

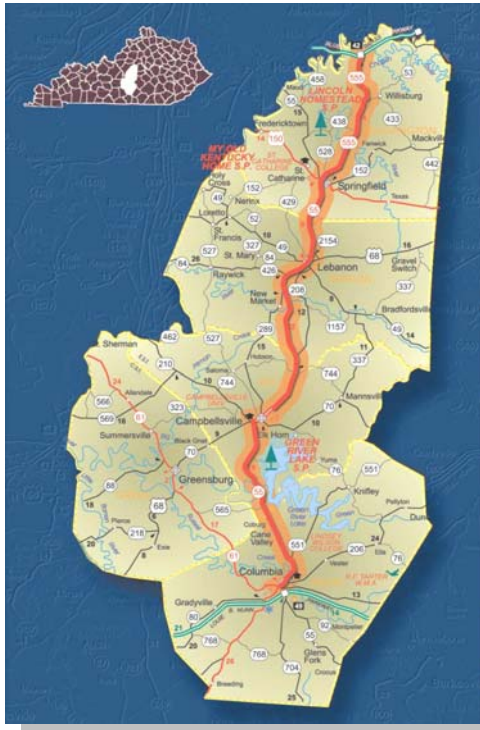


Heartland Parkway Alternatives Planning Study

From the Louie B. Nunn Cumberland Parkway
To the Martha Layne Collins Blue Grass Parkway

Adair, Green, Taylor, Marion, and Washington Counties

ITEM NO. 4-132.00



Final

February 2005

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EXECUTIVE SUMMARY

ALTERNATIVES PLANNING STUDY

Heartland Parkway

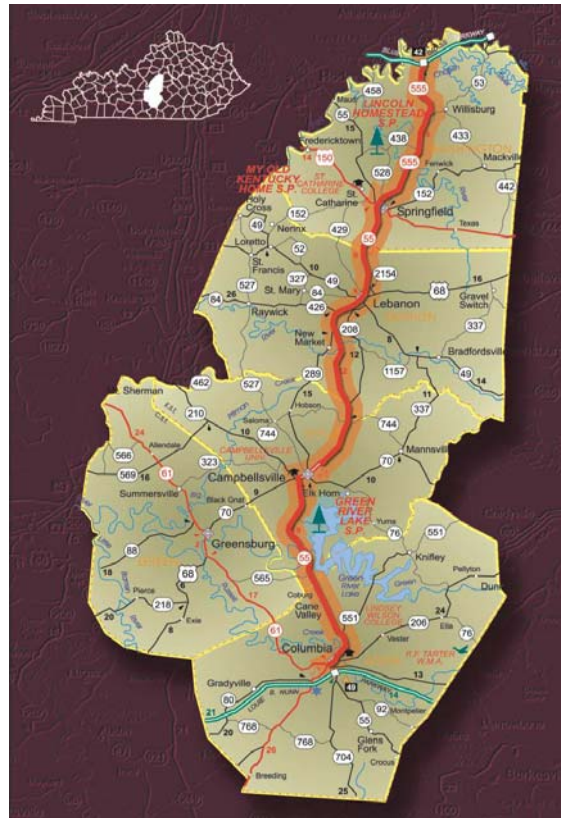
Adair, Green, Marion, Taylor, and Washington Counties
From The Louie B. Nunn Cumberland Parkway
To The Martha Layne Collins Blue Grass Parkway
ITEM NO. 04-132.00

The Heartland Parkway project is defined in the Kentucky Transportation Cabinet's Six-Year Highway Plan (FY 2003-2008) to perform corridor analysis for the location of the "Heartland Parkway" from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. The project is identified as Item No. 4-132.00.

Existing Roadway Conditions

The existing routes are predominantly two-lane rural arterial routes, with some four-lane curb and gutter sections in the urbanized areas. Lane widths vary from ten to twelve feet, and shoulder widths vary from two to twelve feet, and have varied composition. There are sections with partial control of access, while the remainder is access by permit. This access by permit has contributed to congestion and a reduced level of service.

Currently, two of the four communities along the existing corridor have bypass projects in the design or right of way phase. Each of the planned bypasses "T" into existing routes. This will not allow free-flow movement normally associated with a parkway facility. There are no scheduled plans for a bypass in Campbellsville, the most populous of the affected communities. Springfield is already bypassed by the location of KY 55 and KY 555.



Traffic Considerations

Traffic forecasts were completed for each of the three different improvement options, including models with and without the completion of I-66, as well as, a No-Build option.

A new corridor offers some distinct advantages: 1) continuous flow of traffic, which is particularly good for truck traffic; 2) significant reduction in the percent of trucks remaining on the existing routes; and 3) minimal maintenance of traffic during construction. However, traffic bottlenecks and poor geometric conditions will continue to plague the existing routes, and with a 3-4% anticipated growth rate, the level of service on existing routes will continue to decline. Many segments will be in the E-F range by Year 2030.

Improvements along the existing corridor will address deficient conditions, while keeping the flow of traffic near the communities served. Bypasses for Lebanon and Columbia are already in different stages of the design and right of way phases. Truck traffic is expected to reach the 21-31% range in many areas by Year 2030.

Environmental Overview

Field surveys, record searches and contacts with resource agencies, government representatives and the general public have identified environmental issues and sensitive areas. Potential impacts to the human and natural environment will be considered as the project moves into future phases.

- The project area hosts many natural, scenic and sensitive areas including the Green River Lake State Park, Lincoln Homestead State Park, Green River Bioreserve, Tebbs Bend Battlefield and Green County caves.
- These scenic areas potentially are home to several federally listed endangered or threatened species such as the Indiana bat, gray bat, bald eagle, Eggert's sunflower and several species of mussels.
- The project corridors cross numerous streams, which will require widening of bridges, extending culverts, or constructing new structures. Construction impacts on streams and floodplains will need to be evaluated and if appropriate, mitigated.
- Both project corridors will cross the Green River, which is classified as outstanding state resource water, and Russell Creek, which is classified as exceptional water. Erosion and sedimentation controls will be necessary to minimize impacts to these streams.
- Wetlands could be affected by future project phases and all reasonable efforts will be made to avoid or minimize impacts.
- The project corridors contain 64 historic sites that are listed or are potentially eligible for listing on the National Register of Historic Places. The project area also has a high potential for containing unrecorded prehistoric or historic

archaeological sites. Historic and archaeological surveys will need to be conducted to determine/confirm the presence of historic or archaeological sites and potential to avoid or minimize project impacts.

- If historic sites (e.g., Tebbs Bend Battlefield) or recreation areas (e.g., Green River State Park) are impacted, a Section 4(f) evaluation will be necessary.
- A new or improved roadway will enhance regional access for travelers, workers, tourists, and transporters of raw materials, finished products and agricultural products. Beneficial impacts of future phases include anticipated opportunities for industry, tourism, higher education and agricultural activities.
- Only low numbers of residential or commercial relocations are expected in future design phases.
- As the predominant land use in the project area is agricultural, potential impacts to farmlands rated as prime, unique, or of statewide importance must be considered. Agricultural districts are present in the study area, and if avoidance is not feasible, coordination with the local conservation district is required.
- Several service stations, automobile repair shops, and auto salvage yards occur in the project corridors and could have potential hazardous materials and underground storage tank sites. Further consideration will be necessary to confirm the presence of these sites and reasonable efforts will be made to assess avoidance and mitigation options.

Public Involvement Activities

Throughout the course of this study, local officials, resource agencies, interest groups, and the public provided input on potential improvement options for the Heartland Parkway. Comments were obtained from local meetings, questionnaires, and other written correspondence. There were several concerns identified through this process and were expressed by local officials and the public as follows:

A new corridor would bypass the communities that it is intended to serve. It would have a negative impact on economic development and tourism.

A new corridor would destroy too much farmland.

In order to improve economic development, better access to and through the region is needed. Also, access to other parkway and interstate highways will facilitate the delivery of goods.

Bypasses are needed for each community.

A four-lane divided highway with partial control of access built along the existing corridor routes is preferred. It should utilize as much existing right of way and other planned improvements as possible.

Avoid historic and culturally sensitive sites.

Project Goals

The preliminary goals established through this study include: 1) improve regional access for economic development, existing industry, truck access, tourism, higher education, and agricultural economy; 2) improve safety; 3) improve highway capacity in certain locations; 4) decrease delays through the communities; and, 5) improve emergency response times.

The project goals can be achieved through a new or reconstructed parkway-type highway between the Louie B. Nunn Cumberland Parkway and the Martha Layne Collins Blue Grass Parkway.

Corridor Development

The identified project corridors evolved from meetings with the project team and public involvement activities throughout the course of this alternatives study. Input from local officials, resource agencies, interest groups, and the public were considered in the corridor development process.

Two corridors, plus the no-build alternative were considered, and developed. One of the two corridors developed was a 4-lane divided highway with access at interchanges only. This corridor, referred to as Option 1 would be on new alignment and would generally parallel the existing routes approximately 2 miles to the west.

The corridor along the existing routes had two options, Options 2 and 3, with different design concepts, and was broken into eight segments, each with logical termini.

The first concept, Option 2, was a 4-lane divided highway with access provided at 1200-foot spacing at grade with median cuts. It would follow the existing routes (KY 55, US 68, KY 555), upgrade the planned bypasses at Lebanon and Columbia to 4 lanes, and propose a new 4-lane bypass at Campbellsville along the southeast side.

The second concept, Option 3, followed the existing routes (KY 55, US 68, KY 555), adding passing bays and rehabilitation of pavement and shoulders. The bypasses at Lebanon and Columbia would be used, as planned, and a new 2-lane bypass would be proposed for Campbellsville along the southeast side.

Estimates were made for each concept by segment, allowing the option of selecting different concept considerations for each segment, based upon funding availability and need.

Recommendations

Based upon an analysis of the project goals, traffic issues along the existing corridor, potential environmental impacts, and stakeholder input, the project team chose Option 2 along the existing routes as the preferred corridor option. Throughout this alternatives study, it has been clear that available funding will be an issue, and that an implementation plan for improvements would need to be prioritized, which would allow construction by segments.

The project team recommended the following priority for construction project phasing for the preferred alternative:

- Priority 1: Segment 1 – KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass.
- Priority 2: Segment 2 – Columbia Bypass
- Priority 3: Segment 6 – Lebanon Bypass
- Priority 4: Segment 4 – Campbellsville Bypass
- Priority 5: Segment 3 – KY 55 from Columbia to Campbellsville
- Priority 6: Segment 5 – US 68 from Campbellsville to Lebanon
- Priority 7: Segment 7 – KY 55 from Lebanon to Springfield
- Priority 8: Segment 8 – KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway

Since funding is an issue, some consideration may need to be given to spot improvements in order to address critical traffic concerns on roadway segments that, due to being a lower priority segment, may not receive timely improvements.

Funding

The project addressed in this study was scheduled in the Kentucky Transportation Cabinet's Six-Year Highway Plan (FY 2003-2008), with committed funds in the amount of \$625,000. The current Six-Year Highway Plan does not include funds for additional phases for the Heartland Parkway.

Contacts

Comments and/or requests for information regarding this project should be sent to the address listed below:

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Heartland Parkway - Estimated Costs for Priority Segments

Heartland Parkway - Option 1 (Interstate/Parkway Type of Facility)	
Items	Total
Estimated Length	60
Design	\$41,027,000
Right-of-Way	\$73,801,000
Utilities	\$16,000,000
Construction	\$509,650,000
Contingencies	\$76,448,000
Total	\$716,926,000

Heartland Parkway - Option 2 (Four-Lane Facility Along Existing Routes)													
Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A Adair Co. (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	Section B Adair Co. Columbia Bypass	Section C Adair Co. (KY 55 from Columbia Bypass to Taylor Co. Line)	Section D Taylor Co. (KY 55 to Campbells-ville Bypass)	Section E Taylor Co. Campbellsville Bypass	Section F Taylor Co. (US 68 from Campbells-ville Bypass to Marion Co. Line)	Section G Marion Co. (US 68 to Lebanon Bypass)	Section H Marion Co. Lebanon Bypass	Section I Marion Co. (KY 55 from Lebanon Bypass to Wash. Co. Line)	Section J Washington Co. (KY 55 to KY 555)	Section K Washington Co. (KY 555 to MP 8.284)	Section L Washington Co. (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	22,200 - 24,400	21,000 - 32,500	9800 - 11,800	18,700 - 23,600	18,700 - 32,300	9800 - 12,700	24,500 - 25,000	21,900 - 25,000	13,600 - 19,400	9200 - 10,800	-
Design	-	2,894,000	1,824,000	2,673,000	2,322,000	685,000	2,510,000	927,000	478,000	883,000	1,720,000	1,463,000	\$18,379,000
Right-of-Way	2,000,000	4,400,000	2,589,000	14,867,000	5,868,000	2,866,000	8,186,000	2,200,000	2,613,000	2,988,000	4,372,000	4,854,000	\$57,803,000
Utilities	500,000	1,500,000	11,171,000	2,675,000	1,875,000	1,013,000	4,868,000	1,000,000	668,000	1,138,000	2,071,000	1,604,000	\$30,083,000
Construction	15,000,000	35,943,000	23,604,000	34,432,000	28,842,000	8,737,000	32,070,000	13,353,000	6,086,000	11,223,000	21,831,000	18,530,000	\$249,651,000
Contingencies	2,250,000	5,393,000	2,448,000	3,749,000	4,327,000	1,044,000	3,783,000	2,003,000	738,000	1,384,000	2,729,000	2,357,000	\$32,205,000
Total	\$19,750,000	\$50,130,000	\$41,636,000	\$58,396,000	\$43,234,000	\$14,345,000	\$51,417,000	\$19,483,000	\$10,583,000	\$17,616,000	\$32,723,000	\$28,808,000	\$388,121,000

Heartland Parkway - Option 3 (Two-Lane Facility with Passing Lanes Every Three Miles)													
Items	Segment 1	Segment 2	Segment 3		Segment 4	Segment 5		Segment 6	Segment 7		Segment 8		Total
	Section A Adair Co. (KY 61 from L.B.N. C'land Pkwy. to Columbia Bypass)	Section B Adair Co. Columbia Bypass	Section C Adair Co. (KY 55 from Columbia Bypass to Taylor Co. Line)	Section D Taylor Co. (KY 55 to Campbells-ville Bypass)	Section E Taylor Co. Campbellsville Bypass	Section F Taylor Co. (US 68 from Campbells-ville Bypass to Marion Co. Line)	Section G Marion Co. (US 68 to Lebanon Bypass)	Section H Marion Co. Lebanon Bypass	Section I Marion Co. (KY 55 from Lebanon Bypass to Wash. Co. Line)	Section J Washington Co. (KY 55 to KY 555)	Section K Washington Co. (KY 555 to MP 8.284)	Section L Washington Co. (KY 555 MP 8.284 to M.L.C. Blue Grass Pkwy.)	
Section Length	2.1	4.16	6.356	8.7	6.7	4.051	9.47	3.305	2.669	4.551	8.284	6.414	66.76
2030 ADT	-	10,700 - 13,700	19,500 - 21,700	18,500 - 28,700	8600 - 10,500	16,500 - 20,800	16,500 - 28,400	8600 - 11,100	21,500 - 22,000	19,200 - 22,000	11,900 - 17,100	8100 - 9500	-
Design	-	-	317,000	392,000	1,444,000	193,000	523,000	450,000	142,000	216,000	435,000	348,000	\$4,460,000
Right-of-Way	2,000,000	4,400,000	122,000	122,000	5,868,000	0	0	1,300,000	0	0	0	122,000	\$13,934,000
Utilities	500,000	1,500,000	600,000	600,000	1,875,000	300,000	900,000	1,000,000	300,000	300,000	900,000	600,000	\$9,375,000
Construction	15,000,000	18,750,000	4,198,000	5,228,000	17,933,000	2,561,000	6,893,000	7,428,000	1,871,000	2,869,000	5,754,000	4,594,000	\$93,079,000
Contingencies	2,250,000	2,813,000	320,000	360,000	2,690,000	187,000	572,000	1,115,000	151,000	209,000	459,000	377,000	\$11,503,000
Total	\$19,750,000	\$27,463,000	\$5,557,000	\$6,702,000	\$29,810,000	\$3,241,000	\$8,888,000	\$11,293,000	\$2,464,000	\$3,594,000	\$7,548,000	\$6,041,000	\$132,351,000

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I. INTRODUCTION

The purpose of the Heartland Parkway Alternatives Study is to identify and evaluate potential corridors for a new route and/or existing routes (KY 55/US 68/KY 555) from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. The study is intended to help define the location and purpose of the project and better meet federal requirements regarding the consideration of environmental



Existing KY 555

issues, as defined in the National Environmental Policy Act (NEPA). This report provides a general introduction and description of the project, identifies options for proposed improvements, presents an environmental and geotechnical overview for the study area, presents an extensive traffic forecast for each of the options studied, summarizes the input of local officials, resource agencies, and the public, and provides recommendations for the project.

A. LOCATION

The proposed highway project defined as the “Heartland Parkway” will run from the Louie B. Nunn Cumberland Parkway north to the Martha Layne Collins Blue Grass Parkway, and could include Adair, Green, Marion, Taylor, and Washington Counties. The study area for the corridor encompassed the existing corridor routes of KY 55, US 68, and KY 555, and an area two to three miles east and west of the existing routes.



