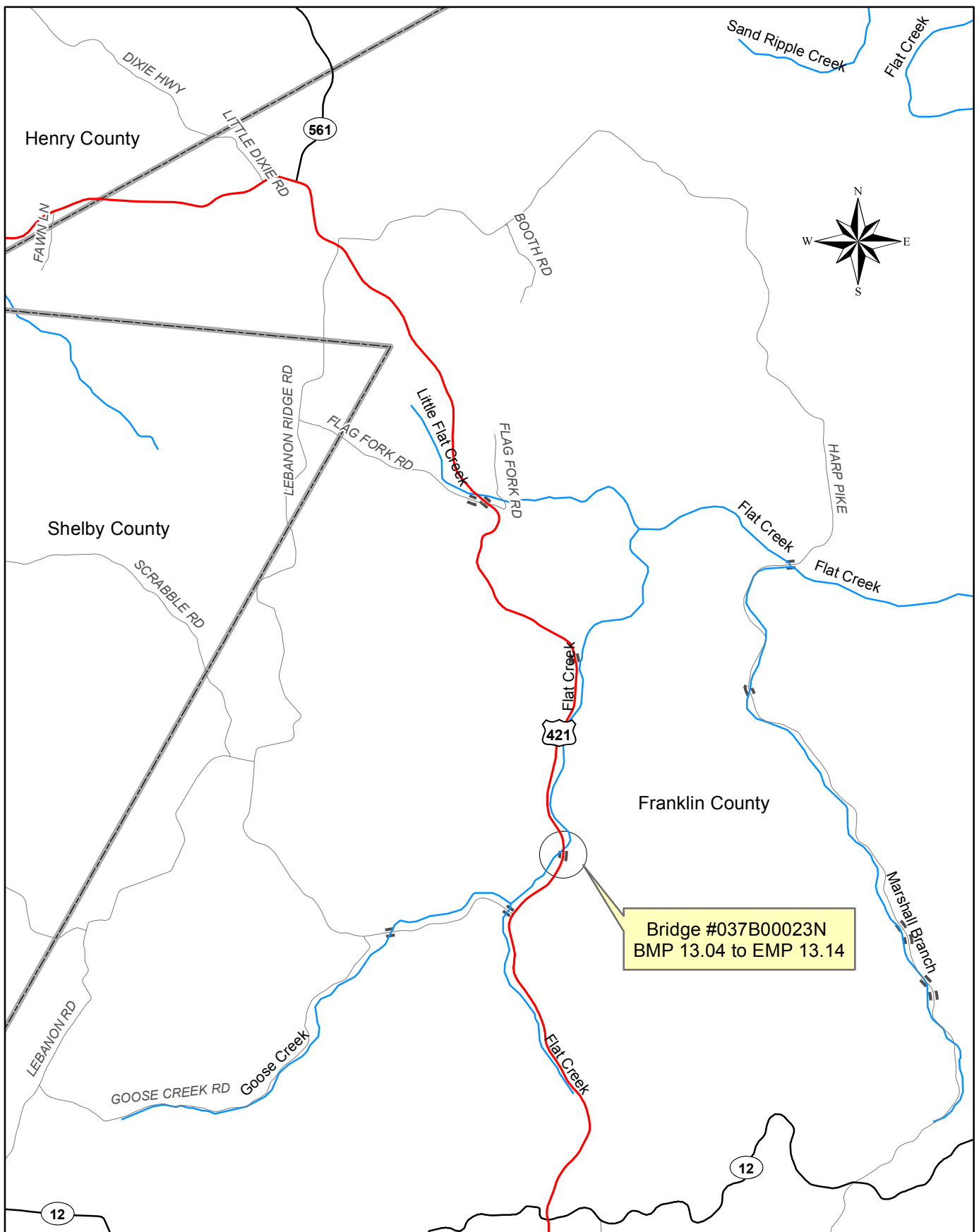


Appendix A – Maps of Project Area



Legend

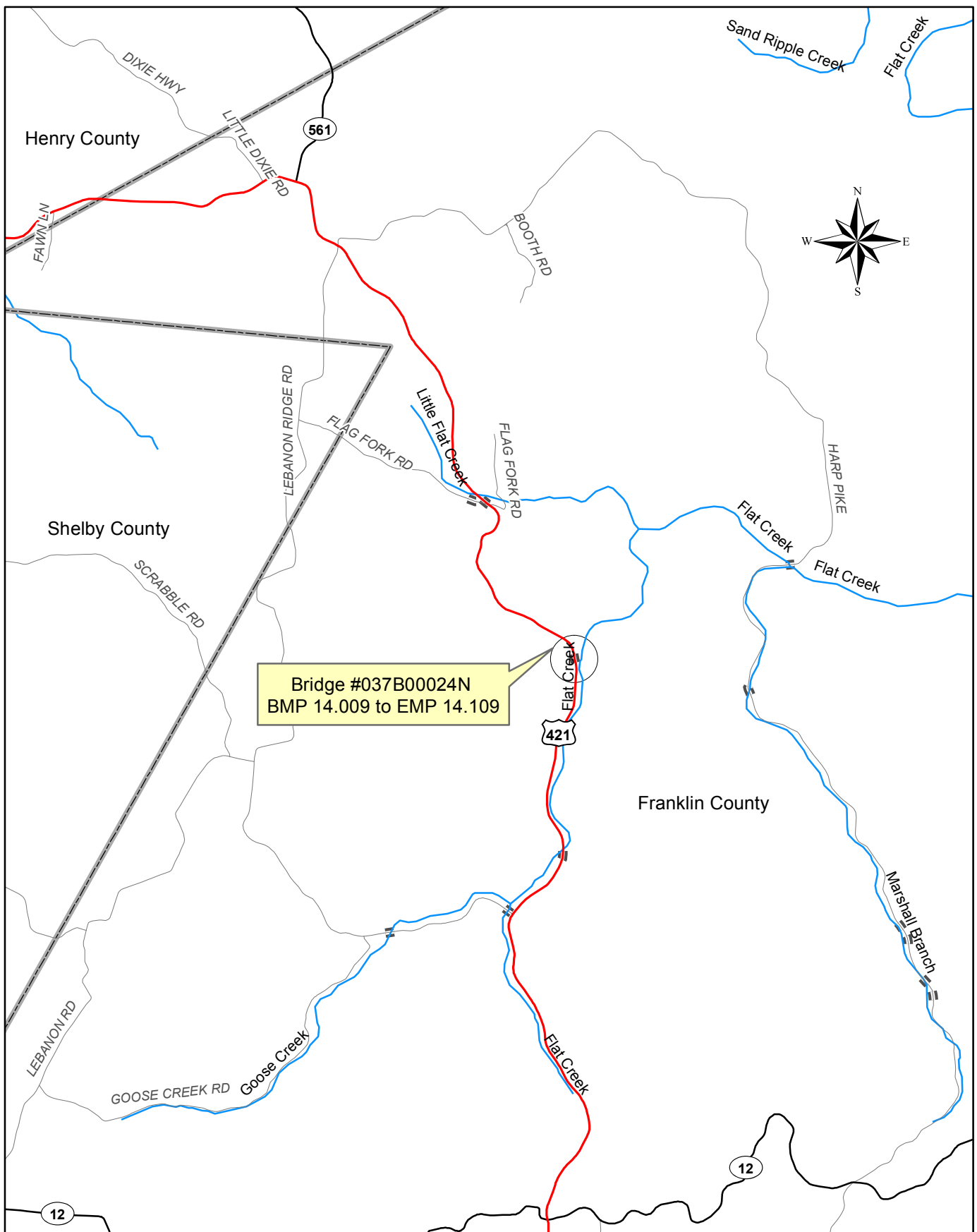
- | | |
|------------|-----------------------|
| Interstate | County Boundary Lines |
| US Highway | Streams |
| State Road | Active Railroad |
| Local Road | Bridge (Line) |



Kentucky
UNBRIDLED SPIRIT™

0 1,750 3,500 7,000
Feet

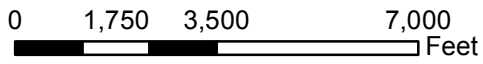
Item Number: 05-1057.00
Franklin County
US 421
Bridge Replacement
Flat Creek



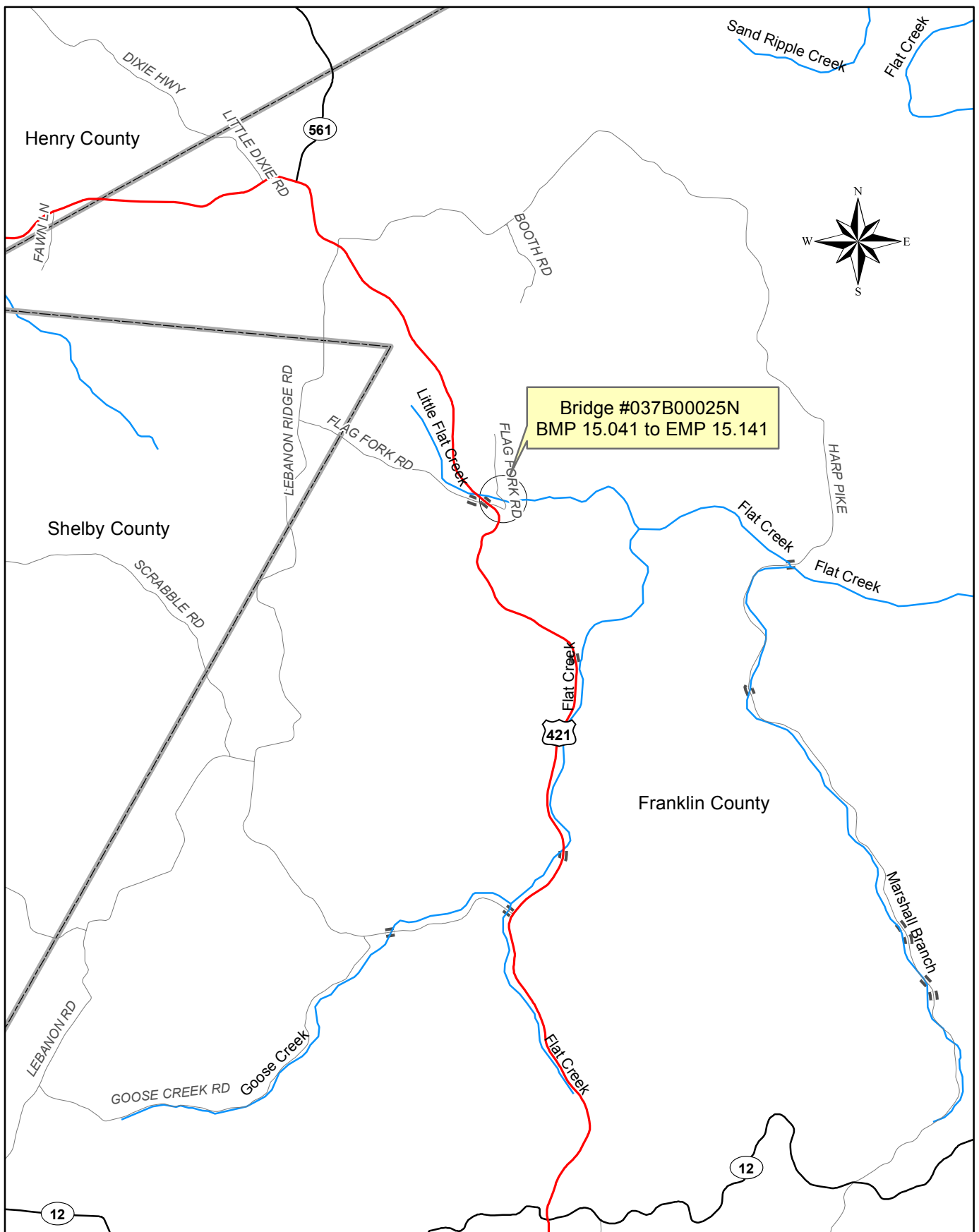
Bridge #037B00024N
BMP 14.009 to EMP 14.109

