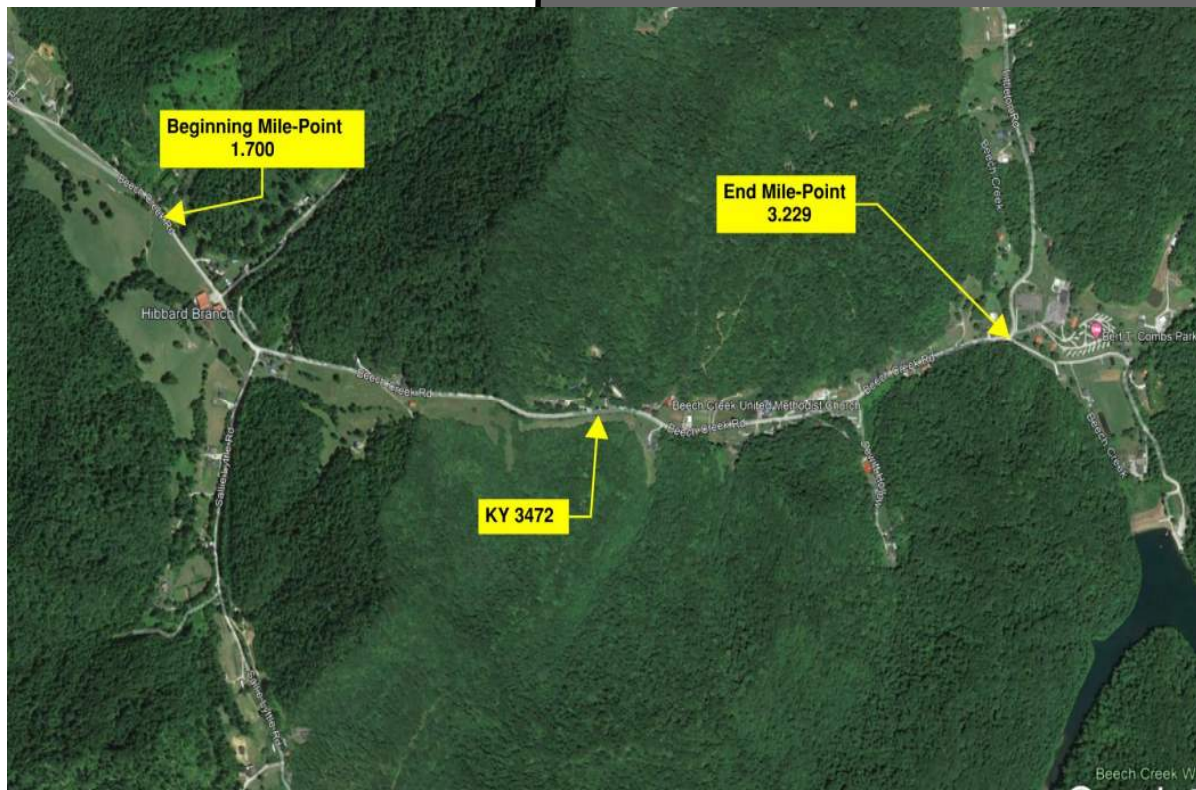


# Data Needs Analysis



## Scoping Study



Improve geometric alignment of KY 3472 from MP 1.7 continuing past the Bert T. Combs Park to the intersection of Beech Creek Road and White Oak Road (MP 3.229)

