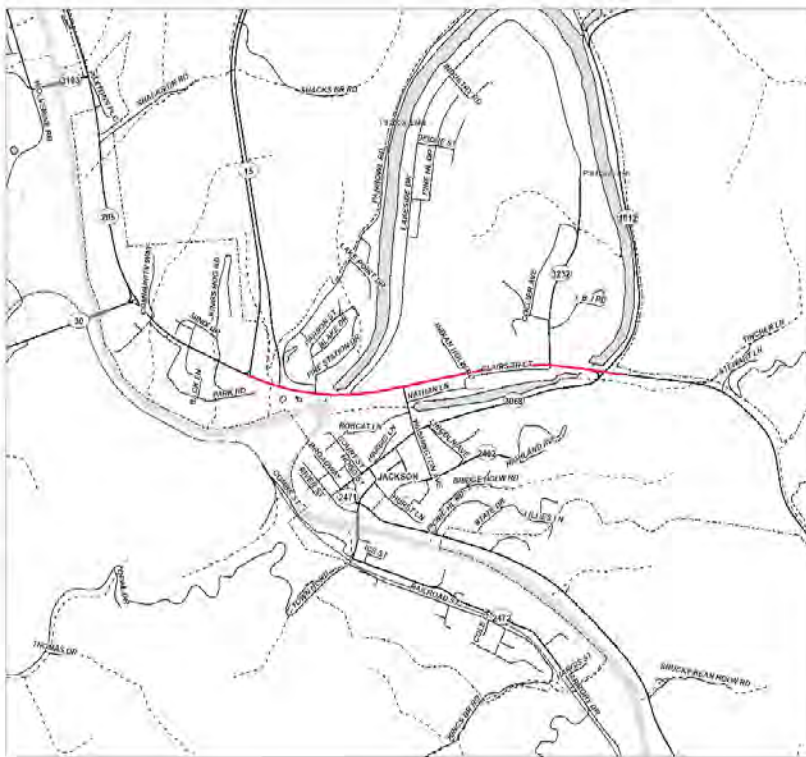


Data Needs Analysis



Scoping Study



KY 15, Breathitt County
Major Widening
Item No. 10-376.00

Prepared by
KYTC

May 2017



I. PRELIMINARY PROJECT INFORMATION			
County:	Breathitt	Item No.:	10-376.00
Route Number(s):*	KY 15	Road Name:	Hazard-Jackson-Campton
Program No.:		UPN:	(Function) 013 0015 016-018
Federal Project No.:		Type of Work:	Major Widening
2018 Highway Plan Project Description:			
IMPROVE KY-15 FROM THE INTERSECTION OF NEW KY-15/30 TO THE INTERSECTION OF KY-1812.			
Beginning MP:	16.75	Ending MP:	17.9
		Project Length:	1.15
In TIP:	<input type="checkbox"/> Yes <input type="checkbox"/> No Reconcile Project Information in Clearview		
State Class.:	<input checked="" type="checkbox"/> Primary <input type="checkbox"/> Secondary		
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural Arterial		
MPO Area:	Not Applicable		
ADT (current):	13752 (2016)		
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:	Shoulder		
Posted Speed:	<input type="checkbox"/> 35 mph <input checked="" type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):		
KYTC Guidelines Preliminarily Based on : 45 MPH Proposed Design Speed			
COMMON GEOMETRIC			
Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	4	Existing Rdwy. Plans available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans:
Lane Width	12'	12'	
Shoulder Width	2'-5'	4' total (includes C&G)	
Max. Superelevation***		6%	
Minimum Radius***		660'	
Maximum Grade	3%	5%	
Minimum Sight Dist.		360'	
Sidewalk Width(urban)	0'	5'	
Clear-zone [†]	10'	18'	
Traffic Forecast Requested Date Requested:			
<input type="checkbox"/> Mapping/Survey Requested Date Requested:			
Type:			
Project Notes/Design Exceptions? Though classified as rural, this project should be designed as urban.			
Bridge No.:[‡]	(Bridge #1) (Bridge #2)		
Sufficiency Rating			
Total Length			
Width, curb to curb			
Span Lengths			
Year Built			
Posted Weight Limit			
Structurally Deficient?			
Functionally Obsolete?			
Existing Bridge Type			
Existing Geotech Data Available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Detour Length(s): NA			
*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

