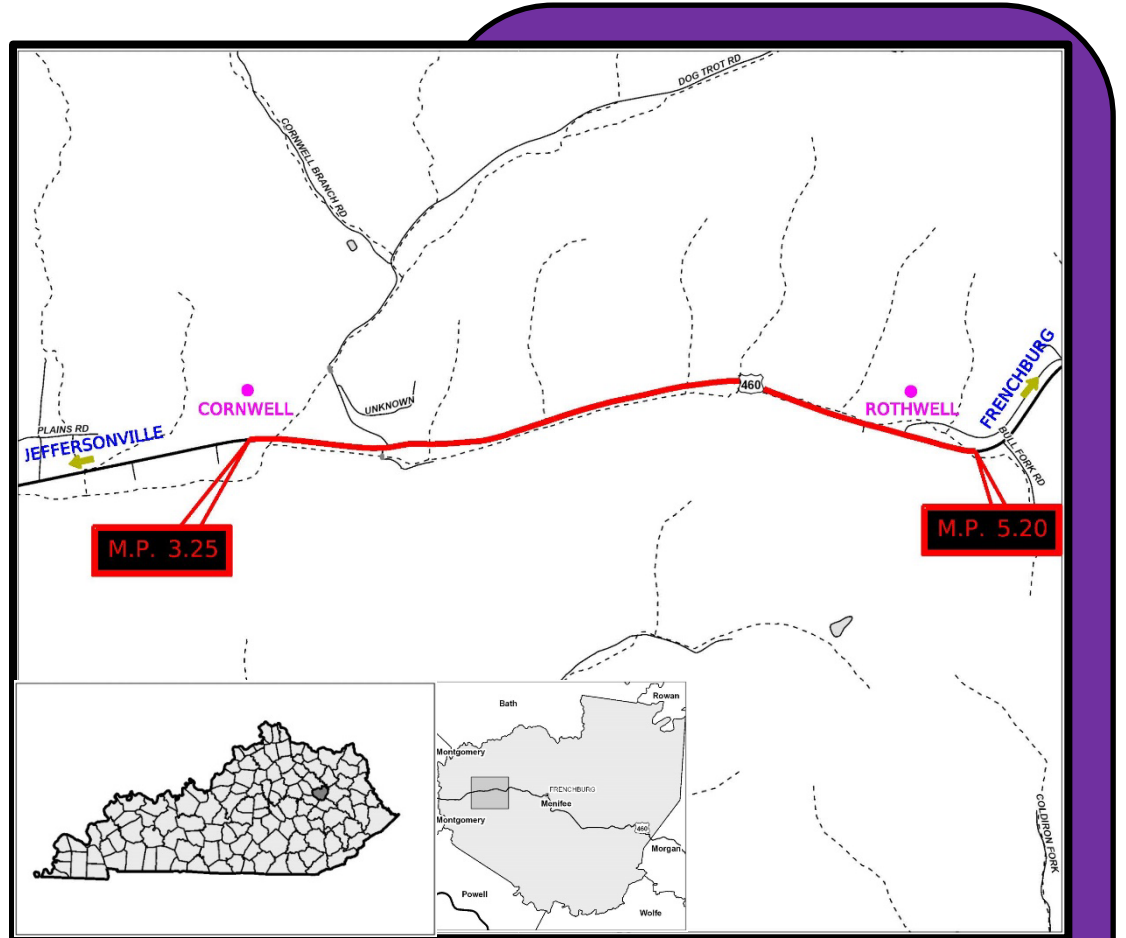


Data

Needs

Analysis



Scoping Study



US 460, Menifee County
From MP 3.25 to MP 5.2
Item No. 10-80201.00

Prepared by the KYTC
Division of Planning and
KYTC District 10

September 2022



I. PRELIMINARY PROJECT INFORMATION			
County:	MENIFEE	Item No.:	10-80201.00
Route Number(s)*:	US 460	Road Name:	Mt. Sterling - Frenchburg Rd.
Program No.:		UPN:	(Function) (County #) (Route) (MPs)
Federal Project No.:		Type of Work:	Safety
2022 Highway Plan Project Description:			
IMPROVE SAFETY, CORRECT GEOMETRICS, AND ENHANCE REGIONAL CONNECTIVITY ON US 460 FROM THE BRIDGE OVER DOG TROT FORK (MP 3.3) TO ROTHWELL (MP 4.8)			
Beginning MP:	3.25	Ending MP:	5.2
Project Length:	1.95		
In TIP:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Use PDP/CHAF to Verify Project Data
State Class.:	<input checked="" type="checkbox"/> Primary <input 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	Arterial	Truck Class.: AAA % Trucks: 8.45%
MPO Area:	Not Applicable		Terrain: Mountainous
ADT (current):	3236 2021		
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial Spacing: <input type="text"/>		
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type): <input type="text"/>		
Existing Bike Accommodations:	None		Ped: <input type="checkbox"/> Sidewalk
Posted Speed:	<input type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify): <input type="text"/>		
KYTC Guidelines Preliminarily Based on :	55 MPH Proposed Design Speed		
COMMON GEOMETRIC			
Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2	Existing Rdwy. Plans available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Year of Plans: <input type="text"/> <input checked="" type="checkbox"/> Traffic Forecast Requested Date Requested: 9/29/2022 <input type="checkbox"/> Mapping/Survey Requested Date Requested: <input type="text"/> Type: <input type="text"/>
Lane Width	10'-11'	12'	
Shoulder Width	1'	8'	
Max. Superelevation***		8%	
Minimum Radius***		960'	
Maximum Grade	5.7%	6%	
Minimum Sight Dist.		495'	
Sidewalk Width(urban)		N/A	
Clear-zone [†]		24'	
Project Notes/Design Exceptions? <input type="text"/>			
Bridge No.‡:	083B00040N (Bridge #2)		
Sufficiency Rating	88.0		Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Detour Length(s): 17.4 miles
Total Length	96.8'		
Width, curb to curb	41.0'		
Span Lengths	88.3'		
Year Built	2009		
Posted Weight Limit	N/A		
Structurally Deficient?	No		
Functionally Obsolete?	No		
Existing Bridge Type	Concrete Box Beams		
*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

