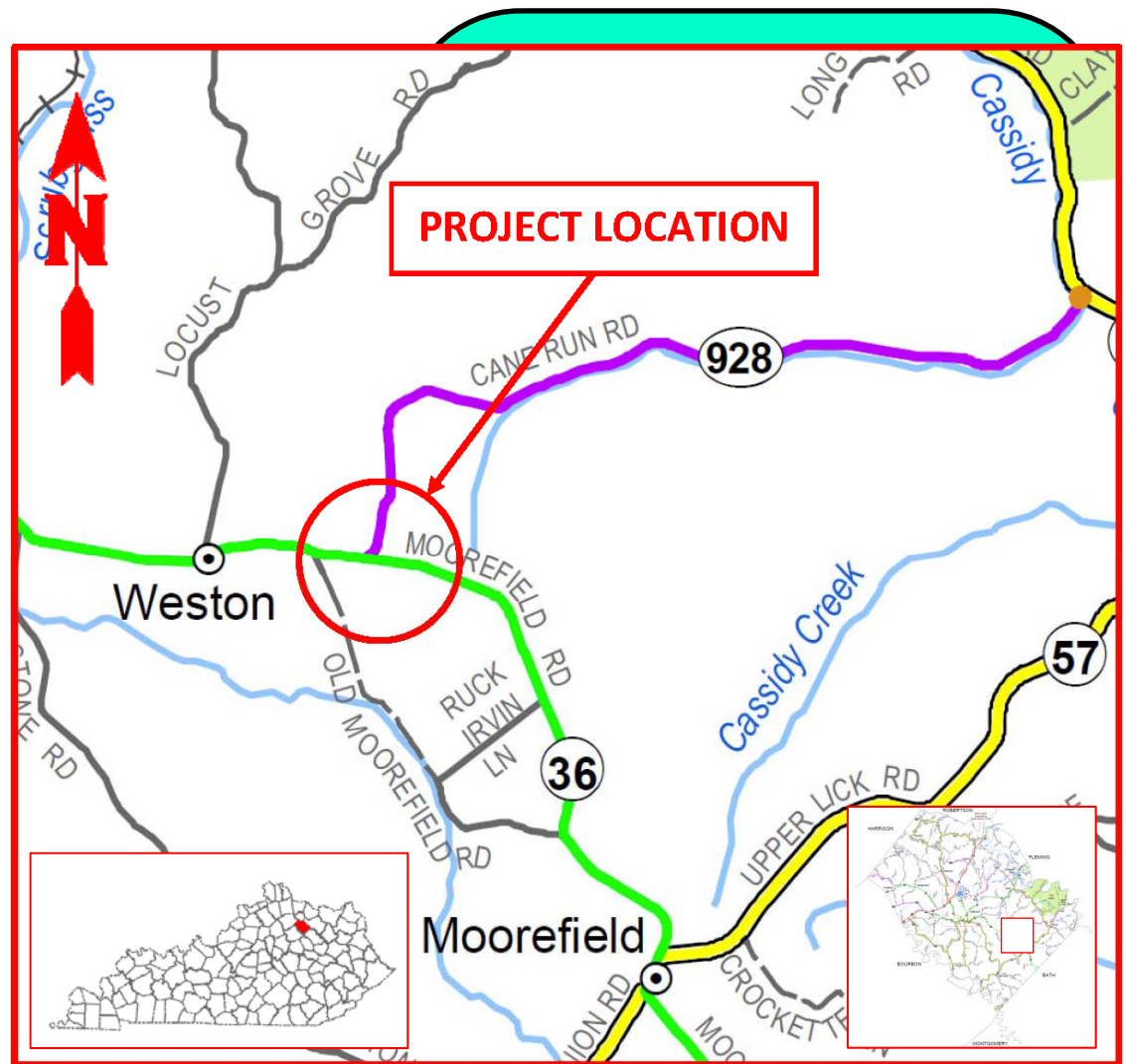


Data Needs Analysis



KY 36 and KY 928
Nicholas County
Intersection Reconstruction
Item No. 09-8811.00

Prepared by KYTC
District 9 Design Staff

October 2014



I. PRELIMINARY PROJECT INFORMATION			
County:	Nicholas	Item No.:	09-8811.00
Route Number(s):	KY 36 and KY 928	Road Name:	Moorefield Road
Program No.:	8954001D	UPN:	FD04 091 0036 008-009
Federal Project No.:		Type of Work:	Intersection Reconstruction
2014 Highway Plan Project Description:			
RECONSTRUCT KY 36/KY 928 INTERSECTION.			
Beginning MP: 8.000		Ending MP: 8.230	
		Project Length: 0.230	
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural Collector ▼	State Class.:	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary
MPO Area: Not Applicable		Route is on:	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt
In TIP: <input type="checkbox"/> Yes <input type="checkbox"/> No		Truck Class.:	AAA ▼
ADT (current):	1243 2012	% Trucks:	7.939
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled	Terrain:	Rolling ▼
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):	Partial Spacing:	▼
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	Other (Specify):	25 (KY 928)
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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans: 1950 <input type="checkbox"/> Traffic Forecast Requested Date Requested: <input type="checkbox"/> Mapping/Survey Requested Date Requested: Type: ▼
Lane Width	9	12	
Shoulder Width	0	6	
Max. Superelevation**		8%	
Minimum Radius**	143	965	
Maximum Grade	10% (approx)	7%	
Minimum Sight Dist.		495	
Sidewalk Width(urban)			
Clear-zone***	30' minimum		
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.*:	(Bridge #1)	(Bridge #2)	
Sufficiency Rating			Existing Geotech data available? <input type="checkbox"/> Yes <input type="checkbox"/> No
Total Length			
Width, curb to curb			Detour Length(s):
Span Lengths			
Year Built			
Posted Weight Limit			
Structurally Deficient?			
Functionally Obsolete?			
Existing Bridge Type			

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

II. PROJECT PURPOSE AND NEED

A. Legislation

The following funding was listed in the 2014 Highway Plan.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
SPP	D	2014	\$200,000
SPP	R	2015	\$200,000
SPP	U	2016	\$150,000
SPP	C	2016	\$1,400,000

B. Project Status

This project is a safety improvement project. The existing intersection has had no previous improvements to address safety problems. Design funds were authorized in August, 2014. Funding for Right-of-Way, Utilities, and Construction is available but not yet authorized. The project will be advertised to consultants for professional services.