The adjacent shown funding was approved as part of the 2018 General Assembly's Enacted Highway Plan. Only Design funding is available in the current biennium.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
NH	D	2019	\$1,500,000
NH	R	2021	\$2,900,000
NH	U	2022	\$1,150,000
NH	C	2023	\$7,500,000

B. Project Status

This project has been a District priority for the last three District Transportation Plans. This is another section of an ongoing corridor rebuilding program along KY 15 from Hazard to the Mountain Parkway and was recommended as the #1 Priority in the 2013 KY 15 Corridor Programming Study. It is the District's intent to begin Design work in calendar year 2018. Recently completed projects along the corridor include (a) intersection of KY 15 and KY 1812/Washington Ave. to a partial concrete intersection due to rutting issues, and (b) a Lakeside Drive rockfall mitigation project.

C. System Linkage

KY 15 is classified as a Principal Arterial and is part of the National Highway System. It is the primary North/South Route running through District 10 and is used to connect much of Eastern Kentucky to the Central and Northern parts of the Commonwealth. The route begins at US 119 in Whitesburg and runs north through seven counties ending in Winchester. There is a direct connection to the Bert T. Combs Mountain Parkway in Campton approximately 20 miles north of this project.

D. Modal Interrelationships

As the primary North/South route, KY 15 sees good amount of freight traffic carrying various goods from coal to retail merchandise. This Section of KY15 is located in the heart of the commercial area of Breathitt County and has seen increased pedestrian traffic over the years.

E. Social Demands & Economic Development

This section of KY 15 runs through a very mixed developed area. It has residential, commercial and light industrial all connecting to KY 15 within the project limits. Within the City of Jackson, the majority of the medical, dining, and retail establishments are located along this project section. This includes the Regional Hospital and 5 of the 7 public schools located in Breathitt County. The only Industrial park in Breathitt County is located along the project section. Breathitt County is currently expanding into the adventure tourism aspects of development with the current focus in the Southfork area of the county. Any visitors coming from the north or west would likely use this section of roadway thus resulting in increased travel demand.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The roadway is basically operating at capacity for its design. Any growth, such as the return of coal mining or an increase in tourism will cause the current system to perform inadequately. This effect is already seen by motorists traveling the corridor during peak times.

G. Capacity

This section of KY 15 sees AADT's ranging from 10,410 (South) to 15,964 (North). Current standards show the corridor is almost at capacity with a V/SF ranging from 0.89 to 0.96.

H. Safety

The CRF (Critical Rate Factor) of this corridor section ranges from 1.39 to 4.91. A CRF over 1.0 means a roadway is experiencing higher than average crash occurrences. This is supported by the fact that in the last five years over 200 crashes have been recorded in this section. Four of the Intersections located within the project limits were found to be among the highest collision Intersections in District 10. They are the Intersections of KY 15 with KY 1812/Washington Ave, Indian Hollow Road, KY 3232, and KY 1812/KY 3068. Maps with crashes plotted can be seen in Section VII. Tables and Exhibits.

