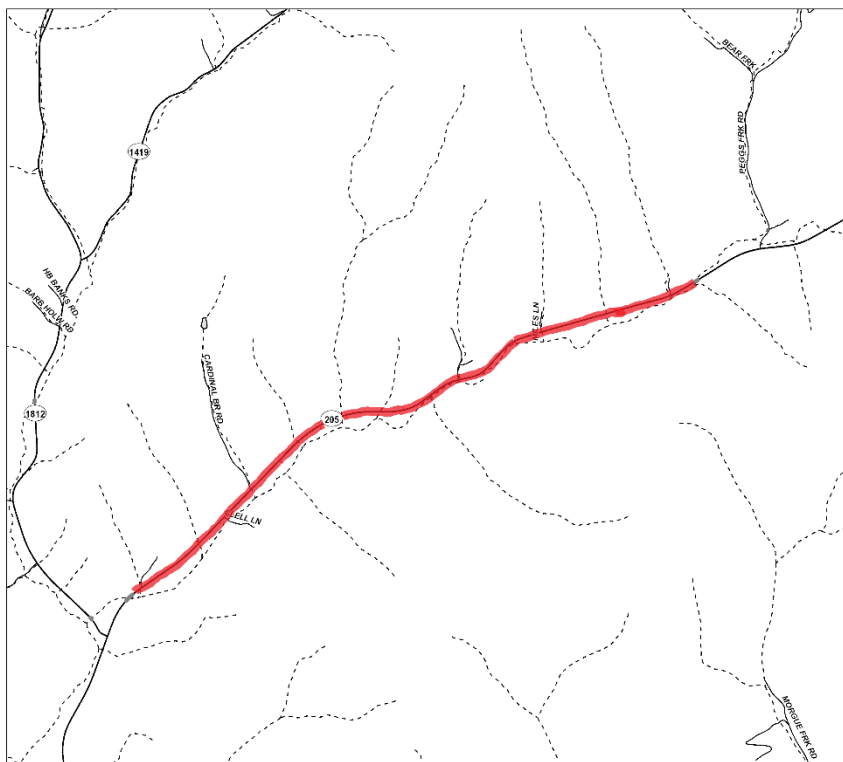
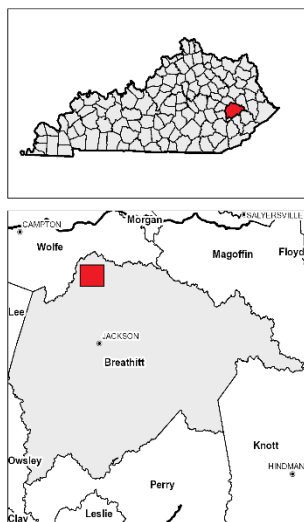


Data Needs Analysis



Scoping Study



KY 205, Breathitt County
From East of KY 1812 to
West of Peggs Fork Rd

Item No. 10-0375

Prepared by the KYTC
District 10

April 2020



I. PRELIMINARY PROJECT INFORMATION

County:	Breathitt	Item No.:	10-0375
Route Number(s):*	KY 205	Road Name:	Jackson - Helechawa
Program No.:		UPN:	(Function) 013 0205 7-10
Federal Project No.:		Type of Work:	Minor Widening

2020 Highway Plan Project Description:

IMPROVE KY-205 FROM NORTH OF KY-1812 TO SOUTH OF PEGGS FORK RD.

Beginning MP:	7.804	Ending MP:	9.954	Project Length:	2.15
In TIP:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reconcile Project Information in Clearview			
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.:	A ▼	% Trucks:	11
MPO Area:	Not Applicable ▼	Terrain:	Rolling ▼		
ADT (current):	1616 (2013)				
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 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 :	55 MPH Proposed Design Speed				

COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2	Existing Rdwy. Plans available?
Lane Width	9'-10'	12'	
Shoulder Width	0-2'	6'	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Max. Superelevation***	unknown	8%	Year of Plans: 1947
Minimum Radius***	550'	960	<input checked="" type="checkbox"/> Traffic Forecast Requested
Maximum Grade	3%	5%	Date Requested: 6/11/2020
Minimum Sight Dist.	unknown	495'	<input type="checkbox"/> Mapping/Survey Requested
Sidewalk Width(urban)	N/A	N/A	Date Requested:
Clear-zone [†]	2'		Type: ▼
Project Notes/Design Exceptions?	Recommend using 11' lanes instead of 12' lanes. No set Clear Zone.		

