Personal property or homes
    b. 50% - Businesses/Commercial Property
    c. 17% - Natural areas of habitats
    d. 23% - Historic or Cultural sites
    e. 17% - Hazardous or monitored sites
    f. 80% - Traffic Relief

8. Please rate the following issues (1 = no problem and 5 = serious problem)
    a. 4.4 – Traffic Congestion
    b. 3.8 – Vehicle Safety
    c. 4.0 – Pedestrian Safety
    d. 3.1 – Lack of Access to Businesses
    e. 4.0 – Lack of Turn Lanes
    f. 3.1 – Too Many Entrances
    g. 3.4 – Lack of Bicycle Facilities
    h. 2.4 – Need for Additional Bus Routes
    i. 3.9 – Need for Improved Truck Route

9. How would you get from Point A **(NEAR TOWN MALL)** on US 23 TO Point B at US 60 near Meads?
    a. 16 – Utilize US 23 to US 60 (Downtown Ashland)
    b. 5 – Utilize KY 168 to US 60
    c. 2 – Utilize Roberts Drive to Rose Hill

10. How would you get from Point A **(BETWEEN KY 168 and KY 5)** on US 23 TO Point B at US 60 near Meads?
    a. 9 – Utilize KY 5 to Summit Area
    b. 6 – Utilize US 23 to US 60 (Downtown Ashland)
    c. 4 – Utilize KY 168 to US 60
    d. 3 – Utilize KY 168\/Roberts Drive to Rose Hill

Several additional comments were also received as part of the questionnaire. These included concerns about speeding on US 60, access to existing businesses, and lack of bicycle and pedestrian facilities in the corridor. In general, the majority of the comments were positive and supported improvements in the study area.

I-64 to US 23
Ashland Connector Study

KENTUCKY TRANSPORTATION CABINET

Public Meeting #1
Kyova Mall Food Court
April 21, 2016
4pm - 7pm

Sign In Sheet

No.	Name	Title/Business/Agency or Organization (if applicable)	Address	Phone (optional)
1	Allen Barnett	Resident	2021 Carter Ave Ashland KY 41101	606-326-2026
2	Chris Wickersham		1200 Commonwealth Ashland KY 41101	325-3233
3	John McGlone	Organization	1400 College Drive Ashland Ky 41101	326-2400
4	Bob Stevens	Boyd County Fiscal Court	2800 Louisa St Catlettsburg KY 41129	928-3157
5	Lee Kaboth	Business	Commonwealth of Kentucky Transportation Cabinet District 9	739-5717
6	James Bradley	Business	Ashland Area Economic Development Corporation	325-6795
7	Chris Hall		1217 Carter Ave Ashland KY	325-8173
8	[illegible]		[illegible]	[illegible]
9	Melanie Bailey-Rife	Ashland Inc.	4612 Bolt Run Rd Ashland KY	325-3014
10	Angela Rife	Ashland Area Economic Development Corporation	2001 Greenup Ave Ashland, KY	325-2011

Page ___ of ___

I-64 to US 23
Ashland Connector Study

KENTUCKY TRANSPORTATION CABINET

Public Meeting #1
Kyova Mall Food Court
April 24, 2008
4pm - 7pm

Sign In Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
1	Robert McCoy	Huntington Pioneers		
2	Peter McCoy	Same		
3	Wally Griffith	City Manager	Ashland	
4	Dan Rogerson	Ashland Alliance	P.O. Box 833	Ashland, Ky 41105
5	Charles Alexander		1661 Winchester Ave Ashland, KY 41101	
6	[illegible]	[illegible]	[illegible]	[illegible]
7	Anna Jo Van Hoose		2411 Oak St	
8	George A. Compton		120 Chesterfield	
9	James E. Hogan		Flatwoods, Ky	
10	[illegible]			

I-64 to US 23
Ashland Connector Study

Public Meeting #1
Kyova Mall Food Court
Ap [illegible]
[illegible]

Sign In Sheet

No.	Name	Title, Address, Agency or Organization (if applicable)	Address	Phone (optional)
21	[illegible]	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	[illegible]	[illegible]
23	[illegible]	[illegible]	[illegible]	[illegible]
24	[illegible]	[illegible]	[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	[illegible]	[illegible]	[illegible]
29				
30				
31				

I-64 to US 23
Ashland Connector Study

KENTUCKY TRANSPORTATION CABINET

Public Meeting #1
Kyova Mall Food Court
Ap 12, 2008
pm

Sign In Sheet

No	Name	Title, Business, Agency or Organization (if applicable)	Address	Phone (optional)
01	[illegible]		[illegible]	[illegible]
02	[illegible]		[illegible]	[illegible]
03	[illegible]	[illegible]	[illegible]	
04	[illegible]	[illegible]	[illegible]	
05	[illegible]		[illegible]	
06	[illegible]		[illegible]	
07	[illegible]		[illegible]	[illegible]
08	[illegible]		[illegible]	
09	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]		[illegible]	

I-64 to US 23
Ashland Connector Study

Public Meeting #1
Kyova Mall Food Court
April 24, 2008
4pm - 7pm

Sign In Sheet

No.	Name	Title Business, Agency, or Organization (if applicable)	Address	Phone (optional)
01	Karen F. Ives			
02	David E. Ives			
03				
04				
05				
06				
07				
08				
09				
10				

Commonwealth

I-64 to US 23 Ashland Connector Study

KENTUCKY TRANSPORTATION CABINET

Public Meeting #1
Kyova Mall Food Court
April 24, 2006
4pm - 6pm

Sign In Sheet

No.	Name	Business, Agency or Organization (if applicable)	Address	Phone (optional)
1	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	[illegible]	[illegible]	[illegible]
5	M Marion Russell	City of Ashland	[illegible] Ashland	327-2007
6				
7				
8				
9				
10				

KYTC

I-64 to US 23 Ashland Connector Study

Public Meeting #1
Kyova Mall Food Court
April 24, 2018
4pm - 7pm

KENTUCKY TRANSPORTATION CABINET

Sign in Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
	Kathryn Rumsey	KYTC		
	Allen Barker	KYTC		
	Joe Brown	KYTC - Planning		
	Eric Wilson	KYTC - Planning	[illegible]	
	Ken Shaver	KYTC - Planning		
	Darren Peterson	KYTC - Planning		

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item # 9-129.00
Public Information Meeting #2 Summary
Park Place Building
November 18, 2008
5:00 – 7:00 pm

A public information meeting for the I-64 to US 23 Connector study was held on Tuesday, November 18, 2008 from 5:00 to 7:00 pm at the Park Place Building, formerly the AEP Building, in Ashland. The purpose of the meeting was to identify community concerns and evaluate study alternatives to improve access and mobility between I-64 and Ashland. The following individuals from the Kentucky Transportation Cabinet and the consultant staff were in attendance:

Allen Blair	KYTC D9
Darrin Eldridge	KYTC D9
Lisa Grimes	KYTC D9
J.R. Hamm	KYTC Central Office
Phil Mauney	KYTC D9
Danny Mineer	KYTC D9
Robin Ramey	KYTC D9
Randi Vint	KYTC D9
Brent Wells	KYTC D9
Brian Aldridge	ENTRAN, PLC
Jason Bricker	ENTRAN, PLC
Glenn Hardin	ENTRAN, PLC
Antonio Pousa	ENTRAN, PLC
Ashley Williams	ENTRAN, PLC

The public information meeting was held in an open house format with display boards. KYTC and consultant staff were available to answer questions and discuss issues. A sign in table was set up where attendees signed in and were given a meeting brochure and questionnaire. Based on the sign-in sheets, approximately 55 members of the public attended the meeting. The following project exhibits were on display:

- KYTC Planning Process
- Project Study Area
- Traffic and Safety
- Environmental Resources
- Ashland Connector Advisory Committee Trouble Spots
- Ashland Connector Advisory Committee Improvements (Potential Corridors)
- Six-Year Plan Projects
- Aerial Map of Study Area with pictures
- Public Meeting #1 Identified Trouble Spots and Proposed Corridors
- Potential Short-Term Improvement Options
- Potential Long-Range Corridor Alternatives
- Alternative Corridors with Aerial Background (2)

Nine (9) questionnaires were returned at the meeting and 18 more were submitted after the meeting. The results of these questionnaires are summarized below:

Short-Term Transportation Improvements
Should the following improvements be considered in the final recommendations?

Intersection Reconstruction:

1. US 60 at KY 180?
   12 – Yes
   10 – No

2. US 60 at KY 168 (Blackburn Ave.)?
   22 – Yes
   3 – No

3. KY 168 (Blackburn Ave.) at Roberts Drive?
   18 – Yes
   5 – No

Median Reconstruction:

4. US 60 between KY 716 and KY 1012?
   11 – Yes
   7 – No

Addition of Turn Lane(s):

5. US 60 at Paul Coffey Boulevard?
   20 – Yes
   4 – No

6. US 60 at KY 716 (Summitt Rd.)?
   20 – Yes
   3 – No

7. US 60 at KY 1012 (Boy Scout Rd.)?
   17 – Yes
   8 – No

8. US 60 at KY 766 (Bob McCullough Dr.)?
   17 – Yes
   7 – No

Signage Improvement:

9. US 60 (13^{th} St.) approaching downtown?
   21 – Yes
   3 – No

Additional short-term improvements that were provided include consideration of right-turn lanes at the US 60/KY 180 intersection and turn lanes for Paul Blazer High School.

Long-Range Corridor Alternatives

Which long-range corridor alternative do you feel should be carried forward for further consideration?

1. Alternative 1: Princess Connector
   - 7 – Yes
   - 14 – No

   If Yes, which option do you prefer?
   - 5 – Alternative 1a
   - 0 – Alternative 1b

2. Alternative 2: Bellefonte Connector
   - 9 – Yes
   - 12 – No

   If Yes, which option do you prefer?
   - 2 – Alternative 2a
   - 7 – Alternative 2b

3. Alternative 3: Westwood Connector
   - 17 – Yes
   - 2 – No

   If Yes, which option(s) do you prefer?
   - 9 – Alternative 3a
   - 4 – Alternative 3b
   - 6 – Alternative 3a-3c
   - 5 – Alternative 3a-3d
   - 2 – Alternative 3a-3e
   - 1 – Alternative 3b-3c
   - 1 – Alternative 3b-3d

4. Alternative 4: Widen US 60 between I-64 and KY 180
   - 9 – Yes
   - 10 – No

5. Alternative 5: Restripe US 60 between Rose Hill and downtown Ashland to a 3-lane section (this alternative will work in combination with Alternative 2 or 3)
   - 14 – Yes
   - 6 – No

One additional long-range corridor was suggested, but it is located outside the study area. It included a new I-64 interchange east of the KY 180 interchange. An additional comment was received as part of the questionnaire. The comment addressed the desire for bicycle and pedestrian paths to be included along the chosen corridor alignment. In general, the majority of the comments were positive and supported improvements in the study area.

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item No. 9-128.00
Public Meeting #2
11/18/08

Sign-In Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
001	Linton Wells	None	[illegible]	[illegible]
002	[illegible]		[illegible]	[illegible]
003	[illegible]		[illegible]	
004	[illegible]		[illegible]	[illegible]
005	[illegible]		[illegible]	[illegible]
006	[illegible]		[illegible]	[illegible]
007	[illegible]		[illegible]	[illegible]
008	[illegible]		[illegible]	[illegible]
009	[illegible]		[illegible]	[illegible]
010	[illegible]	RETIRED	[illegible]	[illegible]

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item No. 08-129.00
Public Meeting #2
10/18/06

Sign-in Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
01	Steven Cole		2604 E. Calvin St. Ashland, KY 41102	(606) 928-3525
02	Ernie Tuttle		5700 Winchester Rd. Ash. KY 41102	
03	Robert Whitlock		500 Winchester Ave Ashland Ky	325-1253
04	Kirk Maher	Sandy Creek Boy Scout	2701 McGraw Summer Ashland KY	922-3779
05	Chris Smith		1001 Stevenson Dr Ashland KY	928-7538
06	Mike Hance	ADI		
07	Kent Johnson		Ashland, Ky	
08	Ernest Sharpe	Ernest Sharpe PA	211 Johnson St Ashland, KY 41101	326-5100
09	Rita Kearney	Retired		
10	LEON MAYNARD	ASHLAND	2501 WINCHESTER AVE ASHLAND	259-369-1314

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item No. 09-129.00
Public Meeting #2
11/13/08

Sign-in Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
021	Paul Ed [illegible]		2416 Front St Ashland KY 41101	324-4870
022	Linda Dixon		2412 15th St Ashland KY	325-4051
023	Jackie Robinson		Ashland	-- --
024	Joe Robinson		Ashland	-
025	Chris Tyree		515 Hagan Ct. Ashland KY 41101	
026	Paula Hayden	Ashland City Commissioner	2238 Tice Ct Ashland Ky	324-8048
027	[illegible]		[illegible]	324-6652
028	[illegible]		[illegible]	324-6632
029				
030				

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item No. 99-128.00
Public Meeting #2
11/19/08

Sign-in Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
101	William Smith		[illegible]	[illegible]
102	Nathan Young	[illegible]		
103	[illegible]			
104	[illegible]	[illegible]	[illegible]	[illegible]
105	[illegible]	[illegible]	[illegible]	
106	[illegible]			
107	[illegible]		[illegible]	[illegible]
108	[illegible]	[illegible]	[illegible]	[illegible]
109	[illegible]		[illegible]	[illegible]
110	[illegible]		[illegible]	[illegible]

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item No. 9-128.00
Public Meeting #2
11/18/08

Sign-in Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
111	Kevin S.	City of Catlettsburg		
112	James D. Simpson	N/A		
113	Linda McCallister			
114	David Miller	Herald Dispatch		
115	Jim Marsh	KDMC		
116	Bill Hopkins	City of Russell		
117				
118	Tony Cox	Commissioner		
119	Judy			
120	A. Judy			

Boyd County Planning Study
I-64 to US 23 Ashland Connector
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Public Meeting #2
11/18/08

Sign-in Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
121	[illegible]			
122	[illegible]			
123	[illegible]			
124	[illegible]			
125	[illegible]	City of Ashland	[illegible]	[illegible]
126	Ronald E. [illegible]	13th Street Baptist Church	3450 - 13th Street	
127	[illegible]	13th St. Free Will Church		
128	Bill Cox		2413 13th St.	324-1179
129	Art Handleser	Allen Funeral Home	1501 Central Ave 3409 13th St	324-4128 324 7475
130	[illegible]			

Boyd County Planning Study
I-64 to US 23 Ashland Connector
Item No. 95-129.00
Public Meeting #2
11/18/02

Sign-In Sheet

No.	Name	Title, Business, Agency, or Organization (if applicable)	Address	Phone (optional)
131	✓			
132	✓			
133	✓			
134	✓			
135	✓			
136	Mark Quinn			
137				
138				
139				
140				

Appendix B – Roadway Inventory

I-64 to US 23 Ashland Connector Scoping Study

Existing Roadway Characteristics

State Route	Begin MP	Begin Intersection	End MP	End Intersection	Segment Length (mi.)	Functional Class	Terrain Type	Posted Speed Limit	Number of Lanes	Lane Width (ft.)	Divided / Undivided Roadway	Median Type	Shoulder Type	Outside Shoulder Width (ft.)	Truck Weight Class	National Truck Network (NTN)	Current ADT
KY 5	0.000	US 60	0.131	Old Princess Road	0.131	Rural Major Collector	Rolling	55	2	11	Undivided	None	Paved w/ Bituminous Material	9	A	No	3,020
	0.131	Old Princess Road	1.455	Straight Creek	1.324	Rural Major Collector	Rolling	55	2	11	Undivided	None	Combination	2	A	No	3,020
	1.455	Straight Creek	1.537	Straight Creek	0.082	Rural Major Collector	Flat	55	2	11	Undivided	None	Combination	2	A	No	3,020
	1.537	Straight Creek	3.763	KY 503	2.226	Rural Major Collector	Rolling	55	2	11	Undivided	None	Combination	2	AA	No	3,020
	3.750	KY 503	4.794	KY 3293	1.044	Rural Major Collector	Rolling	55	2	11	Undivided	None	Combination	2	AA	No	2,940
	4.794	KY 3293	4.861	----	0.067	Rural Major Collector	Rolling	55	2	11	Undivided	None	Combination	2	AA	No	4,340
	4.861	----	6.450	SWUL Ashland	1.589	Rural Major Collector	Rolling	45	2	11	Undivided	None	Combination	2	AA	No	4,340
	6.450	SWUL Ashland	6.862	KY 716 / Metcalf Road	0.412	Urban Minor Arterial	Rolling	45	2	11	Undivided	None	Combination	2	AA	No	4,340
	6.862	KY 716 / Metcalf Road	9.104	KY 1458	2.242	Urban Minor Arterial	Rolling	45	2	11	Undivided	None	Combination	2	AA	No	8,270
	9.104	KY 1458	10.227	Jane Hill Road	1.123	Urban Minor Arterial	Rolling	45	2	11	Undivided	None	Combination	2	AA	No	8,090
	10.227	Jane Hill Road	10.334	Greenup-Boyd Co. Line	0.107	Urban Minor Arterial	Rolling	35	2	11	Undivided	None	Combination	2	AA	No	8,090
	10.334	Greenup-Boyd Co. Line	10.781	US 23	0.447	Urban Minor Arterial	Rolling	35	2	11	Undivided	None	Combination	2	AA	No	7,400
KY 180	0.000	KY 3	0.035	----	0.035	Rural Major Collector	Rolling	55	2	10	Undivided	None	Combination	6	AAA	No	8,110
	0.035	----	0.335	----	0.300	Rural Major Collector	Rolling	55	2	10	Undivided	None	Combination	3	AAA	No	8,110
	0.335	----	0.350	----	0.015	Rural Major Collector	Rolling	55	2	10	Undivided	None	Combination	10	AAA	No	8,110
	0.350	----	0.380	----	0.030	Rural Major Collector	Rolling	55	2	11	Undivided	None	Combination	10	AAA	No	8,110
	0.380	----	0.390	----	0.010	Rural Major Collector	Rolling	55	2	11	Undivided	None	Paved w/ Bituminous Material	7	AAA	No	8,110
	0.390	----	0.515	----	0.125	Rural Major Collector	Rolling	55	2	11	Divided	Flush	Paved w/ Bituminous Material	7	AAA	No	8,110
	0.515	----	0.627	South on-ramp to I-64	0.112	Rural Major Collector	Rolling	55	2	11	Undivided	None	Paved w/ Bituminous Material	7	AAA	No	8,110
	0.627	South on-ramp to I-64	0.637	----	0.010	Rural Major Collector	Rolling	55	2	11	Undivided	None	Paved w/ Bituminous Material	7	AAA	Yes	8,110
	0.637	----	0.800	I-64	0.163	Rural Principal Arterial	Rolling	55	2	11	Undivided	None	Combination	10	AAA	Yes	8,110
	0.800	I-64	1.075	----	0.275	Rural Principal Arterial	Rolling	55	2	11	Undivided	None	Combination	10	AAA	Yes	13,500
	1.075	----	1.365	KY 3291	0.290	Rural Principal Arterial	Rolling	55	4	11	Divided	Depressed	Combination	10	AAA	Yes	13,500
	1.365	KY 3291	1.382	----	0.017	Urban Principal Arterial	Rolling	55	4	11	Divided	Depressed	Combination	10	AAA	Yes	13,500
	1.382	----	2.518	KY 3294 / US 60	1.136	Urban Principal Arterial	Flat	55	4	11	Divided	Depressed	Combination	10	AAA	Yes	13,500
US 60	0.000	Carter-Boyd Co. Line	0.195	I-64	0.195	Rural Major Collector	Flat	55	2	11	Divided	Raised Non-Mountable	Paved w/ Bituminous Material	10	AAA	No	4,650
	0.195	I-64	0.400	----	0.205	Rural Major Collector	Flat	55	2	11	Divided	Raised Non-Mountable	Paved w/ Bituminous Material	10	AAA	No	12,700
	0.400	----	0.465	----	0.065	Rural Major Collector	Flat	55	2	11	Undivided	None	Paved w/ Bituminous Material	10	AAA	No	12,700
	0.465	----	2.110	Williams Creek Bridge	1.645	Rural Major Collector	Flat	55	2	11	Undivided	None	Combination	10	AAA	No	12,700
	2.110	Williams Creek Bridge	2.115	----	0.005	Rural Major Collector	Rolling	55	2	11	Undivided	None	Combination	10	AAA	No	12,700
	2.115	----	2.339	KY 5	0.224	Rural Major Collector	Rolling	55	2	12	Undivided	None	Paved w/ Bituminous Material	10	AAA	No	12,700
	2.339	KY 5	2.440	Virginia Boulevard	0.101	Rural Major Collector	Rolling	55	2	12	Undivided	None	Paved w/ Bituminous Material	10	AAA	No	14,000
	2.440	Virginia Boulevard	3.796	----	1.356	Rural Major Collector	Rolling	55	2	12	Undivided	None	Combination	12	AAA	No	14,000

State Route	Begin MP	Begin Intersection	End MP	End Intersection	Segment Length (mi.)	Functional Class	Terrain Type	Posted Speed Limit	Number of Lanes	Lane Width (ft.)	Divided / Undivided Roadway	Median Type	Shoulder Type	Outside Shoulder Width (ft.)	Truck Weight Class	National Truck Network (NTN)	Current ADT
US 60	3.796	----	4.023	KY 180	0.227	Urban Minor Arterial	Rolling	55	2	12	Undivided	None	Combination	12	AAA	No	14,000
	4.023	KY 180	6.000	----	1.977	Urban Principal Arterial	Rolling	55	4	12	Divided	Depressed	Paved w/ Bituminous Material	10	AAA	Yes	27,900
	6.000	----	6.555	KY 538	0.555	Urban Principal Arterial	Rolling	55	4	12	Divided	Depressed	Paved w/ Bituminous Material	10	AAA	Yes	27,800
	6.555	KY 538	7.020	----	0.465	Urban Principal Arterial	Rolling	55	4	12	Divided	Depressed	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	7.020	----	7.200	----	0.180	Urban Principal Arterial	Rolling	55	4	12	Divided	Flush	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	7.200	----	7.620	----	0.420	Urban Principal Arterial	Rolling	55	4	12	Divided	Depressed	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	7.620	----	7.665	Misty Lane	0.045	Urban Principal Arterial	Rolling	55	4	12	Divided	Flush	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	7.665	Misty Lane	8.070	----	0.405	Urban Principal Arterial	Rolling	45	4	12	Divided	Flush	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	8.070	----	8.220	----	0.150	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	8.220	----	8.617	KY 1012	0.397	Urban Principal Arterial	Rolling	55	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	28,700
	8.617	KY 1012	9.655	----	1.038	Urban Principal Arterial	Rolling	55	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	21,900
	9.655	----	9.760	----	0.105	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	21,900
	9.760	----	9.800	----	0.040	Urban Principal Arterial	Rolling	35	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	21,900
	9.800	----	9.880	----	0.080	Urban Principal Arterial	Rolling	35	4	12	Undivided	None	Paved w/ Bituminous Material	10	AAA	Yes	21,900
	9.880	----	10.818	KY 168	0.938	Urban Principal Arterial	Rolling	35	2	10	Undivided	None	Curbed	0	AAA	Yes	21,900
	10.818	KY 168	11.550	Oakview Road / Pollard Road	0.732	Urban Principal Arterial	Rolling	35	2	10	Undivided	None	Curbed	0	AAA	Yes	22,600
	11.550	Oakview Road / Pollard Road	11.739	US 60	0.189	Urban Principal Arterial	Rolling	35	2	10	Divided	Raised Mountable	Curbed	0	AAA	Yes	22,600
	11.739	US 60	12.100	Courtyard	0.361	Urban Principal Arterial	Rolling	35	3	11	Couplet	None	Curbed	0	AAA	Yes	14,200
	12.100	Courtyard	12.198	----	0.098	Urban Principal Arterial	Rolling	35	4	11	Couplet	None	Curbed	0	AAA	Yes	14,200
	12.198	----	12.217	US 23S / US 23X	0.019	Urban Principal Arterial	Flat	35	4	11	Couplet	None	Curbed	0	AAA	Yes	14,200
	12.217	US 23S / US 23X	12.285	US 23S / US 60	0.068	Urban Principal Arterial	Flat	35	4	10	Couplet	Flush	Curbed	0	AAA	Yes	20,200
	12.285	US 23S / US 60	12.360	US 23X	0.075	Urban Principal Arterial	Flat	35	4	10	Divided	Flush	Curbed	0	AAA	Yes	24,700
	12.360	US 23X	12.409	US 23	0.049	Urban Principal Arterial	Flat	35	2	15	Couplet	None	Curbed	0	AAA	Yes	3,660
	12.409	US 23	12.433	Railroad Street	0.024	Urban Minor Arterial	Rolling	35	2	12	Undivided	None	Curbed	2	AAA	No	10,200
US 23X	0.000	US 23	0.600	25th Street	0.600	Urban Principal Arterial	Flat	35	4	10	Undivided	None	Curbed	0	AAA	No	10,900
	0.600	25th Street	1.135	----	0.535	Urban Principal Arterial	Flat	35	4	10	Divided	Flush	Curbed	0	AAA	No	10,900
	1.135	----	1.250	17th Street	0.115	Urban Principal Arterial	Flat	25	4	10	Divided	Flush	Curbed	0	AAA	No	10,900
	1.250	17th Street	1.551	US 23S / US 60	0.301	Urban Principal Arterial	Flat	25	4	10	Divided	Flush	Curbed	0	AAA	No	14,100
	1.551	US 23S / US 60	1.620	US 60 / 10th Street	0.069	Urban Principal Arterial	Rolling	25	4	10	Divided	Flush	Curbed	0	AAA	Yes	24,700
	1.620	US 60 / 10th Street	1.721	----	0.101	Urban Principal Arterial	Rolling	25	4	10	Divided	Flush	Curbed	0	AAA	No	24,700
	1.721	----	1.796	US 23 (Winchester Avenue)	0.075	Urban Principal Arterial	Flat	25	4	10	Divided	Flush	Curbed	0	AAA	No	24,700
US 23	10.445	KY 3 (Catlettsburg Road)	10.575	I-64 Interchange	0.130	Rural Principal Arterial	Rolling	55	4	12	Divided	Depressed	Paved w/ Bituminous Material	10	AAA	Yes	15,500
	10.575	I-64 Interchange	10.808	----	0.233	Rural Principal Arterial	Rolling	55	4	12	Divided	Depressed	Paved w/ Bituminous Material	10	AAA	Yes	18,200
	10.808	----	11.007	----	0.199	Urban Principal Arterial	Rolling	55	4	12	Divided	Depressed	Stablized	10	AAA	Yes	18,200
	11.007	----	11.337	----	0.330	Urban Principal Arterial	Rolling	55	4	12	Divided	Raised Non-Mountable	Stablized	10	AAA	Yes	18,200
	11.337	----	11.547	----	0.210	Urban Principal Arterial	Rolling	55	4	12	Divided	Depressed	Stablized	10	AAA	Yes	18,200

State Route	Begin MP	Begin Intersection	End MP	End Intersection	Segment Length (mi.)	Functional Class	Terrain Type	Posted Speed Limit	Number of Lanes	Lane Width (ft.)	Divided / Undivided Roadway	Median Type	Shoulder Type	Outside Shoulder Width (ft.)	Truck Weight Class	National Truck Network (NTN)	Current ADT
US 23	11.547	----	11.747	----	0.200	Urban Principal Arterial	Rolling	55	4	12	Divided	Raised Non-Mountable	Stablized	10	AAA	Yes	18,200
	11.747	----	11.922	----	0.175	Urban Principal Arterial	Rolling	55	4	12	Undivided	None	Stablized	10	AAA	Yes	18,200
	11.922	----	12.327	KY 3294	0.405	Urban Principal Arterial	Rolling	35	4	12	Undivided	None	Combination	10	AAA	Yes	18,200
	12.327	KY 3294	12.407	US 60 / 35th Street	0.080	Urban Principal Arterial	Rolling	35	4	12	Undivided	None	Curbed	6	AAA	Yes	22,100
	12.407	US 60 / 35th Street	12.492	KY 1174 / 34th Street	0.085	Urban Principal Arterial	Rolling	35	4	12	Undivided	None	Curbed	6	AAA	Yes	22,100
	12.492	KY 1174 / 34th Street	12.547	----	0.055	Urban Principal Arterial	Mountainous	35	4	12	Undivided	None	Curbed	2	AAA	Yes	20,600
	12.547	----	13.587	KY 168	1.040	Urban Principal Arterial	Mountainous	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	20,600
	13.587	KY 168	13.712	----	0.125	Urban Principal Arterial	Mountainous	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	22,700
	13.712	----	14.907	----	1.195	Urban Principal Arterial	Rolling	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	22,700
	14.907	----	16.063	39th Street	1.156	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	23,400
	16.063	39th Street	16.547	----	0.484	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	23,400
	16.547	----	16.667	----	0.120	Urban Principal Arterial	Rolling	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	23,400
	16.667	----	16.953	US 23X (Winchester Avenue)	0.286	Urban Principal Arterial	Flat	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	23,400
	16.953	US 23X (Winchester Avenue)	18.037	----	1.084	Urban Principal Arterial	Flat	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	18,100
	18.037	----	18.577	----	0.540	Urban Principal Arterial	Flat	35	4	12	Undivided	None	Curbed	2	AAA	Yes	18,100
	18.577	----	18.642	12th Street Bridge Overpass	0.065	Urban Principal Arterial	Flat	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	18,100
	18.642	12th Street Bridge Overpass	18.947	----	0.305	Urban Principal Arterial	Flat	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	16,300
	18.947	----	18.997	US 23X (Winchester Avenue)	0.050	Urban Principal Arterial	Rolling	35	4	12	Divided	Raised Mountable	Curbed	2	AAA	Yes	16,300
	18.997	US 23X (Winchester Avenue)	19.157	Town Center Drive	0.160	Urban Principal Arterial	Rolling	35	4	12	Divided	Raised Non-Mountable	Curbed	2	AAA	Yes	35,600
	19.157	Town Center Drive	19.507	----	0.350	Urban Principal Arterial	Mountainous	45	4	12	Divided	Concrete Barrier	Curbed	2	AAA	Yes	32,800
	19.507	----	20.217	----	0.710	Urban Principal Arterial	Mountainous	45	4	12	Divided	Concrete Barrier	Paved w/ Bituminous Material	10	AAA	Yes	32,800
	20.217	----	20.345	Russell Road / KY 168	0.128	Urban Principal Arterial	Mountainous	45	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	32,800
	20.345	Russell Road / KY 168	20.419	----	0.074	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Mountable	Paved w/ Bituminous Material	10	AAA	Yes	34,400
	20.419	----	20.507	----	0.088	Urban Principal Arterial	Rolling	45	4	12	Undivided	None	Curbed	2	AAA	Yes	34,400
	20.507	----	20.742	KY 5	0.235	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Non-Mountable	Curbed	2	AAA	Yes	34,400
	20.742	KY 5	20.797	----	0.055	Urban Principal Arterial	Rolling	45	4	12	Divided	Raised Non-Mountable	Curbed	2	AAA	Yes	34,000
	20.797	----	20.938	Boyd-Greenup Co. Line	0.141	Urban Principal Arterial	Mountainous	45	4	12	Divided	Raised Non-Mountable	Curbed	0	AAA	Yes	34,000

Source: Kentucky Transportation Cabinet's Highway Information System (HIS) Database, July 2007.

Appendix C – Environmental Overview

ENVIRONMENTAL OVERVIEW

Interstate 64 to US 23 Connector
Boyd County, Kentucky
Item No. 9-129.00

Submitted to:
Kentucky Transportation Cabinet

Submitted:
June 2008

Submitted by:
ENTRAN, PLC

TABLE OF CONTENTS

LIST OF ATTACHMENTS

ATTACHMENT A
Project Location and Environmental Footprint Mapping

ATTACHMENT B
Agency Information Responses

ATTACHMENT C
Photograph Index Map and Study Area Representative Photographs

I. PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

The proposed I-64 to US 23 Connector project is located in Boyd County, Kentucky near the City of Ashland. The study area is approximately 10 miles long by 3 miles wide and encompasses about 24 square miles extending from I-64 between the US 60 and KY 180 interchanges, north to US 23 between KY 5 and US 60. A scoping study is being prepared for the project to identify study area conditions, community and environmental resources, project purpose and need, and to evaluate alternatives to improve access and mobility between I-64 and the City of Ashland. This *Environmental Overview* is a component of the scoping study that identifies environmental resources and issues of concern and establishes an environmental footprint for consideration in the development of alternatives and avoidance and minimization of impacts.

Information for this overview was obtained from literature review, resource agency coordination, and an on-site reconnaissance survey of the study area conducted in September 2007. Information obtained from secondary sources and the on-site survey was Geographical Information System (GIS)-mapped, and is displayed on aerial photographs and topographic base maps in Attachments A2-A7.

Resources and issues of concern identified in the area include those related to both the natural and human environment. Natural environment resources are presented in Section II, starting on Page 2, and include streams, floodplains, wetlands, ponds, water supplies, threatened, endangered and special concern species and habitat, woodland and terrestrial areas, and parks. Human environment resources are presented in Section III, starting on Page 9, and include social and economic resources, historic and archaeological resources, hazardous materials concerns, agriculture, mining, environmental justice, and additional concerns.

A. Land Cover

Land cover in the project area was determined through a combination of review of aerial photographs and on-site survey. General land cover in the project area includes a mix of residential, commercial, industrial, undeveloped woodland, previously disturbed areas, and agricultural land (see Attachments A2 and A5). The northern two-thirds of the study area includes a portion of the City of Ashland, as well as the suburban/rural communities of Millseat, Westwood, West Fairview, Ironville, Winslow, Summit, Rockdale and Meads. Land use is predominantly residential, with industrial and commercial uses concentrated along chief transportation corridors, undeveloped woodlands occurring along steep uplands, and scattered agricultural areas. Land cover in the southern third of the study area, by comparison, largely consists of undeveloped woodland along steep uplands, and disturbed areas from abandoned mines and landfills. Scattered small farming operations and commercial/industrial areas associated with the communities of Coalton, Princess and Cannonsburg occur along I-64, US 60 and KY 180.

B. Physiography and Topography

The project is located in the Cumberland Plateau and Mountains/Eastern Kentucky Coalfields physiographic region, and the Monongahela Transition Zone and Ohio-Kentucky Carboniferous Plateau subareas of the Western Allegheny Plateau Ecoregion. The Western Allegheny Plateau Ecoregion is

described as highly dissected, with steep-walled, narrow, sinuous valleys (McDowell, 2001 and Woods et al, 2002). Areas of steep relief occur in the southern, central and western portions of the study area, and nearly level to gently sloping relief occurs in the eastern and northern portions of the study area. Review of the United States Geologic Survey (USGS) Argillite, Ashland, Boltsfork and Rush 7.5' topographic quadrangles indicates that elevations in the study area range from about 520 feet above mean sea level in the northeast near the Ohio River, to approximately 960 feet above mean sea level in the southern portion of the study area near I-64.

C. Geology and Soils

In general, bedrock in the project area belongs to the Breathitt Formation and is composed of inter-bedded shale and siltstone dating to the Pennsylvanian and Mississippian periods. Ridgetops in the southern portion of the study area are overlain with upper Pennsylvanian materials of the Conemaugh Formation which are composed of clayey shales and sandstones, and low lying valleys along water courses contain alluvial deposits (Hail et. al., 1979).

Soils in the project study area occur either in the Latham-Shelocta soil association, the Cuba-Morehead-Whitley Complex soil association or the Allegheny-Riney-Monongahela soil association. Cuba and Morehead soils found in the East Fork Little Sandy River valley are known to have hydric soil inclusions (Hail et. al., 1979).

D. Drainage

The project study area occurs in the East Fork Little Sandy River watershed of the Little Sandy River basin (Hydrologic Unit Codes 05090104-140 and 05090104, respectively) and the Ohio River Near Greenup watershed of the Tygarts River basin (Hydrologic Unit Codes 05090103-040 and 05090103, respectively). The East Fork Little Sandy River drains the central and south portions of the study area, generally south of KY 716, and the Ohio River Near Greenup watershed drains the north portion of the study area, generally north of KY 716.

II. NATURAL ENVIRONMENT

A. Surface Streams

Information from the Kentucky Environmental and Public Protection Cabinet Division of Water (KEPPC-DOW) indicates that no Special Use Waters (cold water aquatic habitat, exceptional waters, reference reach waters, outstanding state resource waters, outstanding national resource waters, state wild rivers or federal wild and scenic rivers) occur in the project study area (KEPPC-KDOW, 2007). No high quality stream corridors were observed in the study area during the on-site survey conducted in September 2007.

Based on review of USGS 7.5' topographic mapping, a total of 55 USGS blue-line streams occur in the project study area (see Attachments A3 and A6). The most prominent feature is the East Fork Little Sandy River, which flows east to west through the project area, and because of its proximity in relation to the study area, will likely be crossed by one or more of the alternatives developed for this project.

Additionally, numerous ephemeral non-USGS streams were identified in the study area during the September 2007 field reconnaissance. A comprehensive stream survey and impact assessment, including evaluation of avoidance and minimization measures, will need to be conducted as this project further develops. Unavoidable impacts to the Little Sandy River and other USGS and/or ephemeral features will require coordination with the U.S. Army Corps of Engineers and the Kentucky Division of Water during final design to determine Section 404/401 permitting and mitigation requirements. Additional watershed information is provided below.

1. East Fork Little Sandy River Watershed

Thirty-seven USGS blueline streams in the East Fork Little Sandy River watershed (14 perennial and 23 intermittent) occur within the project study area, including the following named features:

- Big Run
- Shope Creek
- Williams Creek
- Big Garner Creek
- Marsh Run
- Music Branch
- Little Garner Creek
- Ellington Run
- East Fork Little Sandy River

Two of these streams have impaired Use designations based on review of KEPPC-DOW 305(b) and 303(d) water quality reports. The East Fork Little Sandy River is listed as "not supporting" its Primary Contact Recreation Use designation due to impairment from pathogens from loss of riparian habitat. This feature is also designated as only "partially supporting" its Aquatic Life Use designation due to impairment from sedimentation and siltation from loss of riparian habitat and surface mining. The East Fork Little Sandy River has been scheduled for Total Maximum Daily Load (TMDL) development for pollutant pathogens (KEPPC-KDOW, 2006).

In addition, Williams Creek is designated as only "partially supporting" its Aquatic Life Use designation due to impairment from unknown pollutants from streambank modification and destabilization (KEPPC-KDOW, 2006).

2. Ohio River Near Greenup Watershed

Eighteen USGS blue-line streams in the Ohio River Near Greenup watershed (14 perennial and 4 intermittent) occur within the project study area, including the following named features:

- Little Hood Creek
- Muddy Branch
- Rockhouse Fork
- Daniels Fork
- Hood Creek

One of these features, Hood Creek, is listed in the KEPPC-DOW 305(b) and 303(d) water quality reports as "Fully Supporting" its Primary Contact Recreation and Aquatic Life Use designations (KEPPC-KDOW, 2004). Hood Creek has been scheduled for TMDL development for pollutant pathogens (KEPPC-KDOW, 2006).

B. Floodplains

Based on review of Federal Emergency Management Agency (FEMA) 100-Year floodplain information from the Kentucky Office of Technology Division of Geographic Information (KOT-DGI, 2007), 100-Year floodplains occur along the following streams within the project study area (see Attachment A3 and A6):

- East Fork Little Sandy River
- Hood Creek
- Williams Creek
- Daniels Fork
- Little Hood Creek
- Shope Creek
- Marsh Run
- Music Branch
- Big Run
- Ellington Run
- Several unnamed USGS and other streams

Avoidance and minimization of floodplain encroachment will need to be evaluated as this project further develops for compliance with Executive Order 11988 and USDOT floodplain policies. KDOW coordination and review of the project by the local floodplain coordinator will need to be conducted to determine permit and mitigation requirements if floodplain encroachment does occur.

C. Wetlands

Nineteen National Wetland Inventory (NWI) mapped wetlands occur in the study area, including ten palustrine emergent, seven palustrine forested, and two palustrine scrub-shrub features (KOT-DGI, 2007)(see Attachments A3 and A6). Most of the NWI mapped wetlands occur along the East Fork Little Sandy River and other 100-year floodplain areas. Many of the NWI mapped wetlands were confirmed present during the 2007 on-site survey conducted for this project, however not all features could be field-checked due to limitations on private property access. In addition, a number of non-NWI features were observed during the 2007 field survey. Most of these non-NWI wetlands were low-quality emergent features associated with roadside ditches or drainage swales. Several moderate quality emergent/scrub-shrub features were also observed, primarily scattered along the East Fork Little Sandy River floodplain. No extensive, high quality wetlands were noted to occur in the study area from secondary mapping or field observation.

Based on review of soils information from the United States Department of Agriculture National Resource Conservation Service (USDA-NRCS, 2007), mapped hydric soils in Boyd County are limited

in extent, with six series listed as being hydric or containing hydric inclusions. Mapped hyric soils in the project study area mostly occur along the East Fork Little Sandy River floodplain near the confluences of Marsh Run and Shope Creek.

A comprehensive wetland survey and impact assessment, including evaluation of avoidance and minimization measures, will need to be conducted as this project further develops. Unavoidable wetland impacts will require coordination with the U.S. Army Corps of Engineers and the Kentucky Division of Water during final design to determine Section 404/401 permitting and mitigation requirements.

D. Ponds

Review of 7.5' USGS topographic quadrangles, project aerial photographs and NWI mapping indicated the occurrence of approximately 80 ponds in the project study area. Twenty five of these ponds were visited during the September 2007 on-site survey and were generally noted to be of low quality and of the following types: small farm ponds, residential recreational and retention ponds, former fish-hatchery ponds, fishing ponds, and landscaped retention ponds at corporate facilities.

E. Groundwater Resources and Public Water Supplies

Groundwater - Review of groundwater, spring, and water well information from the Kentucky Geologic Survey (KGS) and Kentucky Division of Water (KDOW) indicated that no wellhead protection areas, springs or karst areas occur in the project study area limits, and that wells in the general project vicinity draw water from the non-isolated Pennsylvanian aquifers or alluvium from river valleys (KGS, 2007, and Carey and Stickney, 2004). Information from KGS also indicated that approximately 157 water wells occur in the project study area, of which:

- 118 are monitoring wells,
- 27 are domestic water wells
- 7 are irrigation water wells
- 2 are livestock water wells
- 1 is an industrial water well
- 1 is not used
- 1 is of an unknown type

No springs were observed during the September 2007 on-site field survey. Water wells and groundwater resources in the project vicinity are displayed on Attachments A3 and A6 (NOTE: multiple wells may be represented by a single symbol). Water wells encountered within the construction limits of a selected corridor (as this project progresses) will need to be sealed per KYTC standard specifications.

Public Water Supplies - Based on information available from the Kentucky Geologic Survey (KGS) and Kentucky Division of Water (KDOW), no public water supplies were identified within the project study area limits. One public water supply well is located outside, but adjacent to the study area, northwest of the US 60/KY 5 intersection (see Attachment A3). Other public water supplies (surface water sources) occur outside the project study area, along the Ohio River east of Ashland.

The north half of the project study area, generally north of the community of Summit, is located within a KDOW Source Water Assessment and Protection Area (SWAPP).

F. Threatened, Endangered and Special Concern Species

Information concerning the occurrence of federal and state threatened, endangered and special concern species and unique habitats in the project vicinity obtained from the United States Fish and Wildlife Service (USFWS), the Kentucky State Nature Preserves Commission (KSNPC) and the Kentucky Department of Fish and Wildlife Resources (KDFWR) is summarized below. No unique habitats were identified by resource agencies, however, a total of 20 listed fish, mammals, birds and freshwater mussels were reported to occur or have suitable habitat in the general project vicinity. Five of these listed species, indicated below with an asterisk, have reported occurrences of individuals from within the project study area boundaries, and include two federal species of management concern (salamander mussel and trout perch) and three state special concern species (little spectaclecase mussel, yellow troutlily and gray treefrog). No known occurrences of any federal listed threatened or endangered species were reported from within the study area boundaries. Due to the sensitive nature of the data concerning these species, location information is not provided on the project mapping in Attachments A3 or A6. Copies of information from USFWS, KSNPC and KDFWR are provided in Attachment B.

- **peregrine falcon** (*Falco peregrinus*), federal species of management concern and state endangered species known from along the Ohio River. Found in undisturbed areas with a wide view, near water, and close to plentiful prey, and in man-made areas that include tall buildings, bridges, rock quarries, and raised platforms.

- **gray bat** (*Myotis grisescens*), federal endangered and state threatened species known from along the Ohio River. Found in upland and bottomland forests and riparian corridors in summer, and in sandstone and limestone caves, rockhouses, clifflines, auger holes, and abandoned mines in winter.

- **salamander mussel*** (*Simpsonaias ambigua*), federal species of management concern and state threatened species known from the East Fork Little Sandy River in Boyd County. Found buried in substrate such as soft mud or gravel, and under flat stones in shallow water in small streams with swift current.

- **trout perch*** (*Percopsis omiscomaycus*), federal species of management concern and state special concern species known from the Little Sandy River in Greenup and Carter Counties, and the East Fork Little Sandy River in Boyd County. Found in clear, small to moderate-size streams in pools or raceways over clean sand or mixed sand and gravel bottoms.

- **fanshell mussel** (*Cyprogenia stegaria*), federal and state endangered species with historic range in Boyd County. Found in deep water in sand or gravel in medium to large rivers with moderate current.

- **Indiana bat** (*Myotis sodalis*), federal and state endangered species with historic range in Boyd County. In summer, found under exfoliating bark and in cavities of dead and live trees in upland and riparian forests, and wooded fencerows. In winter, found hibernating in caves and old mine portals.

- **pink mucket mussel** (*Lampsilis abrupta*), federal and state endangered species with historic range in Boyd County. Found in mud and sand in shallow riffles and shoals swept free of silt in large rivers and tributaries.

- **ring pink mussel** (*Obovaria retusa*), federal and state endangered species with historic range in Boyd County. Found in gravel bars in shallow waters of large rivers.

- **orangefoot pimpleback mussel** (*Plethobasus cooperianus*), federal and state endangered species with historic range in Boyd County. Found in clean, fast-flowing water in silt-free rubble, gravel or sand, in medium to large rivers with steady currents.

- **sheepnose mussel** (*Plethobasus cyphyus*), federal candidate and state endangered species with historic range in Boyd County. Found in mud, sand or gravel in water 3.3-6.6 feet deep in large rivers with rapid current.

- **clubshell mussel** (*Pleurobema clava*), federal and state endangered species with historic range in Boyd County. Found in sand and fine gravel in riffles and runs in shallow water of small to medium-sized rivers and streams.

- **rough pigtoe mussel** (Pleurobema plenum), federal and state endangered species with historic range in Boyd County. Found in sand or gravel with feeding siphon exposed in a wide variety of small to large streams.

- **yellow-crowned night heron** (*Nyctanassa violacea*), state threatened species known from along the Ohio River. Found in marshes, swamps, lakes, lagoons, and mangrove areas.

- **black-crowned night heron** (*Nycticorax nycticorax*), state threatened species known from along the Ohio River. Found in marshes, swamps, wooded streams, mangroves, along shores of lakes, ponds, and lagoons in salt water, brackish, and freshwater areas.

- **osprey** (*Pandion haliaetus*), state threatened species known from along the Ohio River. Found in forested areas near lakes, rivers, coastal waters and swamps with nest sites in snags and dead-topped pines along lake and stream shorelines, in recent clear cut areas near water, in swamp conifer stands, and in marshes and bogs.

- **little spectaclecase mussel*** (*Villosa lienosa*), state special concern species known from the East Fork Little Sandy River in Boyd County. Found in shallow water on sand, mud and detritus, in small to medium-sized rivers.

- **American brook lamprey** (*Lampetra appendix*), state threatened species known from the East Fork Little Sandy River in Boyd County. Found in sand and sediment of pools and backwaters in raceways and riffles of permanently flowing streams and rivers.

- **yellow troutlily*** (*Erythronium rostratum*), state special concern species known from the Coalton area in Boyd County. Found in moderately moist areas in forested ravines.

- **Virginia mallow** (*Sida hermaphrodita*), state special concern species known from along the Ohio River in the City of Ashland in Boyd County. Found in loose, sandy or rocky soil along riverbanks and floodplains.

- **gray treefrog*** (*Hyla versicolor*), state special concern species known form the East Fork Little Sandy River and Williams Creek in Boyd County. Found in Permanent and temporary ponds in semi-open habitats.

During the September 2007 on-site survey of the project area, potential habitat for the federal endangered Gray and Indiana bats (rock outcrops, clifflines, and trees with exfoliating bark, split trunks, and cavities; see representative photographs in Attachment C), as well as potential habitat for several mussel and fish species, listed above, was observed in the project study area. Due to the occurrence of this potential habitat, more thorough survey for these species should be conducted as the project further develops.

In their letter dated January 3, 2008 (see Attachment B), KSNPC advised against disturbance of bottomland forests and riparian corridors, particularly near caves, to avoid impacts to gray bat. To prevent impacts to aquatic species and aquatic habitats, KSNPC also advised that a written erosion control plan be developed that includes stringent erosion control methods that provide several stages of control, and that all erosion control measures be monitored periodically to ensure proper functioning.

G. Woodland Habitats

Review of information from the USFWS and KSNPC indicated that no state or federal managed areas, parks, forests or preserves occur in the project study area.

Large portions of the study area are covered by forested land (see Attachments A2 and A5). These forested areas cover steep valleys and ridgetops and are comprised of predominantly oak, hickory, pine and sycamore. Reclaimed strip mine areas also occur in the study area and are covered in primarily herbaceous or young secondary growth woodland.

H. Public Parks – Section 4(f) and Section 6(f) Facilities

Through a combination of review of project aerial photographs, USGS maps, information from the National Park Service and on-site field survey, a total of eight public parks were identified in the project study area (see Attachments A3 and A6), including:

- *Armco Park,* US 60 and KY 716, Summit
- *John C. May Amphitheater,* US 60 and KY 716, Summit (adjacent to Armco Park)
- *Fairview Schools Athletic Fields,* Wheatley Road (KY 168), Westwood
- *Big Sandy Complex National Little League,* 263 W. Central Avenue, Ashland
- *Dawson Pool Park,* Central Avenue (between 6th and 7th Streets), Ashland
- *Community Park,* KY 168, Ashland
- *Fraley Complex Ball Park,* 1226 Summit Road, Summit
- *Dog Park,* 1226 Summit Road, Summit (adjacent to Fraley Ball Park)

If any of these facilities are affected by the proposed project, then evaluation and coordination with the Federal Highway Administration will be necessary under Section 4(f) of the Department of Transportation Act of 1966.

Two of the above-listed facilities, *Armco Park* and *Dawson Pool Park*, were additionally identified as receiving grant assistance from the Land and Water Conservation Fund (LWCF), and, if impacted, will require evaluation and approval by the National Park Service under Section 6(f) of the LWCF Act.

I. Geotechnical Issues

A geotechnical overview investigation was conducted by American Engineers, Incorporated in November and December of 2007. This study made the following findings and recommendations for the project:

- The study area was surface and underground mined extensively for coal.
- Mined areas may be encountered near Princess and at several locations west of US 60.
- Available mining records should be reviewed to determine potential settlement areas.
- Terrace deposits should be avoided due to their varied nature and potential for settlement.
- Bedded materials near the surface in the study area are susceptible to landslides. As such, measures to increase safety should include flatter slope design, promotion of surface/ subsurface drainage, re-vegetation, and construction of retaining walls.

III. HUMAN ENVIRONMENT

A. Social and Economic Resources

Through a combination of review of information from the Environmental Systems Research Institute (ESRI) (ESRI, 2005) and on-site field survey, the following social and economic resources were identified in the project study area: schools, institutions, learning centers, churches, cemeteries, fire departments, shopping centers, golf courses, an industrial park, and a federal correctional institution. Social and economic resources in the project study area are displayed on Attachments A4 and A7 and further described below.

Schools, Institutions and Learning Centers - A total of 18 schools, institutions and learning centers were identified in the project study area, including:

- *Holy Family Elementary,* 932 Winchester Avenue
- *Ashland Community Technical College,* 4818 Roberts Drive
- *Ashland Community Technical College;* 1400 College Drive
- *Heritage Temple Christian Academy,* 13109 Copley Road
- *Rose Hill Christian School,* 1001 Winslow Road
- *Hatcher Elementary,* 1820 Hickman St
- *Boyd County Early Childhood Learning Center North,* 1104B Bob McCullough Dr
- *Boyd County Early Childhood Learning Center South,* 12862 SR 180
- *Boyd County High School,* 12307 Midland Trail Rd
- *Boyd County Middle School,* 1226 Summit Road
- *Boyd County Regional Juvenile Detention Center,* 2420 Roberts Drive
- *Summit Elementary School,* 830 SR 716
- *Fairview Elementary School,* 258 McKnight St WW
- *Fairview High School,* 2123 Main St W
- *Fairview Middle School,* 2123 Main St W
- *Shea's Play Learning Center Pre-School,* 1340 Shopes Creek Road
- *Happy Hearts Childcare, 1025 SR 716*
- *Southland Bible Institute,* 238 West Southland Drive

Churches - A total of 38 churches were identified in the project study area, including:

- *church (no visible name)*, Twin Ridge Court
- *El Hasa Temple,* 13450 State Route 180
- *Heritage Temple Free Will Baptist,* 13136 State Route 180
- *Princess Church of Christ,* US 60 south of SR 5
- *Princess Chapel,* US 60 south of SR 5
- *Crossroads Baptist Church,* 12649 US 60
- *Meade Station Church of God,* 1315 Marsh Hill Drive
- *Gospel Light Baptist Church,* 1115 Trinity Lane
- *Faith Independent Baptist Church,* 6900 US 60
- *Potter's House of Worship,* 6417 US 60
- *Summit Missionary Baptist Church,* Highway 716
- *Coalton First Baptist Church,* West Midland Trail Road
- *Gehringer Church,* SR 5 south of KY 1458
- *Hood Creek Regular Baptist Church,* SR 5 north of KY 1458
- *Little Mary Church,* SR 5 north of KY 766
- *Rose Hill Baptist Church,* 1001 Winslow Road
- *New Buckley Road Free Will Baptist Church,* 1200 West New Buckley Road
- *Summit Church of the Nazarene,* 310 Summit Road
- *Rose Road Chapel Baptist,* 1014 West Rose Road
- *Hoods Creek Free Will Baptist,* 4018 SR 5
- *The Recovery Room Church,* Old Buckley Road
- *Westwood Church of God,* 349 McKnight Street
- *Christ United Methodist Church,* 2335 Pollard Road
- *Life Community Church,* 2401 13th Street

- *Calvary Baptist Church,* 3339 13th Street
- *13th Street Free Will Baptist Church,* 3430 13th Street
- *13th Street Baptist Church,* 1812 13th Street
- *Westwood Christian Baptist,* 713 Wheatley Road
- *Tri-State Gospel Assembly,* corner of Bellefonte Road and Main Street
- *Fairview Baptist Church,* 2040 Main Street
- *Faith Baptist Church,* Hoods Creek Pike
- *Bethel at Westwood Church,* Sarah Road
- *The Church of Jesus Christ United Baptist Westwood,* Hoods Creek Road
- *Westwood Wesleyan,* 2400 Main Street
- *Little Jewel Church of Jesus Christ,* 204 Kentucky Street
- *Westwood Christian Church,* 424 Wheatley Road
- *Holy Family Church,* 900 Winchester Avenue
- *Saint James AME Methodist Church,* 329 12th Street

Cemeteries - A total of 15 cemeteries were identified in the project study area, including:

- *Calvary Catholic Cemetery,* Pollard Road
- *Rose Hill Burial Park,* corner of Winslow Road and US 60
- *Dixon Cemetery,* Main Street, between McClure and Fairview Avenues
- *Coalton Community Cemetery,* Coalton Cemetery Road
- *Winslow Cemetery,* KY 766
- *McCormick Cemetery,* Summit Road
- *Howard Cemetery,* US 60, just north of Summit Road
- *Fultz Cemetery,* Summit Road, near Ball Park Fraley Complex
- *Calvin Cemetery,* US 60 and Old US 60 intersection
- *Fields Cemetery,* Fields Avenue
- *McKnight Cemetery,* SR 5 at KY 1581
- *Thompson Cemetery,* Grandview Lake Road
- *Kouns Cemetery,* Kouns Road
- *Heisley Cemetery,* New Buckley Road
- *Hackworth Cemetery,* Fields Avenue

Fire Departments and Hospitals - Three fire departments were identified in the project study area, including:

- *Summit-Ironville Fire Department,* Station #95, 252 KY 716
- *Westwood Volunteer Fire Department,* Station #96, on Main Street at McClure
- *Ashland Central Fire Station,* 1021 Carter Avenue

No hospitals occur within the boundaries of the project study area. The closest hospital facilities are located in Bellefonte and Ashland, to the west and east of the study area, respectively.