C. System Linkage

KY 36 is classified as a Rural Major Collector and serves to connect the city of Carlisle to the community of Moorefield, the city of Owingsville, and Interstate 64. KY 928 is a Rural Local road that connects KY 36 to KY 57 and provides local residents access to the transportation system.

D. Modal Interrelationships

N/A

E. Social Demands & Economic Development

This project will provide improved and safer access for the residents and farms that lie on KY 928 and the various county roads that intersect it.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The last traffic count on KY 36 was 1681 VPD to the northwest of KY 928 (year 2013) and 1243 VPD to the southeast of KY 928, (year 2012). The last traffic count on KY 928 was 164 VPD, performed in 2011.

G. Capacity

Both roadways are sufficient to meet current capacity.

H. Safety

The intersection of KY 36 and KY 928 occurs just beyond the crest of a vertical curve, severely limiting sight distance to the northwest and creating a hazardous condition. KY 928 meets KY 36 at an angle, which contributes to the sight distance problem by making turns onto KY 36 to the southeast difficult. This is the same direction in which the poor sight distance plays the biggest factor. KY 36 has a Critical Rate for all crashes of 0.2190.

I. Roadway Deficiencies

KY 36 has a total roadway width of 18 to 20 feet, with low, earth, or nonexistent shoulders in most places. KY 928 has a total width of 16 feet with no pavement markings. Both roadways have locations with inadequate sight distance, insufficient curve radii, and improper superelevation.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg. #: TIP Pg. #:

As this is a state-funded project, it will not be listed in the STIP.

B. Archeology/Historic Resources

☐ Known Archeological or Historic Resources are present

Since this project is state-funded through all phases, Section 4(f) would not apply. Because the project appears to be state-funded with no US Army Corps of Engineers permits required, then Section 106 also would not apply. However, if it is determined that jurisdictional waters of the US would be impacted, then Section 106 (archaeology and historic resources) would be surveyed within the jurisdictional boundaries of the impacted streams. There are no properties within the expected project limits that are listed on the National Register of Historic Places (NRHP). Additionally, there are no structures that would appear to be eligible for the NRHP. It is unknown if archaeology sites are present, but much of the area that is expected to be impacted appears to be undisturbed, making the likelihood of discovering a site greater.