Legend

Interstate	County Boundary Lines
US Highway	Streams
State Road	Active Railroad
Local Road	Bridge (Line)



Item Number: 05-1058.00
Franklin County
US 421
Bridge Replacement
Hudson Creek



Legend

- | | |
|------------|-----------------------|
| Interstate | County Boundary Lines |
| US Highway | Streams |
| State Road | Active Railroad |
| Local Road | Bridge (Line) |

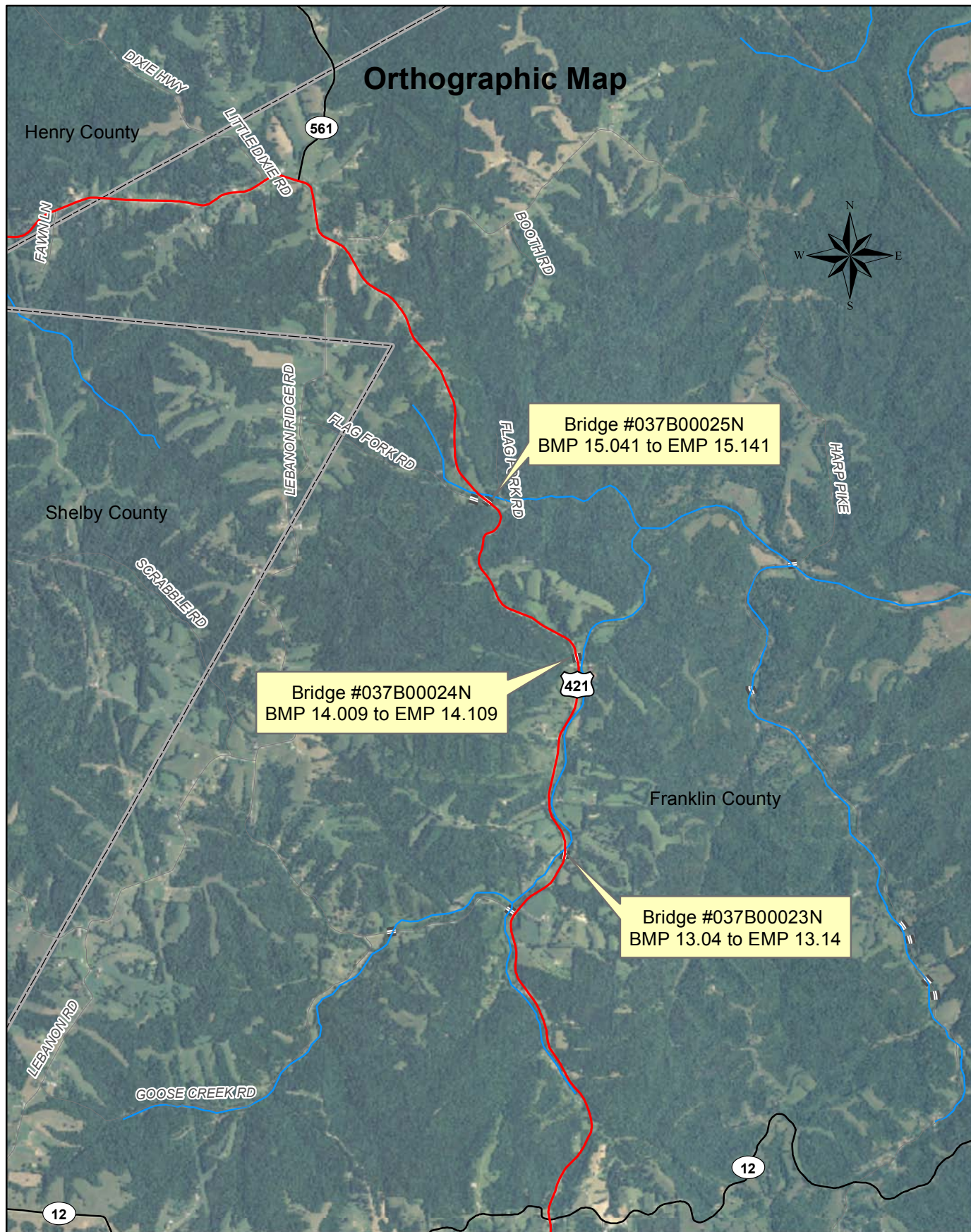


Kentucky
UNBRIDLED SPIRIT™

0 1,750 3,500 7,000
Feet

Item Number: 05-1059.00
Franklin County
US 421
Bridge Replacement
Little Flat Creek

Orthographic Map



Legend

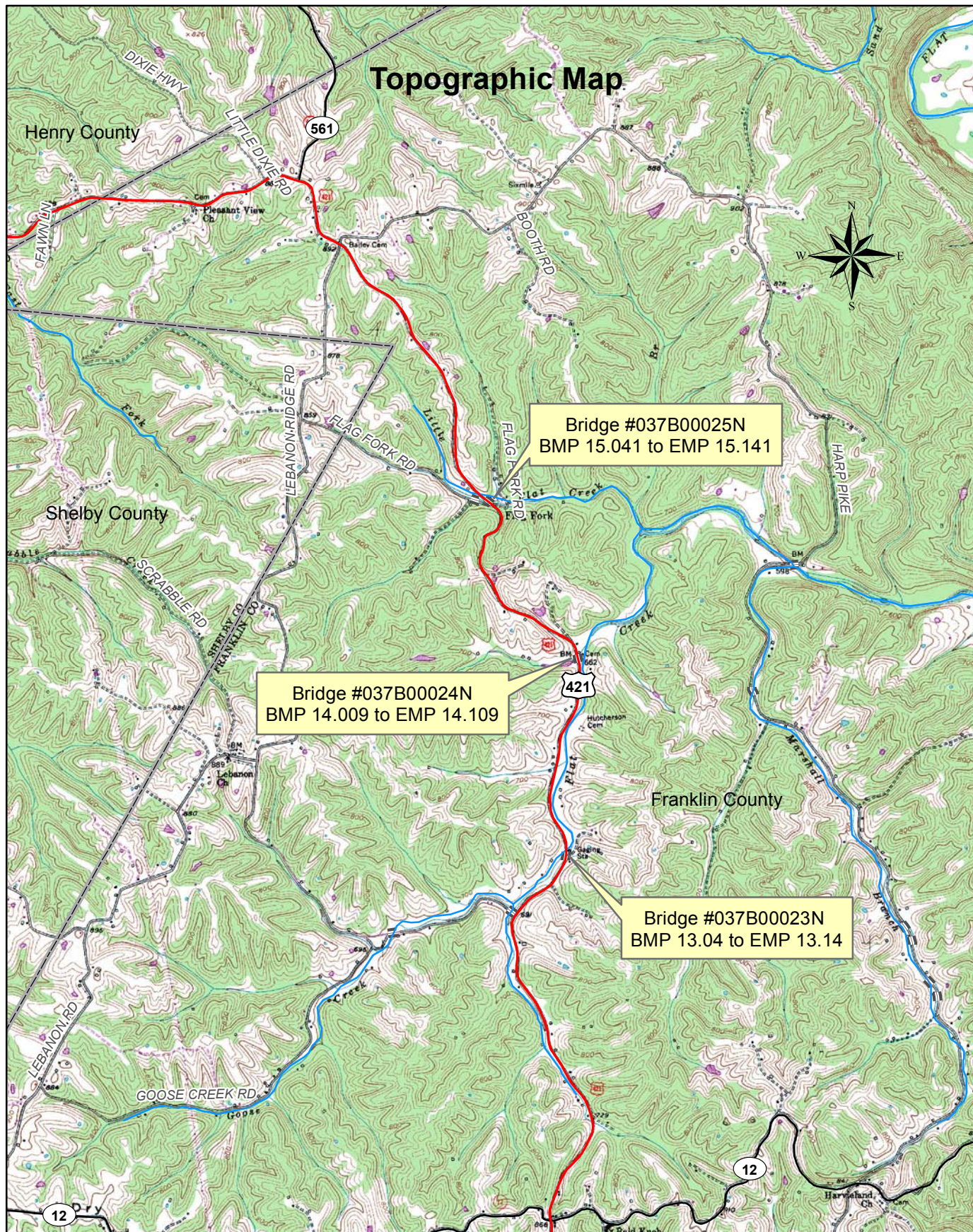
- Interstate
- US Highway
- State Road
- Local Road
- County Boundary Lines
- Streams
- Active Railroad
- Bridge (Line)



0 1,750 3,500 7,000 Feet

Item Numbers: 05-1057.00,
05-1058.00, 05-1059.00
Franklin County
US 421
Bridge Replacements

Topographic Map



Legend

- Interstate
- US Highway
- State Road
- Local Road
- County Boundary Lines
- Streams
- Active Railroad
- Bridge (Line)



Kentucky
UNBRIDLED SPIRIT

0 1,750 3,500 7,000
Feet

Item Numbers: 05-1057.00,
05-1058.00, 05-1059.00
Franklin County
US 421
Bridge Replacements