Shopping Centers - Three large shopping centers/urban mall areas were identified in the project study area, including:

- *Ashland Town Center Mall/Walmart/Kroger* shopping area, 500 Winchester Avenue/351 River Hill Drive/12th Street and Lexington Avenue, respectively. Other stores include: J.C. Penny, Goody's, Belk, a movie theater, and 67 additional businesses.
- *Kyova Mall,* 10699 US 60, 600,000 square foot indoor mall. Stores include: Sears, Elder-Beerman, and Steve and Barry's University Sportswear, as well as additional retail businesses, restaurants and a movie theatre.
- *Walmart Supercenter,* 12504 US 60

Industrial Parks - One industrial park, the *Paul Coffey Industrial Park*, occurs in the project study area in the community of Princess (see Attachments A4 and A7). Key tenants include: Woodford Oil Company, DHL, American Electric Power Kentucky, Flagship Services, Inc., TriMac, Advantage Tank Lines, Boyd County Road Department, SunBelt Rentals, Bow Mech Services, Inc., Fleet Maintenance Services, and L. R. Daniels Transportation, Inc.

The Kentucky Cabinet for Economic Development reported four industrial parks in the general Ashland vicinity, but outside the project study area limits, including: East Park B and East Park A (located in northwest Boyd County and southeast Greenup County, about 11 miles southwest of Ashland); the Wurtland Site (located in Greenup County, about 10 miles northwest of Ashland); and the South Shore Site (located in Greenup County, about 30 miles northwest of Ashland).

Federal Facilities - Two federal facilities occur in the project study area, adjacent to each other, in the community of Summit:

- *Minimum Security Federal Correctional Institution,* located south of the community of Summit with a main entrance on Summit Road, facility has also been identified as eligible for inclusion on the National Register of Historic Places (further discussed in Section III.B.1, on page 12).
- *Army National Guard Maintenance Depot,* located south of the correctional institution with a main entrance on Summit Road

Golf Courses - Two public golf courses occur in the project study area:

- *Sundowner Golf Course,* 4135 KY 5, 9-hole course
- *Sandy Creek Golf Course,* 9701 Meade Springer Road, 18-hole course

B. Historic and Archaeological Resources – Section 106 and Section 4(f) Resources

Cultural historic and archaeological investigations were conducted for the project in 2007 by Helen Powell and Company, and Cultural Resource Analysts, respectively. A summary of key findings from these investigations is provided below. Section 106 review under the Historic Preservation Act and evaluation and coordination with the Federal Highway Administration under Section 4(f) of the Department of Transportation Act of 1966 will be required if any of these resources are impacted by the project.

1. Historic Resources

National Register of Historic Places (NRHP) Resources - A total of four NRHP-listed resources (i.e., two districts and two individual properties) occur in the project study area (see Attachments A4 and A7):

- *Ashland Historic Commercial District,* contains 63 buildings, dating from 1890-1940, NR-listed in 1994.
- *Bath Avenue Historic District,* contains 28 dwellings, representing a variety of styles from Gothic Revival to Classical Revival unparalleled in other sections of Ashland, occupied by nineteenth-century owners and managers of Ashland's industries, NR-listed in 1979.
- *Paramount Theater,* 1304 Winchester Avenue, completed in 1931, designed in Art Deco style, provided seating for 1309 people, NR-listed as an individual property in 1975 and included in the Ashland Historic Commercial District in 1994.
- *Saint James AME Methodist Church,* 329 12th Street, established circa 1860, present day building completed in 1912, one-and-one-half-story, front-gabled brick church, hip-roofed corner bell tower entry, stone lintels above the windows, NR-listed in 1979.

NRHP Determined Eligible Resources - A total of four historic resources determined to be eligible for inclusion on the National Register occur in the project study area (see Attachments A4 and A7):

- *Quadruple Span Concrete Bridge (BD-361),* US 60 over East Fork Little Sandy River, built between 1925 and 1929.
- *Williams Creek Bridge (BD-27),* Old KY 5 in Princess, built in 1921.
- *Summit Missionary Baptist Church (BD-363),* KY 716 in Summit, congregation formed in 1898 and present day building completed in 1946-1947.
- *Federal Correctional Institution and Prison Camp,* KY 716 in Summit, determined eligible under criterion A for association with early development of the federal penitentiary system, and under criterion C as an example of correctional architecture from the late 1930s and early 1940s.

Potential NRHP Resources (pending further research) - A total of six districts and 26 individual properties potentially eligible for inclusion on the National Register were identified in the project study area. A final determination of NRHP eligibility will require additional research, photography, physical examination of the structures, evaluation relative to the integrity standards established by similar properties in Boyd County currently listed on the National Register, and consultation with the State Historic Preservation Officer (SHPO) (see Attachments A4 and A7):

- *Prospect Place Historic District,* area includes large two-and-one-half story, brick American foursquares and Colonial Revival dwellings built before 1927.
- *Midland Heights Historic District,* two-story, brick and frame Colonial Revival dwellings built in the 1930's and 1940's.
- *Graysonia Historic District,* two-story, brick American foursquares along 13th Street, with frame one-and-one-half-story dwellings dating from the 1930's and 1940's on Algonquin and Iroquois Streets.

- *Grayson Road Historic District,* Cumberland Avenue, Kentucky Avenue, and Central Parkway, notable for its curvilinear road pattern which includes areas of common green space, houses are one-and-one-half-story, brick and frame Colonial Revival structures built before 1927.
- *Lexington Avenue/14th Street Historic District,* most houses date from the first three decades of the twentieth century and are variations on the Colonial Revival style, dwellings appear to be part of a larger historic district.
- *1100 Block Bath Avenue/12th Street Historic District,* American foursquares and Colonial Revival dwellings built before 1927.
- *Dwelling,* 2105 Midland Trail near Coalton, may date to the mid-nineteenth century, two-story, three-bay, single-gabled, central passage, single-pile, frame dwelling.
- *House,* 8831 Mead-Springer Road, dates to the period from 1875-1899, two-story, three-bay, side passage frame structure, with associated rusticated concrete block structure.
- *Dwelling,* 9223 Mead-Springer Road, dates to the period from 1875-1900, two-story, three-bay, central passage frame house with full-width two-story porch.
- *Bungalow and Barns,* 8517 Mead-Springer Road, brick bungalow built in 1932, one-and-one-half-story, side-gabled, associated gambrel-roofed barn and several agricultural outbuildings.
- *Tudor Revival Houses,* 835/839 KY 716, two one-and-one-half-story, Tudor Revival houses with steeply pitched side-gabled roofs and front facing chimneys.
- *T-Plan Dwelling,* 3293 Little Garner (KY 716), two-story, three-bay frame T-plan dwelling with full-width hip-roofed porch.
- *Thornberry House,* KY 716 in Summit, built during the period from 1875-1900, two-story, three-bay, log, saddlebag dwelling with full-width porch.
- *Armco Park,* intersection of KY 716 and US 60, opened in 1934, features winding roads through a steep wooded area, some original picnic pavilions remain.
- *Gertrude Ramey House,* Poor House Road, dates to circa 1900, two-story brick structure with five bays on the first floor and four bays on the second floor.
- *Bridge,* concrete bridge over Little Hood Creek, on Horn Street in the historic community of Mill Seat dates to the period from 1925-1949.
- *Westwood Christian Church,* 713 Wheatley Avenue, organized in 1931, two-story, three-bay, front-gabled brick structure with three-story entry tower and Gothic Revival windows.
- *Bill Mayberry House,* 2633 Main Street in Fairview, dates to the period from 1875-1899, two-story, five-bay, central passage, single-pile frame dwelling with full-width, hip-roofed porch.
- *Fairview Gym,* Fairview High School, 2123 Main Street, built by the Works Progress Administration (WPA) in 1938, one-and-one-half-story, front-gabled stone structure.
- *Log House,* McKnight Street in West Fairview, dates from the 1930's, one-story, three-bay rounded log house, with centrally located brick chimney.
- *Dwelling,* Nichols Place, two-story, four-bay frame, side-gabled structure with interior brick chimneys on the gable ends, and full-width, two-story porch supported by square wood columns
- *Log House,* York Street, dates from the 1930's, one-story, front-gabled rounded log house, with front-gabled porch covering the entry.
- *Pollard Baptist Church,* Blackburn Avenue, founded in 1892, present day building dates to 1925, three-story, three-bay, brick sanctuary, main façade is two-story with pedimented porch supported by fluted Ionic columns, site includes the two-story, two-bay, hip-roofed brick foursquare Manse east of the church.

- *Christ United Methodist Church,* Pollard Road, identified on the 1927 Sanborn Fire Insurance Map, three-story, front-gabled brick church, entry framed by truncated square towers, site includes the two-story, three-bay, side-gabled brick Manse, with a full-width, hip-roofed porch.
- *Dwelling,* 321 Harrison, dates to the period from 1900-1924, two-story dwelling with four bays on the first floor and two bays on the second floor, centrally located brick chimney atop the side-gabled roof.
- *Tudor Revival Building,* at the corner of US 60, and Blackburn and Algonquin Streets, built prior to 1927, two-and-one-half-story, side-gabled Tudor Revival building, steeply pitched roof, front-facing brick chimneys, and half-timbering in the wall gables.
- *Tudor Revival Dwelling,* 12th Street, two-and-one-half-story, side-gabled brick Tudor Revival dwelling, steeply pitched roof and halt timbering in the gables.
- *American Foursquare,* 1207 Bath Avenue, two-and-one-half-story, hip-roofed, brick American foursquare with overhanging eves and a full-width, hip-roofed porch.
- *White Swan Laundry Building,* Central Avenue, brick industrial building, built before 1927, one of the few surviving businesses from the era.
- *Commercial Building/Hotel.,* 336-346 13th Street, two-story building with rusticated stone lintels and scrolled brackets and dentils in the cornice.
- *Salvation Army Building,* 1225 Carter Avenue, two story brick building topped by a crenelated balustrade, features stone accents around the central entry, built after 1927.
- *Chesapeake and Ohio Passenger Depot,* Carter Avenue, symmetrical Renaissance design completed in 1926 and renovated for use by Third National Bank of Ashland in 1979, associated with the site are three cast iron and wood canopies.

2. Archaeological Resources

Approximately five percent of the project study area has been previously surveyed for archaeological resources. Review of information from the Kentucky Office of State Archaeology indicated that a total of three archaeological sites occur in the project study area. Due to the sensitive nature of these sites, location information is not provided on the project mapping in Attachments A4 or A7:

- *15Bd2,* prehistoric open habitation without mounds of an indeterminate age and cultural affiliation, location unspecified, appears to be situated on floodplain or terrace of the Ohio River in Elk series soils, NRHP eligibility not assessed.
- *15Bd4,* prehistoric earthen mound of an indeterminate age and cultural affiliation, location unspecified, appears to be situated on a dissected upland ridge sideslope in Latham-Shelocta silt loams (30–50 percent slopes), NRHP eligibility not assessed.
- *15Bd5,* prehistoric earthen mound of an indeterminate age and cultural affiliation, located on Tilsit silt loam on a high stream terrace (upland flat), NRHP eligibility not assessed.

In Boyd County, nearly half of all recorded archaeological sites have been found on floodplains or on stream terraces, suggesting that similar areas within the study area would have the greatest potential for the occurrence of archaeological resources. Additionally, upland flats located in ridge line saddles may also possess archaeological resources in areas that may have been covered over and preserved by colluvial deposition related to deforestation from the iron and logging industries. Although potentially disturbed by human activities, archaeological resources may also be present in the more rural of the

urban areas in the project study area. A more thorough survey for archaeological resources in the project study area should be conducted as the project further develops.

C. Hazardous Materials Concerns

1. Underground Storage Tanks

The occurrence of Underground Storage Tanks (UST's) in the project study area was determined through a combination of review of information from the Kentucky Division of Waste Management (KDWM), Underground Storage Tank Branch, the USEPA Envirofacts Data Warehouse for hazardous waste information and on-site survey (KDWM, 2007 and USEPA, 2007). In an email dated December 10, 2007, KDWM reported that 44 facilities with UST's occur in the general project area (see Attachment B15) (KDWM, 2007). Of these 44 facilities, 39 occur within the project study area limits, as shown on Attachments A4 and A7 (NOTE: multiple facilities may be represented by a single symbol). In general, the types of facilities with UST's include: gas stations, transportation, manufacturing, wholesale, service, government, information services, agriculture, and construction facilities. Three of the UST facilities in the study area are reported as Corrective Action Sites (see list below). Properties with UST's in the project study area include:

- *Five Points,* gas station, 244 W Donta Road (Corrective Action Site: groundwater contamination has spread off-site)
- *Speedway #9550,* gas station, 6009 US 60
- *Speedway SuperAmerica LLC 9603,* gas station, 1222 Lexington Avenue
- *Speedway SuperAmerica LLC 9924,* gas station, 607 Winchester Avenue
- *Galleria Exxon Tiger Mart (Cartee),* gas station, 10951 US 60
- *KJK Petroleum (Exxon Tiger Mart),* gas station, 1122 13th Street
- *Chaffin Inc. No 4 (Conlin Chevron),* gas station, 14525 State Road 180
- *P & R Inc.,* gas station, 2201 Winchester Avenue
- *Par Mar # 32,* gas station, 101 Jane Hill Road
- *Exit 181 Citgo,* gas station, 1965 US 60 West
- *Borders Summit Market,* gas station, 5876 US 60 (Corrective Action Site: soil and groundwater contamination present)
- *Super Quik No. 9,* facility type not identified, 12655 US 60
- *Fleet Purchasing/Ashland Tower,* facility type not identified, 1212 Bath Avenue
- *Greenhills Quik Stop Inc. ,* facility type not identified, 344 West Summit Road
- *Boyd Co School Bus Garage,* facility type not identified, 12219 Midland Trail Road
- *Clark Pump N Shop No 69 (Ro 3811),* facility type not identified, 6353 US 60 West
- *Clarks Pump N Shop 1,* facility type not identified, 1805 Main Street
- *Clarks Pump N Shops 65 (Rich Oil 38),* facility type not identified, 640 Wheatley Road
- *Dickens Shell,* facility type not identified, 3613 13th Street
- *13th St. Food Mart,* facility type not identified, 3354 13th Street
- *Averitt Express Inc.,* transportation facility, 12297 Virginia Boulevard
- *Boyd Co. State Maintenance Garage,* transportation facility, 1168 Halee Lane
- *United Parcel Service,* transportation facility, 12300 Kevin Avenue
- *JRB Trucking Co.,* transportation facility, Winslow Road
- *AK Steel Corp.,* West Works, manufacturing facility, US 23 North
- *KES Acquisition Co. LLC,* manufacturing facility, 2704 S Big Run Road

- *Certified Oil Co.,* manufacturing facility, 8117 US 60
- *John Clark Oil Co. Bulk Plant,* wholesale facility, 101 Wheatley Road
- *Fleet Fuel 1 Bulk Plant,* wholesale facility, 12355 Virginia Boulevard
- *Whayne Supply Co.,* wholesale facility, 12251 US 60 West
- *Cardinal Cleaners,* services facility, 1201 Central Avenue
- *Veolia Environmental Services,* services facility, 806 Hoods Creek Pike
- *13th St. Service Center,* services facility, 501 13th Street (Corrective Action Site: soil contamination present)
- *Federal Correctional Institute,* government facility, Summit Road
- *Boyd Co. Road Dept. Garage,* government facility, 1015 Bob McCullough Drive
- *The Gallaher Group,* information services facility, 101 Armco Boulevard
- *Hinton Hatchery Farm,* agricultural facility, 7229 Hatchery Road.
- *Ruth Contracting Corp.,* construction facility, 9429 US 60
- *B & L Utility & Gas,* miscellaneous property, 441 Iowa Street

A Phase I survey for UST's in the project study area will need to be conducted as the project further develops.

2. USEPA Regulated Sites

A total of 46 properties were identified in the project study area as hazardous materials concerns through review of information from the USEPA Envirofacts Data Warehouse for hazardous waste information and KDWM (USEPA, 2007 and KDWM, 2007). The concerns identified include facilities reported in the following hazardous materials databases: Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS-Superfund), Resource Conservation and Recovery Information System (RCRIS) the Toxic Release Inventory (TRI) and Brownfields. RCRIS is a database of properties that handle or maintain hazardous waste and are required to provide information about their hazardous materials activities; CERCLIS is a database used by the USEPA to track active and archived Superfund properties; the TRI is a database that contains information about releases of toxic chemicals; and Brownfields are real property where expansion or redevelopment is complicated by the presence or potential presence of hazardous substances, pollutants, or contaminants.

In an email dated December 21, 2007, KDWM reported 62 records of Superfund facilities that occur in Boyd County (see Attachment B15) (KDWM, 2007). Of these 62 records for the county, 13 Superfund properties occur in the project study area limits, as shown on Attachments A4 and A7. Four of the Superfund properties were reported as active, eight as closed, and one as status unknown. The 13 Superfund properties in the project study area include:

- *John Clark Property,* RCRIS and CERCLIS-Superfund
- *Kentucky Electric Steel LLC.,* CERCLIS-Superfund, RCRIS, TRI and Brownfields
- *Armco Credit Union,* CERCLIS-Superfund (active)
- *Paramount Arts Center Inc.,* CERCLIS-Superfund
- *Paul Coffey Industrial Park,* CERCLIS-Superfund
- *Ashland Towne Center Mall,* CERCLIS-Superfund
- *Swift Transportation,* CERCLIS-Superfund
- *B & L Utility and Gas,* CERCLIS-Superfund

- *Corbin Clothing Manufacturing,* CERCLIS-Superfund
- *Boyd County Dump,* CERCLIS-Superfund
- *Mobile Pressure Cleaning Landfill,* CERCLIS-Superfund (active)
- *Cooksey Brothers Disposal Co.,* CERCLIS-Superfund (active)
- *US Federal Corrections Institute Ashland,* RCRIS and CERCLIS-Superfund (active)

The USEPA Envirofacts Data Warehouse for hazardous waste information and KDWM reported a total of 33 RCRIS, TRI and Brownfields properties in the project study area (see Attachments A4, A7 and B) (USEPA, 2007 and KDWM, 2007):

- *Air Products,* RCRIS and TRI
- *Ashland Branded Marketing #326-0349988,* RCRIS
- *Ashland Branded Marketing Inc. 326-0729,* RCRIS
- *Ashland Petroleum Co BM #326-045,* RCRIS
- *Ashland Petroleum Co BM #326-284,* RCRIS
- *Ashland State Vo-Tech School,* RCRIS
- *Big Sandy Diesel Service Inc.,* RCRIS
- *BW/IP International Inc. Seal Div.,* RCRIS
- *Cardinal Cleaners,* RCRIS
- *Certified Gas Station #343,* RCRIS
- *Chaffin Inc #3/KDEP 10 1002-010,* RCRIS
- *Columbia Natural Resources Inc.,* RCRIS
- *Conlin's Chevron,* RCRIS
- *Dickerson Union 76 DBA Gas Express,* RCRIS
- *Downtown Cleaners, Inc.,* RCRIS
- *Firestone Store #3836,* RCRIS
- *Flagship Services, Inc.,* RCRIS
- *Hanson Brick Ashland Plant,* TRI
- *Inland Gas/Ashland Warehouse,* RCRIS
- *Inland Gas/Mavity Station,* RCRIS
- *Jims Ironville Market,* RCRIS
- *Mining Machinery Incorporated,* RCRIS
- *Onyx Industrial Services,* RCRIS
- *Pennco, Inc.,* RCRIS
- *Requip Ruth Equipment (3260380240),* RCRIS
- *Rich Oil #3804,* RCRIS
- *Rich Oil #3817,* RCRIS
- *Safety Kleen Systems Incorporated 407501,* RCRIS, TRI and Brownfields
- *Sherwin Williams Company,* RCRIS
- *SuperAmerica #5517*, RCRIS
- *Superior Collision Center,* RCRIS
- *US Postal Service KDEP ID 1002-010,* RCRIS
- *Whayne Supply Company Ashland,* RCRIS

A Phase I survey for hazardous materials concerns in the project study area will need to be conducted as the project further develops.

3. Oil and Gas Wells

Oil and gas well locations in the project study area were identified through a combination of review of information from the Kentucky Office of Technology Division of Geographic Information (KOT-DGI) and on-site field survey of the study area (KOT-DGI, 2007). A total of approximately 111 oil and gas wells were determined to occur within the study area limits (see Attachments A4 and A7).

Due to their occurrence on private property the locations of most of the oil and gas were not confirmed during the on-site survey. A more thorough survey for these wells should be conducted once the project further develops. Oil and gas wells encountered within the construction limits of a selected corridor (as this project progresses) will need to be sealed per KYTC standard specifications.

4. Landfills

Review of information from KDWM Solid Waste Branch indicated that eight known landfills occur in the project study area (see Attachment B16) (KDWM, 2007). KDWM identified two as active, four as inactive, and the conditions at two as unknown (see Attachments A4 and A7):

- *Big Run Landfill* (active)
- *Cooksey Brothers* (identified as active, observed to be closed)
- *Louisa Land Development/Paul Coffey Industrial Park* (inactive)
- *Boyd County Dump* (inactive)
- *R.L. Fosson* (inactive)
- *Mobile Pressure Cleaning* (inactive)
- *Federal Corrections Institute* (status unknown)
- *General Concrete Company* (status unknown)

During the on-site survey of the project area, activity was confirmed at the Big Run Landfill. The Cooksey Brothers landfill, however, was observed to be closed/inactive at the time of the on-site survey. No other landfills were observed in the study area during the September 2007 on-site survey. A Phase I survey for hazardous materials concerns associated with these landfill sites will need to be conducted as the project further develops.

5. Additional Hazardous Materials Concerns

A number of additional hazardous material concerns in and immediately adjacent to the project study area were noted during the September 2007 on-site survey (see Attachments A4 and A7), including:

- above ground storage tanks (AST's)
- drums
- 3 electrical substations
- Columbia Natural Gas Pump Station

A Phase I survey for hazardous materials concerns in the project study area will need to be conducted once the project further develops.

D. Agriculture

In response to agency information requests, the Kentucky Department of Agriculture acknowledged the project, but had no specific comments (see Attachment B17). Review of 2002 Agricultural Census data from the United States Department of Agriculture (USDA) indicates that Boyd County is ranked 108th out of 120 Kentucky counties in agricultural production, and that the typical agricultural practices occurring in the Boyd County include hay, grass silage and greenchop (3,732 acres), corn (184 acres) and livestock (cattle, horses and ponies) (USDA, April 2008). Review of information from the Kentucky, Natural Resources Conservation Service (NRCS) Office also indicated that prime farmland soil areas occur throughout the project study area (see Attachment B21). Prime farmland is land area that has the best combination of physical and chemical soil characteristics for producing food, forage and other agricultural crops with minimal inputs of fuel, fertilizer, pesticides, and labor, and with minimal soil erosion. Prime farmland soil areas in the project study area generally occur in low-lying, level stream bottomland areas, and in level areas along chief transportation corridors (see Attachment B21).

On-site survey of the project study area revealed that agricultural land was sparse and mostly in hay production. Land dedicated to agriculture was estimated to account for less than ten percent of the total land area encompassed by the project study area (see Attachments A2 and A5).

Impacts to farmland are regulated by the Farmland Protection Policy Act (FPPA). Once the project further develops, coordination with the local NRCS office will be necessary to determine if there will be adverse impacts to farmland associated with the proposed project.

E. Mining

Mines and quarries in the project study area were identified through review of information from the Kentucky Department for Natural Resources, Division of Mine Reclamation and Enforcement (KEPPC-DEP-DNR, 2007, and see Attachment B18), the Kentucky Office of Technology Division of Geographic Information (KOT-DGI, 2007) and on-site survey of the study area. No active coal mines occur in the study area, although a total of 18 inactive sites were identified from secondary sources (inactive permits). In addition, two active quarries were identified in the southern portion of project study area in the vicinity of Princess (see Attachments A4 and A7).

F. Socioeconomic and Environmental Justice Information

Socioeconomic Information - Review of 2000 Census Bureau information indicates that Boyd County had a total population of 49,752 individuals of predominantly white race origin, with a high school graduate or higher education. The 2000 unemployment rate was 5.6 percent in a labor force of more than 21,000 individuals working primarily in the Services and Trade/Transportation/Utilities industries, and median household income in 2000 was greater than $32,000 (U.S. Census Bureau, 2008). Additional socioeconomic information for Boyd County is summarized in the table, below

BOYD COUNTY SOCIOECONOMIC INFORMATION

Demographic	Boyd County	Kentucky
Total Population	49,752	4,041,769
Race		
White	48,148 (96.8%)	3,640,889 (90.1%)
Black/African American	1,432 (2.9%)	295,994 (7.3%)
Other	644 (0.3%)	104,886 (2.6%)
Hispanic/Latino Origin	558 (1.15%)	59,939 (1.5%)
Gender		
Male	24,363 (49.0%)	1,975,368 (48.9%)
Female	25,389 (51.0%)	2,066,401 (51.1%)
Age		
Under 18	10,840 (21.7%)	490,025 (12.1%)
65 and Over	7,758 (15.6%)	504,793 (12.5%)
Education (25 years of age or older)		
High School Graduate or Higher	27,063 (78.0%)	1,961,397 (74.1%)
Bachelor's Degree or Higher	4,892 (14.1%)	453,469 (17.1%)
Labor Force (2000)	21,365	1,926,731
Unemployment Rate (2006)	5.6%	5.7%
Personal Income (2005)	$27,555	$28,272
Households		
Number	20,010*	1,590,647 (2000)
Median Income	$32,749*	$37,369 (2005)
Employment By Industry		
Trade/Transportation/Utilities	23.9%*	20%**
Services	49.4%*	35%**
Manufacturing/Construction	20.2%*	18%**
Public Administration	4.7%*	17%**
Agriculture/Forestry	1.6%*	2%**

* 2000 data obtained from the U.S. Census Bureau (U.S. Census Bureau, 2008).
** 2006 data obtained from the Workforce Kentucky (Workforce Kentucky, 2008).

Environmental Justice - Issues pertaining to minority, elderly, disability and low income (persons living in poverty) populations in the project study area were evaluated by EHI Consultants and documented in a May 2008 report entitled *Environmental Justice and Community Impact Report.* The EHI report concluded that Environmental Justice populations occur in several Census Tracts and Block Groups in the study area generally in proximity to the City of Ashland, and the communities of Summit, Westwood and Fairview.

The EHI report identified minority, elderly, disability and poverty populations in the project study area at percentages *above* the state and county averages in the following Census Tracts and Block Groups:

- Census Tract 310 Block Group 4, minority population = 12.31%
- Census Tract 306, elderly population = 22.54%
- Census Tract 309 Block Group 1, disability population = 17.08%
- Census Tract 308, poverty population = 29.4%

The EHI report also noted additional populations of individuals living in poverty, however, these populations were *below* the Boyd County and Kentucky State average poverty levels of 15.5% and 12.4%, respectively, as follows:

- Census Tract 306, poverty population = 9.9%
- Census Tract 307, poverty population = 8.7%
- Census Tract 309, poverty population = 13.7%
- Census Tract 310, poverty population = 12.6%
- Census Tract 311, poverty population = 10.9%

The occurrence of these Environmental Justice populations in the project study area should be taken into consideration as the project further develops.

G. Additional Items of Concern

Air Quality - Boyd County is currently (June 2008) reported by the USEPA as a non-attainment area for Particulate Matter (size < 2.5 micrometers), and a PM2.5 analysis will need to be conducted as this project further develops.

Noise - The study area includes a number of sensitive noise receptors, including parks, schools, churches, golf courses and residential neighborhoods. A project specific traffic noise impact analysis will need to be conducted to identify and mitigate traffic noise impacts as this project further develops.

Utility Corridors - A number of major utility corridors, as well as the CSX rail road, occur within the project study area. These facilities will require consideration as this project further develops.

REFERENCES

REFERENCES

United States Census Bureau. 2008. *State and County QuickFacts; Boyd County, Kentucky*. Website: http://quickfacts.census.gov/qfd/states/21/21019.html. Washington D.C.

Carey, Daniel I. and John F. Stickney. 2004. *Groundwater Resources of Boyd County, Kentucky*. Kentucky Geological Survey, County Report 10, Series XII. Website: http://www.uky.edu/KGS/water/library/gwatlas/Boyd.htm. University of Kentucky, Lexington, Kentucky.

Environmental Systems Research Institute (ESRI). 2005. *ESRI Social and Economic Data and Maps CD-ROMS*. ESRI, Incorporated, Redlands, California.

Hail, Carl W., P.M. Love, and R. Forsythe. 1979. *Soil Survey of Boyd and Greenup Counties, Kentucky*. United States Department of Agriculture, Soil Conservation Service, in cooperation with the Kentucky Agricultural Experiment Station. Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Department for Natural Resources Division of Mine Reclamation and Enforcement. 2007. *Occurrence of Mines in the Project Study Area.* Agency email communication (see Attachment B18) and website: http://www.dnr.ky.gov/surfacemining/. Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Division of Waste Management. 2007. *Email Communications for the Occurrence of Underground Storage Tanks, USEPA Regulated Sites and Landfills in the Project Study Area* (see communications in Attachment B). Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Division of Water (KEPPC-DOW). 2004a. *2004 Kentucky Report to Congress on Water Quality*. April 2004. Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Division of Water (KEPPC-DOW). 2004b. *2004 303(d) List of Waters for Kentucky*. September 2005. Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Division of Water (KEPPC-DOW). 2006a. *2006 Integrated Report to Congress on Water Quality in Kentucky*. Volume I. 305(b) Assessment Results with Emphasis on the Kentucky River Basin Management Unit and Salt – Licking Rivers Basin Management Unit. June 2006. Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Division of Water (KEPPC-DOW). 2006b. *Draft 2006 Integrated Report to Congress on the Condition of Water Resources in Kentucky*. Volume I. 303(d) List of Surface Waters. November 2006. Frankfort, Kentucky.

Kentucky Environmental and Public Protection Cabinet, Division of Water (KEPPC-DOW or KDOW). 2007. *Special Use Waters in Kentucky.* Website: http://www.water.ky.gov/sw/specialwaters/. Frankfort, Kentucky.

Kentucky Geological Survey (KGS). 2000. *Producing Zones in Eastern Kentucky; GMHR Fact Sheet.* Website: http://www.uky.edu/KGS/petro/kyogeast.htm. University of Kentucky, Lexington, Kentucky.

REFERENCES

Kentucky Geological Survey (KGS). 2001. *Mineral Operations in Kentucky*. Website: http://www.uky.edu/kgs/gis. University of Kentucky, Lexington, Kentucky.

Kentucky Geological Survey (KGS). 2007. Kentucky Groundwater Data Repository: Water Well and Spring Location Map. Website: http://kgsmap.uky.edu/website/KGSWater/viewer.asp. University of Kentucky, Lexington, Kentucky.

Kentucky Geological Survey (KGS). April 2007b. *Kentucky Wetlands Image Download Center-NWI Images*. Website: http://www.uky.edu/KGS/gis/wetlands/. University of Kentucky, Lexington, Kentucky.

Kentucky Mine Mapping Information. March 2008. *Mining Permits*. Website: http://minemaps.ky.gov. KEPPC-Department for Natural Resources Office of Mine Safety and Licensing. Frankfort, Kentucky.

Kentucky Office of Technology Division of Geographic Information (KOT-DGI). 2007. *FEMA 100-Year Floodplain Information*. Website: ftp://ftp.kymartian.ky.gov/fema/. Frankfort, Kentucky.

Kentucky Office of Technology Division of Geographic Information Kentucky Geography Network. 2007. *Existing & Proposed Wastewater Infrastructure*. Website: http://kygeonet.ky.gov/wastewatprop/viewer.htm. Frankfort, Kentucky.

McDowell, Robert C., ed. 2001. *The Geology of Kentucky, A Text to Accompany the Geologic Map of Kentucky*. U.S. Geological Survey Professional Paper 1151-H, Online Version 1.0. http://pubs.usgs.gov/prof/p1151h/index.html. Washington D.C.

National Park Service (NPS), United States Department of the Interior. 2008. Land and Water Conservation Fund. Website: http://www.nps.gov/ncrc/programs/lwcf/. Washington D.C.

Powell, Helen C. 2007. *A Cultural Historic Resource Overview for Interstate 64 to Ashland Planning Study, Boyd County, Kentucky*. H. Powell and Co., Inc., Lexington, Kentucky.

Price, W.E. Jr., C. Kilburn, and D.S. Mull. 1962. *Availability of ground Water in Boyd, Carter, Elliott, Greenup, Johnson, Lawrence, Lee, Menifee, Morgan, and Wolfe Counties, Kentucky*. Kentucky Geological Survey, Hydrologic Investigations Atlas HA-37. U.S. Geological Survey, Washington, D.C.

Schenk, C. and W.C. Mitchell. *1876 Map of the Counties of Greenup, Carter, and Boyd and a Part of Lawrence*. Kentucky Geological Survey, Frankfort, Kentucky.

United States Department of Agriculture (USDA). April 2008. *2002 Census of Agriculture, County Profile*. Website: http://www.nass.usda.gov/census/census02/profiles/ky/cp21019. National Agriculture Statistics Service, Fact Finder for Agriculture, Washington, D.C.

REFERENCES

United States Department of Agriculture (USDA). 2007. *Soil Survey Geographic (SSURGO) Database for Boyd and Greenup Counties, Kentucky*. Website: http://SoilDataMart.nrcs.usda.gov/. Washington, D.C.

United States Environmental Protection Agency (USEPA). 2007. *Envirofacts Warehouse Data Hazardous Waste Information*. Website: http://oaspub.epa.gov/enviro/ef_home2.waste. Washington D.C.

Woods, A.J., J.M. Omernik, W.H. Martin, G.J. Pond, W.M. Andrews, S.M. Call, J.A. Comstock, and D.D. Taylor. 2002. *Ecoregions of Kentucky*. U.S. Geological Survey Reston, Virginia.

Workforce Kentucky. 2008. *2006 Employment and Industry Data*. Website: http://www.workforce kentucky.ky.gov/cgi/dataanalysis/?PAGEID=94. Office of Employment and Training. Frankfort, Kentucky.

ATTACHMENTS

Attachments A1-A7	**Project Location and Environmental Footprint Mapping**
Attachment B	**Agency Information Responses**
Attachment C	**Photograph Index Map and Study Area Representative Photographs**

Attachment A
Mapping

A1. Project Location Map

A2. Environmental Footprint, Aerial, General Land Cover

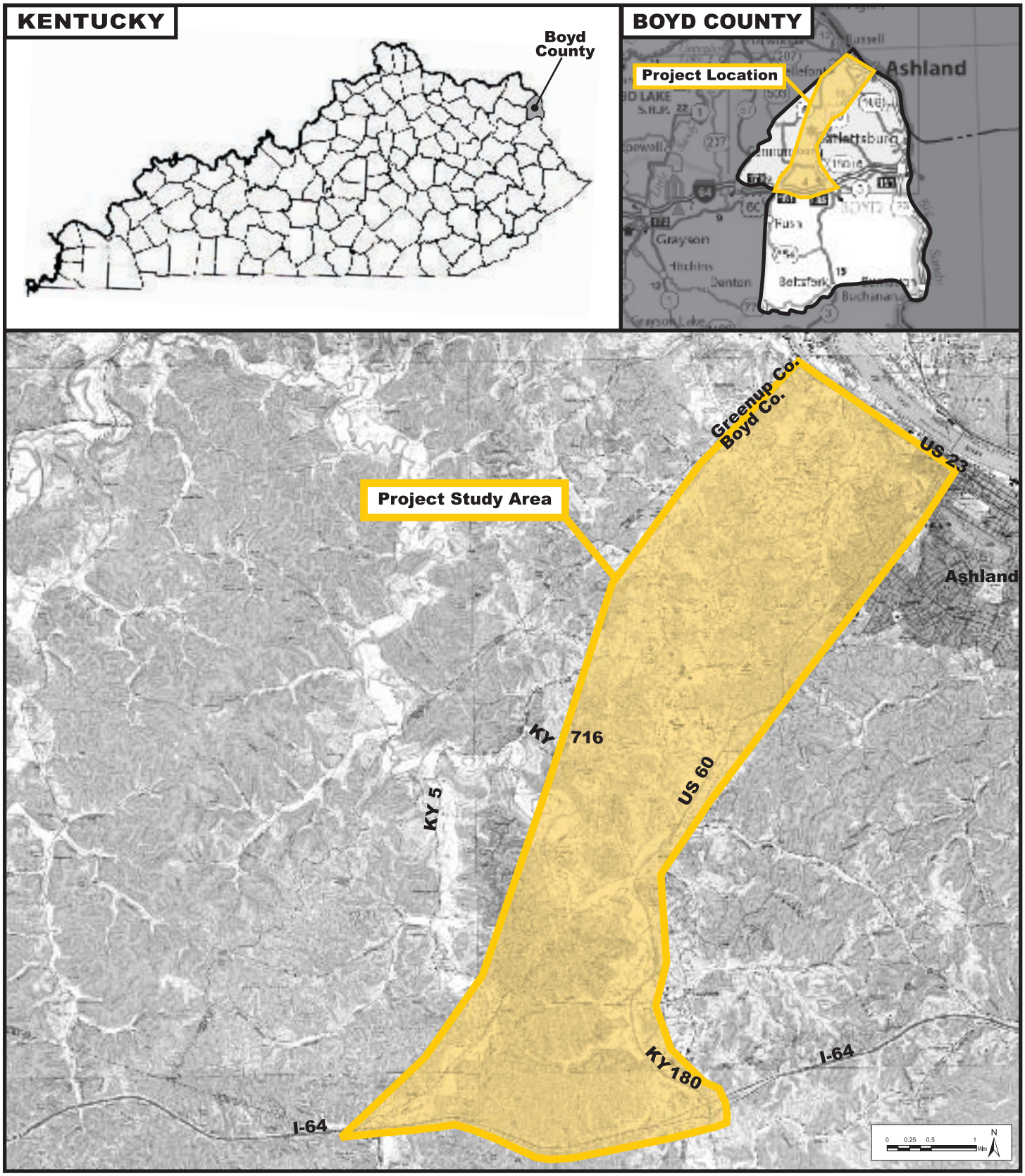
A3. Environmental Footprint, Aerial, Natural Environment

A4. Environmental Footprint, Aerial, Human Environment

A5. Environmental Footprint, USGS Topo, General Land Cover

A6. Environmental Footprint, USGS Topo, Natural Environment

A7. Environmental Footprint, USGS Topo, Human Environment



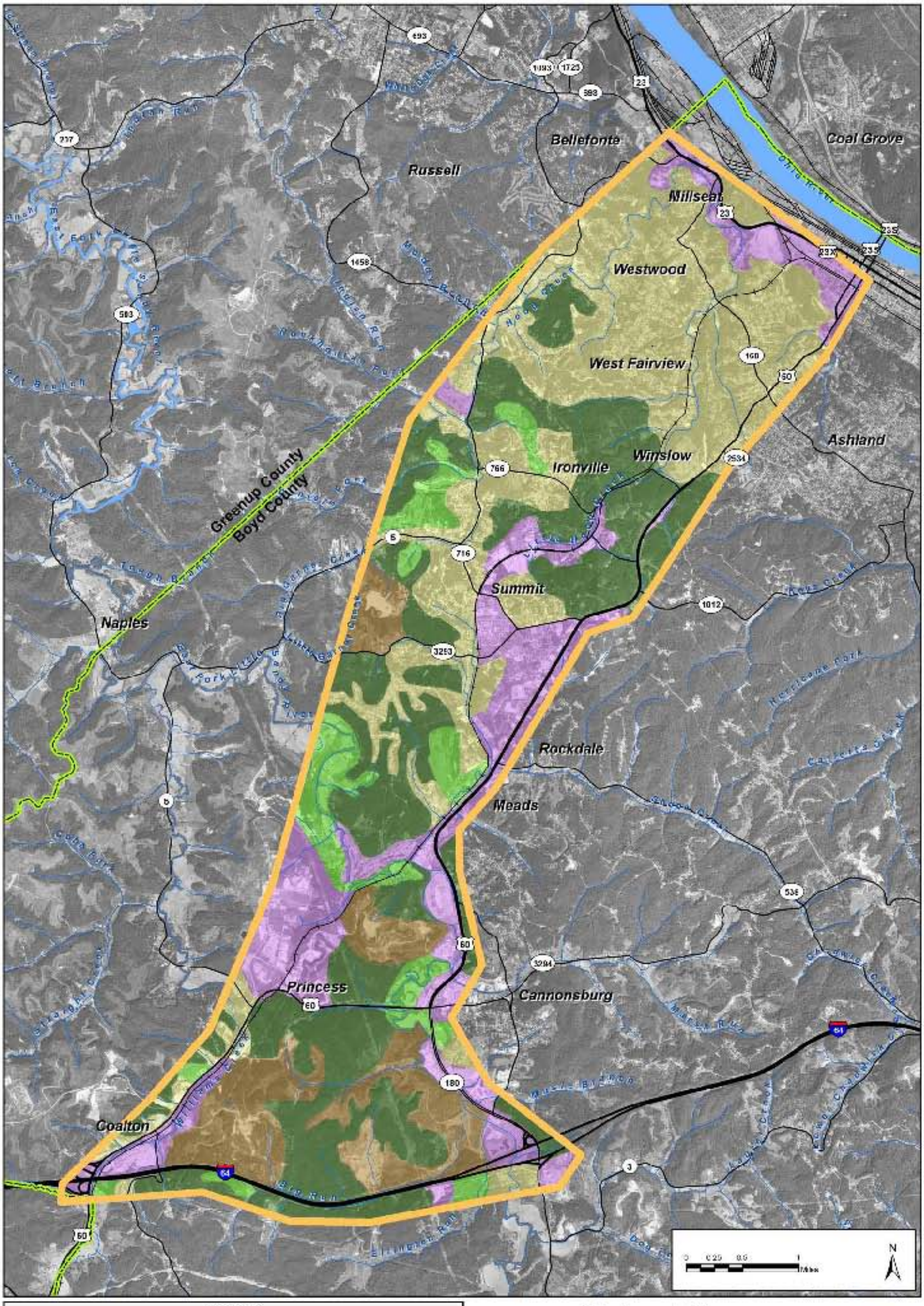
Attachment A1

PROJECT LOCATION MAP

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

KENTUCKY TRANSPORTATION CABINET

ENTRAN



Legend

Land Cover
- Agricultural
- Commercial / Industrial
- Disturbed
- Residential
- Woodland
- Study Area
- Surface Streams

- Railroad
- Major Roads

Attachment A2
Environmental Footprint

GENERAL LAND COVER

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

KENTUCKY TRANSPORTATION CABINET

ENTRAN

Bellefonte
Russell
Millseat
Coal Grove
Westwood
West Fairview
Ashland
Winslow
Ironville
Greenup County
Boyd County
Naples
Summit
Rockdale
Meads
Princess
Cannonsburg
Coalton

Legend

- Study Area
- Surface Streams
- Spring
- Parks
- Water Wells
  - Public
  - Non Public
- NWI Wetlands
- FEMA 100 Year Floodplain
- Potential T & E Habitat (observed) [1]
- Railroad
- Major Roads

[1] Reported T & E Species not shown (sensitive information)

Attachment A3
Environmental Footprint

NATURAL ENVIRONMENT

KENTUCKY TRANSPORTATION CABINET

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

ENTRAN

Bellefonte
Coal Grove
Russell
Millseat
Westwood
West Fairview
Ashland
Winslow
Ironville
Greenup County
Boyd County
Naples
Summit
Federal Correctional Institution
Army National Guard Depot
Rockdale
Meads
Princess
Cannonsburg
Coalton
Utility Corridor
Golf Course
Shopping Center
Industrial Park

Legend

- Study Area
- Schools / Institutions
- Churches
- Cemeteries
- Hospitals
- Fire Department
- Nat. Register/Determined Eligible Prop.
- National Register District
- Potential National Register Property
- Potential National Register District
- Oil and Gas Wells
- Mining Permits, Other Mines (Quarries)
- Land Fill
- Electrical Substation
- Registered UST
- Natural Gas Pump Station
- Toxic Releases Reported (TRI)
- Active/Archived Superfund Sites (Non-NPL) (CERCLIS)
- Hazardous Waste Handler (RCRIS)
- Brownfields Property
- Other Hazardous Concerns (observed)

Archaeology data not shown (sensitive information)

Attachment A4
Environmental Footprint

HUMAN ENVIRONMENT

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

KENTUCKY TRANSPORTATION CABINET

ENTRAN

Bellefonte
Coal Grove
Russell
Millseat
Westwood
West Fairview
Ashland
Ironville
Winslow
Greenup County
Boyd County
Summit
Naples
Rockdale
Meads
Princess
Cannonsburg
Coalton

Legend

Land Cover
- Agricultural
- Commercial / Industrial
- Disturbed
- Residential
- Woodland
- Study Area
- Surface Streams

- Railroad
- Major Roads

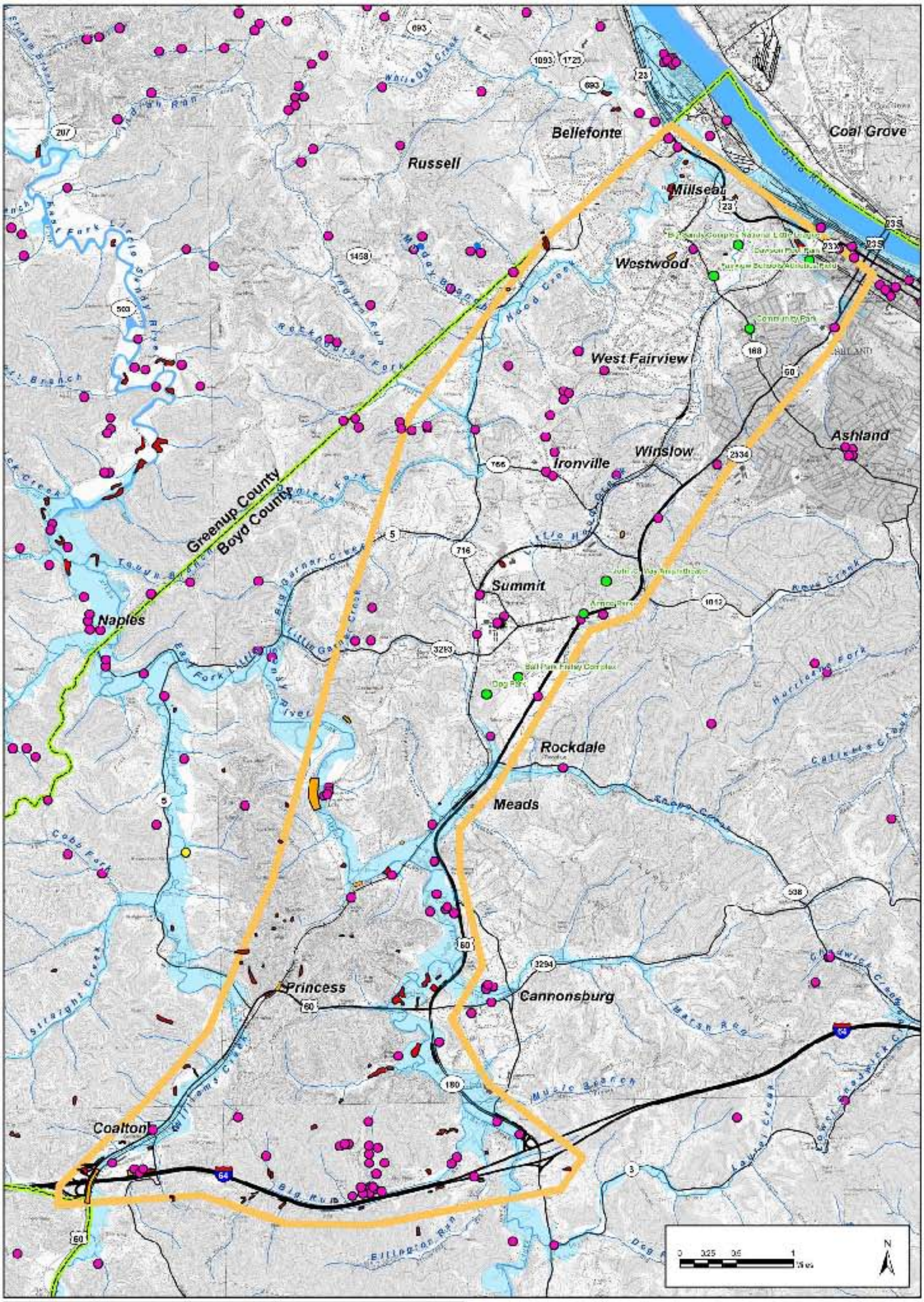
Attachment A5
Environmental Footprint

GENERAL LAND COVER

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

KENTUCKY TRANSPORTATION CABINET

ENTRAN



Legend

- Study Area
- Surface Streams
- Spring
- Parks
- Water Wells
  - Public
  - Non Public
- NWI Wetlands
- FEMA 100 Year Floodplain
- Potential T & E Habitat (observed) [1]
- Railroad
- Major Roads

[1] Reported T & E Species not shown (sensitive information)

Attachment A6
Environmental Footprint

NATURAL ENVIRONMENT

KENTUCKY TRANSPORTATION CABINET

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

ENTRAN

Bellefonte
Coal Grove
Russell
Millseat
Westwood
West Fairview
Ashland
Winslow
Ironville
Greenup County
Boyd County
Naples
Summit
Rockdale
Meads
Princess
Cannonsburg
Coalton
Federal Correctional Institution
Army National Guard Depot
Industrial Park
Utility Corridor
Golf Course
Shopping Center
0 0.15 0.3 0.9 Miles
N

Legend

- Study Area
- Schools / Institutions
- Churches
- Cemeteries
- Hospitals
- Fire Department
- Nat. Register/Determined Eligible Prop.
- National Register District
- Potential National Register Property
- Potential National Register District
- Oil and Gas Wells
- Mining Permits, Other Mines (Quarries)
- Land Fill
- Electrical Substation
- Registered UST
- Natural Gas Pump Station
- Toxic Releases Reported (TRI)
- Active/Archived Superfund Sites (Non-NPL) (CERCLIS)
- Hazardous Waste Handler (RCRIS)
- Brownfields Property
- Other Hazardous Concerns (observed)

Archaeology data not shown (sensitive information)

Attachment A7
Environmental Footprint

HUMAN ENVIRONMENT

KENTUCKY TRANSPORTATION CABINET

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

ENTRAN

Attachment B
Agency Information Responses

B1. **USFWS, Boyd County Threatened and Endangered Species Summary**

B2. **KSNPC letter 1/3/2008**

B3. **KDFWR, letter 1/8/2008**

B4. **KEPPC-DEP Clearing House, letter 1/28/2008**

B5. **Kentucky Bicycle and Bikeway Commission, letter 12/4/2007**

B6. **KGS, letter 12/18/2007**

B7. **CDC Division of Emergency and Environmental Health Services, letter 12/28/2007**

B8. **Kentucky Cabinet for Economic Development, letter 12/27/2007**

B9. **Kentucky Cabinet for Health and Family Services, letter 12/26/2007**

B10. **Ashland Fire Department, letter 12/4/2007**

B11. **Boyd County Sheriff, email 12/21/2007**

B12. **Kentucky Department of Education Division of Facilities Management, email 12/4/2007**

B13. **Department of Military Affairs, email 12/4/2007**

B14. **Kentucky Heritage Council, letter 12/20/2007**

B15. **KDWM, emails 12/10, 21, 27, 14/2007**

B16. **KDWM Landfills, email 12/27/2007**

B17. **Kentucky Department of Agriculture, letter 12/3/2007**

B18. **KEPPC-DEP Department for Natural Resources Division of Mine Reclamation and Enforcement, letter 12/3/2007**

B19. **FAA, letter 12/3/2007**

B20. **KEPPC-DEP Division of Air Quality, letter 12/20/2007**

B21. **Kentucky NRCS Office, email 6/16/2008**

Attachment B1

USFWS, Boyd County Threatened and Endangered Species Summary

U.S. Fish & Wildlife Service
3761 Georgetown Rd.
Frankfort, KY 40601
Phone: 502-695-0468
Fax: 502-695-1024

Endangered, Threatened, & Candidate
Species in ____ BOYD County, KY

Group	Species	Common name	Legal Status	Known** Potential	Species Comments
Mammals	Myotis sodalis	Indiana bat	E	P	
Mussels	Cyprogenia stegaria	fanshell	L	H	
	Lampsilis abrupta	pink mucket	E	H	
	Obovaria retusa	ring pink	E	P	
	Plethobasus cooperianus	orangefoot pimpleback	E	P	
	Plethobasus cyphyus	sheepnose	C	P	
	Pleurobema clava	clubshell	L	P	
	Pleurobema plenum	rough pigtoe	E	P	

NOTES:

* Key to Status: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat
** Key to Potential: K = Known occurrence recorded in the area, P = Potential for the species to occur within the county based on habitat and other biological factors, U = Unknown occurrence, insufficient information to either confirm or deny presence

Attachment B2

KSNPC letter 1/3/2008

Steven L. Beshear
Governor

Robert D. Vance
Secretary
Environment and Public
Protection Cabinet

Commonwealth of Kentucky
Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, Kentucky 40601-3415
502 573-2886 Voice
502 573-2355 Fax

Ronald S. Cook, Jr.
Director

January 3, 2008

Deanna Harris Miller
TEAM Ecological Planning
P.O. Box 314
Lemingsburg, KY 41641

Data Request: 08-089

Dear Ms. Miller:

This letter is in response to your data request of November 27, 2007 on the US 60 Alternate Study - 1.84 to Ashland project. Per Laws pertaining to Kentucky's Natural Heritage Program, I attempt to determine if any of the species, plus selected species of concern, plants and animals or exemplary natural communities documented by the Kentucky State Nature Preserves Commission occur near the project area on the Argillite, Ashland, Ashtabula, and Russell USGS Quadrangles, as shown on the map provided. Please see the attached printout for more information, which reflects and gives the project area a 3-mile buffer applied.