Clay County  
Item Number 11-80253

Prepared by the KYTC  
Division of Planning and  
KYTC District 11

June 2022



I. PRELIMINARY PROJECT INFORMATION			
<b>County:</b>	Clay	<b>Item No.:</b>	11-80253.00
<b>Route Number(s):*</b>	KY-3472	<b>Road Name:</b>	Beech Creek Rd.
<b>Program No.:</b>		<b>UPN:</b>	
<b>Federal Project No.:</b>		<b>Type of Work:</b>	Realignment
2022 <b>Highway Plan Project Description:</b>			
Improve geometric Alignment from KY 3472 at MP 1.7 continuing past the Bert T. Combs Park to the intersection of Beech Creek Road and White Oak Road. (Approximately 1.5 miles of roadway to improve)			
<b>Beginning MP:</b>	1.7	<b>Ending MP:</b>	3.229
		<b>Project Length:</b>	1.529
<b>In TIP:</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <a href="#">Use PDP/CHAF to Verify Project Data</a>		
<b>State Class.:</b>	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary		
<b>Functional Class.:</b>	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural <span style="border: 1px solid black; padding: 2px;">Local</span>		
<b>MPO Area:</b>	<span style="border: 1px solid black; padding: 2px;">Not Applicable</span>		
<b>ADT (current):</b>	1860 (2019) <small>MP .512 to .7180</small>		
<b>Access Control:</b>	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial Spacing: <span style="border: 1px solid black; padding: 2px;"> </span>		
<b>Median Type:</b>	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type): <span style="border: 1px solid black; padding: 2px;"> </span>		
<b>Existing Bike Accommodations:</b>	<span style="border: 1px solid black; padding: 2px;">Shared Lane</span> <b>Ped:</b> <input type="checkbox"/> Sidewalk		
<b>Posted Speed:</b>	<input type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify): <span style="border: 1px solid black; padding: 2px;"> </span>		
<b>KYTC Guidelines Preliminarily Based on :</b>	55 MPH Proposed Design Speed		
<b>COMMON GEOMETRIC PRACTICES**</b>			
<b>Roadway Data:</b>	<b>EXISTING</b>	<b>PRACTICES**</b>	<a href="#">Existing Rdwy. Plans available?</a> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Year of Plans: <span style="border: 1px solid black; padding: 2px;"> </span>
No. of Lanes	2	2	<input checked="" type="checkbox"/> <a href="#">Traffic Forecast Requested</a> Date Requested: <span style="border: 1px solid black; padding: 2px;">6/1/2022</span>
Lane Width	9'-12'	11'	
Shoulder Width	0-1'	4'	
Max. Superelevation***	Unknown	8%	
Minimum Radius***	Unknown	960'	
Maximum Grade	Unknown	7%	
Minimum Sight Dist.	Unknown	495'	
Sidewalk Width(urban)	N/A		
Clear-zone <sup>†</sup>			<input type="checkbox"/> Mapping/Survey Requested Date Requested: <span style="border: 1px solid black; padding: 2px;"> </span> Type: <span style="border: 1px solid black; padding: 2px;"> </span>
Project Notes/Design Exceptions? <span style="border: 1px solid black; padding: 2px;"> </span>			

**II. PROJECT PURPOSE AND NEED**

**A. Legislation**

The project appeared in the 2022 Highway Plan with the description "Improve geometric Alignment from KY 3472 at MP 1.7 continuing past the Bert T. Combs Park to the intersection of Beech Creek Road and White Oak Road. (Approximately 1.5 miles of roadway to improve)"

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
SPP	D	2023	\$1,300,000
SPP	R	2024	\$2,000,000
SPP	U	2025	\$1,900,000
SPP	C	2026	\$7,500,000

All phases have funding in the highway plan at this time.

**B. Project Status**

There is funding in the 2022 Highway Plan for all phases of this project. There are no other projects scheduled for this location at this time. The slide repair that is referenced in the photo below (approximately MP 2.9) will likely be completed by placment of an asphalt strip patch in the near future.

**C. System Linkage**

KY 3472 is an east/west route that connects US 421 to Beech Creek Road/Bert T Combs Lake Road. The road begins at US 421 and ends at the intersection with Beech Creek Road and Bert Combs Lake Road.

**D. Modal Interrelationships**

KY 3472's primary users will be passenger cars. Some larger vehicles such as school buses and garbage trucks also travel this route as it is primarily a residential area. KY 3472 has residential properties throughout the length of the project with the eastern end of the project being more densely populated. There are several schools on US 421 that are in close proximity to the project, these would include: Clay County Middle School, Clay County High School, and Manchester Elementary School. It is also noteworthy that the park at the end of the project also has campsites and horseback riding trails so RVs and trucks with large trailers travel this route frequently as well.

**E. Social Demands & Economic Development**

This project will result in a much safer route for residents to use each day. This increase in safety will also promote use of facilities located at the park.

## II. PROJECT PURPOSE AND NEED (cont.)

### F. Transportation Demand

There is currently not any traffic count data from MP .718 - MP 3.229. The closest set of traffic count data is from MP 0.512 to MP 0.718 which gives an ADT of 1860. A two lane rural typical section would likely handle the traffic into the future but a new count should be completed to verify this.

### G. Capacity

Based on adjacent traffic data along with little new development occurring in the area, a two lane rural roadway would likely handle traffic in the future, but new traffic data on this section should be collected before that determination is made.

### H. Safety

KY 3472 experienced 8 collisions from milepoint 1.700 to 3.229 from 2017 to 2021. Of these collisions, 4 resulted in injuries and 1 of them resulted in a fatality. None of the collisions involved a commercial vehicle. Of the 8 collisions, 3 of them were located in close proximity to an F rated curve at approximately milepoint 1.95.

### I. Roadway Deficiencies

The existing alignment has a large number of horizontal curves relative to the length of the project. Of those, 7 have D ratings, 3 have E ratings, and 2 have F ratings. The first curve with an F rating is located at approximately MP 1.95; 3 crashes occurred near this location from 2017-2021. The second with an F rating is located at approximately MP 3.226; there have been no crashes at this location from 2017-2021 but will likely be inadequate for the ultimate design of this roadway. This roadway also has instances of undesirable vertical geometry such as steep grades and abrupt changes in grade. This road is also narrow with varying lane width of 9-12 feet and 0-1 foot shoulders. There is also poor site distance at many of these horizontal and vertical curves due to the poor geometry. Various examples of roadside hazards also exist in this area which include but are not limited to critical slopes and utility poles well within the clear zone with no roadside barriers present for either. Existing pavement structure appears to be in poor condition with various forms of cracking and base failures are present within this area.