Appendix B – Six Year Highway Plan Project Listings

KENTUCKY TRANSPORTATION CABINET
SIX YEAR HIGHWAY PLAN

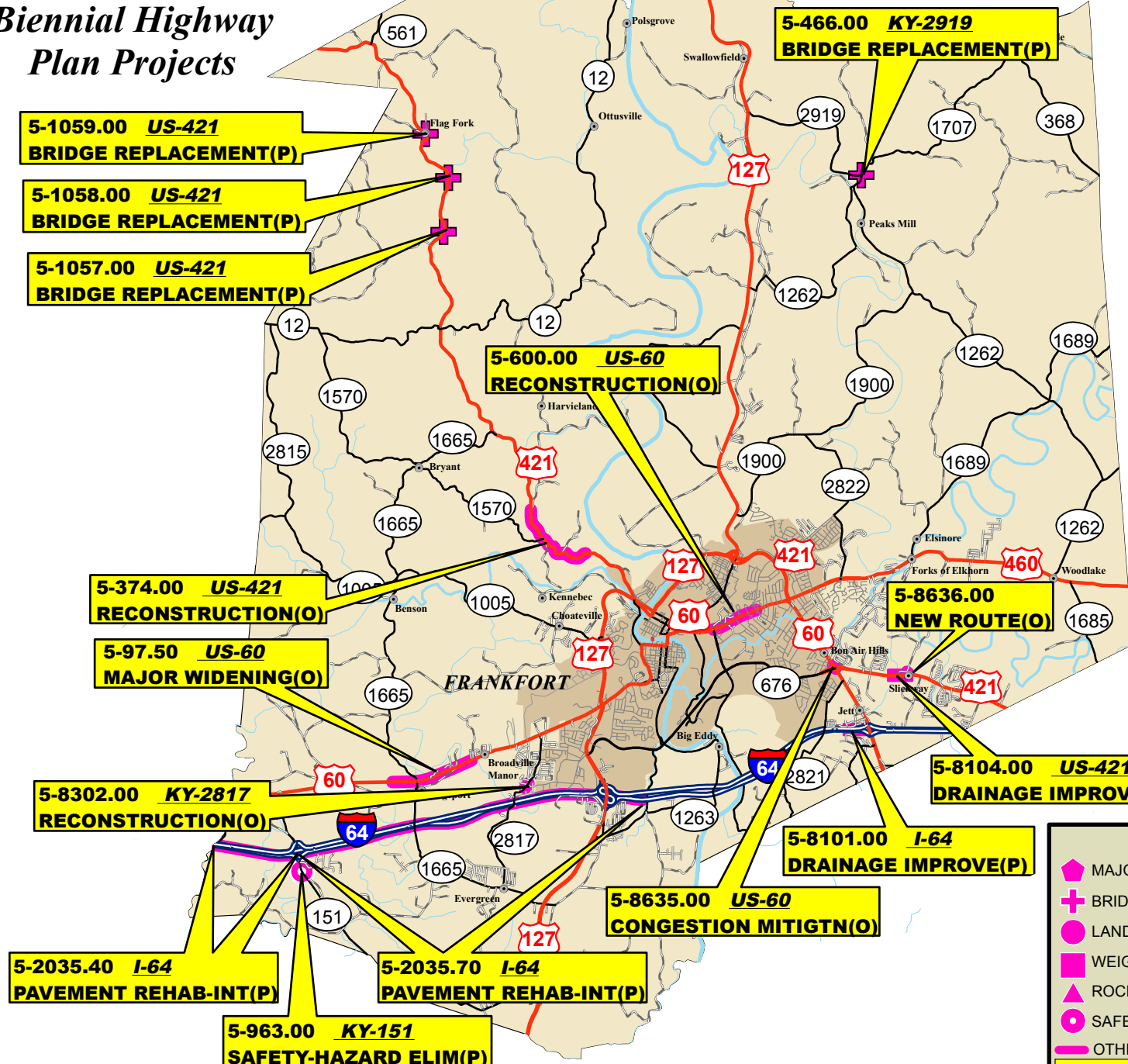
Page: 42

28 JAN 2010

FY - 2010 THRU FY - 2016

COUNTY	ITEM NO. & PARENT NO.		ROUTE	LENGTH	DESCRIPTION	FUND-SCHEDULING INFORMATION			
FRANKLIN	2000	05 . 963.00	KY-151	.400	CORRECT SIGHT DISTANCE ISSUES ON KY-151 S OF I-64, IMPROVE SAFETY AND OPERATION OF I-64/KY-151 I-CHNG AND WIDEN KY-151 TO ACCOMODATE LEFT TURN LANES. (2000BOP) Milepoints: From:1.8 To: 2.2 Purpose and Need: SAFETY / SAFETY-HAZARD ELIM(P)	FUNDING	PHASE	YEAR	AMOUNT
	1996	99 . 206.20				HES	R	2010	\$290,000
						HES	U	2010	\$70,000
						HES	C	2011	\$1,250,000
						Total			\$1,610,000
FRANKLIN	2010	05 . 1057.00	US-421	.100	REPLACE BRIDGE ON US-421 (MP 13.09) OVER FLAT CREEK; 2.0 MI NORTH OF JCT KY 12; (STRUCTURALLY DEFICIENT, SR=46.8) 037B00023N Milepoints: From:13.04 To: 13.14 Purpose and Need: RELIABILITY / BRIDGE REPLACEMENT(P)	FUNDING	PHASE	YEAR	AMOUNT
		Parent No.:				BRO	D	2012	\$170,000
	2010	05 . 1057.00				BRO	R	2014	\$150,000
						BRO	U	2014	\$30,000
						BRO	C	2016	\$390,000
						Total			\$740,000
FRANKLIN	2010	05 . 1058.00	US-421	.100	REPLACE BRIDGE ON US-421 (MP 14.059) OVER HUDSON CREEK; 2.8 MI NORTH OF JCT KY 12; (STRUCTURALLY DEFICIENT, SR=48.9) 037B00024N Milepoints: From:14.009 To: 14.109 Purpose and Need: RELIABILITY / BRIDGE REPLACEMENT(P)	FUNDING	PHASE	YEAR	AMOUNT
		Parent No.:				BRO	D	2012	\$120,000
	2010	05 . 1058.00				BRO	R	2014	\$100,000
						BRO	U	2014	\$60,000
						BRO	C	2016	\$200,000
						Total			\$480,000
FRANKLIN	2010	05 . 1059.00	US-421	.100	REPLACE BRIDGE ON US-421 (MP 15.091) OVER LITTLE FLAT CREEK; 3.8 MI NORTH OF JCT KY 12; (STRUCTURALLY DEFICIENT, SR=48.7) 037B00025N Milepoints: From:15.041 To: 15.141 Purpose and Need: RELIABILITY / BRIDGE REPLACEMENT(P)	FUNDING	PHASE	YEAR	AMOUNT
		Parent No.:				BRO	D	2012	\$140,000
	2010	05 . 1059.00				BRO	R	2014	\$75,000
						BRO	U	2014	\$30,000
						BRO	C	2016	\$300,000
						Total			\$545,000
FRANKLIN	2004	05 . 2035.70	I-64	5.420	PAVEMENT REHAB AND BRIDGE WIDENING ON I-64 FROM MP 47.70 TO MP 53.75. (2004BOPC)(DESIGN FUNDED UNDER 5-2035.40) Milepoints: From:47.7 To: 53.75 Purpose and Need: RELIABILITY / PAVEMENT REHAB-INT(P)	FUNDING	PHASE	YEAR	AMOUNT
		Parent No.:				IM	R	2012	\$120,000
	2004	05 . 2035.00				IM	U	2012	\$110,000
						Total			\$230,000
FRANKLIN	2002	05 . 8101.00	I-64		CONSTRUCTION OF RETENTION/DETENTION BASIN ON I-64 MILEPOST 58 ASSOCIATED WITH FLOODING DUE TO ROAD CONSTRUCTION. (02CCN)(04CCN)(06CCN) Milepoints: From:57.6 To: 57.8 Purpose and Need: RELIABILITY / DRAINAGE IMPROVE(P)	FUNDING	PHASE	YEAR	AMOUNT
		Parent No.:				SP	C	2010	\$260,000
	2002	05 . 8101.00				Total			\$260,000
FRANKLIN	2002	05 . 8104.00	US-421		CONSTRUCTION OF RETENTION/DETENTION BASIN ON US-421 AT MILEPOST 2 SOUTH SIDE ASSOCIATED WITH FLOODING DUE TO ROAD CONSTRUCTION. (02CCN)(04CCN)(06CCN) Milepoints: From:2 To: 2.1 Purpose and Need: RELIABILITY / DRAINAGE IMPROVE(P)	FUNDING	PHASE	YEAR	AMOUNT
		Parent No.:				SP	C	2010	\$520,000
	2002	05 . 8104.00				Total			\$520,000

Franklin County Biennial Highway Plan Projects



Legend		
	MAJOR RIVER BRIDGE MAINTENANCE	
	BRIDGE REPLACEMENT PROGRAM	
	LANDSLIDE REPAIR	
	WEIGH STATION & REST AREA REHAB	
	ROCKFALLS	
	SAFETY PROGRAMS	
	OTHER PROJECTS	
Project ID	Route	PROJECT INFORMATION
Type	Work	

Appendix C – Project Identification Form for UPL Project within Project Area

KYTC Project Identification Form

Cycle Year: **New**
 Priority: L : R: D:
 Tier:
 Tier Rank: R: D:
 Overall Top Ten: R: D:

Section I – General Information

Requested by:	Unknown
Title/Organization:	
Date:	
Form Completed by:	B.Duncan/T.Hall
Title/Organization:	BGADD/DOH5
Date:	September 9, 2008
Revision 1 by:	
Title/Organization:	
Date:	
Revision 2 by:	
Title/Organization:	
Date:	

UPL Control #: 05 037 B0421 16.23 Co. #: 037			
Parent Control #: <u> </u>			
RSE Unique Number: 037 US-421			
District: <u>5</u>	County: FRANKLIN	Route: US 421	
ADD: BGADD	MPO: <u> </u>	SUA: <u> </u>	
Mode: Highway	State System: State Primary		
Type: Major Widening	Funct'l Class: Rural Min Art		
Project Length: 5.515		Total Cost Estimate: \$ 55500	
(P:300 D:3900 R:8300 U:4000 C:39000)			
Possible Funding Sources (Check all that apply):			
<input type="checkbox"/> IM <input type="checkbox"/> NH <input type="checkbox"/> HES <input type="checkbox"/> BR <input checked="" type="checkbox"/> STP <input type="checkbox"/> SP <input type="checkbox"/> TE <input type="checkbox"/> CMAQ <input type="checkbox"/> PLH <input type="checkbox"/> Other: <u> </u>			
Highway Networks (Check all that apply):			
<input type="checkbox"/> NN <input type="checkbox"/> Scenic Byway <input type="checkbox"/> Coal Haul <input checked="" type="checkbox"/> Non NHS <input type="checkbox"/> NHS <input type="checkbox"/> Defense <input type="checkbox"/> Strahnet <input type="checkbox"/> Ext. Wt. <input type="checkbox"/> Bike <input type="checkbox"/> Forest <input type="checkbox"/> ADHS ()			
Existing Project Studies (Year):			

Section II – Problem Statement

Route Number: US 421	(Use Report Year)	Original	Rev. 1	Rev. 2
Beginning MP: 11.132	Adequacy Rating:	69.80: (06)	: ()	: ()
Ending MP: 16.947	• CRF: (Year)	0.88: (06)	: ()	: ()
Total Length: 5.515	• IRI: (Year)	120: (06)	: ()	: ()
	• V/SF: (Year)	0.09: (06)	: ()	: ()
Primary Purpose: Upgrade Existing System(Major)	Current ADT: (Year):	1,132: (07)	: ()	: ()
	Percent Trucks: (Year):	4.2: (07)	: ()	: ()
	Projected ADT (HDO): Year:	2027	%Growth: 2.70	ADT: 1,929

Please provide a clear problem statement for this project:

US 421 in the principal route from New Castle to Frankfort. The segment from KY 12 north of Frankfort to KY 561 has numerous safety issues as indicated narrow lanes and no shoulders present, along with a troublesome CRF. Substandard geometrics are indicated by Horizontal Alignment Ratings of 3 and 4 in both counties.

Section III – Project Description

Project Description Narrative:

Improve safety and level of service on US 421 from KY 12 to KY 561 in Franklin County.

Regional Goals/Objectives Addressed: **To promote the safe and efficient movement of people, goods, and services to benefit all of the residents of the region.**

Section IV – Project Area Information:

1. Miscellaneous Roadway Conditions	Access Control:	Existing: <u>Permit</u> Proposed: <u>Permit</u>	Median Type:	Existing: <u>N/A</u> Proposed: _____	Width: <u>NA</u> Width: _____
	Lane No./Width:	Existing: <u>2/10'</u> Proposed: _____ / _____	Shoulders:	Existing: <u>DGA</u> Proposed: _____	Width: <u>0</u> Width: _____
	No. of Bridges:	Existing: <u>3</u> Proposed: _____	Other Improvement Projects in Area:	<input checked="" type="checkbox"/> None <input type="checkbox"/> SYP <input type="checkbox"/> Resurface <input type="checkbox"/> Other _____	
	Comments: Bridges at MP 13.088, 14.061 and 15.083				
2. Right of Way	Avg. Width:	Existing: <u>40'</u>	Source: <input checked="" type="checkbox"/> HIS <input type="checkbox"/> Plans <input type="checkbox"/> Microfilm <input type="checkbox"/> Other _____		
	Current Primary Use: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Farmland <input type="checkbox"/> Other: _____				
	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Project may require additional R/W.		Possible Relocations : Homes: _____ Businesses: _____		
	Comments:				
3. Utilities	Existing Utilities:	<input checked="" type="checkbox"/> Power <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Cable <input type="checkbox"/> Sewer <input checked="" type="checkbox"/> Water <input type="checkbox"/> ITS <input type="checkbox"/> None <input type="checkbox"/> Other: _____			
	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Project may require Utility Relocations.		Comments:		
4. Environmental Impacts	(Check all that apply):				
	<input checked="" type="checkbox"/> Blueline Streams <input type="checkbox"/> Wetlands <input type="checkbox"/> Floodplain <input type="checkbox"/> Wildlife Managed Areas <input type="checkbox"/> Historic Properties <input type="checkbox"/> Cemeteries <input type="checkbox"/> Schools <input checked="" type="checkbox"/> Churches <input type="checkbox"/> Endangered Species <input type="checkbox"/> Public Land/Park <input type="checkbox"/> Noise Impact <input type="checkbox"/> Arch. Sites <input type="checkbox"/> NR Properties <input type="checkbox"/> Potential NR Properties <input type="checkbox"/> Other:				
	<input checked="" type="checkbox"/> Potential Contaminated sites:		<input checked="" type="checkbox"/> Gas Stations <input type="checkbox"/> Landfills <input type="checkbox"/> Auto Repair <input type="checkbox"/> Junkyards <input type="checkbox"/> Other		
Comments:					
5. Air Quality	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Project is located in a Maintenance or Nonattainment Area <input type="checkbox"/> Ozone <input type="checkbox"/> PM 2.5				
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Project adds through lane capacity				
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Project results from a Congestion Management Plan				
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Project is included in TIP/STIP TIP Page # STIP Page #				
	Comments:				
6. Economic Impacts	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Planning/Zoning Regulations exist in Community		<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Project may affect established Business, Commercial or Industrial Districts.		
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes This project has economic impacts on regional/local economy:		<input checked="" type="checkbox"/> Development <input checked="" type="checkbox"/> Tax Revenues <input type="checkbox"/> Employment Opportunity <input type="checkbox"/> Retail Sales <input type="checkbox"/> Other		
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Please Describe: Could present development opportunities				
	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes This project provides direct access to major points of interest:		<input type="checkbox"/> Nat'l/State Parks <input type="checkbox"/> Monuments <input type="checkbox"/> Historic Sites <input type="checkbox"/> Amusement Parks <input type="checkbox"/> US Public Land <input type="checkbox"/> Other		
	<input type="checkbox"/> No <input type="checkbox"/> Yes Please Describe:				
<input type="checkbox"/> No <input type="checkbox"/> Yes This project provides direct access to major traffic generators:		<input checked="" type="checkbox"/> Shopping Centers <input checked="" type="checkbox"/> Schools <input checked="" type="checkbox"/> Industries <input type="checkbox"/> Military Installations <input type="checkbox"/> Other			
Please Describe: Employment opportunities in Frankfort					