Bridge No.: [‡]	(Bridge #1)	(Bridge #2)	
Sufficiency Rating	N/A		Existing Geotech Data Available?
Total Length			
Width, curb to curb			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Span Lengths			
Year Built			
Posted Weight Limit			Detour Length(s): 20 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

The adjacent shown funding was approved as part of the 2020 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>
FED	D	2022	\$1,560,000
FED	R	2023	\$2,900,000
FED	U	2024	\$1,470,000
FED	C	2025	\$11,390,000

B. Project Status

This is the final section of the KY 205 Corridor left to rebuild. Over the last 30 years 14 miles between KY 15 in Breathitt County and US 460 in Morgan County has been reconstructed with an additional 7 miles under construction at this time.

C. System Linkage

KY 205 is a Minor Arterial that is used to connect KY 15 (major North-South route) to both the Mountain Parkway and US 460 corridors (both major East-West routes.) This connection is over 20 miles shorter than traveling KY15 to Campton and then back East along the Mountain Parkway which is the next equivalent connection.

D. Modal Interrelationships

KY 205 currently does not serve as an intermodal connector route. In previous years it did serve as a main route for transporting both coal and timber to railroad loading yards in Jackson.

E. Social Demands & Economic Development

This section of KY 205 is primarily used by corridor residents traveling for daily activities such as shopping and work. It is also used by commuters wanting to access the Major Corridors that are mentioned in part C above. While it does have some usage for commercial traffic now, completion of this corridor will serve to enhance the Transportation Network of Breathitt, Wolfe, and Morgan Counties and in return help promote economic development in the area.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

Usage of this roadway is expected to continue at the same level that it currently has today. Visual observation indicates that the road is not currently operating at vehicular capacity .

G. Capacity

There are no known capacity issues along KY 205 at this time nor are any expected within the foreseeable future.

H. Safety

A review of the Kentucky State Police Collision Database shows that there have been 8 crashes within this section of KY 205 in the last five years. 6 of the 8 crashes happened in the horizontal curve cluster located at milepoint 9.100. Overall, the whole section has an EEC (Excess Expected Crashes) of -7 which indicates an LOSS (Level of Service of Safety) rating of 2. This indicates that as a whole, this section of KY 205 is generally considered as a safe section of roadway when compared to roads of the same class and charcater within the Commonwealth.

I. Roadway Deficiencies

This section of KY 205 consists of 2 narrow (9'-10') lanes and little to no shoulders. There are two areas that contain concerns regarding geometric design standards. The first is a cluster of horizontal curves located at approximate milepoint 9.100 and the second is a couple of vertical curves located within the horizontal tangent at approximate milepoint 9.600. The rest of this corridor section contains horizontal tangents and curves that appear to conform to current design standards.

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 type="checkbox"/> Potentially Contaminated Sites are present <input type="checkbox"/> Potential Bridge or Structure Demolition No known sites located within project limits.	
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 checked="" type="checkbox"/> ACE NW <input type="checkbox"/> ACE IP <input checked="" type="checkbox"/> DOW IWQC <input type="checkbox"/> Special Use Waters Actual Permit level will be determined by actual alternate that is chosen.	
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
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 type="checkbox"/> Section 6(f) Resources N/A	
Anticipated Environmental Document: CE Level 2 ▼	

