I-66 CORRIDOR STUDY WESTERN KENTUCKY TO MISSOURI BALLARD / MCCRACKEN COUNTY - ITEM # 1-23.00

APPENDIX 6 – LEVEL 1 SCREENING

Prepared for

Kentucky Transportation Cabinet (KYTC) – Division of Planning

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1.0 PRELIMINARY ALTERNATIVE CORRIDORS

This paper presents the alternative corridor development process used for the I-66 Corridor Study Western Kentucky to Missouri section. It included here are a description of (1) how the alternative corridors were developed, (2) and how they were grouped or classified for further analysis and screening. This chapter also provides a comprehensive list and description of the initial alternative corridors developed for the study, the evaluation criteria and methods for Level 1, 2 and 3 screening. The screening analysis and results for the Level 1 / initial evaluation are also included.

1.1 Development Process

A wide-range of alternative corridors were developed in response to the study's goals, objectives and identified issues. The alternative corridors development process was interactive and took into account suggestions and input from a wide variety of sources, including:

- Stakeholder / Public
- Project Work Group
- Project Team
- Previous studies
- Existing transportation plans

Specific activities to solicit input for the alternative corridors development process included:

- Project Work Group input in a workshop style meeting where numerous alternative corridors were developed. This meeting was held in Charleston, Missouri on July 25, 2002.
- A set of two (2) public meetings also held in workshop format, specifically designed to receive public comment on three initial corridors and to receive suggestions for other potential alternative corridors developed by participants at the workshops. The workshops were held in Sikeston Missouri and in Barlow Kentucky respectively on August 19 and 20, 2002.

1.2 Issues Addressed

The initial alternative corridors were designed to address many observed transportation system deficiencies, problems and other issues in the study area including:

 Identify a viable corridor(s) from I-24 in Western Kentucky to Missouri consistent with national and / or Kentucky legislation, previous national and Kentucky studies, and the goals of the Delta Commission, including improved access and mobility in depressed or impoverished regions

- Maximize connectivity between Kentucky and Missouri
- Stimulate the economic development potential in Western Kentucky and Southeastern Missouri
- Accommodate increasing automobile and truck traffic
- Improve traveler safety
- Support Completion of I-66 Across Southern Kentucky, Providing System Continuity from West Virginia to Missouri

Although not all encompassing, the list provides a good indication of the types of problems and issues that were of consequence or had an impact on the development of the preliminary alternative corridors.

1.3 Corridor Descriptions

To date, public stakeholders, the Project Work Group, and the Project Team have identified over 22 preliminary alternative corridors – including combinations and hybrids. The descriptions below and the map on the following page depict these corridors. Note that for ease of description, some geographically similar alternative corridors have been combined.

<u>Corridor 1</u> - From existing I-24 alignment in Illinois due westward on new right-of-way through Shawnee National Forest in southern Illinois to Missouri 146 near Cape Girardeau via existing bridge to I-55

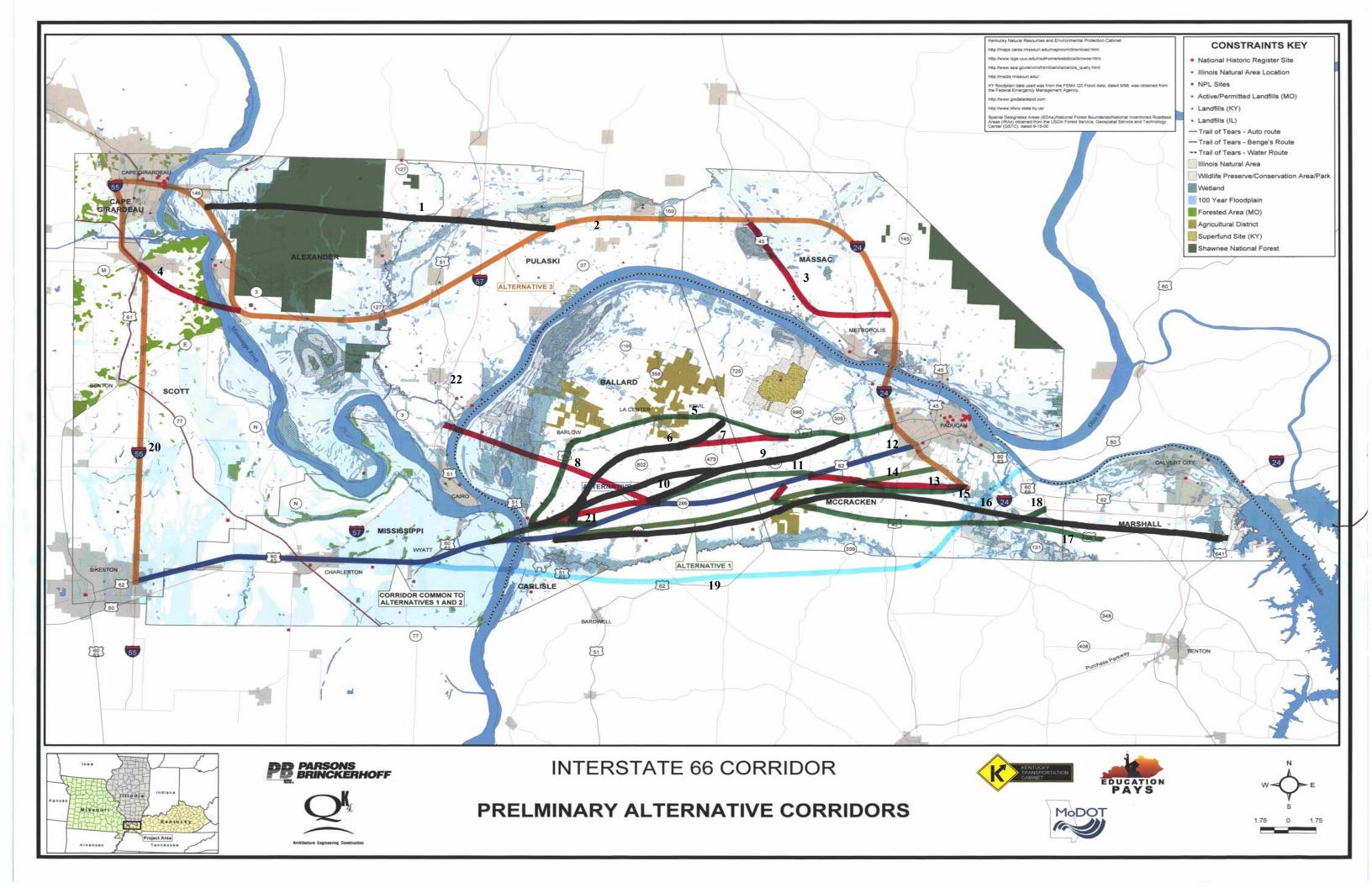
<u>Corridor 2</u> - From existing I-24 alignment in Illinois due southwestward on new right-ofway avoiding major environmental areas in Illinois and Missouri around the Shawnee National Forest in southern Illinois to Missouri 146 near Cape Girardeau over existing bridge to I-55