Southern Terminus:
Louie B. Nunn Cumberland Parkway



Northern Terminus:
Martha Layne Collins Blue Grass
Parkway

B. TERMINI and LENGTH

The project is identified in the Six-Year Highway Plan to perform corridor analysis for the location of the “Heartland Parkway” from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway. This study identifies the southern termini as the new interchange for KY 61 on the Louie B. Nunn Cumberland Parkway, and the northern termini as the KY 555 interchange on the Martha Layne Collins Blue Grass Parkway. See **Figure 7** in **Appendix A**.

C. PROJECT OBJECTIVES

The Alternatives Study for the Heartland Parkway will define the project purpose and need, identify approximate corridor locations, proposed improvements within each corridor, and a prioritization of the corridor improvements. The study will also involve a public involvement program, a technical analysis that encompasses geotechnical and environmental issues, traffic forecast and accident analysis and existing conditions.

Specific tasks included in this study are:

- Discuss project needs and issues with public officials, resource agencies, and other groups which have a special interest in the project;
- Define project goals, needs, and issues;
- Define the beginning and ending points of the project corridor;
- Identify any known environmental concerns;
- Identify and evaluate alternate corridors with possible design concepts;
- Listen to, and share information with, the public; and,
- Recommendations.

D. PROJECT ISSUES

Several study issues were anticipated as part of the corridor identification process, and each one addressed in this study. Several issues are identified below:

Currently there are several improvement projects already in the pre-construction phase in the study area, including an improved 5-lane



Green River Lake State Park

urban reconstruction project of KY 61 from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Columbia Bypass (Item No. 8-162.6). Bypasses are planned for Columbia (Item No. 8-159.0) and Lebanon (Item No. 4-125.10). Right of way process is currently underway for the Columbia Bypass. The Columbia Bypass will be constructed as 2-lane on a 4-lane ultimate right of way; however, the Lebanon Bypass will be constructed as 2-lane on a 2-lane ultimate right of way. Additionally, there is a US 150 Bypass planned for Springfield (Item No. 4-307.01 and 4-103.05).

There are key community issues and interests that are addressed in this study. Some of these issues include impacts to:

- Higher Education Facilities
- Cultural and Historic Features
- Green River Lake and Willisburg Lake
- Lincoln Homestead State Park
- Residences and Businesses

Other issues and concerns that have been identified within the study area and will be addressed in the Alternatives Study include:

- Lack of good access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- A need to improve economic development and tourism opportunities in Adair, Green, Taylor, Marion, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance (no passing lanes), and access types;
- Truck access; and,
- A need to improve capacity in Adair, Green, Taylor, Marion, and Washington Counties in certain locations.



Limited Sight Distance

E. PROGRAMMING and SCHEDULE

The project addressed in this study was scheduled in the Kentucky Transportation Cabinet's Six-Year Highway Plan (FY 2003-2008), with committed funds in the amount of \$625,000. The current Six-Year Highway Plan does not include funds for additional phases for the Heartland Parkway.

PART 1. PROJECT AREA CHARACTERISTICS

Part 1 of this document provides an overview of the general project area for the Heartland Parkway Scoping Study. Included in **Chapter II** are transportation systems, geometric data, bridges, existing traffic conditions, vehicle crash history, and planned highway improvements. **Chapter III** provides an analysis of future traffic conditions with and without area transportation improvements. The environmental overview in **Chapter IV** addresses various items, such as water quality issues, soils and geology, species and habitats, historic and archaeological resources, farmland, monitored sites, and items impacting the social and economic resources of the project area. **Chapter V** provides a geotechnical overview for the project area, including topography and constructability issues.

II. STUDY AREA CHARACTERISTICS

Characteristics of the study area and the major highway network are identified in the following sections. These characteristics include the project study area, transportation facilities, traffic and geometric data, bridges, crash data, and other Six-Year Highway Plan projects in the study area. Features of the existing highway routes were obtained from the KYTC Highway Information System (HIS) database. Maps and data tables can be found in **Appendix A** and **Appendix C** respectively. Photos of the project area can be found in **Appendix B**.

A. HIGHWAY SYSTEMS

The existing north-south corridor routes of KY 55, US 68, and KY 555 generally parallel I-65 and provide regional connectivity from the Blue Grass Parkway to the Cumberland Parkway (future proposed I-66), with east-west connectivity to I-65 and I-75.

The highway systems within the study area are summarized in **Table 1** in **Appendix C**. Information provided includes the Functional Classification, State Highway System, National Truck Network, National Highway System, and Truck Weight Class. Scenic Byway and Bike Route Systems are also listed for the existing corridor routes. A discussion of significant highway information is summarized as follows:

- State maintained roads in Kentucky are comprised of twelve different functional classification categories. KY 55, US 68, and KY 555 in Adair, Taylor, Marion, and Washington Counties are classified as State Primary routes.
- The National Truck Network (NN) includes routes that have been designated for use by commercial trucks with widths of 102 inches and heights of 13 ½ feet. KY 55, US 68, and KY 555 are all on the National Truck Network.
- The functional classification assigned to KY 55, US 68, and KY 555 is Rural Principal Arterial, except for the sections where KY 55 and US 68 pass through Campbellsville and Lebanon, where the classification is Urban Principal Arterial.
- The Truck Weight Classification along the existing corridor route is AAA (80,000 pounds gross vehicle weight), with the exception of a portion of KY 55 from the Louie B. Nunn Cumberland Parkway to KY 80 (MP 10.059 to MP 10.614) which is classified as AA (62,000 pounds gross vehicle weight). Additionally, KY 55 south of the Louie B.

Nunn Cumberland Parkway is also classified as AA. Some other significant routes in the study area that are classified as AAA include US 68 from Campbellsville to Greensburg, US 150 from Springfield to Danville, and US 150 from Springfield to Bardstown.

DEFINITIONS

State System: State-maintained roads in Kentucky are classified into four categories under the state system, ranging from Supplemental Road to State Primary.

National Truck Network: The National Truck Network (NN) includes roads that have been specifically designated for use by trucks with increased dimensions (102 inches wide; 13 feet 6 inches high; semi-trailers up to 53 feet long; trailers up to 28 feet long – not to exceed two trailers per truck).

National Highway System: The National Highway System (NHS), a system of nationally important roads, was established in the Intermodal Surface Transportation Efficiency Act (ISTEA). It includes the Interstate Highway System and other significant principal arterial roads important to the nation's economy, defense, and mobility.

Functional Classification: One (1) of 12 functional classification categories is assigned to each state-maintained road in Kentucky.

Truck Weight Class: The Kentucky Revised Status requires weight limits on the state-maintained highway system. With the exception of permits for over-dimensional or over-gross-vehicle-weight-classification-limit vehicles issued by the Kentucky Transportation Cabinet, Division of Motor Carriers, there are three weight classification limits: 1) AAA – 80,000 lbs. gross vehicle weight; 2) AA – 62,000 lbs. gross vehicle weight; and 3) A – 44,000 lbs. gross vehicle weight.

- A portion of The Cumberland Cultural Heritage Highway Scenic Byway System is in the Heartland Parkway study area. Routes included in that system include KY 80 and KY 61 in Adair County, KY 55 and US 68 from Columbia via Campbellsville to Greensburg.
- There are four bike routes in the study area as listed below:
 1. Central Heartlands Tour along KY 55 and US 68 in Taylor County
 2. Midland Kentucky Tour along KY 55 and US 68 in Taylor County
 3. Ramblin' River Tour
 4. Kentucky's TransAmerica Bike Trail

B. GEOMETRIC CHARACTERISTICS

Geometric characteristics for the routes along the existing corridor are shown in **Table 1** in **Appendix C**, and include items, such as number of lanes, lane widths, shoulder widths, posted speed limit, and percent of passing sight distance. Within the study area, the existing routes have the following characteristics:

- KY 55, US 68, and KY 555 are predominantly two lanes with a posted speed limit of 55 miles per hour (M.P.H.) in the rural areas. There are a few truck passing lanes. In the urbanized areas of Columbia, Campbellsville, and Lebanon, there are some four-lane undivided highway sections with reduced speed limits of 35-45 M.P.H.
- Typical lane widths are 10-12 feet.
- Shoulders vary in width from 0 feet to 12 feet and vary in composition from gravel to full-width asphalt. Curb and gutter is utilized in the urban areas.
- There are several locations along the existing routes with restricted sight distance similar to the entrance shown on Page 3 of this report.



Existing Shoulder – KY 55 in
Taylor County

C. BRIDGES

Bridge data for the routes considered in this study are listed in **Table 2** in **Appendix C**. None of the bridges located on the existing corridor routes are listed as structurally deficient. Two bridges are functionally obsolete. One of the two functionally obsolete bridges is B00052 in Adair County, which will be avoided because of the proposed Columbia Bypass. Below is a list of the bridges along the existing routes.

- B00071 on KY 55 at MP 12.890 in Adair County crosses Butlers Branch. The structure is a Double 12' x 9' x 166' Reinforced Concrete Box Culvert (RCBC) and has a sufficiency rating of 94.9.
- B00015 on KY 55 at MP 2.615 in Taylor County over Green River. The structure is a five-span 70'-95'-100'-95'-75' Reinforced Concrete Deck Girder (RCDG), and has a sufficiency rating of 82.7. The 436-foot bridge has a horizontal clearance of 30 feet and total bridge width of 35 feet.
- B00014 on KY 55 at MP 2.925 in Taylor County spans Pinch Creek. The structure is a Double 10' x 6' x 210' RCBC and has a sufficiency rating of 90.7.

- B00024 on US 68 at MP 1.706 in Marion County crosses State Creek. The structure is a Double 12' x 5' x 37' RCBC and has a sufficiency rating of 90.3.
- B00072 on US 68 at MP 5.239 in Marion County spans Rolling Fork. The bridge is a four-span 60'-95'-95'-95' Precast Concrete I Beam (PCIB), and has a sufficiency rating of 97.3. The 360-foot bridge has a horizontal clearance of 44 feet.
- B00073, a box culvert on US 68 at MP 5.953 in Marion County crosses Buckhorn Creek. The structure is a Double 12' x 7' x 101' RCBC and has a sufficiency rating of 93.9.

METHODOLOGY

Bridge Ratings: A bridge with a sufficiency rating less than fifty (50.0) is considered to be eligible for replacement with federal funds under the Federal-Aid Highway Bridge Replacement and Rehabilitation Program. Bridges can also be rated either structurally deficient or functionally obsolete.

- B00069 in Marion County on KY 55 at MP 2.781. The 106-foot structure crosses Cartwright Creek. It has spans of 32' x 41' x 32' and a sufficiency rating of 96.3.
- B00048 on KY 55 in Washington County is at MP 1.549. The Double 11' x 8' x 201' culvert carries Servant Run and has a sufficiency rating of 98.1.
- B00043 on KY 55 in Washington County is at MP 4.240. This structure is a 34-foot RCDG bridge over Road Run Branch. It has a horizontal clearance of 28 ½ feet and a sufficiency rating of 83.4.
- B00024 on KY 55 in Washington County is a 48-foot bridge that is listed as a 45-foot RCDG bridge over Road Run Creek. It has a horizontal clearance of 19 feet and a sufficiency rating of 70.6 and is functionally obsolete.
- B00047 on KY 555 in Washington County, is a Double 12' x 8' x 106' culvert at MP 0.02 and carries Haydon Branch. The sufficiency rating is listed at 95.4.



Beech Fork Bridge in
Washington County

- B00046 on KY 555 in Washington County is listed at MP 3.457. The 284-foot PCIB bridge crosses Beech Fork River and has a span composition of 93' x 93' x 83' x 93'. The horizontal clearance is shown at 44 feet and it has a sufficiency rating of 90.2.
- B00006 on KY 555 in Washington County is an arch culvert carrying Mays Creek at MP 7.038. The culvert is 30' x 20' x 223' and has a sufficiency rating of 80.
- B00005 on KY 555 in Washington County is at MP 8.284. The 286-foot Welded Steel Plate Girder (WSP) bridge crosses Long Lick Creek and has a span arrangement of 85'x 110'x 85'. The horizontal clearance is 30.2 feet and it has a sufficiency rating of 78.5.
- B00010 on KY 555 in Washington County is a 195-foot PCIB bridge over the Martha Layne Collins Blue Grass Parkway at MP 14.698. The span arrangement is listed as 35' x 58' x 58' x 35'. The horizontal clearance is 33 feet, and the bridge has a sufficiency rating of 77.7.

D. EXISTING TRAFFIC AND LEVEL OF SERVICE

Traffic and operational levels of service are included as part of this study and are shown in **Figure 2** in **Appendix A** and **Table 1** in **Appendix C** as graphical illustrations of existing and future traffic volumes. For this project, the following traffic volumes and levels of service (LOS) have been identified:

- Existing 2003 Traffic Volume and LOS
- Future Year 2030 Traffic Volume and LOS – No Build Alternative

1. EXISTING TRAFFIC VOLUMES and LEVEL OF SERVICE (YEAR 2003)

The KYTC Highway Information System (HIS) was used to provide the existing traffic volumes (2003) for segments along the existing corridor routes of KY 55, US 68, and KY 555. Additionally, existing truck percentages were determined using the HIS database.

The existing average daily traffic volumes and the corresponding truck percentages are shown in **Figure 2** in **Appendix A** and in **Table 1** in **Appendix C** of the document. Within the mapped study area, the existing traffic volumes along the existing corridor routes range from 3,200 average daily traffic (ADT) along KY 555 in Washington County to 28,600 ADT along KY 55 in Adair County.

Listed below are segments along the KY 55, US 68, KY 555 corridor, with traffic volumes and levels of service associated with each segment.

The segment along KY 55, from the Louie B. Nunn Cumberland Parkway (MP 10.059) through Columbia to the proposed Columbia Bypass (MP 12.65) in Adair County, has an ADT range from 10,700 to 28,600, with truck traffic averaging 8.8%. Current Level of Service (LOS) ranges from D to F. Free Flow Speed (FFS) is



Columbia Courthouse Square

hampered by signalization of several intersections, the courthouse square, and multiple entrances with access by permit.

The next segment along KY 55, from the proposed Columbia Bypass in Adair County, north to a point where a proposed Campbellsville Bypass (not currently in the Six-Year Highway Plan) will cross KY 55 in Taylor County (MP 8.70), has an ADT range from 7,300 to 10,600, with truck traffic averaging 11.3%. Current Level of Service is in the C to D range. Portions of this section are access by permit.

Through the City of Campbellsville, along KY 55 and US 68, the ADT has a range of 8,500 to 24,200, with truck traffic at 5.9%. Level of Service is predominately in the C to D range, and there are two small four-lane segments on US 68 that have Levels of Service A and B.

From the north edge of Campbellsville, where a proposed bypass was to join US 68 (MP 9.48) to the proposed Lebanon Bypass in Marion County (MP 9.47) on US 68, the ADT range is from 6,500 to 11,200. Truck traffic averages 9.7% on this section, and the Level of Service is in the C and D range.

Through the City of Lebanon, along US 68, KY 55, and KY 49, the ADT ranges from 9,000 to 13,400. Truck traffic averages 8%. On US 68, the Level of Service is E; however, on KY 55 there is a range of A to C Level of Service where there is a 4-lane typical section.

Leaving Lebanon on KY 55 from MP 2.0 and extending north through Marion and Washington Counties to the intersection of KY 555 at MP 4.551 in Springfield, the ADT on this rural section ranges from 7,600 to 8,500 and the average percent of trucks is 8.9%. The Level of Service throughout this section is D.

The northern-most section is KY 555, from the intersection of KY 55 MP 0.00 north to the Martha Layne Collins Blue Grass Parkway at MP 14.738. This rural section has the lowest traffic volumes, ranging from 3,200 to 6,700. The average truck percentage on this section is 15%, and the Level of Service is in the B and C range.

METHODOLOGY

Traffic Volumes: Existing traffic volumes (Year 2003) along project area routes are summarized based on information provided in the HIS database. Existing truck percentages were determined for routes using the HIS data and Kentucky Transportation Cabinet default values for functional highway classes.

Level of Service: Level of Service (LOS) is a qualitative measure defined in the *2000 Highway Capacity Manual*, published by the Transportation Research Board (TRB) and used to describe traffic conditions. Individual levels of service characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined and are given letter designations from A to F with LOS A representing free flow conditions, and LOS F representing severe congestion. Typically, a minimum of LOS D is acceptable in urban areas and LOS C in rural areas. Chapters 15, 20, and 21 of the *2000 Highway Capacity Manual* provide guideline on the analytical procedures for estimating LOS for streets and highways.

E. CRASH ANALYSIS

Crash data along the existing routes (KY 55, US 68, and KY 555) were considered during a six-year period from January 1, 1997, through December 31, 2002. Crash locations were replicated using the mile point in **Table 3** of **Appendix C**, and both spot and segment analysis were performed. Additionally, Critical Rate Factors were determined using the methodology outlined in the Kentucky Transportation Center's *Analysis of Traffic Crash Data in Kentucky (1997-2001)*. The analysis classified each crash as being fatal, involving injuries, or property damage. During the six year time frame, there were 29 fatal, 965 injury, and 1320 property damage crashes. **Figure 3** in **Appendix A** displays segments where the critical rate factor is greater than 1.0.

Areas where the critical rate factor exceeded 1.0 include the following:

- Adair County (KY55) MP 10.440 – MP 10.614
- Taylor County (US68) MP 5.553 – MP 5.923
- Marion County (US68) MP 9.864 – MP 10.690

- Marion County (KY55) MP 0.000 – MP 0.570
- Washington County (KY555) MP 0.000 – MP 0.841

The two sections in Marion County are contiguous.

