

Finding of No Significant Impact

US 60 Improvement Project



KYTC Items #1-115.00, 1-115.10, and 1-118.00

The proposed highway project involves the improvement of roughly six miles of US 60 near the Ballard/McCracken County line, from east of LaCenter to the existing four-lane section east of Kevil. A range of build alternatives were analyzed to improve mobility and provide a safe connection for the traveling public. US 60 provides the only east-west designated truck route west of Paducah, connecting to the Ohio River Bridge at Wickliffe.

Submitted pursuant to 42 U.S.C. 4332(2)(c) by the Federal Highway Administration (FHWA) and Kentucky Transportation Cabinet (KYTC) Division of Environmental Analysis (DEA).





April 2020

ADMINISTRATIVE ACTION: FINDING OF NO SIGNIFICANT IMPACT (FONSI)

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Approved for Public Availability				
John Ballantyne FHWA Division Administrator	Date			
Recommended By	Date			
Danny Peake KYTC DEA Director	 Date			

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I. US 60 Improvement Project

The proposed US 60 project is located near the Ballard/McCracken County line, stretching six miles from east of LaCenter to the existing four-lane section east of Kevil. **Figure 1** shows the project location in relation to the county and region. A range of build alternatives to improve mobility and provide a safe connection for the traveling public were evaluated, building on findings of a 2001 planning study and subsequent preliminary design efforts. Additional information is provided in the Environmental Assessment (EA)¹ developed for the project.

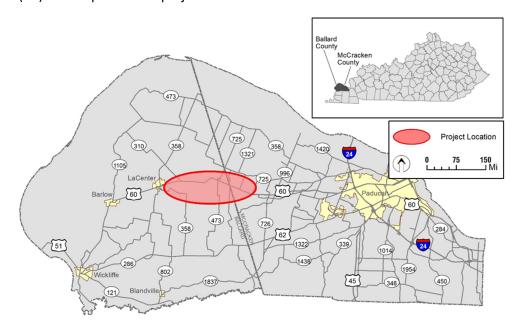


Figure 1: Project Location Map

The project addressed by this analysis includes three separate Item Numbers: 1-118.0 covers the western section, 1-115.0 covers the central section, and 1-115.1 covers the eastern section in McCracken County.

US 60—locally named Hinkleville Road, Kentucky Avenue, and Paducah Road moving east to west—is a two-lane rural highway with 11-foot lanes and 2-foot paved shoulders. It provides the only east-west principal arterial connection west of Paducah, connecting to the Ohio River Bridge at Wickliffe. The speed limit is 55 mph, dropping to 35–45 mph within Kevil. The route is listed on the National Highway System (NHS) and rated for AAA trucks (up to 80,000 pounds gross weight). The project corridor carries 5,000 to 7,200 vehicles per day (vpd) based on recent counts, with truck traffic representing 10% to 17% of this volume. Traffic volumes have been trending downward over the past decades.

A. Project History

The project concept has been considered for several decades now: the Kentucky Transportation Cabinet (KYTC) completed a planning study for the proposed project in 2001, associated with a statewide initiative to widen US 60 to four lanes in its entirety. The study identified two alternatives for consideration: a

¹ https://transportation.ky.gov/DistrictOne/Pages/US-60-Ballard-McCracken-Counties.aspx

bypass south of Kevil and reconstructing the existing route. Either option assumed a divided four-lane or five-lane cross section. While the bypass would reduce relocation impacts within Kevil, there was concern regarding the effects that a bypass would have on businesses within the small community.

Following the planning study, state-funded preliminary design efforts commenced, culminating in a 2007 design executive summary (DES) for the central portion of the project. Four alignments were developed and shared with the public, each with a rural, four-lane divided cross section and a 60 mph design speed. A southern bypass was preferred as it reduced impacts and provided for good constructability and maintenance of traffic.

Around 2018, KYTC opted to federalize the project, commencing environmental studies compliant with the National Environmental Policy Act (NEPA) to allow for future federal funding. Three build alternatives—including a variation of the 2007 Alternative A preferred southern bypass—advanced for consideration in compliance with federal environmental regulations. The alternatives development process is discussed further in **Chapter II**.

B. Current Project Funding

During 2019, the project was evaluated alongside other projects throughout the state and region as part of the Strategic Highway Investment Formula for Tomorrow (SHIFT) process intended to provide a data-driven evaluation process to feed into the state's biennial highway budget. Funding in the current *FY 2020-2026 Highway Plan* is summarized in **Table 1**.