IV. PROJECT NEED, PURPOSE & SCOPE	
A. Need:	
The following needs have been identified for this project:	
<ol style="list-style-type: none">1. Completion of a Major Corridor connector.2. Improve and Modernize KY 205 to current standards.3. Improve Safety along segment of roadway with crash history.	
B. Purpose:	
The purpose of this project is to complete a multi-county corridor reconstruction. This will be accomplished via segmented safety improvements and overall modernization of an existing 2 lane roadway facility.	
C. Scope	
The goal of this project is the completion of a project that not just meets the purpose but meets it in a timely manner and within the expected budget. In order to meet this goal, the DNA Study has identified the following three areas of concern that can affect the successful completion of the project goal.	
<ol style="list-style-type: none">1. Horizontal Curve Correction - The curves located at milepoint 9.100 should be reconstructed to 55 mph design speed standards. Two potential ways of doing this are located in Exhibit 2. The recommended alternate is the red line labeled as Alternate 2. Initial indications are that Alternate 2 would require less Right of Way and thus save time and money.2. Vertical Curve Correction - There are a series of vertical curves located just Northeast of the horizontal curves at milepoint 9.600. These curves are located in a tangent that allows vehicles to obtain higher speeds yet the vertical curves limit sight distance for typical passenger vehicles.3. Typical Section - The typical section that is ultimately chosen will probably have the greatest impact to the project schedule and budget. In order to minimize these impacts it is recommended that two different typical sections are used along the project. A curb and gutter style typical should be used in Section A (shown on Exhibit 1) and a standard rural typical with 6' of paved shoulder should be used as buildings move further off the roadway (Exhibit 2.)	

V. PROJECT ESTIMATE & METHODOLOGY	
Estimate Methodology:	Current Estimate
This estimate is based upon the alternates presented and mentioned in the Scope section above. The estimate is based upon previous projects located within the District and are of the same nature.	<u>Phase</u> <u>Estimate</u>
	Planning
	Design \$ 1,000,000.00
	R/W \$ 2,000,000.00
	Utilities \$ 1,250,000.00
	Const \$ 9,500,000.00
	Total \$ 13,750,000.00
VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION	
Company Name -	Licking Valley RECC
Contact -	Wes McKinney
Address -	PO Box 605, West Liberty, KY 41472
Phone No. -	(606)743-3179
Company Name -	Thacker & Grigsby
Contact -	Freddie Williams
Address -	PO Box 789, Hindman, KY 41822
Phone No. -	(606)785-9500
Company Name -	AT&T
Contact -	Jack Salyer
Address -	250 Williams St., NW Suite 5000, Atlanta, GA 30303
Phone No. -	(606)424-9328
Company Name -	Breathitt Co. Water District
Contact -	Estill McIntosh
Address -	1137 Main St., Suite 305, Jackson, KY 41339
Phone No. -	(606)666-3800 Ex. 250