This project was added to the 2022 Enacted Highway Plan with the description "Improve safety, correct geometrics, and enhance regional connectivity on US 460 from the bridge over Dog Trot Fork to Rothwell". All phases of the project are in the plan

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
NH	D	2023	\$1,000,000
NH	R	2025	\$1,200,000
NH	U	2026	\$1,200,000
SPP	C	2027	\$11,800,000

B. Project Status

There is design funding available in the current biennium and it has been authorized. This section of US 460 is intended to be a continuation of corridor upgrades that have been in progress for many years. On either side of this section of US 460 are recent sections that have been improved.

C. System Linkage

US 460 is an east-west route that runs from Norfolk, VA to Frankfort, KY. It was one of the first major corridors in Eastern Kentucky. It is the heaviest traveled route in Menifee County and is the primary route for anyone traveling to the county seat of Frenchburg. It connects Menifee County to Morgan County to its east and Montgomery County to its west.

D. Modal Interrelationships

US 460's primary users will be passenger cars with 8.45% of traffic being trucks.

E. Social Demands & Economic Development

This route is used daily by commuters for work and recreation. It is the most used route for residents of Morgan and Menifee County to access the growing area of Mount Sterling and the I-64 corridor. As the Mt. Sterling area continues to grow it is expected that the demand for a better corridor will increase. This route is also used by tourists and visitors wanting to access the Cave Run Lake and Red River Gorge Areas.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

There is only 1 recent count through this section of US 460. It was completed in 2021 with an ADT of 3236 and 8.5% trucks. Historic counts show that it has been consistently around this number since 2009. There are no indications that these numbers will rise or fall dramatically in the future.

G. Capacity

There are no known capacity issues on this section of US 460 and this project will not add or decrease capacity.

H. Safety

A review of crash data from the Kentucky State Police database was performed and 23 crashes have occurred within the project limits in the last 5 years. Of the 23 crashes, 10 resulted in injury, and none resulted in fatalities. 15 of the crashes were single vehicle involvement involving collisions with a fixed object off the roadway. Clusters of crashes appeared between MP 4.1 - MP 4.3 (7 crashes) and MP 4.6 - MP 5.18 (7 crashes). A review of the geometry found that both of these locations were in gentle horizontal curves that were rated Class 'A'. Reports should be pulled by the project team for further analysis.

