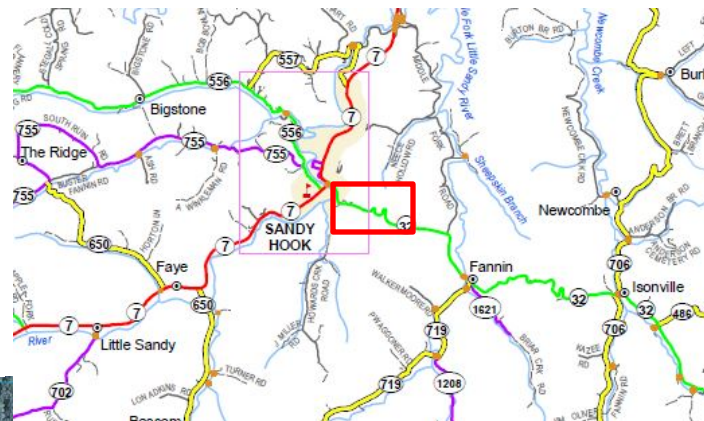


Data

Needs

Analysis



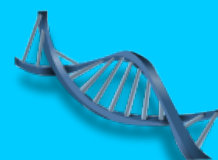
Scoping Study



KY 32, Elliott County
Brown Ridge Road
Major Widening
Item No. 9-8802.00

Prepared by
KYTC District 9

May 2015



I. PRELIMINARY PROJECT INFORMATION			
County:	Elliott	Item No.:	09-8802.00
Route Number(s):*	KY 32	Road Name:	Brown Ridge Rd
Program No.:	9020801	UPN:	FD52 032 0032 009-011
Federal Project No.:	STP 5255 (024)	Type of Work:	Major Widening
2014 Highway Plan Project Description:			
KY 32 from 9.2 Mile Marker to 10.2 Mile Marker Widening			
Beginning MP:	9.200	Ending MP:	10.200
		Project Length:	1.000
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		
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural Collector ▼		
MPO Area:	▼		
ADT (current):	1199 (2012)		
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:	▼ 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 PRACTICES**			
Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2	Existing Rdwy. Plans available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans: 1950 <input type="checkbox"/> Traffic Forecast Requested Date Requested: ▼ <input checked="" type="checkbox"/> Mapping/Survey Requested Date Requested: Feb-15 Type: ▼
Lane Width (feet)	varies 9.0-11.0	11	
Shoulder Width (feet)	varies 1.5-2.0	5	
Max. Superelevation***	8.00%	8%	
Minimum Radius***	95.5	965	
Maximum Grade	7.50%	7%	
Minimum Sight Dist.	minimal	495'	
Sidewalk Width(urban)	n/a	n/a	
Clear-zone [†]	minimal	30' min.	
Project Notes/Design Exceptions?			
Bridge No.:#	(Bridge #1) (Bridge #2)		
Sufficiency Rating			Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Detour Length(s): ▼
Total Length			
Width, curb to curb			
Span Lengths			
Year Built			
Posted Weight Limit			
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 added by the General Assembly into the 2014 Highway Plan with the funding levels shown at right.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
STP	D	2015	\$535,000
STP	R	2016	\$450,000
STP	U	2016	\$300,000
	C		

B. Project Status

Initial design funding approval was received January 2015. Aerial survey (Lidar) is currently underway via statewide surveying contract with GRW Aerial Surveys, Inc. KYTC expects to receive deliverables by August 15, 2015. Roadway design will be performed through consultant services, which will be selected through bulletin advertisement by professional services.

C. System Linkage

Brown Ridge Road (KY 32) is classified as a rural major collector at the project location, which is less than a mile from the county seat of Sandy Hook. KY 7 (another rural major collector) and KY 32, along with several rural minor collectors, carry traffic to and from surrounding Lawrence, Morgan, Carter, and Rowan Counties. From Sandy Hook, this piece of KY 32 provides connectivity to Isonville, in Elliott County and then Lawrence County and Louisa.

D. Modal Interrelationships

There are no apparent intermodal interactions with pedestrians or bicycle routes along KY 32 in the vicinity of the project. Access for commercial vehicles is significantly limited due to the current geometric deficiencies.

E. Social Demands & Economic Development

The KY 32 corridor provides the only means of connection for much of this rural area to larger communities for education, shopping, and civic activities.

II. PROJECT PURPOSE AND NEED (cont.)	
F. Transportation Demand	
A 2012 count indicated 4.13% single axle trucks, 1.29% combo axle trucks, and 5.42% trucks overall.	
G. Capacity	
The number of lanes is sufficient for current traffic volumes.	
H. Safety	
The Critical Rate Factor for the project extent is 0.4570. Three crashes have been reported within the project limits in the last five years. One crash at milepoint 9.48 involved a vehicle hitting an animal, one vehicle lost control under wet conditions at milepoint 9.59, and one vehicle lost control under icy conditions at milepoint 9.73. A crash map is provided in Section VII. Tables and Exhibits.	
I. Roadway Deficiencies	
KY 32 is deficient for steep grade, horizontal and vertical curvature, pavement width, and clear zone at this location. KY 32 climbs and descends over 150 vertical feet within the project limits. Some database information noted grades in excess of 8.5% within the project and archive plans represent the maximum grade at 7.50%. Horizontal curve radii, according to archive plans, are 95.5 feet, 191.0 feet, 204.6 feet, 102.3 feet, and 191.0 feet in rapid succession. The multiple sharp curves within the project limits, in combination with excessive grade, are also hindrance to sight distance. Passenger vehicles maneuver the roadway with difficulty, and commercial vehicles must make use of the entire pavement width.	

