

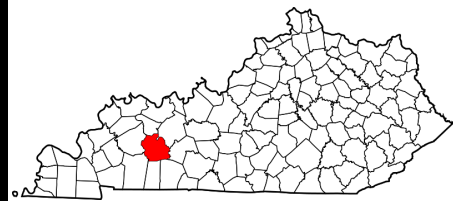
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Scoping Study



US431, Replace Overflow
Structure at the Muhlen-
berg and Mclean County
Line

Item No. **2-1078**

Prepared by

KYTC District 2 Planning

November 2013



I. PRELIMINARY PROJECT INFORMATION			
County:	McLean/Muhlenberg	Item No.:	2-1078.00
Route Number(s):	US 431	Road Name:	
Program No.:	2-1078.00	UPN:	FD52 089 0431 028-029
Federal Project No.:	BRO 4311(036)	Type of Work:	bridge replacement
2012-2018 Highway Plan Project Description:			
Replace overflow structure on US 431 at the Muhlenberg-McLean County line (SR 39) B00056N McLean MP 0.00 to 0.071 and Muhlenberg MP 28.273 to 28.344			
Beginning MP:		Ending MP:	
		Project Length:	0.142
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural <div style="border: 1px solid black; padding: 2px; display: inline-block;">Arterial</div>	State Class.:	<input checked="" type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> NHS <input type="checkbox"/> NN <input checked="" type="checkbox"/> Ext Wt
MPO Area:	Not Applicable	Truck Class.:	AAA
In TIP:	<input type="checkbox"/> Yes <input type="checkbox"/> No	% Trucks:	16.9
ADT (current):	3622 2012	Terrain:	Level
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 Accommodation:	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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans: 1952 <input type="checkbox"/> Traffic Forecast Requested Date Requested: NA <input type="checkbox"/> Mapping/Survey Requested Date Requested: Type:
Lane Width	11'	12'	
Shoulder Width	3'	8'	
Max. Superelevation**			
Minimum Radius**			
Maximum Grade		4%	
Minimum Sight Dist.		1985	
Sidewalk Width(urban)			
Clear-zone***			
Project Notes/Design Exceptions?:			
<small>*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide</small>			
Bridge No.*:	089B00056N (Bridge #2)		
Sufficiency Rating	39		
Total Length	497'		
Width, curb to curb	24"		
Span Lengths	29.9'		
Year Built	1932		
Posted Weight Limit	none		
Structurally Deficient?	yes		
Functionally Obsolete?	no		
		Existing Geotech data available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Detour Length(s): 25miles	
<small>*If more than two bridges are located on the project, include additions sheets.</small>			

Existing Bridge Type Concrete Tee Beam

II. PROJECT PURPOSE AND NEED

A. Legislation

This project is in the approved 2012 Highway Plan	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	BRO	D	2013	\$300,000
	BRO	R	2014	\$200,000
	BRO	U	2014	\$100,000
	BRO	C	2015	\$2,400,000

B. Project Status

Design funds for this project were authorized in July of 2012.

C. System Linkage

US 431 is a Principal Arterial connecting Owensboro to the Central City/Greenville area.

D. Modal Interrelationships

This section of US 431 is part of the Coal Haul Highway System.

E. Social Demands & Economic Development

US 431 is a major connector from Muhlenberg County to Owensboro. This route provides access to shopping, dining, and entertainment.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The last actual traffic count on record was 3622 in 2012. In 2009 the count was slightly higher at 3706.

G. Capacity

There currently are no capacity problems on this route and none are expected in the future.

H. Safety

According to the KY State Police database, there were 2 collisions in the project area in the last 3 years. One animal collision and one fixed object collision.

I. Roadway Deficiencies

This bridge is listed as structurally deficient. The 24 month inspection report shows the condition as poor. There are currently no restrictions posted. This is a coal haul route with nearly 17% truck traffic. KYTC's Common Geometric Practices recommends 24 ft pavement width along with 8 ft shoulders for a rural arterial roadway.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg. #: 92

TIP Pg. #:

Standard pre-demolition asbestos inspection required

B. Archeology/Historic Resources

☐ Known Archeological or Historic Resources are present

All area disturbed. Agricultural fields and raised road bed with right-of-ditches. No foreseen issues at this time.

C. Threatened and Endangered Species

Concern is very large trees in right-of-way approaches at base of road embankment. Trees are up to approximately 40" dbh, prime habitat for Indiana bats and other bat species. Mixed bottomland tree species: American basswood, sycamore, hackberry, sweetgum, etc. Biology Subject Matter Expert will need to examine situation further. Also, no perennial stream or wetlands.

D. Hazardous Materials

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

Standard pre-demolition asbestos inspection required for air quality will determine any asbestos present. No other hazardous materials present at this time.

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 drainage in this area is defined as "overflow". The permitting subject matter expert in Frankfort will examine more closely to determine what action needed. This will not delay environmental clearance

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

None present

G. Socioeconomic

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

None

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

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

Bridge will need to be examined by historic structure subject matter expert.

Anticipated Environmental Document:

CE Level 1



IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

The bridge is structurally deficient with a sufficiency rating of 39. The scope of the project is to replace the existing bridge.



B. Draft Project Purpose:

The purpose of this project is to address the structural deficiencies of this overflow structure and roadway deficiencies on the bridge in order to provide safe passage on this section of US 431.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:

This Estimate is based on similar projects. The amounts in the Highway Plan should be adequate to complete this project.

