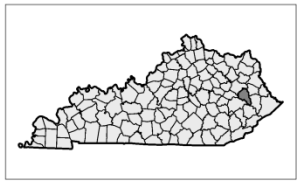
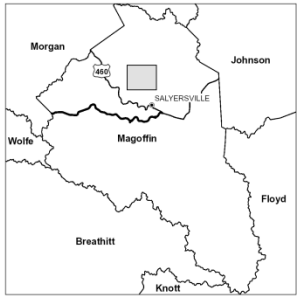
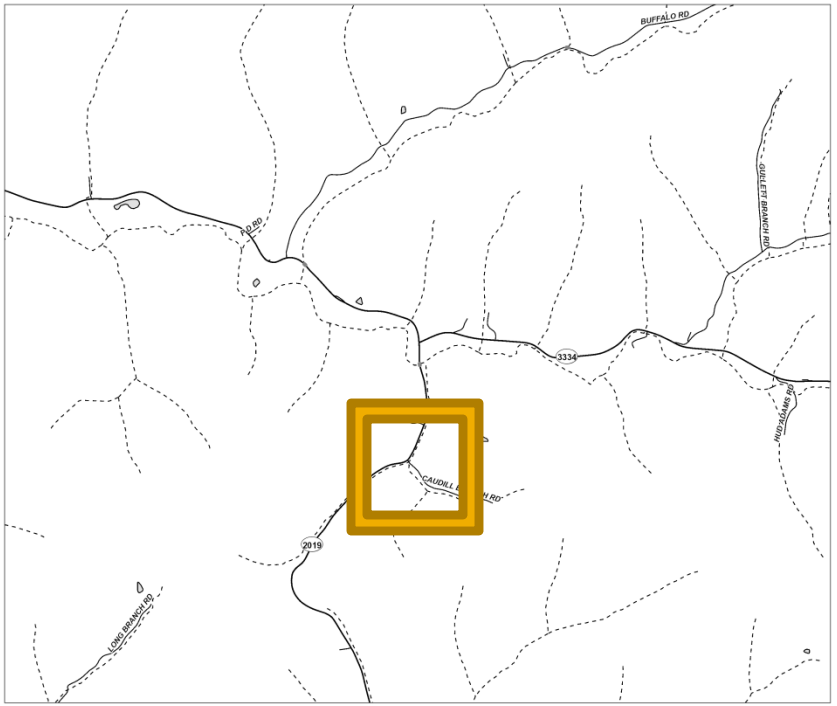
DNA
STUDY

KENTUCKY TRANSPORTATION CABINET







KY 2019
Magoffin County

2012 Highway Plan
Item No. 10-1098.00

Prepared by:
KYTC District 10

June 2012

I. PRELIMINARY PROJECT INFORMATION

County: Magoffin **Item No.:** 10-1098.00
Route Number(s): KY 2019 **Road Name:**
Program No.: **UPN:** (Function) 77 2019 002-003
Federal Project No.: **Type of Work:** Bridge Replacemen

2012 **Highway Plan Project Description:**

Replace Bridge on KY 2019 Over Lick Creek 0.055 Miles S of KY 3334 (SR 31.9) 077B000062N

Beginning MP: 2 **Ending MP:** 2.5 **Project Length:** 0.5

Functional Class.: ☐ Urban ☑ Rural — Collector
State Class.: ☐ Primary ☑ Secondary
Route is on: ☐ NHS ☐ Nat'l Truck Network
MPO Area: Not Applicable
In TIP: ☐ Yes ☐ No
Truck Class.: A
% Trucks:
ADT (current): 1705
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**

Roadway Data:	**EXISTING**	**COMMON GEOMETRIC PRACTICES***
No. of Lanes	2	2
Travelled Way Width	20	24
Shoulder Width	1	6
Max. Superelevation**		6%
Minimum Radius**		1065
Maximum Grade		4%
Minimum Sight Dist.		495
Sidewalk Width(urban)	NA	NA
Clear-zone***		22

Existing Rdwy. Plans available? ☐ Yes ☑ No
Year of Plans:
☑ Traffic Forecast Requested
Date Requested: 5/10/2012
☐ Mapping Requested
Date Requested:
Type:

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.*:	077B00062N	(Bridge #2)
Sufficiency Rating	32.1	
Total Length	32.2	
Width, curb to curb	20	
Span Lengths	29.9	
Max. Span Length	29.9	
Year Built	1976	
Posted Weight Limit	NA	
Structurally Deficient?	Yes	
Functionally Obsolete?	Yes	

Existing Geotech data available? ☐ Yes ☑ No

* 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.