There are also several spot locations where the critical rate factor is greater than 1.0. These locations are shown in the Spot Analysis section of **Table 3** in **Appendix C**, and often occur at intersecting roadways.

METHODOLOGY

Crash Data: Vehicle crash data for routes in the project area were considered for a six-year period from January 1, 1997 through December 31, 2002. The location of vehicle crashes with valid milepoint designations were identified through data obtained from the Kentucky Transportation Cabinet's Highway Information System (HIS).

Crash Analysis: When a roadway segment has a critical rate factor greater than one (1.00), this indicates that accidents at this location may not be occurring randomly. The critical rate factors are calculated based on the methodology presented in the Kentucky Transportation Center's *Analysis of Traffic Accident Data in Kentucky (1997-2001)*. A spot location or segment of roadway is considered to have a high crash rate when the total crash rate is higher than the critical accident rate for similar roadways in the state.

F. HIGHWAY IMPROVEMENTS in the SIX-YEAR HIGHWAY PLAN

Improvements in the 2002 Six-Year Highway Plan along the existing corridor, as well as, improvements within the study area that may influence the location of a recommended corridor for the Heartland Parkway, are identified in **Table 4** of **Appendix C** and listed as follows:

KY 55 - Western Bypass of Columbia in Adair County: Right of Way (2003), Utility Relocation (2003), and Construction (2004-2007) scheduled with \$24,650,000 allocated for this project.

KY 61 (MP 10.571 to MP 12.600) in Adair County: Right of Way (2002), Utility Relocation (2004), and Construction (2005) scheduled with \$17,500,000 allocated for reconstruction of KY 61 from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Western Bypass of Columbia.

KY 80 (MP 15.523 to MP 15.623) in Adair County: Design (2003), Right of Way (2005), Utility Relocation (2006), and Construction (2008) scheduled with \$3,750,000 allocated to replace the bridge over Russell Creek, 1.2 miles east of KY 55.

KY 61 in Green/Adair Counties: Design (2002) scheduled with \$1,250,000 allocated to reconstruct KY 61 from KY 487 in Green County to Columbia.

US 68 in Marion/Boyle Counties: Right of Way (2003), Utility Relocation (2005), and Construction (2006) scheduled with \$22,917,925 allocated to reconstruct US 68 from Lebanon to 1.5 miles east of the Boyle County Line.

KY 49 (MP 10.500 to MP 11.730) in Marion County: Design (2002), Right of Way (2003), Utility Relocation (2003), and Construction (2004) scheduled with \$2,750,000 allocated to reconstruct KY 49 from Pope Creek Bridge to Riverside Bridge.

US 68 (MP 12.900 to MP 13.200) in Marion County: Construction (2002) scheduled with \$225,000 allocated to construct a left-turn lane.

KY 210 (MP 16.184 to MP 16.884) in Taylor County: Design (2004) scheduled with \$350,000 allocated to widen KY 210 from US 68 to new connector.

KY 3211 (MP 3.390 to MP 3.490) in Taylor County: Design (2004), Right of Way (2005), Utility Relocation (2005), and Construction (2006) scheduled with \$475,000 allocated to replace bridge at Trace Fork, 1.9 miles west of US68/KY55.

CR 1236 in Taylor County: Design (2004), Right of Way (2006), and Construction (2007) scheduled with \$1,250,000 allocated to replace bridge over Green River 0.75 miles southwest of KY 55.

US 150 in Washington County: Construction (2002) scheduled with \$4,200,000 allocated to relocate US 150 from Springfield to Danville.

US 150 Springfield Bypass in Washington County: Design (2003), Right of Way (2004), Utility Relocation (2005), and Construction (2006-2008) scheduled with \$13,000,000 allocated for a new route – Bardstown to Springfield Bypass.

KY 1584 (MP 0.806 to MP 0.906) in Washington County: Right of Way (2002), Utility Relocation (2002), and Construction (2003) scheduled with \$200,000 allocated to replace bridge and approaches at Poorhouse Branch.

KY 555 in Washington/Anderson Counties: Construction (2003-2006) scheduled with \$21,300,000 allocated to extend KY 555 from the Martha Layne Collins Blue Grass Parkway to KY 248.

III. FUTURE TRAFFIC VOLUMES and LEVEL OF SERVICE (YEAR 2030)

A. FUTURE TRAFFIC VOLUMES and LEVEL OF SERVICE (Year 2030) WITH NO IMPROVEMENTS

Included in this study are a number of traffic forecast options for future year (2030) traffic. The future average daily traffic volumes without any transportation improvements along the existing corridor are shown in **Figure 4A** in **Appendix A** and **Table 1** in **Appendix C**. Future Year traffic along the existing corridor without improvements (no-build), and corresponding Levels of Service are discussed below.

The segment along KY 55, from the Louie B. Nunn Cumberland Parkway MP 10.059) through Columbia to the proposed Columbia Bypass (MP 12.65) in Adair County, is expected to grow to an ADT range from 17,900 to 28,000 vehicles per day (VPD), with truck traffic averaging 13.3%. Level of Service (LOS) is expected to range from E to F. Free Flow Speed (FFS) will continue to decrease due to the signalization of several intersections, the courthouse square, and multiple entrances with access by permit, and will be further complicated by the increase in traffic, particularly truck volumes.



KY 55 South of Columbia

The next segment along KY 55, from the proposed Columbia Bypass in Adair County, north to a point where a proposed Campbellsville Bypass (not currently in the Six-Year Highway Plan) crosses KY 55 in Taylor County (MP 8.70), is projected to have an ADT that ranges from 16,200 to 24,200 VPD, with truck traffic averaging 17.8%. Level of Service is expected to drop in the E to F range. Portions of the section are access by permit.

Through the City of Campbellsville, along KY 55 and US 68, the ADT will range from 18,900 to 53,800 in the Future Year 2030, with truck traffic increasing to an average of 8.8%. Level of Service is predominately in the D to F range, with two small four-lane segments on US 68 having a Level of Service C.

From the north edge of Campbellsville, where a proposed bypass (not currently in the Six-Year Highway Plan) was to join US 68 (MP 9.48) to the

proposed Lebanon Bypass in Marion County (MP 9.47) on US 68, the projected 2030 ADT range is from 14,400 to 24,900. Truck traffic will be 15.2% on this section, and the Level of Service will be in the D to F range.

Through the City of Lebanon, along US 68, KY 55, and KY 49, the 2030 ADT ranges from 11,300 to 23,000. Truck traffic will average 12.1%. On US 68 a Level of Service E is projected; however, on KY 55 the range is A to D Level of Service. The four-lane typical section has a Level of Service A.

Leaving Lebanon on KY 55 from MP 2.0 and extending north through Marion and Washington Counties to the intersection of KY 555 at MP 4.551 in Springfield, the 2030 ADT on this rural section is projected to range from 16,900 to 18,900, and the average percent of trucks at 13.3%. The Level of Service throughout this section is E.

The northern most section is KY 555, from the intersection of KY 55 MP 0.00 north to the Martha Layne Collins Blue Grass Parkway at MP 14.738. This rural section has the lowest 2030 traffic volumes, ranging from 7,100 to 10,400. The average truck percentage on this section will be 23.2%. The 2030 Level of Service is in the D and E range.

IV. ENVIRONMENTAL OVERVIEW

Environmental issues and sensitive areas were identified and shown on the Environmental Footprint Map and are shown in **Figures 5a and 5b** in **Appendix A**. They are also summarized in the following discussion. The Final Environmental Overview is included in **Appendix D**.

- The potential socioeconomic impacts to the region were evaluated, considering the efficient transportation of goods and services, access to shopping areas, employment opportunities, and tourism attractions.
- Environmental Justice Issues that may disproportionately affect minority or low-income groups, neighborhoods or communities must be considered.
- Land use and potential effects on farmland, residential and commercial relocations were considered.
- There will be a number of floodplains and wetlands in the area, as well as, blue line streams.
- There are many resources in the study area. There are Nature Preserves, Historic Resources, Cemeteries, and Section 4(f) and 6(f) Resources. These are identified and shown on the Environmental Footprint Map. Archaeological and Hazardous Materials Sites were also located and shown on the Environmental Footprint Map.

V. GEOTECHNICAL OVERVIEW

Geotechnical characteristics and potential issues in the project area have been identified and summarized in the following paragraphs, and will require further consideration throughout future phases of this project. The Final Geotechnical Overview Report is included in **Appendix E**.

- There are several active and inactive crushed stone and sand quarry sites within the study area. The quarries are currently being mined or have been mined in the past for limestone, dolomitic limestone, and/or dolomitic rock, or sand and gravel materials for a variety of construction uses.
- Karst activity exists over portions of the project area. The potential for karst activity is greatest in the Mississippian Plateau Region near Columbia.
- There is significant potential for acid drainage to occur within the Knobs Region where the New Albany Shale may be exposed to air and water. Cuts and embankments in this area should be assessed for acidity and remedial measures applied, such as capping with four feet of clay-like, non-acidic material.
- Faults known to exist in the area are not considered to be active. Potential for slumping and other forms of slope failure exists because of unstable conditions of the bedrock and soils along the areas affected by the fault.



New Albany Shale along US 68

PART 2. CORRIDOR DEVELOPMENT PROCESS

Part 2 of this document provides a chronological account of the corridor development and public involvement process. The evolution of the identified project corridors is interwoven with the project team meetings and public involvement efforts undertaken as part of this project. **Chapter VI** provides a summary of the initial project team meeting and summaries of the first rounds of local officials/agencies, stakeholder, and public information meetings. The second project team meeting, the refined Draft Project Goals, identification of preliminary improvement corridors, and summaries of the second rounds of local officials/agencies, stakeholders, and public information meetings are identified in **Chapter VII**, which also includes resource agency input.

VI. CABINET and INITIAL PUBLIC INVOLVMENT ACTIVITIES

Throughout this study, local citizens, public officials, representatives of local agencies, and other special interest groups were given an opportunity to ask questions, view project displays, and provide input on the proposed project. The following sections will describe the public involvement activities that took place during the course of this study. In addition to the information presented in this report, all material related to the public meetings is included in each of the Public Meeting Summary Notebooks.

A. FIRST PROJECT TEAM MEETING

The initial project team meeting was held May 28, 2003, in the Elizabethtown District Office Conference Room in order to inform attendees of all information obtained to date, to discuss the project purpose, goals, and issues, and to discuss the limits of the environmental footprint. Attendees included representatives from Central Office, District Offices in Elizabethtown and Somerset, Lincoln Trail Area Development District Office, Lake Cumberland Area Development District Office, and the consultant team. Copies of the meeting minutes are included in **Appendix F**.

Some of the key issues along the existing corridor that were discussed were:

- Lack of good access to major expressway-type systems in the region (i.e., I-75, I-65, and the proposed I-66 corridor);
- Need to improve economic and tourism opportunities in Adair, Green, Taylor, Marion, Nelson, and Washington Counties;
- Poor geometrics, including narrow lane widths, narrow shoulders, substandard horizontal/vertical alignments, poor sight distance (no passing lanes), and access type;
- KY 55/US 68/KY 555 are not on the National Highway System; and,
- Need to improve capacity in Adair, Green, Taylor, Marion, Nelson, and Washington Counties in certain locations.

In addition, other major items discussed at this meeting included:

- Draft Environmental Footprint
- Draft Project Goals
- Possible Design Criteria
- Project Termini
- Traffic Forecasting Methodology
- Public Meeting Preparations

- Review Traffic Data Tables in Handout
- Review Crash Data Tables and Map in Handout
- Review Bridge Data Tables in Handout
- Review Six-Year Highway Plan Projects in the Study Area

Preliminary Draft Project Goals

- Improved statewide and regional access;
- Improved truck access for the region;
- Improved economic opportunities;
- Improved horizontal/vertical alignments to provide adequate sight distances and control of access;
- Improved highway capacity;
- Decrease delays through communities; and
- Improved emergency response times.

B. FIRST ROUND of LOCAL OFFICIALS/AGENCY MEETINGS

As part of the public involvement activities, meetings were held with local officials, agencies, and interest groups. Due to the length of the study area, and the number of counties potentially affected, the first round of meetings was held in the Area Development District Offices. Representatives from Marion, Washington, and Nelson Counties were invited to the meeting at the Lincoln Trail Area Development District Office in Elizabethtown on July 7, 2003, and representatives from Adair, Green, and Taylor Counties were invited to a meeting at the Lake Cumberland Area Development District Office in Russell Springs on July 15, 2003. Lastly, the morning meetings were for Local Officials, and the afternoon meetings were for local agencies.

Meeting minutes for each meeting can be found in **Appendix F**.

At each meeting, attendees were presented with a preliminary environmental footprint area that contained data collected at that time, and draft project goals.

1. LOCAL OFFICIALS MEETING for Marion, Washington, and Nelson Counties

The primary interests for local officials were economic development and increasing tourism opportunities in the area. Consequently, the group recommended adding tourism to the draft project goals. They

also expressed their main concern -- the number of large trucks traveling through their communities.

The draft project goals were further discussed, and some additional changes or refinements were suggested. Another item was added, "Improved Access for Higher Education" to assist commuting students.

The group also expressed interest in a four-lane divided highway similar to Lincoln Parkway and constructed mostly along the existing routes of KY 55, US 68, and KY 555, with unrestricted traffic flow.

During the meeting, there was a discussion of extending this project to connect with I-64, using the KY 555 Extension.

2. LOCAL AGENCY MEETING for Marion, Washington, and Nelson Counties

There were no attendees for this meeting.

3. LOCAL OFFICIALS MEETING for Adair, Taylor, and Green Counties

The primary emphasis of attendees was to improve economic development. Large trucks have difficulty getting through Columbia, which is a deterrent for industry. Also, the group expressed concern that many residents are leaving and finding jobs in other locations.

Additionally, tourism was mentioned as a goal of significant importance.

The group also discussed improved access to higher educational facilities in the region since many students commute from outside the area. An improved transportation system would not only provide better accessibility for students, but also improve the opportunity for economic development and better paying jobs through a more educated workforce.

Since farmers are shifting from tobacco crops to crops that are shipped nationwide, agricultural economy was discussed. This item was also added to the draft project goals.

Safety was also a concern for local officials. An improved transportation facility would improve emergency response times.

The group predominantly supported a four-lane facility similar to the Lincoln Parkway, and they also recommended completion of the community bypasses. Likewise, an eastern bypass was favored for Campbellsville.

4. LOCAL AGENCY MEETING for Adair, Taylor, and Green Counties

Lt. Greg Speck of the Kentucky State Police expressed concern for reducing the number of fatalities. He indicated that most fatalities occur on two-lane roads where vehicles drop off the shoulders and then over-correct into the path of oncoming traffic.

Tourism was mentioned as a major goal, with emphasis placed on Green River Lake State Park. The attendees were told that a proposed development of a lodge and golf course was planned.

Because farm equipment is frequently seen on the highway, wider shoulders would provide an opportunity to move farm equipment without hindering other traffic.

Bypass routes were mentioned as a top priority for the region. The KY 55-KY 210 Connector was discussed as the beginning of a possible bypass route for Campbellsville. After some further discussion of the congestion already on that route, the group felt a new bypass would be appropriate.

When asked about the type of facility that would best serve the needs of the region, most attendees recommended a four-lane partially controlled highway.

C. HEARTLAND PARKWAY TASK FORCE MEETING

A meeting with the leadership of the Heartland Parkway Task Force was held on July 18, 2003, at the Campbellsville University Technology Training Center. The task force was shown a preliminary environmental footprint area, and draft project goals for their consideration.

The group recommended adding Agricultural Economy to the draft project goals.

Economic development was of primary importance among the attendees since it was noted that the garment industry is leaving the area.

Tourism is another significant goal. With Green River Lake State Park currently having over a million visitors annually, tourism is expected to increase with the development of a new lodge and golf course.

Higher educational facilities in the region also generated discussion. Chairman John Chowning pointed out that fifty percent of Campbellsville University's students are first generation college students from working class families, and many of these students are commuters from surrounding counties.

Additionally, it was noted that Campbellsville has the only trauma center in the region, making emergency response time a key project goal.

The group also expressed interest in the future extension of the Heartland Parkway to the south into Tennessee and to the north to I-64.

The type of highway recommended by the group was a four-lane highway similar to Lincoln Parkway in Hardin County. The Lincoln Parkway is a 4-lane divided highway with a depressed median. Access is partially controlled, allowing access at 1200-foot intervals.

D. FIRST ROUND OF PUBLIC INFORMATION MEETINGS

The first round of open house format public information meetings was held in each of the four communities along the existing corridor routes. The purpose of these meetings was to provide the public with a list of the draft project goals and the draft environmental footprint. Also available were exhibits that identified existing conditions related to traffic volumes, crash data, and a display that showed the preliminary environmental footprint with early environmental data. The key point for the meetings was to gather input from individuals on their ideas regarding regional needs and solutions to those needs. At this stage in the study, no corridors had been identified, only the general study area. Many attendees provided additional information related to cultural, historic, or environmental features not yet identified. A handout with a questionnaire was given to each person who attended. Results from the questionnaires have been



First Round of Public Meetings

summarized in **Table 5** in **Appendix C**, and meeting minutes from each meeting can be found in **Appendix F**.