7. Multimodal Opportunities	This project is a candidate for: (check all that apply)			<input type="checkbox"/> Bicycle Paths	<input type="checkbox"/> Sidewalks	<input checked="" type="checkbox"/> Shared-Use Paths
				<input type="checkbox"/> Park/Ride Lots	<input type="checkbox"/> N/A	
	This project improves direct access to: (check all that apply)			<input type="checkbox"/> Airports	<input type="checkbox"/> Railways	<input type="checkbox"/> Riverports
				<input type="checkbox"/> Trucking Routes	<input checked="" type="checkbox"/> N/A	
Type of Public Transportation available:			<input type="checkbox"/> Fixed Route	<input checked="" type="checkbox"/> Demand Response		
Comments:						
8. Social Impacts						
This project may affect: (Check all that apply)		<input type="checkbox"/> Neighborhood or Community Cohesion <input checked="" type="checkbox"/> Travel Patterns (Vehicular, commuter, bicycle, pedestrian) <input type="checkbox"/> Household Relocations <input type="checkbox"/> Elderly, disabled, nondrivers, minorities, low-income persons <input checked="" type="checkbox"/> No adverse effects to neighborhoods apparent.				
Comments/Impact Descriptions:						

Section V – Cost Estimate Information (to be completed by Hwy District Office):**Cost Estimate by Phase:**

Phase	Original Estimate	By:	Revision 1	Date	By:	Revision 2	Date	By:
Planning	\$300,000	th						
Design	\$3,900,000	th						
ROW	\$8,300,000	th						
Utilities	\$4,000,000	th						
Construction	\$39,000,000	th						
Total Cost	\$55,500,000							

Estimate Procedure Used:

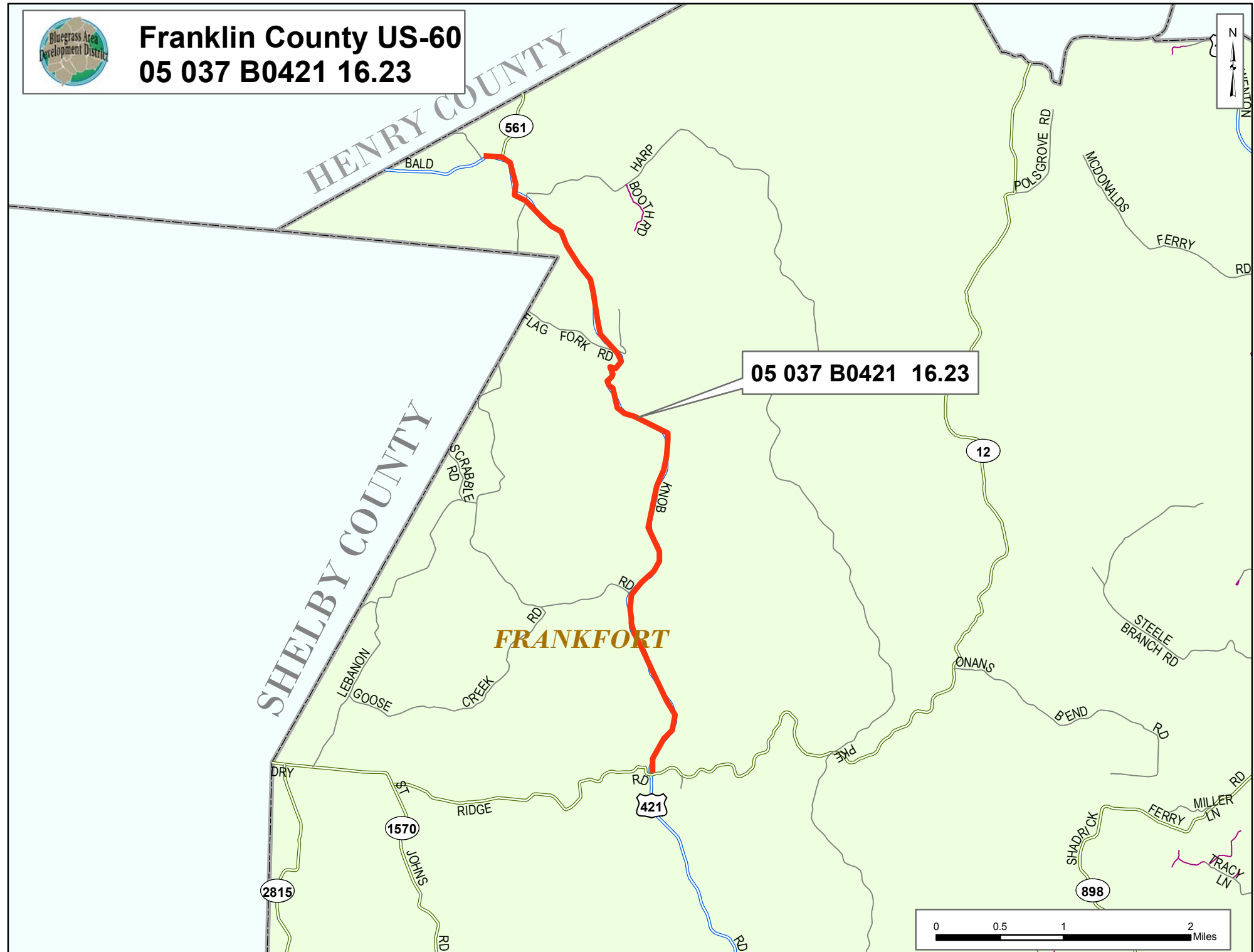
Original Estimate:	Revision 1:	Revision 2:
<input type="checkbox"/> Per Mile@ \$ 9.9M Terrain: Rolling	<input type="checkbox"/> Per Mile@ \$ ____ Terrain: ____	<input type="checkbox"/> Per Mile@ \$ ____ Terrain: ____
<input type="checkbox"/> Detailed Estimate with Calculations Attached	<input type="checkbox"/> Detailed Estimate with Calculations Attached	<input type="checkbox"/> Detailed Estimate with Calculations Attached
<u>Estimate Assumptions:</u> 2008 estimate Super 2 D \$0.7M/mi R 1.5M/mi U 1.0M/mi C 7.0M/mi	<u>Estimate Assumptions:</u>	<u>Estimate Assumptions:</u>
Estimate Class: _____	Estimate Class: _____	Estimate Class: _____

Section VI – Attachments:

The following items are attached to this document: <input checked="" type="checkbox"/> Location Map <input checked="" type="checkbox"/> Photograph(s) <input type="checkbox"/> Other:
Comments:



