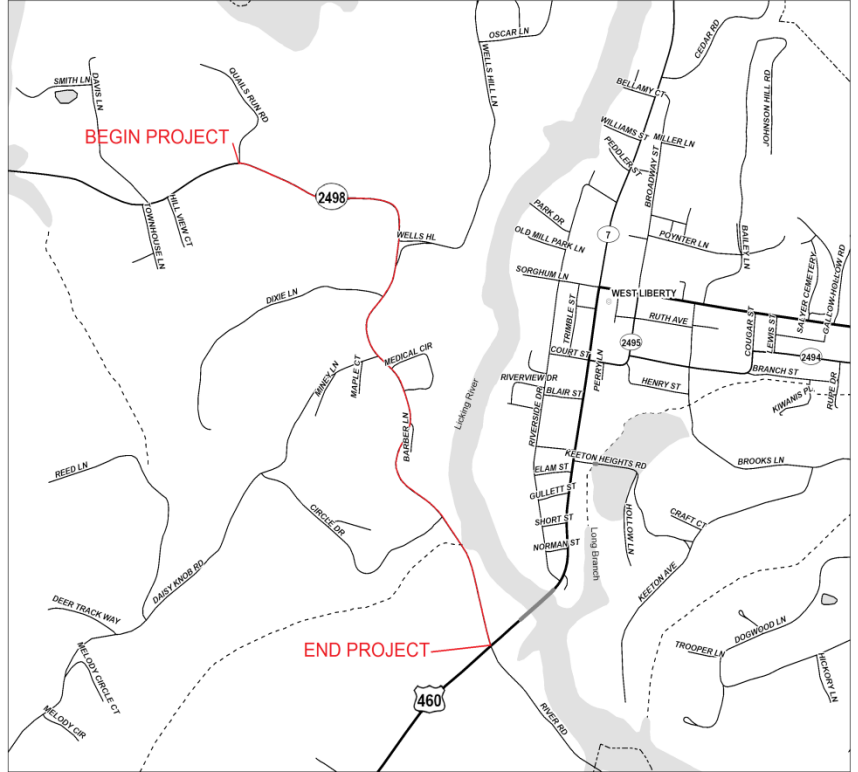


Data

Needs

Analysis



Scoping Study



KY 2498, Morgan County
Item No. 10-8804.00
Reconstruction

Prepared by the
KYTC District 10

December 2014



I. PRELIMINARY PROJECT INFORMATION

County:	Morgan	Item No.:	10-8804.00
Route Number(s):*	KY 2498	Road Name:	Liberty Road
Program No.:	8943201D	UPN:	FD04 088 2498 006-008
Federal Project No.:	N/A	Type of Work:	Reconstruction

2014 **Highway Plan Project Description:**

IMPROVEMENTS TO CORNER OF KY 2498 & US 460 EXTENDING ONE MILE TO THE ARH HOSPITAL AT THE TOP OF THE HILL. (14CCN)

Beginning MP:	6.719	Ending MP:	7.719	Project Length:	1
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Reconcile Project Information in Clearview			
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 Collector	Truck Class.:	A	% Trucks:	6.5
MPO Area:	Not Applicable	Terrain:	Rolling		
ADT (current):	2600 (2014)				
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:	Shared Lane	Ped:	<input type="checkbox"/> Sidewalk		
Posted Speed:	<input checked="" type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):				
KYTC Guidelines Preliminarily Based on :	35 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
Lane Width	9	12	
Shoulder Width	2	8	Year of Plans: _____
Max. Superelevation***		6%	<input checked="" type="checkbox"/> Traffic Forecast Requested
Minimum Radius***		380	Date Requested: 7/29/2014
Maximum Grade	8%	9%	<input checked="" type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.		250	Date Requested: _____
Sidewalk Width(urban)			Type: Aerial
Clear-zone [†]	3	18	

Bridge No.:#	(Bridge #1)	(Bridge #2)	
Sufficiency Rating			Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length			
Width, curb to curb			
Span Lengths			
Year Built			
Posted Weight Limit			Detour Length(s): 8.7 miles
Structurally Deficient?			
Functionally Obsolete?			
Existing Bridge Type			

*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 approved in the 2014 Biennial Highway Plan with the funding listed to the right.	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	SPP	D	2016	\$400,000
		R		
		U		
		C		

IMPROVEMENTS TO CORNER OF KY 2498 & US 460 EXTENDING ONE MILE TO THE ARH HOSPITAL AT THE TOP OF THE HILL. (14CCN)

B. Project Status

Design funds have been approved for this project. At this time there are no active projects in the area of this project. The District is on the process of Improving the entire US 460 Corridor but this area of US 460 does not currently have any funded phases.