Exhibit M1



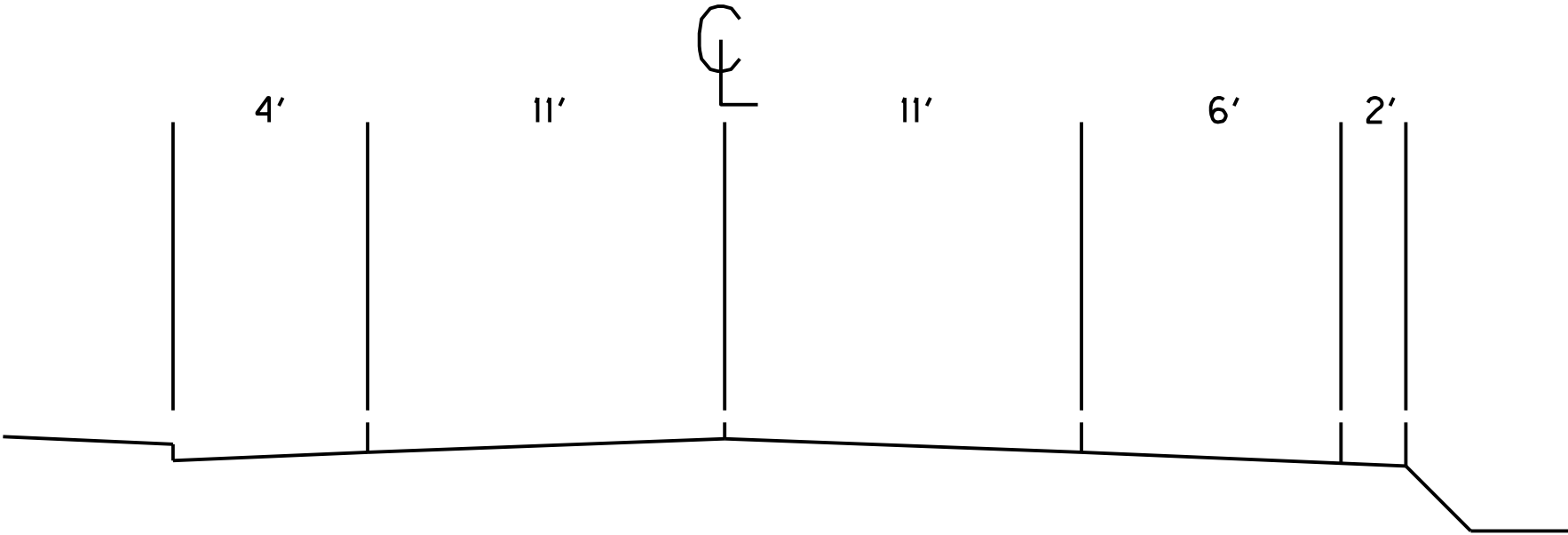
Exhibit 2



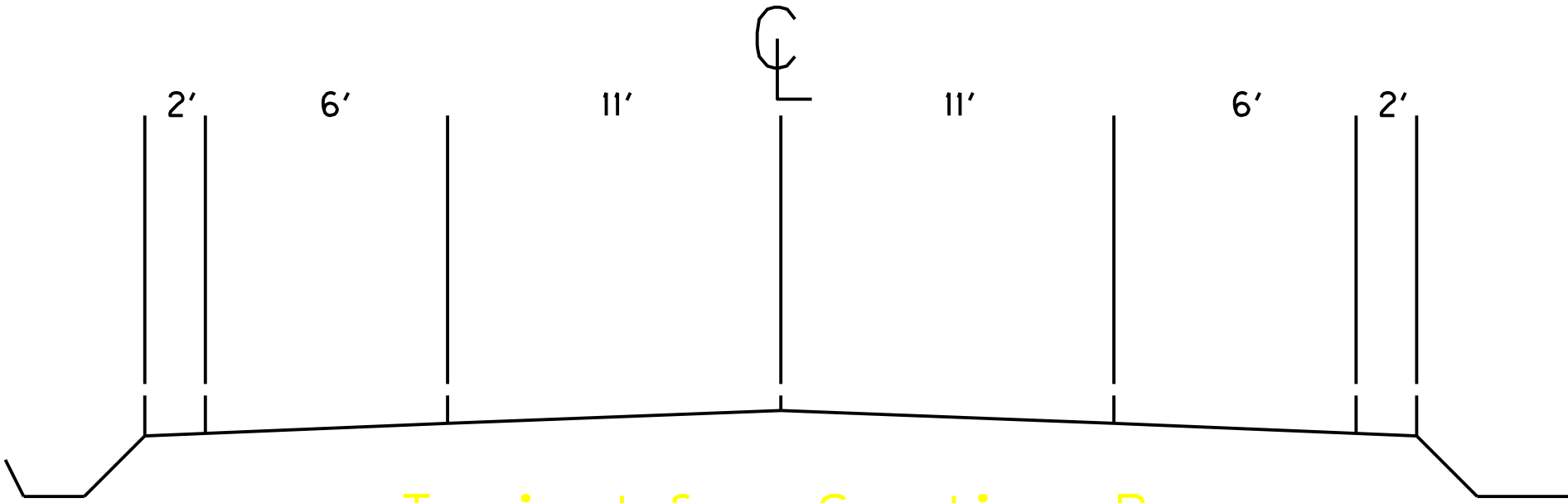
Alternate 2
Alternate 3

Vertical Curves

Exhibit 3



Typical for Section A



Typical for Section B