In addition to the information presented in this section, material related to the first round of public information meetings is included in four (4) separate Public Meeting Summary Notebooks on file in the KYTC Division of Planning:

- *September 2, 2003 Public Information Meeting Notebook (Lebanon)*
- *September 4, 2003 Public Information Meeting Notebook (Columbia)*
- *September 8, 2003 Public Information Meeting Notebook (Springfield)*
- *September 11, 2003 Public Information Meeting Notebook (Campbellsville)*

Each of the public information meetings was set up as a walk-through tour, with each Station labeled. At Station One, where Kentucky maps and Kentucky Road Work Ahead pamphlets were available, attendees were asked to sign in before given a handout that included the following items:

- Questionnaire
- Study Purpose, Issues, and Project Goals
- Location Map
- Special Considerations

Attendees were asked to complete the questionnaire prior to leaving the meeting, or return it to the KYTC at a later date in the provided postage-paid envelope.

At Station Two, a narrated PowerPoint Presentation described many of the project issues within the project study area. Issues included the Project Goals, identified environmental, social, and cultural features in the area, and evaluation criteria for this study.

At Station Three, individual county maps were displayed that contained improvement projects identified in the Six-Year Highway Plan (FY 2003-2008).

At Station Four, there were several exhibit boards on display that included:

- Existing conditions information collected to date, including a project location map, Year 2003 traffic data, and crash data from January

1997 through December 2002. Identified environmental data was also displayed, along with the environmental footprint area.

- Traffic Forecast data for YEAR 2030
- Draft Project Goals

At the final station, refreshments were provided.

Consultant and cabinet staff members were available to record oral statements. These statements were transcribed and placed in the Public Information Meeting Summary Notebook, which is in a separate document.

1. MARION COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Tuesday, September 2, 2003, from 4:00 p.m. to 7:00 p.m. at Center Square in Lebanon, Kentucky.

A total of twenty-two people attended this meeting, not including the eleven staff members. However, there were three public members who chose not to register. One attendee made oral comments to one staff member, which were noted and transcribed.



Marion County Public Meeting

2. ADAIR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Thursday, September 4, 2003, from 4:00 p.m. to 7:00 p.m. at the W.R. Davenport Family Life Center in Columbia, Kentucky.



Adair County Public Meeting

A total of fifty-nine persons registered their attendance at this public information meeting, but this does not include the 10 staff members listed in the minutes in **Appendix F**.

3. WASHINGTON COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Monday, September 8, 2003, from 4:00 p.m. to 7:00 p.m. at the Washington County Extension Office in Springfield, Kentucky.

A total of sixteen persons registered their attendance at the public information meeting; this does not include the thirteen staff members. There were some oral comments that were noted and transcribed.



Washington County Public Meeting

4. TAYLOR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Thursday, September 11, 2003, from 4:00 p.m. to 7:00 p.m. at the City Council Chambers in Campbellsville, Kentucky.



Taylor County Public Meeting

A total of twenty-three persons registered their attendance at the public information meeting; this does not include the ten staff members.

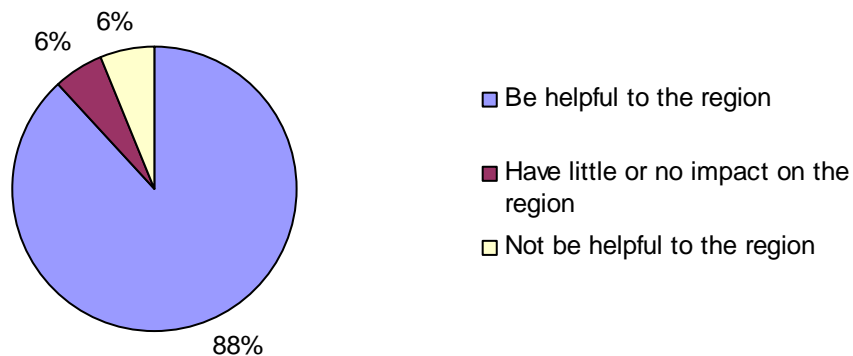
E. SURVEY QUESTIONNAIRE RESPONSES

During the public involvement meetings, attendees were provided with a project survey questionnaire. The survey included questions about the project benefits, potential use, existing transportation-related problems, type of facility, and environmental concerns. The survey responses are tabulated in **Table 5** in **Appendix C**, with the results summarized below:

88% of the survey respondents indicated that the project would be beneficial to the region.

82% of those surveyed indicated that the Heartland Parkway would improve economic development.

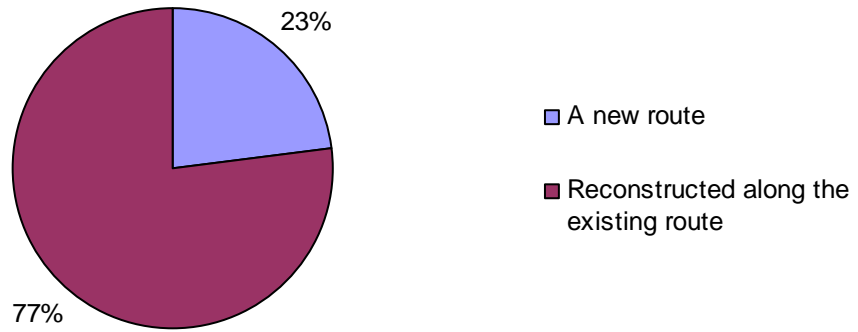
If a new/reconstructed roadway were built, do you think it would:



About one-third (33%) of those surveyed indicated they would use this route on a daily basis.

77% of those surveyed indicated they preferred the Heartland Parkway be constructed along the existing route.

The Heartland Parkway should be:



VII. CORRIDOR DEVELOPMENT

As issues and concerns were expressed in the first round of meetings, recommended alternatives were developed that would address concerns identified in the Draft Project Goals as refined from input received in the first round of meetings with local officials, agencies, special interest groups and the public.

A. DRAFT PROJECT GOALS

Preliminary project goals have been identified through this study and are the result of the compilation of ideas from Kentucky Transportation Cabinet personnel, transportation planners from the Area Development Districts, Local Officials and Agencies, special interest groups, and the public.

For this project, the following goals have been identified:

- **Improve Regional Access** – Improvements to the existing corridor routes of KY 55, US 68, and KY 555 or construction of a new Parkway would provide a better route for truck access, which is essential in improving economic development in the region and serving existing industries, including the agricultural economy as it shifts from tobacco to nationally shipped crops. A new or improved route would also create better access to higher educational facilities in the region, improving the educational level of local residents and allowing an educated workforce to compete for higher paying jobs. In addition, this region is rich in cultural, historic, and recreational sites, which make tourism an industry dependent on an efficient transportation system.



KY 55 in Taylor County

- **Improve Safety** – Many of the shoulders along the existing routes consist of unstabilized material. As shoulders erode at the edge of the driving lanes, drop-offs develop, creating a potentially hazardous situation. Additionally, there are some locations that have poor sight



KY 210 in Campbellsville

distance at entrances. These are in areas where access control is by permit. High crash locations are located in the urbanized areas, primarily at intersections.

- Improve Highway Capacity in Certain Locations – Some of the existing routes are operating at acceptable levels of service; however, a review of future year (2030) traffic volumes and percentage of trucks will necessitate an improved transportation system in order to minimize congestion. As noted in Table 1, Appendix C, KY 55 and US 68 are operating at Level of Service D and E through the communities of Columbia, Campbellsville, and Lebanon.
- Decrease Delays through Communities – As a major corridor route in this region, the existing route carries up to 26,100 VPD along portions of KY 55. Varying speed limits between 35 and 55 mph do not allow consistent travel speeds. Additionally, frequent entrances, intersections, and traffic signals create delays and contribute to crashes. The most significant delays involve the courthouse square in Columbia; however, other delays are experienced in Campbellsville and Lebanon as a result of traffic signals and reduced speed limits.
- Improve Emergency Response Times - Emergency vehicles transporting patients to more advanced medical facilities in the region, such as the Trauma Center at Taylor Regional Hospital or outside the region, could benefit from reduced travel times. Law enforcement and fire emergency response times could also be reduced.

B. SECOND PROJECT TEAM MEETING

The second project team meeting was held on February 4, 2004, in the Elizabethtown District Office Conference Room. The purpose of this meeting was to discuss the results of the public meeting and the summary of questionnaire results, to discuss three options developed by the consultant, and to review the project purpose, issues, and goals as they have been refined through the public involvement process.

The needs and concerns in the study area were obtained through meetings with local officials, public information meetings, and special interest group meetings. The results of the questionnaires were then summarized.

Different design concepts will be considered as part of this study, with each having its own unique application. The appropriate concept will be applied to corridors along and off the existing routes. Considerations will involve the number of lanes, type of access control, and typical section.

Through field and database research, known environmental concerns were identified and shown on the project exhibits. The following three options were presented for consideration:

Option 1

- 4-Lane Divided Highway
- Access Points at Interchanges Only
- New Alignment

Option 2

- 4-Lane Divided Highway
- Access Provided at 1200' Spacing at Grade with Median Cuts
- Follow Existing Routes (KY 55, US 68, KY 555)
- Upgrade Proposed Bypasses at Columbia and Lebanon to Four-Lane
- New Four-Lane Bypass at Campbellsville on Southeast Side (KY 55 to US 68)

Option 3

- Add Passing Bays to Existing Routes (KY 55, US 68, KY 555)
- Access Locations Would Not Change
- Use Proposed Bypasses at Columbia and Lebanon
- New Two-Lane Bypass at Campbellsville on Southeast Side (KY 55 to US 68)
- Pavement and Shoulders on Existing Routes Would Be Rehabilitated

Attendees were given a handout with a more detailed explanation of each option, as shown below:

As this study progressed, it became apparent that a corridor on the east side of the existing corridor would be difficult due to the Green River Lake area. This study addresses three options: **Option 1** is a parkway to the west of the existing corridor; **Options 2 and 3** are along the existing route with bypasses at the communities.

Option 1 is a four-lane divided fully controlled access facility. It lies approximately two miles west of the existing roadway. Interchanges are provided at major crossroads to access the communities. **Option 1** lies on a new alignment along its entire route, as shown in **Figure 7** of **Appendix A**.



Taylor County

Option 2 consists of widening the

existing KY55/US68/KY555 route to a four-lane partially controlled access facility. It would follow the bypasses currently under design around the west sides of Columbia and Lebanon. Both of these bypasses would be widened to four lanes. **Option 2** would provide a four-lane bypass around the southeast side of Campbellsville.

Option 2, as shown in **Figure 7** of **Appendix A**, is summarized in eight segments, which describes the work required in upgrading the route to a four-lane roadway:



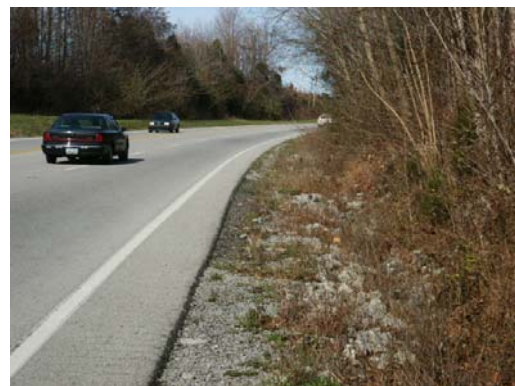
Existing KY 55 in Adair County

Segment 1 follows a section of KY 61 currently under design (Item No. 8-162.6). It is a five-lane facility that connects to the Louie B. Nunn Cumberland Parkway with a new interchange and extends north 1.9 miles to the proposed Columbia Bypass. This five-lane roadway would be included in the Heartland Parkway as presently designed.

Segment 2 is 4.16 miles in length and follows the proposed Columbia Bypass from KY 61 to Mile Point 12.65 on KY 55. The bypass is currently under design as a two-lane initial on four-lane ultimate right of way. **Option 2** would construct the bypass as a four-lane initial, instead of two lanes.

Segment 3 extends along existing KY 55 from Mile Point 12.65 in Adair County to Mile Point 8.70 in Taylor County. **Option 2** would upgrade the existing two-lane route to four lanes with partial access control. Currently, a portion of *Segment 3* has access by permit and a portion has partial access control. In areas with access control by permit, frontage roads will be required to access remaining properties. In areas that are developed with access points closely spaced, using the existing road as a frontage road and constructing *Segment 3* on a new alignment should be considered in the final design phase.

Segment 4 extends from KY 55 Mile Point 8.70 south of Campbellsville to US 68 Mile Point 9.48 north of Campbellsville. *Segment 4* would consist of a four-lane partially controlled access facility on a new alignment, bypassing Campbellsville on the southeast side. The route



Existing KY 55 in Taylor County

would be similar to the bypass design that was begun in 1998 and cancelled.

Segment 5 extends from Mile Point 9.48 in Taylor County to Mile Point 9.47 in Marion County. The north end of *Segment 5* would connect to the bypass currently under design for Lebanon (Item No. 4-125.10). The existing US 68/KY 55 routes have partial access control except for approximately one mile on the Lebanon end of the segment.

Option 2 would add two additional lanes and a 40-foot median to *Segment 5*. Frontage roads would be added to the portion of access control by permit to allow changing access control to partial.



Existing US 68 in Marion County

Segment 6 extends from US 68 Mile Point 9.47 south of Lebanon to KY 55 Mile Point 2.0 north of Lebanon. It would follow the Lebanon Bypass (Item No. 4-125.10) that is currently under design. *Segment 6* would be constructed as a four-lane facility with a 40-foot median.

Segment 7 would follow KY 55 from the Lebanon Bypass to the intersection with KY 555 in Springfield. The route would be widened to four lanes with a 40-foot median. Additional right of way will be acquired and the current partial access control will be maintained.

Segment 8 would follow KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway. KY 555 would have two additional lanes and could have a 40-foot median added or a flush urban-type median. In areas of existing access by permit, frontage roads will be added to convert access control to partial with 1200-foot entrance spacing.

Option 3 consists of providing on existing KY55/US68/KY555 a two-lane facility with passing bays. The bypasses currently in design at Columbia and Lebanon would be used. A two-lane initial, four-lane ultimate bypass will be added around the southeast side of Campbellsville. The remainder of the route would be upgraded by adding one-mile passing bays every three miles. The route would receive a surface rehab and shoulder treatment. Shoulder treatment would consist of widening if necessary and paving to prevent pavement edge drop-offs.

Option 3, as shown in **Figure 7** of **Appendix A**, is summarized in eight segments, which describes the improvements associated with this option: *Segment 1* follows a section of KY 61 currently under design (Item No. 8-162.6). It is a five-lane facility that connects to the Louie B. Nunn Cumberland Parkway with a new interchange and extends north 1.9 miles to the proposed Columbia Bypass. This five-lane roadway would be included in the Heartland Parkway as presently designed.

Segment 2 is 4.16 miles in length and follows the proposed Columbia Bypass from KY 61 to Mile Point 12.65 on KY 55. **Option 3** would use the bypass as it is currently being designed – a two-lane facility on four-lane ultimate right of way.

Segment 3 extends along existing KY 55 from Mile Point 12.65 in Adair County to Mile Point 8.70 in Taylor County. **Option 3** would provide passing bays at needed locations. Additional right of way will be required; however, no additional access restrictions are proposed with **Option 3**.

Segment 4 extends from KY 55 Mile Point 8.70 south of Campbellsville to US 68 Mile Point 9.48 north of Campbellsville. *Segment 4* would consist of a two-lane/four-lane ultimate partially controlled access facility on a new alignment, bypassing Campbellsville on the southeast side. The route would be similar to the bypass design that was begun in 1998 and cancelled.



Existing US 68 in Taylor County

Segment 5 extends from Mile Point 9.48 in Taylor County to Mile Point 9.47 in Marion County. The north end of *Segment 5* would connect to the bypass currently under design for Lebanon (Item No. 4-125.10). Several passing bays would be constructed within the existing right of way. There is no proposed upgrade in access control with this option.

Segment 6 extends from US 68 Mile Point 9.47 south of Lebanon to KY 55 Mile Point 2.0 north of Lebanon. It would follow the Lebanon Bypass (Item No. 4-125.10), as it is currently designed.

Segment 7 would follow KY 55 from the Lebanon Bypass to the



Existing KY 555 in Washington County

intersection with KY 555 in Springfield. Along this segment, some passing bays would be constructed on existing right of way.

Segment 8 would follow KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway. Some passing bays would be added with **Option 3**. Additional right of way would be required; however, no additional access restrictions are proposed with this option.

A display showing the limits of each segment is shown in **Figure 7** in **Appendix A**.

Cost estimates for each option were presented. For **Option 2** and **Option 3**, the estimates were further broken down by segment.

An Eastern Columbia Bypass was discussed; however, since right of way is being purchased for a western bypass route, no change was recommended by the project team at this time.

There was some discussion about making the bypass routes at each of the communities the through movement. It was pointed out that many communities oppose that concept, preferring the movement of through traffic through their communities.

The project team recommended taking the options presented to the local officials and the public.

C. SECOND ROUND of LOCAL OFFICIALS/AGENCY MEETINGS

As a continued effort to keep local officials and agencies informed about the progress of the Heartland Parkway project, a second round of meetings was scheduled. In an attempt to increase attendance and participation, the second round of meetings was held in each of the affected communities, with the location and dates listed below:

February 27, 2004 - Adair Court House Annex Meeting Room - 10:00 am (CST)

February 27, 2004 - Taylor County District Court Room - 2:00 pm (EST)

March 5, 2004 - Green County District Court Room - 1:00 pm (CST)

March 9, 2004 - Marion County 2nd Floor Court Room - 10:00 am (EST)

March 9, 2004 - Washington Co Agricultural Ext Office - 2:00 pm (EST)

These meetings combined Local Officials and Agencies. At each meeting attendees were presented with the project history, a geotechnical overview, an environmental overview, and a brief description of the roadway options being studied. The group was asked to complete a new

questionnaire, which included questions to determine their personal preferences for the options presented. Nine display boards with detailed project information were available.