C. System Linkage

KY 2498 serves as a rural collector that connects the two commercial districts of the City of West Liberty - Downtown and Index. While US 460 is a more direct path between the two areas, KY 2498 adds redundancy to the roadway system that can assist in times of need.

D. Modal Interrelationships

West Liberty currently does not have any type of public Transit Service and as shown above bike and pedestrian users currently must share the road with vehicular traffic.

E. Social Demands & Economic Development

KY 2498 as a whole route mainly serves as a rural collector for residential purposes. However, the two ends also serve the area in other significant ways as well. On the Index side the corridor contains various educational and research facilities along with other commercial businesses and is the primary route to the counties main sports and recreational parks. On the Downtown side (which is the focus of this study) KY 2498 is the primary connection to the ARH Hospital which is the only medical hospital that serves Morgan and parts of Magoffin, Menifee, and Wolfe Counties.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

As stated earlier, the focus area of KY 2498 for this study is the primary connection for people to the Area's only Hospital. The Transportation Demand for this route is expected to stay the same, if not increase, for the future.

G. Capacity

This section of KY 2498 is currently operating below its capacity as it is a two lane facility with an ADT of 2600. Capacity is not expected to become an issue in the near future.

H. Safety

A review of the Kentucky State Police Collision Database from January 1, 2008 to the present shows that there have been 15 collisions along this section of roadway resulting in 4 injuries. The collision types include Run Off Road, Sideswipe, Rear End, and Fixed Object. There are no high CRF (>1) sections or spots within the project area. Maps showing the collisions can be seen on page 10.

I. Roadway Deficiencies

As listed above, the existing roadway consist of two 9 ft. wide lanes with 2 ft. wide shoulders. KYTC's Common Geometric Practices for Rural Collector Roads recommends 12' driving lanes and 8' shoulders. This section of roadway contains substandard horizontal curves and guardrail and narrow or no shoulders.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW	
A. Air Quality Project is in: <input checked="" type="checkbox"/> Attainment area <input type="checkbox"/> Nonattainment or Maintenance Area <input type="checkbox"/> PM 2.5 County STIP Pg.#: _____ TIP Pg.#: _____	
B. Archeology/Historic Resources <input checked="" type="checkbox"/> Known Archeological or Historic Resources are present A Historic Church is located in the area but should not be impacted with the project.	
C. Threatened and Endangered Species Indiana Bat Northern Long-Eared Bat Virginia Big-Eared Bat Snuffbox Mussel	
D. Hazardous Materials <input type="checkbox"/> Potentially Contaminated Sites are present <input checked="" type="checkbox"/> Potential Bridge or Structure Demolition	
E. Permitting Check all that may apply: <input checked="" type="checkbox"/> Waters of the US <input type="checkbox"/> MS4 area <input 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 Project is adjacent to the Licking River.	
F. Noise Are existing or planned noise sensitive receptors adjacent to the proposed project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is this considered a "Type I Project" according to the KYTC Noise Analysis and Abatement Policy? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
G. Socioeconomic Check all that may apply: <input type="checkbox"/> Low Income/Minority Populations <input checked="" type="checkbox"/> Relocations <input type="checkbox"/> Local Land Use Plan available Project may require 3-5 residential relocations and 1 commercial relocation.	
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	
Anticipated Environmental Document: NONE (Completely State Funded)	

IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

The Project Team has identified the following needs for this project: The area's only hospital, ARH, is located on this section of the project on KY 2498. This section of the roadway has substandard horizontal curves, narrow lanes and narrow or no shoulders. There is a need to upgrade roadway geometry of KY 2498 which also provides redundancy to the roadway system in this area.

The Project Team has identified the following issues/concerns that must be considered during the design process:

- Avoidance of Impacts to the Licking River
- Minimization of Floodzone Impacts
- Maintenance of Traffic during Construction
- Proximity of Historic Resources
- Impacts to Medical Services during Construction
- Stream Impacts
- Stakeholder Concerns

During the study, the Project Team examined various alternates as can be seen in Exhibit 1. The Team recommends progressing Alternates 3 & 5 for further study in the Preliminary Engineering Phase. It is also recommended that various typical sections be studied including 2-Lane Rural, 3-Rural (Truck Climbing Lane) and an Urban Typical (curb and gutter w/out sidewalk) at the Hospital to minimize impacts to the area.