1-mile for all records - 0 records
3-mile for aquatic records - 11 records
3-mile for federally listed species - 1 record
10-mile for mammals and birds - 3 records

A review of our records indicates that the Kentucky arrowhead, KSNPC special concern, is found in the area. This species is known to occur in mesic (moist) wooded slopes.

Kentucky's forests support a diverse fauna (See Appendix A). KSNPC Special Concern, federal species of management concern, and Kentucky endangered, threatened and watch species are present. Aquatic species and habitats in the project area could be adversely impacted by increased turbidity, sedimentation, and other adverse influences on water quality. A written erosion control plan should be developed that includes stringent control measures (i.e., straw bales, silt fences and erosion mats, limited time exposure of disturbed areas), which are phased in as staging of work progresses to minimize several stages of control. All erosion control measures should be monitored periodically to ensure that they are functioning as planned. Silt fences are not sufficient to guarantee absence of sediment. Creations of an

sensitive species from the site and to avoid construction disturbance. We recommend that impacted streams be thoroughly surveyed by a qualified biologist prior to any earth-moving disturbance.

Short-eared owls (*Asio flammeus*, federally listed endangered, KSNPC threatened) known to occur within the limits of the proposed project. A thorough survey for this species should be conducted by a qualified biologist if suitable habitat will be disturbed. The survey should include wet and dry abandoned harvest and winter sites, and a minimum coverage of transect points within the proposed corridor, particularly in preferred summer habitat. Suitable foraging habitat is found in pine forests, bottomland forests and riparian corridors. Suitable roost and winter sites include sandstone and limestone caves, rock crevices, mine openings, tunnels, and abandoned mines. In order to avoid impacts to these bottomland forests and riparian corridors, portals to any caves, should not be disturbed.

Native peregrines (*Falco peregrinus pealei*, KSNPC endangered, federal species of management concern) typically nest on rocky cliffs, bluffs, and river banks. Ideal locations include cliff/talus areas with wide view, near water, and a ready food supply. Substitute man-made nesting sites include tall buildings, bridges, quarries, and raised platforms.

Northern coachwhip (*Coluber flagellum*, KSNPC Special Concern) occurs in several locations within the project area. This species is found in permanent and temporary ponds in some wetland habitats.

I would like to take this opportunity to remind you of the terms of the data request license which you may sign in order to submit your request. The new species occurrences data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission. The exact location of plants, animals, or natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. These products are provided on a temporary basis for the exclusive and confidential benefit of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the presence/absence surveys of many individuals and organizations. In most cases, this information is not the result of comprehensive or site specific field surveys, many natural areas in Kentucky have never been thoroughly surveyed, and new plants or animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of rare species or natural communities in any part of Kentucky. The lack of records documented in the Kentucky Natural Heritage Program database does not mean that rare species or natural communities do not occur in the area you are investigating. Our data reflect only what is documented in our files. Heritage Program data are a compilation of records from many different sources, including museum specimens, literature reports, and observations by biologists. Data files are frequently updated as new records are added and existing records are revised. Therefore, our data files should be considered a work in progress. Our records should not be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information you have collected on site surveys

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Sara Hume
Data Manager

SLD:SCD

Enclosures: Data Report and Interpretation Key

Attachment B3

KDFWR, letter 1/8/2008

KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES
COMMERCE CABINET

Steven L. Beshear
Governor

[illegible]
Frankfort, Kentucky 4060
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

Matthew Sparrow
Secretary

Dr. Jonathan W. Gassett
Commissioner

January 8, 2008

Jonathan C. Bradley, P.E.
Chief Highway Engineer
Kentucky Transportation Cabinet
Department of Highways District Office
825 Elizabeth Road
P.O. Box 347
Elizabethtown, KY 42701

RE: I-64 at US 23 Additional Turnaround Study
KYTC Item No.: 9-325.20

Dear Mr. Bradley:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that the federally endangered gray bat, Myotis grisescens, and Indiana bat, Myotis sodalis, are known to occur in or within close proximity to the project area. Please be aware that the database system is dynamic and only represents the current knowledge of the known species distributions.

- The Indiana bat utilizes a wide range of habitats, including riparian forests, upland woods, and fencerows for both summer foraging and roosting habitat. Indiana bats typically roost under exfoliating bark, in crevices of dead and live trees, and in cavities of dead trees or dead portions of live trees. Trees in excess of 12 inches diameter at breast height (DBH) are considered optimal for maternity colony roosts. Trees as small as 9 inches DBH can provide adequate maternity roosting habitat. Male Indiana bats have been observed roosting in trees as small as 5 inches DBH. Removal of suitable Indiana bat roost trees due to construction of the proposed project should be completed between October 15 and March 31 in order to avoid impacting summer roosting Indiana bats. However, if any caves or abandoned mines are identified on the project area or are known to occur within 10 miles of the project area, we recommend the applicant only remove trees between November 1 and March 31 in order to avoid impacting hibernating Indiana bats in winter roosts.
- Summer Mist Nets are known to occur, have historically occurred, and/or could occur within the project area. Should the surveyors find potential habitat for these species as part of their Indiana bat survey, KDFWR recommends mist netting these areas that provide adequate habitat for bats.
- To minimize impacts to aquatic resources, erosion control measures should be developed and implemented prior to any ground disturbance activities. Such measures should be installed in accordance with the Kentucky Erosion Prevention and Sediment Control Program Manual and should be inspected and maintained regularly. Erosion control measures will need to be implemented prior to construction and should be inspected and maintained regularly as needed.

[illegible] Service Ecological Services Field Office at (502) 695-0468.

It appears that the proposed project has the potential to impact wetland habitats. KDFWR recommends that you contact the appropriate U.S. Department of Interior Regional Wetland Inventory Coordinator (RWIC) and the appropriate U.S. Army Corps of Engineers (USACE) regulatory office to determine whether the proposed project may impact wetlands. Additionally, field verification may be needed to determine the current quality of wetland functions within the project area. Any practicable alternatives designed to eliminate adverse impacts to wetland habitats. If impacts cannot be avoided, mitigation should be proposed and provided to offset the losses. KDFWR will recommend that mitigation ratios for any permanent loss or cumulative adverse impacts

KDFWR recommends that you contact the appropriate U.S. Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetlands of Kentucky. Additionally, KDFWR recommends the following for the portion of the project that impacts streams:

- Channel changes [illegible] stream segments should incorporate natural stream channel design.
- Structures must, at a minimum, be designed to allow the passage of aquatic organisms.
- Culverts should be designed so that degradation, aggradation, and constriction of the cross-sections are avoided.
- Development [illegible] during low flow periods to minimize disturbance.
- Proper placement of erosion control structures [illegible] to minimize entry of silt into the streams.
- Replanting of disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of riparian corridor [illegible] and wildlife populations. We recommend a 100-foot [illegible] each stream bank.
- Return all [illegible] to natural state as quickly as practicable upon completion of construction in the area.
- The avoidance of impacts during overlapping use dreams within the project area.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (502) 564-3400, Extension 462.

Sincerely,

Doug Dawson
Wildlife Biologist III

cc: Environmental Section File

Attachment B4

KEPPC-DEP Clearing House,
letter 1/28/2008

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Steven L. Beshear
Governor

Department for Environmental Protection
[illegible]
[illegible]
[illegible]
[illegible]
www.[illegible].ky.gov

Robert D. Vance
Secretary

R. Bruce Scott
Commissioner

January 28, 2010

Mr. [illegible]
[illegible]
Department of Highways District 9
Division of Planning
822 Louisville Road
P.O. Box [illegible]
Bowling Green, KY [illegible]

Re: [illegible] at US 31 Natural Corridor ([illegible])

Dear Mr. Miller:

The Environmental and Public Protection Cabinet serves as the state clearinghouse for review of environmental documents prepared pursuant to the National Environmental Policy Act (NEPA). Within the Cabinet, the Commissioner's Office in the Department for Environmental Protection coordinates the review for Kentucky state agencies.

The Kentucky agencies listed on the attached list have been provided an opportunity to review the above referenced report. Responses were received from [illegible] agencies. Comments were received from the Kentucky Division of Water, Waste Management, Air Quality, Kentucky Heritage Council, and Department of Natural Resources.

If you should have any questions, please contact me at (502) 564-2150, ext. [illegible].

Sincerely,

[illegible]
Tammy C. Tipton
Environmental Review Officer

Attachments

RECEIVED
[illegible]
TRANSPORTATION CABINET
DISTRICT 3

Kentucky Unbridled Spirit

An Equal Opportunity Employer M/F/D

Division of Water Resources

Planning Study for the I-64 to U.S. 23 Ashland Connector

Endorsement:

A Request for review of the Planning Study for the I-64 to U.S. 23 Ashland Connector in Boyd County, Kentucky was received on December 21, 2007. The Division of Water (DOW) completed its review and found that the information provided warranted endorsement of this project. Below are the comments that were received.

Water Quality Branch:

This project has an environmental statement in the letter from the Chief District Engineer. The letter stated that "Currently, the only direct route to downtown Ashland from I-64 are US 23 and US 60, both of which are congested primarily at peak times. KY 180 exit 4 off of I-64 is another route that connects to US 60, but it also has highways in Ashland. The KY 180 exit has had extensive reconstruction in the past 5 years to improve it as well as Commonwealth and the City of Ashland.

Bull Creek and Little Sandy River pose only minor water quality standards in this area with the information that we currently have available in our assessment database. However, Bull Creek and Little Sandy River are considerably impaired by habitat alteration that can result from this type of road construction. Williams Creek and Tributaries in this area meet the criteria for

Although no special issues exist in this corridor, care must be taken with construction along and crossing these sensitive streams of the Little Sandy and Williams Creek to prevent further degradation of the waters of the Commonwealth.

Groundwater Branch:

A proposed new connector from I-64 to U.S. 23 in the Ashland area is likely to have minimal, if any, effects on groundwater. However, if any do occur, they are likely to be transitory.

To protect the area's groundwater, the measures found in the following would be adhered to: KYTC Best Management Practices, the Kentucky Department of Highways' Standard Specifications, and the KYTC General Construction Permit. If, during construction, these measures are found to be inadequate, KYTC is strongly encouraged to work with the Kentucky Geological Survey and the Division of Water in the development of any new measures the study has identified.

Water Resources Branch:

Any water withdrawals during the project activity, if disposed outside the Right of Way of Department of Highways and in the vicinity of a public well, must meet the requirements of 401 KAR 5:037.

Enforcement Branch:

The Division of Enforcement does not object to the project proposed by the applicant.

Division of Waste Management Comments

Project Number: SERD 2007-32

All solid waste generated by this project must be disposed at a permitted facility. If underground storage tanks are encountered they must be properly addressed. Fluorescent, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed.

Division for Air Quality Comments

Kentucky Division for Air Quality Regulation 401 KAR 63:010 Fugitive Emissions states that no person shall cause or permit any materials to be handled, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area of fugitive materials likely to become airborne, and that no materials be spilled from vehicles being transported by truck or conveying equipment, to be deposited on a paved street or roadway. Please view the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/homepage/publications/Clearinghouse.htm

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed in the Open Burning Fact Sheet located at http://www.air.ky.gov/homepage/publications/Clearinghouse.htm

The Division also supports an investigation into compliance with applicable local government regulations.

Kentucky Heritage Council Comments

COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL

Steven L. Beshear
Governor

The State Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601
Phone (502) 564-7005
Fax (502) 564-5820
www.kyheritage.ky.gov

Marcheta Sparrow
Secretary

Donna M. Neary
Executive Director and
State Historic Preservation Officer

January 24, 2014

Mr. Larry C. Taylor
Environmental Scientist, IV
Commissioner's Office
Department for Environmental Protection
14 Reilly Road
Frankfort, KY 40601

Dear Mr. Taylor:

The Kentucky Heritage Council has reviewed the Kentucky Transportation Cabinet's proposed study area for the Ashland Connector Study in Boyd County, Kentucky. Historic archaeological sites have been recorded within a half mile radius of the study area. Additionally, there are 18 properties listed in the National Register of Historic Places that are located on the west side of Ashland from 13th Street to the KY 5 at the Greenup County line. A review of our records indicates that there are both recorded archaeological sites and historic structures within the study area. Consequently, we feel that the proposed Ashland Connector has the potential for impacting significant archaeological sites and historic properties.

Additional archaeological and historic resource surveys will be conducted of the selected corridor for this project. Further, a historic preservation consultant will be hired to conduct literature research and survey of historic properties within the area of the proposed project. The consultant will determine if historic properties eligible for listing in the National Register of Historic Places will be affected by the project. Once the archaeological and historic reports have been submitted for my review, comments and approval. Should you have any questions, please feel free to contact Charlie Hockensmith of my staff at (502) 564-7005.

Sincerely,

Donna M. Neary, Executive Director
and State Historic Preservation Officer

DMN:kmw

Department for Natural Resources Comments

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES

Steven L. Beshear
Governor

Commissioner's Office
[illegible]
[illegible]

Robert D. Vance
Secretary

December 17, 2007

Mr. Deacon Harris, P.E.
Division of Planning
Kentucky Transportation Cabinet
Department of Highways District 9 Office
837 Flatwoods Road
Flemingsburg, KY 41041

Subject: Ashland Overpass Study
Boyd County, I-64 to I-8 23
Item No. 9-120.00

Dear Mr. Harris:

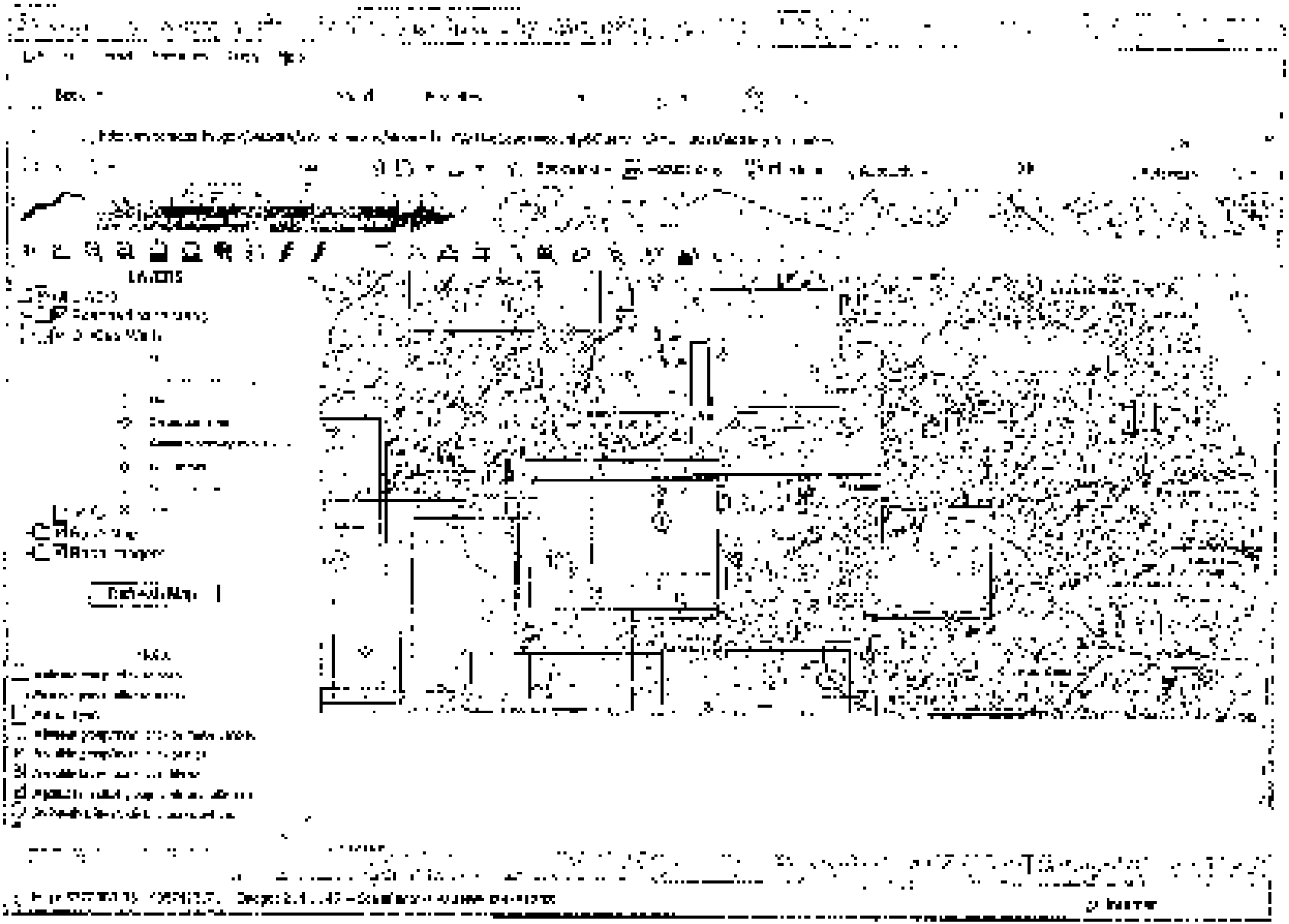
Thank you for the opportunity to comment on the Ashland Overpass Study in Boyd County. Your letter dated November 27, 2007. The Department for Natural Resources has reviewed the records for the proposed planning study for the above project.

The Division of Oil and Gas Conservation confirms that there are no oil and gas wells. Enclosed is a map of the area showing several oil and gas wells obtained from the Kentucky Mine Mapping Web site, http://minemaps.ky.gov. The Kentucky Geological Survey can provide an overlay with the wells plotted for this area.

Should you have additional questions or concerns please contact Mark Peterson in my office at (502) 564-6940.

Sincerely,

Susan Rush
Commissioner



Attachment B5

Kentucky Bicycle and Bikeway Commission, letter 12/4/2007

December 21, 2007

Kelsing C. Bradley, P. E.
District Engineer
Department of Highways, District 9
P. O. Box 347
Flemingsburg, Kentucky 41041

Re: I-64 to KY 32 Bridge Replacement Study

Dear Mr. Bradley:

Thank you for the opportunity to input on this project. I have taken the liberty of sharing the information you sent me with key members of Bluegrass Cycling Enthusiasts, Inc. Members of the club often bicycle within the area of study, and possibly know the roads as well as anyone.

The BCE board of directors has voted to oppose the US 60 -Kentucky River connection apparently preferred by the staff of I-64 from KY 180 to US 60 at Coalton, combined with the High Cross Highway to Kentucky 2 and US 60 west widened. There is no present need for this connector. We firmly believe the proposed project will greatly reduce rural character, and result in further development in the study area.

It is our collective opinion that routes should be placed as far west in the study area as possible, to take the traffic on the very dangerous Kentucky 9. This would also place the southern terminus of the connector near the west end of the proposed four-lane - Big Sandy Bypass.

We also would like to make a few comments that any recommended route with bicycle lanes in both directions. Past experience with wide shoulders, separated by double stripe, has proved to be the best way to accommodate bicyclists.

The accumulation of glass, gravel and other debris renders the shoulders unusable for cyclists. Examples include the shoulders on the Cuba Road Bridge in Boyd and Denton Counties, and SH 24 in Lamar County.

We firmly believe construction of this project with adequate shoulders for bicycle users, will be of great benefit to the residents of this area, as well as the traveling public, and should receive KATC's highest priority.

Again, thank you for allowing this input.

Sincerely,

Charles R. Anderson
RRRW

Jess W. Hunt
Executive Director
Bicycle Philosophy, Inc.

CRA/cm

cc: Clifton Jackson

Attachment B6

KGS, letter 12/18/2007

Kentucky Geological Survey
[illegible]

December [illegible], 2007

Dennis Keene, P.E.
KYTC
Division of Planning
Department of Highways, District 9 Office
522 Louisville Rd
Flemingsburg, KY 41041

Dear Mr. Keene,

This letter is to summarize my geologic concerns for the project identified as:
KYTC Highway District 9
Boyd County
Ashland, Kentucky
I-64 at U.S. 23 Add and Widening Study
Item No. 9-170.00

Physiographic Region
The study area is in the Eastern Kentucky Coal Field physiographic region, which is underlain by sandstone, gravel, sand, silt, clay, limestone, shale, siltstone, coal, and conglomerate.

Land-Use Planning Map
For a good geologic (with a spatial component) overview of the study area, refer to the county land-use planning map at www.uky.edu/KGS.
On the home page, click on GIS and Maps.
On this page, click on County Land-Use Planning Maps.
On this page, click on the county of interest on the index map. A viewable and downloadable PDF of the map will be displayed.

Karst Potential
The study area [illegible] is not considered to be capable of sinkhole or karst development.

Landslide Potential
The study area probably will encounter pre- or post-landslide hazards. The potential for landslides in the underslope and shales could be initiated or accentuated by removal of material at the base of the slope. The edges of these layers of sandstone and shale will crumble where they are undermined.

Unconsolidated Sediments
The study area will encounter some unconsolidated sediments at or near surface (primarily clay such as mud, silt, and gravel. Also some unconsolidated sediments such as cobbles, gravel, sand, and silt can be found on some of the hilltops in the area in the Ashland area.

Resource Complexity
The study area might encounter resource issues such as private ownership of oil and gas well and mineral property line mining. These issues can be found by going to the Kentucky Geological Survey's Website.
http://kgsweb.uky.edu/DataSearching/OilGas/OilGasSearch.asp and inputting search parameters. Coal mining information can be found on the Department of Mines and Minerals Web site, http://minesandminerals.ky.gov.

Subsidence
The study area will encounter some underground voids that were left from previous coal mining activity, which could be a possible subsidence hazard. The Department of Mines and Minerals Web site would be good to find deep mines in the area.

Mineral Availability
The study area will not encounter any mineral as in the list of mineral resources. The study area may encounter coal, limestone, or sandstone. The study will need to be done to determine what is present.

Fault Potential
The study area probably will not encounter faults.

Earthquake Zone
The study area has a probable peak ground acceleration of 0.4g due to earthquake record over an 475 yr. period. According to the physical characteristics of the area in the location, there is a good probability that the peak ground acceleration would actually be higher. There would be a moderate potential for liquefaction or loss of use in the areas within the structure and with unconsolidated sediments or near areas as caused by earthquake because ground motion.

Sincerely,

Richard A Sorsch
Geologist

Attachment B7

CDC Division of Emergency and Environmental Health Services, letter 12/28/2007

[illegible] 18, 2012

Katrina D. Bradley, P.E.
Chief District Engineer
City-County Planning
Transportation Cabinet
Department of Highways District 5 Office
822 Winchell Road
P.O. Box [illegible]
Morehead, KY 40351
[illegible]

Dear Ms. Bradley:

[illegible] reviewed the recommendations for the Planning Study related to [illegible] Ashland Boulevard in Boyd County. The area of study for which we are responding has been identified as beginning at [illegible] and ending at [illegible] on the west side of Ashland from 13th Street (U.S. 60) to Kyle at the Greenup County line. This is [illegible] on behalf of the Department of [illegible] Services (DPHS), Local Public Health Service.

We understand that this thoroughfare is [illegible] residential, commercial, and recreational land uses in close adjacency to the roadway. We commend your efforts to reduce crash related injuries in the Planning Study area. In addition to reducing crash related injury and fatalities, multimodal transportation benefits can also be realized and promote healthy lifestyles; we would like to see some of these opportunities in the Planning Study.

Planners with Health in mind [illegible] Complete Streets policy, this corridor will not only increase multimodal transportation options that [illegible] physical activity and reduce air pollutants, it will also reduce the exposure to pedestrians and cyclists to potential injuries from vehicular crashes. In some more highly populated [illegible] Planning Study's recommendations should be carefully considered about an adequate amount of pedestrian infrastructure including sidewalks on both sides of the roadway and crosswalks for safe access and connectivity to general shopping areas. The only marked crosswalks in the study area are at the signalized intersections. Adequate lighting and [illegible] Park environments, and should be considered. In addition, the proposed sidewalk on the southbound portion of the roadway [illegible] and landscaped medians [illegible] pedestrian crossing refuges as well as to enhance the overall [illegible]. Aside from the obvious benefit of reduced injuries, landscaped buffers and medians [illegible] through carbon sequestration, improving pedestrian environment, and typically [illegible] surrounding community through increased property value.

Although we have made specific recommendations to address some of the issues identified in the report, we also recommend that the topics listed below be considered during the study process and addressed if appropriate. Mitigating the destruction of the environment and cultural resources should be discussed in the Study Team meetings and documented.

AREAS OF POTENTIAL PUBLIC HEALTH CONCERNS

I. Air Quality
   - Construction activities during project construction and mitigation practices to reduce dust and particulate matter during and after project completion.
   - Compliance with local ordinances and standards.

II. Water Quality Protection

- special consideration to protect public water supply, including ground and surface water resources
- groundwater or surface water contamination (e.g., runoff)
- compliance with water quality and wastewater treatment requirements

III. Wetlands and Flood plains
- potential contamination of underlying aquifers
- construction within flood plains which may endanger human health
- contamination of the food chain

IV. Hazardous Materials/Wastes
- identification and characterization of hazardous/contaminated sites
- safety plans/procedures, including use of personal protective equipment, worker training
- spill prevention, containment, and countermeasures plan

V. Non-Hazardous Solid Wastes/Other Materials
- measures regarding solid waste generation, collection, and disposal should be considered

VI. Noise
- identify projected elevated noise levels from activities near/adjacent to sensitive receptors (e.g., residences, schools, hospitals) and appropriate mitigation plans during and after construction

VII. Occupational Health and Safety
- compliance with appropriate criteria and guidelines to ensure worker safety and health

VIII. Land Use – Community and Neighborhood Impacts
- special consideration and planning for pedestrian infrastructure, including sidewalks, walkways and crosswalks
- accessible, safe and aesthetically pleasing
- adequate pedestrian crossings that are convenient and easily identified by motorists
- with visibly marked lanes or bike lanes to meet the needs of bicyclists
- ADA accessibility requirements for the project area
- consideration of short and long term land use impacts, including the potential for loss of people from the area as a result of a project and [illegible]
- special consideration for hospitals, nursing homes, day care centers, schools
- special consideration and appropriate mitigation for necessary relocation and other potential adverse impacts to residential areas, community cohesion, community services

X. Environmental Justice
- minority populations in study area
- economic characteristics of study area residents and workers

While this is not intended to be an exhaustive list of possible impact areas, it provides a guide for typical areas of potential public health concern which may be applicable to this project. Any other health related topics which may be associated with the proposed project should also receive consideration. Please provide us with one copy of all NEPA-related documents to the address listed below when they become available for review. Please feel free to contact us for further discussion of any topics raised in this response letter.

Sincerely yours,

Andrew L. Dannenberg, MD, MPH
Associate Director for Science
Division of Emergency and Environmental Health Services
National Center for Environmental Health
Centers for Disease Control and Prevention
4770 Buford Highway, MS F-30
Atlanta, GA 30341

Attachment B8

Kentucky Cabinet for Economic Development, letter 12/27/2007

Date: Jan 23, 2007

VIA E-Mail

Ms. Donna Davis Miller, P.E.
Transportation Cabinet
Division of Planning
200 Mero Street
P.O. Box 567
Frankfort, KY 40601

Re: Letter - Ashland Connector Planning Study

Dear Ms. Miller:

The purpose of the Ashland Connector Planning Study is to identify the following elements from an economic development perspective:

- The Ashland area has several underserved commercial sites as listed below:

  East Park II
  East Park A
  Winchester Site
  South Shore Site

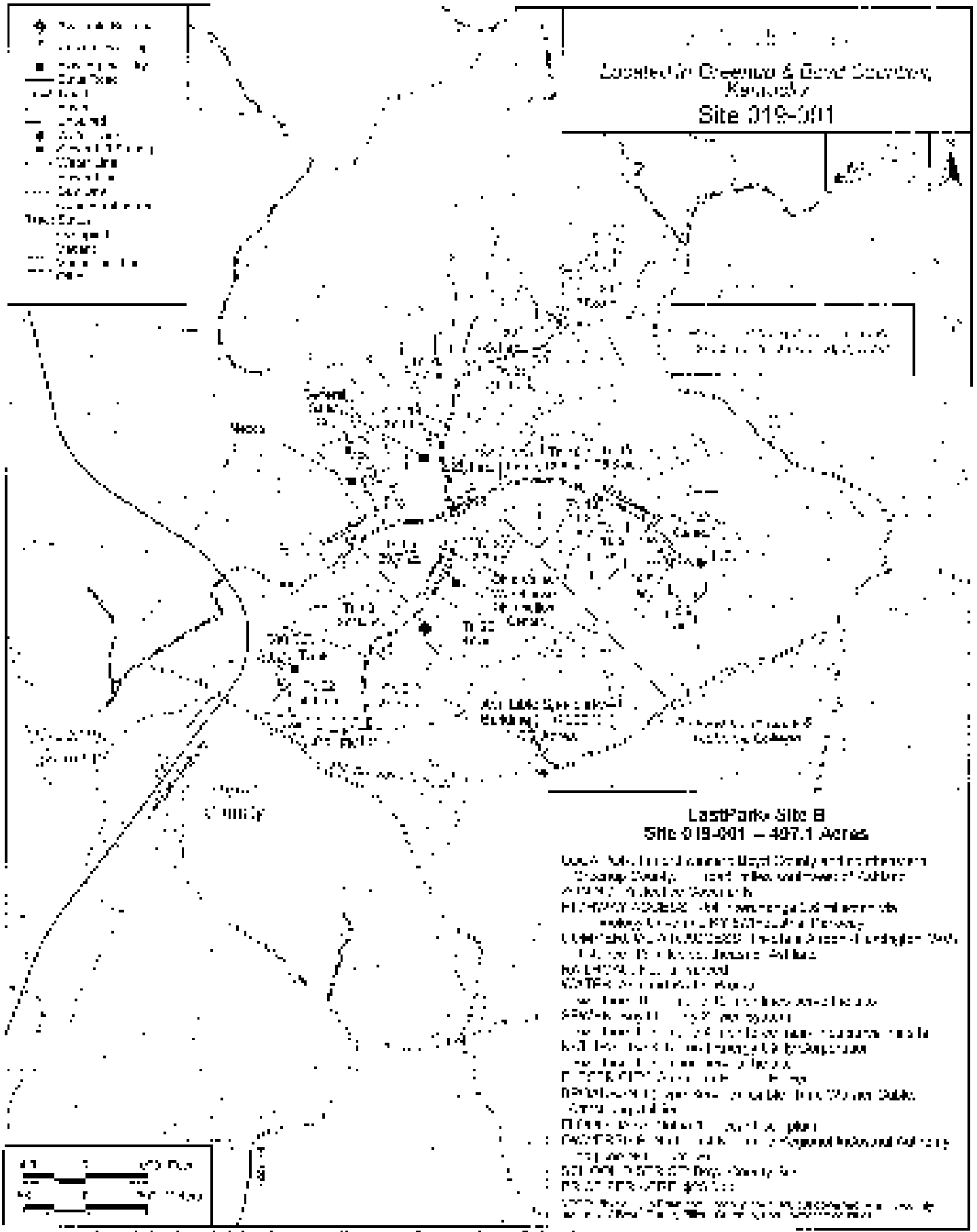
- A new connector road located in a different corridor may improve access to all or only enhance the commute for those within the corridor as well as for the whole community.

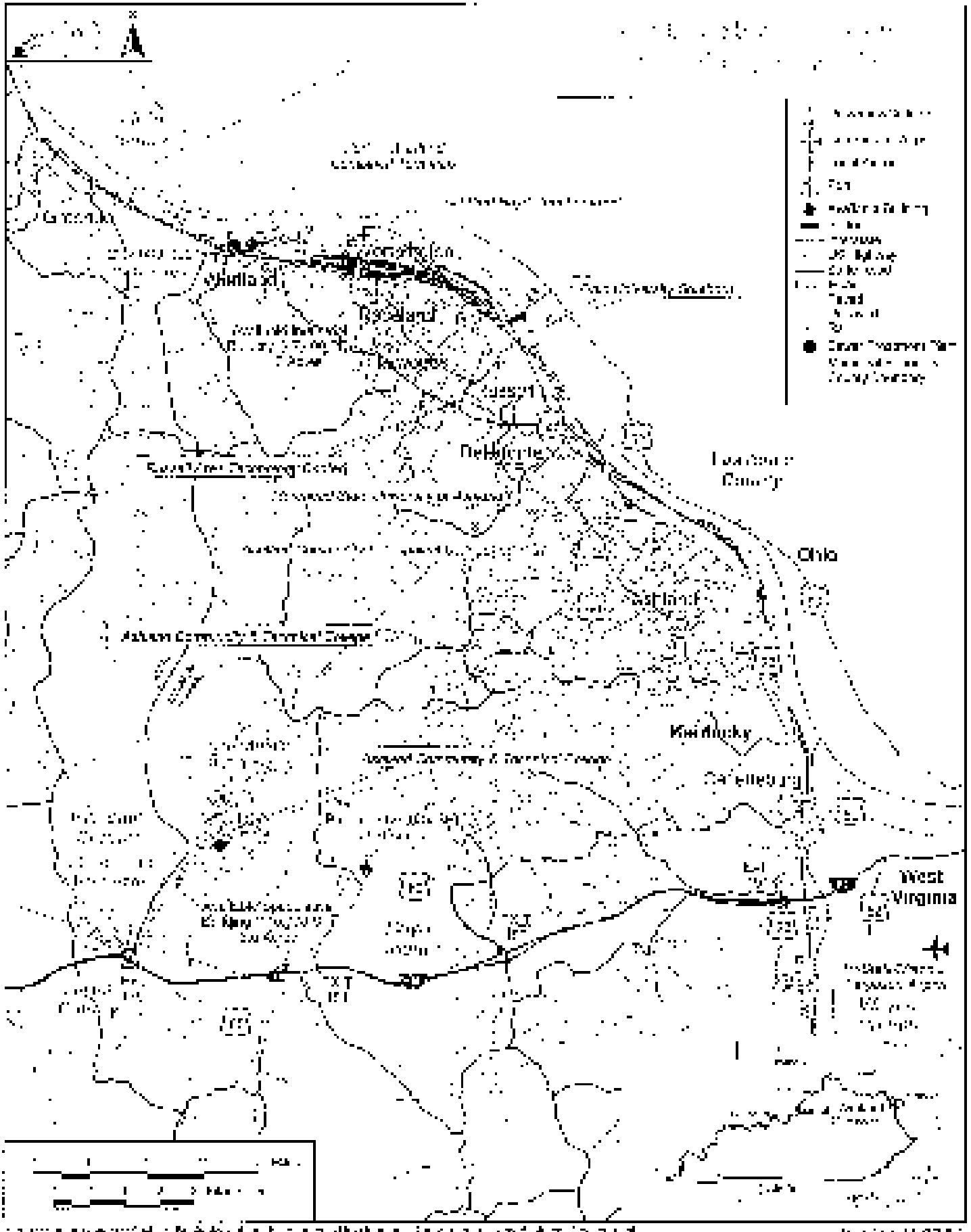
Please contact me at (502) 564-2140 if you have any questions.

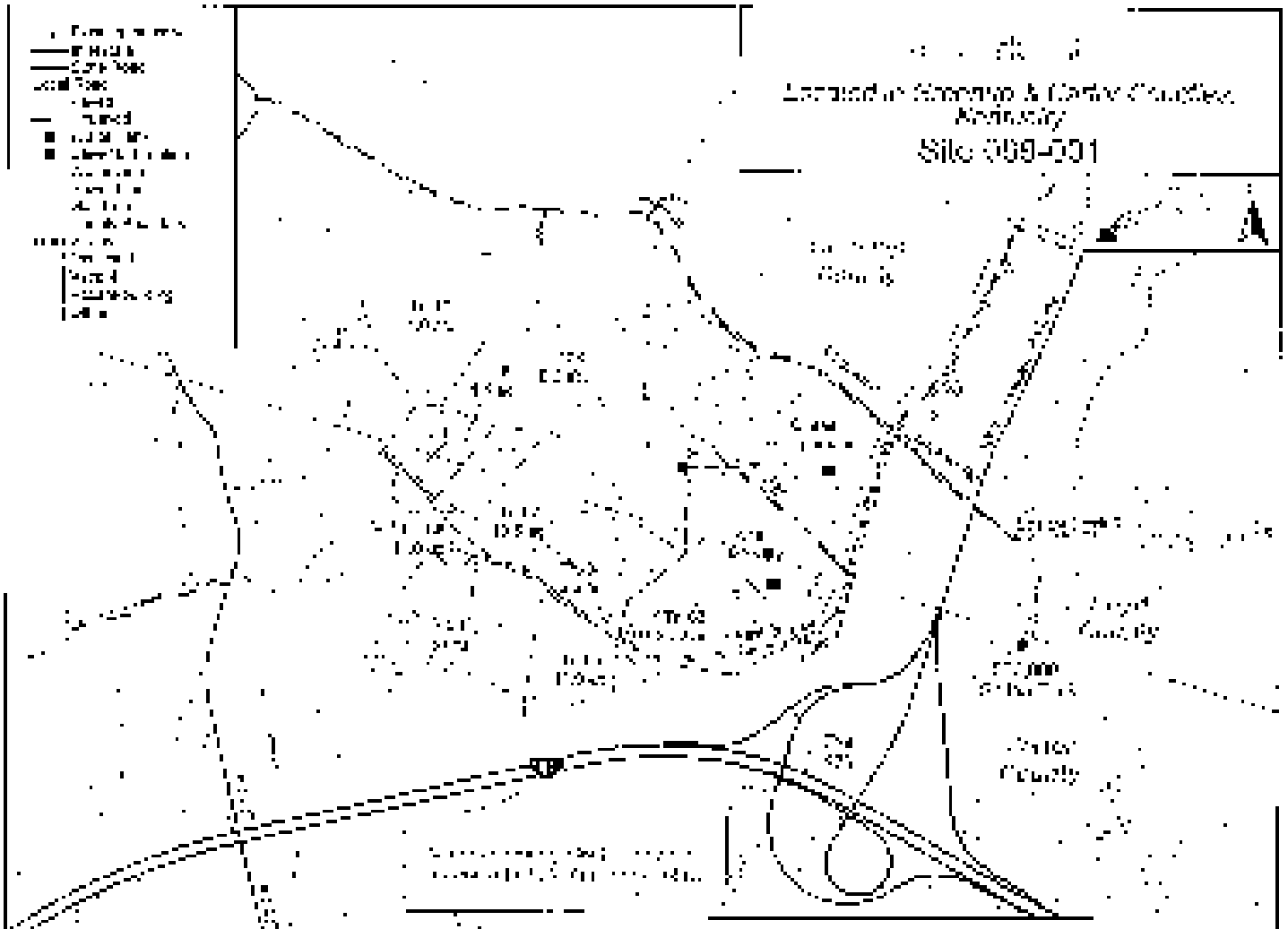
Sincerely,

Tom Stamper
Industrial Site Representative
Cabinet for Economic Development
300 West Broadway
Frankfort, Kentucky

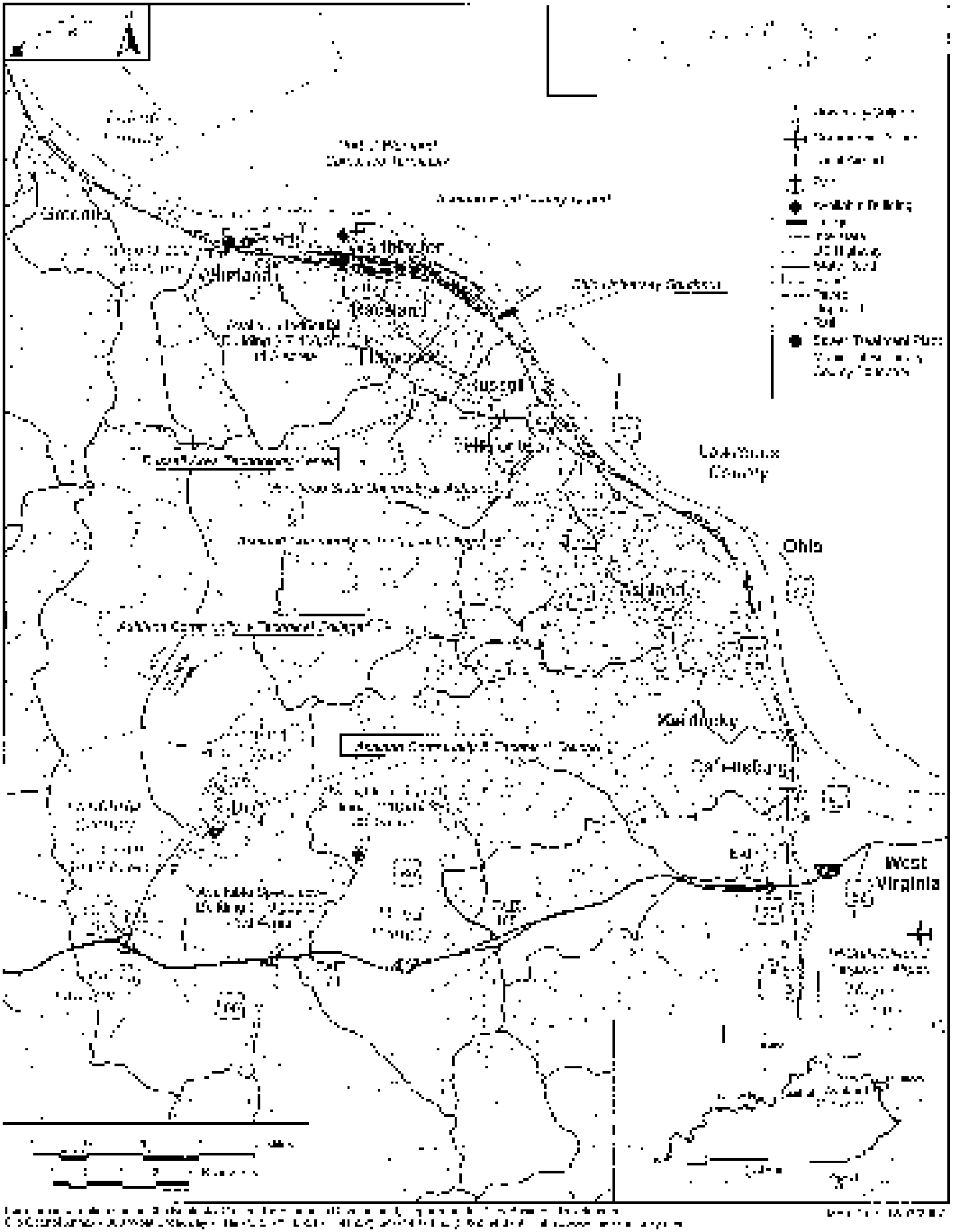
cc: Russell Carey
David Greenup
Site Files

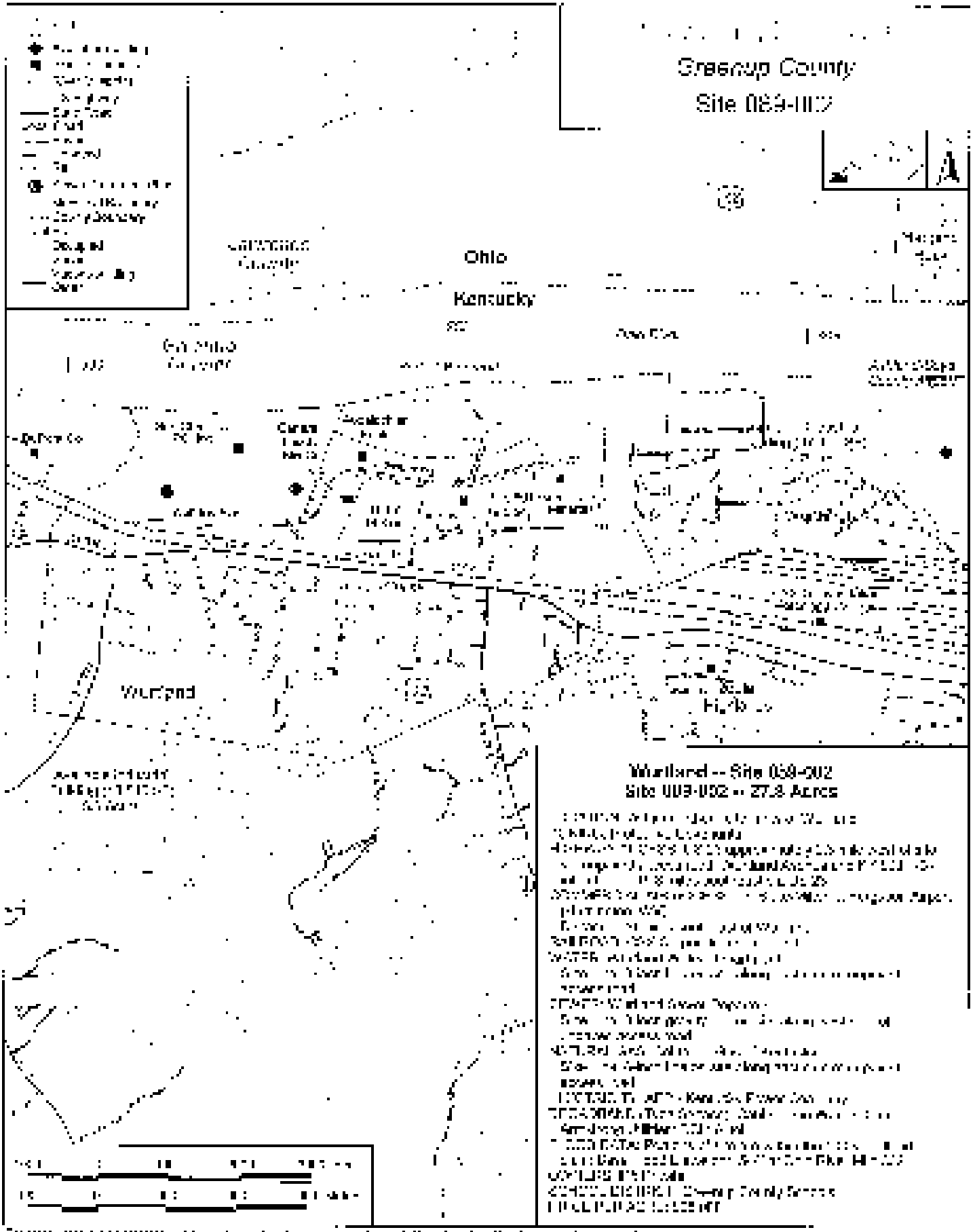

Located in Greenup & Boyd Counties, Kentucky
Site 019-001
LastPark Site B
Site 019-001 – 497.1 Acres

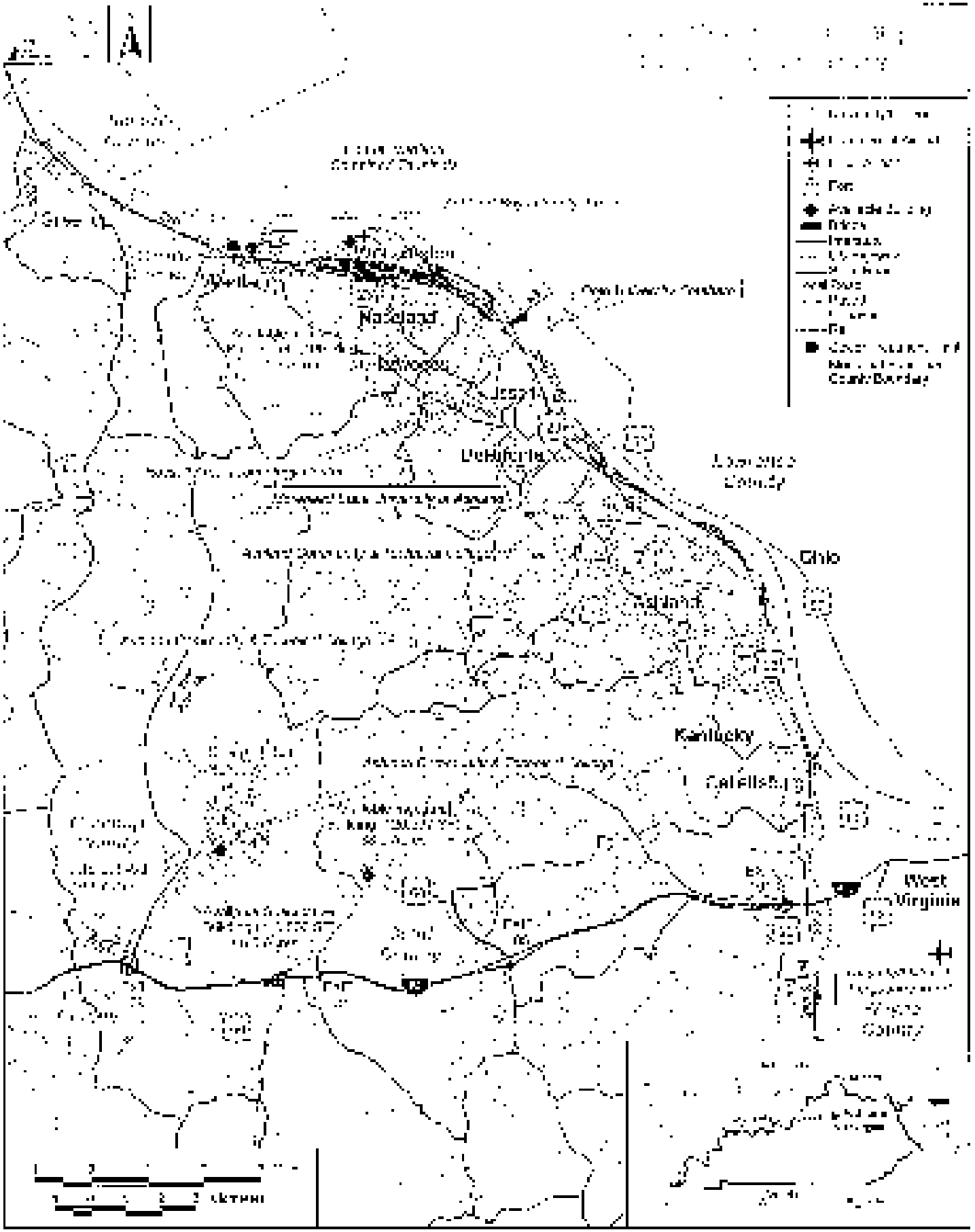

Ohio
Kentucky
West Virginia

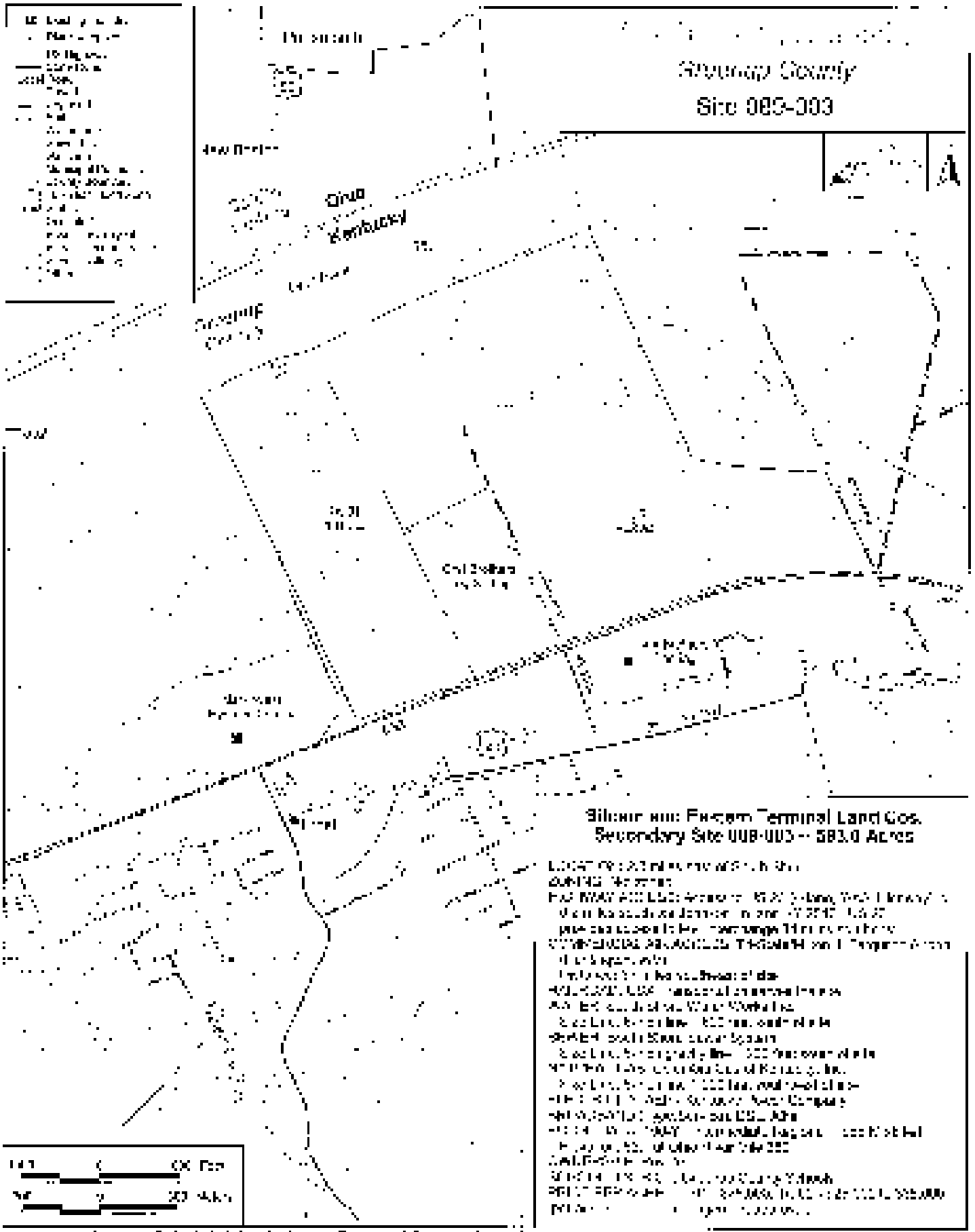


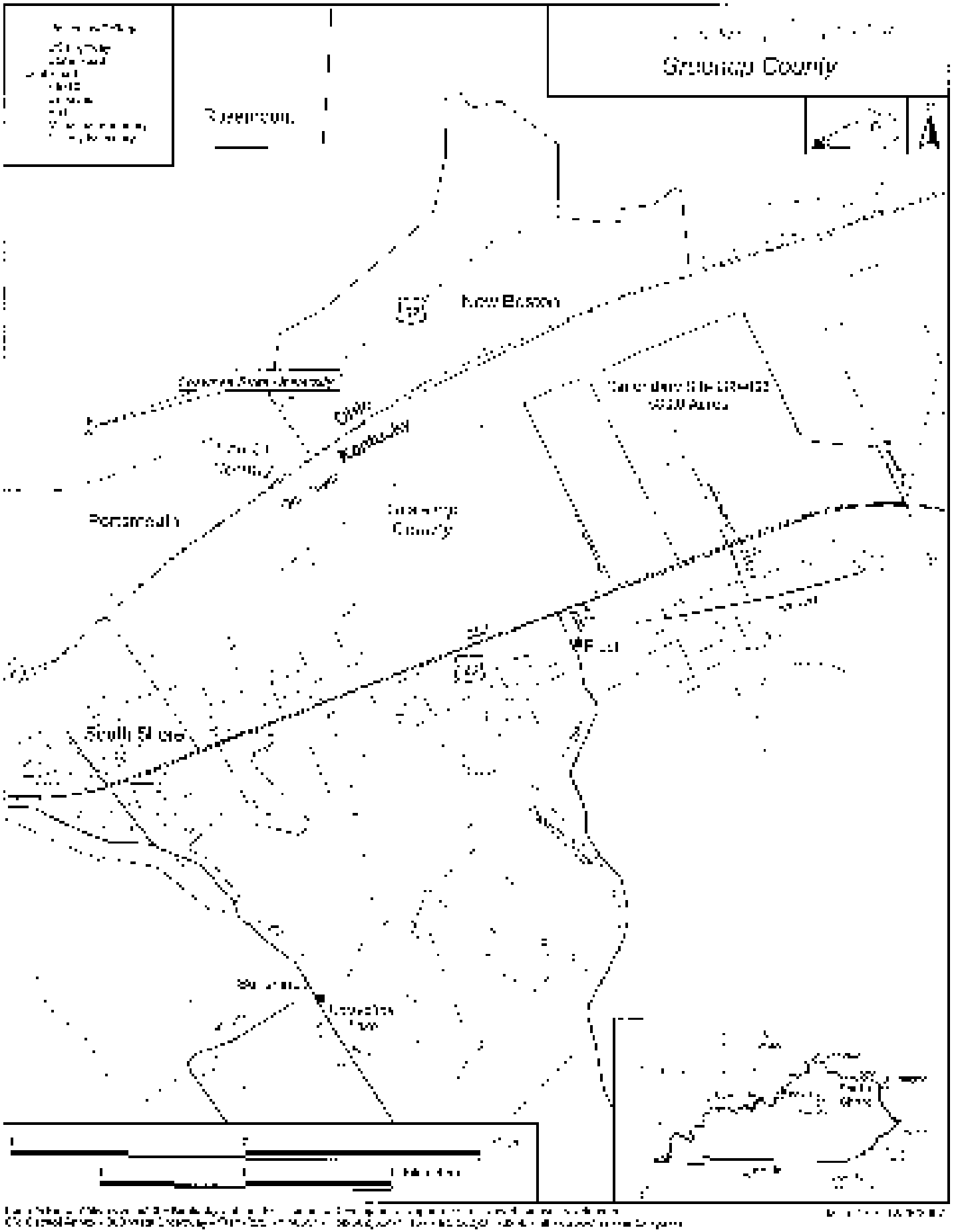
EastPark- Site A
Site 089-001 -- 108.7 Acres


Ohio
Kentucky
West Virginia


Greenup County
Site 039-III
Ohio
Kentucky
Wurtland
Wurtland -- Site 039-002
Site 039-002 = 27.8 Acres


Ohio
Kentucky
West Virginia


Silicon Valley
Site 088-003
Silicon Valley Freeway Terminal Land Corp.
Secondary Site 088-003 -- 583.0 Acres


Greenup County
New Boston
Portsmouth
Greenup County
South Shore

Attachment B9

Kentucky Cabinet for Health and Family Services, letter 12/26/2007

CABINET FOR HEALTH AND FAMILY SERVICES
FACILITIES MANAGEMENT DIVISION

Steven L. Beshear
Governor

[illegible]

Ellen M. Hesen
Acting Secretary

December 28, 2007

Kentucky Transportation Cabinet
Dept. of Highways District 9 Office
Ms. Deanna Harris Miller, P.E., Project Manager
822 Elizaville Road
P.O. Box 527
Flemingsburg, Ky. 41041

Subject: Planning Study
US 23 to Interstate 64 Exits 181 and 195

Ms. Miller,

The Kentucky Transportation Cabinet has asked that we identify specific issues or concerns which may affect the development of a road improvement project in Boyd County the project would involve improvements in the US 23 to Interstate 64 Exits 181 and 185. We have reviewed the project study area map, crash information, and existing traffic volumes provided by your office.

