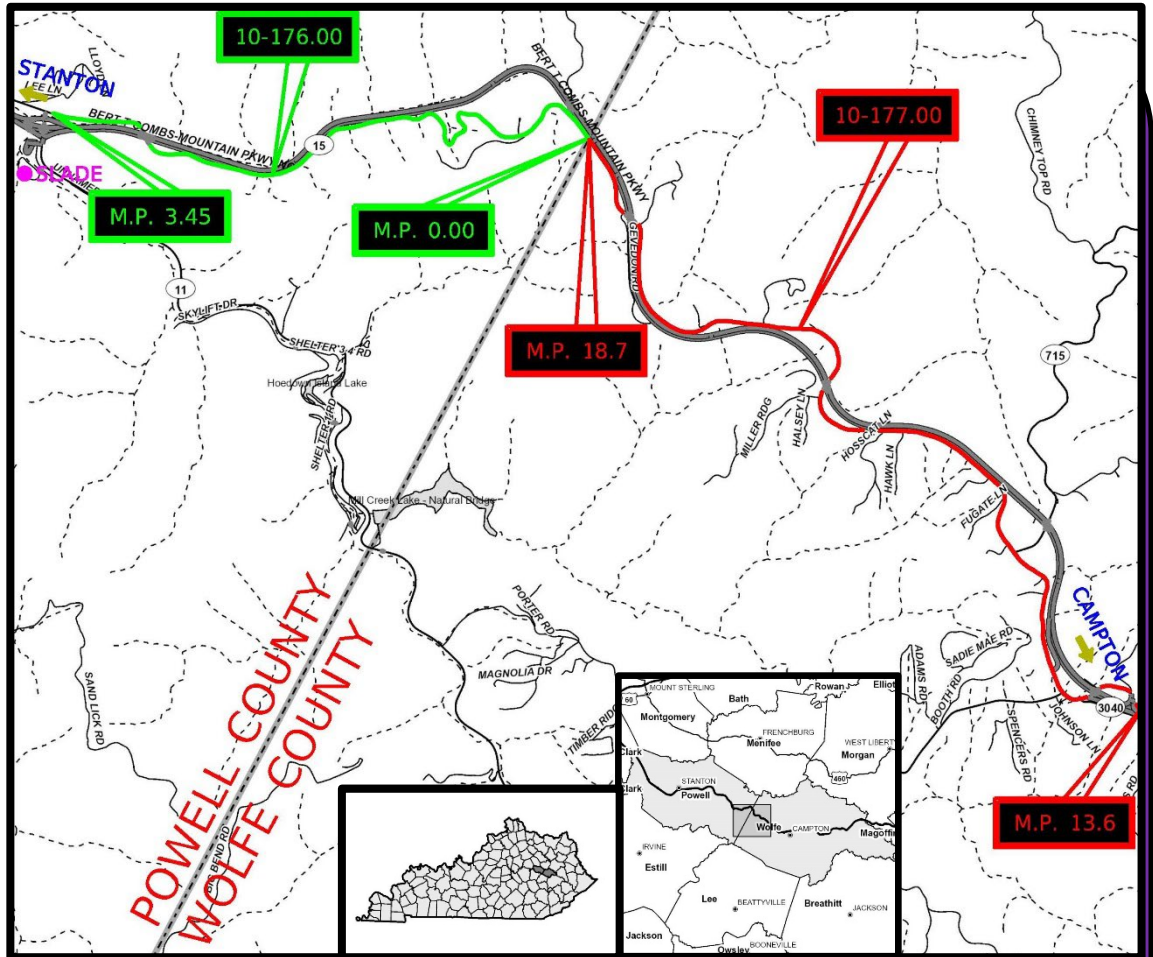


Data Needs Analysis



Scoping Study



KY 15, Powell/Wolfe County
From Slade to Pine Ridge
Item No. 10-176.00 / 177.00

Prepared by the KYTC
Division of Planning and
KYTC District 10

August 2022



I. PRELIMINARY PROJECT INFORMATION

County:	POWELL / WOLFE	Item No.:	10-176.00/177.00
Route Number(s):*	KY-15	Road Name:	STANTON - CAMPTON RD.
Program No.:		UPN:	(Function) (County #) (Route) (MPs)
Federal Project No.:		Type of Work:	MINOR WIDENING