Meeting minutes for each meeting can be found in **Appendix F**.

1. ADAIR COUNTY LOCAL OFFICIALS/AGENCIES MEETING

There were eight attendees at the February 27th meeting besides department and consultant staff.

There was some discussion about the project goals, but no changes were recommended.

Mayor Curtis Hardwick indicated he could live with Option 3, but would prefer Option 2. He also asked about the length of time it would take to complete this project.

2. TAYLOR COUNTY LOCAL OFFICIALS/AGENCIES MEETING

One attendee questioned the timeframe for a project of this magnitude. If funding was not an issue, an optimistic estimate would be ten to fifteen years.

Mayor Brenda Allen had a question about tourism and industry for Option 1. The concern was that with the towns being bypassed, Option 1 would defeat the purpose of a new road promoting their communities and tourism.

Additionally, there was a discussion about the cost differences between Options 2 and 3. It was noted that Option 3 would mostly utilize the existing right of way with no additional right of way restrictions, and the construction cost would be significantly less.

3. GREEN COUNTY LOCAL OFFICIALS/AGENCIES MEETING

There were several comments and questions regarding the need for a corridor that runs nearly parallel to the proposed KY 61 improvement project from Columbia to Greensburg. Some wanted to know why the KY 61 improvement could not be used as part of the Heartland Parkway.

Patty Dunaway, KYTC District 4, explained to the group that KY 61 was a separate project and was outside the Heartland Parkway's scope.

There is still a concern that the new Heartland Parkway will bypass Greensburg. Attendees mentioned the limited miles of AAA Trucking routes in Green County, making it difficult to attract industry to the area.

Another comment from one attendee centered on the state's current budget crisis. They felt that the Heartland Parkway was a waste of money, and if it wasn't going to benefit Greensburg, they were opposed to the project.

4. MARION COUNTY LOCAL OFFICIALS/AGENCIES MEETING

John Thomas, Lebanon City Administrator, asked if inflation was built into the cost estimates. Dan Byers, WMB Consulting Engineers, responded that because the proposed estimate is in today's dollars, it is a conservative estimate.

Additionally, Mr. Thomas said he preferred Option 2; he did not believe Option 1 would serve the people of Lebanon with its proposed location being two miles from town.

Another question was raised about providing access only at public road intersections. This would be more restrictive than Option 2 but less restrictive than Option 1. Dan Byers responded that it *can* be done; however, it would mean additional frontage roads would be required.

There was also a question about our experience with Option 1, such as the type of road and how the communities were affected. Jim Wilson, KYTC Division of Planning, responded that, generally, growth would migrate to the parkway interchanges.

The remaining question was focused on utilities improvements. Dan Byers responded that utilities improvements would be a local issue; whereas, the Heartland Parkway is a transportation improvement project.

John Thomas also mentioned Congressional support for the project. He also stated that there will be a possible Heartland Summit on May 17th.

5. WASHINGTON COUNTY LOCAL OFFICIALS/AGENCIES MEETING

There was a question regarding access routes from Option 1 into the communities. Dan Byers, WMB Consulting Engineers, responded that these routes would also have to be upgraded.

Next, there was a question on how Option 2 would benefit Springfield. Byers responded by telling the group that we weren't there to endorse any option – only to present the options and listen to the comments from the community.

There was another comment expressing concern about Option 1 bypassing and having a negative impact on Springfield. It was pointed out that a similar sentiment exists in the community regarding the US 150 Bypass.

Additionally, there was another comment on favoring Option 2 because it allows driveway access.

There was also a question regarding the KY 555 extension project and whether that project's effects have been considered with this study. Byers responded that the traffic forecast analysis does consider the KY 555 extension.

Lastly, there was a question about the economic benefits of a new road. Byers said that T.H.E. has reviewed a New York study, which has similar characteristics, in order to determine the potential economic benefits. Marty Marchaterre, T.H.E. Engineers, added that Springfield has most of its infrastructure in place already. The only key component missing is better access to the interstate highway system. Likewise, the cited study mentions that the best way to achieve a positive economic impact is through transportation access.

D. SECOND ROUND OF PUBLIC INFORMATION MEETINGS

The second round of open house format public information meetings was held in each of the four communities along the existing corridor routes plus Greensburg. A handout with a questionnaire was given to each person who attended. Results from the questionnaires have been summarized in **Table 6** in **Appendix C**, and meeting minutes from each meeting can be found in **Appendix F**.

In addition to the information presented in this section, material related to the second round of public information meetings is included in five (5) separate notebooks on file in the KYTC Division of Planning:



Second Round of Public Meetings

- *April 26, 2004 Public Information Meeting Notebook (Greensburg);*
- *April 29, 2004 Public Information Meeting Notebook (Lebanon);*
- *May 6, 2004 Public Information Meeting Notebook (Campbellsville);*
- *May 10, 2004 Public Information Meeting Notebook (Springfield); and*
- *May 11, 2004 Public Information Meeting Notebook (Columbia).*

Each meeting was organized as a walk-through tour of project information. Beginning with guest registration, attendees were then led through a series of stations that included a project PowerPoint presentation, exhibits, and refreshments. Detailed descriptions of these stations are listed below.

Station One: Attendees were greeted at the door and asked to sign the attendance list. Kentucky maps, and an assortment of pamphlets, were available for interested parties. Attendees were also given handouts that included the following items:

- Study Purpose, Issues, and Project Goals
- Environmental Footprint Map, showing three options for consideration
- Discussion of each option
- Cost Estimate for each option
- Summary of the questionnaires from the first round of public meetings and local officials/agencies meetings
- Questionnaire

Attendees were asked to complete the questionnaire prior to leaving the meeting or return it to the KYTC at a later date in the postage-paid envelope provided.

Station Two: A PowerPoint presentation gave the attendees a guided tour of the area and included the Project Goals, identified environmental, social, and cultural features in the area, as well as, an explanation of the three options being presented for consideration.

Station Three: Individual county maps were displayed with identified current Six-Year Highway Plan projects.

Station Four: Several exhibit boards displayed the following:

- Project Location Map
- Study Area with identified environmental data and the three corridor options
- Year 2003 traffic data
- Traffic Forecast data for YEAR 2030 for each corridor option, as well as, a no-build option
- Draft Project Goals
- Typical Section display for each corridor option

Station Five: Refreshments were provided.

There were flip-charts and markers available for written comments.

1. GREEN COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Monday, April 26, 2004, from 5:00 p.m. to 7:00 p.m. at the Green County Middle School in Greensburg, Kentucky.

A total of thirty-three individuals registered their attendance at the public information meeting, plus eleven staff members.

There were also two comments written on the provided flip-charts:



Green County Public Meeting

- “Most people in Greensburg travel to E’town.”
- “Actually, I think most people in Greensburg shop in Campbellsville. After that, it depends on which end of the county they are in – Columbia and Glasgow in addition to Campbellsville.”

There was a general consensus of attendees that the Heartland Parkway should be closer to Greensburg because many felt that the community is being bypassed by the Heartland Parkway. In addition, many individuals also noted that the Heartland Parkway should incorporate the proposed improvements planned for KY 61 between Greensburg and Columbia.

2. **MARION COUNTY PUBLIC INFORMATION MEETING**

A public information meeting was held on Thursday, April 29, 2004, from 5:00 p.m. to 7:00 p.m. at the Center Square in Lebanon, Kentucky.



Marion County Public Meeting

A total of three persons registered their attendance at the public information meeting, plus ten staff members.

One verbal comment was that Option 1 would bypass all the communities, so it would make more sense to build Option 2 and complete the bypasses for each community.

3. **TAYLOR COUNTY PUBLIC INFORMATION MEETING**

A public information meeting was held on Thursday, May 6, 2004, from 5:00 p.m. to 7:00 p.m. in the Student Union Building's Little Auditorium at Campbellsville University in Campbellsville, Kentucky.

The meeting was well attended with a total of forty-



Taylor County Public Meeting

four individuals who registered their attendance, plus nine staff members.

There were discussions on the pros and cons of Option 1, and how it would affect the communities along the corridor. After reviewing the exhibits, some attendees noted that Option 1 would reduce the number of trucks on the existing routes. Others were concerned that Option 1 may “dry up” the communities or cause them to be bypassed by most traffic.

4. WASHINGTON COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Monday, May 10, 2004, from 5:00 p.m. to 7:00 p.m. in the Washington County Extension Office in Springfield, Kentucky.



Washington County Public Meeting

The meeting was well attended with a total of thirty-five individuals who registered their attendance, plus ten staff members.

There were discussions on the pros and cons of each option. Many who attended expressed their displeasure with Option 1 because it would cut through too many farms.

In general, most attendees expressed their support for Option 2.

5. ADAIR COUNTY PUBLIC INFORMATION MEETING

A public information meeting was held on Tuesday, May 11, 2004, from 5:00 p.m. to 7:00 p.m. in the William R. Davenport Family Life Center in Columbia, Kentucky.

The meeting was attended by six individuals, plus eight staff members. One



Adair County Public Meeting

individual didn't register his/her attendance.

There was discussion about the traffic congestion in Columbia, and the difficulty of transporting houseboats around the downtown square. In addition, the bypass project was mentioned as being the most important roadway improvement project.

6. STAKEHOLDERS MEETING in LEBANON

A local stakeholders meeting was conducted at 5:30 p.m. (EST) on Wednesday, August 11, 2004, at City Hall in Lebanon, Kentucky. The meeting was conducted similar to the local officials/agencies meetings. Presentations included a project history, a geotechnical overview, an environmental overview, and a brief description of the roadway options being studied. The group was given a handout and asked to complete a new questionnaire, which included questions to determine their personal preferences. Nine display boards with detailed project information were available; however, only three were displayed due to the constraints of the meeting room.

Complete minutes can be found in **Appendix F**.

There were 41 registered attendees, in addition to staff members, consultant personnel, and State Representative Jimmy Higdon.

One individual asked if there had been any accident studies focusing on fatalities. She asked which of the options presented was safest. The discussion that followed involved several aspects to consider: (1) If Option 1 were built, nothing would be done along the existing highway to correct deficiencies, leaving unsafe conditions; (2) If Option 2 were built, speed and driver error can still contribute to serious crashes; and, (3) Another consideration is that if Option 1 is built, there will be two roads to maintain.

There was a comment that Marion County is an agricultural county, and Option 1 would take a lot of farmland.

A second question was also brought up regarding the availability of studies on the effects of the Lincoln Parkway on economic growth.

Another question on safety centered on low or broken shoulders. Shoulder drop-offs were mentioned in an earlier meeting.

Still another safety comment said people are driving 85 mph.

Lastly, there was a question about how long it will take to construct this project, which resulted in a discussion of funding issues.

7. STAKEHOLDERS MEETING in SPRINGFIELD

A local stakeholders meeting for the Alternatives Study for Heartland Parkway (Item No. 4-132.00) was conducted at 5:30 p.m. (EDT) on Thursday, September 23, 2004, at the Washington County Courthouse in Springfield, Kentucky. The purpose of the meeting was to discuss the draft purpose, goals, and objectives of the proposed project, project issues, to review the options developed by the consultant, and to solicit input from those in attendance.

Complete minutes can be found in **Appendix F**.

There were 16 registered attendees, in addition to staff members, consultant personnel, and State Representative Mike Harmon.

During the discussion of Option 1, it was noted that a new highway of this type would have to be built a minimum of two miles from the communities, and it would need to be completed from beginning to end in order for the communities to receive any transportation benefits. Option 2, which includes four-lane bypasses around the communities of Columbia, Campbellsville, and Lebanon, could be built incrementally, and as each section is completed, immediate use of that facility would be available. Lastly, Option 3 would only include two lane bypasses for the communities of Columbia, Campbellsville, and Lebanon.

The cost for each option was discussed, as was the current budget issue. It was mentioned that a primary question has arisen during the planning study: Which option best meets the goals of the project, and how will it be funded? A review of historic funding of highway projects in the existing corridor is about \$20M per year. At that rate, Option 2 - preferred by most who have responded to the questionnaire - would take approximately 18-20 years to complete.

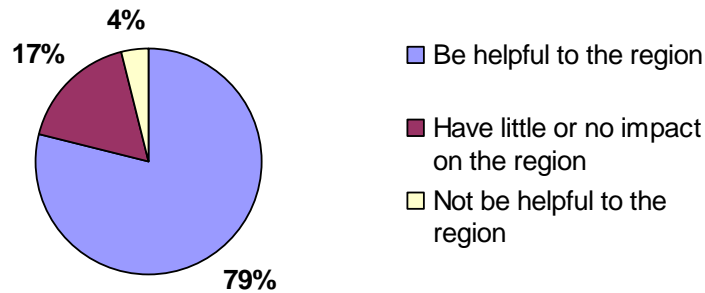
E. SURVEY QUESTIONNAIRE RESPONSES

During this second round of meetings, attendees were provided with a project survey questionnaire. The survey included questions about the project benefits, the type of highway that would best serve the needs of the region, environmental concerns, and an opportunity to prioritize

segments, and the design concept preferred for each segment. A summary of survey results follows:

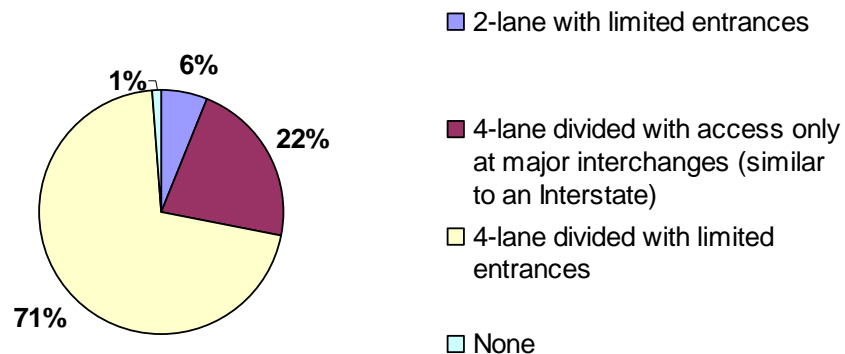
- 79% of the surveyed respondents indicated that the project would be helpful to the region.

If a new/reconstructed roadway were built, do you think it would:



- 77% of those surveyed said the improvement should be constructed along the existing route.
- 71% of those surveyed said a 4-lane highway with limited entrances would best serve the needs of the region.

What type of roadway best serves the needs of the region:



- Over half (63%) of those surveyed preferred Option 2.

- Several comments written on the forms indicated bypasses for the communities to be the highest priority.

The highest priority segments included completion of bypasses for each community along the existing corridor routes. After the bypass routes, the Campbellsville-Lebanon and Columbia-Campbellsville segments were the next highest priority.

F. RESOURCE AGENCY COORDINATION

Many local, state, and federal resource agencies, with diverse areas of public responsibility, were included in this planning process. Input was solicited through written requests. Each agency was sent a copy of the project purpose and goals statement, existing traffic on KY 55, US 68, and KY 555, environmental footprint map, and a project location map.

This section describes the input received from these organizations. The remainder of recipients did not provide a response. Response letters from the various resource agencies are located in **Appendix G** and are summarized below.

The following seven agencies responded that the proposed Heartland Parkway would have no adverse effects:

- Brainard Palmer-Ball – No comments at this time.
- Charlie Harman, Commonwealth of Kentucky, Education Cabinet – We have no comments to offer at this time.
- Commonwealth of Kentucky, Department of Agriculture – This agency has no specific concerns or issues concerning this project.
- Commonwealth of Kentucky, Cabinet for Health and Family Services, Department for Public Health – The Department for Public Health does not have any specific issues or concerns regarding this proposed highway project.
- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division of Mine Permits – After reviewing our surface mining database, no proposed or existing surface coal mining operations will be impacted by the proposed routes of the Heartland Parkway.
- Commonwealth of Kentucky, Kentucky State Police – I am in receipt of your correspondence concerning and alternative planning study for widening and/or relocation of the Heartland Parkway, from the Louie B. Nunn Cumberland Parkway to the Martha L. Collins Bluegrass Parkway.

