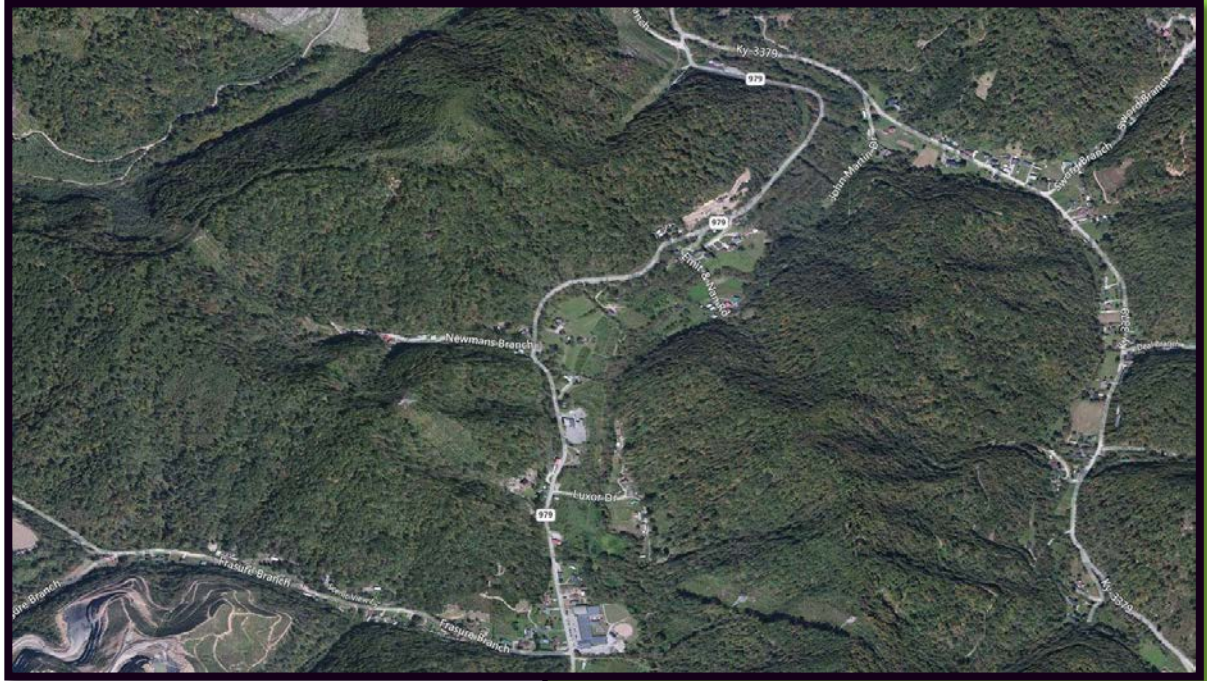


Data

Needs

Analysis



Scoping Study



Floyd County KY 979
Spot Improvements from
Branham's Creek to
John M. Stumbo School
Item Number 12-0195.00

Prepared by KYTC
Division of Planning
District 12

February 2013



I. PRELIMINARY PROJECT INFORMATION

County:	Floyd	Item No.:	12-0195.00
Route Number(s):	KY 979	Road Name:	N/A
Program No.:	87426	UPN:	FD04 036 0979 011-013
Federal Project No.:	N/A	Type of Work:	Spot Improvements

2012 Highway Plan Project Description:

Spot improvements from Branham's Creek to John M. Stumbo School

Beginning MP: 12.40 **Ending MP:** 14.00 **Project Length:** 1.6 Miles

Functional Class.: Urban Rural
State Class.: Primary Secondary
Route is on: NHS NN Ext Wt

MPO Area: Not Applicable
 In TIP: Yes No
Truck Class.:
% Trucks: 7.60%

ADT (current): 3189 2010
Terrain:

Access Control: None Permit Fully Controlled Partial
 Spacing:

Median Type: Undivided Divided (Type):