Current Estimate

<u>Phase</u>	<u>Estimate</u>
Planning	0
Design	300,000
R/W	200,000
Utilites	100,000
Const	2,400,000
Total	3,000,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Muhlenberg County Water District # 3
4789 Main Street
Bremen, KY 42325
Ben Tooley 270-525-6333

VII. PRECONSTRUCTION STATUS REPORT

02-Apr-2013

Preconstruction Status Report

Page 104 of 167

Auth No. / Date 86846 25-Jul-2012 Project No. 02 1078.00 Parent No. 02 1078.00
County Name MCLEAN MUHLENBERG
BMP / EMP 0 / 0.071 28.273 / 28.344
Route US-431- US-431-

Desc REPLACE OVERFLOW STRUCTURE ON US-431 AT THE MUHLENBERG-MCLEAN CO LINE (SR 39) B00056N.

Type Of Work BRIDGE REPLACEMENT(P) No. Lanes Length 0.07 Measurement Type E
Road Eng. CONSULTANT Bridge Eng.
Proj Mgr kytcjohn.rudd Bridge No. B00056 Suff. Rating

Letting Status / Date *****

Final Plans

Contractor Notice

Environmental	Name	Date	Type	Sched. Comp.	Actual Comp.	Expire Date
Assigned:						
Requested:						

Concerns

EMARS PROGRAM CODE

Phase Code	D	R	U	C	8684601D
Stage	AUTHORIZED	ESTIMATED	ESTIMATED	ESTIMATED	
Fund Code	BRO	BRO	BRO	BRO	
Escalated Cost	0	200,000	100,000	2,400,000	
Fiscal Year		2014	2014	2015	
Auth Amt.	400,000				
Auth Date	13-Aug-2012				
Current Cost					
Date Of Current Cost					
Year of Proj Auth Date					
Program Code	FD52				
Remaining Balance	400,000.00				

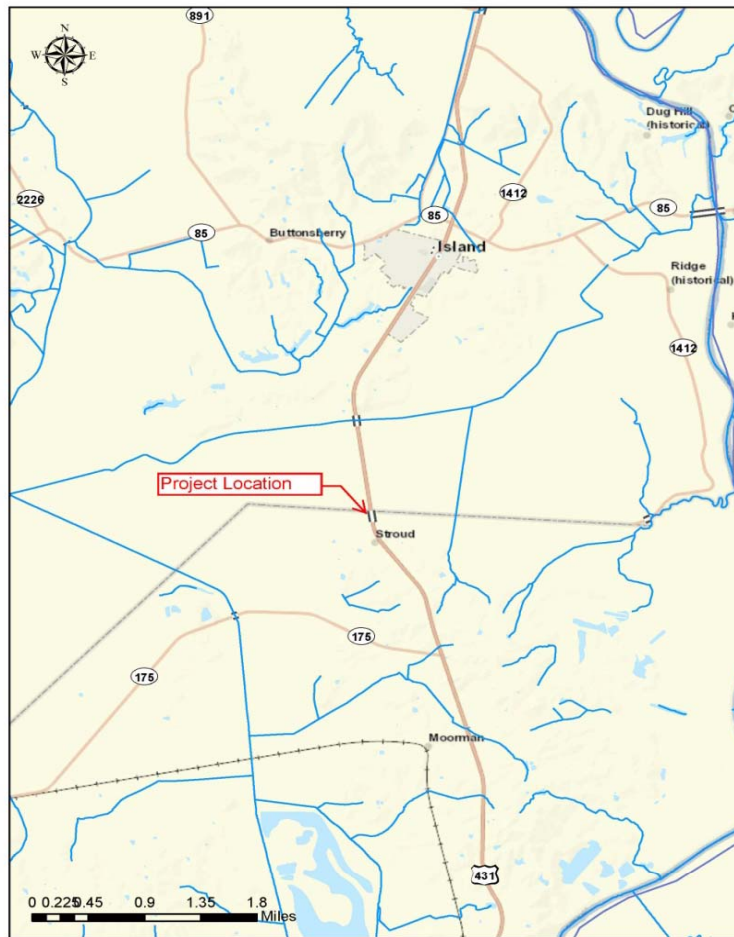
Right Of Way Parcel Information

Utility Information

Total Parcels:	Completion Date	Utility Information	Completion Date
Appraisals of		Negotiated Starts of	
Relocated of		Agreement of	
Deeds Signed		Relocated of	
Suits Filed			
Right Of Entry			
Parcels Cleared			

Milestone	Remarks	Status	Date	Scheduled
PRELIMINARY LINE AND GRADE		UNKNOWN	21-May-2012	
DRAINAGE INSPECTION		UNKNOWN	21-May-2012	
JOINT INSPECTION		UNKNOWN	21-May-2012	
GEOTEC ENGINEERING - ROADWAY		UNKNOWN	21-May-2012	
GEOTEC ENGINEERING - BRIDGES		UNKNOWN	21-May-2012	
BRIDGE AND STRUCTURE PLANS TO CENTRAL OFFICE		UNKNOWN	21-May-2012	
ADVANCE SITUATION TO CENTRAL OFFICE		UNKNOWN	21-May-2012	
RIGHT OF WAY PLANS TO CENTRAL OFFICE		UNKNOWN	21-May-2012	
ROAD PLANS TO CENTRAL OFFICE		UNKNOWN	21-May-2012	
TRAFFIC PLANS - SIGNING		UNKNOWN	21-May-2012	
TRAFFIC PLANS - LIGHTING		UNKNOWN	21-May-2012	
TRAFFIC PLANS - SIGNALS		UNKNOWN	21-May-2012	
TRAFFIC PLANS - TRAFFIC CONTROL		UNKNOWN	21-May-2012	

VIII. TABLES AND EXHIBITS



VIII. TABLES AND EXHIBITS (cont.)