The following thirty-one agencies responded by offering comments or concerns regarding the project:

- City of Campbellsville, Office of the Mayor – Option 2 will be the best option for us. The upgrading of the existing routes with bypasses around Columbia, Campbellsville, and Lebanon will be the most affordable as well as best suited for this area.
- City of Campbellsville, Fire Department – After looking over the proposal, we found no specific problems or concerns with the project; however, we do believe that Option 2 would be the better choice.
- City of Lebanon City Council – The Heartland Parkway Project will benefit the citizens of Lebanon, and a four-lane bypass would alleviate traffic congestion in the downtown area. In addition, a four-lane bypass would also widen the existing corridor to connect to the Blue Grass Parkway to the Cumberland Parkway as referred to in the Kentucky Transportation Cabinet’s study. Option 2 fulfills the needs of Lebanon now and in the future, so the City Council of Lebanon endorses Option 2.
- City of Springfield City Council, Mayor Mike Haydon, and Laurie Smith – It would be in the best interest for our community to stay along the existing 555 Highway.
- Columbia/Adair County Industrial Development Authority, Inc. – Be it resolved that the Columbia-Adair County Industrial Development Authority, Inc. hereby supports Option 2 of the road project known as the Heartland Parkway for the Kentucky counties of Adair, Taylor, Marion, and Washington.
- Commonwealth of Kentucky, Commerce Cabinet – The provided material has been reviewed, and it appears there is a preference toward implementing Option 1. However, my review has noted the impact upon historical sites or potential historical sites along this route. Depending upon the nature of these facilities, they may impact the tourism industry in the area. It is important that areas possessing historical and natural assets be preserved if at all possible. With that in mind, I ask that the Kentucky Historical Society and Kentucky Heritage Council be contacted, if this has not already occurred, to insure properties of interest to these agencies are not impacted in a negative manner.
- Commonwealth of Kentucky, Commerce Cabinet, Department of Fish & Wildlife Resources (KDFWR) – The Kentucky Fish and Wildlife Information System indicates that several federally threatened and endangered species are known to occur in the above-reference counties (Adair, Green, Marion, Taylor, and Washington). The federally endangered Indiana Bat inhabits this area. It forms maternity colonies and roosts with its young under the bark of trees along streams and adjacent upland areas, usually from the middle of May to the middle of August. Disturbance in riparian areas during this time period should be avoided in order to minimize potential impacts to the species. In quadrangles in which gray bats are known to occur, any cave entrances that exist within the project area (i.e. the right-of-way

and regeneration sites) should be surveyed for potential use by gray bats. KDFWR has determined that potential negative impacts to the aquatic resources can occur in the project area. KDFWR also recommends any excavation of stream channel for placement of bridge piers should be kept at a minimum and the existing transportation corridors should be used as the main crossing of the stream during bridge construction if possible to minimize impacts to the aquatic resources.

- Commonwealth of Kentucky, Commerce Cabinet, Department of Parks – There are two State Parks in the vicinity of the study area. Green River Lake State Park is near the widening alternative of Route 55 and Lincoln Homestead State Park is in the vicinity of the relocation alternative. The Park locations are not depicted on the maps provided in your letter so our concerns are general at this time and we do not have specific issues. Our concerns are how the project will impact the park aesthetics, air quality, storm water runoff, landscaping, signage, approach sight distance, turning lanes, right of way encroachments and interruption of access.
- Commonwealth of Kentucky, Cabinet for Economic Development – (Adair County Response) Option 2 seems the best choice for Adair County as it impacts Green River Commerce Park. This 327.3 acre park's only entrance is on KY 55.
(Green County Response) Both alternatives are well to the east of Greensburg, and the location of both of Green County's industrial parks. There are no direct impacts on either of these parks. Either alternative appears to improve regional transportation, which will positively impact the Green County parks. However, the new highway corridor proposal closer to Greensburg may offer a bit better access to the Louie B. Nunn Cumberland Parkway and the Martha L. Collins Blue Grass Parkway. Especially, if improvements (if needed) to US 68/KY 70 to Greensburg can be considered.
(Taylor County Response) I recommend Option 2 for two reasons. One, Taylor County has three industrial sites, their oldest park, Campbellsville Industrial Park, is almost at full capacity. Campbellsville's main industrial site focus will be on their new 202 acre "Heartland Commerce & Technology Park." Second, the Transportation Cabinet previously had a bypass design in their 1998 6-year road plan, which would encompass the Heartland Commerce & Technology Park; but the bypass design was cancelled. Interestingly, Option 2 is the former cancelled bypass issue revisited. I feel that Option 2 would greatly enhance ingress and egress to the park. Thus, improving economic development and addressing the transportation needs of the community.
(Marion County Response) I recommend Option 2 for two reasons. One, Marion County has three industrial sites, their newest park: "Crossroads Industrial Park" is their main industrial site. Second, there

is a current construction of a northwestern connector from KY 2154 at KY 55 to US 68, which will directly affect this park. I feel that Option 2 will improve the current economic development efforts and address the transportation needs of the community.

(Washington County Response) I recommend Option 2 for several reasons. One, Washington County has three industrial sites. The smallest park is 34.6 acres and is adjacent to KY 55. Although widening of KY 55 will negatively impact this site, the improved road will allow for a better entrance to the site and will improve the entire community's transportation system. Second, their newest park, Clearview Commerce Complex, is adjacent to KY 555. The widening of KY 555 will greatly improve the ingress and egress traffic to this park. Third, there is a current bypass project in Washington County along KY 152 and KY 555. The current construction project and the Heartland Parkway widening project will greatly improve the road system in Washington County.

- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Environmental Protection, Division for Air Quality – The following Kentucky Administrative Regulations apply to this proposed project: 1) 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 precaution to prevent particulate matter from becoming airborne, and; 2) Kentucky Division for Air Quality Regulation 401 KAR 63:005 Fugitive Emissions states that open burning is prohibited. Finally, the projects listed 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.
- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division of Conservation– There are three agricultural districts established in the study area: #044-02 in Green County, #078-01 in Marion County, and #115-01 in Washington County. Also there are three permanent conservation easements in the study area: #002-109-011, #002-100-010, and #001-109-002 in Taylor County. We would like to see the issue of the loss of farmland addressed. Both prime farmland and farmland of statewide importance could be impacted by this project. One other concern we would like to comment on is the control of erosion and sedimentation during and after earth-disturbing activities once this project begins. Agricultural Districts are shown in **Figure 10 in Appendix A.**
- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources – Personnel from our Department's Non-Coal Branch have conducted a review of the information provided and have identified the following: 1) Adair County – There are two Limestone Quarry permits and one Sand permit in

Adair County; 2) Green County – There are two Limestone Quarry permits in Green County; 3) Marion County – Marion County has one Limestone Quarry; 4) Taylor County – Nally and Gibson Quarries Inc. – Permit 109-9400 operates one Limestone Quarry in Taylor County; and, 5) There is one Limestone Quarry in Washington County.

- Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Department for Natural Resources – We have examined the documentation for the alternatives study for the Heartland Parkway and have identified areas of concern:

The Kentucky Division of Forestry responds as follows: Option One – A new roadway area to the west of the HWY 55/68 corridor would have minimal impact on the forestlands of Adair, Green, and southern Taylor Counties. Options Two and Three – Widening of the current roadway would have minimal impact on the forestlands.

The Heritage Land Conservation Fund Board has two properties, which have potential for impact: Tebbs Bend Battle Field and Wyatt Jeffries Woods. A new roadway (Option One) would have the greatest detrimental impact to these lands and is not recommended. The best alternative is to limit the widening of the existing highway by constructing passing bays (Option Three).

- Commonwealth of Kentucky, Justice and Public Safety Cabinet – It is determined it would be beneficial for the proposed area. There are no designated highways in this area for trucks to get into small cities within that region.
- Commonwealth of Kentucky, Kentucky Transportation Cabinet, Division of Environmental Analysis – This study has been evaluated by the Division of Environmental Analysis for any potential environmental challenges that would need to be addressed during future design stages. The following comments are based upon the planning study data presented; additional comments could be provided if/when site visits are conducted: noise concerns with regard to the project may need to be addressed; the Air Quality status of the project would not be a problem – the project is outside an area that requires conformity; channel changes, impacts to Green River and Russell Creek, and wetland impacts should be limited/avoided; and, any impacts to the listed endangered species should be avoided.
- Commonwealth of Kentucky, Kentucky Transportation Cabinet, Permits Branch – We have reviewed the data provided for the subject study site and wish to offer the following: We recommend the Cabinet classify this project as a partially controlled access facility as explained in Option 2. It appears to adequately meet the project goals listed in the study.
- Greensburg/Green County Industrial Foundation, Inc. – Enclosed you will find input and comments by the Greensburg/Green County Industrial Foundation, Inc. concerning the alternative study of the

Heartland Parkway. An Environmental Information Form for the Green River Paddle Trail Access Project is attached. No comments.

- John Houlihan, Commonwealth of Kentucky, Kentucky Transportation Cabinet, Department of Aviation – I have reviewed the proposed locations and have found no negative impact to aviation. There are three airports that are close to this proposed project. The Columbia airport has a 2600 foot runway with an elevation of 818 feet. The Campbellsville airport has a 5000 foot runway with an elevation of 921 feet. The Springfield-Lebanon airport has a 5000 foot runway with an elevation of 866 feet. I have provided a website that describes Kentucky Airport Zoning Commissions jurisdiction. Section 4 also includes regulations concerning construction equipment (cranes).
- Lebanon-Marion County Chamber of Commerce – Be it resolved that the Lebanon-Marion County Chamber of Commerce cast a unanimous vote to recommend Option 2 as the best alternative for the Heartland Parkway Corridor.
- The Nature Conservancy, Kentucky Chapter – The Conservancy most favors the option least likely to create significant additional stress to the aquatic system and surrounding landscape – Option 3. We least favor and would most oppose Option 1. This option would necessitate crossing the Green River near the Roachville area bringing high degrees of traffic and disturbance to a reach of the river containing 1 federally listed endangered species of mussel and 3 state-listed mussel species. In addition, 3 state-listed fishes occur in this reach. Furthermore, Option 1 would have the most potential to harm the natural resources associated with Russell Creek in Adair County, one of the Green River's most important tributaries.
- Marion County Industrial Foundation – Be it resolved, that the Marion County Industrial Foundation cast a unanimous vote to recommend Option 2 as the best alternative for the Heartland Parkway Corridor.
- Marion-Washington County Airport Board – We received the Heartland Parkway proposal and have the following comments: 1) Option 1: This option should be discarded outright as it would be too expensive and would not be beneficial to the communities it by-passes; 2) Option 2: From our location the four lane highway proposed in Segment 7 is fine; and, 3) Option 3: If Option 3 is adopted then it is requested that one of the passing bays proposed in Segment 7 be constructed where Airport Lane meets the existing right of way.
- Mike Blevins, P.G. – The Geotechnical Branch has reviewed the Geotechnical Overview, and their comments are included in that document. Therefore, they will have no comments concerning the coordination letter.
- Paul Patton, Taylor County Judge/Executive – He has no change in preference from our previous meeting, and he supports a four-lane highway along the existing route. Patton also believes that the bypasses should be constructed first and then other segments, as

funding is available; however, the bypass in Columbia is really needed due to congestion.

- Purcell's Business Products – Option 2 would best serve this area in the future. But as we look to the distant future if this area continues to grow I feel the need for a four lane facility is the best option. The only concern I have is that the bypasses around Campbellsville, Columbia, and Lebanon need to be fully controlled access.
- Springfield Water Company – Springfield has a raw water line from Willisburg Lake to Springfield along the west side of KY 555; and the east side of KY 555 has a domestic water line on private property and right of way. There is also a fiber optic line from KY 53 south to Springfield along KY 555; and there are sewer lines and natural gas lines along the roadway within the city limits of Springfield. On behalf of Teddy Boone, representative of Springfield Water Company, Option 3 with a one-mile passing lane every three miles is preferred.
- Team Taylor County Industrial Development Authority – On behalf of the Campbellsville-Taylor County Industrial Development Authority Board of Directors, I want to convey to you a recent action taken by the board. We have unanimously endorsed Option 2 for the proposed Heartland Parkway. I know that you are aware of our continuing interest in this vitally important transportation project. This project will significantly enhance the economic well being of the entire region. As the Economic Impact Study conducted by Younger Associates indicates, this project will assist with the creation of more than 2000 new jobs in commercial development alone with an economic impact exceeding \$2 billion.
- University of Kentucky, Kentucky Geological Survey – This letter is to summarize any geologic concerns for the alternatives study: Physiographic Region, Karst Potential, Landslide Potential, Unconsolidated Sediments, Resource Conflicts, Materials Suitability, Fault Potential, and Earthquake Ground Motions.
- United States Department of Health & Human Services – While we have no project specific comments to offer at this time, we do recommend that the topics listed below be considered during the NEPA process along with other necessary topics, and addressed if appropriate: Air Quality, Water Quality/Quantity, Wetlands and Flood Plains, Hazardous Materials/Wastes, Non-Hazardous Solid Waste/Other Materials, Noise, Occupational Health and Safety, Land Use and Housing, and Environmental Justice.
- United States Department of Homeland Security/United States Coast Guard – The project's waterways were evaluated and pursuant to the Coast Guard Authorization Act of 1982, these are not waterways over which the Coast Guard exercises jurisdiction for bridge permit purposes. Coast Guard bridge permits are not required.
- United States Department of Homeland Security/United States Coast Guard – During a telephone conversation, it was stated that the study

shows there will be 18 bridges involved in the project. After asking how many of these bridges would cross bodies of water, a KYTC project representative replied that those questions would have to be researched and a response will be sent as soon as possible. The information on stream crossing was provided.

- Brenda Patterson, Greensburg City Council – Ms. Patterson states there is lack of economic development in Green vs. Taylor, Adair, Marion and Washington Counties. She states Green County has limited AAA highways. She also states that Green County agricultural economy is diversifying and needs improved roads. She indicates that a bypass to Greensburg could connect the Green County Industrial Park to the Nunn Parkway. Options 2 and 3 would not help Green County at all. Ms. Patterson says that the Heartland Parkway should extend into Green County via US 68, then to new KY 61 and on into Columbia in Adair County. She asked that Greensburg not be bypassed again.

PART 3. CORRIDOR ANALYSIS and RECOMMENDATIONS

Part 3 of this document includes a review of the geometric design criteria for this project, an analysis of the final corridors for consideration, priorities, project corridor development costs, future traffic and level of service for each option, and environmental and geotechnical considerations. The analysis and recommendations are based on data collected through the corridor development process. **Chapter VIII** provides an analysis of corridor options, including future traffic volumes, project cost by segment, priorities, and environmental and geotechnical considerations. **Chapter IX** includes a discussion from the Final Project Team Meeting, recommendations for a preferred Heartland Parkway corridor, and prioritized segment cost. **Chapter X** provides an analysis of other potential issues and concerns within each of the final corridors for consideration. Finally, project contacts are included **Chapter XI**.

VIII. CORRIDOR ANALYSIS

A. GEOMETRIC DESIGN CRITERIA

This study addresses three different design concepts. The first concept is a four-lane divided highway on fully controlled access right of way. A forty-foot depressed median with full width shoulders inside and outside are included with this concept. Entry to and from the facility would be at interchanges only. This alternative would be built in a new corridor approximately two miles west of the existing routes. The second concept is also a four-lane divided facility that would be constructed as a partially controlled highway that generally follows the existing routes, utilizing as much of the existing routes as possible. This concept would include a forty-foot depressed median and full width shoulders inside and outside, and right of way access would be restricted to 1200-foot spacing. The third concept also utilizes the existing routes, adding a one-mile passing bay every three miles. No additional right of way restrictions are proposed with this option. The three different typical sections are illustrated in **Figure 8** in **Appendix A**.

B. DISCUSSION OF OPTIONS

The three build options considered for the Heartland Parkway were identified and refined through the study process. Corridor needs and input from local officials, interest groups, community members, and resource agencies were considered in the corridor development process. The three build options evaluated are as follows:

- **Option 1** is a new four-lane fully controlled access corridor from the Louie B. Nunn Cumberland Parkway to the Martha Layne Collins Blue Grass Parkway, which is located approximately two miles west of the communities of Columbia, Campbellsville, Lebanon, and Springfield.
- **Option 2** is a four-lane partially controlled access facility running along the existing KY 55/US 68/KY 555 route with bypasses at the communities.
- **Option 3** is a two-lane partially controlled access facility running along the existing KY 55/US 68/KY 555 route with bypasses at the communities. **Option 3** includes passing bays at approximate three-mile intervals. Estimates for **Option 3** leave the access control by permit for approximately one mile of KY 55 south of Lebanon, approximate 6.5 miles at the north end of the corridor along KY 555, and for an 11.8 mile section of KY 55 from the Columbia Bypass in Adair County to the intersection of KY 1701 in Taylor County.

- **No-Build Option**

There were four important considerations identified in recommending a preferred option:

- Meet the project goals as determined from the study and public input
- Public Support
- Cost to Construct
- Traffic Volumes

The **No-Build Option** was evaluated by the project team. A conclusion was reached that without some corridor improvements, the project goals that relate to congestion and regional mobility could not be met for the following reasons:

- The existing routes through the communities are congested and cause considerable delays.
- Trucks traveling on the existing roadways between the communities cause increased travel times. As the number of trucks and traffic volumes increase, these delays will continue to increase.

The **No-Build Option** would also do nothing to increase safety, decrease delays, or improve emergency response times, all of which were listed as project goals.

Certainly there are benefits to the **No-Build Option**. There would be no expenditure of funds, except for routine maintenance; no impact to environmental resources; no impact to farms; and, no residential or commercial relocations.

Option 1, the four-lane fully controlled access facility on new location, was the least desirable alternative for the following reasons:

- It does not have significant public support (13%).
- It has the greatest potential for community impact by creating an all new roadway corridor. The corridor would have access from one side to the other at crossroads only. Therefore the potential to separate farms and neighborhoods is high.
- It requires the greatest amount of new right of way.
- A totally new roadway would be created which would leave the state with two systems to maintain (existing KY 55/US 68/KY 555 and the new route).
- It has the greatest cost.
- Greater potential impact to environmental resources.

Option 1 would be a major parkway transportation facility that would reduce the truck traffic along the existing routes to 3 or 4 percent.

Options 2 and 3 have some commonalities that are beneficial to the project area.

- Bypasses around Columbia, Campbellsville, and Lebanon.
- Using existing KY 55/US 68/KY 555 between the communities.
- Communities and rural areas have direct access to the route.

The major difference between **Option 2** and **Option 3** is that **Option 2** is a four-lane facility while **Option 3** is a two-lane facility.