The Cabinet for Health and Family Services has two offices located within the US 23 to Interstate 64 Exits 181 and 185 study areas. One office is located on US 60 which serves the community and has 6 staff which sees 35 clients per week. The other office is located on Greenup Avenue which serves the community and has 60 staff which sees 2000 clients per month.

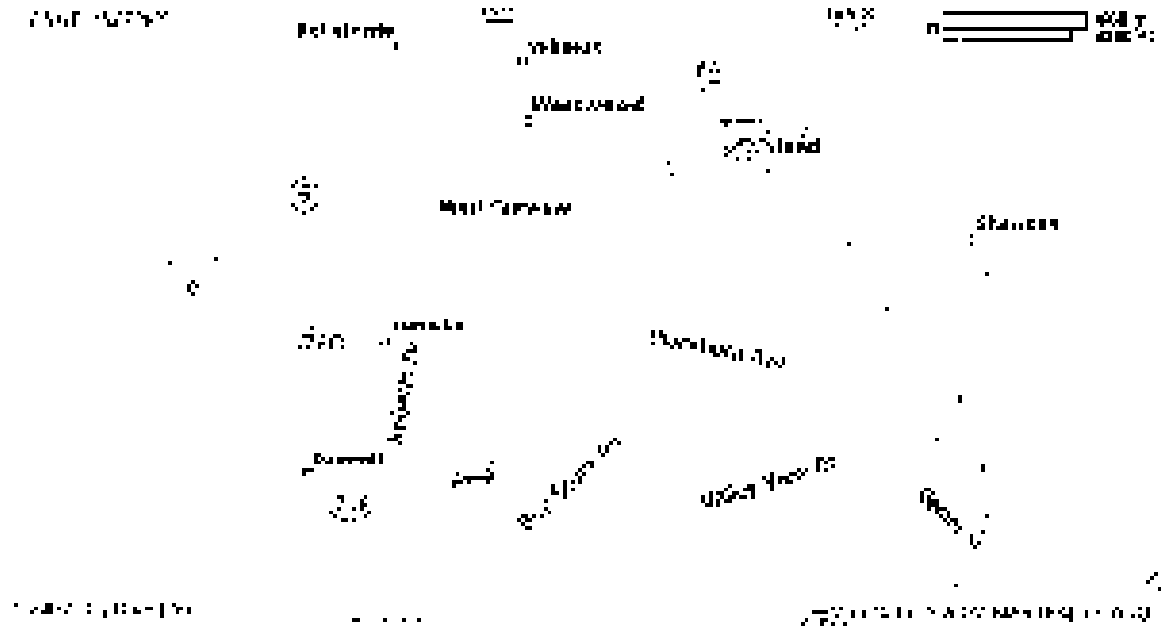
Thank you for giving consideration to our facilities, staff, and clients.

Sincerely,

Robert W. Wright
Leasing Properties Branch

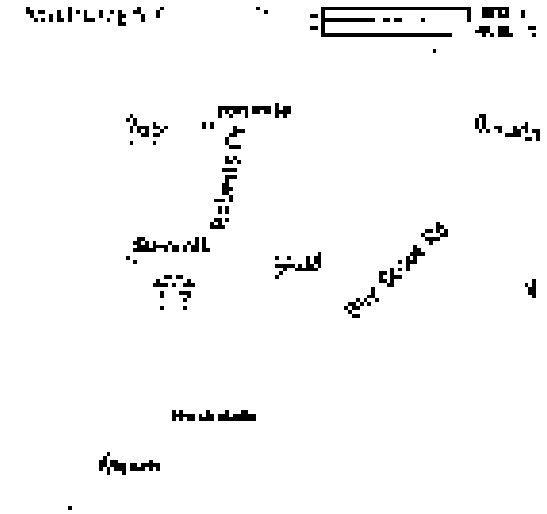
cc: file

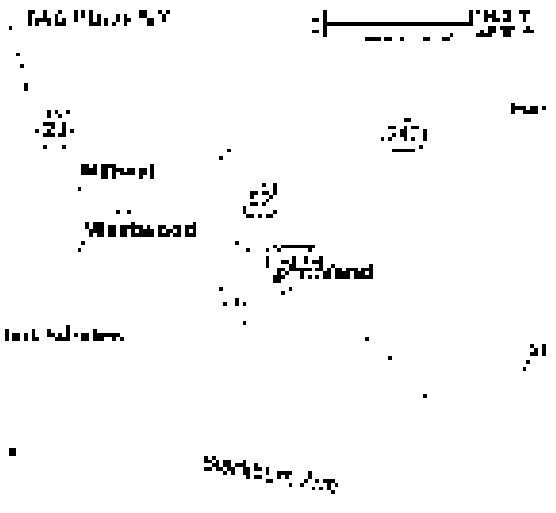
RECEIVED
JAN 2 2008
TRANSPORTATION CABINET
DISTRICT 9



Start:
5850 Us Route 60
Ashland, KY 41102-9510, US

End:
1530 Greenup Ave
Ashland, KY 41101-7613, US





Attachment B10

Ashland Fire Department,
letter 12/4/2007

Ashland

Fire Department
Office of the Fire Chief
[illegible]
[illegible]
[illegible]

December 4, 2007

Director Dennis Keller, P.E. T.E.P.M.
Department of Highways
Division of Planning
522 Elizabeth River
P.O. Box 447
Hemingway, SY 41041

Ashland Connector Study

Dear Mr. Keller

Thank you for the opportunity to provide input on this important project.

The Fire Departments of Ashland, Catlettsburg, and Boyd County want to voice their support for a new connector road from KY 1-64, through the northwestern end of Boyd County and connecting to US 23 at or near the Westwood Limited Addition.

The proposed road would have a positive effect on the emergency services of this region. As you pointed out in the socioeconomic data, crashes are increasing throughout this area and as the population base numbers will undoubtedly continue to climb.

Members such as the US-60 Highway Safety Corridor Safety Committee, of which I am a member, have made significant improvements in the safety of motorists using this vital roadway, but there is only so much we can do with engineering, education and signage. A main point of concern must be addressed.

During the 2007 Kentucky Homeland Security assessment of Ashland, access to and from the area was noted as a major concern.

A missing second primary route will discourage congestion on US-60, involving the potential for accidents. Additionally it will improve response times and ongoing accident scene by giving us a safe means to bypass traffic around the scene. This will reduce the chance of a secondary collision and save the citizens time and money.

Should the unthinkable happen and the road close in either the eastbound or westbound lanes, it will provide a viable route to get traffic into the greater Ashland area. Please stay certain to watch for and file your reports of road closures and chemical spills.

Finally, we have a good road in this portion of the county, which is considered to be a narrow, smaller road connecting Ashland. This will improve response times by emergency responders in saving lives and property. The topography of this region dictated how these roads were built; they are very narrow, winding along the hillsides to take the path of least resistance instead of leading directly to the destination. This not only increases the probability of a crash but also delays the heavy loads of fire and emergency medical response vehicles as they negotiate the terrain responding to emergencies.

Sincerely

David K. Stout, Chief
Ashland Fire Department

Attachment B11

Boyd County Sheriff,
email 12/21/2007

- Original -

From: [illegible]
Sent: Friday, December 21, 2007 [illegible]
To: Wells, Brent (KYTC-D05)
Subject: FW: [illegible] Highway Improvements - Boyd County

From: [illegible]
Sent: Friday, December 21, 2007 12:40 PM
To: Holt, Deanna (KYTC-D07)
Subject: Highway Improvements in Boyd County

I WOULD LIKE TO BEGIN BY THANKING YOU FOR THE OPPORTUNITY TO EXPRESS MY CONCERNS. AS YOU ARE AWARE WE HAVE SEVERAL TRAFFIC SIGNALS IN BOYD COUNTY AND WITH THE INCREASE IN TRAFFIC FLOW THE SMITHFIELD JEUDMIL WORSE.

ANY CONNECTOR FROM I-64 TO ASHLAND WHICH WOULD INCLUDE ROUTE 3 WOULD ALSO AN IMMENSE IMPROVEMENT IN BOYD COUNTY. ROUTE 3 HAS BECOMINGLY JEUDMIL OUR MOST DANGEROUS SECONDARY ROADWAY. NO MATTER WHAT TIME OF THE SEASON 3 ROUTE 3 GOES BECOME OVERBURDENED WITH INCREASED TRAFFIC FLOW. A NUMBER OF COLLISIONS WE HAVE INVESTIGATED MOUNTAIN PARKWAY AND VALLEY AND SINCE WE INVESTIGATE 99% OF ALL COLLISIONS OUTSIDE OF ASHLAND AND CATTLETSBURG WE HAVE FIRST HAND KNOWLEDGE.

ROUTE 3 IS ALWAYS JELLY DANGEROUS DURING PERIODS WITH SNOW AND ICE [illegible] WORKS [illegible] DO A GOOD JOB KEEPING ROUTE 3 OPEN WHICH IS ANOTHER CONCERN [illegible] WOULD HELP IF THE ROADWAY THRU EAST PARK TO LINK WITH US 23 IN WORTHINGTON WOULD BE [illegible] WHICH IS JOINING ROUTE 3 TO BYPASS US 60 BECAUSE IT IS SO CONGESTED. IT IS A MATHEMATICAL PROBLEM WITH US 60 IS THE 2 LANE SECTION FROM I-64 AT THE 181 EXIT TO THE JUNCTION OF US 60 IN GRAYSON. IF US 60 WAS MADE FOUR LANES FROM THAT POINT INTO GRAYSON THIS WOULD HELP IMMENSELY BUT FUTURE INCREASE IN TRAFFIC WITH [illegible] AND US 60 IS CONGESTED ENOUGH A PORTABLE WIDENING OF [illegible] AND WEST BOUND LANES WOULD ALSO BE A BONUS.

NO MATTER WHAT ACTION IS TAKEN, MY OPINION IS THAT ROUTE 3 WILL NOT EASE THE MYRIAD OF PROBLEMS. NEEDS TO BE THE [illegible] OF A CONNECTOR FROM I-64 TO US 23. I'M NOT SURE IF IT IS FEASIBLE BUT I HAVE TO ASK. IT WOULD IMPROVE [illegible] WILL BENEFIT THIS WHOLE AREA IN MANY WAYS.

AGAIN, THANK YOU FOR THIS OPPORTUNITY.

[illegible]

Attachment B12

Kentucky Department of Education Division of Facilities Management, email 12/4/2007

Harris, Deanna (KYTC-D08)

From: Hugg, Louis - Facilities Management [Louis.Hugg@education.ky.gov]
Sent: Tuesday, December 04, 2007 11:45 AM
To: Osborne, Ken (Superintendent of Schools); Eason, Phil (Superintendent); Weeks, Bill (Interview Superintendent)
Cc: Harris, Deanna (KYTC-D08); Owens, Laura (Cabinet Secretary); Hyles, Mark - Facilities Management
Subject: Fwd: US 23 Ash and Connector Study, KYTC Item No. 9-126.00

Importance: High

Gentlemen:

On 11/30/07, Education Cabinet Secretary Laura Owens received a letter from Kelvin Bradley, Chief District Engineer, Department of Highways District 9 Office, requesting input and comments on the Ashland Connector Study, US 23 to US 23. The proposed project will not affect the Kentucky Department of Education because we do not own real property. However, the project may concern you. If you are aware of the connector study and have provided input to KYTC regarding the study, please disregard this email. If you don't know about the study, please request information from Ms. Harris re: the connector corridor. If you know of the study, but have not given your comments to Ms. Harris, it may be in your interest to do so. Mr. Bradley requests comments be sent to Ms. Harris by December 28, 2007.

Regards

Louie Hugg, AIA Emeritus
Construction Branch Manager
Division of Facilities Management
Kentucky Department of Education
500 Mero St., Room 1530
Frankfort, KY 40601
T: (502) 564-4395
F: (502) 564-5454
Louis.Hugg@education.ky.gov

Attachment B13

Department of Military Affairs,
email 12/4/2007

Harris, Deanna (KYTC-D09)

From:	Wilkins, Joseph M MF NGKY [mailto:joseph.m.wilkins@us.army.mil]
Sent:	Tuesday, September 07, 2010 1:14 PM
To:	Harris, Deanna (KYTC-D09)
Cc:	Reinhardt, Mike R (D9) NGKY
Subject:	Planning Study, KY-80 to US 23 Connector, Boyd County Item No. 9-189.00

Ms. Miller,

The Department of Military Affairs can not identify any issues or concerns that could affect the development of subject project.

The Kentucky Army National Guard Post and Armory located at 2119 Lexington Avenue and a Field Maintenance Shop located at 735 61st St. in Ashland, KY is reported that such a connector would facilitate accessibility to each of these facilities, especially with larger military type vehicles.

Joe M. Wilkins
Director, Facilities Division
Boone National Guard Center
Frankfort, KY 40601-6168
ATTN: G57-FD
DSN 697-1535
502 382 7272 (Cell)
502-607-1271 (Fax)
Email: joseph.m.wilkins@us.army.mil

Attachment B14

Kentucky Heritage Council,
letter 12/20/2007

COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL

Steve Beshear
Governor

The State Historic Preservation Office
300 Washington Street
Post Office Box 1792
Frankfort, Kentucky 40601
(502) 564-7005
www.kentucky.gov

Marcheta Sparrow
Secretary

Dennis M. Neary
Executive Director and
State Historic Preservation Officer

March 30, 2010

Connie O. Bradley
Chief District Engineer
Kentucky Transportation Cabinet
District 6
421 Buttermilk Pike
P.O. Box 369
Fleminsburg, KY 41041

Re: Planning Study, Item No. KY 23 Ashland Connector, Boyd County, Kentucky, Item No. 9-129.00

Dear Ms. Bradley:

The State Historic Preservation Office has received a request for comments regarding the above-referenced planning study. There are many cultural resources within the project area, including National Register of Historic Places listed resources and surveyed sites as well as some historic resources that have yet to be evaluated by professional architectural historians. Additionally, there are a number of previously recorded archeological sites within the project corridor, and there will be new sites identified by professional archeologists.

Depending upon the funding source, whether federally-funded or project to Corps of Engineers permits, the Section 106 Review Process must be completed. A full survey of built and archeological cultural resources must be conducted and submitted to this office for review. Contact KYTC Central Office, Division of Environmental Analysis.

We look forward to reviewing the archaeological and architectural reports. If you have questions regarding these comments, please contact Jennifer Bruton Mobley at (502) 564-7005, extension 12.

Sincerely,

Dennis M. Neary, Executive Director and
Kentucky Heritage Council and
State Historic Preservation Officer

RECEIVED
APR 06 2010
ENVIRONMENTAL ANALYSIS
DISTRICT 6

cc: Rebecca Turner, KYTC Central Office
bmm:jb

Kentucky Unbridled Spirit

An Equal Opportunity Employer M/F/D

Attachment B15

KDWM, emails 12/10, 21, 27, 14/2007

[illegible]

Osborne, Deborah

From: Daniell, Robert (EPPC DEP DWM) [robert.daniell@ky.gov]

Sent: Monday, December 10, 2007 8:[illegible] AM

To: Gilbert, George [illegible]

Cc: [illegible] Dean [illegible]

Subject: FW: Planning Study Body Co. [illegible]

For your records!

Rob Daniell, Manager
Underground Storage Tank Branch
81 C. Michael Davenport Blvd
Frankfort, KY 40601
(502) 564-[illegible]

From: [illegible]
Sent: Monday, December 10, 2007 [illegible] PM
To: Daniell, Robert [illegible]
Subject: FW: Planning Study Body Co. [illegible]

UST Branch sends the following comments regarding item No. [illegible]

The USTB has identified [illegible] facilities with [illegible] registered underground storage tanks within the project area ([illegible] active tanks and [illegible] tanks removed or closed in place). The following facilities have had reported USTs [illegible] within the boundaries of the project area.

AI#

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
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[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

From: Daniel, Robert (EPPC DEP DWM)
Sent: Monday, December 10, 2007 11:10 AM
To: Crase, Dawn (EPPC DEP DWM)
Subject: FW: Planning Study Body Contact

[illegible]

Rob Daniel, Manager
Underground Storage Tank Branch
[illegible]
Frankfort, KY 40601
(502) 564-6831

[illegible]

From: Greer, George (EPPC DLP DWM)
Sent: Monday, December 10, 2007 10:30 AM
To: Daniel, Robert (EPPC DEP DWM); Gregston, Ron (EPPC DEP DWM); Watkins, Joe (EPPC DEP DWM); Sherman, Joe (EPPC DEP DWM); Gaus, Jr., Art (EPPC DEP DWM)
Cc: Hall, Karen (EPPC DEP DWM)

[illegible]

Subject: Re: Herring Study Scope.pdf

Please read the attached TOR study scope I received via e-mail by COB Tuesday, Dec 27. Thank you.

From: Foley, Jennifer (DEC sponsored)
Sent: Monday, December 26, 2005 9:58 AM
To: Gilman, Tracy (DEC sponsored)
Subject: Herring Study Scope.pdf

Osborne, Deborah

From: [redacted]
Sent: Friday, December 21, 2007 4:20 PM
To: [redacted]
Subject: FW: Pharmacy Study Body Scope.pdf
Attachments: Pharmacy Study Body Scope.pdf; Proposed Updates to Body Scope of Study 12.20.pdf

From: [redacted]
Sent: Thursday, December 20, 2007 10:10 AM
To: [redacted]
Cc: [redacted]
Subject: FW: Pharmacy Study Body Scope.pdf

Please review the attached TS study body scope and let me know if you have any questions. Thanks.

From: [redacted]
Sent: Thursday, December 13, 2007 9:50 AM
To: [redacted]
Subject: Pharmacy Study Body Scope.pdf

Superfund Site List Report

Superfund Site List Report

Osborne, Deborah

From: Burton Dale [EPIC DEP DWM]
Sent: Thursday, December 27, 2007 [illegible] AM
To: Gilbert, George [EPIC DEP DWM]
Cc: Anderson, Danny [EPIC DEP DWM]; Gurney, Terry [EPIC DLP DWM]; Schneider, William [EPIC DEP DWM]; Glowchuk, Alan [EPIC DEP DWM]; Grubesky, Ron [EPIC DEP DWM]; Webb, Art [EPIC DLP DWM]
Subject: RE: Fleming Study Boyd Co.pdf

George

The HDV Report is inclusive of any historic studies in the study area, some of which are HDV facility in the extreme SW corner of the study area. Kentucky studies & soil which I see as [illegible] should be kept covered with soil and/or grass to prevent dust [illegible] exposures for study visitors.

From: Gilbert, George [EPIC DEP DWM]
Sent: Thursday, December 27, 2007 8:30 AM
To: Grubesky, Ron [EPIC DEP DWM]; Webb, Art [EPIC DLP DWM]
Cc: Anderson, Danny [EPIC DEP DWM]; Gurney, Terry [EPIC DLP DWM]; Osborne, Deborah [EPIC DEP DWM]; Schneider, William [Kenton County]
Subject: FW: Fleming Study Boyd Co.pdf
Importance: High

[illegible] Thanks

From: Gilbert, George [EPIC DEP DWM]
Sent: Monday, December 10, 2007 10:10 AM
To: Daniel, Darrell [EPIC DEP DWM]; Gurney, Terry [EPIC DLP DWM]; Osborne, Deborah [EPIC DEP DWM]; Shaver, Rick [EPIC DLP DWM]; Webb, Art [EPIC DLP DWM]
Cc: Hall, Kevin [EPIC DLP DWM]
Subject: FW: Fleming Study Boyd Co.pdf

Please review [illegible] study and comment/[illegible] the study area by COB Friday, Dec. 21. Thanks

From: Perry, Derrick [EPIC DEP DWM]
Sent: Monday, December 10, 2007 9:58 AM
To: Gilbert, George [EPIC DEP DWM]
Subject: Fleming Study Boyd Co.pdf

Osborne, Deborah

From: [illegible]
Sent: Friday, [illegible]
To: [illegible]
Subject: RE: [illegible]

George
As I'm sure you're aware, our concern on the map we have are the following comments:
If the road goes east of Coalton, it will be going through the middle of Big Run Farm (it will be west of Coalton instead).
If the road goes due North, it will be going through Valley Industrial Park, which has a medical and some retail facilities, a few CD&D landfills and a junkyard plus various other small businesses. Connecting to go North will encounter a federal preserve as well as some other issues there also.

Let us know if you need more specific information.

From: Gilbert, George (EPPC DEP DWM)
Sent: Monday, December 10, 2007 10:10 AM
To: Daniel, Robert; EPPC DEP DWM; Gilbert, Ray (EPPC DEP DWM); Hayden, Jon (LAN, DEP DWM); Shanor, Dan (EPPC DEP DWM); Webb, Ann (EPPC DEP DWM)
Cc: Hall, Karen (EPPC DEP DWM)
Subject: RE: Planning Study Easy Co.pdf

Please review the enclosed County and Network roads in the study area by COB Friday, Dec. 21st. Thanks.

From: Perry, Jennie (EPPC DEP DWM)
Sent: Monday, December 10, 2007 9:55 AM
To: Gilbert, George (EPPC DEP DWM)
Subject: Planning Study Easy Co.pdf

Attachment B16

KDWM Landfills, email 12/27/2007

Osborne, Deborah

From: [illegible]
Sent: Thursday, December 27, 2007 1:47 PM
To: Cooley, George (LRPC DLP DWM)
Subject: FW: Diamond Shoals Body Co. PDF
Attachments: [illegible]

[illegible]

Tony L. Cooley P.E., P.G.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

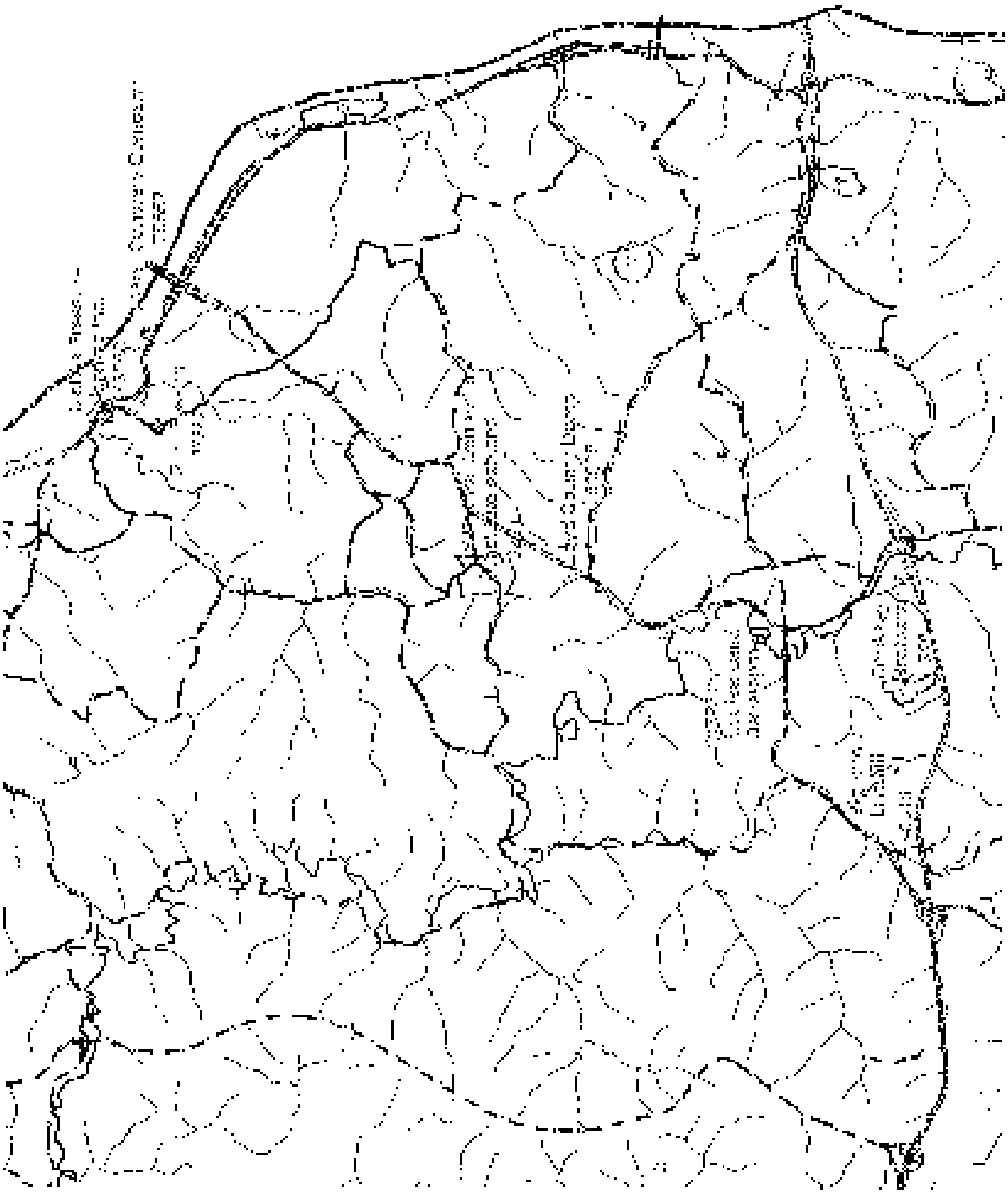
From: Cooley, George (LRPC DLP DWM)
Sent: Thursday, December 27, 2007 12:32 PM
To: Schaefer, Kurt (LRPC DLP DWM); Webb, Alan (LRPC DEP DWM)
Cc: Anderson, Danny (LRPC DEP DWM); Cooley, Tony (LRPC DEP DWM); [illegible]; Schaefer, Kathryn - Jackson County
Subject: FW: Diamond Shoals Body Co. PDF
Importance: High

[illegible]

From: Elliott, Gaston (LRPC DEP DWM)
Sent: Monday, December 10, 2007 [illegible]
To: Daniel, Richard (LRPC DEP DWM); Sandusky, Kurt (LRPC DLP DWM); Medlin, Jim (LRPC DEP DWM); Shelton, Lee (LRPC DLP DWM); Webb, Alan (LRPC DEP DWM)
Cc: Hall, Ronald (LRPC DEP DWM)
Subject: FW: Diamond Shoals Body Co. PDF

[illegible]

From: Daniel, Richard (LRPC DEP DWM)
Sent: Monday, December [illegible], 2007 [illegible]
To: Elliott, Gaston (LRPC DEP DWM)
Subject: Diamond Shoals Body Co. PDF



Attachment B17

Kentucky Department of Agriculture,
letter 12/3/2007

Richie Farmer, Commissioner
32 Capital Plaza
Frankfort, KY 40601

Phone: (502) 564-4696
Fax: (502) 564-2133
www.kyagriculture.com

Kentucky Department of Agriculture

A Consumer Protection And Service Agency

December 5, 2007

Ms. Deanna Harris Miller, P.E., TEDM
Division of Planning
Department of Highways District 9 Office
541 Louisville Road
P.O. Box 347
Harrodsburg, Kentucky 40330

RE: Boyd County Item No. 9-12000

Dear Ms. Miller:

The Kentucky Department of Agriculture acknowledges receipt of information concerning the above noted Item No. At this time, the Department has no comment on the proposed project.

We appreciate the opportunity to provide input.

Sincerely,

Richie Farmer, Commissioner

RECEIVED
DEC - 5 2007
TRANSPORTATION CABINET
DISTRICT 9

Attachment B18

KEPPC-DEP Department for Natural Resources Division of Mine Reclamation and Enforcement, letter 12/3/2007

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Bruce Hietcher
Governor

Department for Natural Resources
[illegible]
Frankfort, Kentucky 40601
Phone: (502) 564-6940
Fax: (502) 564-5698
www.dnr.ky.gov
www.dmrky.com

Teresa J. Hill
Secretary

Susan B. Bush
Commissioner

December 5, 2007

Teresa Morris Miller, P. E., TEBM
Director of Planning
Kentucky Transportation Cabinet
Division of Planning
P. O. Box 747
Frankfort, KY 40601

Subject: Planning Study – I-64 to US 23 Ashland Connector Study
Item No. 9-120.00

Dear Ms. Miller:

Thank you for the opportunity to comment on the planning study project located in Boyd County. Upon initial review of the project, the Department for Natural Resources (DNR) has identified the presence of several mining permits listed below – our office no longer has jurisdiction over these active permits. There does not appear to be any active coal mining activities in this vicinity. We also have an abandoned mine in the study area. Please see the attached map for permit locations.

Hanson Brick Quarry #811-0018 (permit [illegible])
Center Creek Mining #811-0040 (coal, released)
K & S Coal Company #811-0047 (coal, released)
Addington, Incorporated #811-0010 (coal, released)
South Consolidated LLC #811 (coal, released)
Addington, Incorporated #810-0020 (coal, released)
Donald W. Kaiser #810-0001 (coal, released)
Several Coal Co. #811-0005 (coal, bond forfeiture) and #810-0001 (coal, released)
Paul Coffey Construction #811-0008 (coal, released)
Blanton Coal Corporation #811-0076A and #811-0076 (coal, released)
Paul Coffey Construction #811-0008 (coal, released)

I appreciate the information you have provided to us on the proposed Study Area. If you have any questions regarding this correspondence or require additional information regarding the Federal permits, please contact Dan Crews at (502) 564-2856.

Sincerely,

Paul Anthony "Jack" Jordan
Division of Water Ecological Services and Conservation

PAJ:gbt

Attachment

Mining Permits Within I-64 and US 23 Connector Study Area

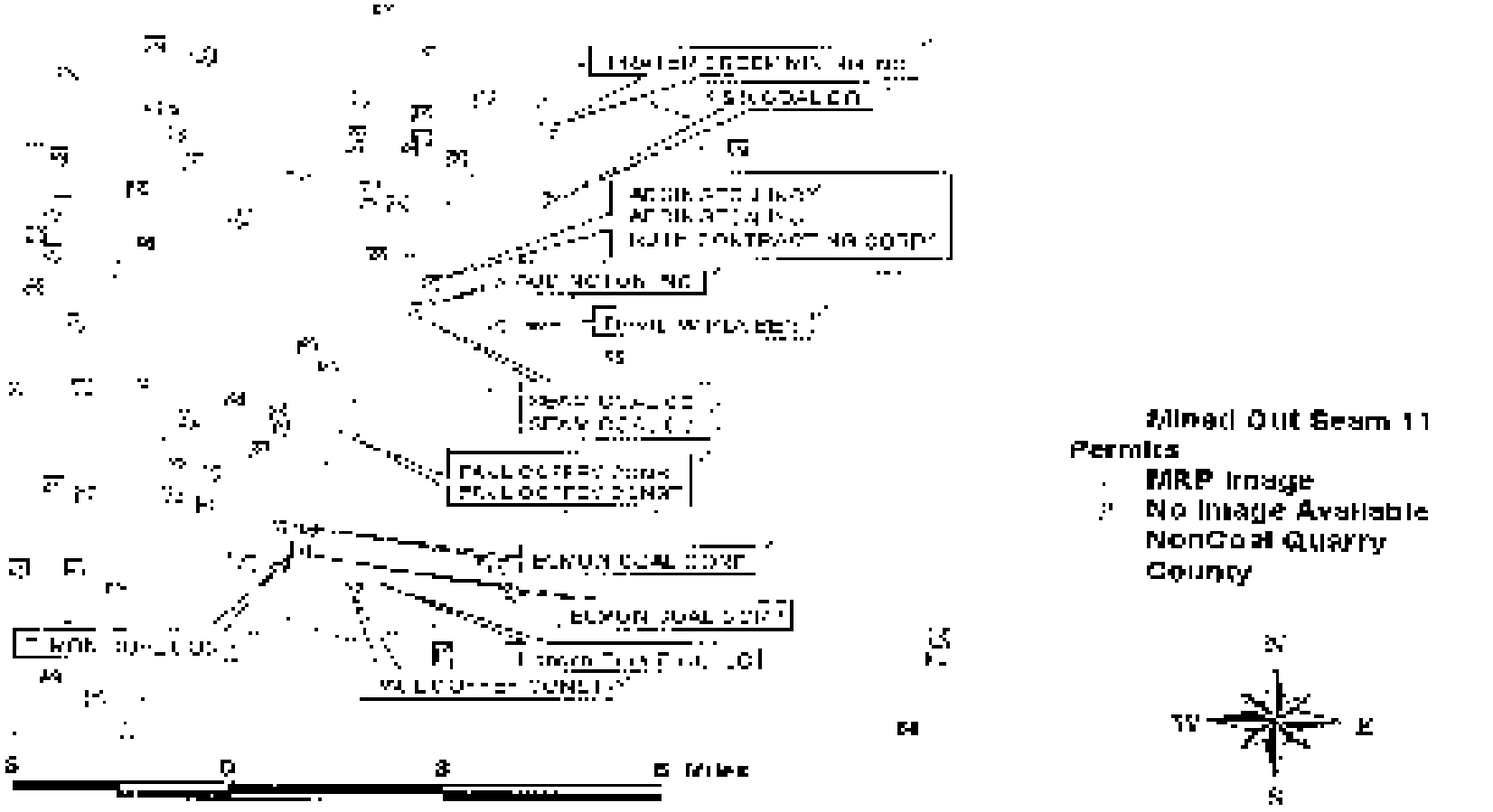


Figure 1. Location of Coal and Quarry Mining Permits within the Study Area.

Attachment B19

FAA, letter 12/3/2007

U.S. Department of
Transportation
Federal Aviation
Administration

Memphis Airports District Office
2602 Tower Road, Suite 220
Memphis, TN 38131-1854
Phone: 901-544-3495

December 3, 2007

Katrina O. Bradley, P.E.
Kentucky Transportation Cabinet
Department of Highways, District 9
P. O. Box 347
Flemingsburg, KY 41041

Dear Ms. Bradley,

This is in response to your letter to Mr. Philip Brazer dated November 27, 2007 requesting information on any impacts concerning proposed highway improvements in Boyd County. I have approximated the coordinates of your proposed construction as follows:

Point 1: Intersection of Highway 5 and Highway 23 – latitude 38° 29' 49.20", longitude 82° 32' 06.59"

Point 2: Intersection of Highway 60 and US 64 – latitude 38° 21' 52.78", longitude 82° 46' 35.30"

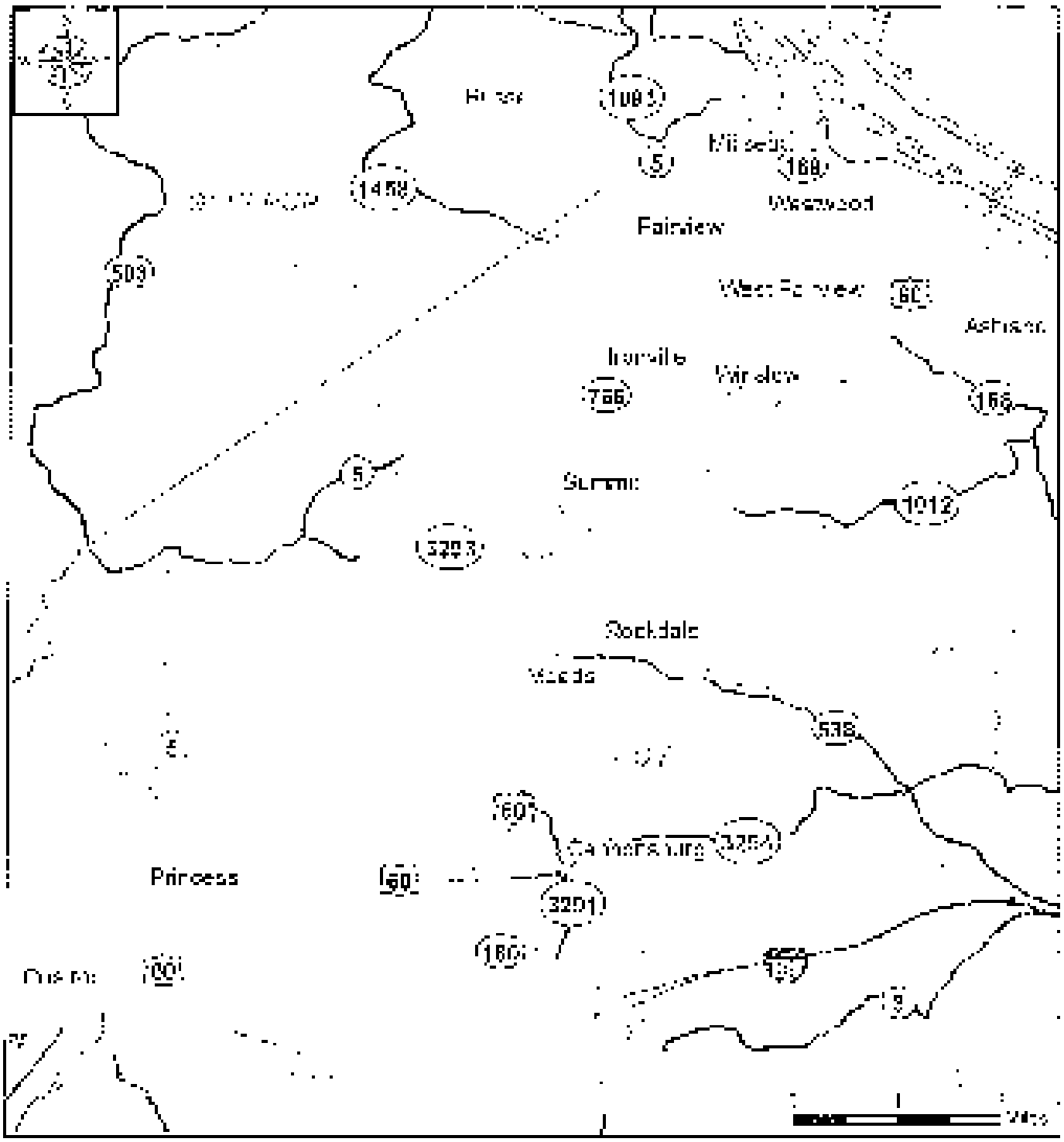
Point 3: Intersection of Highway 180 and US 64 – latitude 38° 22' 06.50", longitude 82° 41' 53.17"

Point 4: Intersection of Highway 60 and Greenup Ave – latitude 38° 28' 07.39", longitude 82° 38' 32.21"

Please be advised that the Ashland Regional Airport (Location Identification DWH) is located 4.65 miles from Point 1. It is my responsibility to inform you of any public use airports within a six mile radius of proposed construction and ask that you review the instructions for FAA Form 7460-1 to determine if you need to submit the form for further review of the proposed construction. I have attached the form and instructions for your use. Please review my construction limits specification for accuracy in your review.

Sincerely,

Michael L. Thompson
Program Manager



Legend

Study Area

Populated Place

Streams and Rivers

Railroad

STUDY AREA

KY 180 to I-64 Access Connector
Boyd County
KYTC Item 12-129.00

ENTRAN

Attachment B20

KEPPC-DEP Division of Air Quality,
letter 12/20/2007

Steven L. Beshear
Governor

Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
www.dep.ky.gov
December 30, 2013

Robert D. Vance
Secretary

Ms. Deanna Wilson, P.E.
TPMC
Division of Planning
Kentucky Transportation Cabinet – District 9 Office
822 Elizaville Road
P.O. Box 317
Lexington, Kentucky 40511

Dear Ms. Miller:

The Division has reviewed the permitting strategy for the evaluating proposed highway improvements for the I-64 at U.S. 25 Ashland Connector in Boyd County, Item Number 9-129.00. The following Kentucky Administrative Regulations apply to the proposed project:

Kentucky Division for Air Quality Regulation 401 KAR 63:010 Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precautions to prevent particulate matter from becoming airborne. Additional requirements include the severance of open bodied trucks operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/Documents/Fugitive_Emissions_Fact_Sheet.pdf.

Kentucky Division for Air Quality Regulation 401 KAR 63:005 states that open burning is prohibited. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. Open burning may be utilized for the purposes listed in the Open Burning Fact Sheet located at http://www.air.ky.gov/Documents/Open_Burning_Fact_Sheet.pdf. Although, explosive matter accumulated by land clearing is included as a permissible method of disposal, the Division encourages the use of chipping or grinding in order to avoid excessive particulate emissions in the immediate vicinity of the project.

Finally, the subject location in this document must meet the conformity requirements of the Clean Air Act as amended and the transportation planning provisions of Title 23 and Title 49 of United States Code.

The Division also suggests an investigation into compliance with applicable local government regulations.

Every effort should be made to maintain compliance with the remaining pollutant standard requirements. The Division also suggests an investigation into compliance with applicable regulations of the local governments. If there are any questions relating to this matter, please contact Joe Burgess at (502) 573-3382 extension 204.

Sincerely,

John S. Lyons
Director

JSL:jmf

Attachment B21

Kentucky NRCS,
email 6/16/2008

Young, Chris

From: Adams, Jerry - Lexington, KY [jerry.adams@ky.usda.gov]
Sent: Monday, June 16, 2008 3:59 PM
To: Young, Chris
Subject: Boyd Co Prime Farmland
Attachments: BoydCo_primefarmland.pdf

Chris
Attached is report you requested.
Here's a link to the Soil Data Mart: http://soildatamart.nrcs.usda.gov/Default.aspx
And Soil Data Viewer that utilizes info from SDM to create maps. http://soildataviewer.nrcs.usda.gov/
I dont believe there's any restrictions on either's access.

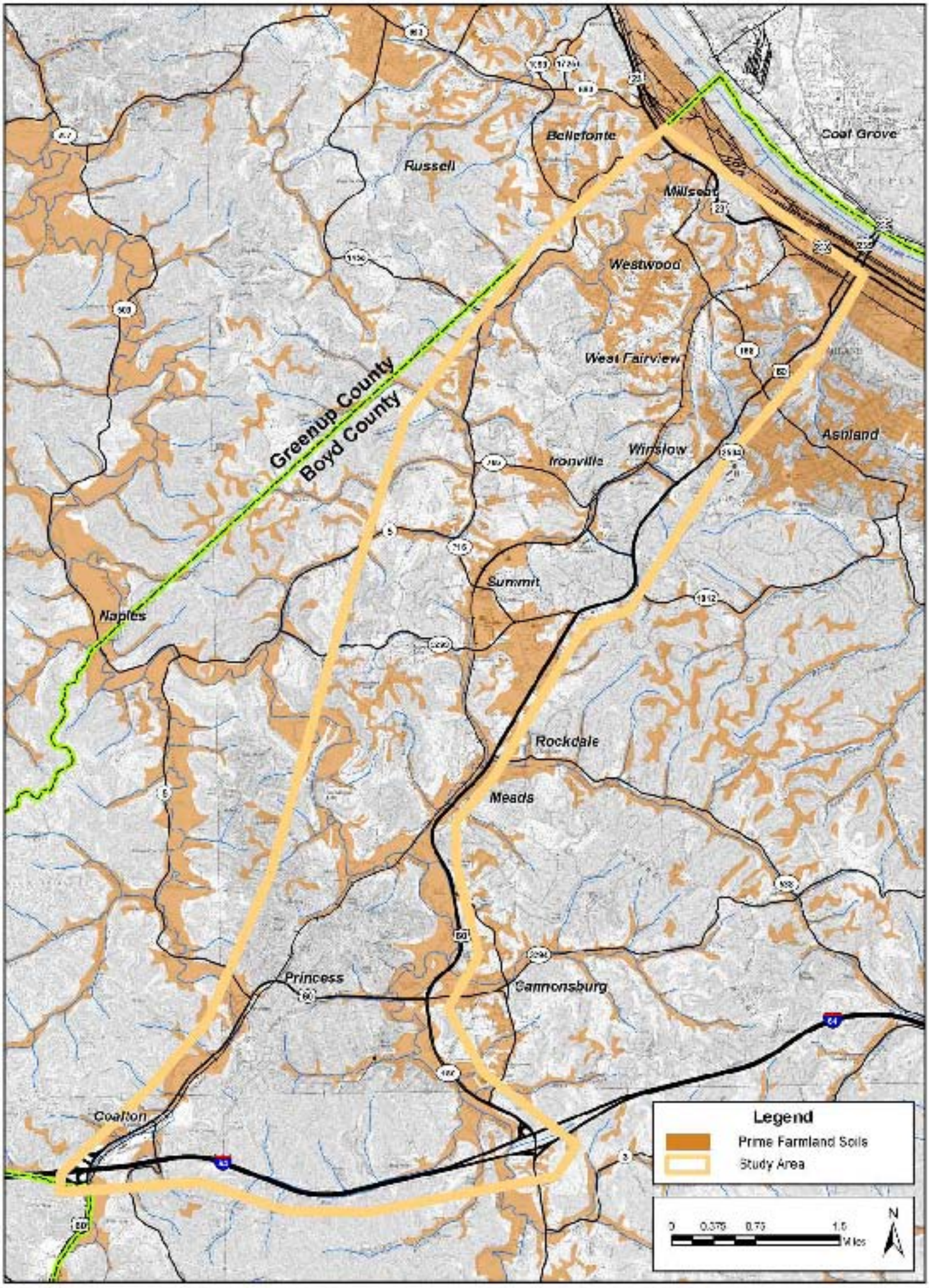
The District Conservationist for Greenup and Boyd Co is Earl Johnson. His father passed away this weekend, but if you need future info you should be able to contact him at 606-833-0180. Let me know if you need additional info.

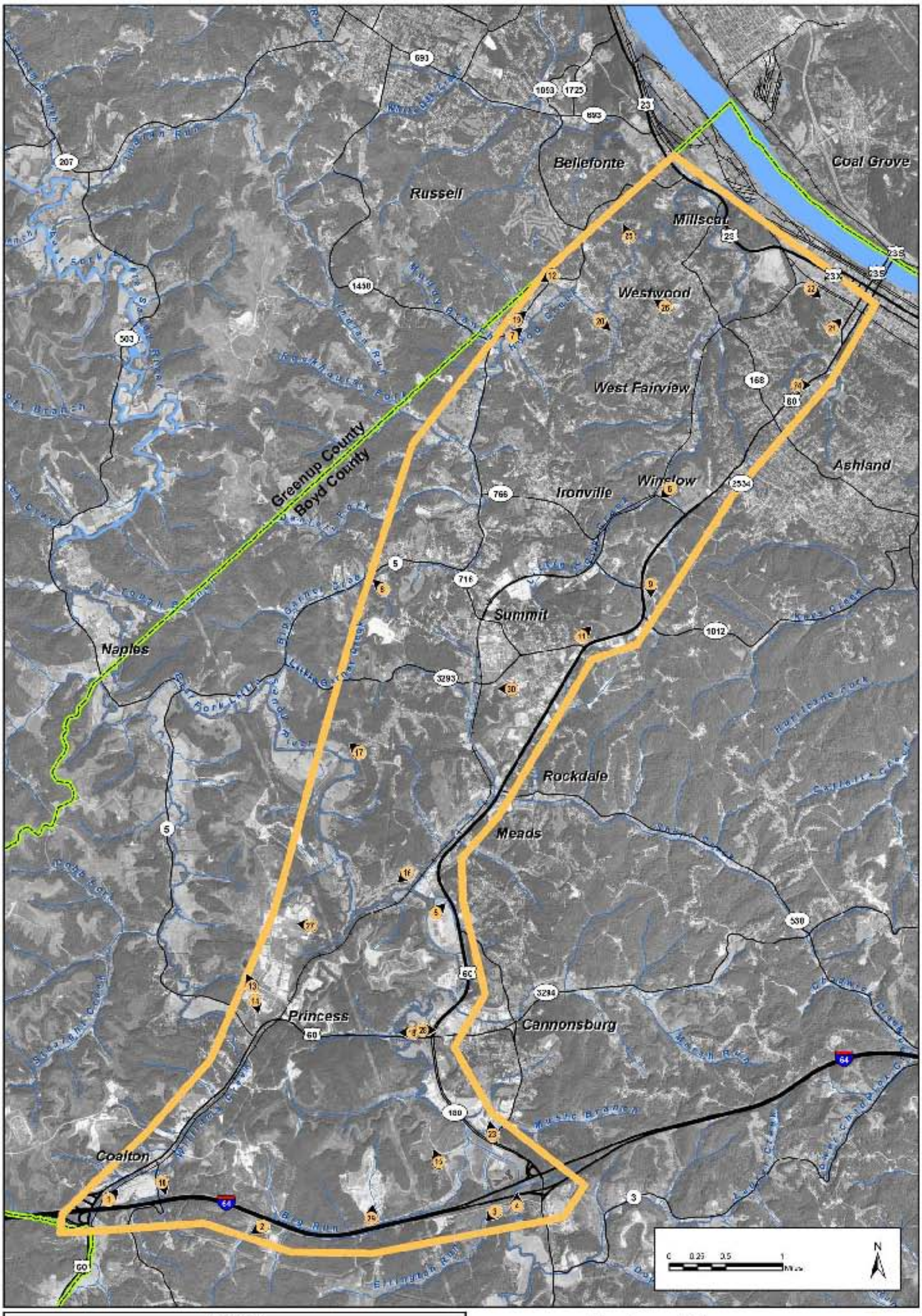
Jerry L Adams
Area Resource Conservationist
771 Corporate Drive Suite 210
Lexington, KY 40503-5479
Ofc: 859-224-7381
Cell: 859-585-8090
Fax: 859-224-7602

Prime and other Important Farmlands

Boyd and Greenup Counties, Kentucky

Map symbol	Map unit name	Farmland classification
AlB	Allegheny loam, 2 to 6 percent slopes	All areas are prime farmland
ChA	Chavies fine sandy loam, 0 to 6 percent slopes	All areas are prime farmland
Co	Cotaco loam	All areas are prime farmland
EkA	Elk silt loam, 0 to 2 percent slopes	All areas are prime farmland
HsB	Hayter silt loam, 2 to 6 percent slopes	All areas are prime farmland
LtA	Licking silt loam, 0 to 2 percent slopes	All areas are prime farmland
MkB	Markland silt loam, 2 to 6 percent slopes	All areas are prime farmland
MnB	Monongahela silt loam, 2 to 6 percent slopes	All areas are prime farmland
OtA	Otwell silt loam, 0 to 2 percent slopes	All areas are prime farmland
ScB	Shelocta gravelly silt loam, 2 to 6 percent slopes	All areas are prime farmland
TlB	Tilsit silt loam, 2 to 6 percent slopes	All areas are prime farmland
WcB	Wernock silt loam, 2 to 6 percent slopes	All areas are prime farmland
WhA	Whitley silt loam, 0 to 2 percent slopes	All areas are prime farmland
WhB	Whitley silt loam, 2 to 6 percent slopes	All areas are prime farmland
AlC	Allegheny loam, 6 to 12 percent slopes	Farmland of statewide importance
GlC	Gilpin silt loam, 6 to 12 percent slopes	Farmland of statewide importance
HsC	Hayter silt loam, 6 to 12 percent slopes	Farmland of statewide importance
LmC	Latham silt loam, 6 to 12 percent slopes	Farmland of statewide importance
MlC	Markland soils, 6 to 12 percent slopes	Farmland of statewide importance
MnC	Monongahela silt loam, 6 to 12 percent slopes	Farmland of statewide importance
RnC	Riney loam, 6 to 12 percent slopes	Farmland of statewide importance
ScC	Shelocta gravelly silt loam, 6 to 12 percent slopes	Farmland of statewide importance
TlC	Tilsit silt loam, 6 to 12 percent slopes	Farmland of statewide importance
WcC	Wernock silt loam, 6 to 12 percent slopes	Farmland of statewide importance
WhC	Whitley silt loam, 6 to 12 percent slopes	Farmland of statewide importance
Mm	McGary silt loam	Prime farmland if drained
Mo	Morehead silt loam	Prime farmland if drained
Wb	Weinbach silt loam	Prime farmland if drained
Bo	Bonnie silt loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Nk	Newark silt loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Sm	Stendal silt loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Sn	Stokly fine sandy loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
As	Ashton silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
Cu	Cuba silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
Hu	Huntington silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
Lu	Lindside silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
No	Nolin silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
Pf	Pope fine sandy loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
Pg	Pope gravelly silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season


Bellefonte
Coal Grove
Russell
Millseat
Westwood
West Fairview
Greenup County
Boyd County
Ironville
Winslow
Ashland
Summit
Naples
Rockdale
Meads
Princess
Cannonsburg
Coalton
Legend
Prime Farmland Soils
Study Area
0
0.375
0.75
1.5
Miles
N



Legend

- Photo Locations
- Study Area
- Surface Streams
- Railroad
- Major Roads

[1] Reported T & E Species not shown (sensitive information)

Attachment C
Environmental Footprint

PHOTOGRAPH INDEX MAP

I-64 to US 23 Connector
Boyd County
KYTC Item #9-129.00

KENTUCKY TRANSPORTATION CABINET

ENTRAN

Representative Photographs of Environmental Footprint Resources and Concerns

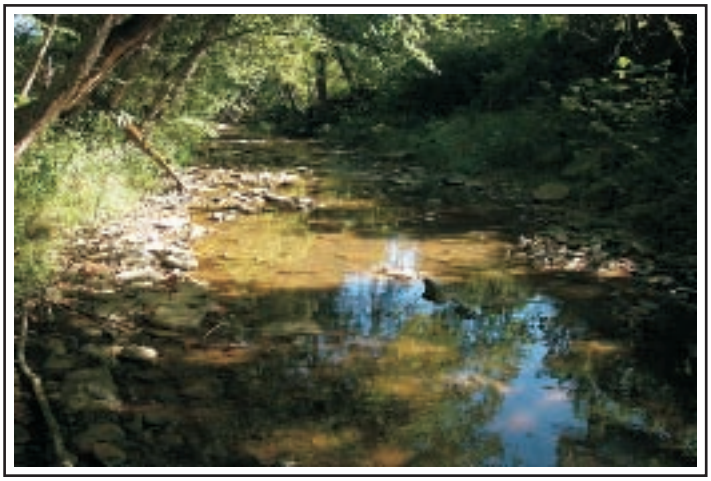


Photo 1: Representative Photograph of Williams Creek in the Study Area, a USGS Perennial Stream.