<u>Corridor 3</u> - From I-24 north of Metropolis, Illinois follow US 45 in Illinois northwest then following alternative 2 as described above to I-55

<u>Corridor 4</u> - From existing I-24 alignment in Illinois due southwestward on new right-ofway avoiding major environmental areas in Illinois and Missouri around Shawnee National Forest to new bridge over Mississippi River south of Cape Girardeau to I-55

<u>Corridor 5</u> - From I-24 at Paducah generally follow the existing US 60 corridor to Wickliffe, Kentucky over the Mississippi River on new bridge through lowland/floodway in Missouri connecting to US 60 in Missouri east of Charleston to I-57

<u>Corridors 6 / 7</u> - From existing US 60 east of Kevil, Kentucky go southwest on a new alignment towards Wickliffe over the Mississippi River on a new bridge through lowland/floodway in Missouri connecting to US 60 in Missouri east of Charleston to I-57



<u>Corridor 8</u> - From I-24 at Paducah, Kentucky along existing KY 286, US 60 or US 62 corridor to a point east of Wickliffe, proceed northwest on new route across the Ohio River on a new bridge to I-57 in Illinois

<u>Corridors 9 / 10</u> - From I-24 near Paducah, Kentucky follow new route southwesterly to Wickliffe (parallel to US 62 KY 286) across the Mississippi River on a new bridge to I-57

<u>Corridors 11 / 12 / 13 / 14 / 15 / and 21</u> - From I-24 south of Paducah follow new route southwest parallel to KY 286 to point south of Wickliffe over Mississippi River on new bridge to I-57

<u>Corridor 16</u> - From I-24 in Marshall County Kentucky proceed west along new route to McCracken County then follow parallel route to option 14 above

<u>Corridor 17</u> - From I-24 near US 68 in Marshall County Kentucky proceed west to McCracken County along new route parallel to 16 above to similar route as 14 west and south of Paducah

<u>Corridor 18</u> - From I-24 / US 60 / US 68 location in Marshall County Kentucky proceed west along new route to McCracken County with 17 then follow parallel route to option 14 above

<u>Corridor 19</u> - From existing US 60 bridge across Tennessee River in Kentucky proceed south west across I-24 to new route south of KY 339 westerly along new route south of study area across the Mississippi River on a new bridge to US 60 / US 62 to Sikeston

Corridor 20 - Re-badge existing interstate I-24 in Kentucky as I-66

<u>Corridor 22</u> - From existing I-24 alignment proceed due southwest on new right-of-way avoiding major environmental area(s) in Illinois to existing I-57

2.0 ALTERNATIVES EVALUATION METHODOLOGY

2.1 Introduction

This section describes a screening process and measures of effectiveness (MOEs) that will be / are being applied to the alternative corridors developed and analysis for the I-66 Corridor Study Western Kentucky to Missouri section. The purpose of the screening process is to refine the list of possible alternative corridors from a long list of many / all possible alternative corridors (universe) to a shorter list of recommended one(s) at the conclusion of the study.

This screening process is obviously necessary to identify and further screen those corridors that more completely meet the project's Goals, Objectives and issues and to eliminate from further consideration those that do not.

Initially, a few pertinent, qualitative details will be identified for the initial group of alternative corridors. As progression is made through the three proposed levels of screening, the amount of information grows and becomes more quantitative as the number of corridors decreases. Figure 2.1 below depicts the levels of screening and the depths of information that will be developed as the number of alternatives narrows.

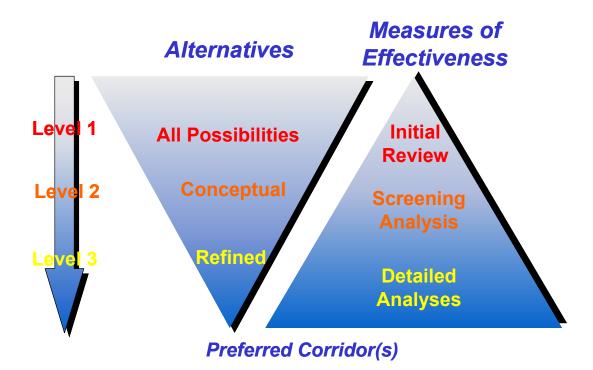


Figure 2.1

The first phase of analysis, the Level 1 screening, focuses on more qualitative, rather than quantitative analysis. This first level is an initial analysis of the general feasibility of the corridors. As the screening process progresses, more detailed information will be developed. The criteria for Levels 2 and 3 respectively, will gradually become more definitive and utilize more quantitative rather than qualitative data for analysis.

The following sections detail the proposed three-level screening processes.

2.2 Level 1 – Initial Screening

The initial level of analysis seeks to apply limited measures of evaluation to all alternative corridors that have been developed in order to eliminate some of them from further consideration. Alternative corridors that are eliminated are those that do not fully or best meet the study's Goals and Objectives, or they do not fully or best address the problems and issues identified in the Existing Conditions Report, or they have a characteristic that would prevent their further implementation.

Sometimes referred to as a "fatal flaw" screening, this first level of analysis relies on rather qualitative criteria and analysis garnered from the study's internal working staff or Project Team composed of members of the Kentucky Transportation Cabinet Central Office Planning Division, District Office Planning Staff, Purchase Area Development District (PADD) and Consultants. The evaluative criteria for Level 1 screening focuses on whether or not a corridor could be developed successfully into the project development phase. The focus of this initial analysis includes:

- **Constructability / Implementation / Feasibility -** To what extent is an alternative implementable? This would include issues such as ease of construction, political support, and funding.
- **Compatibility with Goals, Objectives and Issues** To what extend is an alternative compatible with identified and adopted Goals, Objectives? To what extent does it address identified problems and/or issues?
- **Community / Environmental Impacts** To what extent does an alternative enhance or degrade the natural, social, built or economic environments?