Franklin County US-60
05 037 B0421 16.23









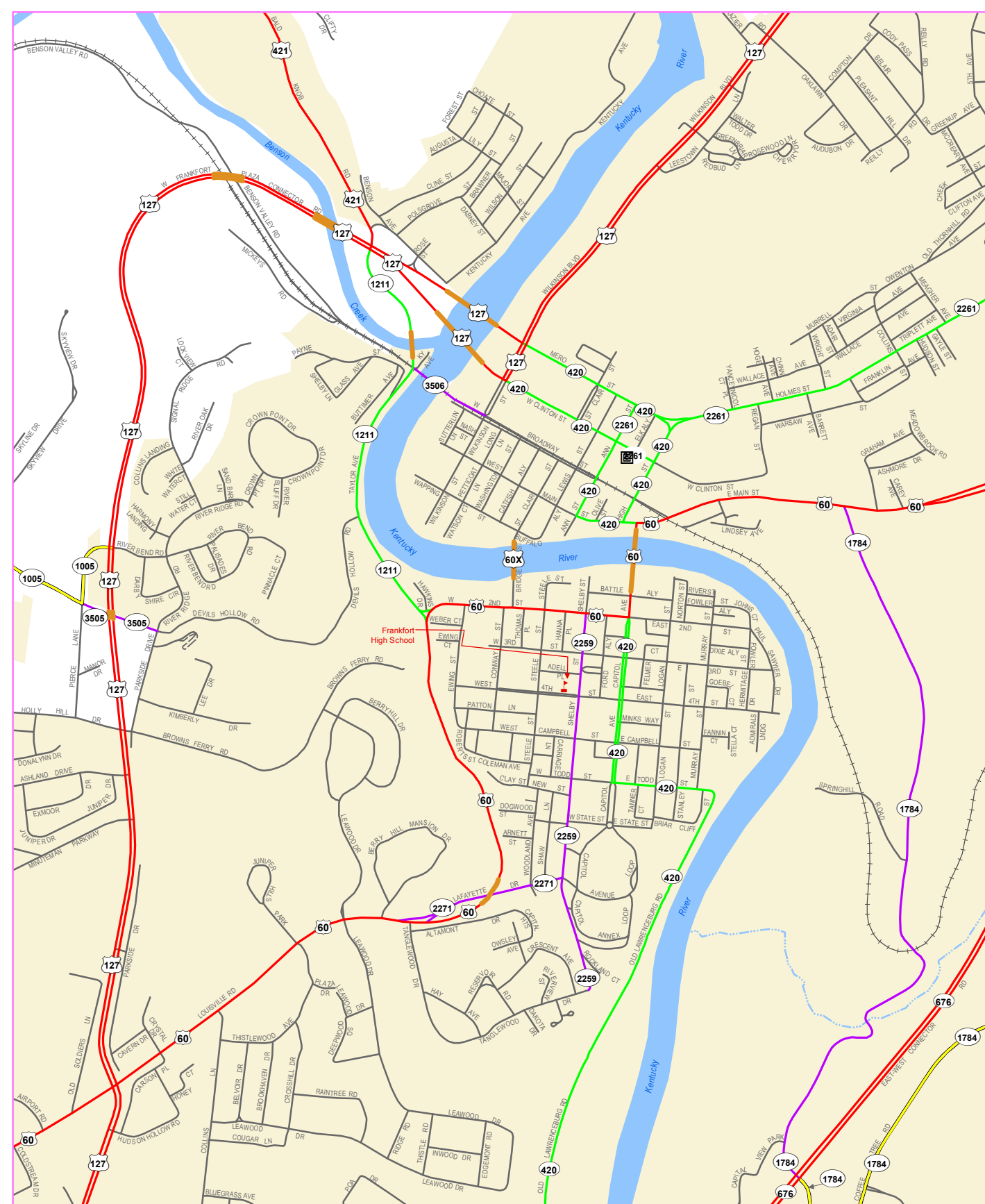
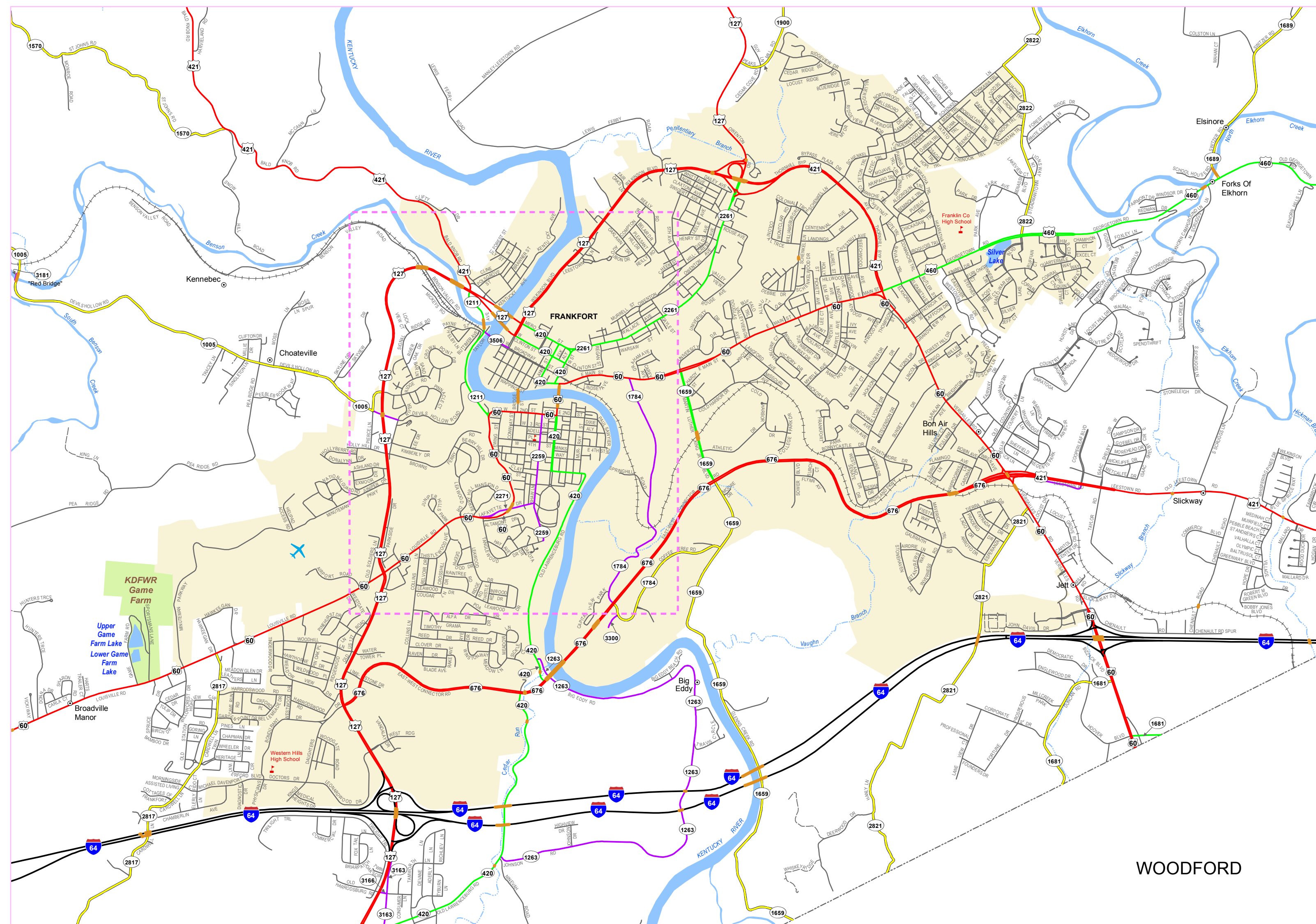
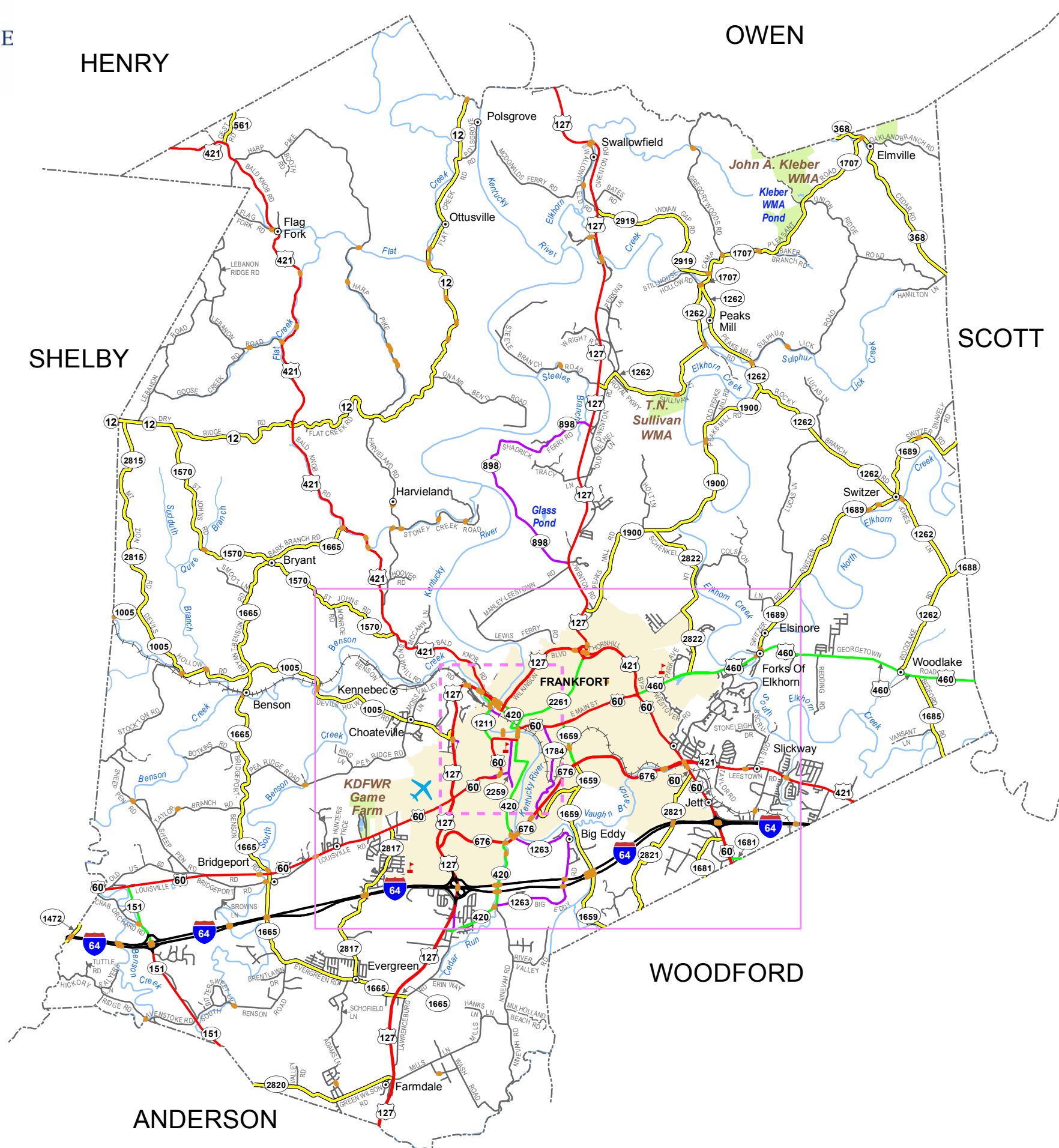
CHURCH
ENTRANCE

NO
PASSING

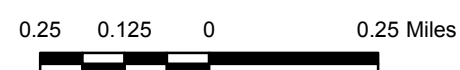




Appendix D – Franklin County Map




DOWNTOWN FRANKFORT



- State Primary Road System**
- Interstate
 - Parkway
 - Other State Primary
 - State Secondary
 - Rural Secondary
 - Supplemental Road
 - Unimproved
 - Paved or Concrete
 - Bridge
 - Railroad
 - Stream
 - City/Town
 - Airport
 - Incorporated Area
 - Lake
 - State Park
 - National Park or Recreation Area
 - Defense Facility
 - Wildlife Area
 - Geological Area
 - State, National, or Private Forest

The Kentucky Transportation Cabinet does not warrant the information contained on this map is accurate or complete. The Kentucky Transportation Cabinet states that all attempts are made to insure the correctness of road network portrayal and it is based on the best available information at a given time but disclaims any and all representations and/or warranties made with respect to this map by any contributing source as to its contents, whether expressed, implied, or statutory, including, but not limited to, warranties of title, merchantability, and fitness for a particular purpose.




Division of Planning
Kentucky
UNBRIDLED SPIRIT
State Primary Road System
FRANKLIN COUNTY
2 1 0 2 4 6 Miles
Last map revision: APRIL 2011
Road centerlines collected using GPS technology
Kentucky State Plane Coordinate System (NAD83)
www.planning.kytc.ky.gov/

Appendix E – Traffic Count Data

Kentucky Traffic Counts

Route: US 421 Street:

From MP: 11.132 At: KY 12

To MP: 16.947 At: KY 561

District: 5

County: FRANKLIN

City: FRANKFORT

Station ID: 751 Station Cnty: FRANKLIN

Station Type: Full Coverage

Functional Class: RURAL - Minor Arterial

Last Actual Count:

957 in 2010

New Road Year:

Impact Year:

<u>Year</u>	<u>Count</u>	<u>Type</u>
2011	1,020	Computer Estimate
2010	957	Actual Count
2009		
2008		
2007	1,130	Actual Count
2006		
2005		
2004		
2003		
2002		
2001	1,150	Actual Count
2000		
1999		
1998		
1997		
1996		
1995	1,200	Actual Count
1994		
1993		
1992	1,140	Actual Count
1991		
1990		
1989		
1988	933	Actual Count
1987		
1986		
1985	921	Actual Count
1984	805	Actual Count
1983	876	Actual Count
1982	850	Actual Count
1981	869	Actual Count
1980		
1979	747	Actual Count
1978		
1977	1,040	Actual Count
1976		
1975	973	Actual Count
1974		
1973	711	Actual Count
1972		
1971	1,130	Actual Count

Kentucky Traffic Counts

1970	632	Actual Count
1969	621	Actual Count
1968		
1967	640	Actual Count
1966	616	Actual Count
1965		