Photo 2: Representative Photograph of Big Run in the Study Area, a USGS Perennial Stream.

Photo 3: Representative Photograph of Ellington Run in the Study Area, a USGS Perennial Stream.

Photo 4: Representative Photograph of East Fork Little Sandy River in the Study Area, a USGS Perennial Stream.

Photo 5: Representative Photograph of Shope Creek in the Study Area, a USGS Perennial Stream.

Photo 6: Representative Photograph of Little Hood Creek in the Study Area, a USGS Perennial Stream.

Photo7: Representative Photograph of Hood Creek in the Study Area, a USGS Perennial Stream.

Photo 8: Representative Photograph of Big Garner Creek in the Study Area, a USGS Intermittent stream.

Photo 9: Representative Photograph of an Unnamed Tributary to Little Hood Creek in the Study Area, a USGS Perennial Stream.

Photo 10: Representative Photograph of an Unnamed Tributary to Williams Creek in the Study Area , a USGS Intermittent Stream.

Photo 11: Representative Photograph of a Non-USGS Ephemeral Unnamed Tributary to Shope Creek in the Study Area.

Photo 12: Representative Photograph of an NWI-Mapped Palustrine Emergent Wetland in the Study Area.

Representative Photographs of Environmental Footprint Resources and Concerns

Photo 13: Representative Photograph of a Non-NWI-Mapped Palustrine Emergent Scrub-ShrubWetland in the Study Area.

Photo 14: Representative Photograph of a Non-NWI-Mapped Palustrine Emergent Wetland in a Roadside Ditch in the Study Area.

Photo 15: Representative Photograph of a Pond in the Study Area.

Photo 16: Representative Photograph of Sandy Creek Golf Course, and a Gray Bat or Indiana Bat Potential Habitat Tree in the Study Area.

Photo 17: Representative Photograph of Gray Bat or Indiana Bat Potential Habitat in a Rock Face with Cavities in the Study Area.

Photo 18: Representative Photograph of Forested Land Cover and Right-of-way Land Use along Westbound US 60 in the Study Area.

Representative Photographs of Environmental Footprint Resources and Concerns

Photo 19: Representative Photograph of Suburban and Rural Land Cover in the Study Area; Agricultural, Residential and Commercial Land Uses.

Photo 20: Representative Photograph of Suburban Land Cover in the Study Area; Residential Land Use.

Photo 21: Representative Photograph of Urban Land Cover in the Study Area; Downtown Ashland - Residential, Commercial and Industrial Land Uses.

Photo 22: Representative Photograph of a Public Park in the Study Area; Dawson Pool Park, North of US 23.

Photo 23: Representative Photograph of a School and Athletic Complex in the Study Area; Boyd County High School and Athletic Fields on Midland Trail Road.

Photo 24: Representative Photograph of a Learning Center in the Study Area; Ashland Community and Technical College on College Drive.

Representative Photographs of Environmental Footprint Resources and Concerns

Photo 25: Representative Photograph of a Church in the Study Area; Bethel at Westwood Church on Sarah Road.

Photo 26: Representative Photograph of a Cemetery in the Study Area; Dixon Cemetery in the City of Ashland on Main Street Between McClure and Fairview Avenues.

Photo 27: Representative Photograph of an Industrial Area in the Study Area at US 60 and KY 5.

Photo 28: Representative Photograph of a UST Facility in the Study Area; Super Quik Gas Station and Car Wash on US 60.

Photo 29: Representative Photograph of a Landfill in the Study Area; Cooksey Brothers Landfill, Closed, CERCLIS-Superfund Property.

Photo 30: Representative Photograph of AST's in the Study Area; Oil Tanks and Wells South of KY 3293.

Appendix D – Historic Resources Overview

A CULTURAL HISTORICAL RESOURCE OVERVIEW FOR INTERSTATE 64 TO ASHLAND PLANNING STUDY BOYD COUNTY, KENTUCKY

KTYC Item No. 9-128.00

by

Helen C. Powell

H. Powell and Co., Inc.
838 East High Street
Box 253
Lexington, Kentucky 40502
(859) 233-8818

for

Entran
400 East Vine Street
Suite 300
Lexington, Kentucky 40507

(859) 233-2100

Helen Powell Principal Investigator
December 2007

Lead Agency
Department of Transportation

Abstract: Overview of Interstate 64 to Ashland, Ky Connector Planning Study
Boyd County, KYTC Item No. 9-129.00

Within the proposed planning study area for the Interstate 64 to Ashland, Kentucky Planning Study are the following two historic districts and two individual properties which are listed on the National Register

Ashland Historic Commercial District which contains 63 buildings, listed in 1994 (Site PP)

North Avenue Historic District which contains 28 dwellings, listed in 1979 (Site EE)

Paramount Theater, 1304 Winchester Ave., listed as individual property in 1975 and included in the Ashland Historic Commercial District (Site PP) in 1994

St. James African Methodist Episcopal Church, listed in 1978 (Site NN)

As the result of coordination with the SHPO on compliance reports the following sites were Determined Eligible by Agreement by SHPO

Quadruple Span Concrete Bridge, US 60 over Little Sandy River (Site C)
Williams Creek Bridge, Tennessee (Site D)
Summit Missionary Baptist Church, KY 716 (Site I)

The following site was Determined Eligible by the Keeper of the National Register.

Federal Correctional Institution and Prison Camp (FCI/FCP) (Site J)

After a windshield survey, the following six historic districts appear to meet National Register criteria

Prospect Place Historic District (Site Z)
Midland Heights Historic District (Site AA)
Graysona Historic District (Site BB)
Grayson Road Historic District (Site CC)
Lexington Ave / 14th Street Historic District (Site DD)
1100 Block Bath Ave / 12th Street Historic District (Site II)

The following 26 individual properties appear to meet National Register criteria
Dwelling, 2155 Midland Trail (Site A)
House, 8831 Meade-Springer Road (Site E)

Dwelling, 8023 Mead Springer Road (Site F)
Bungalow and Barns, 8017 Mead Springer Road (Site G)
Tudor Revival Houses, 835/839 KY 716 (Site H)
I Plan Dwelling, 8763 KY 716 (Site I)
Thornberry House, KY 716 (Site M)
ARMCO Park, US 60 (Site N)
Gertrude Varney House (Site O)
Bridge over Little Hood Creek (Site P)
Westwood Christian Church, 713 Wheatley Avenue (Site Q)
Bill Mayberry House, 2633 Main St. Fairview (Site R)
Fairview Gym, Fairview High School, 2133 Main St. (Site S)
Log House, McKnight St., West Fairview (Site T)
Dwelling, Nichols Place (Site U)
Log House, York St. (Site V)
Ballard Baptist Church, Blackburn Ave. (Site W)
Christ United Methodist Church (Site X)
Dwelling, 321 Harrison (Site Y)
Tudor Revival Building, US 60 (Site DD)
Tudor Revival Dwelling, 17th St. (Site EE)
American Foursquare, Bain Ave. (Site HH)
White Tower Laundry Building, Central Ave. (Site KK)
Commercial Building/ Hotel, 306 W 13th St. (Site LL)
Salvation Army Building, 1225 Carter Ave (Site MM)
Chesapeake and Ohio Passenger Depot, Carter Ave. (Site OO)

For the location of these sites with National Register potential, see the project map (Figure III-1). A final determination of National Register eligibility will require additional research, photography, physical examination of the structures, an evaluation of these sites relative to the integrity standards established by similar properties in Boyd County, Kentucky which are currently listed on the National Register, and consultation with the State Historic Preservation Officer (SHPO) at the Kentucky Heritage Council in Frankfort.

TABLE OF CONTENTS

I. INTRODUCTION

Records Search

To determine if there were individual sites or districts on the National Register within the study area for the Interstate 64 to Ashland Connector in Boyd County, Kentucky, the consultant reviewed the survey files for the counties at the Kentucky Heritage Council in Frankfort. Figure I-1 shows the location of the corridor relative to highways and communities in Boyd County, Kentucky.

National Register Sites in Project Corridor

Ashland Commercial Historic District, listed in 1984

The Ashland Commercial Historic District consists of 74 properties in a 21-acre area bound by the CSX (formerly C&O) Railroad tracks and the Ohio River on the north 16th Street on the east, Carter Avenue on the south, and 12th Street on the west. The brick commercial buildings included in the district date from 1890 to 1940, but over half or 43 of the buildings date from the period from 1900 to 1925, a period of economic expansion for Ashland.

Bath Avenue Historic District, listed in 1978

The Bath Avenue Historic District includes four blocks on the north and south sides of West Bath Avenue between 13th Street and 17th Street. Western Bath Avenue was a neighborhood occupied by the nineteenth century owners and managers of Ashland's industries. Large scale houses continued to be built there into the twentieth century. The district contains an important group of dwellings built in a variety of styles uniquely listed elsewhere in Ashland. Commercial development of the 1200 block has severed the west end of the block from the neighborhood, and the remaining four blocks

(1930-1960) are well maintained and unspoiled by intrusions.

Paramount Theater, 130d Winchester Ave, listed in 1975

The Paramount Theater was also included within the boundaries of the Ashland Commercial Historic District in 1994. Completed in 1931, the Paramount designed in the Art Deco style and provided seating for 1000 people. For many years, the Paramount was the region's only movie house which showed "talking pictures."

St. James African Methodist Episcopal Church, listed in 1979

Established by the Reverend Christopher Seals circa 1860, the present day St. James African Methodist Episcopal Church was completed in 1917. The entry to the one and one half-story front-gabled brick church is through a hip-roofed corner bell tower. Above the windows are stone lintels. It was listed on the National Register in 1979.

Properties Determined Eligible by Keeper in Project Corridor

Federal Correctional Institution and Prison Camp (30-83), KY 716, Summit

The original FCI/FCP complex has been Determined Eligible for the National Register under criterion A for its association with the early development of the federal penitentiary system and under criterion C as an example of correctional architecture from the late 1930s and early 1940s.

Properties Determined Eligible by Agreement in Project Corridor

Quadruple Span Concrete Bridge (BD 301), US 60 over East Fork of the Little Sandy River, 2002

Williams Creek Bridge (BD 27), Old KY 5, Princess

Summit Missionary Baptist Church (DR 1993) KY 716, Summit

Literature Search

The literature search on the project study area was conducted at the survey and National Register files, computerized report library of the Kentucky Heritage Council and the University of Kentucky Map Collection.

National Register nominations which were useful included "The Historic Resources of Ashland" written by Edward Chappell in 1978 which contained a history of the development of the community as well as information about the Beth Avarna Historic District and the St. James African Methodist Episcopal Church. The nomination for the "Ashland Downtown Historic District" written by Helen Powell in 1984 included a context in which Ashland was compared to other Kentucky cities along the Ohio River and detailed information about commercial buildings.

The survey forms and survey report for Boyd County completed by Helen Powell and James Powers in 1992 had information on buildings in the county which were documented in an update of the Boyd County survey in 1992. In Boyd County, outside of Ashland and Catlettsburg, 304 sites were documented. A shape file for the GIS locations of all surveyed sites within the study area was requested and received from the Kentucky Heritage Council. When the results of the GIS mapping were compared to the maps from the 1992 survey and sites in the field, the GIS map proved to have many mislocated sites and was not used in the preparation of the overview.

Books and Records on Boyd County

For the history of the Ashland, "A History of Ashland, Kentucky from 1786 to

1954" prepared by the Ashland Centennial Committee in 1954 provided the most comprehensive history of the community.

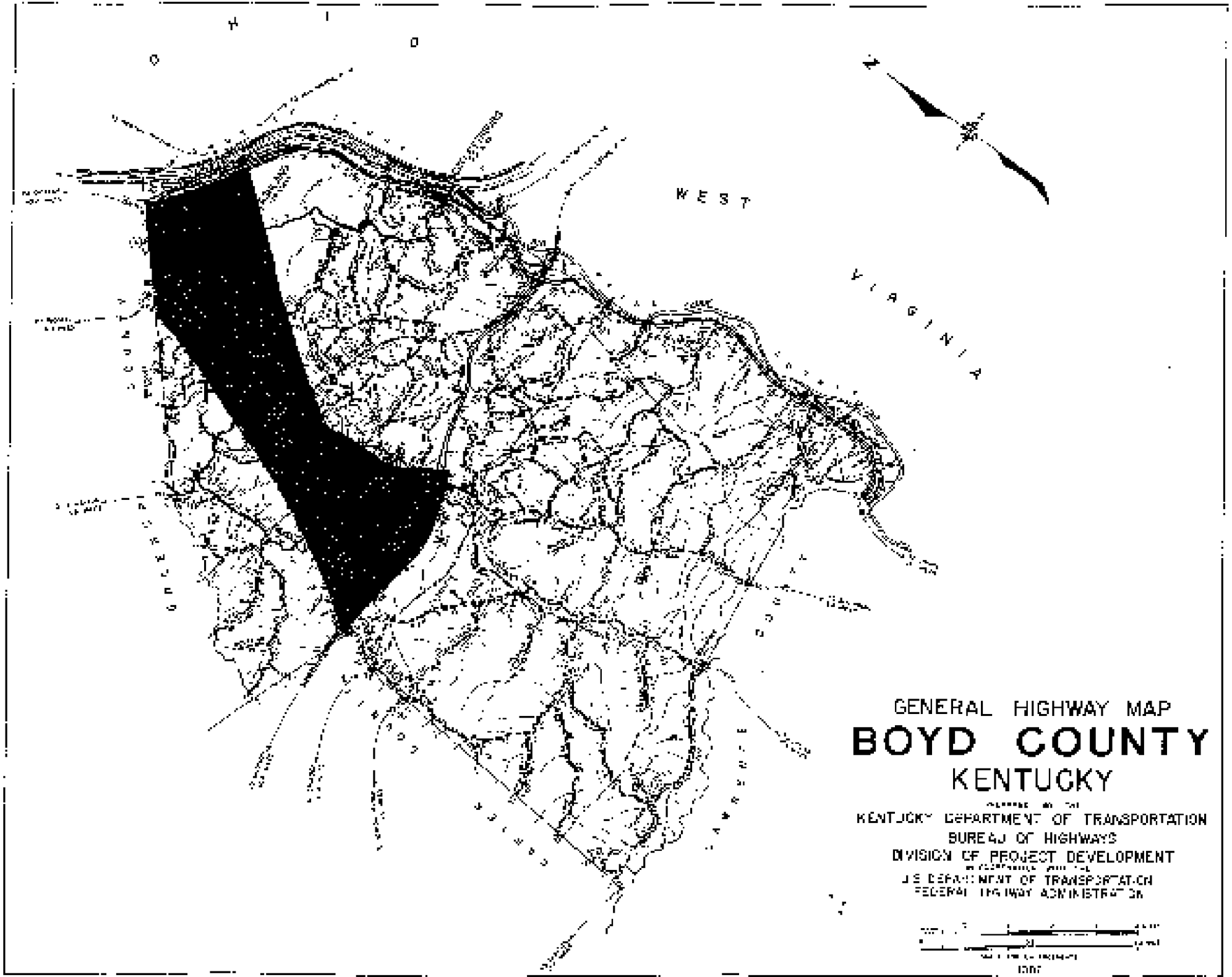
"The New Deal Builds: A Historic Context of the New Deal in East Kentucky, 1933-1943" by Rachel Kennerly and Cynthia Johnston provided a history of the WPA in Boyd County and information on the fate of specific buildings from the era. All of the references consulted are listed in the bibliography.

Field Work

In the fall of 2007, the consultant did a windshield survey of the Interstate 64 to Ashland, Kentucky Connector Study Area. Included in the windshield survey were buildings visible from public roads. Buildings on the interiors of farms or structures which were not accessible were not included. Buildings which appeared to have potential to meet National Register criteria were noted on the project map (Figure II-1) and were given a preliminary National Register evaluation, based primarily on Criterion C, architecture.

For the overview, no buildings were inspected in detail. A final determination of National Register eligibility relative to criteria A, B, and C will require additional research, photography, physical examination of the structures, evaluation of each site relative to the integrity standards established by similar property types in Boyd County which are currently listed on the National Register, and consultation with the State Historic Preservation Officer at the Kentucky Heritage Council in Frankfort.

Figure I-1
Project Study
Area
Boyd County
Overview, 2007



II. OVERVIEW OF THE PROJECT AREA

Boyd County

Boyd County is located on the Ohio and Big Sandy rivers in the extreme northeastern part of Kentucky, an area classified as the Mountains and Eastern Coal Fields. Ashland is the major urban center in the county. Nearby major cities in adjoining states include Portsmouth and Ironton in Ohio and Huntington in West Virginia.

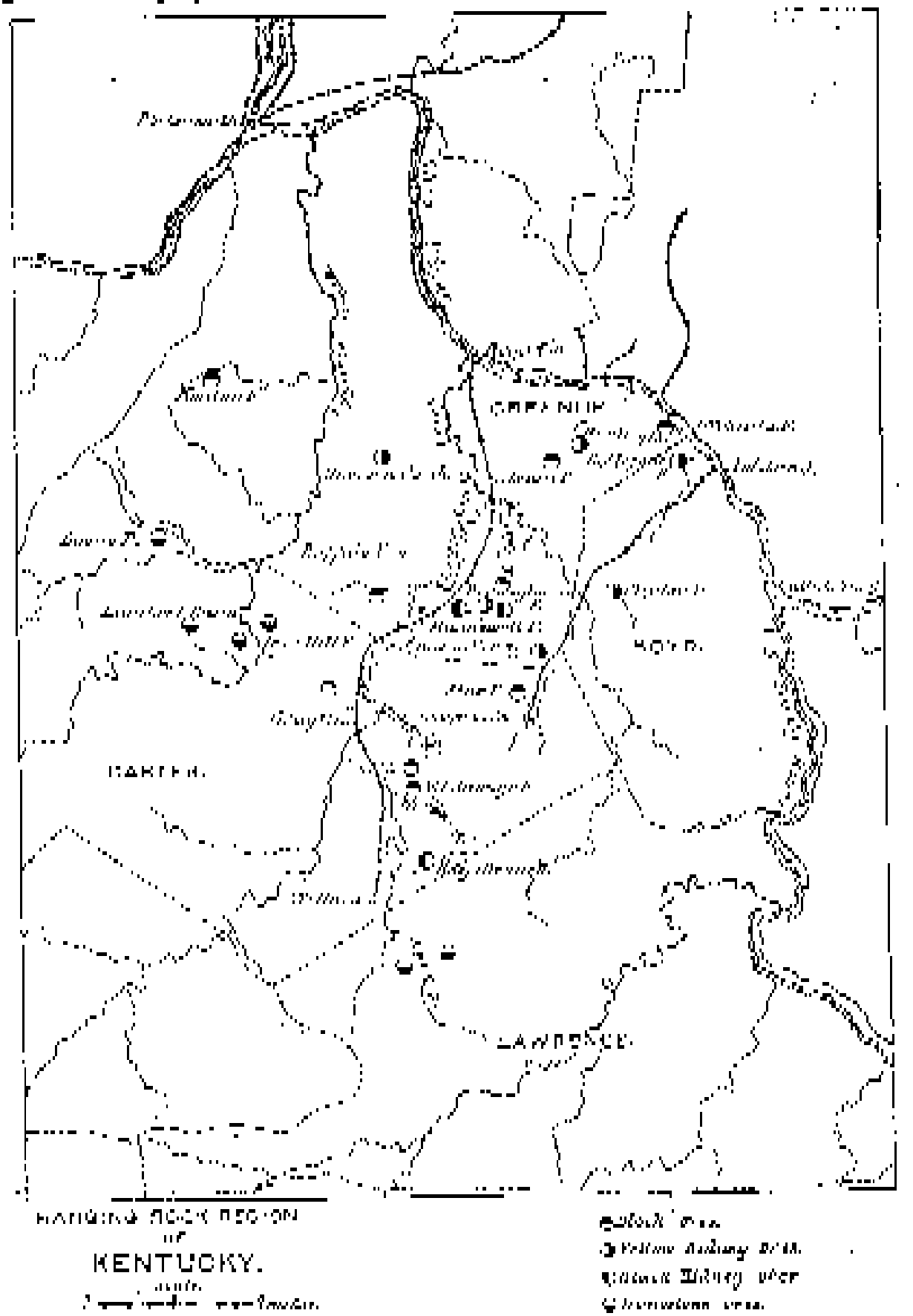
Approximately 80 per cent of Boyd County consists of steep to very steep hillsides with about 15 per cent of the county being level to gently sloping flood plains and terraces. The remaining 5 percent of the county consists of gently sloping to moderately sloping steep ridges and high stream terraces. Elevations range from 500 feet above sea level along the Ohio River to more than 1,100 feet above sea level on the higher ridges.

Boyd County is dissected by streams which flow north into the Ohio River or east into the Big Sandy River. Tributaries of the Ohio River include the East Fork of Little Sandy River, Hood Creek, and Williams Creek. The Big Sandy River originates in southwestern Virginia as two separate waterways called the Levisa and Tug Forks. The two forks join 25 miles south of the Ohio River. In Boyd County, Catletts Creek, Chadwick Creek, Whites Creek, Durbin Creek, and Bear Creek flow into the Big Sandy River.

Iron Industry, Boyd County

Boyd, Greenup, and Carter Counties in Kentucky were part of the 180-mile area known as the Hanging Rock region.

Figure II.1 Hanging Rock Region of Kentucky (10th U. S. Census, V. 15)



This area attracted German and Irish immigrant laborers, iron masters from Pennsylvania and wealthy investors from the east. A total of 29 charcoal-fueled iron furnaces operated on the Kentucky side of the Ohio River. Nine of these furnaces were in or near present-day Boyd County including the Bellefonte Furnace, 1828; Clinton Furnace, 1833; Oakland Furnace 1834; Princess Furnace, 1837; Buena Vista Furnace, 1847; Sandy Steam Furnace, 1853; Boone Furnace, 1857; Norton Furnace in 1873; and the Ashland Furnace in 1869.

The photograph below shows the wall of the Princess Furnace on KY 5 behind a modern house, west of the project corridor in Boyd County.

Kentucky's highest national ranking as a producer of iron ore occurred in 1850 when the state ranked fifth. In 1860 and 1870, Kentucky's ranking dropped to sixth. By 1880, Kentucky had dropped to twelfth. In the late nineteenth century, the Lake Superior

District composed of Wisconsin, Michigan, and Minnesota became dominant in the iron industry. By 1890, the combined production of the Lake Superior District and the Southern District (Alabama, Georgia, and Tennessee) accounted for approximately 90 percent of the total iron ore tonnage produced in the United States.

Development of Ashland

Ashland, first known as Poage Settlement, was settled by Robert Poage and his sons, Robert, Jr. and George, as well as George Poage and his son John. The Poages, who were from Virginia, held title to thousands of acres of land obtained through the William Bell patent and treasury land warrants.

The area in the vicinity of present day Ashland was rich in timber, coal, and limestone, necessary for the manufacture of pig iron and soon attracted industrialists from the east. The community of Ashland was developed as an iron export center by the Kentucky Iron and Coal Manufacturing Company in 1854. It was named Ashland after Henry Clay's estate in Lexington. Mahlon Talley Hillard, chief engineer for the Lexington and Big Sandy Railroad, laid out the original plat for the community which consisted of a grid. The original layout consisted of a grid pattern of streets, twenty three blocks long and seven blocks deep which covered the expanse of flat ground between the Ohio River to the north and a series of hills to the south. The streets which were parallel to the Ohio River such as present day Winchester, Greenup, and Carter, were one hundred feet wide. Street which were perpendicular to the river were eighty feet wide.

A fifteen-square block park in the southwest corner of the grid, present-day Central Park, became the city's primary open space. The strip of land between the river

and the northwest street was reserved as an industrial zone, a function it served into the twentieth century.

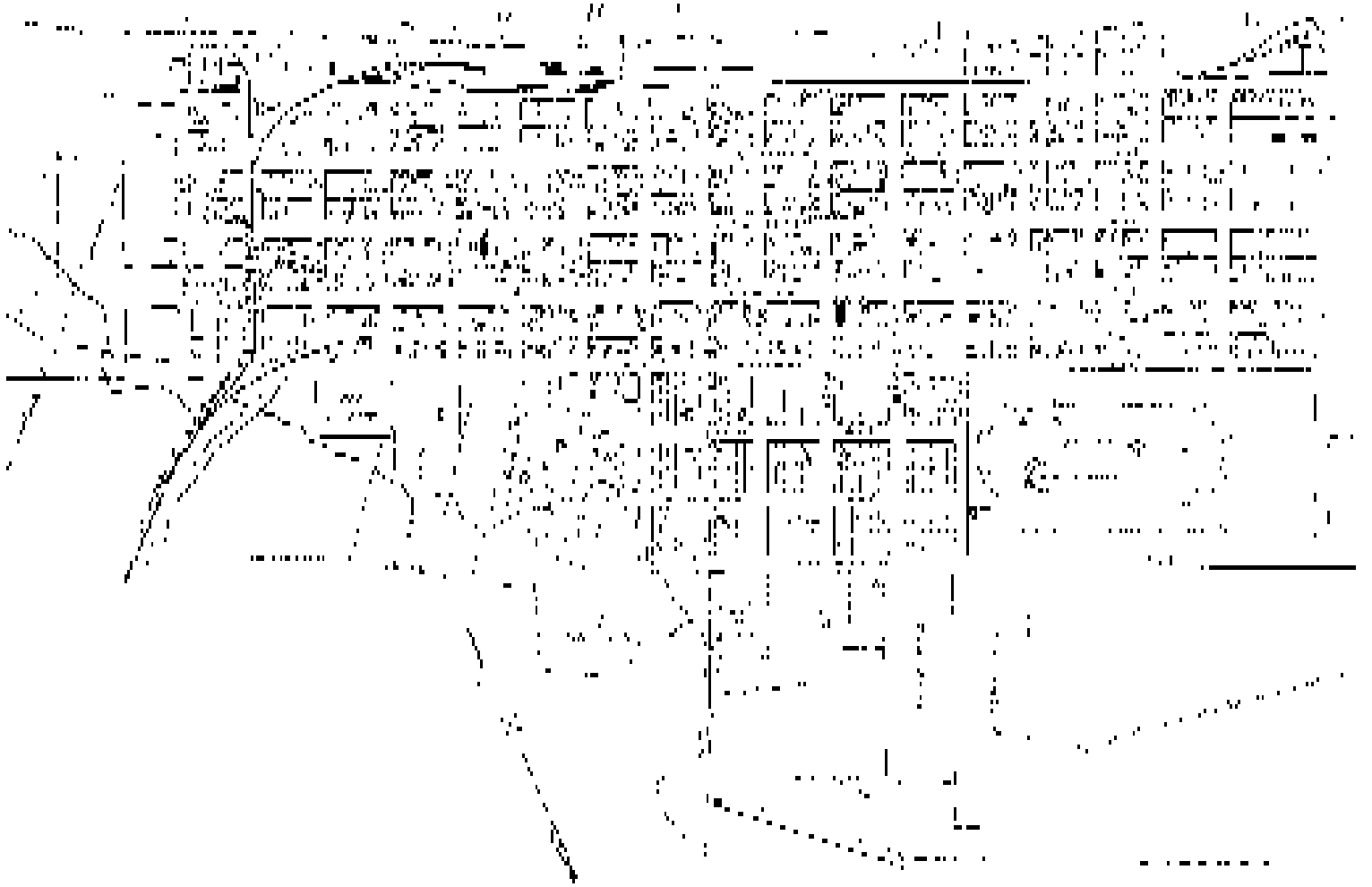


Figure II-3
Map of Ashland, 1877

ASHLAND

Front Street, which faced the river, was to be the primary commercial street. In 1854-1855, the Kentucky Iron, Coal and Manufacturing Company built a four story hotel known as the Ashland at the corner of present day Front and Fifteenth streets. In the late

nineteenth century. Ashland's commercial activity moved away from the river and Front Street to Winchester and Greenup Avenues.

Since the early twentieth century, Winchester and Greenup Avenues have been the center of the downtown business district. Two- and three-story, turn-of-the-century, commercial buildings line these streets. Many are brick structures with cast iron first-floor shop fronts with simple stone trim on the upper facades.

By the late nineteenth century, industrial workers were living in both the east and west ends of Greenup Avenue and adjoining streets. The frame shotgun houses they occupied on property owned by the Ashland Coal and Iron Railroad were removed during urban renewal in the 1980s.

By the late nineteenth century, Winchester, Carter, and Railway (present-day Conrail) avenues had become substantial middle class residential districts. Of the three streets, Winchester Avenue appears to have had the most distinctive architecture.

Western Bath Avenue was a neighborhood occupied by the nineteenth century owners and managers of prominent Ashland industries. Many houses were architect designed as in the case of the W.H. Newman House, 1411 Bath Avenue which was designed in 1893 by S. Floyd Hazel from Catlettsburg, West Virginia. W.H. Newman was the manager of the Bellefonte Furnace. Abraham C. Campbell, whose home at 1304 Bath Avenue was completed in 1870, was a successful financier who built the Ventura Hotel and was involved in the establishment of several local banks. The Rufus Van Sant House, builder of the house 1391 Bath Avenue, was the owner of the Van Sant-Kitchen Lumber Company.

Although Lexington Avenue was included as the southern boundary in Martin Hilton's plat for Ashland in 1854, the street was occupied by only one or two houses until the late nineteenth century. In 1855, Hilton built his own home on the hillside above Lexington Avenue. Iron industrialist Thomas Means built a large brick Italianate house further east on the hillside in 1870 as a wedding present for his daughter. The only mid-nineteenth century house built directly on Lexington Avenue was the brick Greek Revival Rigby House, constructed in the present day 1600 block of the street. Most of the houses on Lexington Avenue date from the first three decades of the twentieth century and are variations upon the Colonial Revival style. The dwellings along Lexington Avenue and 14th Street (Side 1 E) appear to be part of a larger potential historic district.

As US 60/ Mayo Trail travels south from Lexington Avenue it passes through numerous subdivisions, most of which date from the 1920s when Ashland experienced significant population growth with the arrival of American Rolling Mill Company and the extension of the Chesapeake and Ohio Railway.

Immediately south of the original Ashland plat are the Long Run subdivision on the west which dates to 1888. On the east along the bluffs overlooking the city is the Poplar Hill subdivision which dates from the 1920s followed by the Avondale subdivision which dates to 1909. Immediately south of the Avondale area is Oaten Addition which was platted in 1914.

On the east side up to Beach Street are: Beverley Hills, 1924; Wurtz Subdivision 1928; Highlawn, 1923; Grayson Road, 1920-23; Adkins Brothers Addition, 1949; Western Hills, 1949; Tuberculosis Sanatorium Property, 1917; Skyline Acres, 1954;

Hazel Addition, 1950. On the west side are Stephens Addition, 1924, Graysonia, 1924, Midland Heights, 1919; Rose Hill Burial Park, 1927; and Moogling Heights, 1951. See the Map of Ashland, 1937 (Figure II-4) which shows the locations of subdivisions.

Of these subdivisions, four neighborhoods appear have potential to be historic districts because they retain significant amounts of their architectural integrity and have few modern intrusions. Prospect (Site A) is home to large two-and-one-half-story, brick American foursquares and Colonial Revival dwellings built before 1927. Midland Heights (Site AA) contains two story, brick and frame Colonial Revival dwellings. Graysonia (Site BB) has two story, brick American foursquares along 13th Street with frame one and one-half-story dwellings dating from the 1910s and 1940s on the interior streets of Algonquin and Iroquois. Grayson Road (Site CC) which includes Cumberland Avenue, Kentucky Avenue, and Central Parkway is notable its curvilinear road pattern which includes areas of common green space. The houses are one-and-one-half-story brick and frame Colonial Revival structures built before 1927.

Figure II-4
Map of Maryland, 1937

Railroads in Boyd County

Ashland's location on the Ohio River was influential in the iron manufacturing company's choice of the site for a community, but rail lines had to be developed to transport the raw materials, iron ore and coal, from the interior of Boyd County to the furnaces on the Ohio River. In 1853 the Kentucky Legislature passed an act incorporating the Lexington and Big Sandy Railroad. The original plan was to lay a railway line from Mt. Sterling to Catlettsburg and connect with the Ohio and Big Sandy Rivers. The furnace men living in the vicinity of Poage's Settlement, present-day Ashland, knowing of the incorporation of the Lexington and Big Sandy Railroad, desired to have the route come closer to their furnaces. They formed a company, took options on lands, and laid out a town at Poage's Settlement. The Legislature was petitioned to pass an Act of Incorporation for the newly formed company, the Kentucky Iron, Coal, and Manufacturing Company. A committee met with the directors of the railroad company to point out to them the advantages of changing the proposed route of the railway to include the new town, present-day Ashland. The furnace men bought stock in the railroad which helped in the financial difficulties. In 1854, 1500 acres of land was purchased by the Kentucky Coal, Iron, and Manufacturing Company. In 1857, the Lexington and Big Sandy Railroad (LBSR) connected Ashland to Princeton, a coal and iron community in southwestern Boyd County. Track was laid to Coalton in 1868 and to Kash in 1872.

Another railroad serving Ashland was the Chesterfield, incorporated in 1873. The initial narrow gauge line connected Ashland to the coal mines which had recently

opened at Peach Orchard in Lawrence County. The rail line was changed to standard gauge and in 1901 reached Louisa, the county seat of Lawrence County. The line was extended an additional 10 miles to Richardson in 1883, creating a 40-mile line.

In 1873, the Chesapeake and Ohio Railroad (C&O) was extended from Richmond, Virginia to the Ohio River at Huntington, West Virginia. The C&O Railroad was completed to Ashland in 1881. The owner, Collis P. Huntington, had plans for a coast-to-coast rail empire. In 1890, the C&O Railroad gained control of the Lexington and Big Sandy Railroad. An arrangement with the Louisville and Nashville Railroad gave C&O trains access from Lexington to Louisville while railroad cars bound for Cincinnati were sent up the Kentucky Central to Covington. By 1894, Huntington controlled railroads from C&O's eastern terminus in Newport News, Virginia, through Kentucky to the Pacific. Two leased lines in Tennessee and Mississippi gave the C&O access to New Orleans.

To reach Cincinnati and the mid-western markets, Huntington built the 143 mile Maysville and Big Sandy Railroad along the Ohio River from Ashland to Covington. The railroad was finished in 1888 when the bridge over the Ohio River to Covington was opened. These operations became the C&O's Cincinnati Division. The C&O's Big Sandy Division acquired the Chatteroi Railroad which linked Ashland to Lawrence County in 1888. The purpose of this expansion was the collection of coal from the spur lines which branched out into the large coal producing areas, primarily in West Virginia and eastern Kentucky.

Huntington's railroad empire did not last. Revenues did not equal the costs of

assembling and running the rail network. The C&O Railroad was reorganized in 1869 and sections of the system dismembered. The Lexington and Big Sandy Railroad was acquired by the C&O in 1892. The Big Sandy Division was developed as part of the C&O's plan to serve the coal fields in the Big Sandy region. By 1900 the C&O had built additional branches to serve Floyd Johnson, Knott Magoffin, and Pike County mines. Massive volumes of coal were sent north to Russell in Greenup County. From there, the coal was shipped either north to the industries in the Great Lakes region or east to the east coast. The 1,550-foot long railroad bridge at the Ohio River near Limeville was opened in 1917 to provide a route for the C&O to the north.

By 1924 the C&O Railroad had acquired the rights and the properties of the two earlier railroads and was the major railroad through Ashland. In the Ashland vicinity, the railroad branched in three directions, with one line going to Louisville, another to Chicago, and a third to Ohio, Michigan, and to New York via Canada. The C&O built a railroad repair facility near the Boyd Greenup County line. Approximately 4,000 people were employed by the railroad in Ashland in various capacities in the 1920s. The present day C&O Passenger Station (Site 00) was completed in 1926, replacing an earlier depot.

After 1880 the C&O concentrated its Ashland area operations at Russell. The Russell yard was expanded in the 1920s. It became the railroad's major coal facility in the western U.S. A freight car repair shop was completed in nearby Raceland in 1929.

The C&O was the dominant partner in a merger with the neighboring Baltimore and Ohio in 1963. From that consolidation came the Chessie System in 1972. In 1980,

the operations of the Chessie System and the Seaboard Coast Line Railroad were joined as a single system, CSX Transportation which serves twenty states, the District of Columbia, and Ontario, Canada.

The open hearth steel plant of the Ashland Iron and Mining Company, successor to the Ashland Coal and Iron Company was built in 1916-1917. In the 1920s, the iron furnaces along the Boyd Greenup County line were absorbed by the American Rolling Mill Company which produced steel sheets through a continuous rolling method. By 1927, Armco had acquired the properties of the old Ashland Steel Company and the Norton Iron Works. When the American Rolling Company chose Ashland as the site for its new steel processing plant, the resulting commercial expansion to service the new work force of 3,000 people increased Ashland's population from 15,000 in 1920 to 28,000 by 1925. Suburbs were annexed to the city. In 1924, the Ashland Oil and Refining Company, which would become Ashland's second largest employer, was formed. It purchased a small refinery near Catlettsburg which had a 1,000 barrel a day capacity. Through the development of new properties, acquisition and/or mergers with other companies, Ashland Oil grew rapidly. By the 1950s, its capacity was more than 50,000 barrels a day. During the same time period, Ashland was known as the "Crossroads of the C&O Railroad" because of the high volume of passengers and freight which passed through the city on a daily basis. The growth of the railroad and steel industry in Ashland during the 1920s created almost a 10% percent population growth rate: 14,729 residents in 1920 to 29,074 residents in 1930. In 1929, ARMCO acquired the properties of the old Ashland Steel Company as well as the Norton Iron Works and

the Ironton, Ohio furnaces. This acquisition marked the beginning of the boom era in Ashland.

Bellefonte

Bellefonte is a residential suburb on the Boyd-Greenup County line. Bellefonte is bordered by the cities of Russell on the north and Flatwoods on the northeast. The community was laid out in 1918 and named for the charcoal fueled Bellefonte Furnace, an iron furnace which was built in 1826 by Archibald Paull, George Poage, and others. The stone stack of the furnace was 34 feet high with a maximum inner diameter of 10.5 feet. In 1874, a typical year, it produced 3,600 tons of iron. It was in operation until 1893 and left a slag heap of 300,000 tons.

The photograph below shows the stone wall of the Bellefonte Furnace which is west of the project study corridor on Oxcart Road in Greenup County.

Coalton

The Ashland Coal Company was incorporated in 1864 and purchased 9,000

acres of coal lands in Boyd County, known as the Coalton and Rush tracts. These lands were deeded to the Lexington and Big Sandy Railroad, Eastern Division, in 1866. Coal mines were opened at Coalton in early 1867. The coal was shipped to Ashland via the Lexington and Big Sandy Railroad. The Coalton post office was established in 1869, but was moved here from Metcalfe Furnace established in 1848 which was also known as Star Furnace. The Coalton post office closed in 1920.

Carmonsburg

In 1838 Jeremiah H. Carmon bought a 100-acre tract on the Marsh Run branch of the East Fork of the Little Sandy River from Jacob VanBrocklin. The local post office was established as East Fork in 1839 with John Colvin as the postmaster. The name of the post office was changed to Carmonsburg in 1850. The post office was discontinued in 1932.

Pollard/ Pollards Mill

Pollards Mill was named for the sawmill owned by Henry D. Pollard in the present day western part of the city of Ashland. The post office at Pollards Mill established in 1847 preceded the post office at Ashland.

Rush

The community extends for over two miles along KY 854 along Rush Creek and its main tributary Williams Creek. Earlier known as Gilgerville for the its early pioneer family, the community grew rapidly around a coal seam known as Rush No. 5 which was developed by the Ashland Coal and Iron Railway Company in the 1870s. The post office was established in 1880.

The extension of the railroad from Coalton to Rush in 1879 spurred further growth in Ashland. The company's name was changed to Ashland Coal and Iron Railroad in 1880. In 1924, the C&O Railroad purchased the Ashland Coal and Iron Railroad from the American Rolling Mill Company.

Summit

Summit was named for its location on an elevation traversed by the Chesapeake and Ohio Railroad.

Westwood

Westwood lies adjacent to Ashland and less than one mile from the Greenup County line. It may have been named by John Seaton, possibly for its location. The first Ashland blast furnaces was completed in 1869. It used the Coalton coal as fuel. The process also utilized local iron ore and limestone. The initial output of 25 tons a day was later increased to 40 tons a day with the use of richer iron ore from Bath County. The company supplied coal to local businesses, fuel for steamboats, and shipping it by barge to Portsmouth, Ohio, Maysville, Kentucky, and Cincinnati, Ohio.

Boyd County New Deal Resources

Property types identified in the Boyd County as part of context for " The New Deal Builds: A Historic Context of the New Deal in East Kentucky, 1933-1943" by Rachel Kennedy and Cynthia Johnson include schools, gymnasiums, a courthouse, a public park, a prison, roads and streets, bridges and culverts, sanitary sewers, a waterworks, sanitary privies, a hen hatchery, a retaining wall, and a WPA relief office. A field survey was conducted to verify the existence of resources described in the archival research for

the project.

Other schools were constructed by the WPA, PWA, CWA, or KERA as replacements for antiquated schools in order to modernize educational facilities in a county. The WPA built three schools in Lloyd County. Gymnasiums and other recreational facilities like athletic fields and playgrounds were also constructed during the New Deal era. These facilities allowed members of the community and school children to have a dedicated place to engage in physical activity. They also served teams from surrounding communities to play against the home team, providing local entertainment. One gym and one playground were constructed by the WPA in Boyd County. The WPA schools in Boyd County identified by Kennedy and Johnson were the Cannonsburg High School, the New Normal School, and the Summit School. None of these schools are still standing. The Fairview Gym (Site 5), built by the WPA in 1939, is still used by the Fairview High School as a practice facility. The Putnam Stadium in Ashland is located at the George M. Verity Middle School on 29th Street. Originally the school was known as Putnam High School. The original concrete stadium has two bleachers that run the length of the football field and is still being used. The Cannonsburg Elementary School playground and bleachers built by the WPA is no longer extant.

The Ashland Library was constructed by the WPA in 1939 on the edge of Central Park in the 1700 block of Central Avenue. This one-story limestone, building had Colonial Revival detailing including a columned porch and a cupola. The WPA library building was demolished in the late 1970s to create space for a new Library.

The Central Park Pool in Ashland, locally known as the Lily Pond, was one

adjacent bath house were constructed by the WPA in 1935. Central Park is a 47 acre facility that dates to 1901. The crescent-shape Lily Pond was originally designed to be in the shape of Kentucky, but was altered to avoid tree roots. The pond was filled in during the 1950s, but was restored approximately ten years ago. Both the edge of the Lily Pond and the Bath House are built of native sandstone.

Both the PWA and the WPA were involved in the construction of prisons and prison infrastructure. The buildings at Federal Correctional Institute (FCI) Ashland (Site J) were built by the PWA in 1936 with road and sewer connections constructed by the WPA. The prison is located in the town of Summit which is approximately five miles south of Ashland. The prison's purpose was to house 600 short-term male inmates from the region. It was one of the nine correctional institutions built during the period from 1930 to 1939 during the first decade of the Federal Bureau of Prisons.

The FCI Ashland facility was one of two facilities which used the "telephone pole" design concept in which the long connecting corridor bisects the housing units at right angles. The original site consisted of 22 buildings and support buildings all within the FCI security compound. Within the complex were the following structures: Administration Building, Hospital and Detention Building, four Cell Houses (B through F), four Dormitory Units (JA, JB, KA, KB), Library and Recreation Building, Mechanical Services Building, Steam Tunnel, Commissary, Laundry, Power House, three Guard Towers (#1 through 3), Garage, Root Cellar, and Sally Port Officer's Station. The latter is the main and only entrance into the prison facility. It is a controlled entrance through which employees, prisoners, and supplies came into the prison grounds.

Most of the buildings in the original complex are one- or two-stories with a red brick veneer over a reinforced concrete superstructure. Elements from the Art Deco/ Moderne style are used in the brick detailing. On the Administration Building are some Colonial Revival elements such as a hipped roof and cupola. Northwest of the 40-acre prison tract are eleven dwellings for staff on Federal Circle. East of the prison complex are dwellings built for the prison warden and other officers. Due to security measures, no photographs were taken.

Sewers were constructed by the WPA manual labor in Ashland through the laying of pipe in trenches which were three feet deep and six feet wide. A sewage pump station was also built by the WPA for the City of Ashland. The pump station has been demolished & replaced. A water filtration plant, sediment basin (reservoir), and water tank were built by the PWA for the Ashland water works. Only the original sediment basin and water tank, built in 1937 and 1938 respectively, are still in use. The poured concrete, 20 million gallon, sediment basin is located on 41st Street on the site of the former Oldfields Park Lake.

The Fish Hatchery on KY 5 was built by the WPA to supply local ponds and lakes with hatchery raised fish. Six of the eleven rectangular concrete ponds remain. A WPA county relief office, which housed administrative services and served as a warehouse for materials, was located in Ashland. Its location was unknown.

III. WINDSHIELD SURVEY

The windshield survey of the project corridor was conducted in the fall of 2007. Sites were viewed from the public roads within the corridor. No sites were examined in detail. Individual structures or districts within the corridor which appear to meet National Register criteria are briefly described in the paragraphs which follow. With each description is a preliminary evaluation. A final evaluation relative to National Register eligibility can not be made until more in depth research is done for the formal cultural-historical baseline study for submission to the Kentucky Heritage Council (SHPO).

NR National Register. Buildings or districts which are either listed on the National Register or have been determined eligible for the National Register by Appalachian or by the Keeper in previous compliance projects or nominations.

NRP National Register Potential. Buildings, which compared to others listed on the National Register, appear to meet criteria A, B or C as either an individual property or contributing property within a potential district. These structures may also be a property type which the SHPO has determined eligible in other recent compliance projects.

S Survey. Buildings which would be documented in a baseline study, but appear to have no significant architectural characteristics or association with historic events or persons to meet National Register criteria.

X Destroyed. Site which was previously documented in the Laura County files, but has either been torn down or removed from that location since the completion of the survey.

? Unknown. Site which was not viewed during the windshield survey due to lack of access (locked gates or posted for no trespassing).

Preliminary National Register boundaries for eligible individual sites and districts were proposed, using the property maps from the office of the PVA in Boyd County. The surveyed sites are keyed to the map of the Study Area (Figure III-1).

Site/ Evaluation	Description
Site A/ NRP	**Dwelling, 2105 Midland Trail, near Coalton** Site A is a two-story, three-bay, side-gabled, central passage, single pile, frame dwelling. The central doorway is flanked by sidelights and a transom. A two-tiered porch covers the central bays of the first and second stories. Aluminum siding covers the original exterior fabric, but its scale, plan, and location indicate that the structure may date to the mid-nineteenth century and could be a rare survivor from that period.

Site B/ S	**Central Passage Dwelling, (BD-256), South Big Run Rd.** Site B is a two story, three bay frame dwelling with a centrally located brick chimney.

Note: an agricultural complex consisting of several barns for BD-148-151 is no longer standing in the southeast quadrant of the intersection of I-64 and KY 180.

Site/ Evaluation	Description

Site C/ NR

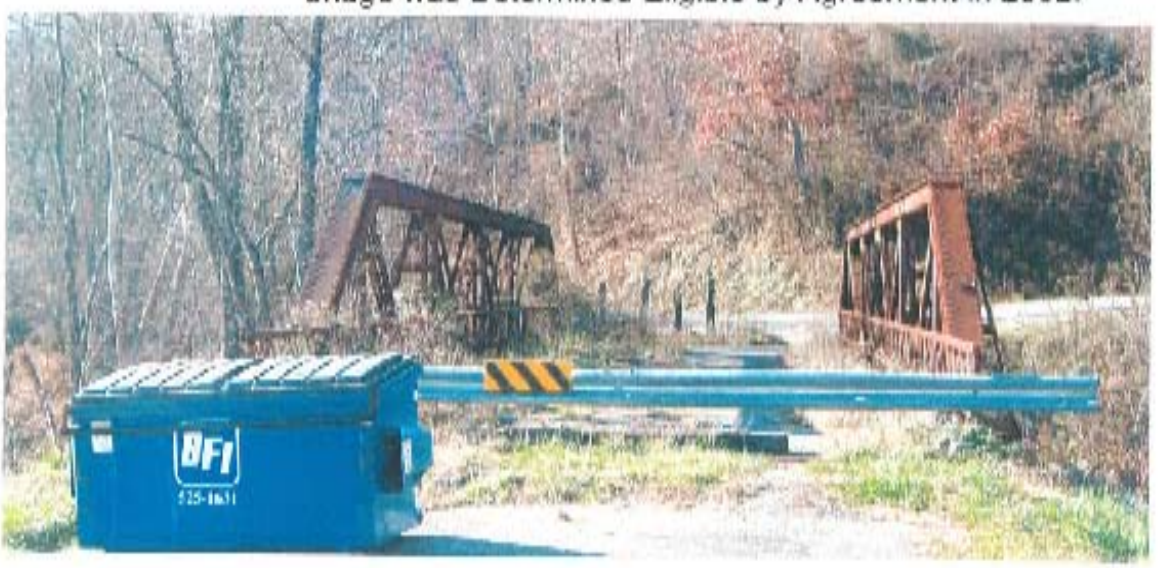
Quadruple Span Concrete Bridge (BD-361), US 60 over East Fork of Little Sandy River

The quadruple span concrete bridge has concrete railings on both sides and is estimated to have been built between 1925 and 1929. The bridge was Determined Eligible by Agreement in 2002.

Site D/ NR

Williams Creek Bridge (BD-27), Old KY 5, Princess

The Williams Creek Bridge is a single span Pratt Pony Truss built by the Commonwealth of Kentucky Department of State Roads and Highways in 1921. The Vincente Bridge Company of Vincente, Indiana built the bridge's concrete floor. It has riveted metal trusses. According to *Historic Highway Bridges in Kentucky, 1792-1950*, there were only 63 Pratt Pony trusses remaining in Kentucky in 1982. The Williams Creek Bridge is approximately 40 feet long. The bridge was Determined Eligible by Agreement in 2002.

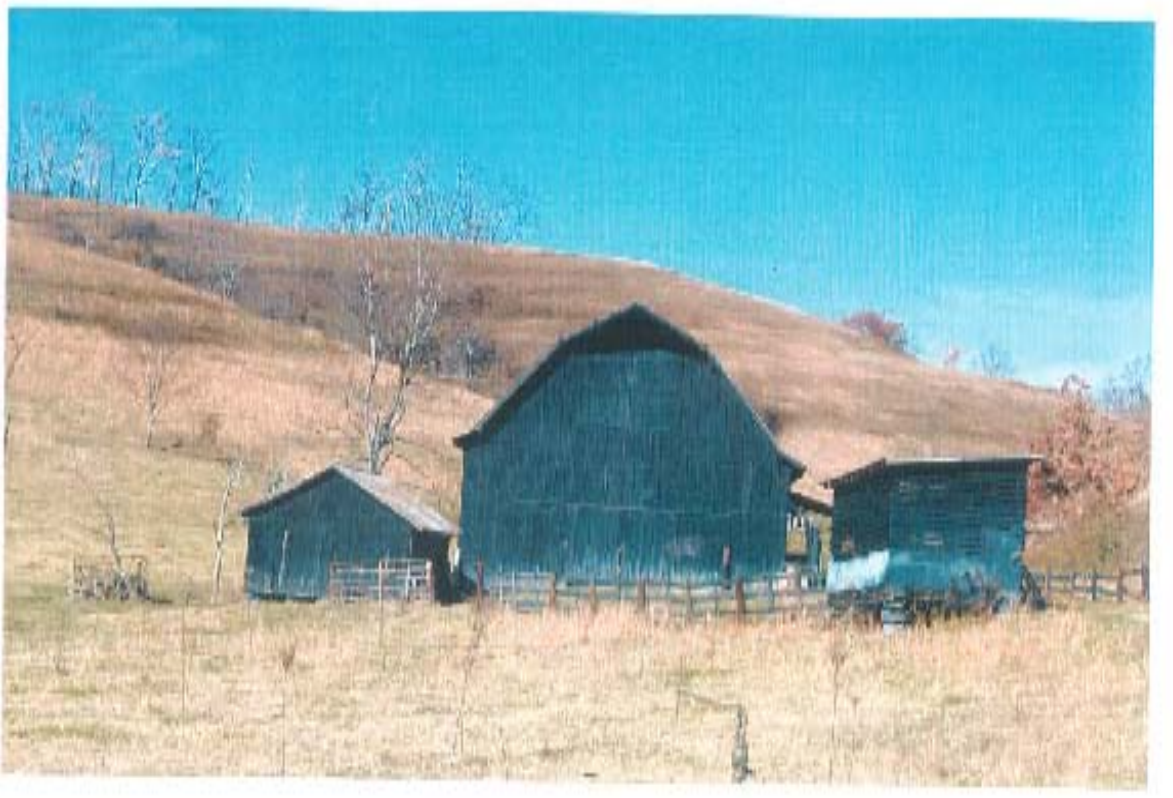


Site/ Evaluation	Description
Site E/ NRP	**House and Outbuilding, 8831 Meade-Springer Rd. (BD-54/ 55)** The dwelling is a two-story, three bay, side passage frame structure which dates to the period from 1875-1899. Associated with the dwelling is the rusticated concrete block structure.