Existing Bike Accommodations:
Ped: Sidewalk

Posted Speed: 35 mph 45 mph 55 mph Other (Specify):

KYTC Guidelines Preliminarily Based on : 40 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'	11'	
Shoulder Width	2	6	Year of Plans: <input type="checkbox"/>
Max. Superelevation**		8%	<input type="checkbox"/> Traffic Forecast Requested
Minimum Radius**		465'	Date Requested: <input type="checkbox"/>
Maximum Grade	4%	10%	<input checked="" type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.		305'	Date Requested: 2/25/2013
Sidewalk Width(urban)	N/A	N/A	Type: <input type="checkbox"/> <input type="checkbox"/>
Clear-zone***	N/A	N/A	

Project Notes/Design Exceptions?:

*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide

Bridge No.*: Culvert (Bridge #2)

Sufficiency Rating	Not in state system	Existing Geotech data available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length	27'	
Width, curb to curb	16'	Detour Length(s): <input type="checkbox"/>
Span Lengths	13.5	
Year Built	N/A	
Posted Weight Limit	N/A	
Structurally Deficient?	N/A	
Functionally Obsolete?	N/A	
Existing Culvert Type	Wet Stone Masonry	

*If more than two bridges are located on the project, include additions sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

This following funding was listed in the 2012 General Assembly's Enacted Highway Plan	Funding	Phase	Year	Amount
	SPP	D	2012	\$1,000,000
	SPP	R	2016	\$1,500,000
	SPP	U	2016	\$1,320,000
	SPP	C	2018	\$11,500,000

B. Project Status

Design funds for this project have been authorized.

C. System Linkage

KY 979 is a Rural Secondary Collector located in the southeastern part of Floyd County that connects KY 122 to US 23. It serves various communities located along an area known as Mud Creek. KY 979 provides a critical connection for these communities to access US 23. Presently KY 680 is being constructed in the Mud Creek area that will connect KY 122 to US 23. Access to KY 680 will be given to KY 979 at various locations along the route. The construction of KY 680 is not expected to be completed until 2017.

D. Modal Interrelationships

KY 979 is a designated coal haul route. There are presently no bike or pedestrian facilities along this section of highway and no plans to add any with this project.

E. Social Demands & Economic Development

BP Gas Station (M.P. 12.87) and John M. Stumbo Elementary (M.P. 12.45) are located within the project area. The Mud Creek Clinic (M.P. 11.7), which houses both medical and dental offices is located in the vicinity of the project. With the completed construction of KY 680 in 2017, there may be residential development within the project area. There is no economic development anticipated.

F. Transportation Demand

KY 979 is a Rural Secondary Collector that provides a critical connection to US 23 for communities located in the Mud Creek area of Floyd County. Even though KY 680 is currently under construction, this section of KY 979 will still be used as a connection to the new KY 680. With a school and medical/dental clinic located in the project vicinity, average daily traffic is expected to remain the same. KY 979 is a designated coal haul route and there is a possibility of new mining activity in this area of Floyd County.

II. PROJECT PURPOSE AND NEED (cont.)

G. Capacity

There are no congestion issues that would contribute to the need of this project, however, the area located around the school becomes congested during the beginning and ending of the school day.

H. Safety

A ten year review of collisions was conducted of the project area finding 10 total collisions. Critical Rate Factor between M.P. 12.4 and M.P. 13.4 = 1.04. Critical Rate Factor between M.P. 13.52 and M.P. 14.5 = 2.37

I. Roadway Deficiencies

The current section of roadway has a rural template of 9.0' lanes and 2.0' shoulders. The major deficiencies are in the vertical and horizontal curves. The minimum recommended stopping sight distance, maximum grade, and curve radius are not met with the current geometrics of the road. Other problems that contribute to the need for the project include poor entrance geometrics, lack of shoulders in some areas, breaks in the pavement edges, and landslides.

Draft Purpose and Need Statement:

Need: KY 979 is a rural two-lane coal haul route that has numerous vertical and horizontal curve deficiencies along with substandard shoulders and lane widths.