2.3 Level 2 – Screening Analysis

The Level 2 evaluation will be performed on a smaller set of alternative corridors for which more details will be developed. Some criteria from Level 1 shown above will be carried through to Level 2, although these criteria will be expanded and more detailed measures and information will be applied. More specific measures will be developed and refined to quantify and evaluate potential impacts in greater detail.

Building on Level 1, proposed criteria for Level 2 includes:

- Traffic Operations general criteria to evaluate mobility and accessibility improvements including: level of service (LOS), improvements to travel time, number of users (volume / ADT), truck %s, capacity / flow analysis (V/C ratios), safety, security, etc., based on travel demand forecasting model runs and manual adjustments / interpolation
- **Support** likelihood that one or more alternatives will be supported /is supported by the local community, including citizens, political leaders, business / industry and other stakeholders, derived from all public comments, letters, emails, etc., to date. Also contains description of relevant criteria or issues to be scrutinized.
- **Community Impacts** compatibility with adjacent and proposed land uses and the affects and impacts on those land uses (separate impacts to type of property: farmland, commercial / business, parks / recreation, residential, etc., calculated by lane miles of adjacent property. Also includes an environmental justice analysis
- **Property Impacts** more specific impact determining need for new right-of-way quantified in acres
- Environmental Impacts impacts on known historic and archeological sites / structures, acres of natural resource / wildlife areas, habitat areas, no of HAZMAT sites, number of stream crossings, floodplain / floodway impacts, and acres of wetlands
- **Capital cost considerations** order of magnitude capital costs for proposed alternative corridors derived on a cost per mile basis from typical sections for roadway (at-grade and elevated) and bridge improvements, and typical cost basis for interchanges; will also include bicycle and pedestrian amenities if appropriate

This second level of screening analysis will produce richer quantitative comparisons for a smaller number of alternative corridors. This Level 2 evaluation involves the selection of alternatives that deserve subsequent and more detailed examination in Level 3. Decisions on options to advance and on the appropriate combination of alternative corridors will be based on data resulting from these first two levels of analysis.

2.4 Level 3 – Refinement

Finally, a third round of screening will take place based on the most detailed analysis. This third round of alternative refinement will use the processes described above to focus detailed analysis on the alternatives that have survived from the first two rounds. This analysis phase will broaden the range of information known about the final alternatives in the above mentioned categories and will seek to determine the most refined quantitative and definitive information about each alternative as possible. At this point, the volume of technical data about each of the alternatives will be at its peak. Measures from Level 2 will be refined to include the following additional measures (if any):

- **Traffic Operations** no anticipated refinement for Level 3. May involve "new" model runs rather than manual adjustments / interpolation
- **Support** no anticipated refinement for Level 3, however subsequent comments received will be incorporated
- **Community Impacts** refine to include more quantitative number of impacts to community by type of land use if available
- **Property Impacts** refine to include more specific impacts determining need for new right-of-way quantified in acres
- Environmental Impacts refine to include qualitative / quantitative noise and air quality analysis (# of and location by type for sensitive receptors and likely impacts to air quality), threatened rare and endangered species locations, and bridge location geology / compatibility
- **Capital cost considerations** refine to separate costs for right-of-way, utilities, design and construction costs probably at a "gross level"

3.0 Level 1 Screening Summary

3.1 Introduction

The following discussion presents the analysis and outcome for the Level 1 Initial Screening for each alternative corridor. This discussion, together with the Level 1 Screening Summary sheets, depicts all known Information related to each of the 22 initial alternative corridors, including:

- Alternative number
- Brief description of alternative corridor
- Level 1 evaluation criteria results
- Conclusion / recommendation for further consideration or elimination

3.2 Level 1 Discussion

<u>Corridor 1</u> – Corridor 1 runs from existing I-24 near Paducah, Kentucky northward along I-24 then heads due west through southern Illinois and across the Shawnee National forest to Missouri Route 146 near Cape Girardeau to existing I-55. Some of the route would be on new right-of-way and it would use the new Bill Emerson Memorial Bridge currently under construction at Cape Girardeau, Missouri.

Constructability / Implementation / Feasibility – Most sections of the proposed corridor lend themselves to being constructed. There are some sections over wetlands and/or 100-year flood plains that would require staged construction, which would be launched from new roadway sections. This would be necessary to avoid adverse affects during construction on nearby sensitive areas. Also, a large section of the route is in Illinois, which currently is neither interested in an I-66 corridor nor participating in this study. For these reasons it is rated Low.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues, although on a very basic level. The corridor does provide a new route and makes use of portions of the existing interstate, thus maximizing some investment. However, it does little for western Kentucky from Paducah to the Missouri border in terms of supporting economic development or improving community character and quality of life. It would provide for improved accessibility and connectivity but may not provide the most direct route for some trips, and may in fact have a higher travel time for some of those same trips in the study area. For this it is rated Medium.

Impacts – The impacts to the community are assumed to be low. The route uses existing interstate right-of-way for a portion of the corridor from Paducah into Illinois. Other portions of the corridor would require new right-of-way, but are in an area of south / southwestern Illinois that is less populated. For this category it is rated Low.

However, in terms of environmental impacts, the corridor would bi-sect a large portion of the Shawnee National forest in southern Illinois just east of Cape Girardeau. Although going through a national forest may not be in and of itself a "fatal flaw"; however if another feasible and prudent alternative exists, it must be considered. In the case of Corridor 1, other options exist that do not involve impacts to the forest. For this reason, the rating is High in this category.

Overall, the corridor is recommended for elimination from further consideration. Its environmental impacts, lack of support and interest from Illinois, and the fact that it does little to facilitate economic development in western Kentucky and only minimally satisfies goals, objectives and issues all limit its ability to be implemented successfully; especially when other corridors are more viable.

<u>Corridor 2</u> - Corridor 2 is similar to Corridor 1. It shares a common alignment on existing I-24 and a section of new right-of-way in southern Illinois in Pulaski County. However, Corridor 2 travels more southwesterly avoiding the Shawnee National Forest as it proceeds closer to the Mississippi River between Illinois and Missouri. In this area, it passes through natural areas, wetlands and the 100-year flood plain(s) before crossing at the new Bill Emerson Memorial Bridge in Cape Girardeau. From here, it too heads to existing I-55. Like Corridor 1, much of Corridor 2 would be on new right-ofway.