Site/ Evaluation	Description
Site F/ NRP	**Dwelling (BD-56), 9223 Mead-Springer Road** The dwelling is a two-story, three bay, central passage frame house with a full-width two-story porch. It dates to the period from 1875-1900.

Site G/ NRP	**Bungalow and Barns (BD-53), 8517 Mead-Springer Rd.** The one-and-one-half-story, side-gabled, brick bungalow was built in 1932. Associated with the dwelling is a gambrel-roofed barn and several agricultural outbuildings.

Bungalow and Barns, Mead-Springer Rd.



Site/ Evaluation	Description
Site H/NRP	**Tudor Revival Houses, 835 and 839 KY 716, Summit** The two one-and-one-half-story, Tudor Revival houses with steeply pitched side gabled roofs and front facing chimneys are adjacent to one another on the north side of KY 716. The brick dwelling (BD-73) has an arched doorway in a front-gabled vestibule. The frame dwelling (BD-72) has arched windows on the main facade.

Site/ Evaluation	Description
Site I/ NR	**Summit Missionary Baptist Church (BD-363), KY 716, Summit** The congregation was formed in 1898 and the present-day church building was completed in 1946-1947. The main facade has two crenellated towers. The front entrance is in a pointed arch doorway which has stained glass. The windows have multiple panes with metal sashes. The church was Determined Eligible by Agreement in 2002

Site J/ NR	**Federal Corrections Institution and Prison Camp (FCI/FCP), (BD-63), KY 716, Summit** The original FCI/FCP complex has been Determined Eligible for the National Register under criterion A for its association with the early development of the federal penitentiary system and under criterion C as an example of correctional architecture from the late 1930s and early 1940s. Contributing resources to the district include the following: Old Administration Building (B-2 A-2); Detention and Hospital Building (B-3B); 4 Cell Houses (B-4 C-C, B-5 D, B-6 E, and B-7 F; Main Corridor (B-11); JA Unit (B-13); JB Unit (B-14); KA Unit (B-15); KB Unit (B-16), Inmate Services (B-17), Mechanical Services (B-18 O); Steam Tunnel (B-20); Commissary (B-20 P); Laundry (B-20 Q); Recreation Yard (B-22); Old Powerhouse (B-23 R (b)); Vehicle Sallyport (B-28); 3 Guard Towers (B-29, C-6, and C-9); Garage (C-1) and Landscape Storage (C-2). The boundaries of the district encompass all of these resources and roughly approximate the security fence along the perimeter of the facility on the north, east, south, and the CSX railroad line on the west.

Site/ Evaluation	Description
Site K/ S	**Tudor Revival House, KY 716** The one and one-half-story, frame, Tudor Revival house has a front-facing brick chimney and steeply pitched roof

Site L/ NRP	**T-Plan Dwelling (BD-61), 3293 Little Garner (KY 716)** Site L is a two-story, three-bay frame T-plan dwelling with a full-width hip-roofed porch.

Site/ Evaluation	Description
Site M/ NRP	**Thornberry House (BD-66), KY 716, Summit** Site M is a log, saddlebag dwelling built during the period from 1875 to 1900. It appears to be a two-story, three bay dwelling with a full width porch.

Site N/ NRP	**ARMCO Park (BD-92), Intersection of KY 716 and US 60** ARMCO Park, which was opened in 1934, features winding roads through a steep wooded area. Some original picnic pavilions remain.

Site/ Evaluation	Description
Site O/ NRP	**Gertrude Ramey Home (BD-22), Poor House Road** The two-story brick structure with five bays on the first floor and four bays on the second dates to circa 1900. It was known as Ramey's Children's Home for 45 years until Gertrude Ramey's illness and retirement in 1988.

Site P/ NRP	**Horn Street Bridge, Little Hood Creek (BD-91), Mill Seat** The concrete bridge dates to the period from 1925 to 1949. The community of Mill Seat is shown on the 1937 map of Ashland, but has lost physical integrity due to multiple modern intrusions and changes.

Site/ Evaluation **Description**

Site Q/ NRP **Westwood Christian Church, 713 Wheatley Ave.**

The Westwood Christian Church, organized in 1931, is housed in a two story, three-bay, front-gabled brick structure. The entry is located in a three story tower which has a crenellated roof. Windows are Gothic Revival.

Site R/ NRP **Bill Mayberry House (BD-79) 2633 Main St. Fairview**

The two-story, five-bay, central passage, single-pile frame dwelling dates to the period from 1875 to 1899. It has a full-width, hip-roofed porch which is supported by brick columns.

Site/ Evaluation	Description
Site S/ NRP	**Fairview Gym, Fairview High School** The one and-one-half-story, front-gabled stone structure was built in 1938 by the WPA, a program of the New Deal during the Great Depression. It is still used as a practice facility by the high school.

Site/ Evaluation	Description
Site T/ NRP	**Log House, McKnight St., West Fairview** The one story, three-bay rounded log house dates from the 1930s. It has a centrally-located brick chimney.

Site U/ NRP	**Dwelling, South end of Nichols Place** The dwelling is a two-story, four-bay (w,d,w,w) frame, side-gabled structure with interior brick chimneys on the gable ends. The full-width, two-story porch is supported by squared wood columns. Sidelights and transom frame the entrance.

Site/ Evaluation | Description

Site V/ NRP

Log House, west end of York Street

The one-story, front-gabled rounded log house dates from the 1930s. There is a front-gabled porch which covers the entry.

Site W/ NRP

Pollard Baptist Church, west side of Blackburn Ave.

According to a cornerstone, the congregation was founded in 1892. The present day three-story, brick sanctuary dates to 1925. On the three-bay, main facade is a two-story, pedimented porch which is supported by fluted Ionic columns.

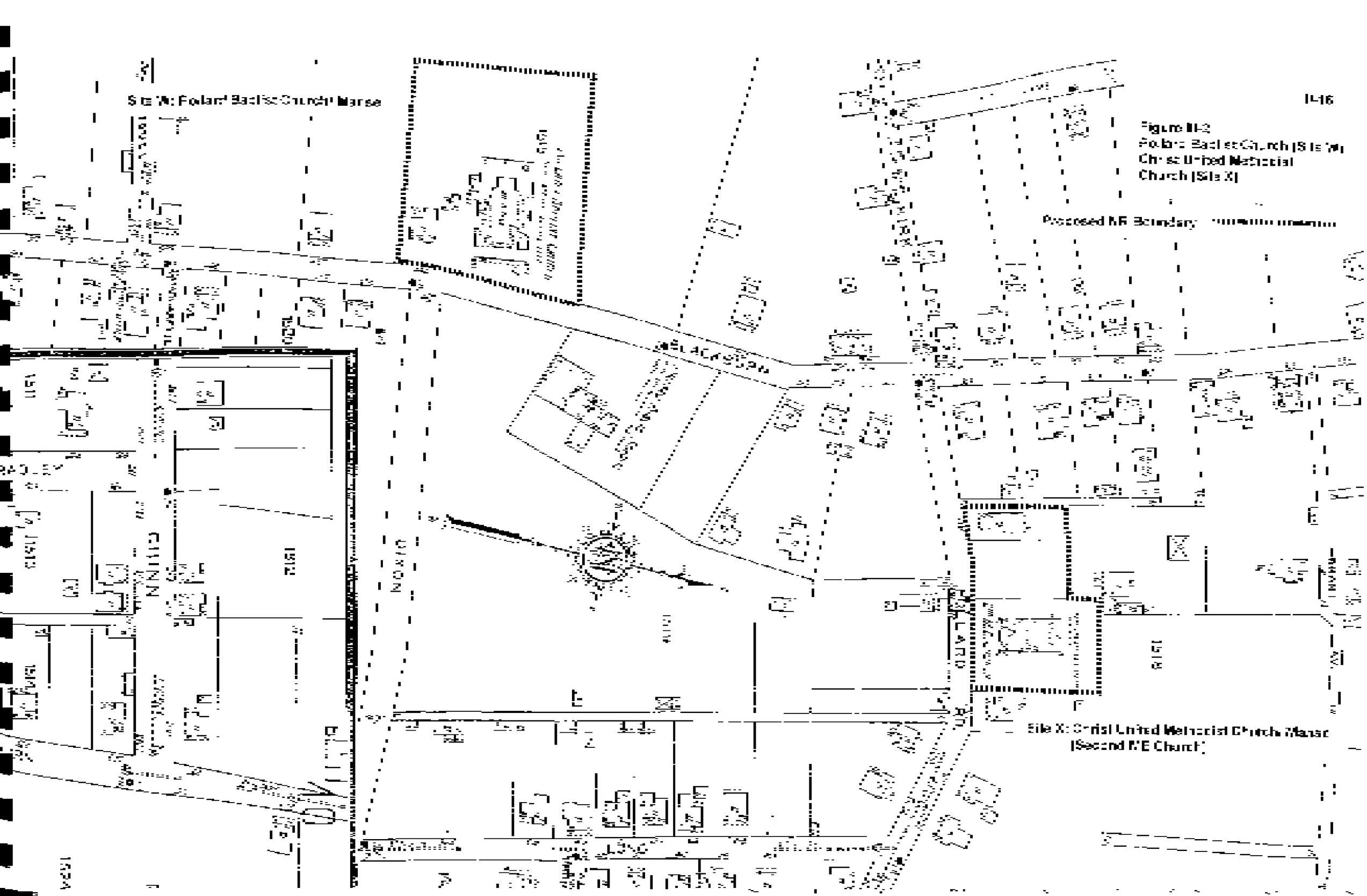


Figure II-2
Poland Baptist Church (Site W)
Christ United Methodist
Church (Site X)

Site/ Evaluation	Description
Site W/ NRP	**Manse for Pollard Baptist Church, Blackburn Ave.** The two-story, two-bay, hip-roofed, brick foursquare is located to the east of the church.

Site X/ NRP	**Christ United Methodist Church, Pollard Road** The entry to the three-story, front-gabled brick church is framed by two truncated square towers. The church is identified as the Second Methodist Episcopal Church on the 1927 Sanborn Insurance Map.

Site/ Evaluation	Description
Site X/ NRP	**Manse, Christ United Methodist Church, Pollard Rd.** The manse is a two-story, three-bay, side-gabled brick dwelling with a full-width, hip-roofed porch. It is located south of the church on Pollard Road.

Site Y/ NRP	**Dwelling, 321 Harrison** The two-story dwelling has four bays (w,d,d,w) on the first floor and two bays on the second. Atop the side-gabled roof is a centrally located brink chimney. The structure dates to the period from 1900 to 1924.

Site/ Evaluation	Description
Site Z/ NRP	**Prospect Place Historic District** The historic district consists of the early twentieth century dwellings on a promontory east of Mayo Trail (US 60) which overlooks the city of Ashland. Most of the dwellings are shown on the 1927 Sanborn Insurance Map.

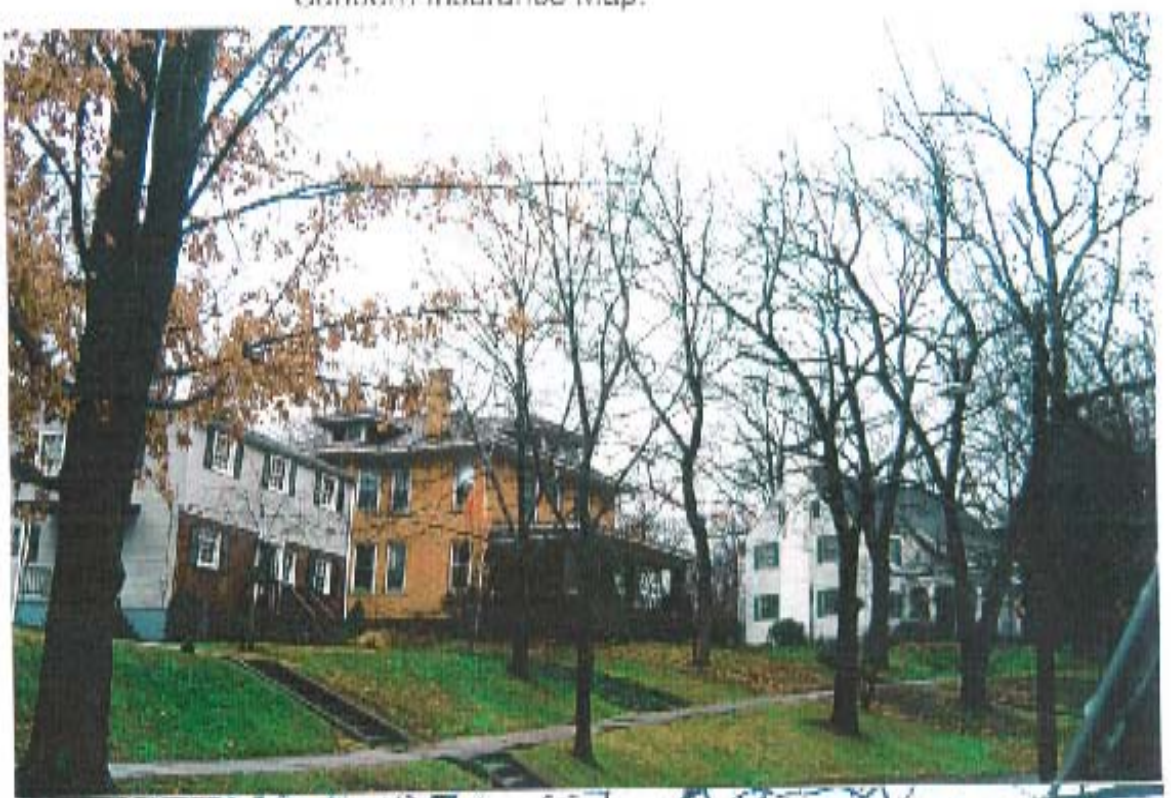
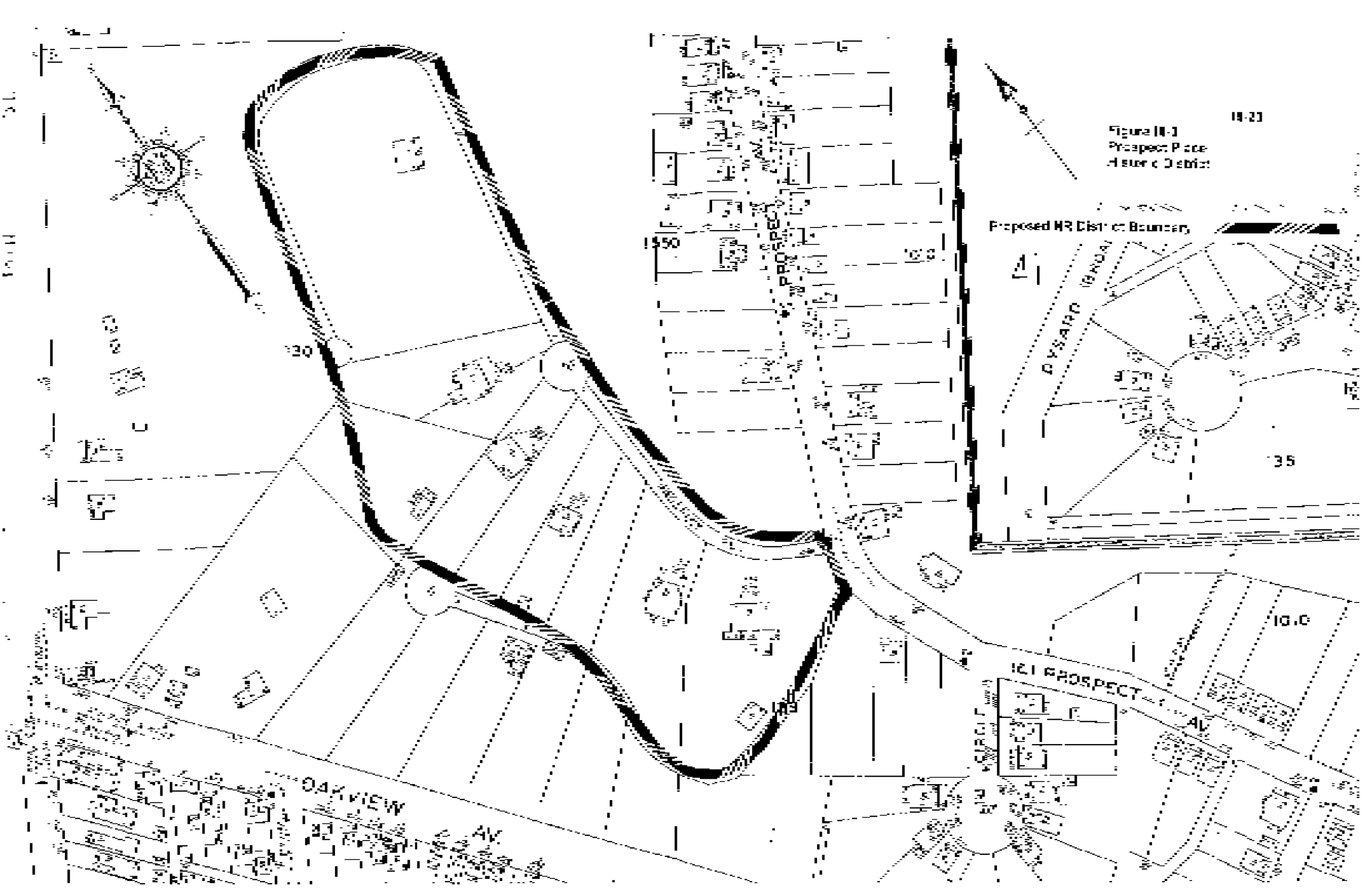


Figure II-1
Prospect Place
Historic District

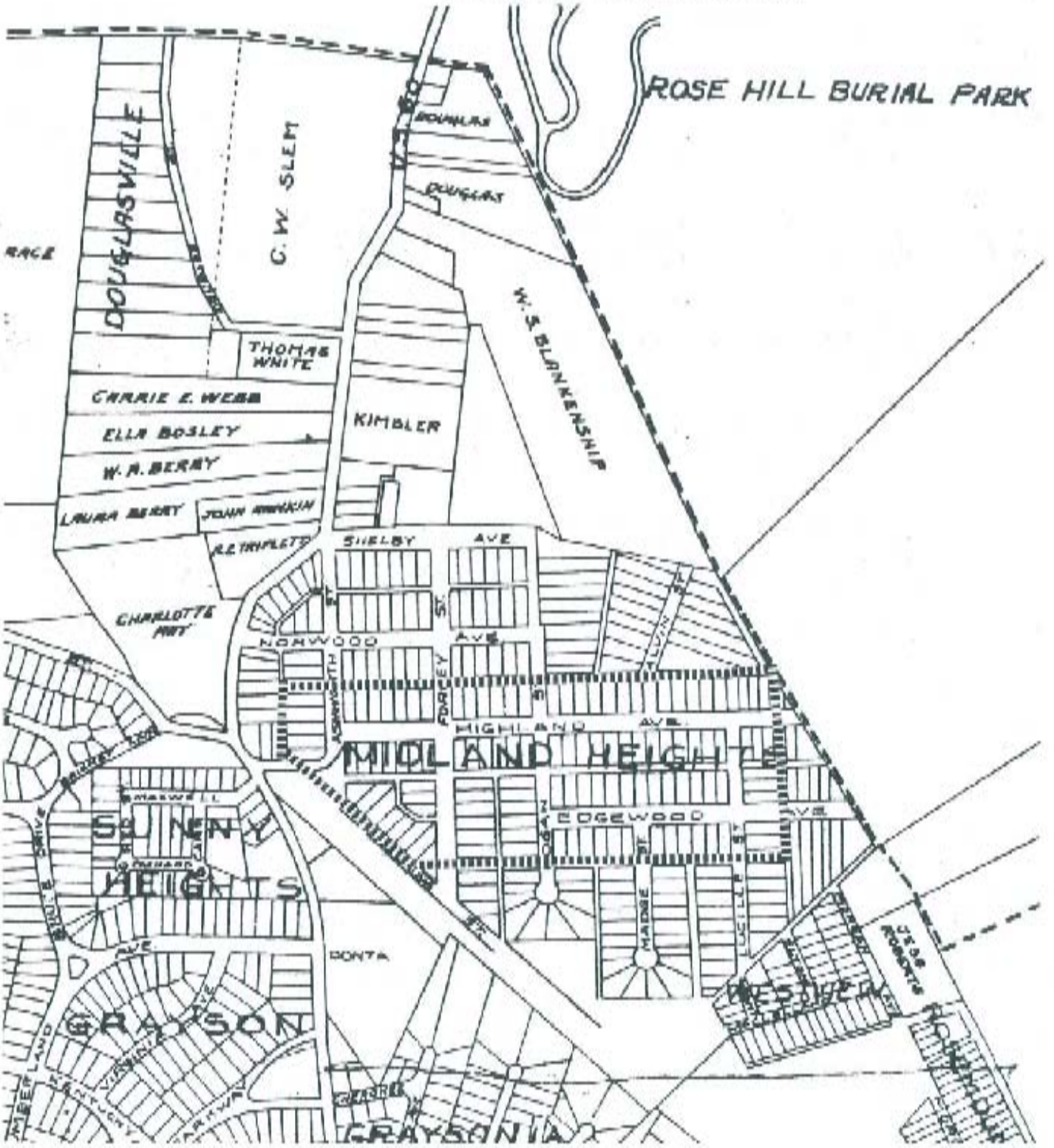
Proposed HR District Boundary



Site/ Evaluation	Description
Site AA/ NRP	**Midland Heights Historic District** The Midland Heights subdivision includes highland Avenue, Norwood, and Edgewood. The houses which are examples of the Colonial Revival style were built in the 1930s and 1940s.

Figure III-4
Midland Heights
Historic District

Proposed NR District Boundary

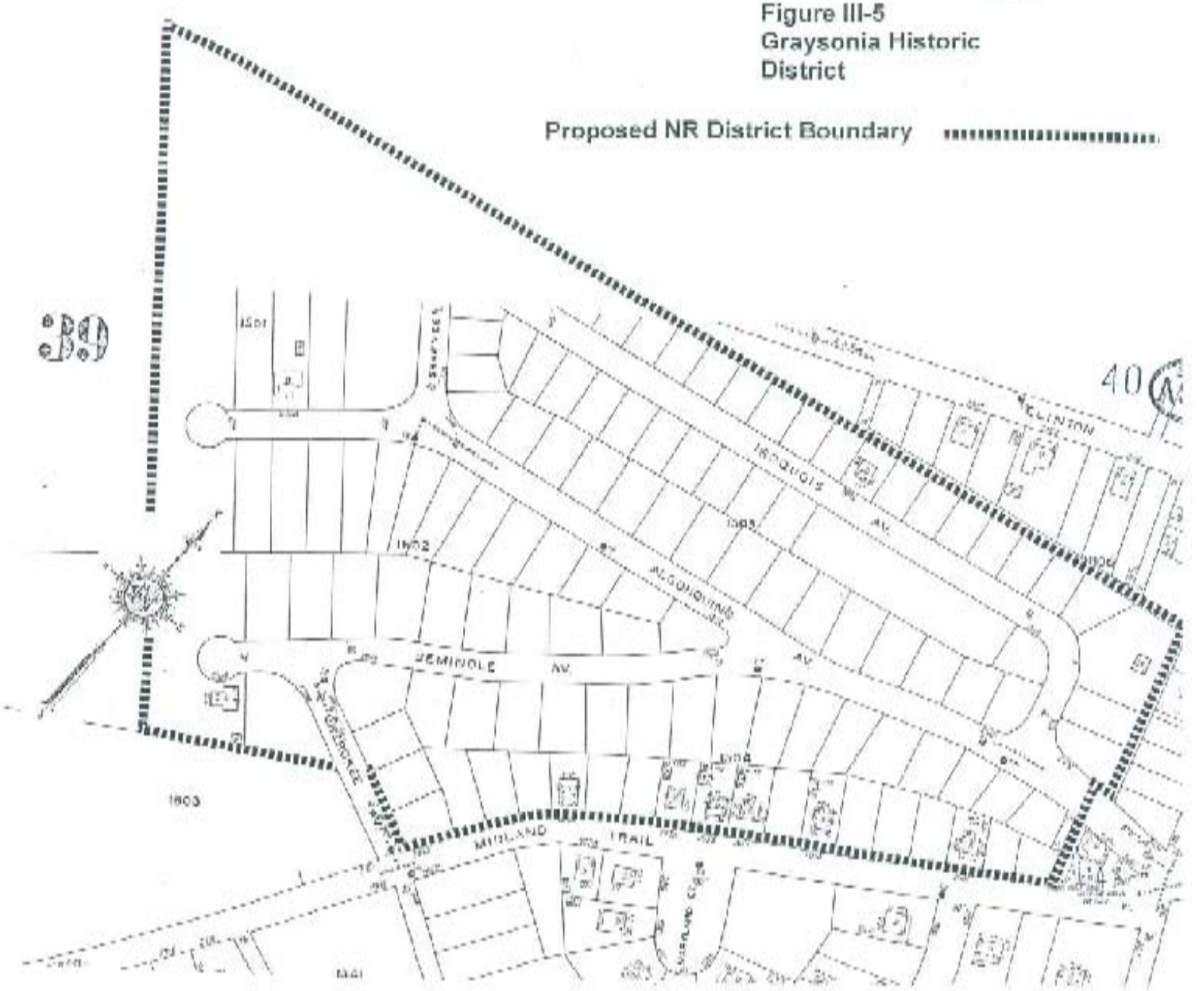


Site/ Evaluation	Description
Site BB/ NRP	**Graysonia Historic District** The Graysonia Historic District includes dwellings on Algonquin, Seminole, Cherokee and associated streets as well as the west side of 13th Street/ Midland Trail (US 60).

Site/ Evaluation	Description
Site BB/ NRP	**Graysonia Historic District** These two-story, American foursquares are located along the west side of 13th Street / Midland Trail (US 60).

Figure III-5
Graysonia Historic District

Proposed NR District Boundary

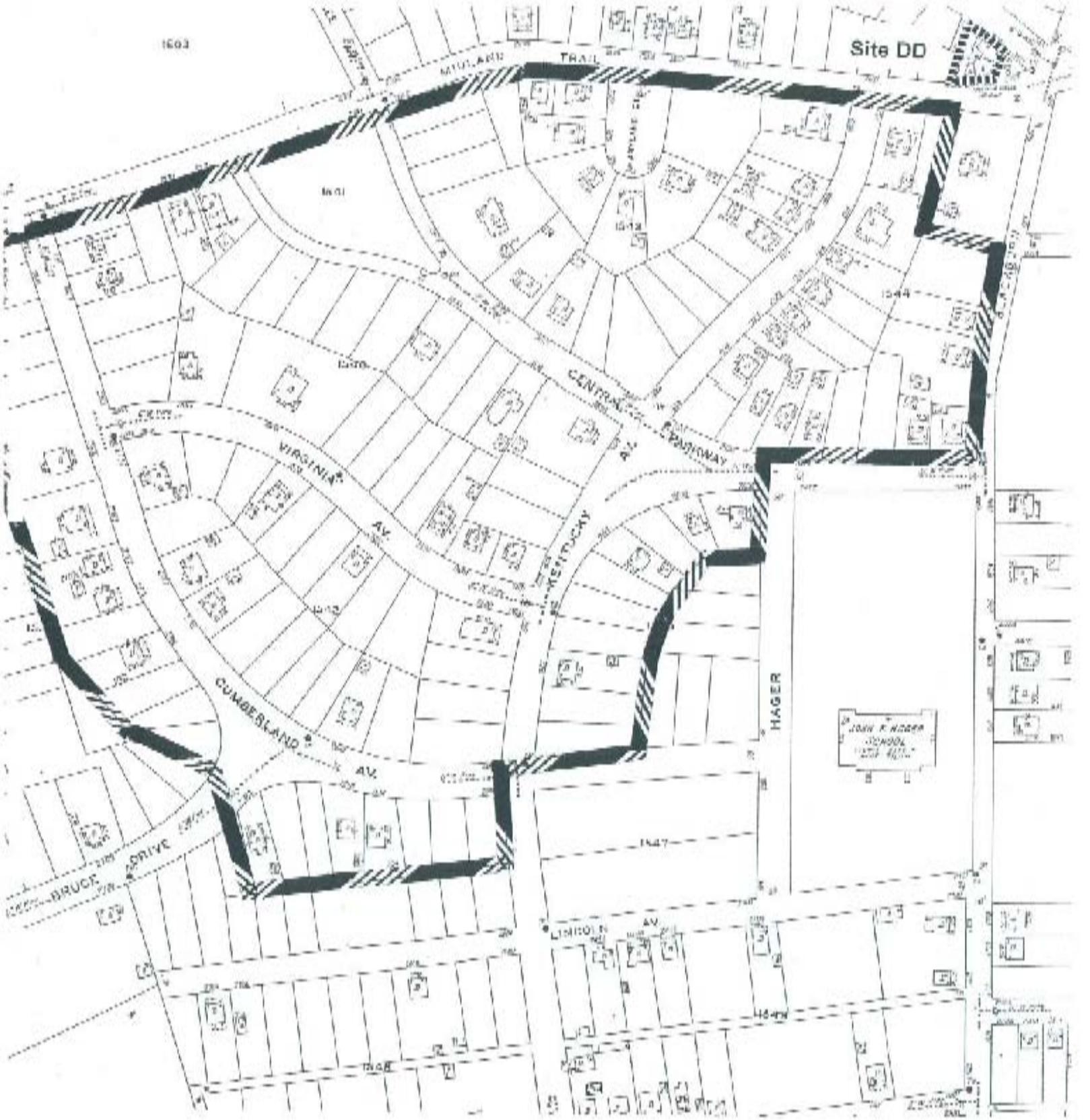


Site/ Evaluation	Description
Site CC/ NRP	**Grayson Road Historic District** Grayson Road Historic District includes Colonial Revival dwellings along Cumberland, Virginia, and Central Parkway

Site/ Evaluation	Description
Site CC/ NRP	Grayson Road Historic District

Figure III-6
Grayson Road Historic District (Site CC)
Tudor Revival Building (Site DD)

Proposed NR District Boundary



Site/ Evaluation	Description
Site DD/ NRP	**Tudor Building, corner of Midland Trail/ Blackburn/ Algonquin** Built prior to 1927, the two-and-one-half-story, side-gabled Tudor Revival building features a steeply pitched roof, front-facing brick chimneys, and half-timbering in the wall gables. It has retail spaces on the first floor and offices on the second. See Figure III-28.

Site EE/ NRP	**Lexington Ave./ Fourteenth Street Historic District** The district includes the early twentieth century buildings along Lexington Avenue north to Bath Avenue.

Proposed HP District Boundary

11-30

Figure 1-7
Lexington Ave./ 14th Street
Historic District

Bath Avenue Historic District
(Site FF)

Central Ave.

District continues, possibly
to 17th Street / Central Park

PROSPECT AVENUE

LEXINGTON AVENUE

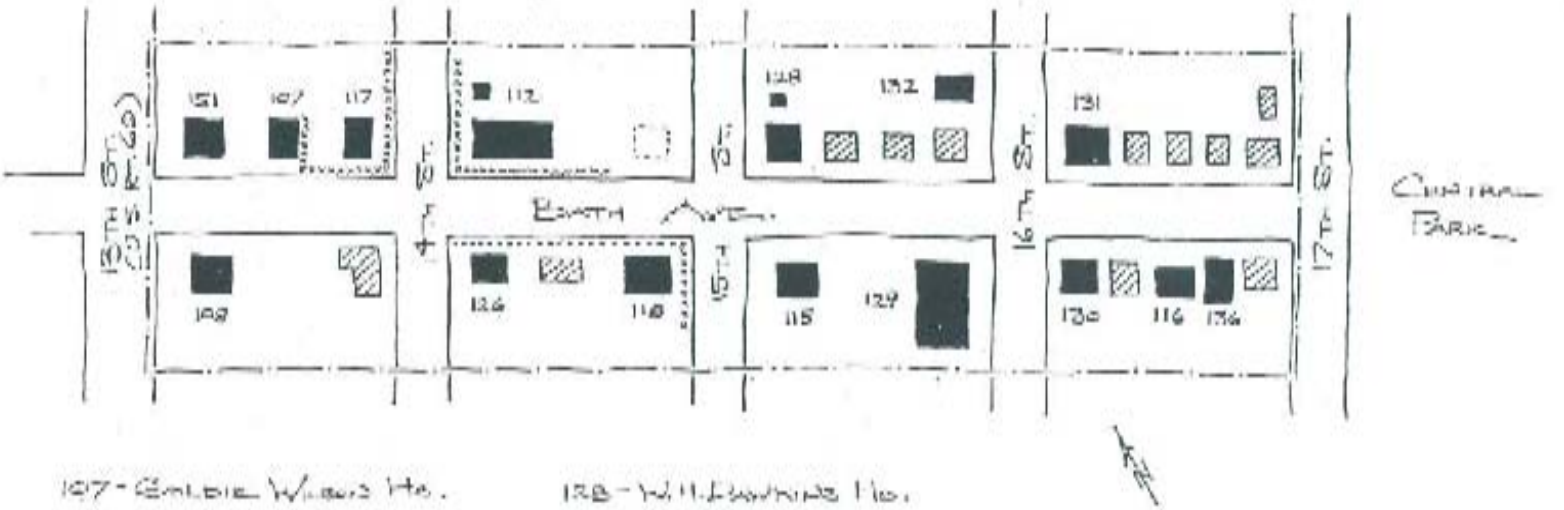
GRAND CENTRAL PARKWAY

Site/ Evaluation	Description
Site FF/ NR	**Bath Avenue Historic District** The Bath Avenue Historic District includes the 1300 through 1600 blocks of West Bath Avenue and was listed on the National Register in 1979. The neighborhood was occupied by the nineteenth-century owners and managers of Ashland's industries. The houses represent a variety of styles from Gothic Revival to Classical Revival which is unparalleled in other sections of Ashland. Commercial development in the 1200 block of West Bath Avenue has severed the west end of the street from the blocks to the east.
Site FF/ NR	**Robert Peeples House, 1317 Bath Avenue** This board and batten, Gothic Revival house was built circa 1874 to 1875 and enlarged in 1891. It is reputed to be the only surviving Gothic Revival house in Ashland.

Figure III-8
Bath Avenue Historic District

BATH AVENUE, HISTORIC DISTRICT, ASHLAND, KY.

■ ESSENTIAL CONTRIBUTORS TO DISTRICT
▨ BUILDINGS WITH COMPATIBLE SCALE AND MATERIALS
□ DESTROYED BUILDING
-·-·- DISTRICT BOUNDARY
CAST IRON FENCES



107 - Goldie Wilson Ho.
108 - A. O. Campbell Ho.
112 - W. E. Bratton Ho.
110 - Hugh Means Ho.
116 - Gen. Simeon Willis Ho.
117 - Robert Peebles Ho.
118 - John Means Ho.
126 - Hilda Peebles Ho.
128 - W. H. Lawhing Ho.
129 - Mayo Mansion
130 - Page-Russell Ho.
131 - H. L. Russell Ho.
132 - Walker Berger Ho.
136 - Sarah Calvin Ho.
151 - Rufus Vail Hunt Ho.

NOTE: NO BUILDINGS IN THE DISTRICT ARE CONSIDERED INTRUSIONS.

Site/ Evaluation	Description
Site FF/ NR	**Abraham Campbell House, 1304 Bath Avenue** This two-and-one-half-story, brick house was built about 1870 by Abraham Campbell, a successful financier who was involved in the Ventura Hotel and several local banks. The Classical Revival porch was added by the Hagers in 1920.

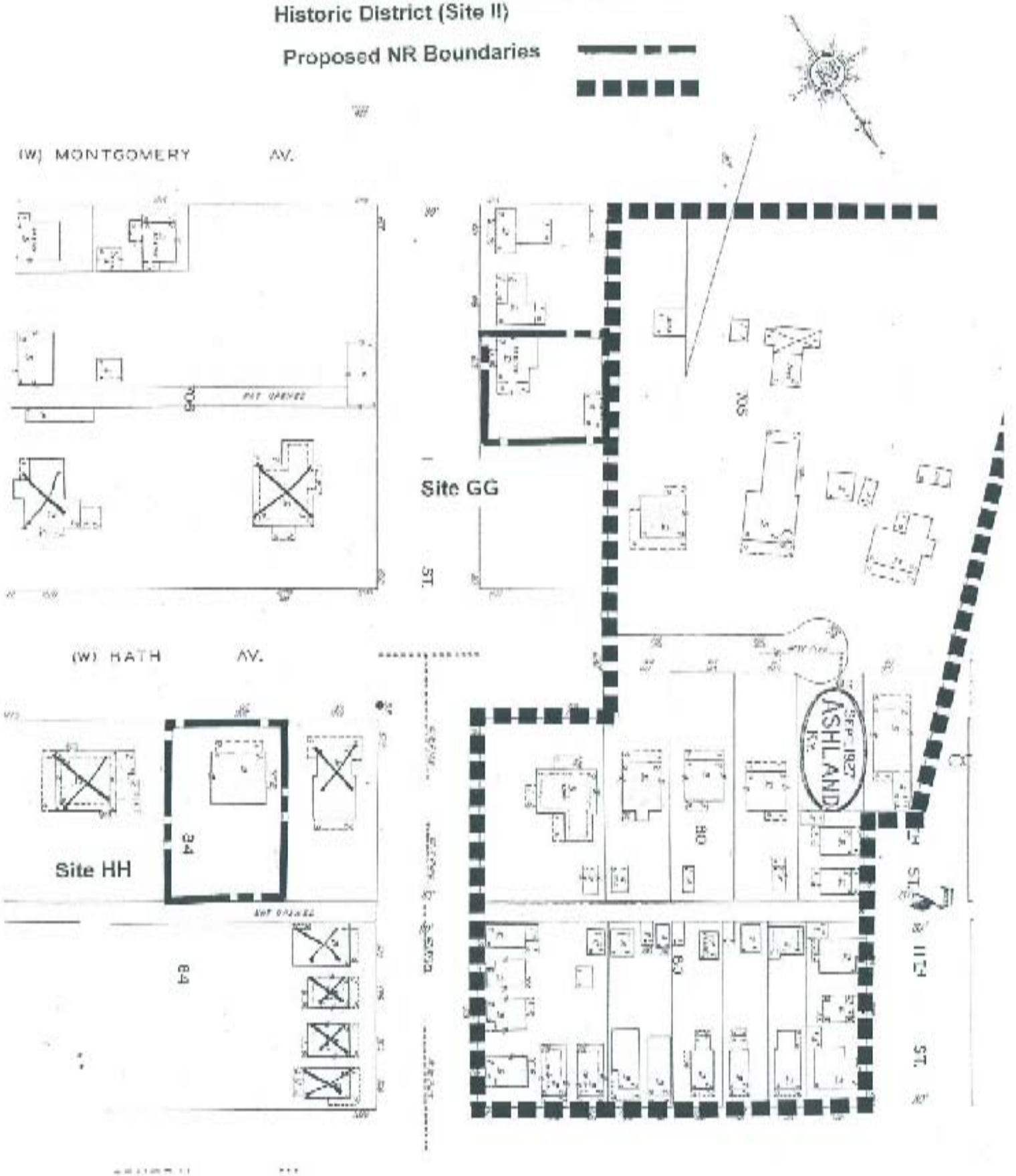
Site GG/ NRP	**Tudor Revival Dwelling, west side of 12th St.** The two-and-one-half-story, side gabled brick Tudor Revival dwelling has a steeply pitched roof and half timbering in the gables.

Site/ Evaluation	Description
Site HH/ NRP	**Dwelling, 1207 Bath Ave.** The two-and-one-half-story, hip-roofed, brick American foursquare has overhanging eaves and a full-width hip-roofed porch

Site II/ NRP	**1100 Block Bath Ave./ West side of Twelfth Street Historic District** The historic district includes a group of brick foursquares and Colonial Revival dwellings which were built before 1927

Figure III-9
Tudor Revival Dwelling (Site GG)
1207 Bath Ave. (Site HH)
1100 Block Bath Ave./ W. Side of 12th St.
Historic District (Site II)

Proposed NR Boundaries



Site/ Evaluation	Description
Site II/ NRP	**1100 Block Bath Ave./ West side of Twelfth Street Historic District** The dwellings which contribute to the proposed historic district are in the 500 block of 12th Street.

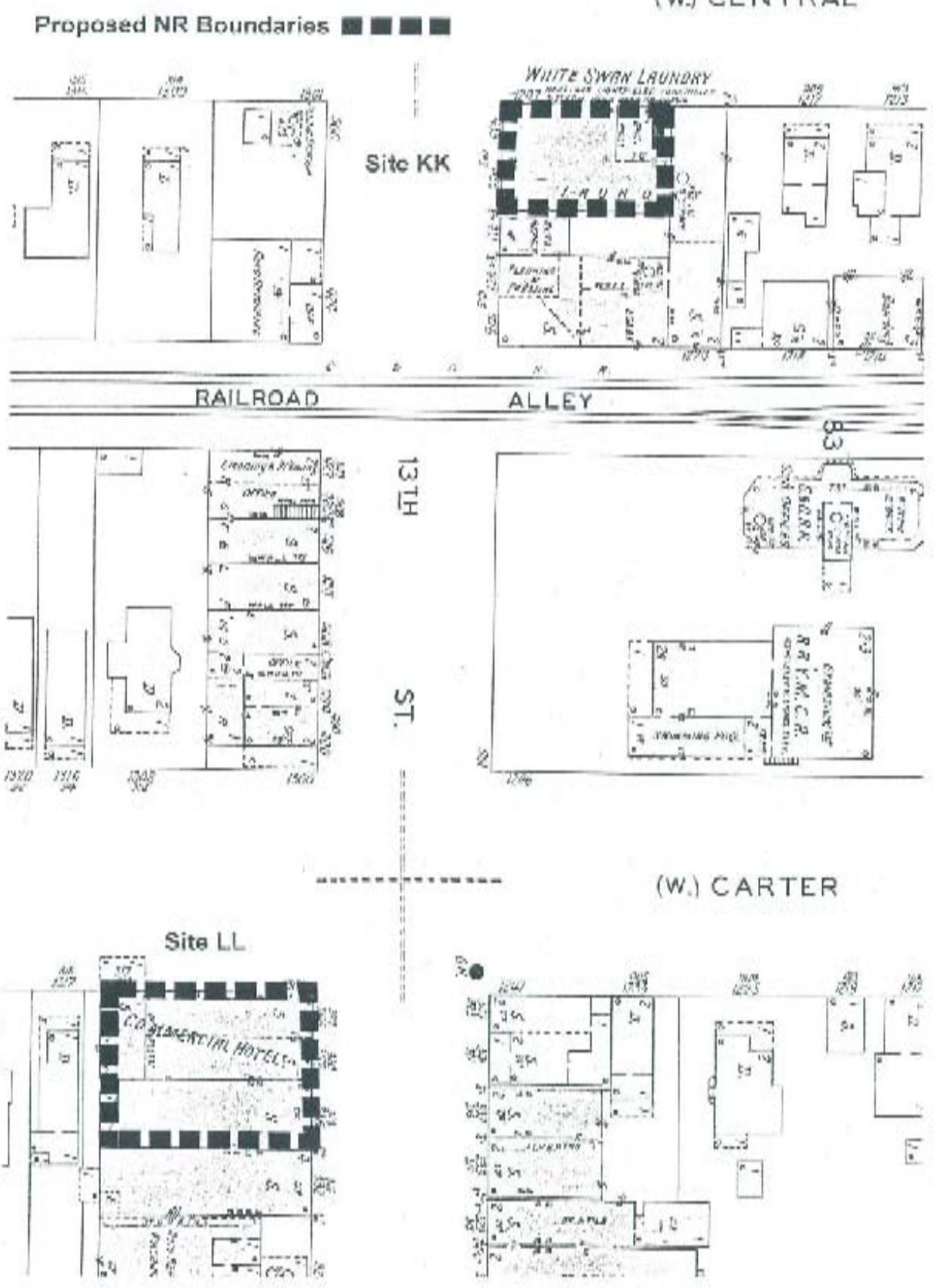
Site JJ/ S	**Commercial Building (BDA-245), 324 14th Street** The two-story, brick commercial building has inlaid stone accents and clerestory windows from the Art Nouveau period. The windows and doorways have been altered.

Site/ Evaluation	Description

Site KK/ NRP **White Swan Laundry Building, NW Corner Central/ 13th St.**
The brick industrial building, shown on the 1927 Sanborn Insurance Map, is one of the few surviving businesses from the era.

Site LL/ NRP **Commercial Hotel (BDA-55), 336-346 13th Street**
The two-story hotel building has rusticated stone lintels as well as scrolled brackets, and dentils in the cornice.

Figure III-10
White Swan Laundry (Site KK)
Commercial Building/ Hotel
(Site LL)

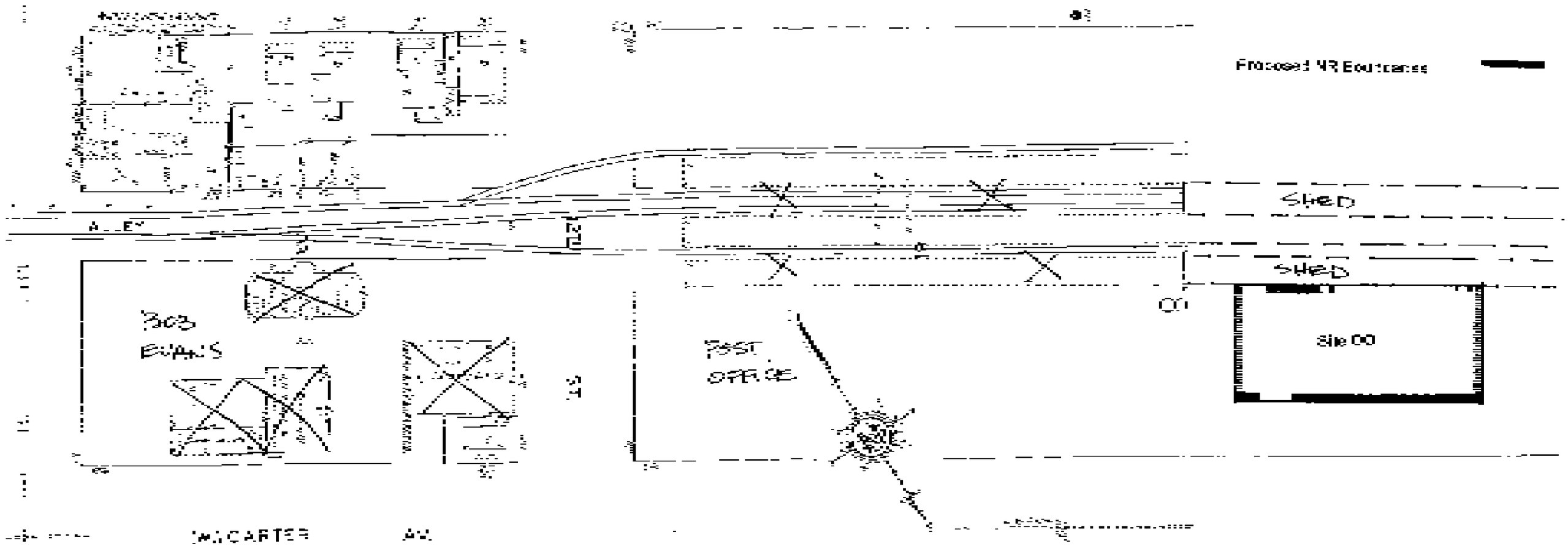


Site/ Evaluation	Description
Site MM/ NRP	**Salvation Army Building, 1225 West Carter St.** The two-story brick building which is topped by a crenelated balustrade and features stone accents around the central entry was built after 1927.

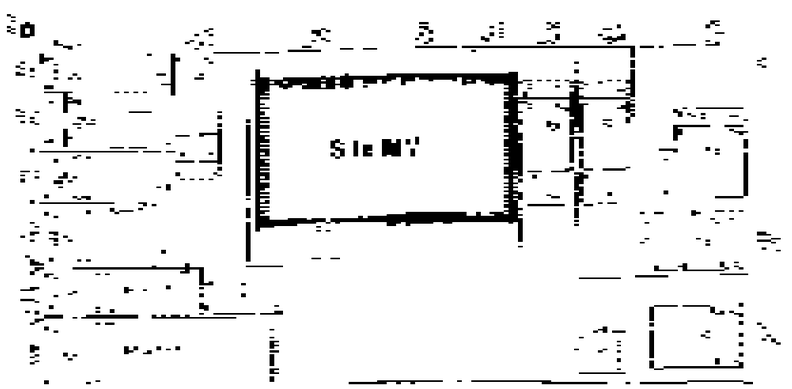
Site NN/ NR	**St. James African Methodist Church , NW Corner Carter/ 12th** Established by the Reverend Christopher Seals circa 1860, the present day St. James African Methodist Episcopal Church was completed in 1912. The entry to the one-and-one-half-story, front gabled brick church is through a hip-roofed corner bell tower. Above the windows are stone lintels. It was listed on the National Register in 1979.

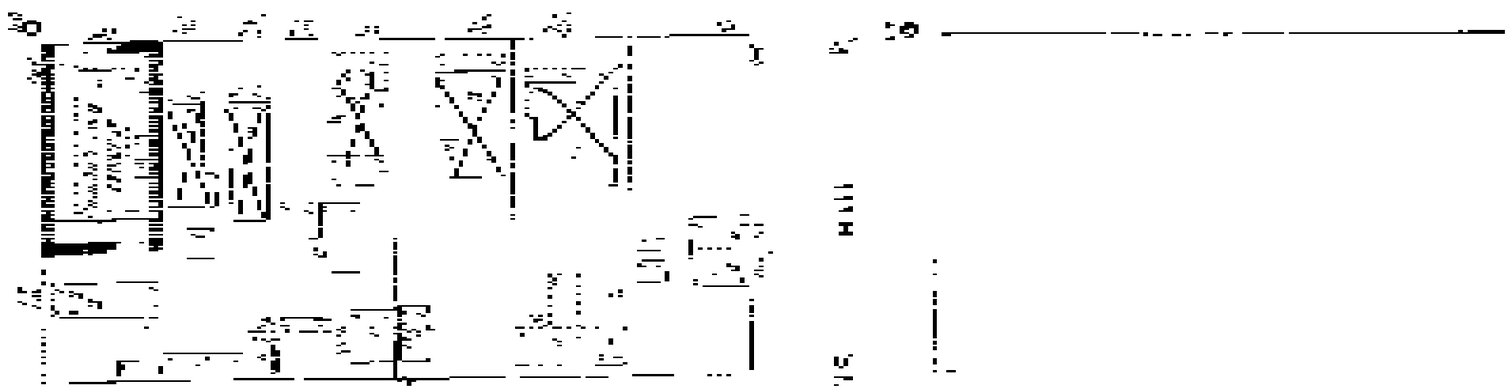
Figure [illegible]
Salvation Army (Site VN)
St. James African Methodist Episcopal Church (Site NN)
Chesapeake and Ohio Railroad Station (Site OO)

Proposed 4R Boundaries



Site NN





Site/ Evaluation	Description
Site OO/ NRP	**Chesapeake and Ohio Railway Station (BDA-54), Carter Ave.** In 1926, this building replaced the railroad's original large frame nineteenth century frame passenger station. The large waiting room is located in the central block of the symmetrical Renaissance design. Associated with the railroad station are three cast iron and wood canopies. The building was renovated for use as an office building by the Third National Bank of Ashland in 1979

Site PP/ NR

Downtown Commercial Historic District

The Downtown Commercial Historic District was listed on the National Register in 1994 under Criteria A and C. The district is significant in the context "Commercial Districts of Kentucky Ohio River Communities, 1850 to 1940". Along with the cities of Ironton and Portsmouth, Ashland serves as one of the major urban centers in the tri-state area of Kentucky, Ohio, and West Virginia. The historic district consists of 84 properties located in a 21-acre area bound by the CSX (formerly C&O) Railroad tracks and the Ohio River on the north, 18th Street on the east, Carter Avenue on the south, and 13th Street on the west.

The historic district is located in the area originally platted for an iron export center by the Kentucky Iron and Manufacturing Company in 1854. The original plat ran from present-day Front Street to Lexington Avenue and from present-day 1st Street to 23rd Street. Originally called Broadway, 16th Street served as the major north-south connector from the commercial area near the Ohio River to Hilton Avenue at the edge of the hills. Broadway or 16th Street was also designated as the dividing line for the east and west addresses on the avenues.

