

# DNA

## STUDY



KY 30  
Magoffin County

2012 Highway Plan  
Item No. 10-8702.00

Prepared by:  
KYTC District 10

June 2012



## I. PRELIMINARY PROJECT INFORMATION

County: Magoffin Item No.: 10-8702.00  
Route Number(s): KY 30 Road Name: Jackson - Salyersville  
Program No.:  UPN: (Function) 77 30 007-008  
Federal Project No.:  Type of Work: Bridge Replacement

2012 Highway Plan Project Description:

Widen or Replace Bridge on KY 30 and Improve Curve 500 feet North of Mcfarland Road to 1000 feet South of KY 3337.

Beginning MP: 7.2 Ending MP: 7.8 Project Length: 0.6

Functional Class.: ☐ Urban ☒ Rural State Class.: ☒ Primary ☐ Secondary  
Collector Route is on: ☐ NHS ☐ Nat'l Truck Network

MPO Area: Not Applicable


In TIP: ☐ Yes ☐ No

Truck Class: AAA

% Trucks: 10

ADT (current): 2335

Terrain: Level


Access Control: ☐ Fully Controlled ☒ Permit ☐ Partial Spacing: 

Median Type: ☒ Undivided ☐ Divided (Type):

Existing Bike Accommodations: Shared Lane Ped: ☐ Sidewalk

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

KYTC Guidelines Preliminarily Based on : 55 MPH Proposed Design Speed

	EXISTING	COMMON GEOMETRIC	
Roadway Data:			
No. of Lanes	<u>2</u>	<u>2</u>	<a href="#">Existing Rdwy. Plans available?</a>
Travelled Way Width	<u>22</u>	<u>24</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Shoulder Width	<u>2</u>	<u>8</u>	Year of Plans: <u></u>
Max. Superelevation**		<u>6%</u>	<input checked="" type="checkbox"/> <a href="#">Traffic Forecast Requested</a>
Minimum Radius**		<u>1065</u>	Date Requested: <u>5/10/2012</u>
Maximum Grade		<u>4%</u>	<input type="checkbox"/> Mapping Requested
Minimum Sight Dist.		<u>495</u>	Date Requested: <u></u>
Sidewalk Width(urban)	<u>NA</u>	<u>NA</u>	Type: 
Clear-zone***		<u>22</u>	

Project Notes/Design Exceptions?: Possible Design Exceptions for Lane and Shoulder Width

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

Bridge No.\*: 077B000051N (Bridge #2)  
Sufficiency Rating 81.1 [Existing Geotech data available?](#)  
Total Length 280.8 ☐ Yes ☒ No  
Width, curb to curb 29.9  
Span Lengths 49.9  
Max. Span Length 49.9  
Year Built 1963  
Posted Weight Limit NA  
Structurally Deficient? NO  
Functionally Obsolete? Yes

\* If more than 2 bridges are present on project, see attached sheets.

## II. PROJECT PURPOSE AND NEED

### A. Legislation

This project was approved in the 2012 Biennial Highway Plan with the funding listed to the right. The construction funding is included in the 2015-2018 extended Plan. This project was Championed and Sponsored by Rep. John Short.	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	SPP	DN	2013	\$250,000
	SPP	RW	2013	\$1,425,000
	SPP	UT	2014	\$140,000
	SPP	CN	2015	\$4,950,000

### B. Project Status

No funds have been authorized on this project at this time. There are no planned improvements at this location at this time, however KY 30 is one of the District's Core Corridors and there are various projects along KY 30 in the Highway Plan.

### C. System Linkage

KY 30 serves as a connector between the county seats of Salyersville and Jackson. From Jackson, KY 30 continues on to the City of London and connects to the I-75 corridor.

### D. Modal Interrelationships

Ky 30 has long been a coal haul route and still serves as one to this day. The Juilian Carroll Airport is located along KY 30 in Breathitt County.

### E. Social Demands & Economic Development

This route serves as a residential collector for a large section of Magoffin County. With the closing of the elementary school a few years back this route has seen a drop in usage. There is no known plans for any type of Development along this route.

### F. Transportation Demand

Transportation Demand for this route is expected to stay the same as existing for the foreseeable future.

## II. PROJECT PURPOSE AND NEED (cont.)

### G. Capacity

There are no known issues at this time and none are expected in the future.

### H. Safety

A search of Crash Data for the last five years shows that there have been 5 collisions that fall within the project limits. According to the data the horizontal curves (3 run off the road) and potential lack of sight distance (1 pulling out of driveway) contributed to the accidents. A map showing the crashes can be seen in exhibit 2.

### I. Roadway Deficiencies

KY 30 has little to no shoulders. It also has numerous substandard horizontal curves. The bridge is considered narrow and Functionally Obsolete.

### Purpose and Need Statement:

Need: To replace an existing narrow structure. To Improve one of the District's Core Corridors as identified in the District Transportation Improvement Plan. To address safety issues along the section.

Purpose: To ensure continued safe usage of the existing route by replacing a narrow and Functionally Obsolete Bridge and improve adjacent curves to modern roadway geometric standards.

### III. PRELIMINARY ENVIRONMENTAL OVERVIEW

#### A. Air Quality

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

STIP Pg. #:

TIP Pg. #:

NA

#### B. Archeology/Historic Resources

☐ Known Archeological or Historic Resources are present

None Known.

#### C. Threatened and Endangered Species

Indiana Bat

#### D. Hazardous Materials

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

Existing structure will be removed.