(Year) **Highway Plan Project Description:**

MINOR WIDENING TO IMPROVE REDUNDANCY OF REGIONAL TRAVEL

Beginning MP:	13.6 (WOLFE)	Ending MP:	3.45 (POWELL)	Project Length:	8.554
In TIP:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Use PDP/CHAF to Verify Project Data			
State Class.:	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary	Route is on:	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt		
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural <input type="checkbox"/> Collector	Truck Class.:	AAA	% Trucks:	3.62%
MPO Area:	Not Applicable	Terrain:	Mountainous		
ADT (current):	601	2020			
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	Spacing:			
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):				
Existing Bike Accommodations:	None	Ped:	<input type="checkbox"/> Sidewalk		
Posted Speed:	<input checked="" type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):				
KYTC Guidelines Preliminarily Based on :	45 MPH Proposed Design Speed				45

COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2	Existing Rdwy. Plans available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lane Width	10-11'	11'	
Shoulder Width	0-2'	4'	Year of Plans: 1922
Max. Superelevation***		8%	<input type="checkbox"/> Traffic Forecast Requested
Minimum Radius***		643'	Date Requested:
Maximum Grade	9.8%	10%	<input type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.		360'	Date Requested:
Sidewalk Width(urban)	N/A	N/A	Type: <input type="text"/>
Clear-zone [†]		14'	
Project Notes/Design Exceptions?			

Bridge No.:#	119B00020N	119B00019N	
Sufficiency Rating	98	98	Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length	248'	296'	
Width, curb to curb	27.9'	27.9'	Detour Length(s): 7.6 miles
Span Lengths	70'	80'	
Year Built	1962	1962	
Posted Weight Limit	N/A	N/A	
Structurally Deficient?	No	No	
Functionally Obsolete?	No	No	
Existing Bridge Type	Concrete	Concrete	

*If more than one road is included in the project, include additional sheets.
 **Based on proposed Design Speed
 ***AASHTO's A Policy on Geometric Design of Highways and Streets
 †AASHTO's Roadside Design Guide
 ‡If more than two bridges are located on the project, include additional sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

These projects were added to the 2022 Enacted Highway Plan. Only D, R, and U phases were in the plan with only D being scheduled for funding this biennium. The funding shown to the right is the sum of the funding shown for both projects in the plan.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
PROT	D	2024	\$1,500,000
PROT	R	2025	\$500,000
PROT	U	2025	\$750,000
	C		

B. Project Status

These projects were created after the need became apparent for a viable redundant route to the Mountain Parkway in the Slade area. The Parkway had to be shut down for repairs for over a month in 2020 and this section of KY 15 could not be used as a bidirectional detour due to it's poor geometry. This section of KY 15 has been designated as part of the Red River Gorge Scenic Byway, which is included on the Kentucky Scenic Byways and Highways List. Design funding for these projects have been authorized. Another KYTC highway plan project (10-80250) is active in the Planning phase and joins this project at the KY 15/KY11 intersection at Slade.

C. System Linkage

This section of KY 15 is a Rural Major Collector and runs adjacent to the Mountain Parkway from Exit 33 at Slade to Exit 40 at Pine Ridge. This route is mostly used to access residential properties and businesses located along the corridor.

D. Modal Interrelationships

This section of KY 15 does not serve as an intermodal connector route normally. If the Mountain Parkway is shut down for any time then Parkway traffic would detour to this route.

E. Social Demands & Economic Development

This project is located within the Natural Bridge State Resort Park/Red River Gorge National Geologic Area footprint. This route serves as direct access to trail-heads and campgrounds that exist along the project. There are 2 schools that use this route as access. Dessie Scott Children's Home is located on the route and has direct access to KY 15. Rogers Elementary School is located on KY 715 which intersects KY 15.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

There are roughly 750,000 visitors to the Red River Gorge area annually and this number continues to grow. The Red River Economic Development Group has drafted a master plan for developments in the area, including a destination resort to be built in the Slade area. The current ADT is 601 but this number could grow with if the planned developments get constructed in the Red River Gorge area.

G. Capacity

There are no known capacity issues on this section of KY 15. The only time capacity has been an issue is when this route becomes the detour for the Mountain Parkway.

H. Safety

There have been 24 crashes reported within the project limits over the past 5 years. 17 of these have been single vehicle accidents. 7 crashes resulted in injuries. There were 2 clusters that should be noted. 6 crashes (2 head on collisions) occurred in Wolfe Co. from MP 13.875 to MP 14.102 in a D rated horizontal curve. This section encompasses intersections with KY 3040, Johnson Lane (CR 1351), and KY 715. 6 crashes occurred in Powell Co. from MP .801 to MP .991 in an E rated horizontal curve.