Phase	Item No.	Fiscal Year	Dollars
Design			\$0
Right-of-Way	1-115.0	2021	\$2.00 M
	1-115.0	2022	\$3.80 M
	1-118.0	2023	\$2.76 M
Utilities	1-115.0	2021	\$1.20 M
	1-115.0	2022	\$6.00 M
	1-118.0	2024	\$11.25 M
Construction	1-115.0*	2022	\$10.70 M
TOTAL			\$37.71 M

Table 1: Funding Source per current KYTC Highway Plan

C. Project Purpose and Need

The Purpose and Need Statement establishes why the KYTC proposes to advance a transportation improvement and drives the decision-making process for alternatives' consideration, analysis, and selection. The purpose of the project is to improve mobility and safety for the US 60 corridor in eastern Ballard County. US 60 is the only east-west principal arterial link in Kentucky west of Paducah, leading to the only Ohio River highway crossing for an 80-mile stretch. Listed on the NHS and a state-designated truck route, its narrow lanes, limited passing opportunities, closely spaced access points through Kevil, and substandard curves make the route challenging for freight carriers. Further, five years of data show a history of crashes, with two high crash spots and five fatality collisions.

^{*} SPP state funds

D. Logical Termini

The western terminus for the project is KY 310, a rural minor collector providing access to the northeast. A short segment extends beyond this terminus, necessary to transition back to the existing US 60 geometry. A separate KYTC project concept, CHAF 20060004, will eventually continue the improvement west through LaCenter.

The eastern terminus of the project is the existing four-lane section leading to Paducah, roughly 1.4 miles east of the county line. Engineers examined a variety of potential connection locations and improvement limits, considering existing geometry and safety factors.

II. Alternatives Considered

Since the 2001 planning study, a series of potential improvements have been considered, culminating in three detailed study alternatives discussed in the EA, alongside the No Build Alternative. Following an assessment of environmental impacts, Alternative 1 was selected for implementation.

Initial Planning Effort. The 2001 planning study² identified two alternatives for consideration based on public input: a bypass south of Kevil and reconstructing the existing route. Either option used a divided four-lane or five-lane cross section. The report states that "a southern bypass of Kevil appears to be the most preferred alternative. A bypass would result in fewer parcels and relocations; however, there would be loss of prime farmland. There are community concerns about the effects of a bypass on businesses that are currently located along the existing route, so a bypass should remain as close to Kevil as possible to maintain visibility of the community. A bypass would also allow continuation of a four lane, divided highway template that has been used on previously reconstructed segments of US 60."

State-Funded Design Process. Following the planning study, preliminary design efforts commenced, including public meetings during February 2004 and December 2006. Four alignments were considered with a rural, four-lane divided typical section and a 60 mph design speed. The southern bypass was again preferred as it lessened property and utility relocations and provided better constructability.

Once the southern bypass concept was identified as the preferred alternative, the design process continued as a state-funded project. Limited environmental investigations were conducted to resolve public concerns and address jurisdictional areas for future permitting needs. Concerns about potential historic preservation issues associated with Eagles Rest Farm led to three additional alternatives considered in the western section of the project.

Federal-Funded Design Process. Since that time, its prioritization in the 2018 SHIFT process with right-of-way funding in the FY 2018–2020 biennium led KYTC to federalize the project, adding a NEPA component to allow for future federal funding. Discussed below, three build alternatives—including a variation of the 2007 preferred southern bypass—advanced for consideration in compliance with federal environmental regulations.

² Intermediate Planning Study: Ballard-McCracken Counties, US 60, Item No. 1-115.00 (December 2001). Prepared by KYTC Division of Planning.

A. Alternatives for Detailed Study

Three build alternatives were advanced for detailed study, alongside the No Build Alternative.

The No Build Alternative is one in which the KYTC would take no action to construct/reconstruct US 60; only routine maintenance would occur. While no new right-of-way would be acquired, the No Build Alternative does not improve east-west mobility and would not meet the stated purpose and need of the proposed project. However, it was carried forward as a baseline for comparing impacts among other alternatives.

Build Alternatives. Three build alternatives were identified in the EA for detailed study, shown in **Figure 2**. A variety of typical sections was considered as part of the engineering design process: two to five travel lanes, various shoulder widths, rural or urban templates, etc. To be conservative, the largest footprint scenarios were evaluated; impacts may be reduced as preliminary designs are refined.

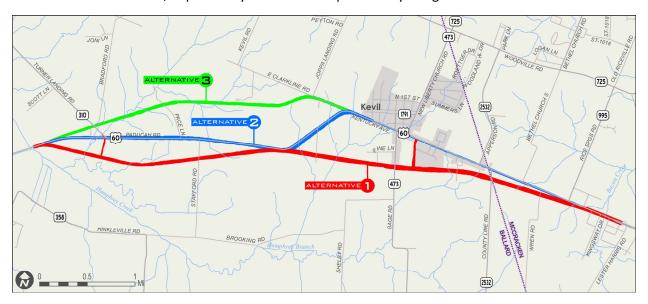


Figure 2: Build Alternatives for Detailed Study

- Alternative 1 begins east of the bridge over Humphrey Creek, creating a new route on new
 alignment south of existing US 60. It ends at the improved four-lane section near Lester Harris
 Road. The assumed cross-section is a four-lane divided rural highway. This option mimics the 2007
 preferred Alternative A.
- Alternative 2 begins east of the bridge over Humphrey Creek, generally following the existing US 60 alignment. The cross-section is a four-lane divided rural highway with a five-lane urban section through Kevil. A narrower footprint with two to three lanes was also considered.
- Alternative 3 begins east of the bridge over Humphrey Creek, creating a new route along the old railroad bed west of Kevil, then generally following the existing US 60 alignment through Kevil to the east. The cross-section is a four-lane divided rural highway with a five-lane urban section through Kevil. A narrower footprint with two to three lanes was also considered. This alternative grew from a local suggestion to preserve access to Kevil businesses while minimizing property impacts.