**III. PRELIMINARY ENVIRONMENTAL OVERVIEW**

**A. Air Quality**

Project is in:  Attainment area  Nonattainment or Maintenance Area  PM 2.5 County

STIP Pg.#: [redacted] TIP Pg.#: [redacted]

Project must be added to STIP. TIP is not applicable because it is not in an MPO. Clay County is attainment for all monitored air pollutants. If the project receives federal funding and it significantly changes or increases traffic, or adds additional lanes, it may require MSAT analysis. If structures are impacted they will need to be inspected for asbestos containing materials, and KY DAQ will require advanced notification prior to demolition, if applicable.

**B. Archeology/Historic Resources**

Known Archeological or Historic Resources are present

Several structures along the route appear > 50 years old. If federal funding is applied to the project, then investigations of archeological and historic resources will be required for the entire APE. Even with SPP funds, investigation within USACE Jurisdictional Areas will most-likely be required for Corps permitting.

**C. Threatened and Endangered Species**

USFWS IPaC report generated for this location lists Gray Bat, Indiana Bat, Northern Long-eared Bat, Kentucky Arrow Darter, and Snuffbox Mussel. There is no critical habitat in the project area. Several trees and wooded areas are adjacent to the roadway. Hibbard Branch, Hart Branch, and an unnamed tributary of Beech Creek are all within the project area.

**D. Hazardous Materials**

Potentially Contaminated Sites are present  Potential Bridge or Structure Demolition

No obvious potentially contaminated sites noted from aerial photography, however a UST/HAZMAT SME should review the project for issues such as prior fuel stations or known monitoring wells. Any structures requiring demolition will need to be inspected for asbestos.

**E. Permitting**

Check all that may apply:  Waters of the US  MS4 area  Floodplain Impacts  Navigable Waters of the US Impacts  
Are 401/404 Permits likely to be required?  Yes  No Impacts to:  Wetlands  Stream/Lake/Pond  
 ACE LON  ACE NW  ACE IP  DOW IWQC  Special Use Waters

404 and 401 permit requirements TBD based upon impacts from alternatives and improvements selected. A KYR10 construction permit will likely be required. A floodplain permit may be required.

**F. Noise**

Are existing or planned noise sensitive receptors adjacent to the proposed project?  Yes  No  
Is this considered a "Type I Project" according to [KYTC Noise Analysis and Abatement Policy?](#)  Yes  No

Several noise sensitive receptors are along the route including but not limited to: residences, a church, and a public park at the Eastern end of the route. Due to the expected curve revisions with horizontal and vertical changes, it is likely this would be a Type I Project. Noise analysis required if federal funds are used on the project.

**G. Socioeconomic**

Check all that may apply:  Low Income/Minority Populations  Relocations  Local Land Use Plan available

There are several residences very close to the existing roadway. According to the "Demographic Indicators 2020" layer available through the KYTC mapping tools, over 80% of the population along the route may qualify as Low Income. The project should not pose hardships to the community during construction provided that traffic access is maintained during construction. There is no Local Land use plan.

**H. Section 4(f) or 6(f) Resources**

The following are present on the project:  Section 4(f) Resources  Section 6(f) Resources

No known 4(f) resources, however potential for historic structures exist pending eligibility determination, if required, for Corps permitting. No known 6(f) resources are in the project area. However, it should be noted that Bert T. Combs Park and Campground is just to the East of the project area.

[Anticipated Environmental Document:](#)

None (Completely State funded)



**IV. PROJECT NEED, PURPOSE & SCOPE**

**A. Need:**

KY 3472's primary need is to improve the existing alignment by correcting deficiencies in both the horizontal and vertical alignments along with adding additional lane/shoulder width that is warranted by current standards.

**B. Purpose:**

The purpose of this project is to improve safety and mobility along this route which will improve commutes for residents and allow the park/lake area to be more accessible to the public.

**C. Scope:**

The focus of the project will be to improve existing geometric alignment from KY 3472 at MP 1.7 continuing past the Bert T. Combs Park to the intersection of Beech Creek Road and White Oak Road. This includes approximately 1.5 miles of roadway to be improved.

**V. PROJECT ESTIMATE & METHODOLOGY**

**Estimate Methodology:**

All necessary right of way will likely be from residential properties. Multiple utility companies will likely be impacted throughout the length of the project. Construction will be focused on improvements so portions of the existing roadway will be reused in some capacity.