Funding	*Phase*	*Year*	*Amount*
BRO	DN	2013	$200,000
BRO	RW	2014	$100,000
BRO	UT	2014	$100,000
BRO	CN	2015	$750,000

B. Project Status

No funds have been authorized on this project at this time. There are no planned improvements (other than bridge replacements) along this corridor.

C. System Linkage

KY 2019 could serve as another route between West Liberty and Salyersville in place of a large section of US 460.

D. Modal Interrelationships

NA

E. Social Demands & Economic Development

This route serves as a residential collector for a large section of Magoffin County. 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 no accidents at this location.

I. Roadway Deficiencies

KY 2019 has narrow lanes and virtually no shoulders. It also has numerous substandard horizontal curves. The bridge is considered both Structurally Deficient and Functionally Obsolete.

Purpose and Need Statement:

Need: To replace an existing substandard structure.

Purpose: To ensure continued usage of the existing route by replacing a Structurally Deficient and Functionally Obsolete Bridge.

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

One relocation possible

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

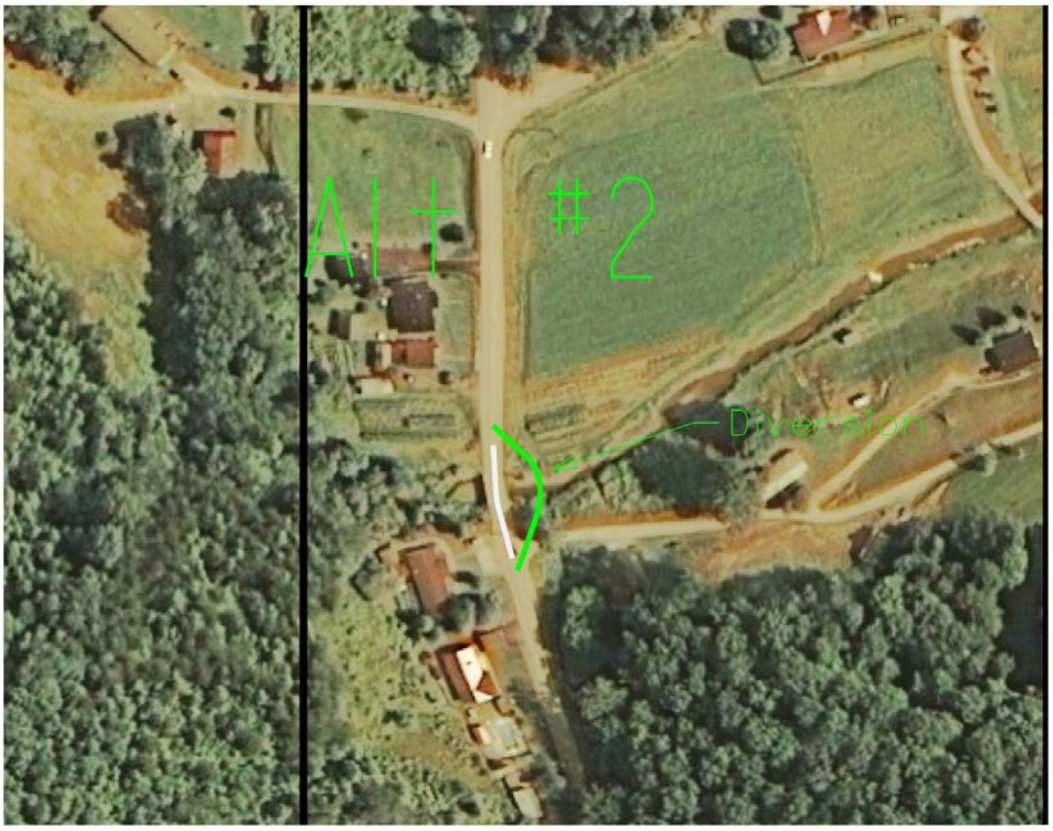
IV. POSSIBLE ALTERNATIVES

A. Alternative 1: No Build

This alternate does not address the purpose and need.

B. Alternative 2

This alternate proposes to reconstruct a new structure in the existing location. This would require a temporary diversion to be put into place during construction (preferably to the east to avoid farther residential impacts) and is the least expensive of the alternates considered. This could also be done by part width construction, this should be determined during the design phase.