Per input from elected officials, other stakeholders, and the public, a wider cross-section better addresses community goals for the proposed project. The rural section includes two 12-foot-wide travel lanes per

direction, 12-foot-wide outside shoulders (10-foot paved), and 8-foot-wide inside shoulders (6-foot paved), separated by a depressed median. No bicycle/pedestrian improvements are planned as part of the project. However, wider shoulders provide a safer connection than the existing conditions.

B. Selected Alternative

Alternative 1, a four-lane highway on new alignment south of existing US 60, was selected for implementation. The alternative footprint is presented in **Appendix A**, overlaid with an overview of environmental features discussed in the following chapter.

- This alternative avoids/minimizes impacts to major red flag issues along existing US 60: homes and businesses, high pressure gas lines/pump station, the Daher-TLI facility, etc. There are no impacts to Section 4(f) resources: public parks, wildlife refuges, or historic properties.
- The vast majority of over 300 public surveys preferred it: 72% preferred Alternative 1 in the western section and the 84% preferred it in the eastern section.
- Maintenance of traffic is less complex as the existing highway can continue to carry traffic while the new facility is built.
- Estimated costs for Alternative 1 are lower than the other Detailed Study Alternatives, with savings most notable in the right-of-way and utility phases.

Table 2 summarizes the environmental impacts associated with preliminary designs for Selected Alternative 1, discussed throughout **Section III**.

Table 2: Summary of Impacts for Selected Alternative 1

Impact Category	Selected Alternative 1
Project Length	6.29 miles
Cost (2019\$)	\$62.4 million
Meets Purpose & Need	Yes
2040 Daily Traffic	5,200-7,000 vpd on new alignment with 2,000-2,100 vpd on existing
Bicycle/Pedestrian	No dedicated facilities; wider shoulders improve safety
Right-of-Way Impacts	
Relocations	19-20 Residential + 2 Commercial
New Right-of-Way	200 acres divided between 68 parcels
Business Community	Reduced pass-by traffic on old US 60;
Business Community	no utility connections along new route
Land Use	Consistent with regional land use, transportation plans
Farmlands	
Prime/Unique Soils	65.5 ac
Statewide/Local Importance	15.6 ac
Land in Ag Districts	26.6 ac
NRCS Rating Score	190
Environmental Justice	Not Disproportionately High and Adverse
Air Quality	Minimal changes
Noise Impacts	18 impacts to noise-sensitive receptors; No abatement
Stream Impacts	4,300 LF total including 15 streams
Wetland Impacts	0.14 ac

Impact Category	Selected Alternative 1
Floodplain Impacts	9.15 ac
Forested Bat Habitat	Up to 18 ac
Historic Effects	Not Adverse
Archaeological Sites	No Effect
Hazardous Materials, USTs	6 potential sites
Construction Impacts	Typical impacts for highway construction project likely

III. Affected Environment and Impacts

The following sections provide a description of the existing environment and present likely impacts associated with Selected Alternative 1. Additional information, including a comparison versus other Detailed Study Alternatives, is presented in the EA.

A. Land Use

Land use within the project area is primarily agricultural, with a mixture of rural residential, commercial, and industrial areas interspersed along the corridor. Paducah, located roughly 12 miles east of Kevil, is the nearest urban area. Land use within Ballard County and the far western edge of McCracken County are relatively stable, with little development over the past decade and modest plans for the future.

Key community resources within the project area include:

- One large farm, Eagles Rest Plantation, dominates the western section of the project area. The
 original farm dated to the 1880s and was once noted for its production of mules and jack stock. It
 was donated to Murray State University as an agricultural research facility in 2016. The property
 covers 500+ acres with holdings on both sides of US 60. Discussed further in Section III.F, one
 portion of the farm was identified as eligible for the National Register of Historic Places (NRHP)
 but subsequent losses of integrity reversed the determination.
- Scattered small businesses lie along the corridor, concentrated east of Kevil: various automotive parts/service/sales, home and farm supply retailers, professional offices, a gas station, restaurant, etc.
- The 16-acre West Kentucky Technology Park and Daher-TLI, a uranium storage cylinder cleaning facility, represent the most notable industrial uses in the project area.
- Four large, high pressure gas lines transect the project area with an associated pumping station adjacent to US 60.
- Three churches and two cemeteries are located within the project area.

The proposed project is consistent with available regional/community planning efforts.

1. Impacts to Land Use

Regionally, the improved route will provide increased mobility and safety for Ballard County and western McCracken County motorists. Residents of Kevil and LaCenter will benefit from an improved connection into Paducah.