I. Roadway Deficiencies

The geometrics of the roadway alignment do not seem to be bad as there are no horizontal curves that rate as 'D' or worse and the steepest grade is within standard at 5.6%. The most prominent deficiency of this section is the lack of shoulder and clear zone widths.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW	
A. Air Quality	Project is in: <input type="checkbox"/> Attainment area <input type="checkbox"/> Nonattainment or Maintenance Area <input type="checkbox"/> PM 2.5 County STIP Pg. #: <input style="width: 100px;" type="text"/> TIP Pg. #: <input style="width: 100px;" type="text"/>
No air quality impacts are anticipated.	
B. Archeology/Historic Resources	<input type="checkbox"/> 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, Snuffbox Mussel, Northern Riffleshell, and Pink Mucket 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	<input type="checkbox"/> Potentially Contaminated Sites are present <input type="checkbox"/> Potential Bridge or Structure Demolition No known potentially contaminated sites exist. 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: <input checked="" type="checkbox"/> Waters of the US <input type="checkbox"/> MS4 area <input checked="" type="checkbox"/> Floodplain Impacts <input type="checkbox"/> Navigable Waters of the US Impacts Are 401/404 Permits likely to be required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Impacts to: <input type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Stream/Lake/Pond <input type="checkbox"/> ACE LON <input type="checkbox"/> ACE NW <input checked="" type="checkbox"/> ACE IP <input type="checkbox"/> DOW IWQC <input type="checkbox"/> 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this considered a "Type I Project" according to KYTC Noise Analysis and Abatement Policy? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Several noise sensitive receptors are along the route. Due to the possible alignment revisions, it is possible 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: <input checked="" type="checkbox"/> Low Income/Minority Populations <input checked="" type="checkbox"/> Relocations <input type="checkbox"/> Local Land Use Plan available There are several residences very close to the existing roadway and some are likely to be low income. The project should not pose hardships to the community during construction provided that traffic access is maintained during construction.
H. Section 4(f) or 6(f) Resources	The following are present on the project: <input type="checkbox"/> Section 4(f) Resources <input type="checkbox"/> Section 6(f) Resources No known 4(f) or 6(f) resources present.
Anticipated Environmental Document: <input style="width: 150px;" type="text" value="CE Level 2"/> <input style="width: 20px; height: 20px; border: 1px solid black; background-color: #f0f0f0;" type="button" value="▼"/>	

IV. PROJECT NEED, PURPOSE & SCOPE

A. Need:

US 460 is an arterial route that is a vital corridor for Eastern Kentucky and needs to be modernized to current standards. This section of US 460 does not meet current standards for this class of road.

B. Purpose:

The purpose of this project is to continue a multi-county corridor reconstruction by widening the roadway to enhance safety and regional connectivity.

C. Scope:

The goal of this project will be to bring this section of US 460 to 55mph design speed standards with a typical section consistent with adjoining sections of US 460. I think this can be achieved by widening the existing road throughout most of the length of the project. Care should be taken with the maintenance of traffic design to not shut the road down for extended periods of time. Right of Way and Utility impacts should be evaluated early on and avoided if feasible.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
This estimate was developed using numbers from other sections of the corridor and a cost per mile average with adjustments. Several residential relocations are expected. Utility impacts will be to water along the length of the project and most utility poles will need to be relocated.	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$1,000,000
	R/W	\$1,000,000
	Utilities	\$1,000,000
	Const	\$12,000,000
	Total	\$15,000,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