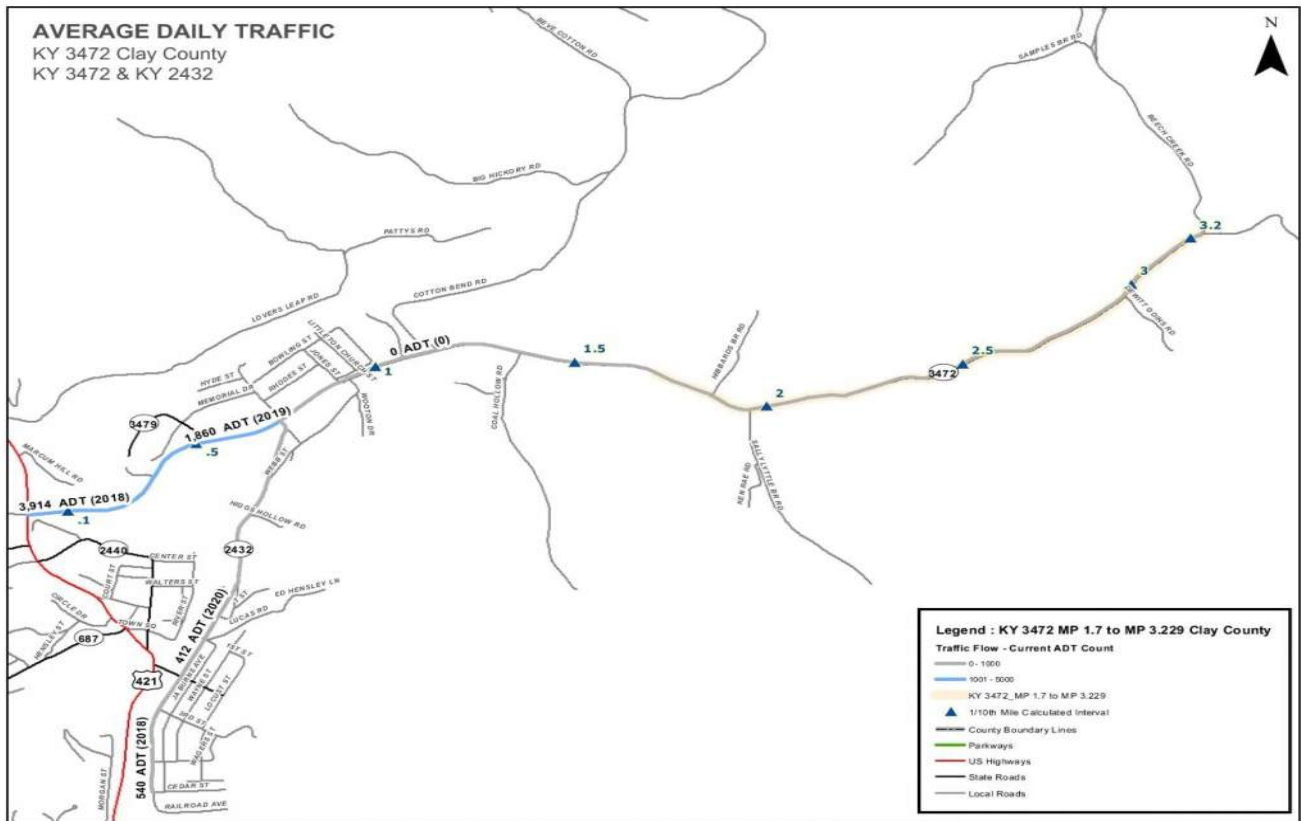
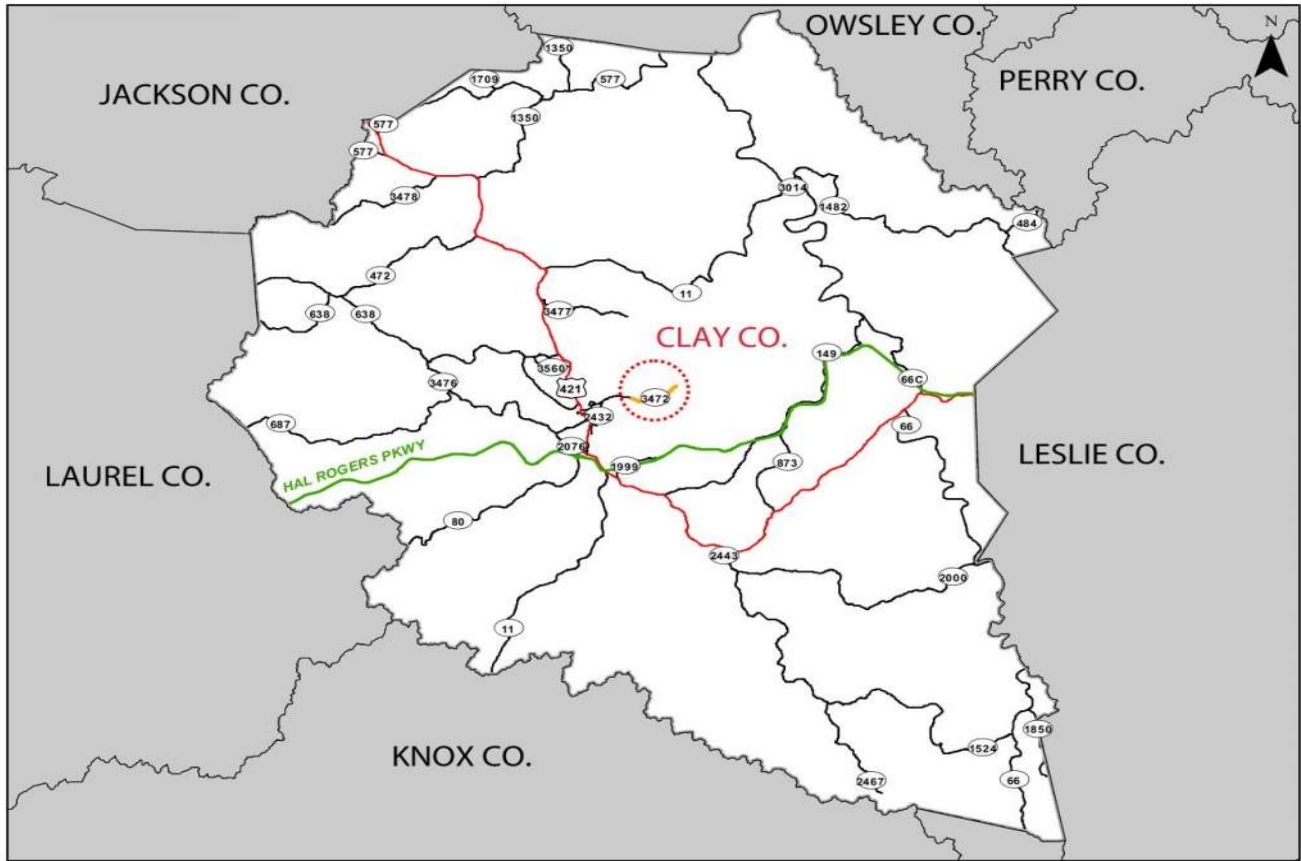
**Current Estimate**