During the 2019 public meeting, attendees expressed concern about the impacts to the Kevil business community. While a wider US 60 through town would have more right-of-way and relocation impacts than a cross-county alignment, diverting through traffic south of town would potentially impact the visibility of local businesses along US 60 today. Traffic forecasts estimate a 75% reduction in daily traffic volumes on old US 60 when the new alignment is constructed.

As the new southern route does not connect to existing utilities, costs to develop along relocated US 60 would be higher, potentially extending the timeline for any future development to occur along the new route.

The Selected Alternative would cause the direct conversion of private taxable property to non-taxable government-owned right-of-way, totaling an estimated 200 acres divided between 68 parcels.

Regarding long-term benefits, the proposed project is expected to enhance the competitive and locational advantages for the corridor, particularly if four lanes are constructed. Although new development is not expected to locate nearby solely as a result of implementing the proposed project, the improved transportation network would be expected to complement local efforts to encourage new employment opportunities and attract business to the area.

Community Resource Impacts. Selected Alternative 1 runs along the south and west boundaries of the West Kentucky Technology Park and would provide a connection from Veterans Avenue to the new US 60 facility. An estimated 2.1 acres of strip taking would occur along the outer edge of the parcels but no site improvements would be affected. An estimated 48.3 acres of the Eagles Rest Plantation would be acquired as new right-of-way to accommodate Selected Alternative 1.

Utility Impacts. The bulk of project area utilities run along existing roadways: water, gas, electric, telephone, and fiber optic lines. Located primarily on new alignment, Selected Alternative 1 minimizes these impacts. However, it (and the other Detailed Study Alternatives) crosses over four large gas/crude oil transmission lines.

Farmland Impacts. Most project area soils are classified as prime or statewide important farmlands. Particularly west of Kevil, most areas lining the US 60 corridor are used for cropland with several large agricultural districts identified. Selected Alternative 1 impacts 65.5 acres of Prime/Unique farmland soils and 15.6 acres of statewide/local important farmland soils, receiving 190 points on the Natural Resource Conservation Service (NRCS) rating scale. Additionally, 26.6 acres of needed right-of-way lies within agricultural districts. Coordination with NRCS indicates no unique mitigation measures are required. For any farm operations affected by a Build Alternative, a relocation assistance specialist will be assigned to help resolve problems resulting from splitting farms.

B. Community

According to Census data and population projections from the Kentucky State Data Center, Ballard County has seen minimal growth and is projected to slowly decrease into the future. McCracken County has seen more substantial growth but is expected to level off. The rural, far west section of McCracken County containing the project more closely resembles Ballard County than Paducah. Overall, the project area

population is predominantly white (98.5%) and generally older than the statewide average (43.3 vs 38.6 years).

Relocations. Selected Alternative 1 will result in an estimated 19-20 residential relocations and 2 commercial relocations. The majority of relocations are clustered in two areas: seven mobile homes within the mobile home community along Amy Lynn Drive plus five homes approaching the eastern project limit, fronting US 60 or Kingsway Drive. The impacted commercial properties are also near the eastern project limit, associated with automotive sales/salvage businesses fronting US 60 near Linda Mel and Kingsway drives.

KYTC Relocation Assistance Program. To minimize the unavoidable effects of right-of-way acquisition and displacement of people, KYTC offers a Relocation Assistance Program in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended. Housing and relocation resources would be available to all residential and business relocatees without regard to race, creed, color, national origin, or economic status. A review of the local housing market reveals an ample supply of comparable housing available at any one time. It is likely the relocations for this project would be accomplished using normal relocation procedures, although the need for Last Resort Housing may arise for low-income relocatees. This program would be used if comparable replacement housing is not available, or is unavailable within the displacee's financial means, and the replacement payment exceeds the state legal limitation. A brochure entitled "Your Benefits as a Highway Displacee under the Relocation Assistance Program" describes in detail the state assistance available.³

1. Environmental Justice

Federal guidance on Environmental Justice (EJ) requires each federal agency to "identify and address disproportionately high and adverse human health or environmental effects of their policies, programs and activities on minority populations or low-income populations." Efforts were made to identify areas of low-income and minority populations within the study area, including: a review of census data, project mapping, field observations, and discussions with the McCracken County planning department.

Recent Census estimates show the area contains an extremely small minority population: 98% of area residents are white, well above the statewide or countywide averages. McCracken and Ballard Counties are generally less wealthy that the statewide average. However, both tract and block groups containing the project generally exceed countywide levels for income. Field observation indicated several clusters of likely low-income housing. The trailer park along Amy Lynn Drive, which would be displaced under Selected Alternative 1, exhibits visual evidence that tenants may satisfy federal poverty guidelines. Another section of homes fronting US 60 near Kingsway and Queensway drives approaching the eastern project limits likely also represents a cluster of low-income persons. No clusters of minority populations were identified during field visits.