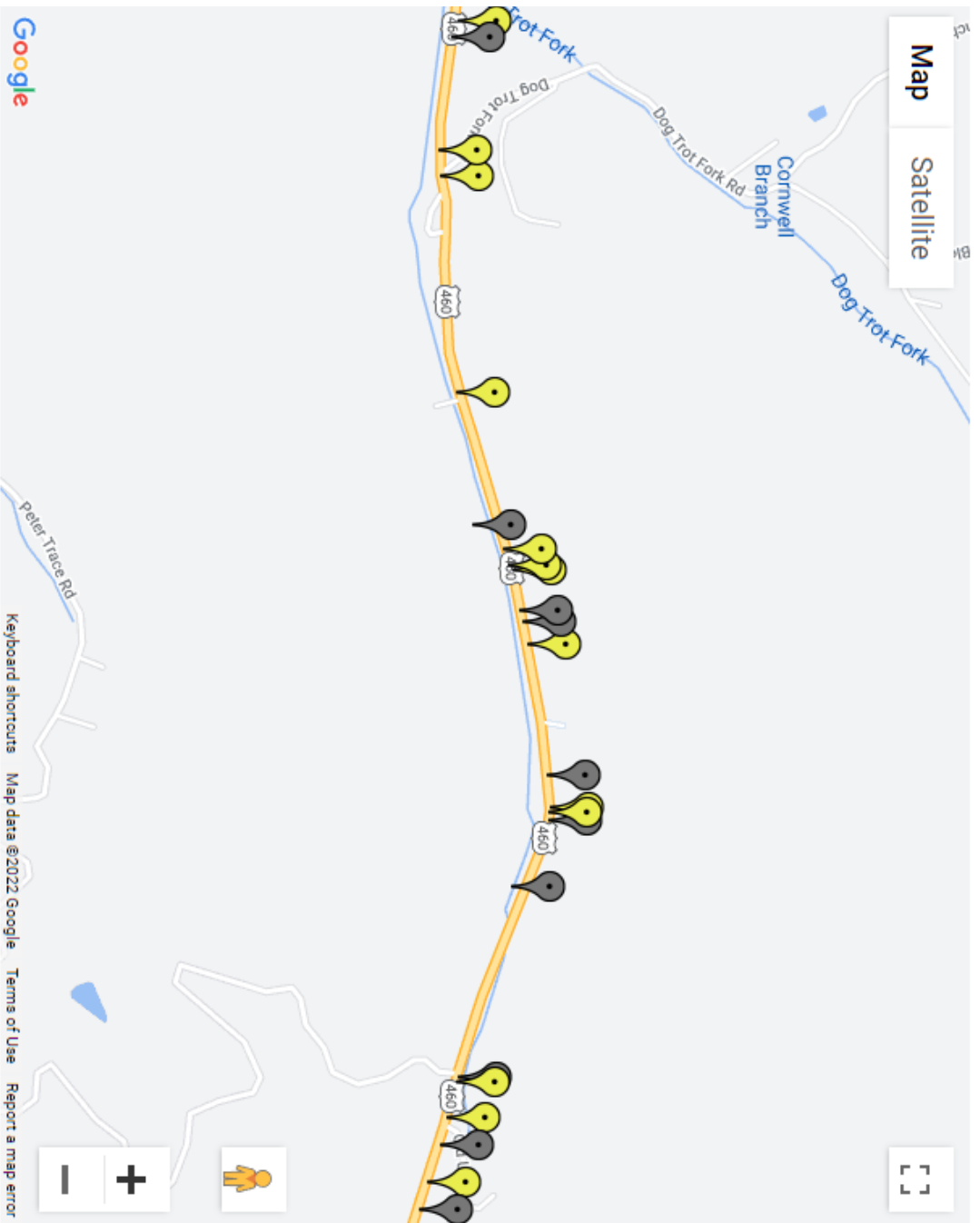
Company Name -	Cave Run Water Commission
Contact -	Larry Workman
Address -	7522 Highway 1693, Wellington, KY
Phone No. -	(606)768-6665
Company Name -	City of Frenchburg
Contact -	Mayor Edward Bryant
Address -	157 Old Campus Road, Frenchburg, KY
Phone No. -	(606)768-3457
Company Name -	Licking Valley RECC
Contact -	Wes McKinney
Address -	271 Main Street, West Liberty, KY
Phone No. -	(606)743-3179
Company Name -	Mountain Rural Telephone Cooperative
Contact -	Steve Gullett
Address -	425 Main Street, Suite A, West Liberty, KY
Phone No. -	(606)743-3121
Company Name -	
Contact -	
Address -	
Phone No. -	
Company Name -	
Contact -	
Address -	
Phone No. -	

VII. TABLES AND EXHIBITS

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VII. TABLES AND EXHIBITS (cont.)

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Collision Categories:

Injured 

Property Damage 