I. Roadway Deficiencies

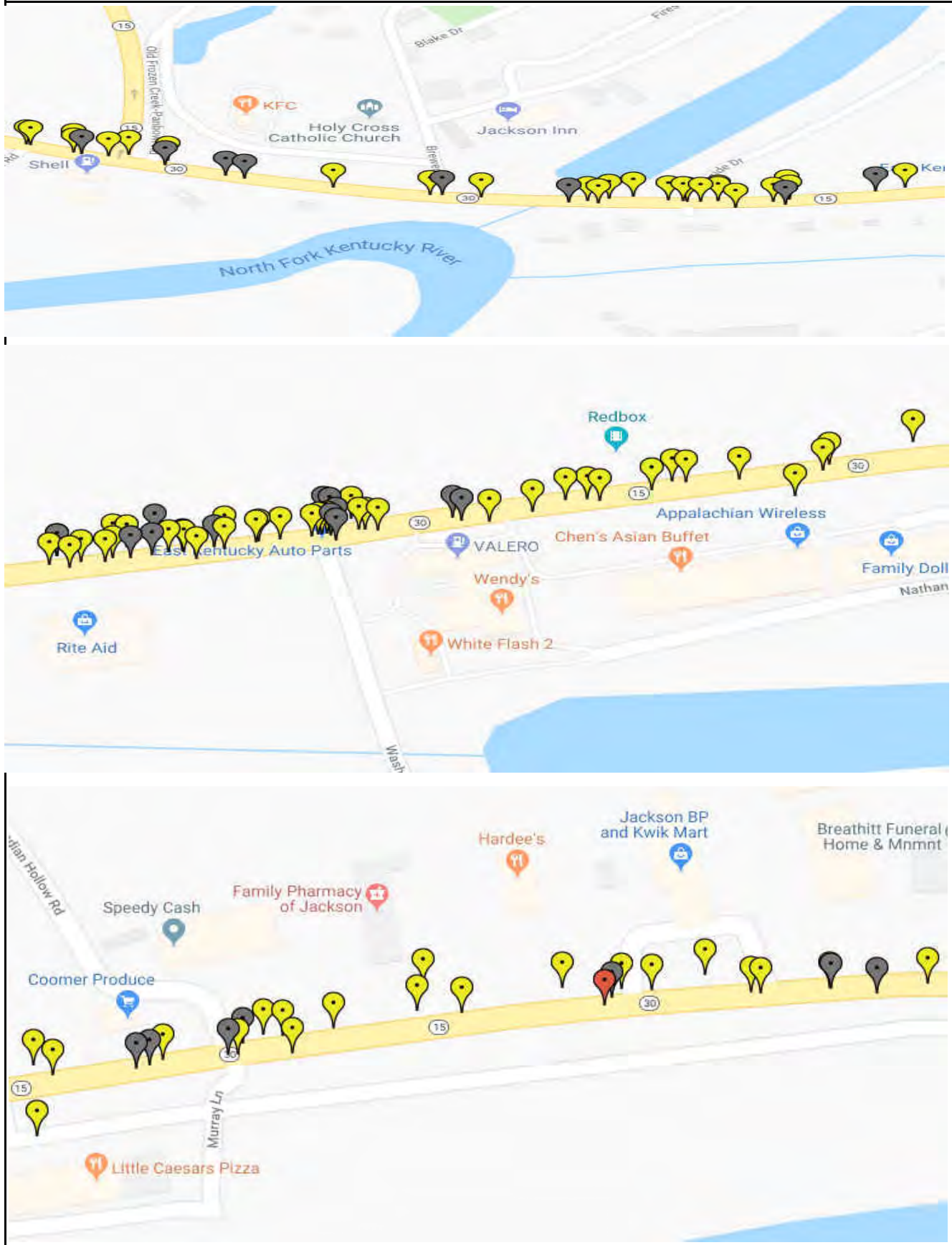
Other than slightly narrow shoulders, this section of roadway does not suffer from geometric deficiencies. This road does have traffic issues relating to capacity and improper signal spacing. The proximity of the two signals located at KY 1812 and Lakeside Drive make proper timing difficult to achieve for the signal system along the route. As mentioned above, the roadway section has a high number of crashes some of which could be improved by implementing access management techniques along the corridor section.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW	
A. Air Quality Project is in: <input type="checkbox"/> Attainment area <input checked="" type="checkbox"/> Nonattainment or Maintenance Area <input type="checkbox"/> PM 2.5 County STIP Pg. #: TIP Pg. #: 	
B. Archeology/Historic Resources <input type="checkbox"/> Known Archeological or Historic Resources are present None known. Project will still require either a completed checklist or Phase I Survey as plans are developed.	
C. Threatened and Endangered Species According to the IPAC listing, this project may affect the following four species: Gray Bat, Indiana Bat, Northern Long-Eared Bat, and the Kentucky Arrow Darter. A Habitat Assessment will be conducted as the project moves forward and the project will avoid or mitigate as necessary.	
D. Hazardous Materials <input checked="" type="checkbox"/> Potentially Contaminated Sites are present <input type="checkbox"/> Potential Bridge or Structure Demolition Project limits include 5 current or former gas stations, a current mechanic shop/ service station, and a former oil change business.	
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 checked="" 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 checked="" type="checkbox"/> DOW IWQC <input type="checkbox"/> Special Use Waters Project is adjacent to and may effect the Kentucky River and/or Panbowl Lake.	
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 KYTC Noise Analysis and Abatement Policy? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Project intends to conduct Noise Analysis as determined to be required.	
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 The Project does have the potential for relocating low income populations.	
H. Section 4(f) or 6(f) Resources The following are present on the project: <input type="checkbox"/> Section 4(f) Resources <input checked="" type="checkbox"/> Section 6(f) Resources It is possible that Panbowl Lake is a 6F resource.	
Anticipated Environmental Document: CE Level 3	