Phase	Estimate
Planning	
Design	\$1,300,000
R/W	\$2,000,000
Utilities	\$1,900,000
Const	\$7,500,000
<b>Total</b>	<b>\$12,700,000</b>

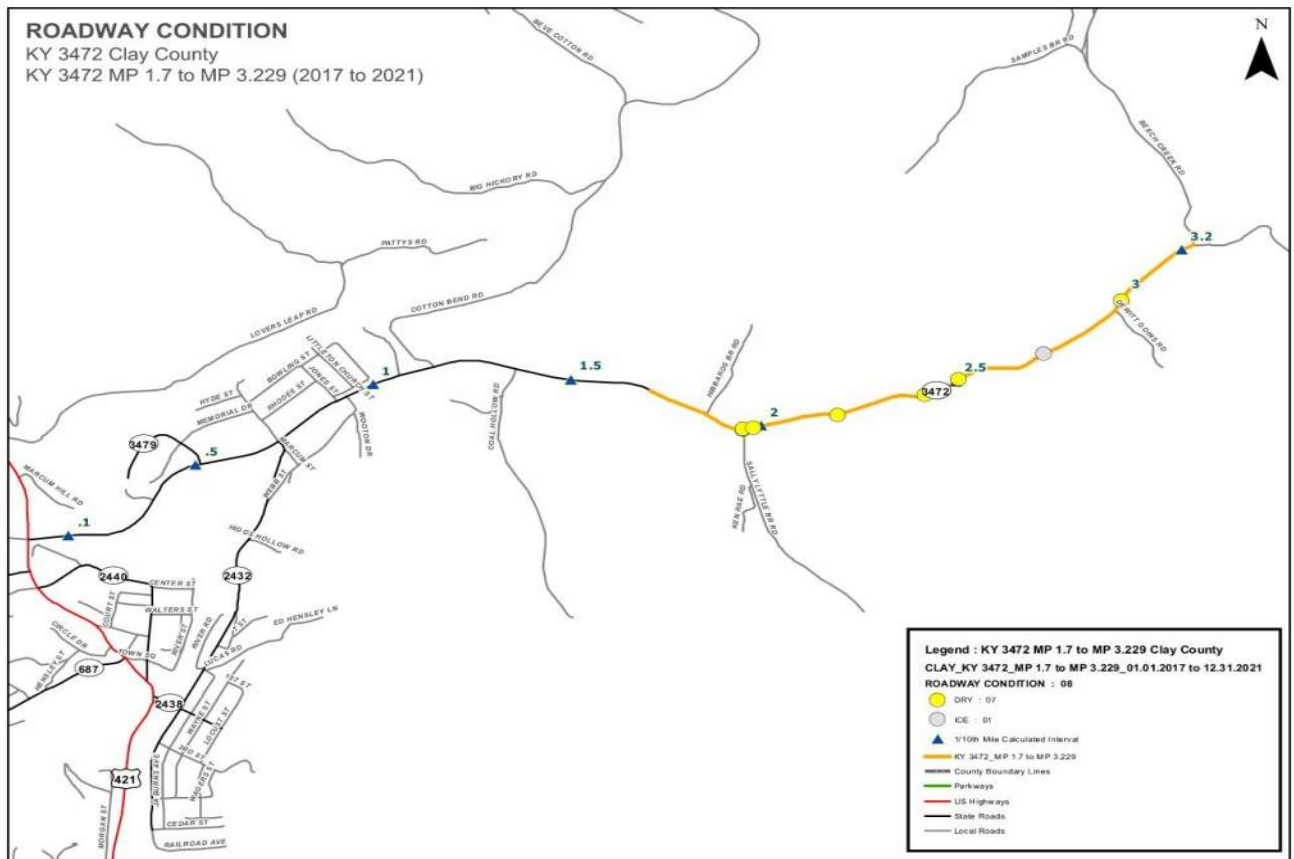
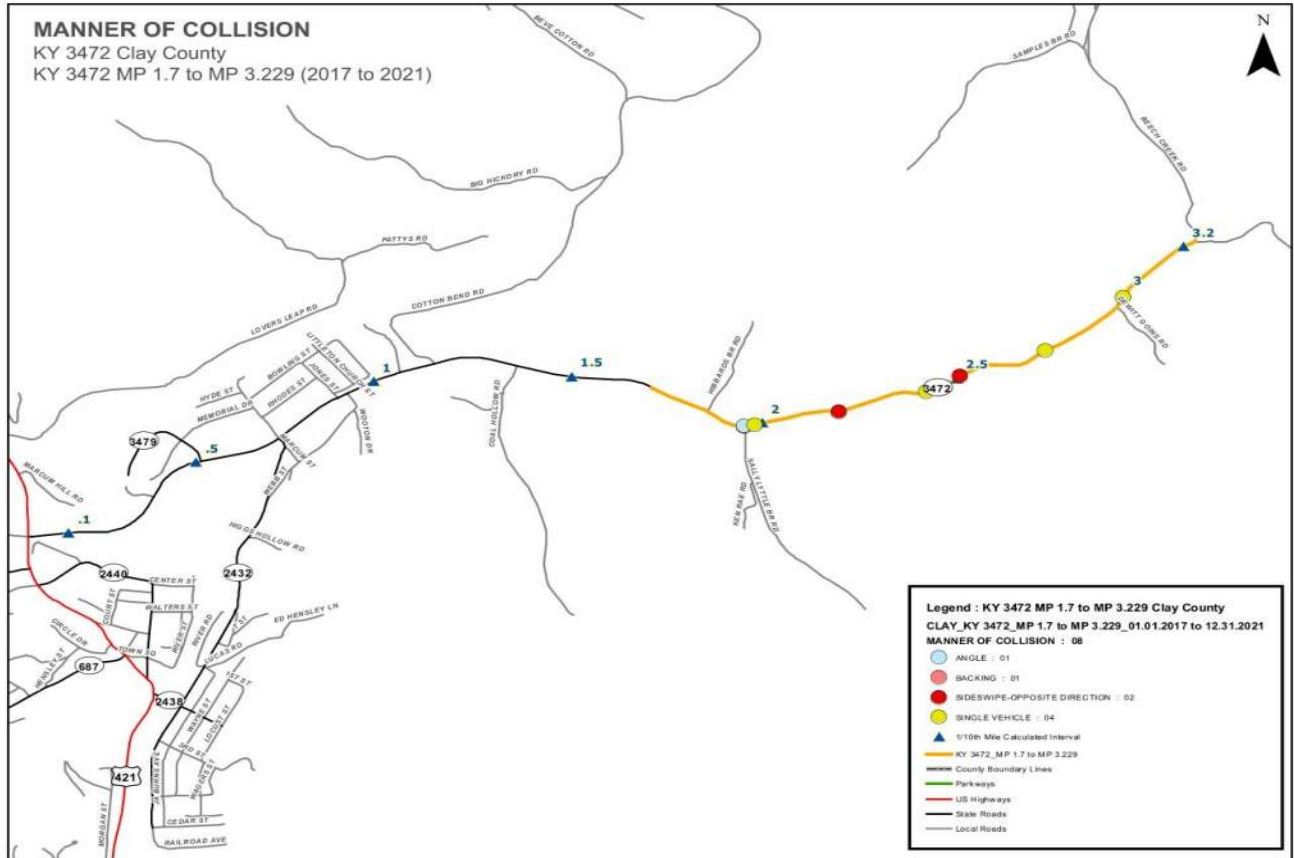
**VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION**