Environmental Justice Findings: Relocation Impacts. Per KYTC policy, surveys were sent to the 20 potential residential relocatees for the preferred alternative during Summer/Fall 2019. One of the rental properties is currently vacant, reducing the number of households to 19 for this analysis.

³ Available online through the KYTC website at https://transportation.ky.gov/RightofWay/AppraisalForms/Relocation%20Assistance%20Information%20Booklet.pdf

Eight surveys, representing 42% of residential relocatees, were returned. Comparing survey responses and statistical assumptions about non-responsive households, 11 residential relocations represent protected populations (disabled, elderly, limited English proficiency, zero car household, and/or minority). Of these, 6-7 of 18 relocatees, or 32-37%, would receive an Adverse Effect determination, below the 50% threshold established in KYTC's current EJ policy.

Environmental Justice Findings: Other Impacts. Regarding other potential effects to EJ populations, indirect effects (i.e., air quality, noise, and construction impacts) would be distributed evenly among all properties along the proposed project. Regarding positive effects to EJ communities, the safer highway benefits all resident populations, including any EJ populations.

Therefore, while the project does have adverse effects to EJ populations, the impacts are not disproportionately high. It has been determined the project does not have a disproportionately high and adverse effect to EJ populations.

C. Air Quality

Due to the rural nature of the area and relatively low traffic volumes, air quality is not a major concern for the project. The project is listed in KYTC's latest Statewide Transportation Improvement Program, FY2019-2022. Ballard and McCracken counties are in attainment for all criteria pollutants monitored by the US Environmental Protection Agency. No meaningful impacts on air quality—direct, indirect, or cumulative—are anticipated to result from construction of the proposed project.

D. Noise

KYTC has developed a policy consistent with FHWA guidelines to determine the need, feasibility, and reasonableness of noise abatement measures, including barrier walls, for highway projects. An analysis was conducted for the proposed project to determine highway-generated noise impacts. Selected Alternative 1 would impact 18 noise-sensitive receptors. Most of the impacts represent a substantial increase as the corridor today, removed from the existing highway, is generally very quiet.

To abate noise impacts, KYTC policy defines feasibility and reasonableness criteria to determine when noise barriers merit consideration. For the proposed project, no noise abatement measures were identified for further consideration. Eliminating receptors likely to be displaced, the remaining receptors are generally too scattered to satisfy noise reduction goals. One area along US 60 does have receptors closely spaced along existing US 60 but individual driveways to access these properties make a barrier infeasible. Additional abatement measures were determined not to be effective.

E. Aquatic and Terrestrial Ecosystems

An ecological baseline study was conducted during 2018-2019, including coordination with state and federal agencies, an inventory of the environmental setting, literature reviews, field surveys/sampling, and impact assessment. No wildlife management areas, public forests or parks, exemplary natural communities, or champion trees were identified in the project area. No Cold Water Aquatic Habitat,

Outstanding State Resource Waters, Exceptional Waters, Reference Reach Waters, Kentucky Wild River, or Outstanding National Resource Waters are nearby.

1. Water Resources

The project area lies in the Upper Humphrey Creek, Bayou Creek/Ohio River, and Middle Humphrey Creek watersheds. Streams, ponds, and wetlands identified within the project area are shown in **Figure 3**, alongside floodplain data from FEMA.



Figure 3: Project Area Water Resources

Stream Impacts. Preliminary designs for the Selected Alternative show an estimated 4,300 linear feet of stream impacts, divided between 15 individual streams. This represents 1,270 linear feet of perennial streams, 1,570 linear feet of intermittent streams, and 1,460 linear feet of ephemeral streams. Additionally, 9.15 acres of floodplain are likely to be impacted.

Construction activities and associated erosion are likely to produce short-term and long-term impacts to streams in the project corridor: increased sedimentation, runoff, and erosion. Strict adherence to KYTC's *Standard Specifications* will minimize erosion and in-stream siltation. Guidance for sediment control is also provided in the FHWA *Best Management Practices (BMP) for Erosion and Sediment Control*. An erosion control plan should be developed for the project and approved by KYTC DEA prior to construction.

Wetland Impacts. Additionally, 0.14 acres of wetlands are likely to be impacted. Construction will result in a direct impact to wetlands through filling, grading, and conversion to roadway. Avoidance measures should be used to avoid, reduce, or eliminate impacts to wetlands. Proper BMPs to reduce or eliminate runoff of contaminants should be used, including the proper use of silt fencing to protect wetlands from contamination and sedimentation.

Permits. Impacts associated with implementing Selected Alternative 1 are anticipated to require a Section 404 Permit issued by the US Army Corps of Engineers and a Section 401 Water Quality

Certification and/or Permit to Construct along a Stream issued by the Kentucky Division of Water. As the project will require permanent stream loss greater than 300 feet on a single stream, mitigation for stream impacts will be required.

2. Threatened and Endangered Species

No unique species or terrestrial habitats were observed during 2018-2019 field surveys. The US Fish and Wildlife Service lists four protected species potentially occurring with the project area: Gray Bat, Indiana Bat, Northern Long-eared Bat, and Least Tern.