Appendix F – Collision Data

Crash Data

MILEPOINT DERIVED	COLLISION DATE	COLLISION TIME	MOTOR VEHICLES INVOLVED	UNITS INVOLVED	KILLED	INJURED	WEATHER	ROADWAY CONDITION	MANNER OF COLLISION	ROADWAY CHARACTER	LIGHT CONDITION
12.7	12/13/2003	1942	1	1	0	0	SNOWING	ICE	SINGLE VEHICLE	CURVE & GRADE	DARK-HWY LIGHTED/ON
12.717	8/5/2007	1654	2	2	0	2	CLOUDY	DRY	ANGLE	STRAIGHT & LEVEL	DAYLIGHT
12.753	12/10/2007	850	1	1	0	1	RAINING	WET	SINGLE VEHICLE	CURVE & LEVEL	DAYLIGHT
12.917	5/22/2005	1900	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
13.003	8/4/2009	1245	1	1	0	0	RAINING	WET	SINGLE VEHICLE	STRAIGHT & GRADE	DAYLIGHT
13.088	6/21/2003	1510	1	1	0	2	CLEAR	DRY	SINGLE VEHICLE	CURVE & LEVEL	DAYLIGHT
13.088	11/22/2006	2239	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DARK-HWY NOT LIGHTED
13.132	9/23/2006	1731	1	1	0	0	RAINING	WET	SINGLE VEHICLE	CURVE & LEVEL	DAYLIGHT
13.317	6/7/2006	655	1	1	0	2	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
13.319	5/18/2011	1235	1	1	0	1	RAINING	WET	SINGLE VEHICLE	CURVE & LEVEL	DAYLIGHT
13.588	9/1/2002	520	1	1	0	2	CLEAR	DRY	SINGLE VEHICLE	CURVE & HILLCREST	DARK-HWY NOT LIGHTED
13.717	7/28/2004	1445	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.067	12/26/2003	2350	1	1	0	2	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DARK-HWY NOT LIGHTED
14.088	12/30/2005	900	1	2	0	1	CLOUDY	WET	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.131	10/12/2002	1405	1	1	0	1	CLOUDY	WET	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.132	6/10/2007	1234	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
14.25	6/13/2006	1618	2	2	0	0	CLEAR	DRY	SIDESWIPE	CURVE & HILLCREST	DAYLIGHT
14.386	9/14/2009	1135	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.467	12/16/2005	920	1	1	0	0	CLEAR	ICE	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.496	3/18/2011	2257	1	1	0	1	RAINING	WET	SINGLE VEHICLE	CURVE & GRADE	DARK-HWY NOT LIGHTED
14.504	7/1/2009	1225	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.511	8/1/2008	1057	2	2	0	0	CLEAR	DRY	SIDESWIPE	CURVE & GRADE	DAYLIGHT
14.567	4/19/2007	705	1	1	0	1	CLOUDY	DRY	SINGLE VEHICLE	CURVE & GRADE	DAWN
14.719	12/29/2010	639	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	CURVE & LEVEL	DAWN
14.767	6/28/2003	1919	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.767	6/26/2004	1457	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.77	5/21/2006	1123	1	1	0	2	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.817	9/17/2001	1724	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.861	9/6/2003	1115	2	2	1	0	CLEAR	DRY	HEAD ON	CURVE & GRADE	DAYLIGHT
14.867	9/4/2006	1549	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.867	6/4/2007	1516	1	1	0	0	RAINING	WET	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
14.886	11/28/2004	2145	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DARK-HWY NOT LIGHTED
15.011	5/24/2007	547	2	2	0	1	CLEAR	DRY	SIDESWIPE	CURVE & GRADE	DARK-HWY NOT LIGHTED

Appendix G – KYTC's Common Geometric Practices for Rural Arterial Roads

COMMON GEOMETRIC PRACTICES RURAL ARTERIAL ROADS (OTHER THAN FREEWAYS) ④

				TRAFFIC VOLUME									
				UNDER 400 A.D.T.		400-1500 A.D.T.		1500-2000 A.D.T.		OVER 2000 A.D.T.			
		DESIGN SPEED ⑥		40-50 M.P.H.		40-70 M.P.H.		40-70 M.P.H.		40-70 M.P.H.			
PAVEMENT WIDTH (FEET)	40 MPH		22		22		22		24				
	45 MPH						24						
	50 MPH												
	55 MPH												
	60 MPH		24										
	65 MPH												
70 MPH													
MINIMUM GRADED SHOULDER WIDTH (FT) ⑤		ALL SPEEDS		4		6		6		8			
MINIMUM CLEAR ROADWAY WIDTH OF NEW AND RECONSTRUCTED BRIDGES		ALL SPEEDS		APPROACH ROADWAY WIDTH									
MINIMUM RADIUS (FEET)	DESIGN SPEED		eMAX. 4%		eMAX. 6%		eMAX. 8%						
	30 MPH		300		275		250						
	35 MPH		420		380		350						
	40 MPH		565		510		465						
	45 MPH		730		660		600						
	50 MPH		930		835		760						
	55 MPH		1190		1065		965						
	60 MPH		1505		1340		1205						
	65 MPH		—		1660		1485						
	70 MPH		—		2050		1820						
NORMAL PAVEMENT CROSS SLOPES ③		RATE OF CROSS SLOPE = 2%											
NORMAL SHOULDER CROSS SLOPES		EARTH = 8%						PAVED = 4%					
MAXIMUM GRADE (PERCENT)	M.P.H.	30	35	40	45	50	55	60	65	70	75	80	
	LEVEL	-		5		4		3					
	ROLLING	-		6		5		4					
	MOUNTAIN	-		8		7		6		5			
MINIMUM STOPPING SIGHT DISTANCE ①		(FEET)	200	250	305	360	425	495	570	645	730	820	910
MINIMUM PASSING SIGHT DISTANCE ②		(FEET)	1090	1280	1470	1625	1835	1985	2135	2285	2480	2580	2680

- ① MINIMUM STOPPING SIGHT DISTANCES ARE BASED ON HEIGHT OF EYE OF 3.5 FT AND HEIGHT OF OBJECT OF 2.0 FT. BOTH HORIZONTAL AND VERTICAL ALIGNMENTS ARE CONSIDERED.
- ② MINIMUM PASSING SIGHT DISTANCES ARE BASED ON HEIGHT OF EYE 3.5 FT AND HEIGHT OF OBJECT OF 3.5 FT. BOTH HORIZONTAL AND VERTICAL ALIGNMENTS ARE CONSIDERED.
- ③ NORMAL PAVEMENT CROSS SLOPES ON BRIDGES SHALL BE 2%.
- ④ FOR GUIDANCE ON FREEWAYS, REFER TO AASHTO, "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS", CURRENT EDITION.
- ⑤ WIDEN 3 FT FOR GUARDRAIL.
- ⑥ JUSTIFICATION FOR A DESIGN SPEED LESS THAN THE REGULATORY OR POSTED SPEED MUST BE DOCUMENTED AND AVAILABLE FOR REVIEW IN THE PROJECT FILES.

Appendix H – Structure Inventory and Appraisal Sheets

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 4174		Agency ID: 037B00023N		SR: 47.1		SD/FO: SD	
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IDENTIFICATION

State 1: 21 Kentucky Struc Num 8: 037B00023N

Facility Carried 7: US-421 Location 9: 2.0 MI NOR. OF JCT KY 12

Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 2 U.S. Numbered Hwy

Level of Service 5C: 1 Mainline Rte. Number 5D: 00421

Directional Suffix 5E: 0 N/A (NBI) % Responsibility : Unknown

SHD District 2: District 5 County Code 3: Franklin (037)

Place Code 4: FIPS 0000 Mile Post 11: 13.090 mi

Feature Intersected 6: FLAT CREEK

Latitude 16: 38d 17' 52" Longitude 17: 084d 56' 33"

Border Bridge Code 98: Unknown (P)

Border Bridge Number 99:

INSPECTION

Frequency 91: 24 months Inspection Date 90: 7/7/2010 Next Inspection: 07/07/2012

FC Frequency 92A: NA FC Inspection Date 93A: NA Next FC Inspection: NA

UW Frequency 92B: NA UW Inspection Date 93B: NA Next UW Inspection: NA

SI Frequency 92C: NA SI Date 93C: NA Next SI: NA

Element Frequency: 24 months Element Inspection Date: 07/07/2010 Next Elem. Insp. Due: 07/07/2012

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 2

Main Span Material/Design 43A/B:

1 Concrete 04 Tee Beam

Deck Type 107: 1 Concrete-Cast-in-Place

Wearing Surface 108A: 6 Bituminous

Membrane 108B: 0 None

Deck Protection 108C: None

CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No || bridge exists

Direction of Traffic 102: 2 2-way traffic Temporary Structure 103: Not Applicable (P)

Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough

Toll Facility 20: 3 On free road Functional Class 26: 06 Rural Minor Arterial

Defense Hwy 110: 0 Not a STRAHNET hwy Historical Significance 37: 5 Not eligible for NRHP

Owner 22: 01 State Highway Agency

Custodian 21: 01 State Highway Agency

AGE AND SERVICE

Year Built 27: 1929 Year Reconstructed 106: 0

Type of Service on 42A: 1 Highway

Type of Service under 42B: 5 Waterway

Lanes on 28A: 2 Lanes Under 28B: 0 Detour Length 19: 9.9 mi

ADT 29: 1,030 Truck ADT 109: 11 % Year of ADT 30: 2010

CONDITION

Deck 58: 3 Serious Super 59: 4 Poor Sub 60: 5 Fair

Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 6 Bank Slumping

GEOMETRIC DATA

Length Max Span 48: 32.0 ft Structure Length 49: 66.0 ft

Curb/Sdwk Width L 50A: 1.3 ft Curb/Sidewalk Width R 50B: 1.3 ft

Width Curb to Curb 51: 23.0 ft Width Out to Out 52: 26.0 ft

Approach Roadway Width 32: 20.0 ft Median 33: 0 No median (w/ shoulders)

Deck Area: 1,716. sq. ft

Skew 34: 30.00 ° Structure Flared 35: 0 No flare

Vertical Clearance 10: 99.99 ft Horiz. Clearance 47: 23.00 ft

Minimum Vertical Clearance Over Bridge 53: 328.1 ft

Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR

Minimum Vertical Underclearance 54B: 0.0 ft

Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR

Minimum Lateral Underclearance R 55: 0.0 ft

Minimum Lateral Underclearance L 56: 0.0 ft

LOAD RATING AND POSTING

Inventory Rating Method 65: 1 LF Load Factor Operating Rating Method 63: 1 LF Load Factor

Inventory Rating 66: HS21.1 Operating Rating 64: HS36.1

Design Load 31: 2 M 13.5 (H 15) Posting 70: 5 At/Above Legal Loads

Posting status 41: A Open, no restriction

APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: 0 Substandard

Transition 36B: 0 Substandard Approach Rail Ends 36D: 0 Substandard

Str. Evaluation 67: 4 Deck Geometry 68: 3 Intolerable - Correct

Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)

Waterway Adequacy 71: 8 Equal Desirable Approach Alignment 72: 8 Equal Desirable Crit

Scour Critical 113: 8 Stable Above Footing

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 0 Type of Work 75: Unknown (P)

Roadway Cost 95: \$ 0 Length of Improvement 76: 0.0 ft

Total Cost 96: \$ 0 Future ADT 114: 1,534

Year of Cost Estimate 97: Unknown Year of Future ADT 115: 2030

NAVIGATION DATA

Navigation Control 38: 0 Permit Not Required

Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft

Pier Protection 111: Not Applicable (P) Lift Bridge Vertical Clearance 116:

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
1	13/1	Unp Conc Deck/AC Ovl	(SF)	1,518	0 %	0	100 %	1,518	0 %	0	0 %	0	0 %	0
1	110/1	R/Conc Open Girder	(LF)	330	30 %	99	63 %	207	7 %	24	0 %	0	0 %	0
1	205/1	R/Conc Column	(EA)	2	0 %	0	0 %	0	100 %	2	0 %	0	0 %	0
1	215/1	R/Conc Abutment	(LF)	110	79 %	87	18 %	20	3 %	3	0 %	0	0 %	0
1	234/1	R/Conc Cap	(LF)	35	60 %	21	11 %	4	29 %	10	0 %	0	0 %	0
1	334/1	Metal Rail Coated	(LF)	132	50 %	66	50 %	66	0 %	0	0 %	0	0 %	0

Structure Inventory and Appraisal Sheet (English Units)

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
1	359/1	Soffit Smart Flag	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
1	361/1	Scour Smart Flag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
1	503/1	RC Curb	(LF)	132	0 %	0	0 %	0	0 %	0	100 %	132	0 %	0
Str Unit	Elm/Env	Description	Element Notes											
1	13/1	Concrete Deck - Unprotected w/ AC	Asphalt wearing surface is in satisfactory condition, some cracking, except where concrete deck overhang has failed under it. Overhangs have severe spalling and deterioration. The overhang on the west side of the bridge has large amount of resteel exposed with advanced section loss. Local failures of the deck overhang have occurred on the west side over the pier and toward the south abutment. The west edge of the south span is spalled completely leaving a void in front of the guardrail. A 3/8" steel plate has been placed over the two worse areas on the west edge of the deck. Cones remain along the west edge to encourage drivers to steer clear of the failed areas. The majority of deck has map cracking with possible full depth deterioration and some spalls with resteel exposed, slightly worse at the pier. Severe joint leakage at the pier. Drains have been paved over.											
1	110/1	Reinforced Conc Open Girder/Beam	Beams have cracks, some with moderate efflorescence. Exterior beams have heavy deterioration, some heavy efflorescence and spalls with exposed resteel and section loss. Possible full depth deterioration in some of the beams. The diaphragms have severe deterioration, map cracks and heavy efflorescence; worse at the pier in the exterior bays.											
1	205/1	Reinforced Conc Column or Pile Ex	Both columns are cracked and spalled.											
1	215/1	Reinforced Conc Abutment	There is deterioration at the abutments. Both abutments have map cracks and efflorescence at the wing turns.											
1	234/1	Reinforced Conc Cap	Both ends of the cap are severely spalled and deteriorated with resteel exposed and section loss.											
1	334/1	Metal Bridge Railing - Coated	The rail posts at the south end on each side are very loose due to deteriorated curbs. The remaining posts are anchored to the crumbling curbs. Railings are rusty, especially the east side.											
1	359/1	Soffit of Concrete Deck or Slab	The majority of deck has map cracking with possible full depth deterioration and some spalls with resteel exposed, slightly worse at the pier. Severe joint leakage at the pier.											
1	361/1	Scour	Some scour around the pier footing and west end of Abutment 3.											
1	503/1	Reinforced Concrete Curb	Curbs are all crumbled away.											