IV. PROJECT NEED, PURPOSE & SCOPE	
A. Need:	
The following Needs have been identified by the Project Team for this project: 1. Continued Improvement of one of Eastern Kentucky's Primary North/South Corridors. 2. Address increased use of non-motorized traffic in project area. 3. Increase roadway capacity and improve Traffic Flow. 4. Improve Roadway Safety.	
B. Purpose:	
The purpose of this project is to improve the operation of this section of KY 15, and thus the KY 15 Corridor, by increasing both motorized and non-motorized user capacity while improving roadway safety.	
C. Scope:	
<p>As with most engineering problems, there is more than one way to solve the issues this section of KY 15 faces. Exhibit 1 presents solutions that the District believes will correct current issues and allow for future traffic demand.</p> <p>Capacity and Transportation Demand are both issues that can be addressed with the utilization of an urban 5 lane typical section. By adding one additional lane in each direction of travel, the roadway would no longer operate at capacity and would allow for any future growth the roadway experiences.</p> <p>Currently, sidewalks exists left of centerline from the beginning of the project to Brewers Drive and right of centerline from the beginning of the project to the entrance of the Sewage Treatment Plant. The City of Jackson has also constructed sidewalks along KY 3232 from the Hospital to the District Office Building but did not connect it to KY 15. At various times of the day, it is evident that numerous pedestrians utilize this facility and continue along the KY 15 project corridor. As the exhibit shows it is the District's intent to connect these sidewalks throughout the project in order to provide a dedicated/safer pedestrian and bike travel way.</p> <p>The exhibit shows that it may be possible to realign a couple of the intersections along the project section. The District believes that these realignments and improving some access management may reduce the number of future crashes within the project area.</p> <p>In order to help improve Traffic Flow, the District intends for the current signal system to be studied and optimized as part of this project.</p> <p>The Project Team has also identified several concerns that may limit the alternates for the project. These include Utility relocation, Traffic Control during construction, potential excavation along project (identified in Exhibit 1), and potential impacts to Panbowl Lake (also identified).</p> <p>Overall, the Scope of this project is to fulfill the project Purpose while addressing the identified Project Needs. It is the District's goal to do this both within the established timeframe and within the established budget.</p>	

V. PROJECT ESTIMATE & METHODOLOGY	
Estimate Methodology:	Current Estimate
Estimates are based on similar projects within the District and may change due to unknown factors. It is anticipated that the remaining Construction funding will be approved in the 2024-2026 Highway Plan.	Phase <u>Estimate</u>
	Planning
	Design \$1,500,000.00
	R/W \$2,900,000.00
	Utilities \$1,150,000.00
	Const \$15,000,000.00
	Total \$20,550,000.00
VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION	
Company Name -	AT&T
Contact -	
Address -	29 Willis Branch Prestonsburg, KY 41653
Phone No. -	606-874-2715
Company Name -	Kentucky Power
Contact -	
Address -	1400 East Main Street Hazard, KY 41701
Phone No. -	606-436-1321
Company Name -	Jackson City Water & Sewer
Contact -	
Address -	333 Broadway Jackson, KY 41339
Phone No. -	606-666-7069
Company Name -	Frontier Gas, LLC
Contact -	
Address -	2963 Route 321 N. Prestonsburg, KY 41653
Phone No. -	606-886-2431
Company Name -	Thacker Grigsby
Contact -	
Address -	PO Box 789 Hindman, KY 41822
Phone No. -	606-785-9500
Company Name -	Crystal Broadband
Contact -	
Address -	PO Box 180336 Chicago, IL 60618
Phone No. -	630-206-0447

VII. TABLES AND EXHIBITS (cont.)



VII. TABLES AND EXHIBITS (cont.)