Planning Level Cost Estimate:

Phase	Estimate
Design	$250,000
R/W	$50,000
Utilities	$100,000
Const	$425,000
Total	**$825,000**

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 1300 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 than alternate 2 but does fit the budget of the project.

Planning Level Cost Estimate:

Phase	Estimate
Design	$300,000
R/W	$125,000
Utilities	$125,000
Const	$600,000
Total	**$1,150,000**

V. Summary

This is a DNA Study of Item # 10-1098.00 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 usage of the existing route by replacing a Structurally Deficient and Functionally Obsolete Bridge.
2. The Project Team recommends to carry Alternate 2 forward into the Design Phase.

Alt #	Description	D ($)(2013)	R ($)(2014)	U ($)(2014)	C ($)(2015)	Total ($mil)
1	No Build	-	-	-	-	-
2	Diversion/Part width	$ 250,000.00	$ 50,000.00	$ 100,000.00	$ 425,000.00	$ 825,000.00
3	New Alignment	$ 300,000.00	$ 125,000.00	$ 125,000.00	$ 600,000.00	$ 1,150,000.00
-	Current Hwy Plan Estimated Cost	$ 200,000.00	$ 100,000.00	$ 100,000.00	$ 750,000.00	$ 1,150,000.00
-	Current Pre-Con Estimated Cost	$ 200,000.00	$ 100,000.00	$ 100,000.00	$ 750,000.00	$ 1,150,000.00

VI. Tables and Exhibits

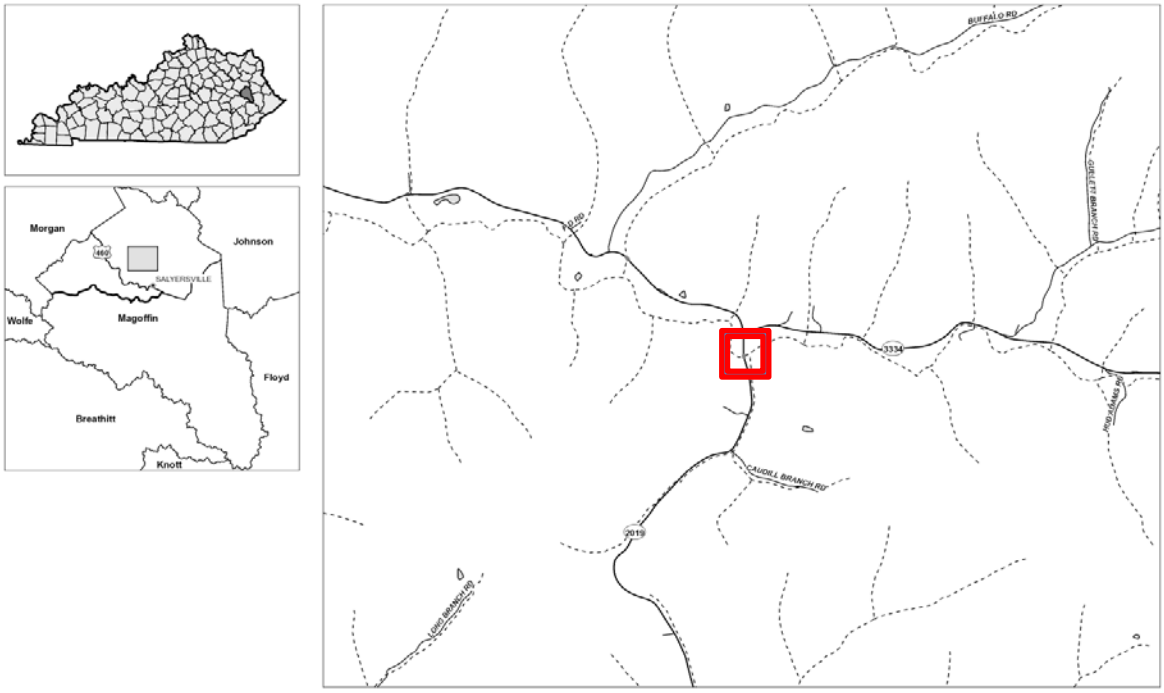


Exhibit 1: Project Location Map

Exhibit 2:

VI. Tables and Exhibits (cont.)

Exhibit 3

Exhibit 4