Suitable forest and stream habitat for bats exists along the project corridor but no portals, caves, or open sinkholes were observed within one kilometer. No caves occur within five kilometers according to Kentucky Speleological Society records. No habitat for Least Tern was observed, resulting in a No Effect finding.

Impacts to Threatened/Endangered Bats. In accordance with the 2020 Programmatic Biological Opinion (BO) on the Effects of Transportation Projects in KY on the Indiana Bat and Gray Bat, presence is assumed and a determination of "may affect, likely to adversely affect" applies to the Indiana bat and gray bat. Mitigation for impacts to forested Indiana and gray bat habitat should be addressed by adhering to the 2020 Programmatic BO with a contribution to the Imperiled Bat Conservation Fund as appropriate, committing to no tree clearing during June 1 through July 31. The project will implement BMPs and sediment and erosion control measures to minimize impacts to these habitats.

Because the project is not located within 1/2 mile of a known hibernacula or within 1/4 mile of a known summer maternity roost tree, it is covered under the Final 4(d) rule and compensatory mitigation and seasonal tree clearing restrictions will not be required for impacts to Northern long-eared bat. Per the final 4(d) rule, Northern long-eared bat receives a determination of "may affect, not likely to adversely effect."

F. Section 106 Cultural Historic & Archaeological Resources

The National Historic Preservation Act requires federal agencies consider the effects that their activities and programs have on important historic properties, that is, those that are listed in or eligible for the NRHP. An extensive data collection effort was completed over the project development process to identify historic resources, which has been coordinated with the State Historic Preservation Office (SHPO). Building on these previous investigations, cultural historians completed additional analyses during 2018–2019, examining archival records and surveying 80 sites over 50 years of age within the Area of Potential Effect.

- Site 6 (KHC #BA-155 and 178), a portion of the Eagles Rest Plantation, was determined to be no longer NRHP eligible as the bungalow associated with the site was destroyed by fire during 2014.
 Further, fields/circulation networks were overgrown once crop/livestock production ceased, the connection to the Robinson family disappeared with the transfer of ownership, and the mule barn was demolished.
- The barrel-vault mule barn (Figure 4, KHC #BA-180) remains eligible for its architecture.
- The remaining 78 resources did not meet the NRHP criteria; no resources are listed or eligible.

Selected Alternative 1 will have No Adverse Effect on the NRHP-eligible barn. The preliminary right-of-way for is located over 300 feet south of the structure, separated from the new roadway by the adjacent tree-lined pond. The SHPO concurred with these findings in letters dated December 5, 2018; May 14, 2109; and August 20, 2019.





Figure 4: BA-180, NRHP-eligible barrel-vault mule barn

1. Archaeological Resources

An archaeological overview was prepared for the project, summarizing previous survey efforts and assessing the potential to encounter previously undiscovered finds. The area has been extensively surveyed with 13 previous archaeological surveys conducted within a 2-kilometer radius of the project area.

During February and March 2020, Phase I archaeological investigations were conducted along previously unsurveyed portions of the Alternative 1 footprint. Field methods varied based on topographic setting and land use, including a combination of pedestrian surveys, systematic shovel testing, and hand auger testing. Two sites are within/adjacent to the footprint:

- 15McN242, the former Knott Schoolhouse (early to mid-20th century) located southeast of the US 60/KY 995 (Rice Springs Road) intersection.
- 15Ba139, a prehistoric open habitation without mounds site dating from the Early Archaic through the Early Woodland periods. The site was previously surveyed, located south of the US 60/KY 310 intersection in Ballard County, near a tobacco barn on the Eagles Rest Plantation.

The portions of these sites impacted by Selected Alternative 1 have very limited research potential because of farming disturbance, the absence of temporally diagnostic materials, and/or the low density and diversity of cultural remains. Therefore, the impacted portions of these sites are recommended not eligible for inclusion in the NRHP. Additional archaeological work would not produce significant information beyond that which has been collected and no further work is recommended for these sites. Construction of Selected Alternative 1 will have no effect on archaeological resources listed in or eligible for the NRHP. SHPO concurred with this finding on May 27, 2020, included in **Appendix B**.

If any previously unrecorded archaeological materials are encountered during construction activities, SHPO should be notified immediately. If human skeletal material is discovered, construction activities should cease and SHPO, the local coroner, and the local law enforcement agency must be notified, as described in KRS 72.020.

G. Hazardous Materials

An assessment was conducted in 2018-2019 to identify hazardous materials and environmental concerns. A database search and field investigation were conducted; no interviews with property owners have been conducted at this time. Site reconnaissance was conducted during July 2018 and February 2019. Listed in **Table 3**, further investigations are recommended at six Recommended Environmental Conditions (REC) and Historic REC sites. Property locations are highlighted in **Figure 5** as well.