BRIDGE NOTES

-62.6

PAST INSPECTION

Inspection Date: 07/07/2010

Type: 2 Standard (24 months)

Inspector: EHOUSE

Pontis User Key: EHOUSE - Eddie I

Scope:

NBI: ☒ Other: ☐ Element: ☒
 Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

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Structure Inventory and Appraisal Sheet (English Units)

PAST INSPECTION

Inspection Date: 07/01/2008 Type: 2 Standard (24 months)
Inspector: DDUDGEON Pontis User Key: DDUDGEON - Dar
Scope:
NBI: ☒ Other: ☐ Element: ☒
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PAST INSPECTION

Inspection Date: 09/01/2006 Type: 2 Standard (24 months)
Inspector: TKING Pontis User Key: TKING - Terry King
Scope:
NBI: ☒ Other: ☐ Element: ☐
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

Work Candidate ID	Action	Object	Agency Status	Agency Priority	Assigned to a Project	Rec. Date
A-KYTC-13CD79C4-00000013	Replace	Bridge	unknown	Medium	No	7/7/2010

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 4175		Agency ID: 037B00024N		SR: 49.2		SD/FO: SD	
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IDENTIFICATION

State 1: 21 Kentucky Struc Num 8: 037B00024N

Facility Carried 7: US-421 Location 9: 2.8 MI NOR. OF JCT KY 12

Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 2 U.S. Numbered Hwy

Level of Service 5C: 1 Mainline Rte. Number 5D: 00421

Directional Suffix 5E: 0 N/A (NBI) % Responsibility : Unknown

SHD District 2: District 5 County Code 3: Franklin (037)

Place Code 4: FIPS 0000 Mile Post 11: 14.059 mi

Feature Intersected 6: HUDSON CREEK

Latitude 16: 38d 18' 40" Longitude 17: 084d 56' 29"

Border Bridge Code 98: Unknown (P)

Border Bridge Number 99:

INSPECTION

Frequency 91: 24 months Inspection Date 90: 6/21/2010 Next Inspection: 06/21/2012

FC Frequency 92A: NA FC Inspection Date 93A: NA Next FC Inspection: NA

UW Frequency 92B: NA UW Inspection Date 93B: NA Next UW Inspection: NA

SI Frequency 92C: NA SI Date 93C: NA Next SI: NA

Element Frequency: 24 months Element Inspection Date: 06/21/2010 Next Elem. Insp. Due: 06/21/2012

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 1

Main Span Material/Design 43A/B:

1 Concrete 04 Tee Beam

Deck Type 107: 1 Concrete-Cast-in-Place

Wearing Surface 108A: 6 Bituminous

Membrane 108B: 0 None

Deck Protection 108C: None

CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No || bridge exists

Direction of Traffic 102: 2 2-way traffic Temporary Structure 103: Not Applicable (P)

Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough

Toll Facility 20: 3 On free road Functional Class 26: 06 Rural Minor Arterial

Defense Hwy 110: 0 Not a STRAHNET hwy Historical Significance 37: 5 Not eligible for NRHP

Owner 22: 01 State Highway Agency

Custodian 21: 01 State Highway Agency

AGE AND SERVICE

Year Built 27: 1929 Year Reconstructed 106: 0

Type of Service on 42A: 1 Highway

Type of Service under 42B: 5 Waterway

Lanes on 28A: 2 Lanes Under 28B: 0 Detour Length 19: 9.9 mi

ADT 29: 1,030 Truck ADT 109: 11 % Year of ADT 30: 2010

CONDITION

Deck 58: 4 Poor Super 59: 4 Poor Sub 60: 5 Fair

Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 7 Minor Damage

GEOMETRIC DATA

Length Max Span 48: 21.0 ft Structure Length 49: 23.0 ft

Curb/Sdwk Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 0.0 ft

Width Curb to Curb 51: 22.0 ft Width Out to Out 52: 22.0 ft

Approach Roadway Width 32: 21.0 ft Median 33: 0 No median (w/ shoulders)

Deck Area: 505.2 sq. ft

Skew 34: 0.00 ° Structure Flared 35: 0 No flare

Vertical Clearance 10: 99.99 ft Horiz. Clearance 47: 22.00 ft

Minimum Vertical Clearance Over Bridge 53: 328.1 ft

Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR

Minimum Vertical Underclearance 54B: 0.0 ft

Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR

Minimum Lateral Underclearance R 55: 0.0 ft

Minimum Lateral Underclearance L 56: 0.0 ft

LOAD RATING AND POSTING

Inventory Rating Method 65: 1 LF Load Factor Operating Rating Method 63: 1 LF Load Factor

Inventory Rating 66: HS21.7 Operating Rating 64: HS35.6

Design Load 31: 2 M 13.5 (H 15) Posting 70: 5 At/Above Legal Loads

Posting status 41: A Open, no restriction

APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: 1 Meets Standards

Transition 36B: 0 Substandard Approach Rail Ends 36D: 0 Substandard

Str. Evaluation 67: 4 Deck Geometry 68: 3 Intolerable - Correct

Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)

Waterway Adequacy 71: 8 Equal Desirable Approach Alignment 72: 8 Equal Desirable Crit

Scour Critical 113: 8 Stable Above Footing

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 64,000 Type of Work 75: 34 Widen w/ Deck Rehe

Roadway Cost 95: \$ 0 Length of Improvement 76: 2.3 ft

Total Cost 96: \$ 63,000 Future ADT 114: 1,534

Year of Cost Estimate 97: 1994 Year of Future ADT 115: 2030

NAVIGATION DATA

Navigation Control 38: 0 Permit Not Required

Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft

Pier Protection 111: Not Applicable (P) Lift Bridge Vertical Clearance 116:

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
1	13/1	Unp Conc Deck/AC Ovl	(SF)	472	0 %	0	100 %	472	0 %	0	0 %	0	0 %	0
1	110/1	R/Conc Open Girder	(LF)	92	25 %	23	62 %	57	13 %	12	0 %	0	0 %	0
1	215/1	R/Conc Abutment	(LF)	76	0 %	0	82 %	62	18 %	14	0 %	0	0 %	0
1	334/1	Metal Rail Coated	(LF)	46	0 %	0	0 %	0	0 %	0	100 %	46	0 %	0
1	359/1	Soffit Smart Flag	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
1	503/1	RC Curb	(LF)	46	0 %	0	0 %	0	0 %	0	100 %	46	0 %	0

Structure Inventory and Appraisal Sheet (English Units)

Str Unit	Elm/Env	Description	Element Notes
1	13/1	Concrete Deck - Unprotected w/ AC	Structure should be considered for replacement. Asphalt surface has cracks and deterioration. Drains have been paved over and are no longer functional. All railing posts are no longer attached to the bridge on the east and west side.
1	110/1	Reinforced Conc Open Girder/Beam	Beams have cracks, some with efflorescence. The west exterior beam has moderate cracks and deterioration with efflorescence for its entire length and some spalls with exposed rebar that has section loss. The east exterior beam at the south abutment has moderate longitudinal cracking with efflorescence at the bearing and runs north for about 4 feet. Beam 2 at the north abutment has about 3 feet of cracking and efflorescence. End diaphragms have cracking, some with efflorescence and minor spalling.
1	215/1	Reinforced Conc Abutment	Abutments have cracks and are deteriorated near the west exterior beam. The breastwalls have some honeycombing and cracking. The north abutment and wing footing is spalled almost its entire length. All wings have cracking and efflorescence, deterioration and scaling on top; the southeast wing is the worse. Some rock buildup in channel. Flow hits the southwest wing wall footing.
1	334/1	Metal Bridge Railing - Coated	The guardrail posts are not anchored at all due to the condition of the concrete the anchors were in.
1	359/1	Soffit of Concrete Deck or Slab	Bottom of deck has minor cracks, some with efflorescence and moderate amounts of possible full depth deterioration. Overhangs and edges of deck are severely spalled and deteriorated with rebar exposed that has advanced section loss.
1	503/1	Reinforced Concrete Curb	Curbs are severely spalled and crumbling.

BRIDGE NOTES

-60.1

PAST INSPECTION

Inspection Date: 06/21/2010

Type: 2 Standard (24 months)

Inspector: DDUDGEON

Pontis User Key: DDUDGEON - Dar

Scope:

NBI: ☒Other: ☐Element: ☒Underwater: ☐Fracture Critical: ☐

INSPECTION NOTES

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Structure Inventory and Appraisal Sheet (English Units)

PAST INSPECTION

Inspection Date: 06/26/2008 Type: 2 Standard (24 months)
Inspector: DDUDGEON Pontis User Key: DDUDGEON - Dar
Scope:
NBI: ☒ Other: ☐ Element: ☒
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PAST INSPECTION

Inspection Date: 09/01/2006 Type: 2 Standard (24 months)
Inspector: TKING Pontis User Key: TKING - Terry King
Scope:
NBI: ☒ Other: ☐ Element: ☐
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

Work Candidate ID	Action	Object	Agency Status	Agency Priority	Assigned to a Project	Rec. Date
A-KYTC-13B379BF-0000000D	Repl Elem	Metal Rail Coated	Approved	High	No	6/21/2010

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 4176		Agency ID: 037B00025N		SR: 47.6		SD/FO: SD	
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IDENTIFICATION

State 1: 21 Kentucky Struc Num 8: 037B00025N

Facility Carried 7: US-421 Location 9: 3.8 MI NOR. OF JCT KY 12

Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 2 U.S. Numbered Hwy

Level of Service 5C: 1 Mainline Rte. Number 5D: 00421

Directional Suffix 5E: 0 N/A (NBI) % Responsibility : Unknown

SHD District 2: District 5 County Code 3: Franklin (037)

Place Code 4: FIPS 0000 Mile Post 11: 15.091 mi

Feature Intersected 6: LITTLE FLAT CREEK

Latitude 16: 38d 19' 18" Longitude 17: 084d 56' 56"

Border Bridge Code 98: Unknown (P)

Border Bridge Number 99:

INSPECTION

Frequency 91: 24 months Inspection Date 90: 6/21/2010 Next Inspection: 06/21/2012