Constructability / Implementation / Feasibility – Most sections of the proposed corridor lend themselves to being constructed. There are larger sections of the corridor west of the Mississippi River and south of the Shawnee National Forest that would be built over wetlands and/or 100-year flood plains that would require staged construction and be launched from new sections. This would be necessary to avoid adverse affects to sensitive environmental areas during construction. Also, a large section of the route is in Illinois, which currently is neither interested in an I-66 corridor nor participating in this study. For this it is rated Low.

Compatibility with Goals, Objectives and Issues – The corridor does satisfy some of the goals, objectives and issues, although largely on a basic level. The corridor does provide a new route and makes use of portions of the existing interstate. However, it is developed in such a way to avoid major environmental areas that it seems circuitous. The route also does little for western Kentucky from Paducah to the Missouri border in terms of facilitating economic development or improving community character and quality of life. It would provide for some improved accessibility and connectivity but may not provide the most direct route and may have a higher travel time for some trips in the study area. For this it is rated Medium.

Impacts – Impacts to the community are assumed to be low. The route uses existing interstate right-of-way for a portion of the corridor from Paducah into Illinois. Other portions of the corridor would require new right-of-way but the area needed is less likely to be populated and/or developed. For this category it is rated Low. With regard to

environmental impacts, the corridor avoids the large portion of the Shawnee National forest just east of Cape Girardeau in southern Illinois. It does however have sections that encroach on existing natural areas, wetlands and the 100-year floodplain near the Mississippi River. For this reason, the rating is Medium in this category.

Overall, the corridor is recommended for elimination from further consideration. Its environmental impacts, lack of support and interest from Illinois, and the fact that it does little to facilitate economic development in western Kentucky and only minimally satisfies goals, objectives and issues combine to limit its ability to be implemented especially when other corridors are more viable.

<u>Corridor 3</u> - Corridor 3 is similar to Corridor 2. It shares a common alignment on existing I-24 and a section of new right-of-way in southern Illinois in Pulaski County as well. However, it follows a section of US 45 just north of Metropolis, Illinois and heads north and west before proceeding on a new alignment in southern Illinois. Like Corridor 2, it travels more southwesterly avoiding the Shawnee National Forest and runs close to the Mississippi River between Illinois and Missouri through natural areas, wetlands and the 100-year flood plain before crossing at the new Bill Emerson Memorial Bridge in Cape Girardeau. From this point, it heads to existing I-55.

Constructability / Implementation / Feasibility – Most sections of the proposed corridor lend themselves to being constructed. There are larger sections of the corridor west of the Mississippi River and south of the Shawnee National Forest that would be built over wetlands and/or 100 year flood plains that would require staged construction and would be launched from new roadway sections to mitigate adverse impacts during construction. Also, a large section of the route is in Illinois, which currently is neither interested in an I-66 corridor nor participating in this study. For this it is rated Low.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues, although on a very basic level. The corridor does provide a new route and makes use of portions of the existing interstate thus using existing investments in those facilities. However, its routing takes a circuitous path to avoid major environmental areas. The route also does little for western Kentucky from Paducah to the Missouri border in terms of facilitating economic development or improving community character and quality of life. The corridor would provide for improved accessibility and connectivity but may not provide the most direct route and might result in an increase in travel times for some trips in the study area. For this it is rated Medium.

Impacts – Impacts to the community are assumed to be low. The route uses existing interstate right-of-way for a portion of the corridor from Paducah into Illinois. Other portions of the corridor would require new right-of-way, but are in areas of southwestern Illinois that are less likely to be populated and/or developed. For this category it is rated Low. In terms of environmental impacts, the corridor misses the large portion of the Shawnee National forest just east of Cape Girardeau. It does however have sections

that encroach on and present impacts to existing natural areas including wetlands and 100-year floodplains. For this reason, the rating is Medium in this category.

Overall, the corridor is recommended for elimination from further consideration. Its environmental impacts, lack of support and interest from Illinois, and the fact that it does little to facilitate economic development in western Kentucky and only minimally satisfies goals, objectives and issues all limit its ability to be implemented successfully. This is especially true when other corridors are more viable in the study area.

<u>Corridor 4</u> - Corridor 4 is also similar to Corridor 2. It shares a common alignment on existing I-24 and a section of new right-of-way in southern Illinois in Pulaski County. However, Corridor 4 travels more southwesterly also avoiding the Shawnee National Forest while running much closer to the Mississippi River before crossing over it on a new bridge southwesterly of the alignment for Corridor 2. The corridor also would impact a forested area in Missouri and eventually, the route links up with I-55 south of Cape Girardeau. Like Corridors 1, 2 and 3, much of Corridor 4 would be on new right-of-way.

Constructability / Implementation / Feasibility – Most sections of the proposed corridor lend themselves to being constructed. Like Corridor 2, there are larger sections of Corridor 4, especially those west of the Mississippi River and south of the Shawnee National Forest that would be built over wetlands and/or 100-year flood plains. These sections would require staged construction and would be launched from new roadway sections. This would be necessary to avoid adverse affects during construction to sensitive nearby environmental areas. Also, a large section of the route is in Illinois, which currently is neither interested in an I-66 corridor nor participating in this study. For this it is rated Low.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues, although in a basic fashion. The corridor does provide a new route and makes use of portions of the existing interstate thus maximizing investment. However, it is developed in such a way as to avoid major environmental areas that it seems circuitous. The route also does little for western Kentucky from Paducah to the Missouri border in terms of facilitating economic development or improving community character and quality of life. The route provides for improved accessibility and connectivity but may not provide the most direct path(s) and may result in increased travel times for some trips in the study area. For this it is rated Medium.

Impacts – Like Corridor 2, impacts to the community for Corridor 4 are also assumed to be low. The route uses existing interstate right-of-way for a portion of the corridor from Paducah into Illinois. Other portions of the corridor would require new right-of-way but are in areas of southwestern Illinois that are less likely to be populated and/or developed. For this category it is rated Low. In terms of environmental impacts, the corridor misses the Shawnee National forest just east of Cape Girardeau. It does

however have sections that encroach on existing natural areas - wetlands, 100-year floodplains and forested areas. In addition, the new river crossing would have environmental affects on the adjacent Mississippi River aquatic ecosystem. For this reason, the rating is High in this category.