Other considerations regarding **Options 2 and 3** are:

- **Option 3** has the least cost and the least overall impact due to right of way acquisition and construction.
- **Option 2** has the greatest public support (74%). It also provides better regional mobility because the four-lane facility allows passing throughout its length and has greater capacity.
- The traffic volumes warrant a four-lane facility for year 2030.

There are some drawbacks to **Option 2**. **Option 2** would require a significant number of residential and commercial relocations and inconvenience to motorists during construction.

C. PRIORITIES

An evaluation of the cost of completing **Option 2** and how **Option 2** might affect ongoing projects along the KY 55 corridor is listed below:

Based on historic funding of projects in the Six-Year Highway Plan along the corridor, it would take 18 to 20 years to complete **Option 2**. Under this approach more critical sections of the route would be completed first, working through the sections by priority until the entire project is completed. Since this process could take twenty years or more to complete, the project team recommended a spot improvement/safety improvement program for sections of the route that would not be improved until several years in the future. These improvements, such as additional passing lanes, pavement rehabilitation, and shoulder improvements, could be completed within the existing right of way and would not require major construction that would be replaced when the four-lane section is constructed.

It should be noted that projects in the study area, which are currently in the design phase (Columbia Bypass, Lebanon Bypass, and KY 61), were considered, and the improvements associated with those projects will be utilized with two of the options presented in this study. Additionally,

consideration should be given to completion of a bypass around the southeast side of Campbellsville as a priority project. A possible corridor for this bypass would then extend from KY 55 south of Campbellsville to US 68 north of Campbellsville.

KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass is currently in the Right of Way Phase. It is designed as a five-lane section with flush median and access control by permit. Including KY 61 as proposed would result in a different typical and access control for the south two miles of the corridor.

The Columbia Bypass is in the Right of Way Phase. It is designed as two-lane initial on four-lane right of way with partial access control. The portion of the bypass from KY 61 to KY 55 on the north side of Columbia could be included in the proposed Heartland Parkway corridor. Two items were noted that could be adjusted on the Columbia Bypass that would make it fit the Heartland Parkway better. As designed, the Columbia Bypass T's into KY 55 north of Columbia. For the parkway, traffic flow would be better if the parkway were the through route around Columbia. It was also noted that the location of the proposed connection of the bypass and KY 55 north of Columbia would serve the parkway route better if it were located approximately 0.5 miles further north of Columbia.

The Lebanon Bypass is currently in the Design Phase. It is being designed as two-lane on two-lane right of way. If the Lebanon Bypass is to be included in the four-lane Heartland Parkway, the bypass would need to be revised to provide four-lane right of way. Both the south connection and the north connection of the Lebanon Bypass "T" into KY 55. Consideration should be given to the Heartland Parkway being the primary route with the route through Lebanon connecting to the parkway. The location of the south connection of the Lebanon Bypass is in an area along KY 55 that has access control by permit. If this location is maintained, there will be the need to change access control from permit controlled to partially controlled on KY 55 for approximately one mile south of the bypass connection. This would provide consistent access control throughout the route.

D. PROJECT CORRIDOR DEVELOPMENT COSTS

Two project corridors, one with two design concepts, have been developed through the course of the alternatives study. **Figure 7** in **Appendix A** identifies the location of these corridors. Option 2 and Option 3 have been broken into segments for consideration of project phasing. Option 1 is a continuous route, making any significant benefits possible only by the completion of this option in its entirety.

Cost estimates have been prepared for each option and by each segment for Option 2 and Option 3. Listed below are cost estimates by option and segment.

OPTION 1: From Louie B. Nunn Cumberland Parkway to Martha Layne Collins Blue Grass Parkway

Option 1	Estimated Development Cost
Estimated Length: 60 miles	
Design	\$41,027,000
Right-of-Way	\$73,801,000
Utilities	\$16,000,000
Construction	\$509,650,000
Contingencies	\$76,448,000
TOTAL	\$716,926,000

OPTION 2 AND OPTION 3

SEGMENT 1: Utilize the reconstructed section of KY 61, from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Columbia Bypass in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 1	Estimated Development Cost	Option 3 Segment 1	Estimated Development Cost
Estimated Length: 2.1 miles		Estimated Length: 2.1 miles	
Design	-	Design	-
Right-of-Way	\$2,000,000	Right-of-Way	\$2,000,000
Utilities	\$500,000	Utilities	\$500,000
Construction	\$15,000,000	Construction	\$15,000,000
Contingencies	\$2,250,000	Contingencies	\$2,250,000
TOTAL	\$19,750,000	TOTAL	\$19,750,000

SEGMENT 2: Will follow the proposed Columbia Bypass to KY 55 north of Columbia in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 2	Estimated Development Cost	Option 3 Segment 2	Estimated Development Cost
Estimated Length: 4.16 miles		Estimated Length: 4.16 miles	
Design	\$2,894,000	Design	-
Right-of-Way	\$4,400,000	Right-of-Way	\$4,400,000
Utilities	\$1,500,000	Utilities	\$1,500,000
Construction	\$35,943,000	Construction	\$18,750,000
Contingencies	\$5,393,000	Contingencies	\$2,813,000
TOTAL	\$50,130,000	TOTAL	\$27,463,000

SEGMENT 3: Reconstruct KY 55 from the Columbia Bypass in Adair County to the proposed bypass for Campbellsville in Taylor County (Figure 7 in Appendix A).

Option 2 Segment 3	Estimated Development Cost	Option 3 Segment 3	Estimated Development Cost
Estimated Length: 15.056 miles		Estimated Length: 15.056 miles	
Design	\$4,497,000	Design	\$709,000
Right-of-Way	\$17,456,000	Right-of-Way	\$244,000
Utilities	\$13,846,000	Utilities	\$1,200,000
Construction	\$58,036,000	Construction	\$9,426,000
Contingencies	\$6,197,000	Contingencies	\$680,000
TOTAL	\$100,032,000	TOTAL	\$12,259,000

SEGMENT 4: Construct new bypass for Campbellsville, from KY 55 south of Campbellsville to US 68 north of Campbellsville in Taylor County (Figure 7 in Appendix A).

Option 2 Segment 4	Estimated Development Cost	Option 3 Segment 4	Estimated Development Cost
Estimated Length: 6.7 miles		Estimated Length: 6.7 miles	
Design	\$2,322,000	Design	\$1,444,000
Right-of-Way	\$5,868,000	Right-of-Way	\$5,868,000
Utilities	\$1,875,000	Utilities	\$1,875,000
Construction	\$28,842,000	Construction	\$17,933,000
Contingencies	\$4,327,000	Contingencies	\$2,690,000
TOTAL	\$43,234,000	TOTAL	\$29,810,000

SEGMENT 5: Reconstruct US 68 from the proposed Campbellsville Bypass in Taylor County to the proposed bypass at Lebanon in Marion County (Figure 7 in Appendix A).

Option 2 Segment 5	Estimated Development Cost	Option 3 Segment 5	Estimated Development Cost
Estimated Length: 13.521 miles		Estimated Length: 13.521 miles	
Design	\$3,195,000	Design	\$716,000
Right-of-Way	\$11,052,000	Right-of-Way	\$0
Utilities	\$5,881,000	Utilities	\$1,200,000
Construction	\$40,807,000	Construction	\$9,454,000
Contingencies	\$4,827,000	Contingencies	\$759,000
TOTAL	\$65,762,000	TOTAL	\$12,129,000

SEGMENT 6: Follow the proposed bypass for Lebanon to KY 55 north of Lebanon in Marion County (**Figure 7 in Appendix A**)

Option 2 Segment 6	Estimated Development Cost	Option 3 Segment 6	Estimated Development Cost
Estimated Length: 3.305 miles		Estimated Length: 3.305 miles	
Design	\$927,000	Design	\$450,000
Right-of-Way	\$2,200,000	Right-of-Way	\$1,300,000
Utilities	\$1,000,000	Utilities	\$1,000,000
Construction	\$13,353,000	Construction	\$7,428,000
Contingencies	\$2,003,000	Contingencies	\$1,115,000
TOTAL	\$19,483,000	TOTAL	\$11,293,000

SEGMENT 7: Reconstruct KY 55 from the Lebanon Bypass in Marion County to the intersection of KY 555 in Washington County (**Figure 7 in Appendix A**).

Option 2 Segment 7	Estimated Development Cost	Option 3 Segment 7	Estimated Development Cost
Estimated Length: 7.22 miles		Estimated Length: 7.22 miles	
Design	\$1,361,000	Design	\$358,000
Right-of-Way	\$5,601,000	Right-of-Way	\$0
Utilities	\$1,806,000	Utilities	\$600,000
Construction	\$17,309,000	Construction	\$4,740,000
Contingencies	\$2,122,000	Contingencies	\$360,000
TOTAL	\$28,199,000	TOTAL	\$6,058,000

SEGMENT 8: Reconstruct KY 555 from its intersection with KY 55 in Washington County to the Martha Layne Collins Blue Grass Parkway in Washington County (**Figure 7 in Appendix A**).

Option 2 Segment 8	Estimated Development Cost	Option 3 Segment 8	Estimated Development Cost
Estimated Length: 14.698 miles		Estimated Length: 14.698 miles	
Design	\$3,183,000	Design	\$783,000
Right-of-Way	\$9,226,000	Right-of-Way	\$122,000
Utilities	\$3,675,000	Utilities	\$1,500,000
Construction	\$40,361,000	Construction	\$10,348,000
Contingencies	\$5,086,000	Contingencies	\$836,000
TOTAL	\$61,531,000	TOTAL	\$13,589,000

Some funds are allocated for Segments 1, 2, and 6 in the current Six-Year Highway Plan for portions of the costs estimated above.

E. FUTURE TRAFFIC AND LEVEL OF SERVICE

Future traffic and operational levels of service for the 3 different options for transportation improvements are included as part of this study and are shown in **Figures 4b-4d** in **Appendix A** and **Table 1a** in **Appendix C** as graphical illustrations of future traffic volumes. For this project, the following traffic volumes and levels of service (LOS) have been identified:

- Future Year 2030 Traffic Volume and LOS – Option 1 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 2 with I-66 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 2 without I-66 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 3 with I-66 Alternative
- Future Year 2030 Traffic Volume and LOS – Option 3 without I-66 Alternative

Future Year 2030 Traffic Volume and LOS were performed for the Option 1 Alternative with and without I-66. The results were the same.

F. ENVIRONMENTAL CONSIDERATIONS

Environmental issues and sensitive areas were considered within each of the Option 1 and Options 2 and 3 corridors as described in **Part 2, Chapter VII, Section B**. Many of the environmental issues are shown on the Environmental Footprint Maps which are **Figures 5A** and **5B** in **Appendix A**. The complete Environmental Overview is contained in **Appendix D**. A summary of the environmental considerations includes:



Green River Lake State Park

1. **No-Build Option:** Environmental impacts are not anticipated with the No-Build Option.

2. Socioeconomic Impacts: Both Option 1 and Options 2/3 would improve regional access for economic development, existing industry, truck access, tourism, higher education and agricultural activities. A new or improved roadway would enhance travel efficiency for area residents, commuters and thru traffic by reducing travel time and accidents and for Options 1 and 2, increasing capacity. Option 1 and Option 2/3 would provide a more efficient means of transporting raw and finished materials and agricultural products to and from industrial sites and farms. Tourists accessing areas of interest, such as the Green River Lake State Park, Willisburg Lake, and Tebbs Bend Battlefield site would benefit from improved travel conditions. Option 1 may have greater negative secondary impacts, such as requiring travelers to use the limited number of interchanges to enter or leave the roadway, increasing distances to reach county seats, work places and shopping areas, splitting farms and limiting access to interchanges or underpasses and increasing the need to upgrade existing secondary roads.

3. Environmental Justice Issues: Neither Option 1 nor Option 2/3 is expected to have environmental impacts that would disproportionately or adversely affect minority or low-income groups, neighborhoods or communities.

4. Relocations: Low numbers of residential or commercial relocations are anticipated for either Option 1 or Option 2/3. Actual numbers of relocations would be developed during future design phases.

5. Project Area Land Use: The predominant land use in the project corridors is agricultural. Urban areas are contained within or near the city limits of the county seats. The majority of government services, commercial activities and neighborhoods are located within or near the city limits. Most of the residential development is single family in nature, and is concentrated within or near the respective city limits. Dwellings outside the city limits are primarily scattered, single-family residences on farms.

6. Project Area Populations: Project area populations have generally increased between 1900 and 2000, however the population of Washington County has declined, while Taylor County became the fastest growing county in the area. Taylor County is projected to continue its rapid rate of growth through 2030.

7. Labor Force: Each county in the project area has a high percentage of employees in their respective workforces that are currently working in jobs that pay less and require less than the

employees' qualifications. The individual counties and the labor market areas provide an ample and capable workforce to attract industry. In addition, the educational attainment for the overall area has increased between 13 and 30 percent over the past 10 years. Both Option 1 and Option 2/3 are anticipated to cause secondary and indirect benefits to the labor force by improving access and travel efficiency for workers, tourists, and transporters of raw materials, finished products, and agricultural products.

8. Farmland: The project will not affect any purchased agricultural conservation easement properties. Option 1 has the



Along KY 55 in Marion County

potential to affect one agricultural district in Taylor County. If avoidance is not feasible, coordination with the local conservation district is required and mitigation may be necessary. Option 1 has the greater potential to split farms. Future design phases will need to coordinate with the Natural Resource Conservation Service on potential impacts to farmlands

rated as prime, unique, or of statewide importance.

9. Wetlands: Option 1 has the potential to affect 44 jurisdictional wetlands and 211 non-jurisdictional ponds. Option 2/3 has the potential to affect 6 jurisdictional wetlands and 17 ponds. Depending on where the road would be constructed or widened, impacts to wetlands and ponds could be avoided or minimized.

10. Stream Crossings: Option 1 has the potential to cross approximately 64 perennial streams and 32 intermittent streams. The majority of these stream crossings will be on new alignment. Option 2/3 has the potential to cross approximately 37 perennial and 10 intermittent streams. The majority of Option 2/3 stream crossings will require widening of bridges or extending existing culverts. Actual amounts of stream crossings will likely be reduced during future project development phases. Potential impacts to ephemeral streams could not be determined at this time.

11. Floodplains: Published floodplain information only exists for Marion and Taylor Counties. Option 1 crosses 8 known floodplain zones in Marion and Taylor Counties and Option 2/3 crosses 2 known floodplain zones in Marion County. Additional

floodplain zones likely exist along streams in Washington, Adair and Green Counties. Option 1 is anticipated to have greater impacts to floodplains because it crosses more streams and would require new construction and floodplain disturbances at all crossings.

12. Outstanding and Exceptional Water Resources: No stream segments designated as wild and scenic rivers are located in the project area. Both Option 1 and Option 2/3 will cross the Green River, which is classified as an outstanding state resource water, and Russell Creek, which is classified as exceptional water. Precautions, such as erosion and sedimentation controls, shall be necessary to minimize impacts to these special streams.

13. Permits: Depending on future project impacts to wetlands or streams, federal and state permits may be required and, if appropriate, mitigation activities may be required.

14. Natural Areas: Both Option 1 and Option 2/3 cross the boundaries of the Green River Bioreserve. Several exemplary natural communities monitored by the Kentucky State Nature Preserve Commission are located within Adair, Green, Marion and Taylor Counties. During future design phases, formal data requests will be required to obtain specific locations of these natural communities.

15. Federally Endangered or Threatened Species:

Input from resource agencies indicates the potential presence of the federally listed endangered Indiana bat, gray bat, fanshell mussel, clubshell mussel and rough pigtoe (mussel) and the federally threatened bald eagle and Eggert's sunflower. Option 1 and Option 2/3 corridors feature habitat

suitable for these endangered or threatened species. Further fieldwork and coordination with the United States Fish and Wildlife Service will be necessary in future project phases to determine if these species exist within right-of-way limits and the potential for adverse impacts.



Gray Bat

16. Historic Resources: A total of 64 sites were identified within the two corridors that are listed or are potentially eligible for listing on the National Register of Historic Sites. The Option 1 corridor could affect 43 structures and the Option 2/3 corridor could affect 17 structures. Due to the width of the corridors, the potential exists to avoid or minimize impacts to historic sites.

17. Archaeological Resources: Five previously recorded archaeological sites have been identified along the Option 1 corridor. Twenty-three previously recorded archaeological sites have been identified along the Option 2/3 corridor. The site disparity between the corridors is likely the result of the limited number of previous cultural resource management studies in the project corridors and should not be interpreted to indicate actual site density in each corridor. The project area has a high potential for containing unrecorded prehistoric or historic archaeological sites. Further archaeological surveys will need to be conducted during future project phases to determine whether additional archaeological sites may be present.

18. Cemeteries: Seven cemeteries were identified in the Option 1 corridor and three cemeteries were located in the Option 2/3 corridor. Efforts should be made during future project phases to avoid or minimize impacts to a cemetery.



Tebbs Bend Battlefield Cemetery

19. Section 4(f) Resources: Section 4(f) resources occur in both corridors. Section 4(f) resources include historic properties listed or eligible for listing on the National Register of Historic Places, archaeological sites requiring preservation in place (e.g., a Native American burial site), or recreation areas, such as Green River Lake State Park. If any Section 4(f) resource is used for a transportation project, a Section 4(f) evaluation must be conducted. This evaluation would be conducted during future project phases.