Company Name -	Charter
Contact -	Phillip Akers
Address -	201 W Chester Ave., Middlesboro, KY 40965
Phone No. -	(606) 431-3131
Company Name -	City of Manchester
Contact -	Mike White
Address -	207 Church Street, Manchester, KY 40963
Phone No. -	(606) 598-6043
Company Name -	Delta Natural Gas Company
Contact -	Rob Nellipowitz
Address -	3617 Lexington Road, Winchester, KY 40391
Phone No. -	(859) 744-6171
Company Name -	House Cable
Contact -	Stella House
Address -	PO Box 422, Manchester, KY 40962
Phone No. -	(606) 598-2292
Company Name -	Jackson Energy Cooperative
Contact -	Brent Bingham
Address -	115 Jackson Energy Lane, McKee, KY 40447
Phone No. -	(606) 364-9227
Company Name -	Kentucky Utilities
Contact -	Chad Francisco
Address -	180 Substation Rd., London, KY 40741
Phone No. -	(606) 864-2821
Company Name -	People Rural Telephone Network
Contact -	Keith Gabbard
Address -	PO Box 159, McKee KY 40447
Phone No. -	(606) 287-7101
Company Name -	Windstream
Contact -	Tommy Lewis
Address -	719 North Main, London, KY 40741
Phone No. -	(606) 309-2279

VII. TABLES AND EXHIBITS







**Looking east at transition from previously constructed project to proposed project at MP 1.7**



**The previously constructed project referenced above is Item No. 11-8001.00**

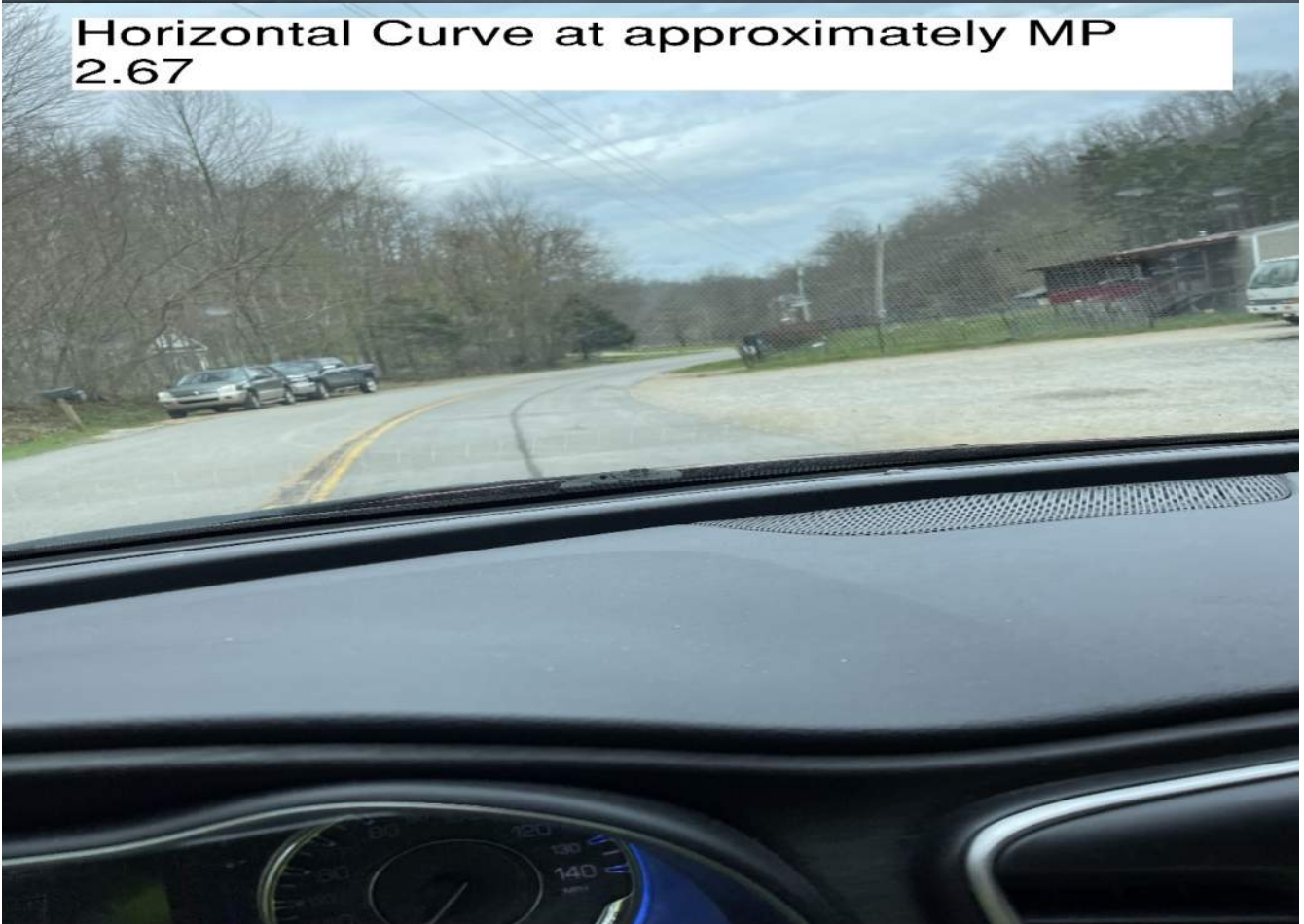
**F-Rated Horizontal Curve at intersection with Sallie Lytle Rd. Approximately Mp 1.95**