Overall, the corridor is recommended for elimination from further consideration. This corridor, like others in the same area, the environmental impacts, lacks support and interest from Illinois, and does little to facilitate economic development in western Kentucky. It also only minimally satisfies goals, objectives and issues. These factors limit its ability to be implemented, especially when other corridors are more viable.

<u>Corridor 5</u> - Corridor 5 would be located in the existing US 60 corridor running from Paducah, Kentucky through Kevil, La Center, and Barlow. The route would also travel in the vicinity of Wickliffe and would include a new Mississippi River crossing south of there. Once in Missouri, the route would use an extended and upgraded US 60 / US 62 to reach I-57 near Charleston.

Constructability / Implementation / Feasibility – In terms of constructability, most sections of the proposed corridor lend themselves to being readily constructed since an existing highway corridor is already in place. Also, since the corridor is used for transportation purposes, it might be easier to place a new or upgraded facility in this location. The route includes a new river crossing south of Wickliffe, Kentucky, which has been preliminarily supported by McCracken County Fiscal Court. For this it is rated Medium.

Compatibility with Goals, Objectives and Issues – The corridor satisfies a large majority of the goals, objectives and issues. The corridor provides a new route and makes use of portions of the existing facilities thus maximizing investment. The route is fairly direct and would likely facilitate economic development and provide other benefits in western Kentucky and southeastern Missouri . It would also provide for improved accessibility and connectivity in the region. For this it is rated High.

Impacts – Although new right-of-way would probably be needed for the new facility, the area is already in use as a transportation corridor, so any new impacts would largely be similar to what already exists. However, there may be changes in local access points for many residences and businesses. For this category it is rated Medium. In terms of environmental impacts, the corridor avoids many of the sensitive environmental areas in the region. It however may have impacts on productive farmlands and other areas especially the aquatic ecosystem(s) of the Mississippi River near the site of the new bridge south of Wickliffe. For these reasons, the rating is Medium in this category.

Overall, the corridor is recommended for advancement and further consideration in Level 2 screening. The corridor can be implemented, it would have political support, it does satisfy the goals, objectives and issues and its impacts are commensurate with likely positive regional benefits.

<u>Corridor 6 / 7</u> - Corridors 6 and 7 are geographically similar and have been combined into one for analysis purposes. The corridor would use a portion of existing US 60 from Paducah, Kentucky and proceed eastward (similarly to Corridor 5) but would be located within a new highway right-of-way roughly where US 60 turns northwestward south of the Gaseous Diffusion Plant west of Paducah. The route would be more to the south of Kevil, La Center, and Barlow, but would still be in the vicinity of Wickliffe in western Kentucky. This corridor would also require a new Mississippi River crossing south of Wickliffe. In Missouri, the route would use an extended and upgraded US 60 / 62 to reach I-57 near Charleston.

Constructability / Implementation / Feasibility – Most sections of the proposed corridor lend themselves to being readily constructed since they would built on new right-of-way with no anticipated conditions that would prevent construction. The corridor is largely situated in undeveloped areas and farmlands. The route includes a new river crossing south of Wickliffe, which has received preliminary support from the City of Paducah and the Purchase Area Development District (PADD). For this the corridors are rated Medium.

Compatibility with Goals, Objectives and Issues – The corridor satisfies a large majority of the goals, objectives and issues. The corridor provides a new route and makes use of portions of the existing facilities (US 60), thus maximizing some existing or planned investments. The route is fairly direct and would likely facilitate economic development and other benefits in both western Kentucky and southeastern Missouri. It would provide for improved accessibility and connectivity and includes a new bridge to replace two existing bridges near Cairo, Illinois. For this it is rated High.

Impacts – Although new right-of-way would probably be needed for the new facility, some of the area is already in use as a transportation corridor so the new impacts would largely be confined to undeveloped areas and/or farmlands. There would be changes in local farm access points for many large farms / parcels in the area and some of the productive land would be precluded form farm use. For this category it is rated Medium. In terms of environmental impacts, the corridor misses many of the most sensitive areas in the region. It however will have impacts on farmlands and other areas especially the aquatic ecosystem(s) of the Mississippi River near the site of the new bridge at Wickliffe. For these reasons, the rating is Medium in this category.

Overall, the corridor is recommended for advancement and further consideration in Level 2 screening. The corridor can be implemented, it would have political support, it does satisfy the goals, objectives and issues, and its impacts are commensurate with likely benefits.

<u>Corridor 8</u> - Corridor 8 would be located more south of Corridor 6/7. It runs from the Paducah area westward towards Missouri and then heads northwest near a point east of Wickliffe and south of Barlow. The corridor goes through the wildlife, wetlands and 100-year floodplain areas that all border the Mississippi River between Cairo, Illinois

and Barlow, Kentucky. This corridor includes a new Mississippi River crossing well north of Wickliffe and would connect to I-57 in Illinois.

Constructability / Implementation / Feasibility – Construction of virtually all sections of the proposed corridor would be on new right-of-way and some would be on what is now farmlands. The section nearest to the Mississippi River would require staged construction over the sensitive aquatic areas to minimize adverse impacts during construction. This however is not perceived to be difficult. For this it is rated Medium.

Compatibility with Goals, Objectives and Issues – The corridor satisfies a many of the goals, objectives and issues. The corridor provides a new route and makes use of large portions of the existing facilities (I-57) thus maximizing some existing investment. The route is not as direct as others, but still might facilitate economic development and provide other benefits in western Kentucky. It would provide for some degree of improved accessibility and connectivity in the region as well. For this it is rated Medium.

Impacts – New right-of-way would be needed for the new facility. Although these areas are not in the vicinity of developed areas, there would be impacts to areas used for agricultural purposes. For this category it is rated Low. In terms of environmental impacts, the corridor has impacts to sensitive aquatic areas in the region, especially those near the Mississippi River southwest of Barlow; an area known as the Barlow Flats. Also, a new bridge and its approaches would have impacts to the aquatic ecosystem(s) of the Mississippi River near the site of the bridge and on wetlands and 100-year floodplains in Missouri. For these reasons, the rating is High.

Overall, the corridor is recommended for advancement and further consideration in Level 2 screening. The corridor can be implemented and would provide a connection between I-24 and I-57. It does satisfy the goals, objectives and issues and its impacts are commensurate with its likely benefit.