Table 3: REC and	Historic REC with	Further Investigation F	Recommended if Impacted

Map ID	Address	Finding	Description
7	804 Kentucky Ave	REC	Current garage/automotive repair type structure.
11	Rudy's Farm Center 12240 US 60 W	REC	Retail farm equipment/materials sales with a former NPDES permit. Unknown sale and/or storage of agricultural chemicals, petroleum products.
12	Federal Materials 11715 US 60 W	REC	Historical light industrial property with a former NPDES permit. Bay doors indicate possible automotive use.
13	Light Industrial 11645 US 60 W	REC	Historical and current commercial property with offset building placement and bay door, which may indicate former retail petroleum and/or automotive repair use.
14	Auto Salvage Yard 11510 US 60 W	REC	Inactive automotive salvage yard.
15	Jerrell Auto 11410 US 60	REC	Active automotive salvage yard. 55-gallon drum observed on the north side of a warehouse.

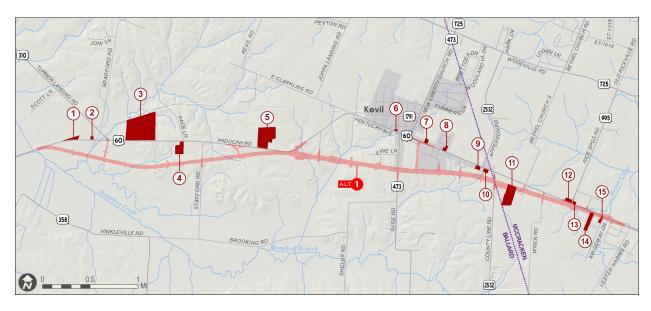


Figure 5: Locations of Potential Hazmat Concerns

H. Viewshed & Aesthetic Resources

The project corridor encompasses primarily rural environments and presents typical viewsheds. Within the project area, typical aesthetic elements associated with corresponding land uses (agricultural fields and rural residential, with limited commercial and industrial fronting US 60) are present. No visually sensitive resources were identified. While the viewsheds have typical aesthetic qualities of a rural west Kentucky landscape, none present unique aesthetic features or viewsheds that would be potentially impacted by the project.

I. Potential Construction Impacts

Depending on the availability of funding, initial construction could include only two lanes on the full, four-lane ultimate right-of-way, resulting in lesser direct impacts that presented throughout this chapter.

The proposed project is anticipated to produce a beneficial short-term economic impact by stimulating the local economy in terms of construction-related jobs, sales, income, government revenue and expenditures, and other variables. Furthermore, it could be expected to produce a beneficial long-term impact by providing the necessary infrastructure for more efficient and safe mobility.

Highway construction activities would also have temporary air, water quality, noise, and traffic flow impacts within the project area, typical for a highway construction project. Steps to minimize or avoid these temporary impacts are recommended in the EA.

IV. Public & Agency Involvement

A key component in the success of any transportation project depends on many factors, including the involvement of the local, state, and federal agencies; elected officials and area planners; and members of the community. The communication process includes both gathering information from stakeholders and providing information. This coordination is a dynamic process that will continue throughout the life of the project. The proposed project builds from a rich background of public involvement, dating back to the 2001 planning study:

Phase	Timeline	Milestone Event
Dlanning	June 2000	Local Officials/Stakeholders Meeting
Planning	Sept 2001	Public Meeting
Ctata	February 2004	Public Meeting
State- funded	December 2006	Public Meeting
Design	2007+	As-needed coordination with individual property owners as part of preliminary design process
	June 2019	Public Meeting
NEDA	February 2020	EA Signed, identifying Alternative 1 as Preferred
NEPA	May 2020	EA Published on District 1 website
Process	June 2020	Press Release, publicizing EA with opportunity to request hearing
	March 2021	Virtual Hearing

Table 4: Public Involvement Milestones

Planning Phase. A meeting with local elected officials and other interested groups was held June 13, 2000, to solicit input on project goals and community concerns. One of the major discussion points was the potential impact of bypassing Kevil.

On September 13, 2001, another public meeting was held in Kevil. Comments received included the need to improve curves, traffic flow, and safety; concerns about bypassing Kevil; concerns about community impacts if the existing route is widened; a suggestion to improve KY 286 as an alternate east/west connection; and farmland impacts.

State-Funded Design Phase. As part of the initial design process, public meetings were held on February 10, 2004, and December 5, 2006. The major concerns that arose from these outreach efforts were 1) access to the industrial park and 2) impacts to Eagles Rest Plantation. Environmental field studies for endangered species, archaeological deposits, and historic resources were undertaken to resolve concerns raised, as summarized throughout the previous chapter.

Consideration under NEPA. An afternoon briefing for local officials/stakeholders and evening public meeting were conducted, both on June 11, 2019, to present the three Detailed Study Alternatives and solicit feedback. In total, 187 members of the public attended. The vast majority of the 331 surveys returned preferred Alternative 1 and over 85% preferred a 4-5 lane widening option over 2-3 lanes.

A. Comments since the EA

Following the May 2020 publication of the EA online, an opportunity to request a public hearing was published in June 2020 by various local media outlets (**Appendix C**) and promoted via KYTC's District 1 social media feeds. In light of public health considerations during 2020, an in-person public hearing was not conducted. Interested parties were directed to contact the KYTC project manager; follow-up coordination points occurred with individuals as requested. Twelve comments were received, included as **Appendix C**.