20. Section 6(f) Resources: Only Option 2/3 has the potential to affect an outdoor recreational land or water area or facility established with the assistance of grants from the Land and Water

Conservation Fund. The Idle Hour Community Park in Springfield is located at the intersection of KY 555 and KY 528. It appears that alternates could be developed to avoid impacting this Section 6(f) resource.

21. Hazardous Materials and Underground Storage Tank

Sites: No Superfund sites, landfills or illegal dumps were identified in either the Option 1 or Option 2/3 corridors. The potential exists for some sites to contain hazardous materials or underground storage tanks. The Option 1 corridor contained an estimated 6 sites, which included service stations and automobile repair shops. The Option 2/3 corridor contained an estimated 25 to 30 sites, which included service stations, automobile repair shops and small junk yards/auto salvage yards.

22. Air Quality: All project area counties are considered in attainment for all transportation-related air pollutants (carbon monoxide, hydrocarbons, nitrogen oxides and particulates). No air quality mitigation is expected to be necessary for any Option.

23. Traffic Noise: Future project analysis may predict noise levels that would exceed regulatory noise thresholds for which abatement considerations (e.g., noise barriers) are appropriate at individual receptors (residential or commercial facilities). Depending on alignments within a corridor, noise levels may increase for some receptors as the roadway is moved closer but may decrease for other receptors as the roadway moves away from them.

G. GEOTECHNICAL CONSIDERATIONS

- Items considered as part of the geotechnical overview for the project area include general topography, geology, active and previous mining, and oil and gas wells.
- The study area is within the Mississippian Plateaus. The Mississippian Plateaus contains gently to moderately rolling topography that has been partially influenced by karst weathering in some areas. The Knobs Region consists of a narrow belt of conical knobs situated in the center of the study area.
- The Knobs Region is underlain by shales and limestone that are Ordovician, Silurian, Devonian, and Mississippian in age. The predominant rock type in the area are Devonian age dark gray

carbonaceous shales of the New Albany Shale Formation. The New Albany Shale is often acidic and toxic when exposed to air and water.

- An east-west trending unnamed fault crosses the environmental footprint approximately one mile south of Lebanon, Kentucky. A series of east-west trending faults are located in the vicinity of Springfield. Another series of faults are near the eastern edge of Salletown in Marion County. The faults discussed are not considered to be active in recent geologic time.
- There are several active, inactive, and abandoned limestone and sand quarries known to exist in the study area.
- The potential for encountering karst activity such as soil piping and solutioning of bedrock, as well as karst features such as sinkholes and subterranean channels, is significant over portions of both corridors. Potential for karst activity is greatest in the southern portion of the study area within the Mississippian Plateaus Region near Columbia.
- The potential exists for acid drainage from bedrock and soils within The Knobs Region. The New Albany Shale within that region is a known acidic stratum. Particular attention should be given to the cut slopes and embankments that are located in The Knobs Area. Cuts and embankments within the New Albany Shale and residual soils from the New Albany Shale should be encapsulated with a minimum of four feet of clay-like, non-acidic material.
- Oil and gas wells could be encountered along any chosen corridor.
- Because of the clayey type soils within the study area, a low CBR value should be anticipated.

IX. PROJECT TEAM RECOMMENDATIONS

This section provides recommendations and conclusions for improvements for the Heartland Parkway. The recommendations made in this section are a result of the Alternatives Study process.

A. FINAL PROJECT TEAM MEETING (SEPTEMBER 1, 2004)

A project team meeting for the Alternatives Study for the Heartland Parkway (Item No. 4-132.00) was conducted on Wednesday, September 1, 2004, at the Kentucky Transportation Cabinet (KYTC) Department of Highways District 4 Office in Elizabethtown, Kentucky. Participants at the meeting included representatives from KYTC District 4, KYTC District 8, KYTC Division of Planning, Lincoln Trail Area Development District, and the consultant staff. The purpose of the meeting was to review the corridors and options being studied, the purpose, goals and objectives of the proposed project, project issues, a summary of the questionnaire results from the second round of local officials, local agencies, and public meetings, and to make recommendations for proposed improvements. The complete meeting minutes are located in **Appendix F**. Project information provided for discussion at the meeting included:

- Project Goals
- Environmental Footprint Map with each Alternative shown
- Handout with a discussion of each Alternative
- Survey Questionnaire results
- Corridor Comparative Matrix

Questionnaire results received to date from all the second round meetings were noted:

- In questions two & three, 80% said the Heartland Parkway is needed, and 79% said the Heartland Parkway is needed and would be helpful to the region.
- In question four, 79% of all responses said the Heartland Parkway should be constructed along the existing route.
- In question five, 74% indicated they prefer a four-lane highway with limited entrances.
- The results of the priority by segment question closely resemble the recommendations presented by WMB, as a result of the public responses and other engineering factors.

After the overview of questionnaire responses, the project team discussed funding for the Columbia and Lebanon Bypasses. There was some concern surrounding these two projects and being able to convert the bypasses to federal funding unless appropriate environmental documents have been approved; and, the question of logical termini as required by FHWA.

A review of historic funding through the corridor indicates the funding level was approximately \$20M per year.

Additionally, it was noted that the Lebanon Bypass includes only enough right of way for two-lane construction; however, after the construction of the two-lane bypass, and the commencement of development, it will be difficult to go back and purchase the additional right of way needed for two more lanes.

The project team was updated regarding geotechnical issues since the previous project team meeting. Some of these geotechnical items include the following:

- Both corridors must cross area geological faults.
- Acidic shale will require special design and construction consideration.

An Environmental Overview was provided. Environmental justice considerations were discussed, specifically mentioning the community of Frogtown, which will not be affected by any of the corridors being studied.

The project team was presented with the detailed corridor analysis by the consultant, which is shown in **Section VIII: CORRIDOR ANALYSIS**. There was some concern about the ability to fund the preferred alternative (Alternative 2 or Option 2); however, it was clear that **Option 2** met the project goals and received overwhelming support from the public and local officials. **Option 2** is shown in yellow along the existing corridor routes in **Figure 7 of Appendix A**.

The project team recommended the following priority for construction project phasing for the preferred alternative:

- Priority 1: Segment 1 – KY 61 from the Louie B. Nunn Cumberland Parkway to the Columbia Bypass.
- Priority 2: Segment 2 – Columbia Bypass
- Priority 3: Segment 6 – Lebanon Bypass
- Priority 4: Segment 4 – Campbellsville Bypass
- Priority 5: Segment 3 – KY 55 from Columbia to Campbellsville

- Priority 6: Segment 5 – US 68 from Campbellsville to Lebanon
- Priority 7: Segment 7 – KY 55 from Lebanon to Springfield
- Priority 8: Segment 8 – KY 555 from Springfield to the Martha Layne Collins Blue Grass Parkway

Preliminary cost estimates are shown in **Table 7** of **Appendix C**, as well as, in **Section VIII: D. PROJECT CORRIDOR DEVELOPMENT COSTS**. Estimates are shown for each alternative and by construction segment.

B. RECOMMENDATIONS

It is concluded that for the long term traffic mobility and in keeping with public support, **Option 2** best addresses all of the Project Goals.

Community Considerations	Option 1	Option 2	Option 3
Public Support	Some Support 19%	Most Support 63%	Least Support 16%
Benefits from Incremental Construction	No	Yes	Yes
Adversely Affects Farmland	Yes	No	No
Potential Cultural/Historic Resources	43	21	21
Meets Project Goals	Yes	Yes	No
Improve Regional Access	Yes	Yes	Yes
Improve Safety	Yes	Yes	Yes
Improve Highway Capacity	Yes	Yes	No
Decrease Delays Through Communities	Yes	Yes	No
Improve Emergency Response Time	Yes	Yes	No

Option 1 would need to be constructed in its entirety, or long sections, to receive any positive returns, such as the reduction of truck traffic along the existing routes or the ability to provide a transportation facility that would enhance shipment of goods to other parts of the state and the nation.

The issue of funding a project of this magnitude was another decisional factor because the cost of **Option 1** is twice that of **Option 2**. In addition, constructing **Option 1** would still leave deficiencies along the existing corridor that would have to be addressed at some point in the future, and it would leave two routes to maintain. Lastly, **Option 1** would be detrimental to many of the farmers that the Heartland Parkway is intended to serve as it would cut through many farms and divide prime farmland.

Option 3 was discarded because it failed to address at least two of the Project Goals: Improve Capacity – because capacity issues are in the urbanized areas, not on rural sections where passing lanes would be added -- and Decrease Delays Through Communities – since passing bays would not be able to correct these deficiencies. In addition, **Option 3** received very little community support.

In making a recommendation, it was apparent that there are several distinct advantages of **Option 2** over **Option 1** and **Option 3**. **Option 2** can be constructed incrementally, allowing immediate benefits from each constructed segment. It would even allow some low priority segments to be upgraded utilizing **Option 3** with limited initial cost. There was also overwhelming support for **Option 2**, both from the local officials, agencies and interest groups, and the public as noted in **Tables 5** and **6** in **Appendix C**.

Lastly, it is also recommended that consideration be given to reconfiguring the ends of the bypasses at Columbia and Lebanon as they are currently planned. In order to provide the most efficient corridor alternative, the bypass routes should be completed to accommodate through traffic. In addition, their termini need to be moved about a half mile further from the communities. To be compatible with Option 2, the current Lebanon Bypass design should be changed to a four-lane facility.

C. PROJECT COSTS BY PRIORITY

PRIORITY #1 - SEGMENT 1: Utilize the reconstructed section of KY 61, from 1000 feet south of the Louie B. Nunn Cumberland Parkway to the proposed Columbia Bypass in Adair County (**Figure 7** in **Appendix A**).

Option 2 Segment 1	Estimated Development Cost
Estimated Length: 2.1 miles	
Design	-
Right-of-Way	\$2,000,000
Utilities	\$500,000
Construction	\$15,000,000
Contingencies	\$2,250,000
TOTAL	\$19,750,000

PRIORITY #2 - SEGMENT 2: Will follow the proposed Columbia Bypass to KY 55 north of Columbia in Adair County (**Figure 7 in Appendix A**).

Option 2 Segment 2	Estimated Development Cost
Estimated Length: 4.16 miles	
Design	\$2,894,000
Right-of-Way	\$4,400,000
Utilities	\$1,500,000
Construction	\$35,943,000
Contingencies	\$5,393,000
TOTAL	\$50,130,000

PRIORITY #3 - SEGMENT 6: Follow the proposed bypass for Lebanon to KY 55 north of Lebanon in Marion County (**Figure 7 in Appendix A**).

Option 2 Segment 6	Estimated Development Cost
Estimated Length: 3.305 miles	
Design	\$927,000
Right-of-Way	\$2,200,000
Utilities	\$1,000,000
Construction	\$13,353,000
Contingencies	\$2,003,000
TOTAL	\$19,483,000

PRIORITY #4 - SEGMENT 4: Construct new bypass for Campbellsville, from KY 55 south of Campbellsville to US 68 north of Campbellsville in Taylor County (**Figure 7 in Appendix A**).

Option 2 Segment 4	Estimated Development Cost
Estimated Length: 6.7 miles	
Design	\$2,322,000
Right-of-Way	\$5,868,000
Utilities	\$1,875,000
Construction	\$28,842,000
Contingencies	\$4,327,000
TOTAL	\$43,234,000

PRIORITY #5 - SEGMENT 3: Reconstruct KY 55 from the Columbia Bypass in Adair County to the proposed bypass for Campbellsville in Taylor County (**Figure 7 in Appendix A**).

Option 2 Segment 3	Estimated Development Cost
Estimated Length: 15.056 miles	
Design	\$4,497,000
Right-of-Way	\$17,456,000
Utilities	\$13,846,000
Construction	\$58,036,000
Contingencies	\$6,197,000
TOTAL	\$100,032,000

PRIORITY #6 - SEGMENT 5: Reconstruct US 68 from the proposed Campbellsville Bypass in Taylor County to the proposed bypass at Lebanon in Marion County (**Figure 7 in Appendix A**).

Option 2 Segment 5	Estimated Development Cost
Estimated Length: 13.521 miles	
Design	\$3,195,000
Right-of-Way	\$11,052,000
Utilities	\$5,881,000
Construction	\$40,807,000
Contingencies	\$4,827,000
TOTAL	\$65,762,000

PRIORITY #7 - SEGMENT 7: Reconstruct KY 55 from the Lebanon Bypass in Marion County to the intersection of KY 555 in Washington County (**Figure 7 in Appendix A**).

Option 2 Segment 7	Estimated Development Cost
Estimated Length: 7.22 miles	
Design	\$1,361,000
Right-of-Way	\$5,601,000
Utilities	\$1,806,000
Construction	\$17,309,000
Contingencies	\$2,122,000
TOTAL	\$28,199,000

PRIORITY #8 - SEGMENT 8: Reconstruct KY 555 from its intersection with KY 55 in Washington County to the Martha Layne Collins Blue Grass Parkway in Washington County (**Figure 7** in **Appendix A**).

Option 2 Segment 8	Estimated Development Cost
Estimated Length: 14.698 miles	
Design	\$3,183,000
Right-of-Way	\$9,226,000
Utilities	\$3,675,000
Construction	\$40,361,000
Contingencies	\$5,086,000
TOTAL	\$61,531,000

X. OTHER CONSIDERATIONS

A. CONSTRUCTION CONSIDERATIONS

A number of issues were identified through the course of this study that should be considered in the future construction phase of this project. Potential construction issues related to the preferred corridor include:

EROSION CONTROL: Measures to control erosion and sedimentation during and after construction activities should be utilized. The construction of this project will initially increase the amount of sediment that ground and surface water sources receive. There will also be an increase in sheet-flow pollution when this project is completed. Careful consideration must be given to erosion control methods to minimize the amount of pollution that reaches surface and ground water.

FLOODPLAINS: The construction of this project may impact floodplains in the project area. Detailed hydraulic analysis must be performed to maintain current flood stages without increasing them by more than one foot in uninhabited areas. The construction of this project must not increase the flood hazard within the project's corridor or drainage area.

AIR QUALITY IMPACTS DURING CONSTRUCTION: Construction period air quality impacts need to be evaluated to examine the potential short-term effects of site preparation, demolition, materials storage, and other construction activities to determine if any appropriate mitigation commitments are to be incorporated into the plans.

GEOTECHNICAL CONSIDERATIONS: Karst activity exists over portions of the project area. The potential for karst activity is greatest in the Mississippian Plateau Region near Columbia. There is also significant potential for acid drainage to occur within the Knobs Region where the New Albany Shale may be exposed to air and water. Cuts and embankments in this area should be assessed for acidity and remedial measures applied, such as capping with four feet of clay-like, non-acidic material.

ENVIRONMENTALLY SENSITIVE AREAS: A number of environmentally sensitive areas will be encountered during the construction of this project. Some of these areas include Green River Lake, Willisburg Lake, and Tebbs Bend Civil War Battlefield. When construction activities are being performed in these areas, every precaution should be taken to minimize the disturbance to these properties.

B. SPECIAL CONSIDERATIONS

Below is a summary of important findings in the study area that will need to be addressed in the next phase of project development.

- Due to funding constraints, this project will be implemented incrementally by establishing the priority sections; however, it is recommended that a Phase I environmental study be performed on the recommended corridor.
- There are a number of environmentally sensitive locations within the study area. The Green River Lake State Park, Tebbs Bend Civil War Battlefield, and many potentially historic properties will require consideration in future project phases.
- Further fieldwork and coordination with the United States Fish and Wildlife Service will be necessary in future project phases to determine if the federally listed endangered Indiana bat, gray bat, fanshell mussel, clubshell mussel and rough pigtoe (mussel) and the federally threatened bald eagle and Eggert's sunflower exist within right of way limits and the potential for adverse impacts.
- For streams and wetlands, analyze specific impacts in future project phases, evaluate avoidance and minimization options, and determine permitting and if appropriate, mitigation requirements.
- Historic and archaeological surveys will need to be conducted to determine/confirm the presence of historic or archaeological sites and potential to avoid or minimize project impacts.
- Environmentally sensitive sites (e.g., Tebbs Bend Battlefield), parks (e.g., Lincoln Homestead State Park and Green River Lake State Park) and exemplary natural areas (e.g., Green River Biosphere) will need to be considered in future project phase decisions.
- Determine whether Section 4(f) or Section 6(f) evaluations will be necessary for future project phases.
- Develop numbers of residential and commercial relocations and farmland impacts.
- For potential hazardous materials and underground storage tank sites, confirm presence at facilities such as service stations, automobile repair shops, and auto salvage yards and assess avoidance and mitigation options.

- Modeling of potential air and noise impacts will be necessary in future project phases to determine if mitigation considerations are necessary.
- Additional funding will be needed to complete priority segments.

C. SUGGESTED PUBLIC INVOLVEMENT ACTIVITIES

Public involvement will continue to be an important aspect of future project development activities. A review of the questionnaire summary indicates that there is support for the Heartland Parkway to be developed along the existing corridor routes of KY 55, US 68, and KY 555. Future public involvement activities may include the following:

- Create a Public Involvement Plan to ensure that the public is kept informed. This would include maintaining and expanding the database of project stakeholders.
- Hold Public Information Meetings at project milestones. This will provide an opportunity to present current engineering and environmental information to the public for their input.
- Local news media should be involved in making the public aware of decisions as they are made.

XI. CONTACTS

If additional information is needed regarding the Heartland Parkway project, the following individuals may be contacted:

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You may find additional information at <http://transportation.ky.gov/planning/index2.asp>