<u>Corridor 9 / 10</u> - Corridors 9 and 10 are geographically similar and have been combined into one for analysis purposes. The corridor would use a small portion of existing US 60 from I-24 near Paducah and proceed eastward (similarly to Corridor 5) but would follow a more southerly path placing it between existing US 60 and KY 286 corridors south of the developed areas of Kevil, La Center and Barlow. Like other routes through western Kentucky, the route would pass in the vicinity of Wickliffe and require a new Mississippi River crossing south of the city. In Missouri, the route would use an extended / upgraded US 60 / US 62 before reaching I-57.

Constructability / Implementation / Feasibility – Most sections of the proposed new corridor lend themselves to being readily constructed since they would built on new right-of-way with no anticipated conditions that would prevent construction. The corridor is largely situated in farmland and / or undeveloped areas. The route includes a new river crossing south of Wickliffe, Kentucky, which has received preliminary backing by the McCracken County Fiscal Court. For this the corridors are rated Medium.

Compatibility with Goals, Objectives and Issues – The corridor satisfies a majority of the goals, objectives and issues. The corridor provides a new route and makes use of a small portion of an existing facility (US 60) thus maximizing some existing or planned investments. The route is fairly direct and would likely facilitate economic development and other benefits in both western Kentucky and southeastern Missouri. It would provide for improved accessibility and connectivity and includes a new bridge to replace the two that are currently in use near Cairo, Illinois. For this it is rated High.

Impacts – Although new right-of-way would probably be needed for the new facility, most of the area required would be largely confined to existing and some to farmlands or undeveloped areas. There would be fewer impacts to existing communities as the corridor is well south of populated areas. For this category it is rated Medium. In terms of environmental impacts, the corridor avoids virtually all of the sensitive areas in the region. It however will have impacts on the aquatic ecosystem(s) of the Mississippi River near the site of the new bridge at Wickliffe and for the approaches to the bridge in Missouri. For these reasons, the rating is Medium.

Overall, the corridor is recommended for advancement and further consideration in Level 2 screening. The corridor can be implemented, it would have political support, it does satisfy the goals, objectives and issues, and its impacts are commensurate with likely benefits.

<u>Corridors 11 / 12/ 13/ 14/ 15 and 21</u> – These corridors are geographically similar and have been combined into one for analysis purposes. The corridor generally lies south of US 60 in Kentucky and would be located in a new corridor running from I-24 at Paducah along KY 286 / US 62 to the southern limits of the study area. The corridor would pass in the vicinity of Wickliffe and includes a new Mississippi River crossing south of Wickliffe.

Constructability / Implementation / Feasibility – Most sections of the proposed corridor lend themselves to being readily constructed since they would built on new right-of-way with few if any anticipated conditions that would prevent construction. The corridor is largely situated in farmland and /or undeveloped areas and is well south of populated localities. The route includes a new river crossing south of Wickliffe, which has received preliminary support from the McCracken County Fiscal Court. For this the corridors are rated High.

Compatibility with Goals, Objectives and Issues – The corridor satisfies a majority of the goals, objectives and issues. The corridor provides a new route that is fairly direct and would likely facilitate economic development and other benefits in western Kentucky and in southeastern Missouri. It would provide for improved accessibility and connectivity and includes a new bridge to replace the two that are currently in use. It is one of the closest corridors to the new industrial park planned for the western Kentucky region. For this it is rated High.

Impacts – New right-of-way would probably be needed for the new roadway. Most of the land needed though would be largely confined to undeveloped areas and/or heavily used farmlands. There would be few impacts however to existing communities or developed areas as the corridor is well south of populated areas. For this category it is rated Medium. In terms of environmental impacts, the corridor avoids most all of the sensitive areas in the region, including the nearby agricultural district. It does however have impacts to some nearby farmlands, and on other areas especially the aquatic ecosystem(s) of the Mississippi River near the site of the new bridge at Wickliffe. For this category, the rating is Medium.

Overall, the corridor is recommended for advancement and further consideration in Level 2 screening. The corridor can be implemented, it would have political support, it does satisfy the goals, objectives and issues, and its impacts are commensurate with likely benefits.

<u>Corridor 16</u> – Corridor 16 starts at US 641 south of I-24 in northern Marshall County in Kentucky and proceeds westward on a new right-of-way south of KY 286. It would utilize a new river crossing south of Wickliffe and then use the extended and upgraded US 60 / 62 corridor in Missouri.

Constructability / Implementation / Feasibility – There is a lengthy section of the corridor that would require staged / launched construction over the wildlife preserve / conservation areas / 100 year floodplain in McCracken County southeast of Paducah; an area known as the Clarks River National Wildlife Reserve. For this it is rated Low.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues identified by the study. The corridor does provide a new route but is longer than others. It does not use I-24 as its eastern terminus (thus, minimizing connectivity to I-66 east of Marshall County), and also makes little use of existing facilities. The route would support economic development in the western Kentucky and southeastern Missouri regions however, and it does provide for improved accessibility and connectivity. It however, may not provide the most desirable or direct route when compared to others. For this it is rated Medium.

Impacts – New right-of-way would be needed along the entire length of the route. This would cause more community impacts since the route is longer than others. For this category it is rated Medium. Similarly, there are some environmental impacts to existing natural areas, including wildlife preserve and conservation / park areas, wetlands and 100-year floodplains and an agricultural district. These areas are largely confined to two locations however, and not the entire length of the route. For this reason, the rating is Medium in this category.

Overall, the corridor is recommended for elimination from further consideration. Its localized environmental impacts, the fact that it does not lend itself to being readily implemented, its lack of system connectivity east of Marshall County, and its level of

impacts all combine to make it less likely to be implemented, especially when other corridors are more viable.

<u>Corridor 17</u> – Corridor 17 starts along US 68 south of I-24 in northern Marshall County and proceeds westward on new right-of-way south of KY 286 and south and north of Corridor 16 as described above. It too would utilize a new river crossing south of Wickliffe, Kentucky and also use US 60 / 62 in Missouri.

Constructability / Implementation / Feasibility –There is a section of the corridor that would require staged / launched construction over the Clarks River National Wildlife Reserve in McCracken County south east of Paducah. For this it is rated Low.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues. The corridor does provide a new route but that route is long, and makes little use of existing facilities. The route would support economic development in the western Kentucky and southeast Missouri regions. It will provide for improved accessibility and connectivity but may not provide the most desirable or direct route especially since it does not use I-24 as its eastern terminus (thus, minimizing connectivity to I-66 east of Marshall County). For this it is rated Medium.