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

Project is in: ☒ Attainment area ☐ Nonattainment or Maintenance Area ☐ PM 2.5 County

STIP Pg. #: pg 23 of 112; Sect. A-5; FY15-FY18

TIP Pg. #:

B. Archeology/Historic Resources

☒ Known Archeological or Historic Resources are present

A historic house and a Mail Pouch barn are within the expected limits of the proposed project. The DEA Historians made a site visit and determined that both of the structures are eligible for the National Register of Historic Places and should be avoided. An additional, potentially-eligible structure is located near the Middle Fork Road/KY 32 intersection. Although this house has been modified, the DEA Historians felt that it could retain enough integrity to possibly be eligible for the NRHP as well. It is likely that this house will not be within the expected limits of the project. Archaeology sites are not known at this time. An archaeological survey will be completed when an alignment has been selected.

C. Threatened and Endangered Species

Three federally endangered bat species (Indiana bat, gray bat, and Virginia big-eared bat) are listed by USFWS, KSNPC, and/or KDFWR as occurring in Elliott County. Additionally, another species is proposed for listing (Northern long-eared bat) as endangered and occurring in Elliott County. The project area is within known maternity habitat for Northern long-eared bat, but does not occur within any Indiana bat known habitat polygons. Mapping has not revealed cave systems being within this area, but a portal search will likely be required as part of an assumed presence biological assessment. It is anticipated that the IBPCMOA will be used to offset impacts to potential Indiana and/or Northern long-eared bat. Tree clearing restrictions and/or payment into the IBCF will likely be used.

D. Hazardous Materials

☐ Potentially Contaminated Sites are present ☐ Potential Bridge or Structure Demolition

No potentially contaminated sites were observed during a field inspection of the project area. Additionally, there are no existing bridges within in the limits of the project.

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

The headwaters of Butcher Branch, a tributary to Middle Fk Little Sandy River, are crossed near MP 9.7 and the stream runs parallel to KY 32 heading east, where it is crossed several more times, making avoidance of this stream nearly impossible. Additionally, an unnamed tributary to the Little Sandy River runs parallel to KY 32 heading west towards Sandy Hook. Impacts to this stream may also occur. Wetlands were not observed during a site visit.

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 the

[KYTC Noise Analysis and Abatement Policy?](#)

☒ Yes ☐ No

There is one residence located near MP 10.15 that would qualify as a receptor. Impacts to this residence will be assessed as part of the NEPA documentation and a noise analysis will be conducted at that time if necessary.

G. Socioeconomic

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

Residential or business relocations are not expected to be needed for the project. As such, an Environmental Justice Analysis will not be warranted.

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

The following are present on the project:

☒ Section 4(f) Resources

☐ Section 6(f) Resources

A historic house and a Mail Pouch barn are within the expected limits of the proposed project. The DEA Historians made a site visit and determined that both of the structures are eligible for the National Register of Historic Places and should be avoided. An additional, potentially-eligible structure is located near the Middle Fork Road/KY 32 intersection. Although this house has been modified, the DEA Historians felt that it could retain enough integrity to possibly be eligible for the NRHP as well. It is likely that this house will not be within the expected limits of the project. Archaeology sites are not known at this time. An archaeological survey will be completed when an alignment has been selected.

There are no parks, public recreation areas, or wildlife refuges within the expected limits of the project. Additionally, there are no sites that received Land and Water Conservation Funds.

Anticipated Environmental Document:

CE Level 2



IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

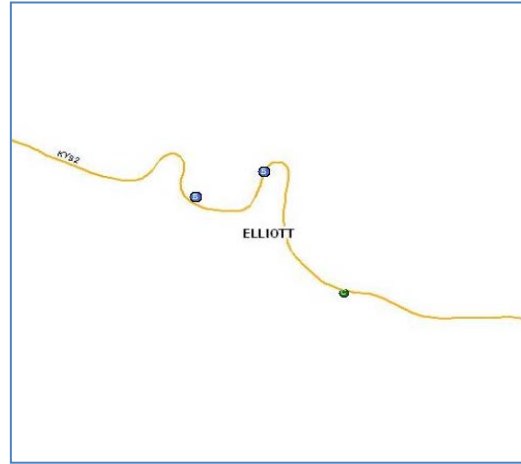
The project includes approximately one mile of KY 32, locally known as Brown Ridge Road, in Elliott County. This one-mile portion of KY 32 lies just south of Sandy Hook, and is part of a larger corridor that carries traffic between Elliott, Lawrence, Rowan, and Carter Counties. The existing roadway was reconstructed in the 1950's. Significant horizontal, vertical, and width deficiencies occur within the project.

B. Draft Project Purpose:

Improve horizontal, vertical, and width deficiencies within a portion of KY 32 between approximate milepoints 9.2 and 10.2.

5/11/2015

VII. TABLES AND EXHIBITS



Crashes on KY 32 - Brown Ridge Road in the project vicinity

VII. TABLES AND EXHIBITS (cont.)



KY 32 - Brown Ridge Road



KY 32 - Brown Ridge Road