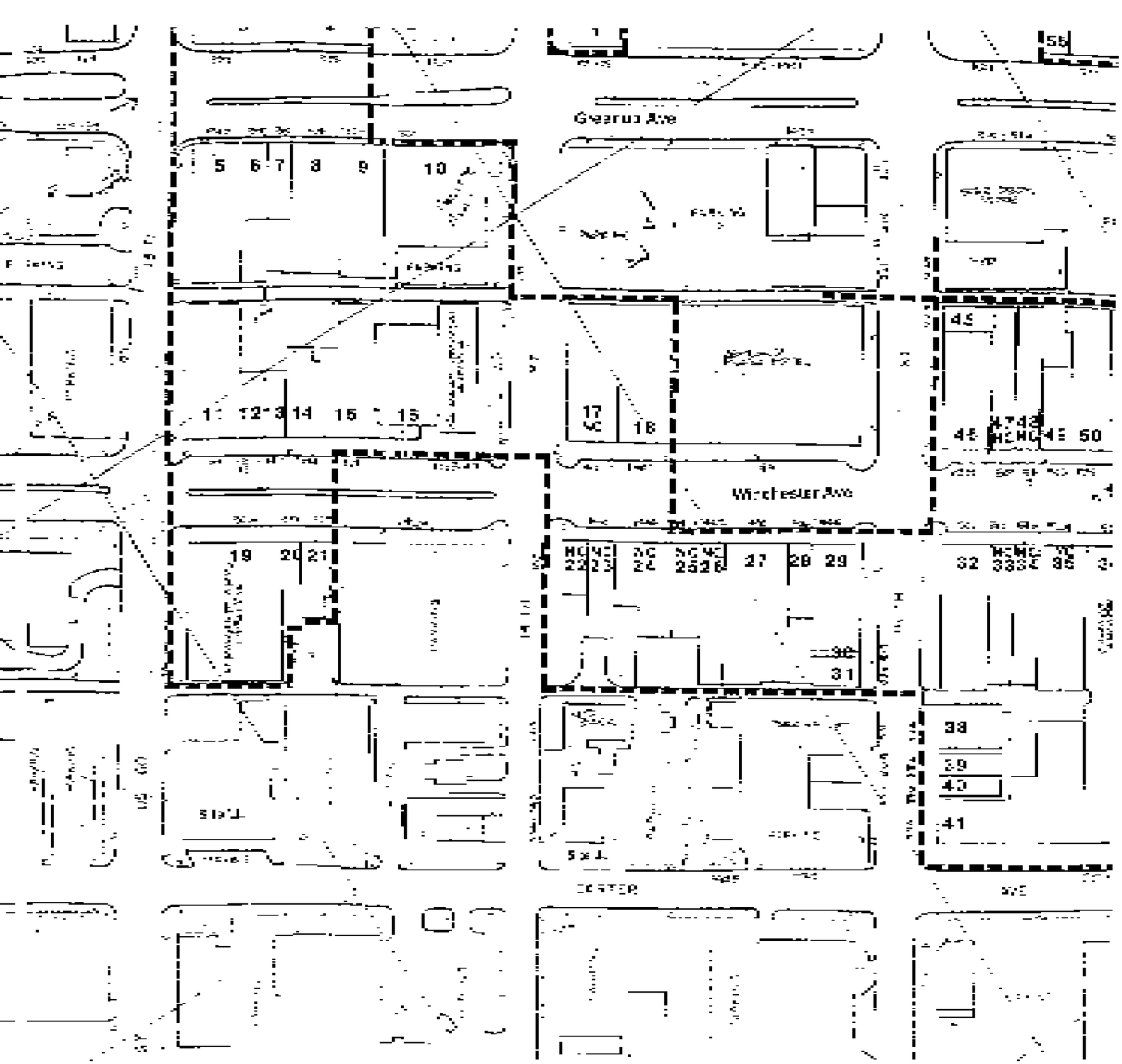
The land between the Ohio River and Front Street was planned for use by river-related businesses, the railroads, and industries. During Ashland's early commercial history, merchants were located along Front Street. By the 1920s, Ashland's major businesses had relocated from Front Street south to Winchester Avenue between 13th and 17th Streets to escape the frequent flooding on Front Street. Today most of Ashland's most significant commercial buildings are found on Winchester Avenue. The intersection of present-day 16th Street and Winchester Avenue became the focus of the commercial district and is marked today by the eleven-story Second National Bank Building which was completed in 1924. Ashland's Ohio River frontage is occupied by the CSX Railroad tracks and is separated from the commercial district by a flood wall which was built during the 1940s.

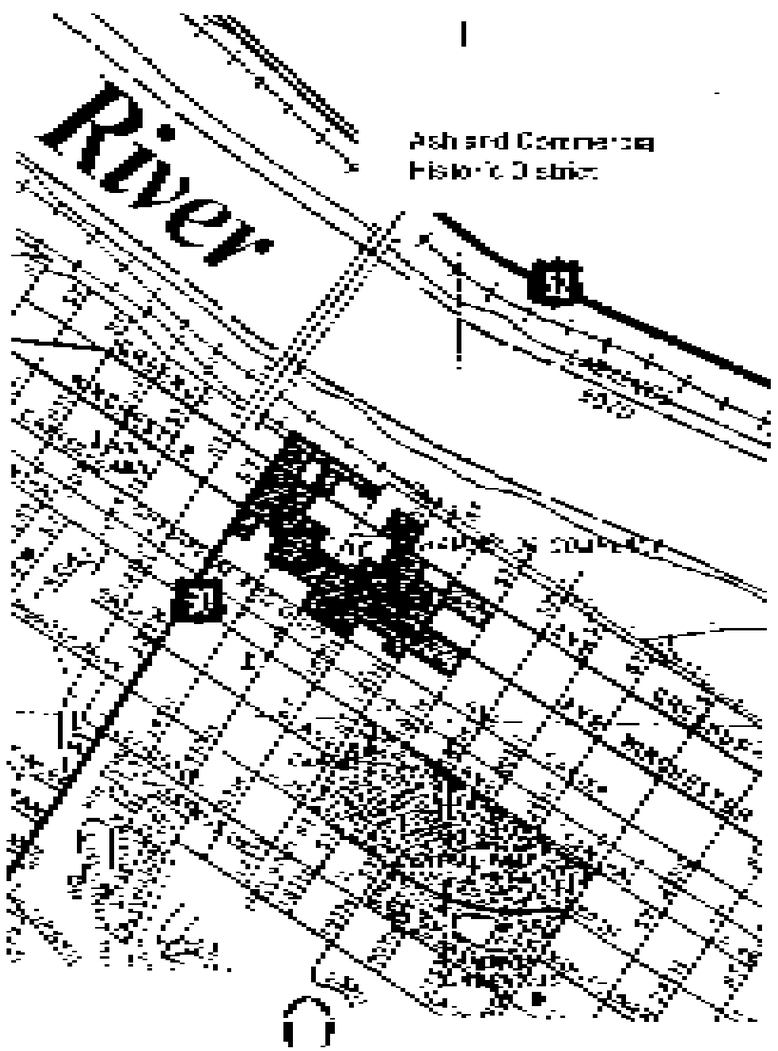
The brick commercial buildings included in the district date from 1890 to 1940, with half of the structures dating from 1900 to 1925, a period of economic expansion for Ashland. During that period, Ashland was known as the "Crossroads of the C&O Railroad" because of the high volume of passengers and freight which passed through the city. Hotels were built to provide temporary accommodations for travelers, businessmen, and newcomers drawn to Ashland by the employment and business opportunities. Ashland also became a banking center due to the capital

generated by the iron and coal industries in the Big Sandy valley. During the early twentieth century, buildings completed for banks not only housed financial operations, but also created office space to lease to the increasing numbers of lawyers, coal and oil operations, and real estate agents who established themselves in Ashland to provide services to the rapidly increasing population.

Ashland also became an entertainment center. By 1918, there were four movie theaters. Two additional ones were built in 1926. The Paramount, shown below, was the most elaborate and the first theater to movie from the silent to the "talking" movies. Located on the southeast corner of the intersection of Winchester Ave. and 13th St., it was listed on the National Register in 1975 as an individual property and is also included in the Ashland Commercial Historic District.

Figure II-11
Site P9
Ash and Commonwealth
Historic District





Site PP/ NR **Downtown Commercial Historic District**

Commercial buildings within the historic district on the north side of Winchester Avenue (1301, 1309, 1317, 1327) between 13th and 14th Streets, which date from 1880 to 1907.

Site PP/ NR

Downtown Commercial Historic District

Calvary Episcopal Church on the northwest corner of Winchester and 14th Street (1333-1347 Winchester Avenue) is a brick and stone Gothic Revival structure completed circa 1895. The arched entry is ornamented with alternating bands of light and dark stone. The three-story, pyramidally-roofed bell tower is accented with stonework and battlements.

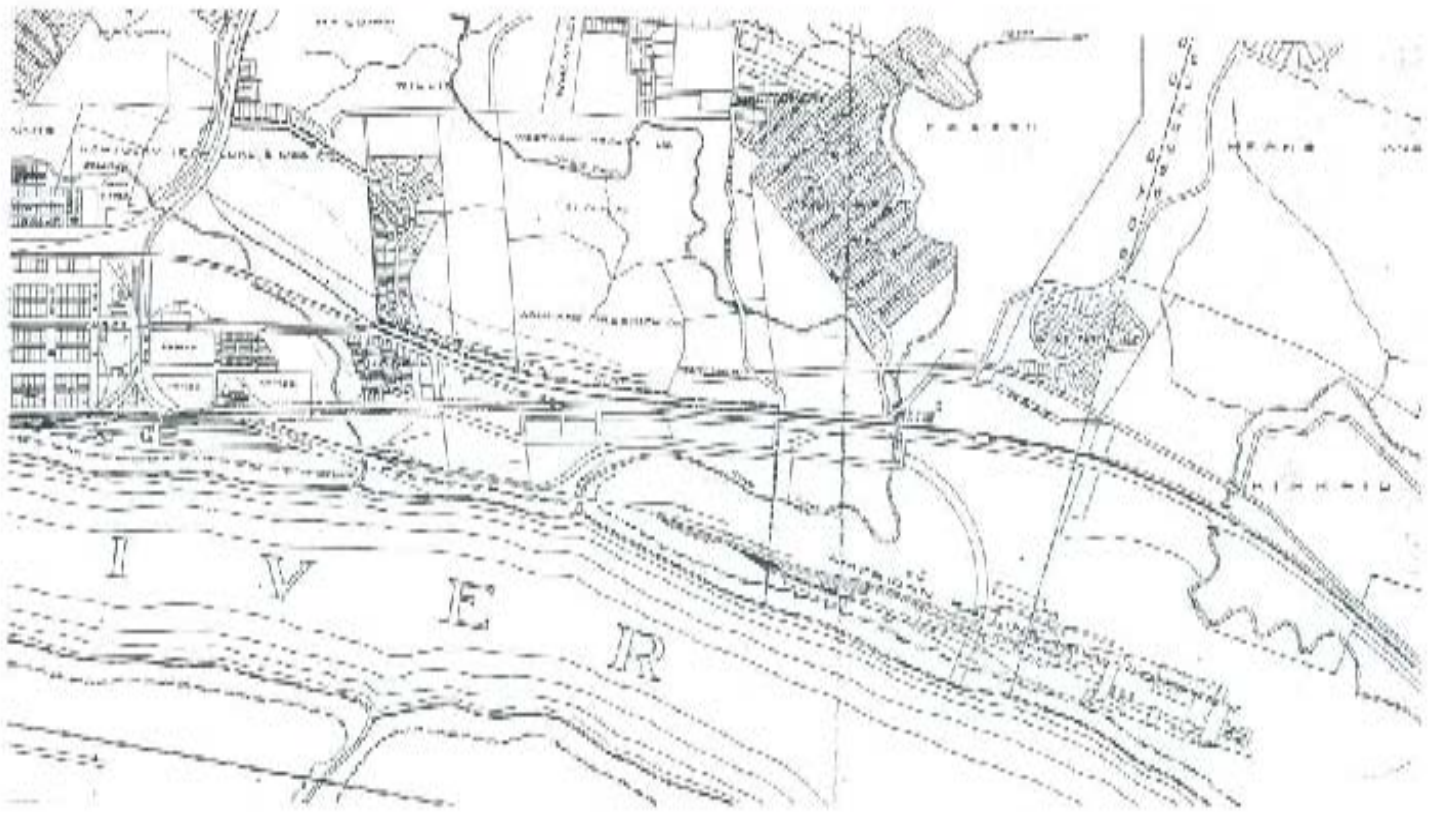
Site QQ/ S

AK Steel Ashland, US 23

In 1994, AK Steel was formed from ARMCO and Kawasaki. Its current products are carbon, stainless and electrical steel, cold rolled and aluminum coated stainless steel for automakers. The American Rolling Mill Company, which changed its name to ARMCO in 1948, purchased the iron furnaces along the Boyd-Greenup County line from the Ashland Coal and Iron Company in the 1920s. The American Rolling Mill Company produced steel sheets through a continuous rolling method and required a work force of 3,600 people. In the subsequent commercial expansion, Ashland's population grew from 15,000 in 1920 to 29,000 by 1925 and resulted in significant commercial and residential construction.

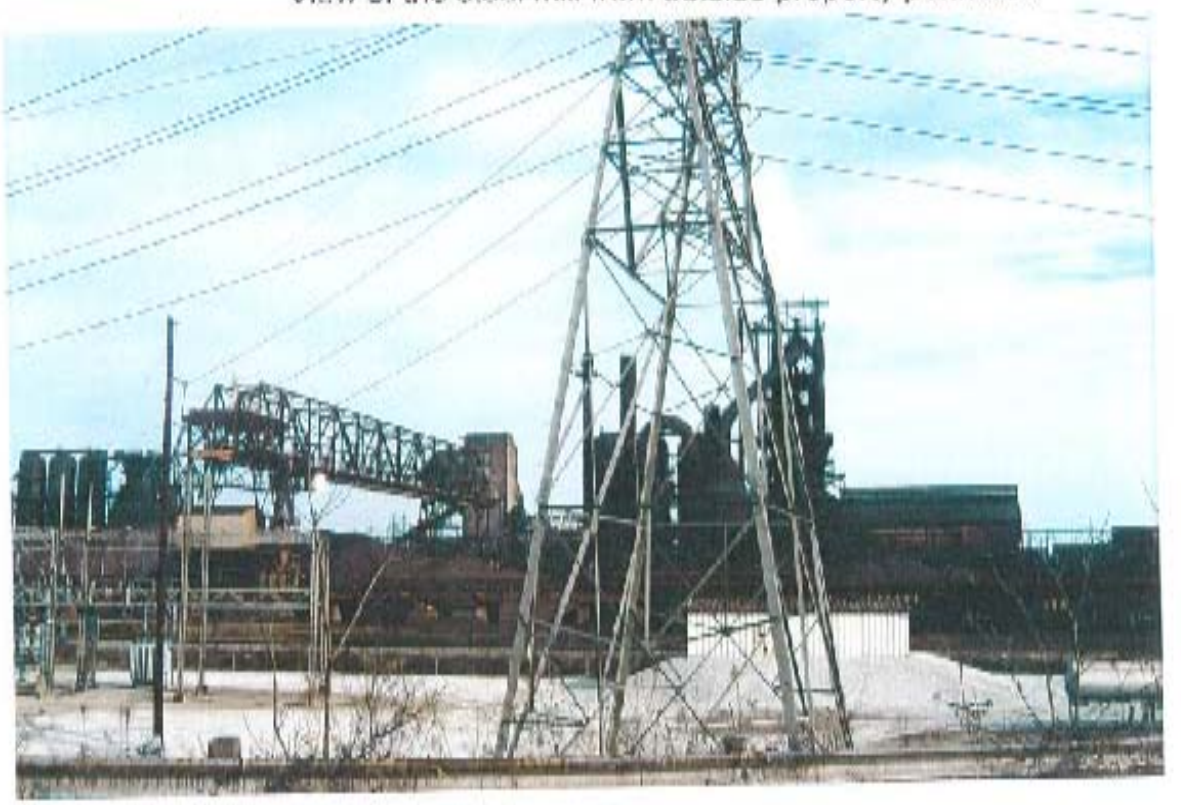
The blast furnaces of the steel plant have been dismantled, rebuilt, and expanded many times since the 1920s. Present-day access to the industrial is restricted due to security, but some early twentieth century buildings associated with the steel mill are visible along the perimeter. Due to the numerous updates of the buildings, equipment and furnaces over the last ninety years, it is doubtful that the industrial site would meet National Register criteria, but an intensive on-site inventory would be required to make a final determination of its eligibility.

Extent of American Rolling Mill Company in 1937



Site QQ/ S AK Steel Ashland, US 23

View of the steel mill from outside property perimeter



Early 20th century building on south edge of steel mill property

IV. CONCLUSION

Within the proposed planning study area for the Interstate 64 to Ashland, Kentucky Planning Study are the following two historic districts and two individual properties which are listed on the National Register.

Ashland Historic Commercial District - listed in 1994 (Site PP)
Main Avenue Historic District, listed in 1978 (Site FF)
Paramount Theater, listed as individual property in 1975 and included in the Ashland Historic Commercial District (Site PP) in 1994
St. James African Methodist Episcopal Church, listed in 1978 (Site NN)

As the result of coordination with the SHPO on compliance reports the following sites were Determined Eligible by Agreement by SHPO

Quadruple Span Concrete Bridge, US 60 over Little Sandy River (Site C)
Williams Creek Bridge, Tennessee (Site D)
Summit Missionary Baptist Church, KY 716 (Site I)

The following site was Determined Eligible by the Keeper of the National Register:

Federal Correctional Institution and Prison Camp (FCI-ASH) (Site J)

After a windshield survey, the following six historic districts appear to meet National Register criteria.

Prospect Place Historic District (Site A)

Midland Heights Historic District (Site AA)

Greystone Historic District (Site BB)

Grayson Road Historic District (Site CC)

Lexington Ave / 14th Street Historic District (Site EE)

11th Block Both Ave / 12th Street Historic District (Site II)

The following 26 individual properties appear to meet National Register criteria:

Dwelling, 2105 Midland Trail (Site A)

House, 8901 Meade Springer Road (Site I)

Dwelling, 8975 Mead-Springer Road (Site F)

Complex and Barns, 8917 Mead Springer Road (Site G)

Tudor Revival Houses, [illegible] KY 716 (Site H)

I Plan Dwelling, [illegible] KY 716 (Site L)

Thornberry House, KY 716 (Site M)

ARMCO Park, US 60 (Site N)

Gertrude Ramey House (Site O)

Bridge over Little Hood Creek (Site P)

Westwood Christian Church, 713 Wheatley Avenue (Site Q)

Bill Mayberry House, 2033 Main St., Fairview (Site R)

Fairview Gym, Fairview High School, 2123 Main St. (Site S)

Log House, McKnight St., West Fairview (Site T)

Dwelling, Nichols Place (Site U)

Log House, York St. (Site V)

Hilliard Baptist Church, Blackburn Ave. (Site W)

Christ United Methodist Church (Site X)

Dwelling, 721 Harrison (Site Y)

Tudor Revival Building, US 60 (Site DD)

Tudor Revival Dwelling, 12th St. (Site GG)

American Foursquare, Ninth Ave. (Site HH)

White Swan Laundry Building, Central Ave. (Site KK)

Commercial Heating/ Hotel, 336-346 13th St. (Site LL)

Salvation Army Building, 1225 Carter Ave. (Site MM)

Chesapeake and Ohio Passenger Depot, Carter Ave. (Site OO)

A final determination of National Register eligibility will require additional research, photography, physical examination of the structures, an evaluation of these sites relative to the integrity standards established by similar properties in Boyd County, Kentucky, which are currently listed on the National Register, and consultation with the State Historic Preservation Officer (SHPO) at the Kentucky Heritage Council in Frankfort.

V BIBLIOGRAPHY

Ashland Centennial Committee. "A History of Ashland, Kentucky from 1786 to 1954." Ashland: Grabo Printing Co., 1954.

Gardner, Charles H. "Chesapeake and Ohio Railway." *The Kentucky Encyclopedia*. Lexington: The University Press of Kentucky, 1992.

Chappell, Edward A. "Ritchie Reservoirs at Ashland." National Register nomination, Kentucky Heritage Council, 1971.

Finney, Celine. "Cultural Historic Survey of Proposed Wireless Communications Facility (BOY 06) in Cannonsburg, Boyd County, Kentucky." Cultural Resource Analysts, 2002.

Finney, Celine and James T. Kirkwood. "Cultural Historic Survey for the Interstate 64/ KY 180 Interchange Extension in Boyd County, Kentucky." KYTC Item No. 9-60. Cultural Resource Analysts, 2002.

Finney, Celine and James T. Kirkwood. "Cultural Historic Survey of Proposed Tennacon Telecommunication Tower Site (BOY-09), in Cannonsburg Vicinity, Boyd County, Kentucky." Cultural Resource Analysts, 2003.

Jackson, Evelyn Stephens. "Boyd County". *The Kentucky Encyclopedia*. Lexington: The University Press of Kentucky, 1992.

Kennedy, Rachel and Cynthia Johnson. "The New Deal Builds: A Historic Context of the New Deal in East Kentucky, 1933-1943." Kentucky Heritage Council.

Paquette, John L. "FCC Form 620 and Attachments for Tennacom-Ironton Hollow Cellular Tower in Ashland, Boyd County, Kentucky." Environment and Archeology, LLC, 2009.

Pulsgrove, Robert M. "Cultural Historic Survey for the Interstate 64/ KY 180 Interchange Reconstruction Project in Boyd County, Kentucky". KYTC Item No. 9-60. Cultural Resource Analysts, 1999.

Powell, Helen C. "Downtown Ashland Historic District". National Register nomination. Kentucky Heritage Council, 1992.

Powell, Helen C. "A Historic Overview for the Ashland Bypass in Boyd and Greenup Counties, Kentucky." Westport, 1994.

Powell, Helen C. "Survey Report Boyd County, Kentucky, 1991-1992." Kentucky Heritage Council and Boyd County Public Library.

Powers, James. "Ashland". *The Kentucky Encyclopedia*. Lexington: The University Press of Kentucky. 1992.

Rennick, Robert A. *Kentucky Place Names*. Lexington: University of Kentucky Press. 1984.

Rogers, Fred J. A Cultural History Survey of the Proposed Wireless Communication Facility (BOY 013) South Ashland, Boyd County, Kentucky. Cultural Resource Analysts. 2002.

Sanborn Fire Insurance Maps for Ashland, Kentucky. 1907.

Suter, Elmer G. *Historic Railroads of Kentucky*. Indianapolis: Van A. Jones Co., 1967.

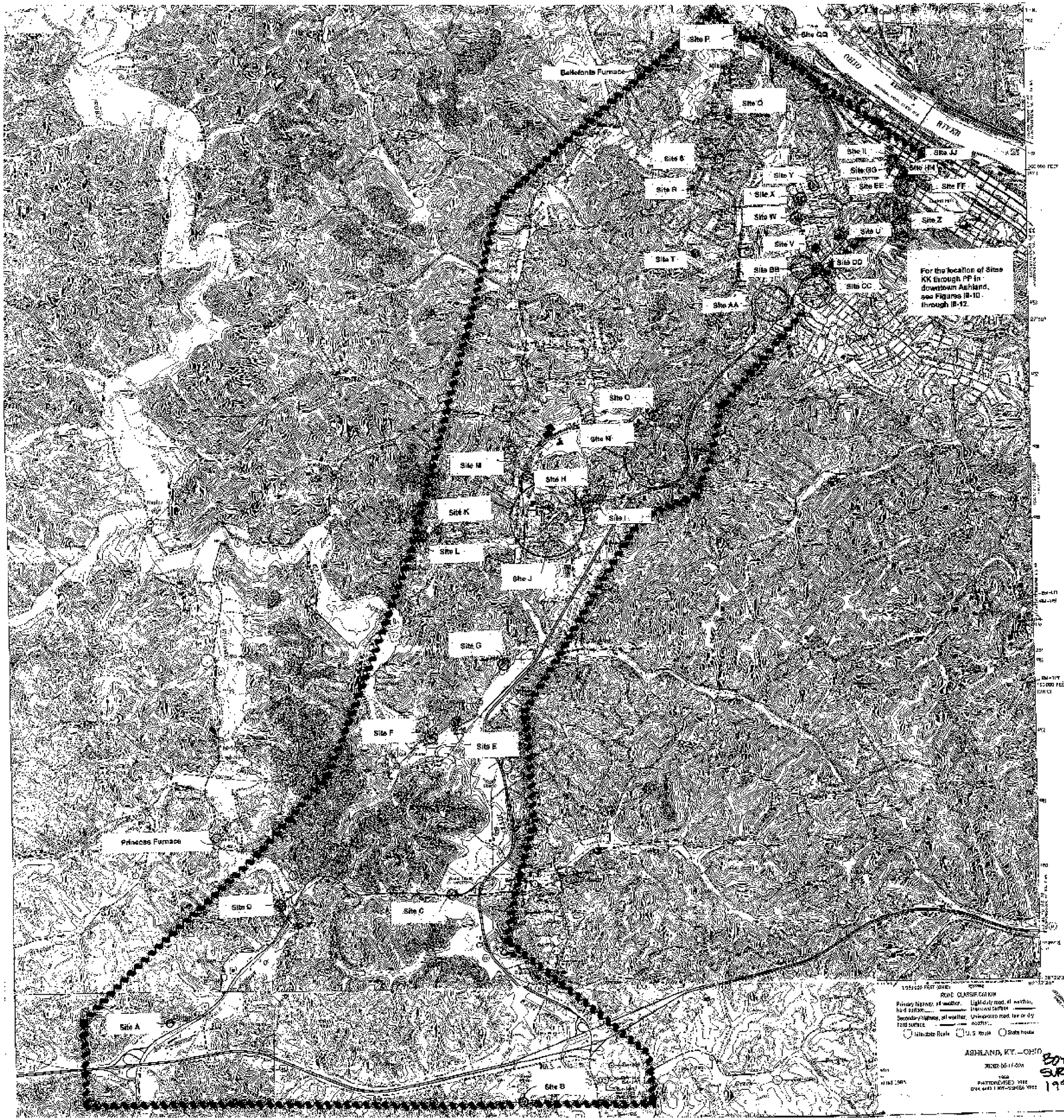


FIGURE III-1

HISTORIC SITES
INTERSTATE 64 TO ASHLAND PLANNING STUDY OVERVIEW
BOYD COUNTY, KENTUCKY (ITEM NO. 9-129.00), 2007

Site A	Dwelling, 2105 Midland Trail, appears to meet National Register criteria
Site B	Central Passage Dwelling, South Big Run Road, survey
Site C	Quadruple Span Concrete Bridge, US 60 over Little Sandy River. Determined Eligible by Agreement by SHPO
Site D	Williams Creek Bridge, Fabricator, Determined Eligible by Agreement by SHPO
Site E	House, 8831 Meade-Springer Road, appears to meet National Register criteria
Site F	Dwelling, 8223 Mead-Springer Road, appears to meet National Register criteria
Site G	Bungalow and Barns, 8517 Mead-Springer Road, appears to meet National Register criteria
Site H	Tudor Revival Houses, 835/839 KY 716, appear to meet National Register criteria
Site I	Summit Missionary Baptist Church, KY 716, Determined Eligible by Agreement by SHPO
Site J	Federal Correctional Institution and Prison Camp (FCI/FCP), Determined Eligible by the Keeper of the National Register
Site K	Tudor Revival House, KY 716, survey
Site L	T-Plan Dwelling, 3293 KY 716, appears to meet National Register criteria
Site M	Thornberry House, KY 716, appears to meet National Register criteria
Site N	ARMCO Park, US 60, appears to meet National Register criteria
Site O	Gertrude Ramey House, appears to meet National Register criteria
Site P	Bridge over Little Hood Creek, appears to meet National Register criteria
Site Q	Westwood Christian Church, 713 Wheatley Avenue, appears to meet National Register criteria
Site R	Bill Mayberry House, 2633 Main St., Fairview, appears to meet National Register criteria
Site S	Fairview Gym, Fairview High School, appears to meet National Register criteria
Site T	Log House, Fairview, appears to meet National Register criteria
Site U	Dwelling, Nichols Place appears to meet National Register criteria
Site V	Log House, York St., appears to meet National Register criteria
Site W	Pollard Baptist Church, Blackburn Ave., appears to meet National Register criteria
Site X	Christ United Methodist Church, appears to meet National Register criteria
Site Y	Dwelling, 321 Harrison, appears to meet National Register criteria
Site Z	Prospect Place Historic District appears to meet National Register criteria
Site AA	Midland Heights Historic District appears to meet National Register criteria
Site BB	Graysonia Historic District appears to meet National Register criteria
Site CC	Greyson Road Historic District appears to meet National Register criteria
Site DD	Tudor Revival Building, US 60, appears to meet National Register criteria
Site EE	Lexington Ave./ 14th Street Historic District appears to meet National Register criteria
Site FF	Bath Avenue Historic District, listed on the National Register in 1979
Site GG	Tudor Revival Dwelling, 12th St., appears to meet National Register criteria
Site HH	American Foursquare, 1207 Bath Ave., appears to meet National Register criteria
Site II	1100 Block Bath Ave./ 12th Street Historic District appears to meet National Register criteria
Site JJ	Commercial Building, 924 14th Street, survey
Site KK	White Swan Laundry Building, Central Ave., appears to meet National Register criteria
Site LL	Commercial Building/ Hotel, 336-346 13th St., appears to meet National Register criteria
Site MM	Salvation Army Building, 1225 Carter Ave., appears to meet National Register criteria
Site NN	St. James African Methodist Episcopal Church listed on the National Register in 1979
Site OO	Chesapeake and Ohio Passenger Depot, Carter Ave., appears to meet National Register criteria
Site PP	Ashland Historic Commercial District, listed on the National Register in 1994
Site QQ	AK Steel, US 23, survey

A final determination of National Register eligibility will require additional research, photography, physical examination of the structures, an evaluation of these sites relative to the integrity standards established by similar properties in Boyd County, Kentucky which are currently listed on the National Register, and consultation with the State Historic Preservation Officer (SHPO) at the Kentucky Heritage Council in Frankfort.

Appendix E –Archaeological Overview

Contract Publication Series 07-108

AN ARCHAEOLOGICAL OVERVIEW OF THE I-64 TO ASHLAND CONNECTOR IN BOYD COUNTY, KENTUCKY (ITEM NO. 9-129.00)

by

Jennifer M. Haney

Prepared for

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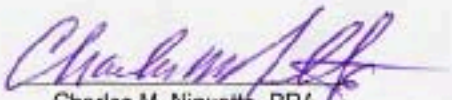


Charles M. Niquette, RPA
Co-Principal Investigator

Richard L. Herndon, RPA
Co-Principal Investigator

Lead Agency: Federal Highway Administration
Kentucky Transportation Cabinet Item Number 9-129.00

Archaeology

A search of records maintained by the National Register of Historic Places (NRHP) (available online at: http://www.nr.nps.gov/nrloc1.htm) and the Office of State Archaeology (OSA) was conducted to: 1) determine what portions of the area of potential effect (APE) had been previously surveyed for archaeological resources; 2) identify any previously recorded archaeological sites that were situated within the APE; and 3) provide information concerning what archaeological resources could be expected within the APE. The work at OSA consisted of a review of professional survey reports and records of archaeological sites for the area encompassing the APE. In addition to the file search, a review of records maintained by the NRHP and the Kentucky Heritage Council (KHC) and of available maps was initiated to help identify potential historic properties (structures) that may be associated with historic archaeological site locations. An analysis of the association between sites and environmental variables (primarily soils) was also conducted to identify areas of high potential to contain significant archaeological sites. The following summarizes the results of this investigation.

OSA Site Files

The OSA database indicated that 16 previous professional archaeological surveys have been conducted within or partially within the APE. Nearly five percent of the APE has been previously surveyed. In all, only 3 archaeological sites have been identified within the APE (Figure 1). What little information is available at the OSA concerning these sites is summarized below.

15Bd2: Prehistoric open habitation without mounds of an indeterminate age or cultural affiliation. Although the OSA database lists the site's topographic location as unspecified, the site appears to be located on a floodplain or terrace of the Ohio River in Elk series soils. The site's NRHP eligibility has not been assessed.

15Bd4: Prehistoric earthen mound of an indeterminate age or cultural affiliation. Although the OSA database does not list the site's topographic setting, the site appears to be located on a dissected upland ridge sideslope in Latham-Shelocta silt loams (30–50 percent slopes). The site's NRHP eligibility has not been assessed.

15Bd5: Prehistoric earthen mound of an indeterminate age or cultural affiliation. The site is located on Tilsit silt loam on a high stream terrace (upland flat). The site's NRHP eligibility has not been assessed.

Despite the low number of previously recorded sites within the APE, Boyd County has a high number of sites which would typically qualify for preservation in place. These include site types such as earthen mounds (n = 21), mound complexes (n = 9), non-mound earthworks (n = 1), open habitations with mounds (n = 3), and stone mounds (n = 12). Earthen mounds have been recorded on the Ashland (USGS 1983a), Catlettsburg (USGS 1983b), and Burnaugh USGS (1989) quadrangles; most of the mound complexes, non-mound earthworks, and stone mounds have been recorded on the Burnaugh USGS (1989) quadrangle. Most of the mound sites appear to be located in upland settings near the Ohio River, although floodplain settings are also present. Five of these sites are located in the vicinity (outside) of the APE and include Sites 15Bd1 (open habitation with mounds), 15Bd24 (mound complex), 15Bd35 (earthen mound), 15Bd36 (earthen mound), and 15Bd40 (earthen mound). None of these additional five sites could be associated with a temporal or cultural affiliation.

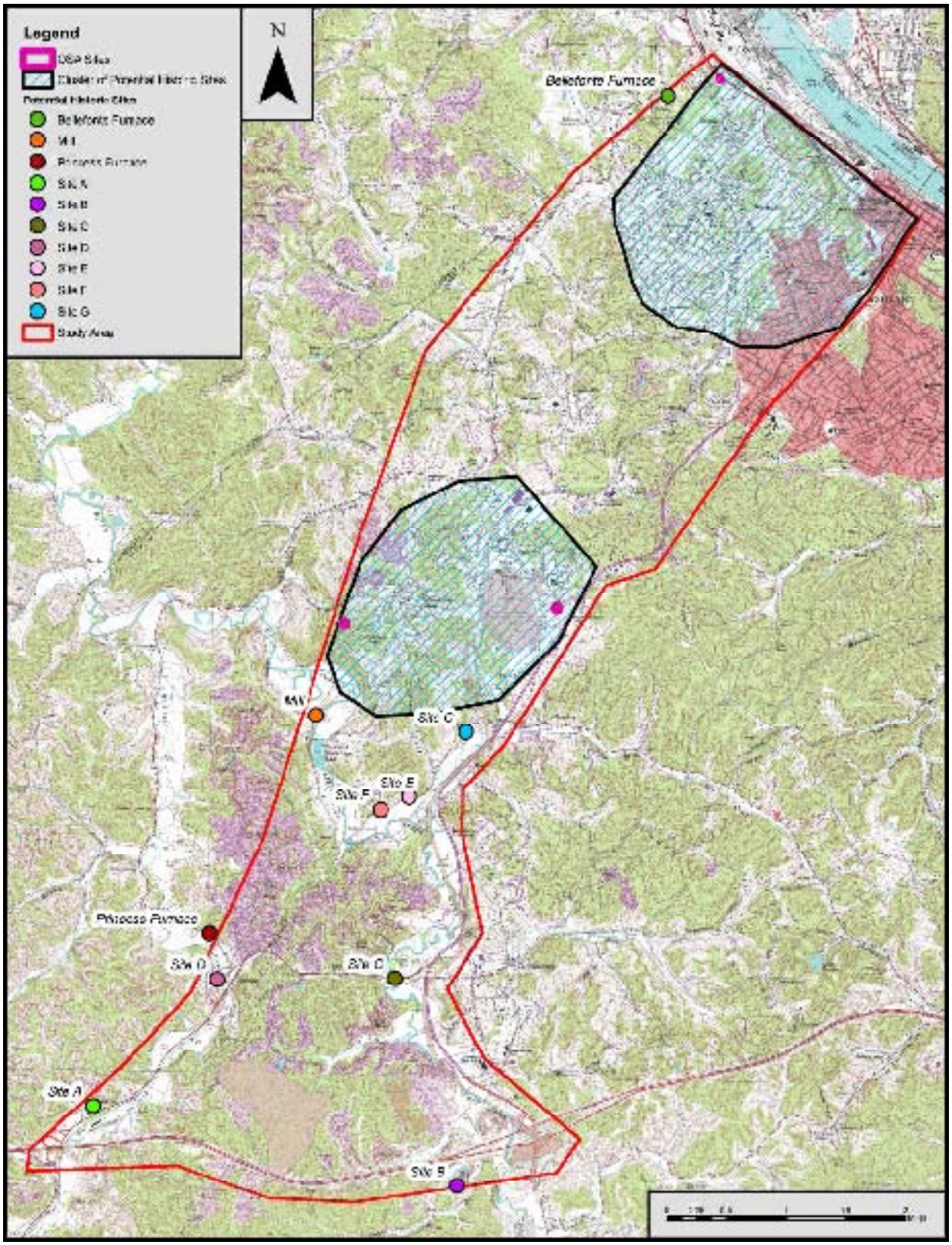


Figure 1. APE showing known archaeological sites and potential historic archaeological sites.

References

United States Geological Survey (USGS)

1983a Ashalnd, Kentucky, 7.5-minute series topographic quadrangle. United States, Department of the Interior, Washington, D.C.

1983b Catlettsburg, Kentucky, 7.5-minute series topographic quadrangle. United States, Department of the Interior, Washington, D.C.

1989 Burnaugh, Kentucky, 7.5-minute series topographic quadrangle. United States, Department of the Interior, Washington, D.C.

Areas of High Archaeological Site Potential

The OSA countywide site database was used to analyze the association between recorded site locations and environmental variables. This was done to identify areas with high potential to contain significant prehistoric archaeological deposits. Soils were found to be the best predictor because soil associations encompass such factors as landform age, depositional environment, slope, and erosion. This analysis suggested that within the APE deep soils on floodplains and stream terraces (alluvial environments) would have the greatest potential to contain significant prehistoric archaeological sites (Figure 2). Archaeological sites located in alluvial environments are often buried and, as such, have not been affected by later disturbances, such as plowing.

Table 1 includes a complete list of soil series located on floodplains or stream terraces within the APE. These soil types account for approximately 19 percent (1,153 ha [2,851 acres]) of the APE (Hail et al. 1979). In Boyd County, nearly half of all recorded archaeological sites have been located on floodplains or stream terraces. Despite this fact, only three archaeological sites have been previously recorded in the APE and these were recorded as being located on Elk series, Tilsit series, or unknown series soils. It is important to remember, however, that the eligibility of these, and most recorded archaeological sites in the county, had not been assessed.

The physiography of the APE is well dissected, although not as rugged as would be typical of the Eastern Coal Field Region (McGrain and Currens 1978). The northern portion of the APE has less rugged topography with more residential and urban development adjacent to the city of Ashland. The central and southern portions of the APE are more dissected with slightly more than 50 percent of the APE being steeply sloped (3,315 ha [8,193 acres]). Despite the steep slope, these areas retain the potential to contain archaeological sites such as rockshelters or petroglyphs. Additionally, archaeological sites located in ridge line saddles may have been covered and preserved by colluvial deposition related to deforestation (iron industry and logging). Upland flat areas also possess the potential to contain archaeological sites. Although upland areas typically would be classified as having a lower potential to contain NRHP-eligible cultural resources, the presence of prehistoric mound sites in greater Boyd County elevates their potential. To some degree, however, this upland potential is diminished by the fact that most of these site types (earthen mounds, mound complexes, non-mound earthworks, open habitations with mounds, and stone mounds) are moderately visible and have likely been previously recorded.

References

Hail, Carl W., Paul M. Love, and Rudy Forsythe

1979 *Soil Survey of Boyd and Greenup Counties, Kentucky*. United States Soil Conservation Service, Department of Agriculture, Washington, D.C.

McGrain, Preston, and James C. Currens

1978 *Topography of Kentucky*. Special Publication No. 25. Kentucky Geological Survey and the University of Kentucky, Lexington.

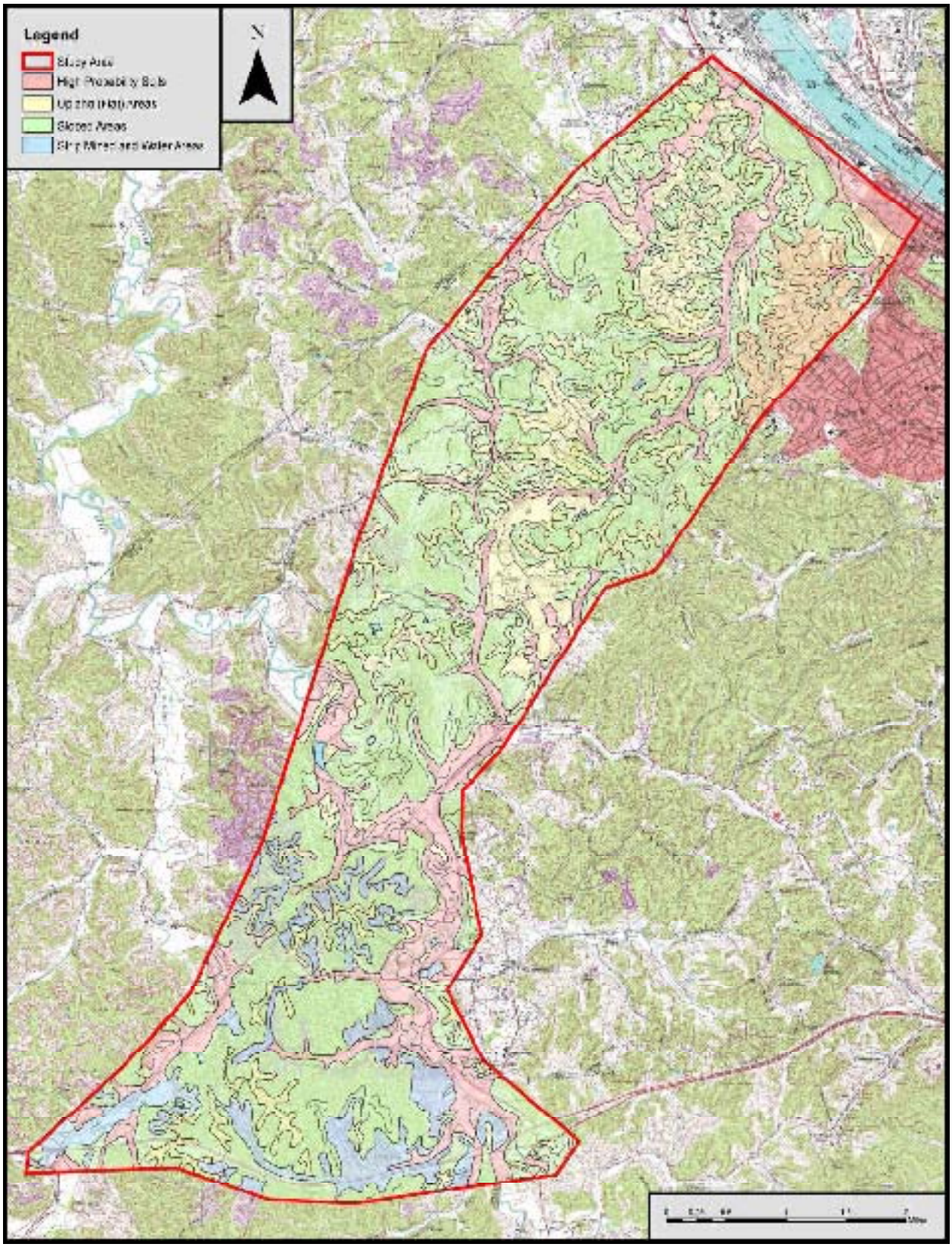


Figure 2. APE showing high probability soils (floodplain/terrace), sloped areas, and upland (flat) area.

Table 1. Summary of Soil Series for Floodplains and Stream Terraces.

Soil Code	Soil Description	Flood Frequency	Drainage
AIB	Alleghey loam	Indeterminate	Indeterminate
Bo	Bonnie silt loam	Frequent	Poorly drained
Co	Cotaco loam	Indeterminate	Somewhat poorly drained
Cu	Cuba silt loam	Frequent	Well drained
EkA	Elk silt loam	Indeterminate	Indeterminate
Hu	Huntington silt loam	Frequent	Well drained
Mo	Morehead silt loam	Indeterminate	Moderately well drained
Pf	Pope fine sandy loam	Frequent	Well drained
Sm	Stendal silt loam	Frequent	Somewhat poorly drained
Sn	Stokly fine sandy loam	Frequent	Somewhat poorly drained
Wb	Weinbach silt loam	Indeterminate	Somewhat poorly drained
WhA, WhB	Whitley silt loam	Indeterminate	Indeterminate

Review of Potential Historic Archaeological Resources

Several sources were consulted in an effort to identify potential historic archaeological resources within the APE. Primarily these included the site survey files at the KHC, the Cultural Historical Resource Overview (Powell 2007), and available historic maps. Cultural historic sites with aboveground structural features often have associated archaeological deposits. These types of resources have therefore been used to estimate the types and locations where potential historic archaeological deposits may be encountered.

Within the APE, there are historic districts as well, as individual cultural historic properties, which may have associated archaeological deposits (see Figure 1). Two historic districts and six individual properties are either listed in the NRHP or have been determined eligible for listing in the NRHP. Additionally, Powell (2007) located six historic districts and 26 additional individual properties which appear to meet National Register criteria, pending further research, within the APE. A wide array of historic properties was located and includes dwellings, bridges, churches, commercial/industrial buildings, a prison complex, a park, and a school gymnasium.

Nine historic districts are located in or adjacent to the APE. Most of these contain late nineteenth or early twentieth century structures and are located in fairly urban areas. These districts include industrial complexes as well as residential neighborhoods. Of particular note is the Ashland Historic Commercial District which spans the turn of the century and is listed in the NRHP and the Twelfth Street Historic District, which contains nineteenth century residential structures built by the owners of local industries. The urban properties in residential districts often possess more confined and clearly demarcated domestic activity areas. Although potentially disturbed by subsequent activities, such as road maintenance/widening, utility installations, and landscaping, urban archaeological deposits have yielded significant data in other parts of Kentucky (Faberson et al. 2007; Haney et al. 2004; O'Malley 1996).

The residential dwellings may be broadly described as clustered near the city of Ashland and near the central portion of the APE (see Figure 1). Most of the documented cultural historic sites date from the late nineteenth and early twentieth century. Several cultural historic sites (dwellings) are scattered in the southern portion of the APE (see Figure 1; Sites A–G). These tend to be some of the earlier structures which are extant in the APE. These structures may have more spatially extensive archaeological deposits. These more rural structures could have activity areas which are less constrained and have a wider potential range of subsistence/domestic activities. For example, the Midland Trail dwelling (Site A; Powell 2007) likely dates from the mid-nineteenth century and is located near U.S. 60 in the southern portion of the APE.

In addition to the available extant cultural historic resources (Powell 2007), historic maps provide clues to the locations of potential historic archaeological sites/deposits. Although no iron furnaces are located within the APE, the remains of several nineteenth-century iron furnaces are

located in the vicinity of and adjacent to the APE (see Figure 1) (Powell 2007; Schenk and Mitchell 1876). These locations may have had extended complexes or communities with associated archaeological sites and deposits related to operations or industry workers' residences. These charcoal-fueled iron furnaces include the Bellefonte, Princess, and Clinton Furnaces (Schenk and Mitchell 1876). The production of charcoal and iron has strongly influenced the development of Boyd County. This industry influenced deforestation (and subsequent erosion), settlement patterns, and the placement of roads and railway lines. In addition to the iron industry, other scattered residences and churches are noted on the 1876 (Schenk and Mitchell) map of Boyd County. These are largely located along streams. One mill (see Figure 1) is depicted along the East Fork (Schenk and Mitchell 1876).

References

Faberson, Tanya A., Flora Church, Brooke Hamby, Richard L. Herndon, and Lori O'Connor
2007 *Erstwhile Days Along Pearl and Lafayette: Physical and Social Change in a Louisville Neighborhood, 1850-1960: Survey and Data Recovery Results for Sites 15Jf16, 15Jf17, and 15Jf18 in the I-65 Accelerated Section of the Louisville Southern Indiana Ohio River Bridges Project, Louisville, Jefferson County, Kentucky (Item No. 5-118.00).* Contract Publication Series 03-182. Cultural Resource Analysts, Inc., Lexington, Kentucky.

Haney, Jennifer M, Jennifer L. Barber, Amanda Graham, and Lori O'Connor
2004 *An Archaeological Survey of the Proposed Newtown Pike Extension-Small Area Development Plan, City of Lexington, Fayette County, Kentucky (Item No. 7-593.00).* Contract Publication Series 03-182. Cultural Resource Analysts, Inc., Lexington, Kentucky.

O'Malley, Nancy
1996 *Kinkeadtown: Archaeological Investigation of an African-American Neighborhood in Lexington, Kentucky*. Archaeological Report #377. Program for Cultural Resource Assessment, University of Kentucky, Lexington, Kentucky.

Powell, Helen C.
2007 A Cultural Historical Resource Overview for Interstate 64 to Ashland Planning Study, Boyd County, Kentucky: KTYC [sic] Item No. 9-129.00. H. Powell and Co., Inc., Lexington, Kentucky. Manuscript on file at Cultural Resource Analysts, Inc., Lexington, Kentucky.

Schenk, C., and W.C. Mitchell
1876 Map of the Counties of Greenup, Carter, and Boyd and a Part of Lawrence. Kentucky Geological Survey, Frankfort, Kentucky.

Appendix F – Geotechnical Overview

REPORT OF GEOTECHNICAL OVERVIEW

I-64 TO U.S. 23 ASHLAND CONNECTOR STUDY

Item No. 9-129.00

BOYD COUNTY, KENTUCKY

PREPARED BY:

AMERICAN ENGINEERS, INC.
FIELD SERVICES CENTER
GLASGOW, KENTUCKY

August, 2008

AEI AMERICAN ENGINEERS, INC.
PROFESSIONAL ENGINEERING

AEI

AMERICAN ENGINEERS, INC.

PROFESSIONAL ENGINEERING

[illegible]

August 1, 2008

Mr. Brian Cash
Entran
400 East Vine Street
Suite 300
Lexington, KY 40507-1577

RE: Geotechnical Overview
I-64 to U.S. 23 Additional Connector Study
Boyd County, Kentucky
Item No. 9-124.00
AEI Project No. 207-308

Dear Mr. Cash:

Attached is the Geotechnical Services Center is pleased to submit this geotechnical overview which details the results of our research and observations performed in support of the above referenced project.

The attached report describes the site geology, topography, and geotechnical considerations. The Appendix at the report contains a drawing with identified areas in the locations, a boring location plan, a regional fault map, and earthquake potential maps.

We appreciate the opportunity to be of service to you on this project and hope to provide further support on this and other projects in the future. Please contact us if you have any questions regarding this report.

Respectfully,
AMERICAN ENGINEERS, INC.

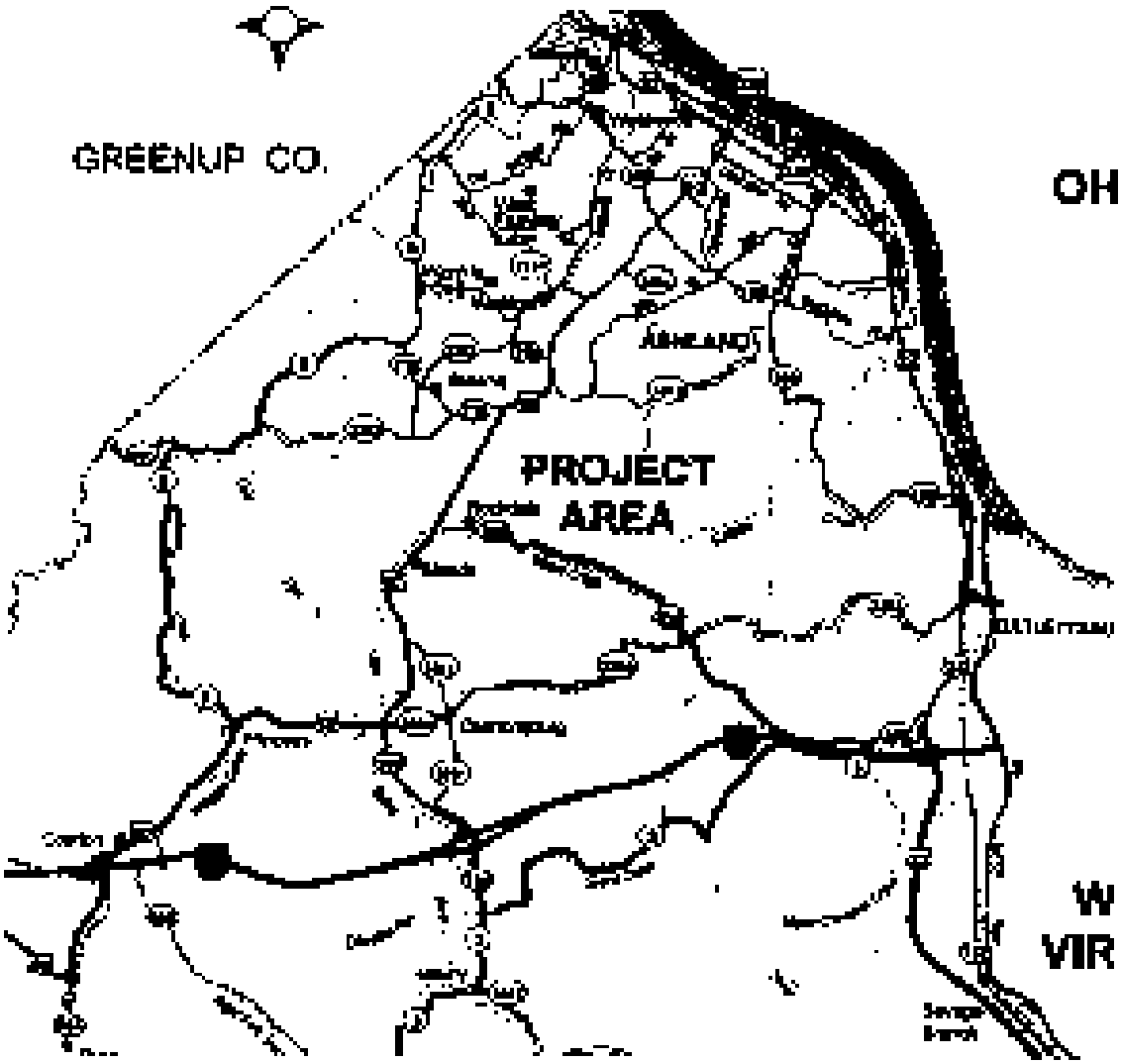
Brad Bright, P.G.
Project Geologist

Dennis Michell, P.E.
Senior Geotechnical Engineer

Geotechnical Overview

I-64 to U.S. 23 Ashland Connector Study

Boyd County, Kentucky



Geotechnical Overview
I-64 to U.S. 23 Ashland Connector Study
Boyd County, Kentucky

1. *Project Description*

The project corridor begins on the south at I-64 and ends on the north at Ashland, covering a length of about 11 miles. The project corridor ranges from about 3 miles wide on the southern portion of the project near I-64, and about 2 ½ to 3 miles wide throughout the remainder of the corridor. The study area lies within the eastern Coal Field physiographic province, which includes the region of Kentucky east of the Pottsville Escarpment.

The purpose of the project is to improve traffic flow between Interstate 64 and the city of Ashland. Currently, U.S. 60 and U.S. 23 are the primary routes from Interstate 64 to downtown Ashland. High traffic volumes, crash rates, and severe traffic congestion are the primary issues for the project. Heavy truck traffic between the Interstate and Ashland are also of concern to the Transportation Cabinet.

The planning study was conducted in relative accordance with a review of Scope of Work for Geotechnical Overviews for Planning Studies provided by KYTC Planning Division, as well as Section 801 of the Kentucky Transportation Cabinet Geotechnical Manual. The study was conducted during November and December, 2007, and included field reconnaissance and geologic research of available geologic and topographic quadrangle maps, soil survey of Boyd County, Kentucky, as well as online resources available from the Kentucky Geological Survey and the United States Geological Survey. Past reports from geotechnical investigations of portions of the existing roadways and structures in the area were also reviewed in preparation of the overview.