Impacts – New right-of-way would be needed along the entire length of the route. This would cause more community impacts since the route is longer than others. For this category it is rated Medium. Similarly, there are some environmental impacts to existing natural areas, including wildlife preserve and conservation / park areas, wetlands and 100-year floodplains and an agricultural district. These areas are largely confined to two locations however, and not the entire length of the route. For this reason, the rating is Medium in this category.

Overall, the corridor is recommended for elimination from further consideration. Its localized environmental impacts, its lack of system connectivity east of Marshall County, the fact that it does not lend itself to being readily implemented and its community and especially environmental impacts, all combine to make it less likely to be continued in the analysis, especially when other corridors are more viable.

<u>Corridor 18</u> – Corridor 18 starts at the interchange near I-24 and US 68 in northern Marshall County and proceeds westward on Corridor 17 as described above. It has similar characteristics and would also utilize a new river crossing south of Wickliffe, Kentucky.

Constructability / Implementation / Feasibility –There is a section of the corridor that would require staged / launched construction over the Clarks River National Wildlife Reserve areas and 100 year floodplains in McCracken County south east of Paducah. For this it is rated Low.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues. The corridor does provide a new route but that route is long and makes little use of existing facilities. The route may support economic development in the region (western Kentucky and southeastern Missouri) and will accommodate some improved accessibility and connectivity, despite the fact that it may not be the most desirable or direct route especially since it does not use I-24 as its eastern terminus (essentially minimizing connectivity to I-66 east of Marshall County). For this it is rated Medium.

Impacts – New right-of-way would be needed along the entire length of the route. This would cause more community impacts since the route is longer than others. For this category it is rated Medium. Similarly, there are some environmental impacts to existing natural areas, including wildlife preserve and conservation / park areas, wetlands and 100-year floodplains and an agricultural district. These areas are largely confined to two locations however, and not the entire length of the route. For this reason, the rating is Medium in this category.

Overall, the corridor is recommended for elimination from further consideration. Its localized environmental impacts, lack of system connectivity east of Marshall County, the fact that it does not lend itself to being readily implemented and its impacts, especially those to the natural environment, all combine to make it less likely to be continue in the analysis, especially when other corridors are more viable.

<u>Corridor 19</u> – Corridor 19 starts at US 60 / US 62 / US 68 junction at the bridge over the Tennessee River in McCracken County southeast of Paducah. From there, it traverses across I-24 along a route well south of (actually out of) the current study area. It proceeds westward on a new alignment and would utilize a new river crossing south of Wickliffe in far northern Carlisle County, Kentucky.

Constructability / Implementation / Feasibility – In terms of constructability, there is a section of the corridor that would require staged / launched construction over the wildlife preserve / conservation areas and 100 year floodplains in McCracken County south east of Paducah. Other sections however are on undeveloped land. The corridor also is the closest to the proposed western Kentucky industrial /business park in Graves County, Kentucky. For this it is rated Medium.

Compatibility with Goals, Objectives and Issues – For the most part, the corridor does satisfy some of the goals, objectives and issues. The corridor does provide a new route but is long and circuitous. The route may support economic development in the region as it comes the closest to the planned western Kentucky business park. It does provide for some improved accessibility and connectivity, but may not provide the most desirable or direct route for the majority of travelers who would use the highway. It's river crossing is not near the region's preferred location of Wickliffe however. For this it is rated Medium.

Impacts – Although the corridor is lengthy, it is very isolated, remote and sparsely developed. Impacts to the community would be minimal. For this category it is rated Low. Similarly, there are some environmental impacts to existing natural areas, including the Clarks River National Wildlife Reserve, wetlands, and 100-year floodplains. These areas are largely confined to two locations – one at the beginning or the route and a large section at the western end of the route as it approaches existing US 60 / 62 in Missouri. For this reason, the rating is Medium in this category.

Overall, the corridor is recommended for advancement to Level 2 and for further consideration. Although there are localized environmental impacts, they are not "fatal flaws". The corridor does lend itself to being implemented. However, the corridor is out of the study area. This however may prove to be advantageous as it may be easier to locate needed new right-of-way especially when compared to other corridors that are the near the developed and congested Paducah / McCracken County area.

<u>Corridor 20</u> - Corridor 20 would rebadge existing I-24 in Kentucky and cross into Illinois. It would also rebadge either I-57 in Illinois or I-55 in Missouri as I-66. This alternative corridor would also require a link in southern Illinois from I-24 to either I-57 or I-55 and may also consider a new / upgraded Mississippi River crossing south of Wickliffe along US 60 and an extended and upgraded US 60 in Missouri to reach I-57 near Charleston.

Constructability / Implementation / Feasibility – The reuse of existing facilities is very feasible. The improved US 60 facility would become the corridor through western Kentucky from I-24 at Paducah across a new bridge south of Wickliffe while I-66 would be coincident with I-24 into Illinois. Illinois and Missouri would then need to decide how or when to program I-66 in their respective states. The bridge at Wickliffe is preliminarily endorsed by the City of Paducah and the PADD. For this it is rated High.

Compatibility with Goals, Objectives and Issues – The corridor would satisfy a large majority of the goals, objectives and issues. The corridor would not provide a new route per se, but would use substantial portions of existing facilities thus maximizing investment. The new bridge and upgraded roadways would provide for improved accessibility and connectivity. For this it is rated High.

Impacts – New right-of-way would probably be needed for the link from I-24 to either I-57 or I-55 across southern Illinois and for programmed improvements along US 60. However, the slated improvements for US 60 are largely underway or have been substantially planned for. As a result, there would be little new or additional changes anticipated to existing businesses or communities in the US 60 corridor. Some local access points for many residences and businesses would be impacted as a result of US 60 improvements. The need for new right-of-way across a sparsely populat4ed southern Illinois presents little obstacles as well. or this category it is rated Low. Likewise, in terms of environmental impacts, the corridor misses many of the sensitive areas in the region. It is within an existing transportation right-of-way that is already disturbed and programmed for upgrade(s). The new bridge south of Wickliffe may have impacts to the aquatic ecosystem(s) of the Mississippi River and along US 60 / 62 in Missouri. This however is likely to be the only impacts in this category. For these reasons, the rating is Low in this category.