C. Threatened and Endangered Species

Since this project is state-funded with no US Army Corps of Engineers permits appearing to be required at this time, then Section 7 would not apply. However, if it is determined that jurisdictional waters of the US would be impacted, then threatened and endangered species assessments would be conducted within those areas. Nicholas County has 6 species of freshwater mussels (fanshell, Northern riffleshell, pink mucket, sheepsnose, rough pigtoe, and snuffbox), 2 plant species (Short's goldenrod and running buffalo clover), and 2 bat species (Indiana and Northern long-eared) listed as federally threatened or endangered. In the expected project area, there do not appear to be streams that would be capable of providing suitable habitat for any of the listed freshwater mussel species. A habitat assessment might be required for Short's goldenrod and running buffalo clover, although at this time habitat does not appear to be likely for those species, particularly within only the jurisdictional limits of nearby streams. If trees will be impacted within jurisdictional limits, then it is expected that the IBPCMOA could be used to address impacts to the Indiana bat habitat.

D. Hazardous Materials

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

There are no sites within the expected project area that appear to be potentially contaminated or would have had a former use as a gas station, garage or UST site. Additionally, there will be no bridges demolished as part of the project. If it is determined that residential relocations are necessary for construction of the project, then they will be inspected and abated of asbestos containing materials prior to demolition.

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 expected improvements do not appear to impact a stream or wetland. Therefore, a USACE or KDOW permit will not be required. However, if a wetland is discovered or if it turns out later in design that a stream will be impacted, then it is likely that the impacts could be covered with a USACE LON or NW. The only blueline stream in the area is an unnamed tributary to Somerset Creek, which is expected to be outside the area of the proposed improvements. An ephemeral unnamed tributary to Cassidy Creek could also be impacted. Neither of these streams are Special Use Waters.

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

KYTC does not normally consider noise analysis on state-funded projects.

G. Socioeconomic

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

There is one home on the corner of KY 928 and KY 36 that could possibly be impacted if the intersection is relocated to the southeast. Since this is a state-funded project, which will not require a NEPA document, EJ will not be assessed.

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

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

Section 4(f) does not apply to this project since it is state-funded. Additionally, there are no parks within the project limits that have received Land and Water Conservation Funds. Therefore, Section 6(f) appears to be unlikely on the project.

Anticipated Environmental Document:

None (Completely State funded)



IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

This safety improvement project is necessary due to the poor intersection alignment and poor sight distance. Due to the geometrics of the roadway and the rolling nature of the terrain, the likely solution will be to move the location of the intersection from its current location to the crest of the vertical curve approximately 160' to the northwest, or approximately 350-360' to the southeast, with the latter option being likely to significantly increase right of way costs and impact the homes of local residents.

B. Draft Project Purpose:

The purpose of this project is to reconstruct the KY 36 and KY 928 intersection and approaches as necessary to achieve adequate sight distance, improved intersection alignment, and to provide better access and increased safety for the citizens of Nicholas County.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:

The current estimate is based on relocating KY 928 approximately 160' to the northwest along KY 36 and improving the intersection geometry.

Current Estimate

Phase	Estimate
Planning	
Design	\$200,000
R/W	\$200,000
Utilites	\$150,000
Const	\$1,400,000
Total	\$1,950,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	Sharpsburg Water District
Contact -	George Purvis
Address -	
Phone No. -	606-875-7678
Company Name -	Windstream Communications
Contact -	Chris Barker
Address -	
Phone No. -	606-784-4140
Company Name -	Kentucky Utilities
Contact -	George Argo
Address -	
Phone No. -	859-588-0035
Company Name -	Time Warner Cable
Contact -	Larry Potter
Address -	
Phone No. -	606-845-0820
Company Name -	
Contact -	
Address -	
Phone No. -	
Company Name -	
Contact -	
Address -	
Phone No. -	

VIII. TABLES AND EXHIBITS