Purpose: To improve geometric roadway deficiencies of KY 979 from M.P. 12.4 to M.P. 14.0.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg.#: [Redacted]

TIP Pg.#: [Redacted]

This is a state funded project and is not listed in the STIP or TIP.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

No Section 106 notifications have been generated from the District at this point. If the historical survey indicates that there may be an impact to historical sites, then the 106 process will be started.

C. Threatened and Endangered Species

The Indiana Bat (*Myotis Sodalis*) and Rabbitsfoot (*Quadrula cylindrica cylindrica*) are listed as threatened or endangered species in the project area. A BA may be required to satisfy Section 7 requirements for both species or an IBCMOA or tree-cutting restrictions may be utilized to compensate for any potential habitat loss for the Indiana Bat.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

At the time of the Environmental Overview, no UST/HAZMAT issues were noted in the project area. However, depending on the final alternate chosen, a gas station could be impacted resulting in the removal of an underground storage tank.

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 IWOC Special Use Waters

ACE LOP may be required for impacts associated with waste area.

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

G. Socioeconomic

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

Several relocations associated with project. Relocation surveys will need to be completed to see if any low income or minority populations are affected.

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

The following are present on the project: Section 4(f) Resources Section 6(f) Resources

State funded project, 4(f) or 6(f) doesn't apply

Anticipated Environmental Document:

None (Completely State funded)



IV. PROJECT SCOPING

	Alternate 1 Estimate		Alternate 2 Estimate	
	Phase	Estimate	Phase	Estimate
A total of (2) alignments have been considered for this project. The two routes are different in alignment location and scope.	Planning		Planning	
	Design	\$1,000,000	Design	\$1,000,000
	R/W	\$1,672,000	R/W	\$2,560,000
	Utilities	\$1,320,000	Utilities	\$1,320,000
	Const	\$8,336,000	Const	\$11,754,000
	Total	\$12,328,000	Total	\$16,634,000

Alternate 1 (See Exhibits Page) begins approximately at M.P. 12.9 and runs northeast of the existing roadway, tying back to the current alignment at approximately M.P. 14.0. This alignment crosses the low lying area and creek to the east of KY 979 with a 100 L.F. structure and then follow the hillside with a cut and fill. The alignment then turns west and crosses the low lying area and creek with an additional 350 L.F. structure to connect with existing KY 979. Additionally this alternative allows for an alignment improvement of KY 979 from M.P. 12.7 to M.P. 12.85 and possible turn lane at M.P. 12.4 next to John M. Stumbo School, which are not reflected in the project estimates. There is a total of 5 relocations possible with this alternative.

Alternate 2 (See Exhibits Page) begins approximately at M.P. 12.9 and follows the existing roadway, tying back to the current alignment at approximately M.P. 14.0. This alignment includes a side hill cut with fill areas. Maintenance of traffic during construction may become problematic with this alternative. This alignment is approximately 5200 L.F. with 1.5M Cu. Yds. of excavation. Additionally this alternative allows for an alignment improvement of KY 979 from M.P. 12.7 to M.P. 12.85 and possible turn lane at M.P. 12.4 next to John M. Stumbo School, which are not reflected in the project estimates. There is a total of 8 relocations possible with this alternative.

V. Summary

This study is a Data Needs Analysis (DNA) of a reconstruction project to address safety and geometric deficiencies of a section of KY 979 in Floyd County, Item Number 12-0195.00. Through analysis of the existing roadway geometrics, crash data, site visits, and discussion with the Project Team, several needs were identified within the project limits. The following were identified as project needs:

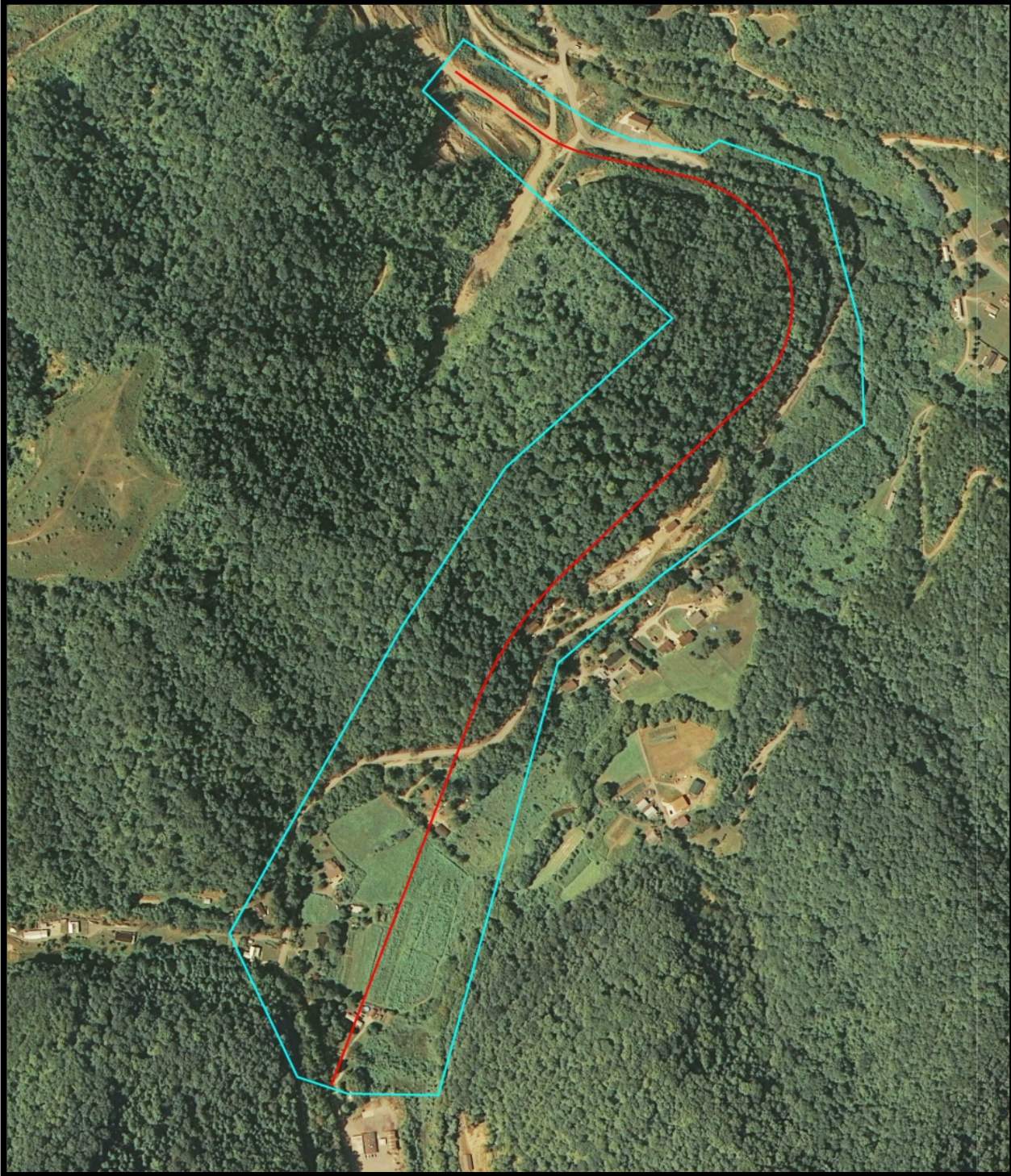
- The No Build Alternative is not feasible due to the poor geometrics of the current alignment.
- The proposed design shall incorporate minimal environmental impacts if possible.
- Alternate 2 is the preferred alternate.
- Improvement of the geometrics of KY 979 is a primary goal.
- Maintenance of traffic will be a critical component of the proposed design.

VI. Tables and Exhibits



Alternate 1

VI. Tables and Exhibits



Alternate 2