Overall, the corridor is recommended for advancement and further consideration in Level 2 screening. The corridor can be readily implemented, it would have political support, it does take advantage of existing or planned investments, satisfies most of the goals, objectives and issues, and its impacts are low and commensurate with likely benefits.

<u>Corridor 22</u> - Corridor 22 is similar to Corridor 2, except that it would utilize a portion of existing I-57 rather than go through the environmentally sensitive areas of southwestern Illinois.

Constructability / Implementation / Feasibility – In terms of constructability, most sections of the proposed corridor do lend themselves to being readily constructed since large portions of the new corridor would use existing facilities (I-24 and I-57). A new river crossing would not be needed. However, the corridor is predominantly in Illinois, which has shown little support for the I-66 study. For this reason, the corridor receives a Low rating in this category.

Compatibility with Goals, Objectives and Issues – The corridor satisfies some of the goals, objectives and issues. The corridor provides a new route and makes use of portions of the existing facilities thus maximizing investment somewhat. The route is not as direct as others under consideration and may facilitate limited economic development and other benefits, although few of them are likely to be in western Kentucky. It would provide for some improved accessibility and connectivity but is likely not to be as direct in terms of system connections as other corridors. For this it is rated Low.

Impacts – Impacts to the community are assumed to be Low. Although new right-ofway would probably be needed for the facility, the areas needed are small and are less likely to be populated and/or developed. For this category it is rated Low. In terms of environmental impacts, the corridor misses many of the major environmentally sensitive areas in the western Kentucky region. It does however have impacts on natural areas and wetlands in Illinois. For these reasons, the rating is Medium in this category.

Overall, the corridor is not recommended for advancement and further consideration in Level 2 screening. The corridor would have little support for implementation. Although it does satisfy some of the goals, objectives and issues in a minimal fashion, the environmental impacts are not commensurate with likely positive benefits. Given the fact that there are other more viable corridors, Corridor 22 is recommended for elimination from further consideration.

3.3 Screening Summary / Conclusions

In summary, of the 22 initial alternative corridors, eight (8) are <u>not</u> recommended for further study in Level 2 Screening. Those corridors include: 1, 2, 3, 4, 16, 17, 18, and 22. Similarly, fourteen (14) corridors, combined for analysis purposes into seven (7) corridors, are being recommended to advance to Level 2 Screening and will be studied further. Those corridors that are recommended to advance to Level 2 Screening, include: 5, 6 / 7 (combined corridor), 8, 9 / 10 (combined corridor), 11 / 12 / 13 / 14 / 15 / 21 (combined corridor), 19, and 20.

The following matrix presents a summary of the discussion above and the recommendations and analysis for the Level 1 Screening. Also presented, is a map depicting the revised / combined alternative corridors that are subject to study in Level 2 Screening.

I-66 Corridor Study Western Kentucky to Missouri Level 1 Screening Summary

Alt. / Corridor No.	Description	Constructability / Implementation / Feasibility	Compatibility with Goals, Objectives and Issues	Impacts		
				Community Impacts	Environmental Impacts	Advance to Level 2 Screening?
1	From existing I-24 alignment in Illinois due westward on new ROW through Shawnee National Forest to MO 146 near Cape Girardeau via existing bridge to I-55	Low	Medium	Low	High	No
2	From existing I-24 alignment in Illinois due southwestward on new ROW missing major environmental area in Illinois and Missouri around Shawnee National Forest to MO 146 near Cape Girardeau over existing bridge to I-55	Low	Medium	Low	Medium	No
3	From I-24 north of Metropolis, follow US 45 in Illinois northwest then following alternative 2 as described above to I-55	Low	Medium	Low	Medium	No
4	From existing I-24 alignment in Illinois due southwestward on new ROW missing major environmental area in Illinois and Missouri around Shawnee National Forest to new bridge over Miss. River south of Cape Girardeau to I-55	Low	Medium	Medium	High	No
5	From I-24 at Paducah generally follow the existing US 60 corridor to Wickliffe over the Miss. River on new bridge through lowland/floodway in Missouri connecting to US 60 in Missouri east of Charleston to I-57	Medium	High	Medium	Medium	Yes
6/7	From existing US 60 east of Kevil go southwest on a new alignment towards Wickliffe over the Miss. River on a new bridge through lowland/floodway in Missouri connecting to US 60 in Missouri east of Charleston to I-57	Medium	High	Medium	Medium	Yes
8	From I-24 at Paducah in/along existing KY 286, US 60 or US 62 corridors to a point east of Wickliffe, proceed north west on new route across the Ohio River on a new bridge to I-57 in Missouri	Medium	Medium	Medium	Medium	Yes
9 / 10	From I-24 near Paducah, follow new route south westerly to Wickliffe (parallel to US 62/KY 286) across the Mississippi River on a new bridge to I- 57	Medium	High	Medium	Medium	Yes
11 / 12 / 13 / 14 / 15 / 21	From I-24 south of Paducah follow new route southwest parallel to KY 286 to point south of Wickliffe over Mississippi River on new bridge to US 60 / US 62 to I-57	Medium	High	Medium	Medium	Yes

I-66 Corridor Study Western Kentucky to Missouri Level 1 Screening Summary

Alt. / Corridor No.	Description	Constructability / Implementation / Feasibility	Compatibility with Goals, Objectives and Issues	Impacts		
				Community Impacts	Environmental Impacts	Advance to Level 2 Screening?
16	From I-24 in Marshall County proceed west along new route to McCracken County then follow parallel route to option 14 above	Low	Medium	Medium	Medium	No
17	From I-24 near US 68 in Marshall County proceed west to McCracken County along new route parallel to 16 above to similar route as 14 west and south of Paducah	Low	Medium	Medium	Medium	No
18	From I-24 / US 60 / US 68 location in Marshall County proceed west along new route to McCracken County with 17 then follow parallel route to option 14 above	Low	Medium	Medium	Medium	No
19	From I-24 near existing US 60 bridge across Tennessee River proceed south west to new route south of KY 339 westerly along new route south of study area across the Mississippi River on a new bridge to US 60 / US 62 to Sikeston	Medium	Medium	Low	Medium	No
20	Rebadge existing interstate I-24 as I-66	High	High	Low	Low	Yes
22	From existing I-24 alignment proceed due southwest on new ROW missing major environmental area(s) in Illinois to existing I-57	Low	Low	Low	Medium	No

Shaded corridors indicate those that are not recommended for further consideration