- Six of twelve comments expressed support for Alternative 1, citing economic growth, safety, convenience, and construction disruptions.
- Four comments were requests for additional information about Alternative 1, primarily related to individual property impacts.
- The remaining two comments were in opposition to Alternative 1, preferring a solution that widens the existing highway through Kevil.

One individual requested that KYTC conduct a hearing. Accordingly, KYTC coordinated with FHWA throughout Fall 2020 to identify a flexible approach to safely conduct a hearing in compliance with the latest state and federal health guidelines. The public involvement approach included three components to engage with the community: a project website and virtual public hearing, supplemented with in-person, by-appointment sessions afterwards. Supporting information is included as **Appendix D**.

1. Project Website

A StoryMap was shared online⁴ with information about the project's history, purpose and need, alternatives considered, and environmental impacts. Exhibits included large-scale plots of the detailed study alternatives from the 2019 public meeting, a link to the EA, and interactive mapping of the Preferred Alternative. Links provided an option to register for the March 9 virtual meeting or to provide comments online. During February and March 2021, the website received over 1,100 visits.

2. Live Virtual Hearing

A virtual meeting was held on March 9, 2021, from 6-7 PM Central time. Zoom tracked 77 preregistrations with 38 members of the public and 14 project team members present during the live event. KYTC and consultant staff highlighted information from the project website and opened the session for questions/comments following a brief presentation on the project. Attendees were encouraged to comment during the meeting, through the website, via email, or by phone.

While no public statements were shared, several attendees had questions about funding/schedule, specific cross-street connections, and anticipated right-of-way widths. The meeting was recorded; a video and transcript were posted to the project website.

3. In-Person Follow-up Sessions

Three individuals requested in-person follow-up sessions: Murray State University representatives plus two private property owners in the vicinity. In-person meetings were conducted March 22-23 in Kevil and Paducah. Comments were primarily about specific driveway connections, property impacts, and noise levels. Members of the design team were on-hand to address concerns.

Throughout the 30-day comment period, 28 public comments were received. These represent a combination of online comment forms from the project website, emails, and phone calls. Summarized visually in **Figure 6**, 13 comments expressed support for Alternative 1. Other themes included a different

alternative preference; specific properties' drainage, access, or noise impacts; and questions about the timeline. The "other" category represents one proponent of a new four-lane facility, one individual identifying other highways that warrant improvements, and a request to find information on the StoryMap. As appropriate, members of the project team provided individual responses to public questions.

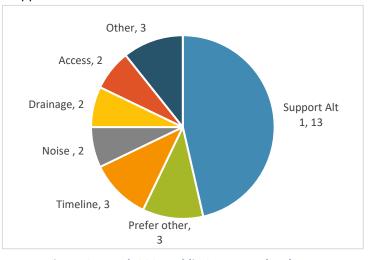


Figure 6: March 2021 Public Comments by Theme

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⁴ https://arcg.is/CGLa1

V. Conclusions, Mitigations, & Commitments

Based on the extent of impacts, several mitigation measures are proposed to offset adverse effects.

Displacements. Summarized in **Section III.B**, the Selected Alternative will displace 19-20 homes and 2 businesses. KYTC will implement a relocation program in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act*. Relocation resources will be available to all residential relocatees without discrimination with an experienced agent assigned to each displaced household or business to navigate the process. Several residential relocatees were identified as likely low-income households; tenants may qualify for supplemental relocation assistance or Last Resort Housing following a detailed income calculation during future right-of-way acquisition.

Bat Habitat. Discussed in Section III.E.2, three federally-listed bat species have the potential to occur within the vicinity. No habitats of exceptional quality or rarity were identified. Appropriate resources should be utilized to minimize impacts to bat habitats such as BMPs at stream crossings to minimize erosion and sedimentation. Mitigation for impacts to forested Indiana and gray bat habitat should be addressed by adhering to the 2020 Programmatic BO with a contribution to the Imperiled Bat Conservation Fund as appropriate and committing to no tree clearing June 1 to July 31.

Hazardous Materials. Summarized in Section III.G, six sites with potential hazardous materials were identified along the Selected Alternative 1 footprint. Other possible environmental concerns throughout the project area include power pole mounted electrical transformers, farms that handle and store pesticides/herbicides, and improperly functioning septic tank systems. During Final Design once impacts for utilities and road construction are known, including depth of excavation, KYTC should reevaluate the identified suspect/contaminated sites to see if Phase II assessments (i.e., soil and groundwater testing for known contaminants) are warranted.

Construction. As with any highway project, temporary and minimal air, noise, water quality, and traffic flow impacts are likely to occur during construction (see **Section III.I**). Impacts should be addressed by implementing the KYTC's *Standard Specifications for Road and Bridge Construction*, as directed by the KYTC project manager, and through the use of BMPs.