#### G. 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

#### H. Noise

Are noise sensitive receivers adjacent to the proposed project? ☐ Yes ☒ No

#### I. Socioeconomic

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

#### J. Section 4(f) or 6(f) Resources

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

Anticipated Environmental Document:

CE Level 1



#### IV. POSSIBLE ALTERNATIVES

##### A. Alternative 1: No Build

This alternate does not address the purpose and need.

##### B. Alternative 2

This alternate proposes to construct a new structure just East of the existing bridge. It also would reconstruct the curve North of the bridge to modern geometric standards. It is the least expensive of the alternates considered.



Planning Level Cost Estimate:

<u>Phase</u>	<u>Estimate</u>
Design	\$400,000
R/W	\$350,000
Utilities	\$120,000
Const	\$3,500,000
<b>Total</b>	<b>\$4,370,000</b>

#### IV. POSSIBLE ALTERNATIVES (cont.)

##### B. Alternative #3

This alternate proposes to construct a new bridge to the East of the existing as well as realign approximately 4000 of the adjacent roadway. The existing structure would be used for traffic until the new one is built. This alternate requires more right of way and utility disturbance then alternate 2 but does fit the budget of the project. It differs from alternate 1 in that it also reconstructs the curve to the South of the bridge.



Design	\$425,000
R/W	\$650,000
Utilities	\$140,000
Const	\$4,850,000
<b>Total</b>	<b>\$6,065,000</b>

#### V. Summary

This is a DNA Study of Item # 10-8702.00 as authorized in the 2012 Biennial Highway Plan. The following are the results and recommendations by the Project team:

1. The Purpose of this project is - To ensure continued safe usage of the existing route by replacing a narrow and Functionally Obsolete Bridge and improve adjacent curves to modern roadway geometric standards.
2. The Project Team recommends to carry Alternate 3 forward into the Design Phase.

Alt #	Description	D (\$)(2013)	R (\$)(2014)	U (\$)(2013)	C (\$)(2015)	Total (\$mil)
1	No Build	-	-	-	-	-
2	Diversion/Part width	\$ 400,000.00	\$ 350,000.00	\$ 120,000.00	\$ 3,500,000.00	\$ 4,370,000.00
3	New Alignment	\$ 425,000.00	\$ 650,000.00	\$ 140,000.00	\$ 4,850,000.00	\$ 6,065,000.00
-	Current Hwy Plan Estimated Cost	\$ 250,000.00	\$ 1,425,000.00	\$ 140,000.00	\$ 4,950,000.00	\$ 6,765,000.00
-	Current Pre-Con Estimated Cost	\$ 300,000.00	\$ 1,425,000.00	\$ 140,000.00	\$ 4,950,000.00	\$ 6,815,000.00



## VI. Tables and Exhibits

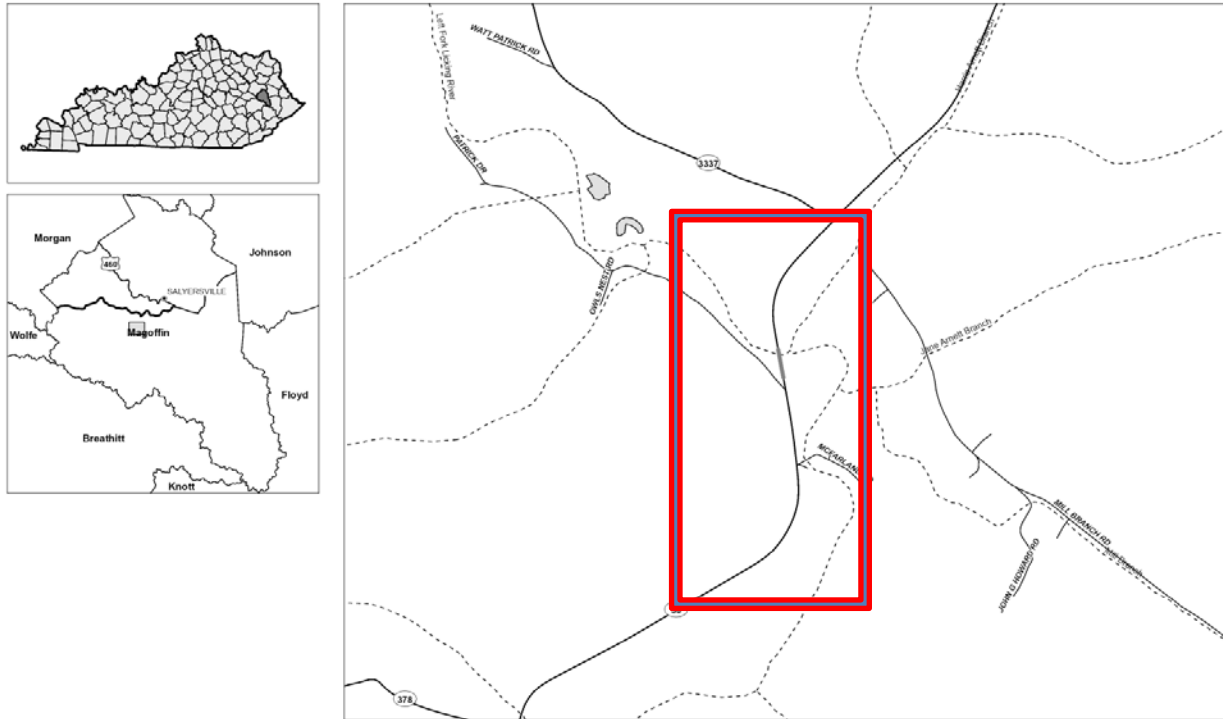


Exhibit 1: Project Location Map



Exhibit 2:



**VI. Tables and Exhibits (cont.)**



**Exhibit 3:**



**Exhibit 4:**