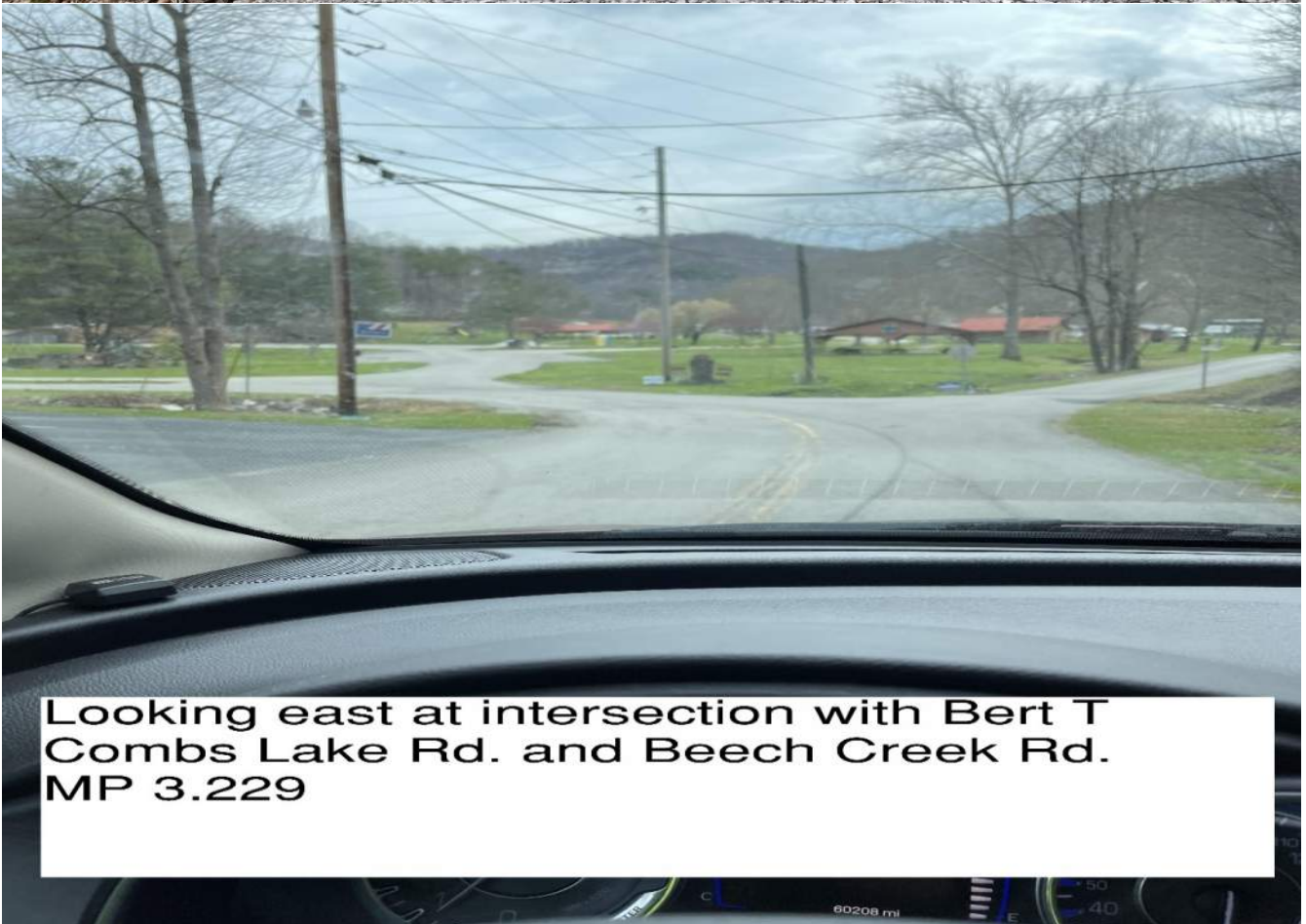
**Horizontal curve at approximately MP 2.23**



**Horizontal Curve at approximately MP 2.67**



**Previously Repaired Embankment  
Failure (Approximately MP 2.9)**



**Looking east at intersection with Bert T  
Combs Lake Rd. and Beech Creek Rd.  
MP 3.229**