B. Draft Project Purpose:

To improve roadway system reliability and regional healthcare accessibility by addressing the current roadway deficiencies.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:		Current Estimate	
The following was used for estimating purposes:		<u>Phase</u>	<u>Estimate</u>
RW-	Residential-\$75,000 per house	Planning	
	Commercial-\$150,000 per structure	Design	\$ 1,000,000.00
	Land-\$1,000 per acre	R/W	\$ 600,000.00
Const-	Earthwork-\$9 per cu yd	Utilities	\$ 400,000.00
	Asphalt-\$90 per ton	Const	\$ 3,000,000.00
	Curb and gutter-\$25 lin ft	Total	\$ 5,000,000.00
	25% Contingency		
<p>This estimate was based on the Alternate 3 alignment using a typical section composed in accordance with the Common Geometric Design Practices listed above. Currently, only Preliminary Engineering funds are listed in the Highway Plan. It is recommended that Preliminary Engineering be completed by October of 2015 so that possible funding be secured for further phases in the 2016 Highway Plan.</p>			

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	West Liberty Gas Service
Contact -	Jeremy Lewls
Address -	565 Main Street, West Liberty, KY 41472
Phone No. -	606-495-6259
Company Name -	West Liberty Water Works
Contact -	Kevin Cantrell (Water) Rod Adams (Sewer)
Address -	565 Main Street, West Liberty, KY 41472
Phone No. -	606-743-3330
Company Name -	American Electric Power
Contact -	Ron Canfield
Address -	12333 Kevin Ave., Ashland, KY 41102
Phone No. -	606-924-1462
Company Name -	Mountain Rural Telephone
Contact -	Junior Barrett
Address -	405 Main Street, West Liberty, KY 41472
Phone No. -	606-743-3121

10-8804.00 DNA STUDY
EXHIBIT 1

EXISTING KY 2498

CITY OF WEST LIBERTY

ARH HOSPITAL

ALTERNATE 1

ALTERNATE 2

ALTERNATE 3

ALTERNATE 4

ALTERNATE 5

EXISTING KY 2498

US 460



VII. TABLES AND EXHIBITS (cont.)



Start of Project (US 460 Intersection)



Looking South at ARH Hospital

VII. TABLES AND EXHIBITS (cont.)

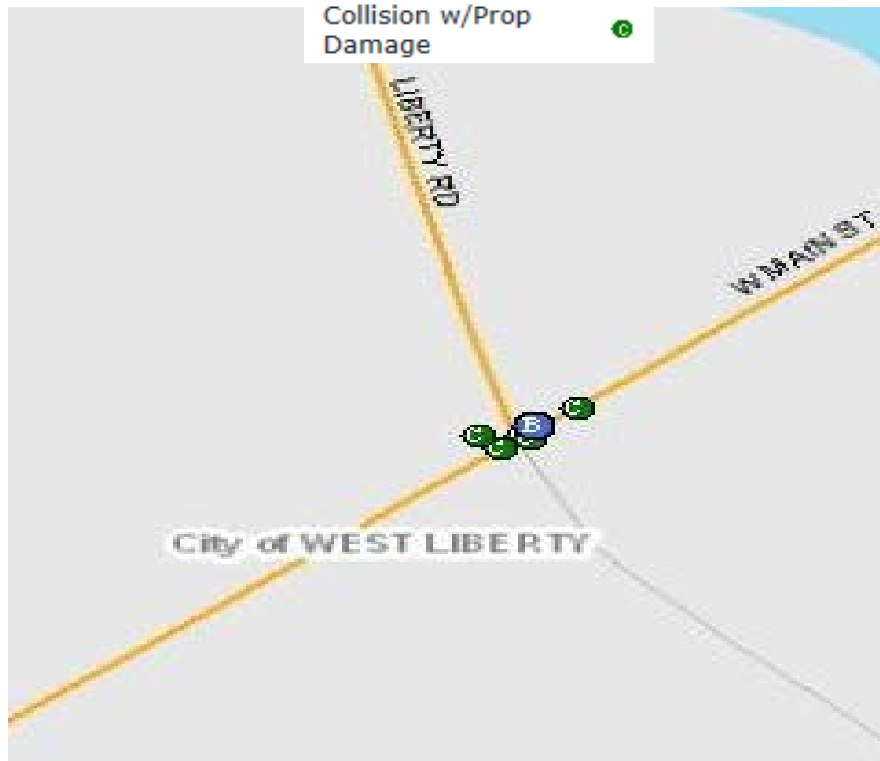


End of Project



Floodzone Information

VII. TABLES AND EXHIBITS (cont.)



Collision Data for KY 2498 (top) and US 460 (bottom)