I. Roadway Deficiencies

The existing roadway consists of several horizontal curves and steep grades. 17 horizontal curves are rated D or worse and grades get up to 9.8%. Lanes are narrow with little to no shoulder width in some areas. Roadside objects such as trees and utility poles exist within the clear zone with no shielding. Some portions of the roadway has a canopy of trees that let little sunlight get through which makes snow and ice a concern. There is a cluster of horizontal curves and steep grades between MP 0.2 and MP 1.5 in Powell County that is the most prominent area for roadway deficiencies.

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]

No air quality impacts are anticipated.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

Section 106 will apply and SHPO clearances for archeology and cultural historic will be required.

C. Threatened and Endangered Species

USFWS IPaC report generated for this location lists Gray Bat, Indiana Bat, Northern Long-eared Bat, Virginia Big-eared Bat, Kentucky Arrow Darter, Snuffbox Mussel, and Short's Bladderpod as threatened or endangered species in the project area. The Monarch butterfly is listed as a candidate and may be added to this list by the time the project is developed.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

No obvious potentially contaminated sites noted from aerial photography and field observations. However, a UST/HAZMAT SME should review the project for issues such as prior fuel stations or known monitoring wells.

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

401 and 404 permit requirements to be determined based upon impacts from alternatives and improvements selected. A KYR10 construction permit will likely 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

There are no noise sensitive receptors close to the areas where it is anticipated to be changing the horizontal and vertical alignment.

G. Socioeconomic

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

There are several residences close to the existing alignment. Depending on what improvements are chosen, relocations could be possible. The majority of this area's population would be considered low income.

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

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

This project is in the Natural Bridge/Red River Gorge area but we do not think it would impact any 4(f) or 6(f) resources.

[Anticipated Environmental Document:](#)

CE Level 2



IV. PROJECT NEED, PURPOSE & SCOPE

A. Need:

This section of KY 15 contains several geometric deficiencies which preclude it from being a viable detour for the Mountain Parkway.

B. Purpose:

The purpose of this project is to make improvements to KY 15 so that it can become a viable redundant route to the Mountain Parkway.

C. Scope:

This project will be a 2-lane improvement project and will focus on improving geometrics along the route. Between MP 0.2 and MP 1.5 will be the area of focus. Several improvement options should be looked at and compared with their associated costs. These improvement options may include curve widening, side hill cuts, clear zone establishment, tree trimming, etc. The rest of the project should be evaluated for minor widening which could be just establishing some consistent shoulder width throughout.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
Right of Way costs should be mostly small takings and few relocations if any. Potentially several utility companies could be involved as this project is long and crosses county lines. Construction costs should be focused on the geometric improvements and not a total reconstruction for the entire length. Much of the existing alignment will be re-used and pavement may be salvaged where feasible.	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$1,500,000
	R/W	\$500,000
	Utilities	\$750,000
	Const	\$8,000,000
	Total	\$10,750,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	AT&T
Contact -	Frank Ambrose
Address -	PO Box 5001 Carol Stream, IL
Phone No. -	859-759-8377
Company Name -	Clark Energy Coop
Contact -	Todd Peyton
Address -	2460 Iron Works Road, Winchester, KY
Phone No. -	859-744-4251
Company Name -	Powell Valley Water District
Contact -	Kendell Knox
Address -	31 Adams Ridge Rd, Stanton, KY
Phone No. -	606-569-5304
Company Name -	Mountain Telephone
Contact -	Steve Gullett
Address -	425 Main St., West Liberty, KY
Phone No. -	606-743-3121
Company Name -	Licking Valley RECC
Contact -	Wes McKinney
Address -	271 Main St., West Liberty, KY
Phone No. -	606-743-3179
Company Name -	City of Campton
Contact -	Katherine May
Address -	PO Box 35, Campton, KY
Phone No. -	606-668-3574

VII. TABLES AND EXHIBITS

Bridge No.: ‡	<u>099B00033N</u>	
Sufficiency Rating	<u>96.2</u>	
Total Length	<u>368'</u>	Existing Geotech Data Available?
Width, curb to curb	<u>31.5'</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Span Lengths	<u>80'</u>	
Year Built	<u>1962</u>	
Posted Weight Limit	<u>N/A</u>	Detour Length(s): <u>7.6 miles</u>
Structurally Deficient?	<u>No</u>	
Functionally Obsolete?	<u>No</u>	
Existing Bridge Type	Concrete	

VII. TABLES AND EXHIBITS (cont.)