2. Site Geology

The corridor lies primarily within two USGS 7.5-minute geologic quadrangle maps: 1) *Geology of the Ashland Quadrangle, Kentucky-Ohio, and the Catlettsburg Quadrangle in Kentucky*, and 2) *Geology of the Kenwick and part of the Burnaugh Quadrangle*. The available mapping indicates that the site is underlain by, in descending order of lithology, Quaternary- aged Alluvium, Tertiary and Quaternary- aged terrace deposits, the Upper Pennsylvanian Conemaugh Formation, and by the Middle Pennsylvanian Breathitt Formation. The Conemaugh and the Breathitt Formations are composed of shale, sandstone, siltstone, limestone, underclay, and interbedded coal.

The sandstone of the Breathitt Formation, and to a lesser extent non-durable shales, are responsible for the majority of landslides and slope failures in the study area. Roadway cut and embankment slopes as flat as 3H:1V which encounter these materials are at some risk for failure. Also, when water is introduced to these materials, they typically exhibit a significant reduction in their strength, and behave as semi-plastic to plastic material. When exposed to cycles of loading and unloading in construction, they tend to pump and rut. Figure 1 shows exposed shale from a construction stockpile near the southern portion of the study area which is actively weathering.

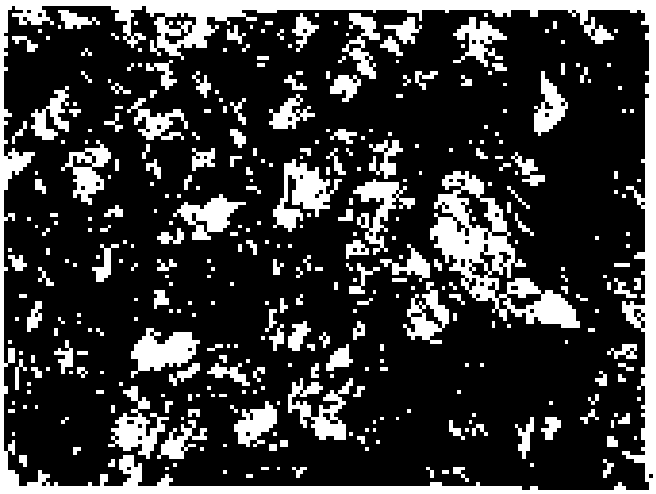


Figure 1. Exposed shale from a construction stockpile.

According to the quadrangle maps *Geology of the Ashland Quadrangle, Kentucky-Ohio* and accompanying geology section, landslides are known to exist in and near outcrops of the

Princess coal beds 6 and 7 that the beds can be located by failures in the roads that cross them. Several reports are available on the KYTC geotechnical reports database online which are specific to landslides in Boyd County. Of these landslide reports which discuss site specific geology, the Breathitt and Conemaugh Formations are both noted to contain materials which contributed to the slope failures. Figure 3 shows an actively creeping slope behind a store in Catlettsburg, off U.S. 60.

Figure 3 – Photo by Kentucky Geological Survey

Landslides are relatively common throughout the region, including the study area. A copy of *Landslide Overview Map of the Conterminous United States* (prepared by USGS) is included in the Appendix. Movement of groundwater is the most common trigger for landslides in the study area. The underclays and shales in the area are relatively impermeable and water tends to migrate along the surfaces of these materials. As the water gradually saturates these materials, the amount of resisting force to movement is lowered in relation to overburden pressures and the force of gravity (or driving forces). If the driving forces exceed the resisting forces, movement of the underclays and shales will occur, usually along with any overlying strata.

Terrace deposits were identified from available geologic mapping within the project area. These deposits are described as consisting of sand, silt, and gravel, and are as much as 40 feet thick in the Ashland Quadrangle. Cobbles and boulders of quartzite and chert as much as ½ to 1 foot in diameter are common. Terrace deposits such as those found within the study area were deposited by local streams and rivers during the Quaternary

and Tertiary Periods in previous floodplain areas. Most streams migrate over time, especially during periods of increased energy from surface runoff over extended periods of time. After the stream alters its original course, the older deposits remain, typically at a higher elevation than the present stream level. These areas should be avoided if possible due to the heterogeneous nature of unconsolidated materials within these deposits. Much like construction within alluvial materials along existing streams, differential settlement can be expected within the limits of these materials of varying degrees.

Terrace deposits noted within the study area from available geologic mapping were predominantly located near the city of Ashland, and to a lesser extent, the southern areas of Catlettsburg. Other areas of which terrace deposits were noted included a significant area in the vicinity of the Federal Correctional Institution and east of U.S. 60 south of the community of Meads.

Several coal beds were identified both from geologic mapping and from field reconnaissance, most notably Princess Nos. 1, 4, 5, 6, 7, and 8, as well as several thinner and more irregular beds which interfinger with the Breathitt and Conemaugh Formations. Thickness of individual Princess coal beds ranges typically from 1 to 4 feet based on stratigraphy of the Ashland Quadrangle. Boyd County has been mined extensively for coal through both surface and underground mining. Numerous mines were identified from available online resources (KGS, www.minemaps.ky.gov), and it is possible that several older mines exist which are not recorded. A map of approximate coal mine locations noted during the overview is included in the appendix, however it should not be considered to be all inclusive.

Coal beds within the project area are commonly underlain by moderately to highly plastic underclay layers with relatively low permeability. The low permeability of the underclay induces movement of groundwater, while the bituminous coal is somewhat more permeable. As a result, when a source of energy in a coal seam is available, water often travels along the seam to an exit point. Coal beds can often behave as aquifers and

commonly discharge water at a downslope location. This discharge can undermine areas in cut slopes, especially when encountering nondurable underclays and shales. Figure 3 is a photograph of erosion beneath a thin coal bed [illegible] near Cleaburne.

[illegible]

Similarly, some sandstone beds within the area are underlain by underclay layers, and can fail in a similar manner when exposed in cuts or naturally occurring slopes. To a lesser extent, nondurable shales were noted along existing cuts and new roadway construction in the vicinity of the study area. These shales tend to break down when exposed to water and weather rapidly, leading to potential slope failure.

Several coal mines, both active and inactive, are located within the limits of the project study area. Ground subsidence is always a risk whenever building in an area where both underground and surface mining have occurred. Settlement analyses should be performed in any mining area of which a potential corridor may cross to provide settlement estimates. Review of available permits and mapping will also aid in determining the extent of the activities in such areas. Ordinarily, the most recently reclaimed areas will have the most potential for settlement. The majority of the surface mines within the project area are west of U.S. 60 based upon a web search of the Kentucky Department for Surface Mining Reclamation and Enforcement.

3. *Topography*

Topography of the study area is typically described as rolling to mountainous with numerous steep slopes and narrow valleys. Topographic relief throughout the study area ranges from a low of about 520 feet near the Ohio River along the eastern portion of the corridor, with a high elevation of about 960 feet near portions of Interstate 64 near the southern boundary of the overview area. The study area is highly dissected by small streams and creeks, most of which ultimately drain to the Little Sandy, Big Sandy, or Ohio Rivers. Surface runoff in the study area typically has a dendritic pattern. Figure 4 is a photograph of typical surface drainage in Boyd County.

Figure 4: Typical Topography and Drainage in Boyd County

It is likely that if an entirely new corridor is chosen for the project, the topography will play a vital role in the route selection, such that cut and fill volumes are balanced as much as possible to minimize construction costs. Figure 5 illustrates the terrain topography of the area.

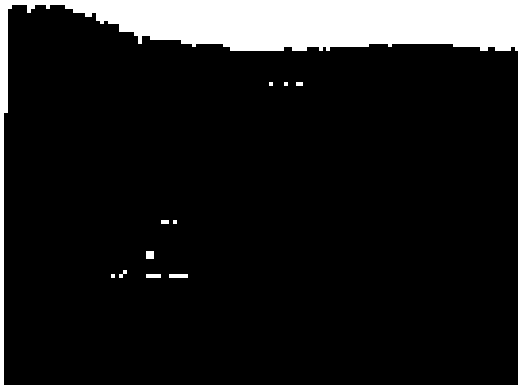


Figure 5: Terrain Topography of Boyd County, Kentucky and Surrounding Areas

d. Geotechnical Considerations

- Adequate drainage will be of primary concern with any design or new construction in the area. Several areas of non durable shale and underclay were mentioned both in the field and from available geologic mapping, particularly in the Breezhill Formation. Landslides are relatively common in the area often as a result of perched water on relatively impermeable layers of plastic shales and underclays.

- Subgrade soils are expected to have a CBR value typically less than 6. Non-durable shales, when utilized as roadway fill, should be expected to have a CBR value of 3 or less. Chemical treatment, such as lime application, may be desired to effectively stabilize road subgrades. In areas where rock is encountered during roadway excavations, it should be utilized as a more affordable yet effective alternative. Whenever possible, subgrade materials bearing on underclays or nondurable shales should be avoided.

- Several small streams and creeks were identified in the study area, especially in the central and western portions of the study area. Any corridor chosen will require structures to cross these streams. Typically, the streams or creeks encountered will require only a single or double reinforced concrete box culvert to accommodate the new roadway construction. Foundations for any structure will most likely consist of shallow spread footings, which will bear on competent bedrock as identified from previous geotechnical explorations performed for structures in the area. Rock will normally be encountered near stream crossings, sometimes at depths of less than fifteen to twenty feet below the finished roadway grade. Foundation designs will depend upon site

specific geology and engineering recommendations from geotechnical explorations performed at the potential structure locations.

- Roadway embankments and cut slopes will be required for construction of the new roadway. Based upon our observations with residual soils and rock types from the Conemaugh and Breathitt Formations, embankments of 2H:1V or flatter will likely provide an acceptable factor of safety for construction in the area in cuts where claystone and non-durable shales are encountered. Several existing highwalls were observed in the area, particularly along Interstate 64, which consisted primarily of massive sandstones. Based on review of the KYTC Geotechnical Manual, typical cut slope configuration for massive sandstone will vary from 1H:2V to 1H:20V. During design of cut slopes in bedrock, presence of joints, fractures, solution features, and crossbedding should be taken into consideration.

- Numerous oil and gas wells were noted in Boyd County from a search of Kentucky Geological Survey oil and gas well records database, many of which lie within the study area. Any oil or gas wells encountered during construction will need to be sealed per KYTC Standard Specifications if encountered by roadway construction.

- Water wells encountered within the construction limits of any corridor chosen will need to be sealed per the KYTC Standard Specifications. Several wells were identified from a water well records search at www.kgs.gov.

- Two (2) landfills were noted within the southwestern portion of the project area, Green Valley Landfill and Big Run Landfill, near U.S. 60 and KY State Route 5. Any potential roadway development in this area should be

precluded by a study of available landfill permit records and current aerial photography.

- The study area is located about 450 miles northeast of the city of New Madrid, Missouri, from which the New Madrid Fault derives its name. Figure 2, included in the Appendix, is an isoseismal map of the Arkansas Earthquake of December 16, 1811, and is based on the Modified Mercalli Intensity Scale. Based upon this earthquake, the damage experienced within the study area would most likely fall within the Strong category. Other available sources from www.earthquake.usgs.gov indicate that the study area would lie within an area for moderate potential for severe damage from an earthquake. An earthquake hazard map, available from the United States Geological Survey, is also included in the Appendix.

Summary

From a geotechnical perspective, several factors will be a part of selection of a new roadway alignment, or realignment of existing routes to improve traffic flow from Interstate 64 to Ashland and surrounding areas. Topographic relief will influence any new routes or realignment of portions of existing roads. Generally increased topographic relief results in overall higher project costs. Additionally, the study area has been mined extensively for coal, by means of both underground and surface mining. Any corridor or realignment chosen may encounter

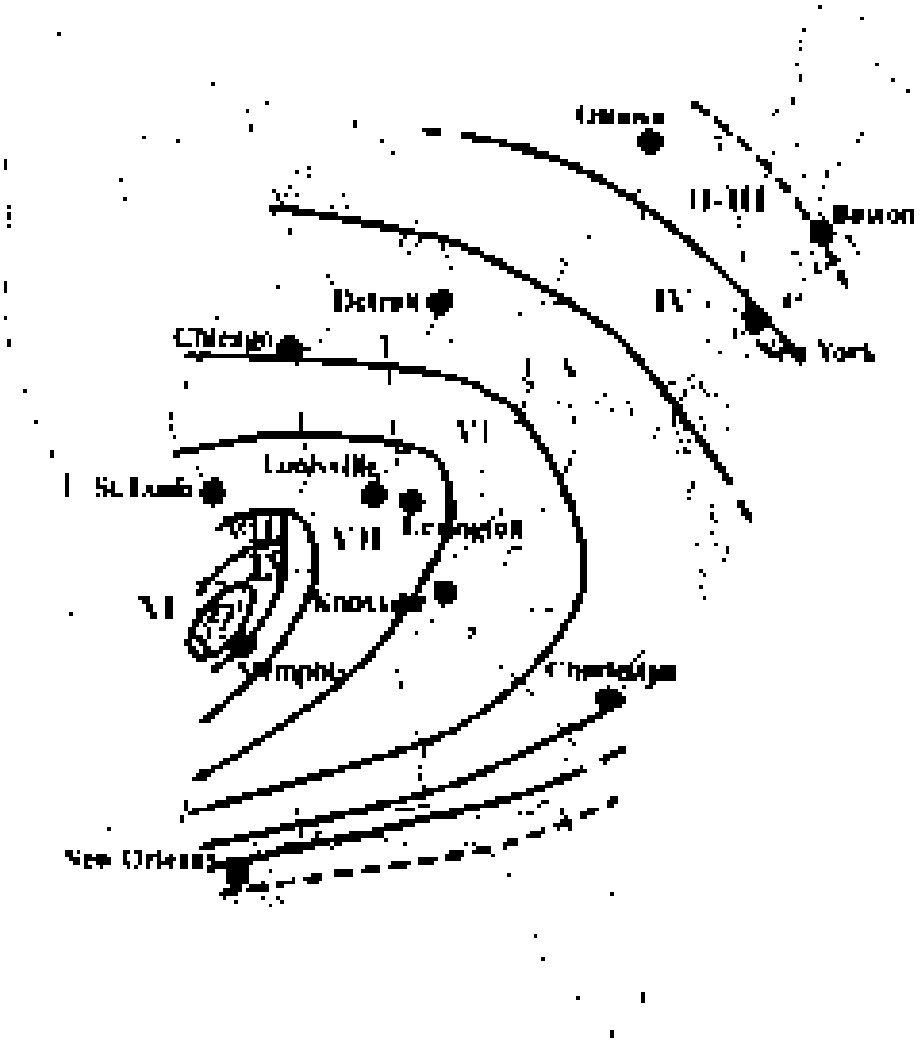
previously mined areas, particularly in the vicinity of the Parkway community, and several areas west of U.S. 60. Review of available mining records should be conducted along with settlement analyses to determine the potential for additional settlement in reclaimed areas.

Terrace deposits should be investigated as well if possible due to the heterogeneous nature and potential for settlement. Construction of a new roadway through extensive areas of terrace deposits would likely escalate project costs. Bedded materials, such as encountered in the Brookville and Conemaugh Formations, near the surface in the region are susceptible to landslides. Measures to increase factors of safety such as flatter slopes, protection of surface and subsurface drainage, vegetation, and reconstruction of retaining walls will likely be required to some extent regardless of the alignment chosen to reduce maintenance costs of any potential new roadway cut areas. Actual recommendations for slope geometries and means of stabilization would follow a thorough geotechnical investigation.

Appendix

- Isoseismal Map, USGS
- Earthquake Hazard Map with $a_{0.2}$, USGS
- Landslide Overview Map, USGS
- Approximate Mine Location Map

Isoseismal Map for the Arkansas Earthquake of December 16, 1811



Modified Mercalli Intensity Scale

INTENSITY		EFFECTS	AVE. PEAK ACCELERATION
VI	Strong	Felt by all. Damage slight	0.05–0.07g
VII	Very Strong	Everybody runs outdoors. Considerable damage to poorly designed buildings.	0.10–0.15g
VIII	Destructive	Considerable damage to ordinary buildings.	0.25–0.30g
IX	Ruinous	Great damage to ordinary buildings	0.50–0.55g
X	Disastrous	Many buildings destroyed.	>0.60g
XI	Disastrous	Few, if any, structures remain standing	

(Modified from Wood, 1923)


USGS
8-16
0-2

APPROXIMATE MINE LOCATIONS

LEGEND

- CLOSED PERM T
- ACTIVE PERM T
- MINE SHAFT

Appendix G – Environmental Justice Overview

Ashland-Boyd County
Westwood-Fairview
I-64 to US 23 Connector Study

Environmental Justice and Community Impact Report







ehi consultants

Ashland – Boyd County I-64 to US 23 Connector Study

Environmental Justice and Community Impact Report

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APPENDIX

1.0 Introduction

The Boyd County Planning Study for the I-64 to US 23 Connector has been studied and this Community Impact Assessment will examine the purpose and need for the Corridor as well as examine community concerns and ultimately make recommendations. The I-64 to US-23 Corridor Study is a priority goal in the Ashland Comprehensive Plan where it is desirous of providing an efficient and economical transportation system, insuring a context sensitive approach to assess potential impacts. This study is charged with investigating Environmental Issues such as Community and Residential Impacts, the Environmental Justice piece in the Westwood and Fairview neighborhoods; all the while considering the historical properties and natural environment in the study area.

The purpose of this assessment is to:

- Fulfill applicable federal Environmental Justice commitments; and
- Further the goals and objectives and cooperative nature of the transportation planning process.

The assessment identifies through socio-demographic analysis, the extent to which Environmental Justice populations and any other groups of concern reside in or surrounding the study area that may be impacted by the proposed transportation project. Upon the results of this socio-demographic analysis, if the determination is made declaring disproportionately high or adverse effects; proposing measures to avoid, minimize, and / or mitigate effects; and providing specific opportunities for public involvement, subsequent actions may be undertaken as appropriate.

The resources used to compile the data contained herein are the U.S. Census Bureau, Kentucky State Data Center, local elected officials, community leaders, and field observations of the study area. The information and results are intended to assist the Kentucky Transportation Cabinet in making informed and prudent decisions in the study area, particularly as it pertains to the requirements of Executive Order 128981, to ensure equal environmental protection to all groups potentially impacted by any project ensuing from the Ashland – Boyd County I-64 to US 23 Connector Study.

This report includes data tables comparing the populations of the census divisions directly in and around the study area at the county, state, and national levels using 2000 Census Data Reports. Statistics are provided for minority, elderly, and low-income populations for census tracts, block groups, and census blocks, except where

not available. For ease of analysis, maps are included that highlight areas of interest at the block group or census block level.

2.0 Environmental Justice

On February 11, 1994, Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* was signed requiring all Federal agencies "to the greatest extent practicable and permitted by law…each federal agency shall make achieving environmental justice a part of its mission by identifying and address, as appropriate, disproportionately high adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations in the United States." The Presidential Memorandum accompanying Executive Order 12898 directed Federal agencies to:

- Analyze the environmental effects (health, economic, and social) of proposed actions, including such effects on minority and low-income communities, when such analysis is required by NEPA
- Address the significant adverse effects of any mitigation measures outlined or analyzed in an EA, EIS, or ROD on minority and low-income communities
- Provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities, improving the accessibility of meetings, and providing access to crucial documents and notices.

This assessment attempts to apply current state of the practice procedure to provide the information needed to "*…ensure that the interest and well being of minority populations and low income populations are considered and addressed during the transportation decision making process.*"

Additionally, two groups included in this assessment are the elderly (age 65 and older) and persons with disabilities. The above Environmental Justice orders do not address these additional peoples. Although, as a matter of good planning practice and in accordance with the Kentucky Transportation Cabinet document, *Methodology for Assessing Potential Environmental Concerns for KTYC Planning Studies (February, 2002)*, these two groups have been included (Appendix B).

Investigation for the Ashland- Boyd County I-64 to US 23 Connector Study – Environmental Justice Community Impact Assessment will evaluate and analyze the impacts for the Westwood and Fairview neighborhoods with in the Study Area.

3.0 Definitions

This assessment uses several terms that are unique to the Environmental Justice process. In accordance with USDOT Order 5610.2 on EJ, issued in the April 15, 1997 Federal Register defines what constitutes low-income and minority population.

- **Low-Income** is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.
- **Minority** is defined as a person who is: (1) Black (a person having origins in any black racial groups of Africa); (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or (4) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).
- **Low-Income Population** is defined as any readily identifiable group of low income persons who live in geographic proximity, and if circumstances warrant geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.
- **Minority Population** is defined as any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.

The following terms and definitions are according to the Federal Highway Administration:

- **Adverse Effects** are the totality of significant individuals or cumulative human health or environmental effects, included interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.
- **Disproportionately High and Adverse Effects on Minority and Low-Income Populations** means an effect that:
    - Is predominately borne by a minority population and/or a low-income population; or
    - Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or nonlow-income population.
    -

The following terms are defined using US Census Bureau terminology and data:

- **Elderly Persons** include persons of age 65 and older as of April 1, 2000 (Census Day).
- **Persons with Disabilities** include persons for which any of the three following conditions were true as of April 1, 2000 (Census Day):
  - They were 5 years old and over and had a sensory, physical, mental, or self-care disability;
  - They were 16 years old and over and had a going outside the home disability; or
  - They were 16 to 64 years old and had an employment disability.

4.0 Methodology

The procedures involved in conducting the community impact assessment for this project center on the identification of potentially impacted populations. The primary sources of data used in the compilation of this report were the U.S. Census Bureau's 2000 Census, Kentucky State Data Center, local elected officials, community leaders, and field observations. Statistics were compiled to present a detailed analysis of the community conditions and to identify potentially impacted populations within the study area.

Tables and maps depicting race, ethnicity, minorities, and persons with low-income are used to indicate the locations and the magnitude of potentially impacted Environmental Justice populations. Elderly and disabled persons are also distributed in the data as part of the Kentucky Transportation Cabinet's "*Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies.*"

Profile tables were developed for each population of interest and for several geographic levels in and around the study area. Tables showing the total number of persons by race, ethnicity, minority status, poverty status, elderly status, and disability status were constructed for each Census Tract, broken down by block groups, within the study area.

The tables were assembled using year 2000 Census Data. The decennial census data represents the most comprehensive information source available in terms of the number of data variables collected and the number of demographic levels available for the study area. Map 4.0.1, below depicts the study area with the connector road.

5.0 Census Data Analysis

The U.S. Census Bureau defines geographical units as:

- **Census Tract (CT)** – A small, relatively, permanent statistical subdivision of a county or statistically equivalent entity delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with Census Bureau guidelines. CTs generally contain between 1,000 and 8,000 people. CT boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. They may also follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county is always a census tract boundary.
- **Block Group (BG)** – A statistical subdivision of a CT. A BG consists of all tabulation blocks whose numbers begin with the same digit in a CT. BGs generally contain between 300 and 3,000 people, with an optimum size of 1,500 people.
- **Census Block (CB)** – An area bounded on all sides by visible and/or invisible features shown on a map prepared by the Census Bureau. A CB is the smallest geographic entity for which the Census Bureau tabulates decennial census data.

Census Designated Places (CDPs) - Census 2000 Criteria

Census designated places (CDPs) are closely settled, named, unincorporated communities that generally contain a mixture of residential, commercial, and retail

areas similar to those found in incorporated places of similar sizes. Westwood has been identified and meets the criteria as being a CDP by the Census Bureau.

The Census Bureau works with local participants to delineate boundaries for CDPs. By defining CDPs, the Census Bureau can tabulate and disseminate data for localities that otherwise would not be identified as places in the decennial census data products. Westwood lies in Boyd County, Census Tract 308 but is further analyzed as a CDP. Map 5.0.1 locates the Westwood CDP and boundaries.

Each CDP will contain an identifiable core encompassing the area that is associated strongly with the CDP name and contains the majority of the CDP's population, housing, commercial structures, and economic activity. A CDP must comprise a reasonably compact and continuous land area internally accessible to all points by road. (Except where parts of a CDP are separated by a narrow corridor of incorporated territory, or where the topography or geographic patterns of settlement are not compact, but are irregularly shaped.) A CDP may not be located partially or entirely within an incorporated place or another CDP. A CDP encompasses the surrounding closely settled territory associated with the place name. The Census Bureau does not intend for a CDP to be an apartment complex or residential subdivision in densely settled areas or simply a crossroads in rural areas.

There are no minimum or maximum population thresholds for recognition as a CDP. This represents a substantial change from all prior CDP criteria.

A CDP name may not duplicate the name of an adjacent or nearby incorporated place.

A CDP may not be located in more than one state, nor may a CDP cross the boundaries of American Indian reservations (AIRs), American Indian trust lands, or a Tribal Jurisdiction Statistical Areas (TJSA)s. A CDP, however, may cross county and county subdivision boundaries.

A CDP may not be coextensive with Alaska Native village statistical areas (ANVSA), county subdivisions, counties, AIRs, TJSAs, and states. (Exceptions are: Arlington County, Virginia, towns in New England, townships in New Jersey and Pennsylvania, and charter townships in Michigan.

CDP boundaries should follow visible and identifiable features, such as roads, rivers, canals, railroads, and above-ground high-tension power lines. The following nonvisible governmental unit boundaries are acceptable as CDP boundaries:

- All state and county boundaries.
- All minor civil division (MCD) boundaries (generally towns and townships) in Connecticut, Indiana, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

- Some MCD boundaries in Illinois (townships only, not election precincts), Iowa, Kansas, Michigan, Minnesota, Missouri (governmental townships only), Nebraska (townships only, not election precincts), North Dakota, Ohio, South Dakota, and Wisconsin.
- Barrio, barrio-pueblo, and sub-barrio boundaries in Puerto Rico, census sub-district boundaries in the Virgin Islands, MCD-county and island boundaries in American Samoa, and municipal district boundaries in the Northern Mariana Islands.
- All incorporated place boundaries.
- American Indian reservation boundaries.
- American Indian trust land, Alaska Native village statistical area, and Alaska Native Regional Corporation boundaries.

The Census Bureau may modify, and if necessary reject, any proposed CDP that does not comply with the CDP criteria. The Census Bureau also may define CDPs in instances where clear evidence of a place exists, but for which local participating officials did not submit boundaries.

Area of Interest

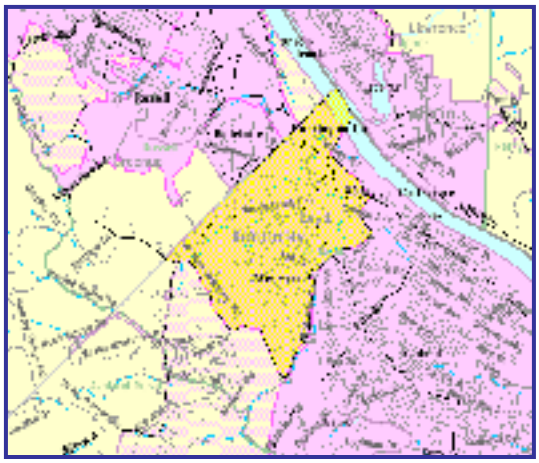
This corridor study is evaluating the need for a new or improved connector route from the vicinity of downtown Ashland to a location on I-64 in Boyd County. Engineering services will look at essentially a ten mile long by three mile wide corridor from I-64 to US 23.

The Westwood and Fairview communities are the primary areas of interest in determining if there will be any adverse impacts from the I-64 to US 23 Connector. These two communities are not incorporated as part of the City of Ashland and have been assessed as two communities independent of each other.

Westwood CDP is located in Kentucky, Boyd County, and Census Tract 309 (see Map 5.0.1). It lies west of US Hwy 60 and west of Ashland city limits. Portions of the community are located on a flat hilltop and down in a flat valley along Hood's Creek. The area of Westwood is total 4.0 sq mi.

As a community with a total population of 4,951, Westwood was developed beginning in the late 1920's as a residential suburb of Ashland and was mainly inhabited by the steel workers and their families who were employed by the nearby American Rolling Mill Co.

Fairview has been identified as another area of interest as community cluster outside of the City of Ashland. Fairview lies in Kentucky, Boyd County, and Census Tract 309. It is a neighborhood of Westwood and is included in the Westwood CDP Census data.



Map 5.0.1 – Westwood CDP
Source: 2000 US Census Data Map, Westwood CDP

Westwood CDP has never been incorporated into the City of Ashland though it is closely affiliated as it shares a zip code, bus system, and sewer lines. This community has its own school district, the Fairview Independent School District, three community churches, a fire station and neighborhoods, including Fairview and West Fairview.

The census data tables for the purpose of this analysis include percentages for minority, elderly, disabled, and low-income populations in the United States, Kentucky, Boyd County, Ashland communities of Westwood CDP, Census Tracts, Block Groups, and Census Blocks located in and around the study area, except where not available. This data was separated into similar geographical census units to obtain accurate measures of demographic data.

6.0 Study Findings

This Environmental Justice and Community Impact Report are to be used as a component of a planning study for transportation system improvements in the Ashland urban and rural areas, specifically the communities of Westwood and the Fairview Neighborhood. This study is intended to help define the locations and purposes of projects and meet federal requirements regarding consideration of environmental issues as defined in the National Environmental Policy Act (NEPA).

According to the 2000 Census, there are six (6) Census Tracts and twenty five (25) Block Groups that encompass the population of the defined study area. The Boyd

County Total Population is 49,752; the Ashland Study Area Total Population is 21,981 and the Westwood CDP Total Population is 4,951. These populations are broken out below in Table 6.0.1. Corresponding Map 6.0.1 shows the location of these Census Tracts in Boyd County, Kentucky.

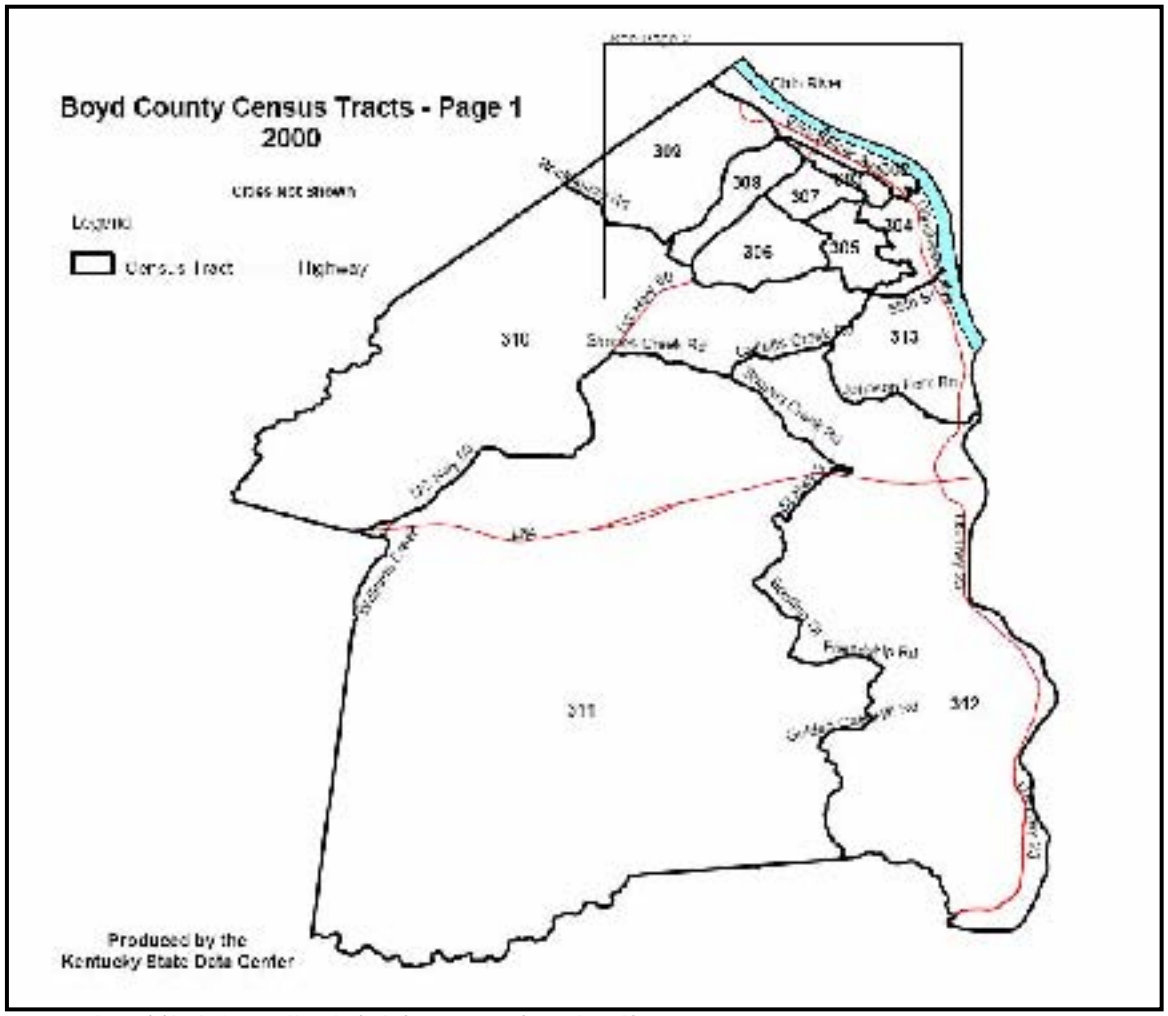
Table 6.0.1 –Census Tracts and Block Group Populations

Census Tract 306		Census Tract 307	
Block Group 1	1,164	Block Group 1	1,149
Block Group 2	985	Block Group 2	1,464
Block Group 3	1,251	Block Group 3	965
Block Group 4	769	Total Population	3,578
Total Population	4,169		
Census Tract 308		**Census Tract 309**	
Block Group 1	1,502	Block Group 1	1,449
Block Group 2	529	Block Group 2	1,504
Block Group 3	1,938	Block Group 3	1,539
Total Population	3,969	Block Group 4	1,280
		Total Population	5,772
		Westwood CDP	4,951
Census Tract 310		**Census Tract 311**	
Block Group 1	1,932	Block Group 1	2,440
Block Group 2	814	Block Group 2	1,358
Block Group 3	1,025	Block Group 3	1,143
Block Group 4	2,078	Block Group 4	1,044
Block Group 5	943	Block Group 5	1,779
Block Group 6	1,330	Total Population	7,764
Total Population	8,122		

Source: US Census Bureau
Data Set: Census 2000 Summary File 3

There are 95 Census Blocks in Census Tract 306. There are 64 Census Blocks in Census Tract 307. There are 80 Census Blocks in Census Tract 308. There are 158 Census Blocks in Census Tract 309. There are 197 Census Blocks in Census Tract 310. There are 227 Census Blocks in Census Tract 311.

Map 6.0.1 - Census Tract Locations in Boyd County, Kentucky



Source: http://ksdc.louisville.edu/sdc/maps2000/Boyd1.pdf

There are 821 Census Blocks that make up the area covered in this report.

7.0 Study Findings / Population by Persons of Minority Origin

As described in the census data, the White Alone population for the state of Kentucky is 90.1%, which is much higher than the national percentage of 75.1%. The total minority population for the state has been calculated and found to be 9.9%. The minority percentage for Boyd County is lower than this value at 4.2%.

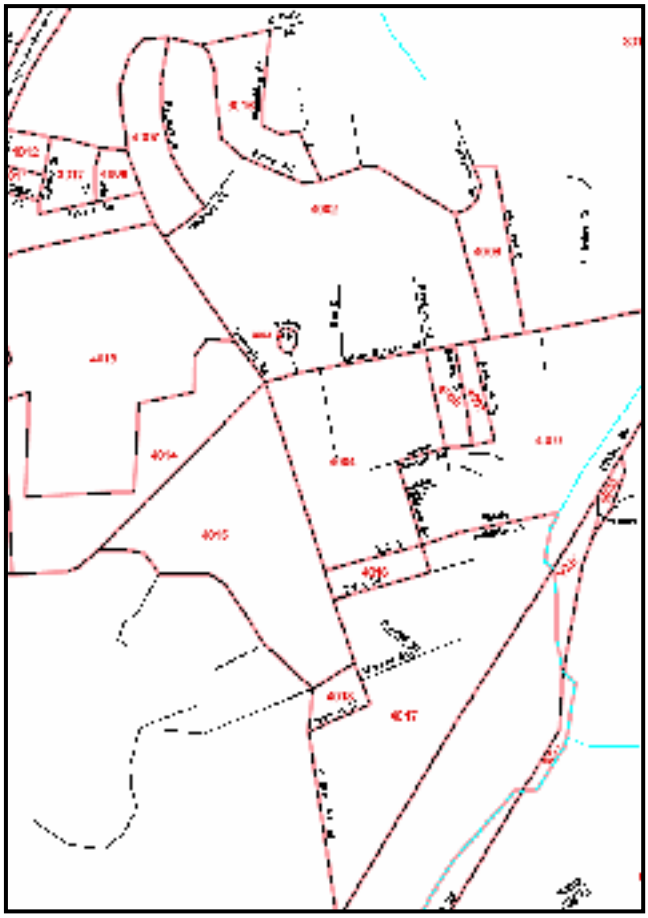
This study has identified populations by persons of minority origin to be located in Census Tract 310 with a total population of 8,122. The majority race is White Alone comprising 86.94% of the race population.
The area of identified minority populations lies in CT 310 BG 4, west of US Hwy. 60 in the Project Area. In this location, there are eighteen census blocks. The corresponding Census Map 7.0.1 depicts BG 4 locations.

Within this block group, the total minority population comprising of Black/African American Alone, American Indian/ Alaska Native Alone, Asian Alone and Hispanic/ Latino Alone is 922 or 12.31% of minority origin.

In accordance with the USDOT definition of Minority, all races were included in the minority concentration analysis. It is worth noting, though, that the Black or African American population makes up approximately 2.5% of the total minority population in Boyd County.

Also worth mentioning is the Hispanic or Latino Origin (of any race) makes up 1.1% of the total minority population in Boyd County.

Map 7.0.1- Census Tract 310- Block Group 4



Source: 2000 US Census Data Map, CT 310, BG 4

When analyzed separately, these individuals were found to make up a very low percentage in Boyd County, for purposes of this study, the areas indicated are highly representative of the Black or African American and Hispanic or Latino populations in the study area. All of the other races have very low concentrations at county, city, census tract, and block group levels. Below, Table7.0.1 shows the Population by Race Findings for Census Tract 310 and by Block Group. Please see Appendix C-1 for all Census Tract population totals, broken down by Block Groups for Population by Race Findings.

Table 7.0.1 - Population by Race Findings

Census Tract 310 - Boyd County, Kentucky								
Race	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Block Group 5	Block Group 6	Race Populations Totals	Percentage of Race Population
White Alone	1,936	771	999	1,182	900	1,273	7,061	86.94%
Black/ African American Alone	0	1	1	576	9	2	589	7.25%
American Indian/Alaska Native Alone	8	0	2	9	1	3	23	0.28%
Asian Alone	0	5	0	9	15	1	30	0.37%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0	0	0	0.00%
Hispanic or Latino Alone	6	13	2	328	7	2	358	4.41%
Some Other Race Alone	0	0	0	0	0	0	0	0.00%
Two or More Races Alone	11	3	10	14	14	9	61	0.75%

Source: 2000 Census Data, CT 310, Custom Table
http://factfinder.census.gov

8.0 Study Findings / Population by Persons 65 and Over and Total Disabilities

As described in the census data, the population percentage of Persons 65 and Over are consistent at the national and state at 12.4% and 12.5%. For Boyd County, 15.05% or 7,486 of the population are Persons 65 and Over. Of this, 3,611 or 48.2% have been identified with a disability as a noninstitutionalized civilian. Two areas within the Project Area appear to warrant further analysis for both these populations.

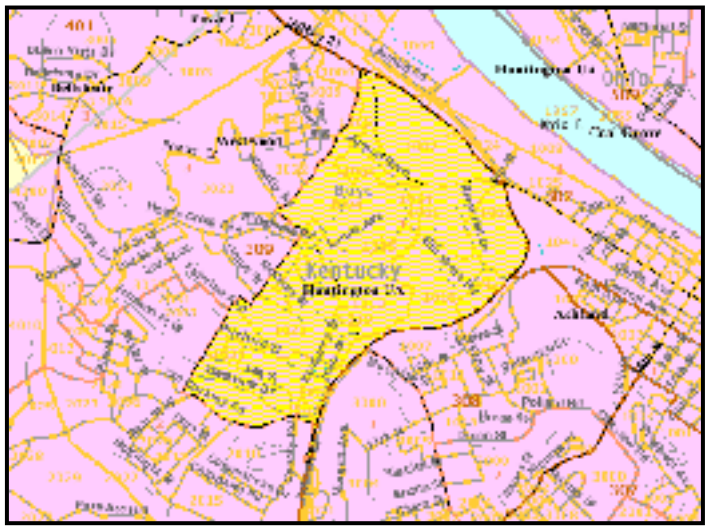
This study has identified populations by persons of 65 and over to be located in Census Tract 306 with a total population of 4,169. 940 or 22.54% of the total population are found to be age 65 and over. The majority of this population is located in Block Group 1. There are twenty five census blocks in BG1. Map 8.0.1 shows these locations.
The total population for Age 65 and Over in Block Group 1 is 344.

Source: 2000 US Census Data Map, CT 306, BG1

Map 8.0.1- Census Tract 306 – Block Group 1

The second area of interest is located in CT309 BG1, north of US Hwy 60. The Westwood CDP has census blocks encompassed in Block Group 1. There are twenty four census blocks within the highlighted area on Map 8.0.2. This area having 986 or 17.08% population of disabilities for noninstutionalized civilian people 16 to 64 years and 65 years and over is the largest population in the Project Area.

Map 8.0.2 – Census Tract 309- Block Group 1



Please refer to Appendix D-1 for the Census Data for all census tracts in the project area analyzing total populations for age 65 and over and disabilities for noninstiutionalized civilians.

Source: 2000 US Census Data Map, CT 309, BG 1

9.0 Study Findings / Population by Persons Below Poverty Level

As described in the census data, the percentage of people in Kentucky below the poverty level is 15.8% – well above the national level of 12.4% and near the county level of 15.5%. However, the city of Ashland has a much higher value of poverty at 18.5% of its total population. The poverty status for Westwood CDP is at 14.2%.

The highest concentration of poverty was found in Census Tract 308 at 29.4%, followed by Census Tract 309 with a percent of 13.7 and Census Tract 310 with a percent of 12.6. The lowest concentration of poverty was found in Census Tract 307 at 8.7%.

In Census Tract 306 of the 4,162 individuals for whom the poverty status is determined, 410 fall below poverty level for a total of 9.9%. A total of 355 individuals were white, 67 were black, 4 were American Indian and Alaska Native, 40 were two or more races and 8 were Hispanic individuals.

In Census Tract 307 of the 3,426 individuals for whom the poverty status is determined, a total of 297 individuals fall below poverty level for a total of 8.7%. Of this percent, 292 were white, and 5 were Asian individuals.

In Census Tract 308 of the 3,953 individuals for whom poverty status is determined, a total 1,164 individuals fall below the poverty level for a total of 29.4%. Of the 29.4%, a total of 1,086 were white, 7 were black, 64 were two or more races, and 17 were Hispanic individuals.

In Census Tract 309 of the 5,772 individuals for whom poverty status is determined, a total of 790 individuals fall below poverty level for a total of 13.7%. Of the 13.7%, a total of 769 individuals were white, and 21 were two or more races.

In Census Tract 310 of the 6,681 individuals for whom poverty status is determined, 840 individuals fall below poverty level for a total of 12.6%. Of the 12.6% a total of 746 individuals were white, 7 were American Indian and Alaska Native, 87 were two or more races and 17 were Hispanic individuals.

In Census Tract 311 of the 7,723 individuals for whom poverty status is determined, 839 individuals fall below poverty level for a total of 10.9%. Of the 10.9%, a total of 802 individuals were white, 14 were black, 14 were two or more races and 24 were Hispanic individuals.

It is worth noting that the largest area of concentration for poverty fell in Census Tract 308.

10.0 Conclusion

After a comprehensive analysis of the Ashland study area, there appear to be several areas of interest at the Block Group and Census Block level in regard to race, age, disabilities, and income level. These areas have been described in the *Study Findings* sections of this report and can be deduced from the respective Census maps.

It is evident from the data that there are several locations that need to be monitored and taken into consideration when planning for a specific project. Project staff will continue to monitor those locations, as well as the surrounding study area for demographic and / or socioeconomic changes that may occur throughout the development of a project.

Appendix A-1
Planning Study Elected Officials List

U.S. Representative	Rep. Geoff Davis
State Senator	Senator Walter Blevins
State Representative	Rep. John Vincent (100) Rep. Rocky Adkins (99) Rep. Tanya Pullin (98)
Boyd County	
Judge Executive	William Stevens
Commissioners	Clarence Jackson Marvin "Coach" Meredith Carl Tolliver
Ashland Officials	
Mayor	Steve Gilmore
Commissioners	Kevin Gunderson Larry Brown Paula Hogsten Cheryl Spriggs

Appendix B-1

Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies

Appendix C-1

Population by Race Findings

Census Tract 306 - Boyd County, Kentucky						
Race	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Race Populations Totals	Percentage of Race Population
White Alone	1,111	944	1,240	747	4,042	96.95%
Black/ African American Alone	30	22	7	15	74	1.78%
American Indian/Alaska Native Alone	0	2	1	0	3	0.07%
Asian Alone	5	3	0	1	9	0.22%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0	0%
Hispanic or Latino Alone	8	3	0	5	16	0.38%
Some Other Race Alone	2	1	0	0	3	0.07%
Two or More Races Alone	8	10	3	1	22	0.53%

Census Tract 307 - Boyd County, Kentucky					
Race	Block Group 1	Block Group 2	Block Group 3	Race Populations Totals	Percentage of Race Population
White Alone	1,162	1,393	856	3,411	95.33%
Black/ African American Alone	24	27	19	70	1.96%
American Indian/Alaska Native Alone	0	0	0	0	0.00%
Asian Alone	5	2	1	8	0.22%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0%
Hispanic or Latino Alone	4	8	3	15	0.42%
Some Other Race Alone	11	0	0	11	0.31%
Two or More Races Alone	24	33	6	63	1.76%

Census Tract 308 - Boyd County, Kentucky					
Race	Block Group 1	Block Group 2	Block Group 3	Race Populations Totals	Percentage of Race Population
White Alone	1,417	517	1,877	3,811	96.02%
Black/ African American Alone	40	0	18	58	1.46%
American Indian/Alaska Native Alone	3	1	2	6	0.15%
Asian Alone	5	0	3	8	0.20%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0%
Hispanic or Latino Alone	13	9	17	39	0.98%
Some Other Race Alone	2	1	0	3	0.08%
Two or More Races Alone	22	1	21	44	1.11%

Cenus Tract 309 - Boyd County, Kentucky						
Race	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Race Populations Totals	Percentage of Race Population
White Alone	1,372	1,557	1,448	1,286	5,663	98.11%
Black/ African American Alone	2	9	7	5	23	0.40%
American Indian/Alaska Native Alone	1	1	2	0	4	0.07%
Asian Alone	2	2	14	1	19	0.33%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0	0%
Hispanic or Latino Alone	5	10	9	0	24	0.42%
Some Other Race Alone	0	0	0	0	0	0.00%
Two or More Races Alone	13	8	13	5	39	0.68%

Cenus Tract 310 - Boyd County, Kentucky								
Race	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Block Group 5	Block Group 6	Race Populations Totals	Percentage of Race Population
White Alone	1,936	771	999	1,182	900	1,273	7,061	86.94%
Black/ African American Alone	0	1	1	576	9	2	589	7.25%
American Indian/Alaska Native Alone	8	0	2	9	1	3	23	0.28%
Asian Alone	0	5	0	9	15	1	30	0.37%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0	0	0	0.00%
Hispanic or Latino Alone	6	13	2	328	7	2	358	4.41%
Some Other Race Alone	0	0	0	0	0	0	0	0.00%
Two or More Races Alone	11	3	10	14	14	9	61	0.75%

Cenus Tract 311 - Boyd County, Kentucky							
Race	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Block Group 5	Race Populations Totals	Percentage of Race Population
White Alone	2,325	1,300	1,168	1,052	1,746	7,591	99.77%
Black/ African American Alone	33	8	0	0	32	73	0.94%
American Indian/Alaska Native Alone	5	1	4	4	5	19	0.24%
Asian Alone	15	0	0	1	1	17	0.22%
Native Hawaiian/Pacific Islander Alone	0	0	0	0	0	0	0.00%
Hispanic or Latino Alone	15	1	2	3	10	31	0.40%
Some Other Race Alone	0	0	0	1	2	3	0.04%
Two or More Races Alone	17	5	0	5	13	40	0.52%

Appendix D-1
Population by Persons 65 and Over and Total Disabilities

Census Tract 306 - Boyd County, Kentucky						
Population	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Populations Totals	Percentage of Population
Age 65 and Over Total	344	175	330	91	940	22.54%
Disabilities for Noninstutionalized Civilian people 5 to 15 years	20	6	0	8	34	0.82%
Disabilities for Noninstutionalized Civilian people 16 to 64 years	241	331	176	78	826	19.81%
Disabilities for Noninstutionalized Civilian people 65 years and Over	212	129	165	80	586	14.06%

Census Tract 307 - Boyd County, Kentucky					
Population	Block Group 1	Block Group 2	Block Group 3	Populations Totals	Percentage of Population
Age 65 and Over Total	206	352	150	708	19.79%
Disabilities for Noninstutionalized Civilian people 5 to 15 years	31	84	21	136	3.80%
Disabilities for Noninstutionalized Civilian people 16 to 64 years	280	570	224	1074	30.02%
Disabilities for Noninstutionalized Civilian people 65 years and Over	100	215	174	489	13.67%

Census Tract 308 - Boyd County, Kentucky					
Population	Block Group 1	Block Group 2	Block Group 3	Populations Totals	Percentage of Population
Age 65 and Over Total	148	82	424	654	16.48%
Disabilities for Noninstutionalized Civilian people 5 to 15 years	16	0	13	29	0.73%
Disabilities for Noninstutionalized Civilian people 16 to 64 years	678	141	552	1371	34.54%
Disabilities for Noninstutionalized Civilian people 65 years and Over	227	84	364	675	17.01%

Census Tract 309 - Boyd County, Kentucky						
Population	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Populations Totals	Percentage of Population
Age 65 and Over Total	323	307	177	121	928	16.08%
Disabilities for Noninstutionalized Civilian people 5 to 15 years	9	0	26	45	80	1.39%
Disabilities for Noninstutionalized Civilian people 16 to 64 years	629	400	722	480	2231	38.65%
Disabilities for Noninstutionalized Civilian people 65 years and Over	357	400	81	109	947	16.41%

Census Tract 310 - Boyd County, Kentucky								
Population	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Block Group 5	Block Group 6	Populations Totals	Percentage of Population
Age 65 and Over Total	220	65	140	137	80	181	823	10.13%
Disabilities for Noninstutionalized Civilian people 5 to 15 years	21	0	0	0	0	14	35	0.43%
Disabilities for Noninstutionalized Civilian people 16 to 64 years	763	208	695	165	470	299	2600	32.01%
Disabilities for Noninstutionalized Civilian people 65 years and Over	248	60	224	165	66	162	925	11.39%

Census Tract 311 - Boyd County, Kentucky							
Population	Block Group 1	Block Group 2	Block Group 3	Block Group 4	Block Group 5	Populations Totals	Percentage of Population
Age 65 and Over Total	274	119	162	140	123	818	10.54%
Disabilities for Noninstutionalized Civilian people 5 to 15 years	18	14	25	0	29	86	1.11%
Disabilities for Noninstutionalized Civilian people 16 to 64 years	678	337	272	342	512	2141	27.58%
Disabilities for Noninstutionalized Civilian people 65 years and Over	327	56	214	163	67	827	10.65%

Appendix E-1

Determined Poverty Status By Race Populations

Race	Census Tract 306	Census Tract 307	Census Tract 308	Census Tract 309	Census Tract 310	Census Tract 311
White Alone	355	292	1,086	769	746	802
Black / African American Alone	67	0	7	0	0	14
American Indian/ Alaska Native Alone	4	0	0	0	7	0
Asian Alone	0	5	0	0	0	0
Native Hawaiian / Pacific Islander Alone	0	0	0	0	0	0
Hispanic or Latino Alone	8	0	17	0	17	24
Some Other race Alone	0	0	0	0	0	0
Two or More Races Alone	40	0	64	21	87	14
Total Population Below the Poverty Level	4,162	3,426	3,953	5,772	6,681	7,723
Population Below the Poverty Level	410	296	1,164	790	840	839
Percentage Below the Poverty Level	9.90%	8.70%	29.40%	13.70%	12.60%	10.90%

Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies

Updated: February 1, 2002

The demographics of the affected area should be defined using U.S. Census data (Census tracts and block groups) and the percentages for minorities, low-income, elderly, or disabled populations should be compared to those for the following:

- Other nearby Census tracts and block groups,
- The county as a whole,
- The entire state, and
- The United States.

Information from PVA offices, social service agencies, local health organizations, local public agencies, and community action agencies can be used to supplement the Census data. Specifically, we are interested in obtaining the following information:

- Identification of community leaders or other contacts who may be able to represent these population groups and through which coordination efforts can be made.
- Comparison of the Census tracts and block groups encompassing the project area to other nearby Census tracts and block groups, county, state, and United States percentages.
- Locations of specific or identified minority, low-income, elderly, or disabled population groups within or near the project area. This may require some field reviews and/or discussions with knowledgeable persons to identify locations of public housing, minority communities, ethnic communities, etc., to verify Census data or identify changes that may have occurred since the last Census. Examples would be changes due to new residential developments in the area or increases in Asian and/or Hispanic populations.
- Concentrations or communities that share a common religious, cultural, ethnic, or other background, e.g., Amish communities.
- Communities or neighborhoods that exhibit a high degree of community cohesion or interaction and the ability to mobilize community actions at the start of community involvement.
- Concentrations of common employment, religious centers, and/or educational institutions with members within walking distance of facilities.
- Potential effects, both positive and negative, of the project on the affected groups as compared to the non-target groups. This may include, but are not limited to:
  1. Access to services, employment or transportation.
  2. Displacement of persons, businesses, farms, or non-profit organizations.
  3. Disruption of community cohesion or vitality.
  4. Effects to human health and/or safety.
- Possible methods to minimize or avoid impacts on the target population groups.

If percentages of these populations are elevated within the project area, it should be brought to the attention of the Division of Planning immediately so that coordination with affected populations may be conducted to determine the affected population's concerns and comments on the project. Also, with this effort, representatives of minority, elderly, low-income, or disabled populations should be identified so that, together, we can build a partnership for the region that may be incorporated into other projects. Also, we hope to build a Commonwealth-wide database of contacts. We are available to participate in any meetings with these affected populations or with their community leaders or representatives.

In identifying communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected population. A target population also exists if there is (1) more than one minority or other group present and (2) the percentages, as calculated by aggregating all minority persons, exceed that of the general population or other appropriate unit of geographic analysis.

Maps should be included that show the Census tracts and block groups included in the analysis as well as the relation of the project area to those Census tracts and block groups.