FC Frequency 92A: NA FC Inspection Date 93A: NA Next FC Inspection: NA

UW Frequency 92B: NA UW Inspection Date 93B: NA Next UW Inspection: NA

SI Frequency 92C: NA SI Date 93C: NA Next SI: NA

Element Frequency: 24 months Element Inspection Date: 06/21/2010 Next Elem. Insp. Due: 06/21/2012

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 1

Main Span Material/Design 43A/B:

1 Concrete 04 Tee Beam

Deck Type 107: 1 Concrete-Cast-in-Place

Wearing Surface 108A: 6 Bituminous

Membrane 108B: 0 None

Deck Protection 108C: None

CLASSIFICATION

Defense Highway 100: 0 Not a STRAHNET hwy Parallel Structure 101: No || bridge exists

Direction of Traffic 102: 2 2-way traffic Temporary Structure 103: Not Applicable (P)

Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough

Toll Facility 20: 3 On free road Functional Class 26: 06 Rural Minor Arterial

Defense Hwy 110: 0 Not a STRAHNET hwy Historical Significance 37: 5 Not eligible for NRHP

Owner 22: 01 State Highway Agency

Custodian 21: 01 State Highway Agency

AGE AND SERVICE

Year Built 27: 1929 Year Reconstructed 106:

Type of Service on 42A: 1 Highway

Type of Service under 42B: 5 Waterway

Lanes on 28A: 2 Lanes Under 28B: 0 Detour Length 19: 9.9 mi

ADT 29: 1,030 Truck ADT 109: 11 % Year of ADT 30: 2010

CONDITION

Deck 58: 4 Poor Super 59: 4 Poor Sub 60: 4 Poor

Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 7 Minor Damage

GEOMETRIC DATA

Length Max Span 48: 30.0 ft Structure Length 49: 35.0 ft

Curb/Sdwk Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 0.0 ft

Width Curb to Curb 51: 27.0 ft Width Out to Out 52: 29.0 ft

Approach Roadway Width 32: 23.0 ft Median 33: 0 No median (w/ shoulders)

Deck Area: 1,015. sq. ft

Skew 34: 45.00 ° Structure Flared 35: 0 No flare

Vertical Clearance 10: 99.99 ft Horiz. Clearance 47: 27.00 ft

Minimum Vertical Clearance Over Bridge 53: 328.1 ft

Minimum Vertical Underclearance Reference 54A: N Feature not hwy or RR

Minimum Vertical Underclearance 54B: 0.0 ft

Minimum Lateral Underclearance Reference R 55A: N Feature not hwy or RR

Minimum Lateral Underclearance R 55: 0.0 ft

Minimum Lateral Underclearance L 56: 0.0 ft

LOAD RATING AND POSTING

Inventory Rating Method 65: 1 LF Load Factor Operating Rating Method 63: 1 LF Load Factor

Inventory Rating 66: HS14.5 Operating Rating 64: HS23.9

Design Load 31: 2 M 13.5 (H 15) Posting 70: 5 At/Above Legal Loads

Posting status 41: A Open, no restriction

APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: 0 Substandard

Transition 36B: 0 Substandard Approach Rail Ends 36D: 0 Substandard

Str. Evaluation 67: 4 Deck Geometry 68: 4 Tolerable

Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)

Waterway Adequacy 71: 8 Equal Desirable Approach Alignment 72: 8 Equal Desirable Crit

Scour Critical 113: 8 Stable Above Footing

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 0 Type of Work 75: Unknown (P)

Roadway Cost 95: \$ 0 Length of Improvement 76: 0.0 ft

Total Cost 96: \$ 0 Future ADT 114: 1,534

Year of Cost Estimate 97: Unknown Year of Future ADT 115: 2030

NAVIGATION DATA

Navigation Control 38: 0 Permit Not Required

Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft

Pier Protection 111: Not Applicable (P) Lift Bridge Vertical Clearance 116:

ELEMENT CONDITION STATE DATA

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
1	13/1	Unp Conc Deck/AC Ovl	(SF)	945	0 %	0	0 %	0	100 %	945	0 %	0	0 %	0
1	104/1	P/S Conc Box Girder	(LF)	80	98 %	78	0 %	0	3 %	2	0 %	0	0 %	0
1	110/1	R/Conc Open Girder	(LF)	160	46 %	73	39 %	62	16 %	25	0 %	0	0 %	0
1	215/1	R/Conc Abutment	(LF)	141	40 %	57	35 %	50	24 %	34	0 %	0	0 %	0
1	334/1	Metal Rail Coated	(LF)	80	83 %	66	15 %	12	3 %	2	0 %	0	0 %	0
1	359/1	Soffit Smart Flag	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0

Structure Inventory and Appraisal Sheet (English Units)

Str Unit	Elm/Env	Description	Element Notes
1	13/1	Concrete Deck - Unprotected w/ AC	Asphalt surface has cracks, a hole near the northwest corner and another hole at the west corner further south.
1	104/1	P/S Conc Closed Web/Box Girder	One box beam was added to each side. The west exterior box beam is spalled on the bottom at the south bearing area. The west box beam has 1" +/- gap between the old overhang. There is a spalled area at the north abutment allowing water to erode behind the bearing areas at the 1" gap joint. There are no actual bearing devices, the beams bear on the abutments and the modifications made to the abutments to add the box beams.
1	110/1	Reinforced Conc Open Girder/Bear	The exterior beams in old section are cracked, spalled and deteriorated; with resteel exposed and section loss. The east "old exterior" RCDG beam has minor spall on the bottom at the south bearing area. Beams otherwise have minor cracks.
1	215/1	Reinforced Conc Abutment	The endwalls have some deterioration. The bearing areas at both box beams are crushed and spalling at the bearing areas, the northwest being the worst since the box beam ends have very little length over the north abutment. Both abutments, all wings and the wing extensions have cracks and some spalling. The south abutment has an approximate 16 square feet spall at the west end just above the footing with some horizontal and vertical steel exposed - heavy deterioration at this location. The top of the southwest wing at the turn is severely spalled and has resteel exposed due to widening. The top of the footing at the south abutment is spalled. The northeast corner under the precast box beam is spalled, crushing and deteriorated and there is a void behind the bearing area. The southwest wing wall extension is tilted toward the creek and separated from the asphalt.
1	334/1	Metal Bridge Railing - Coated	Railings are W-Beam guardrail.
1	359/1	Soffit of Concrete Deck or Slab	Deck has severe full depth deterioration along the edge of overhangs in the old section, the west edge is the worse. The west edge of overhang has severe concrete spalling and large amounts of resteel exposed with advanced section loss that gets worse from south abutment to the north abutment.

BRIDGE NOTES

-7.5

PAST INSPECTION

Inspection Date: 06/21/2010

Type: 2 Standard (24 months)

Inspector: DDUDGEON

Pontis User Key: DDUDGEON - Dar

Scope:

NBI: ☒

Other: ☐

Element: ☒

Underwater: ☐

Fracture Critical: ☐

INSPECTION NOTES

—

Structure Inventory and Appraisal Sheet (English Units)

PAST INSPECTION

Inspection Date: 06/26/2008 Type: 2 Standard (24 months)
Inspector: DDUDGEON Pontis User Key: DDUDGEON - Dar
Scope:
NBI: ☒ Other: ☐ Element: ☒
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PAST INSPECTION

Inspection Date: 09/01/2006 Type: 2 Standard (24 months)
Inspector: TKING Pontis User Key: TKING - Terry King
Scope:
NBI: ☒ Other: ☐ Element: ☐
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

Work Candidate ID	Action	Object	Agency Status	Agency Priority	Assigned to a Project	Rec. Date
A-KYTC-13B379BF-0000001C	Repl Elem	R/Conc Abutment	Approved	High	No	6/21/2010

Appendix I – Pictures of Bridges and Roadway



Looking south along US 421.



Looking north.



West edge supported by steel plates.



West edge supported by steel plates.



East curb spalled away.



DS channel.



US channel.



Span 1 west edge; Girder 1 spalled.

037B00023N

West edge at P2: pier column & cap
spalled, G1 spalled.



Span 1 G5 spalled.



East edge at P2: pier column & cap
spalled.

037B00024N



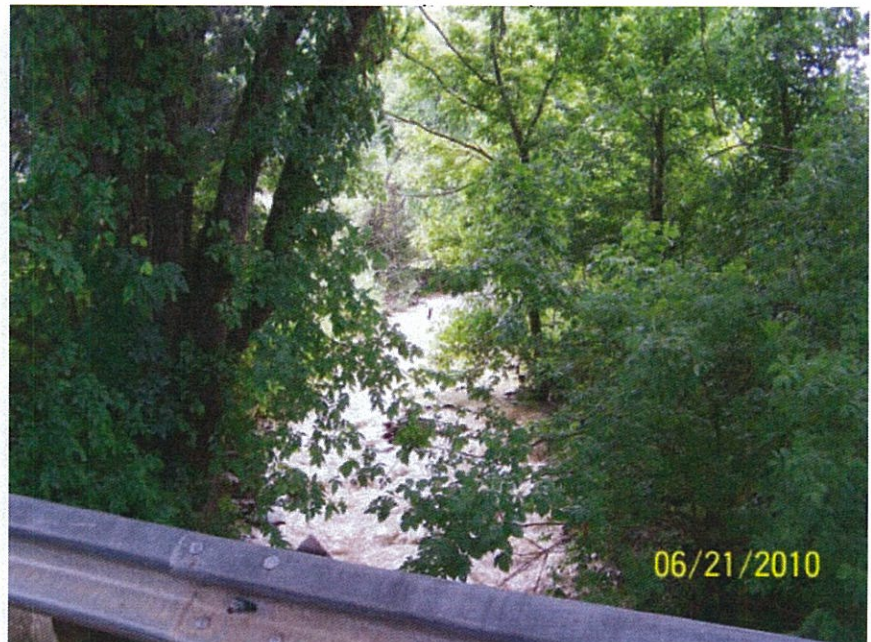
View looking north (cardinal direction)



View looking south (non-cardinal)



View east (downstream)



View west (upstream)

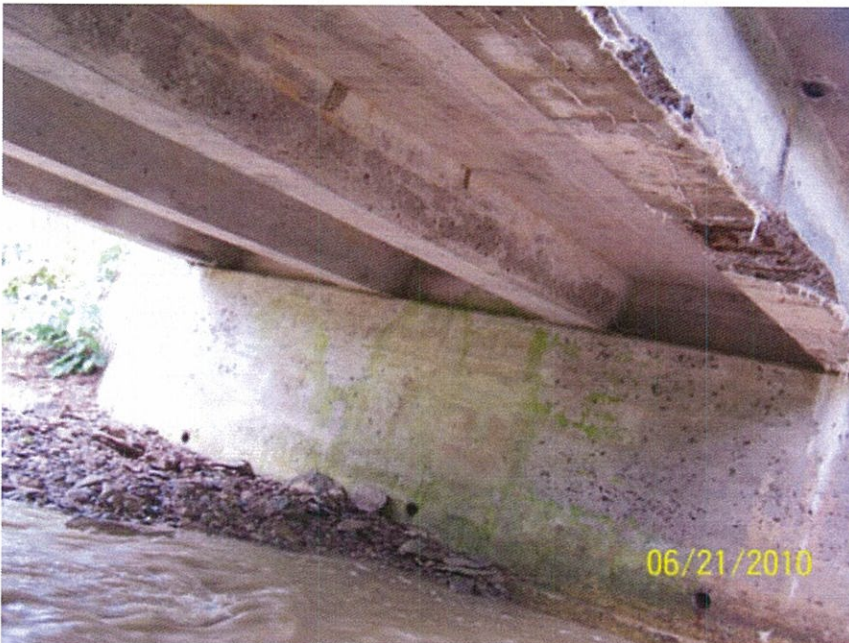
037B00024N



East (downstream) profile



West (upstream) profile



Underside of bridge and south abutment



Underside of bridge and south abutment

037B00024N



Railing posts are not attached



Railing posts are hanging from the rails



Railing posts are mis-aligned



Rail posts are dangling from the railing

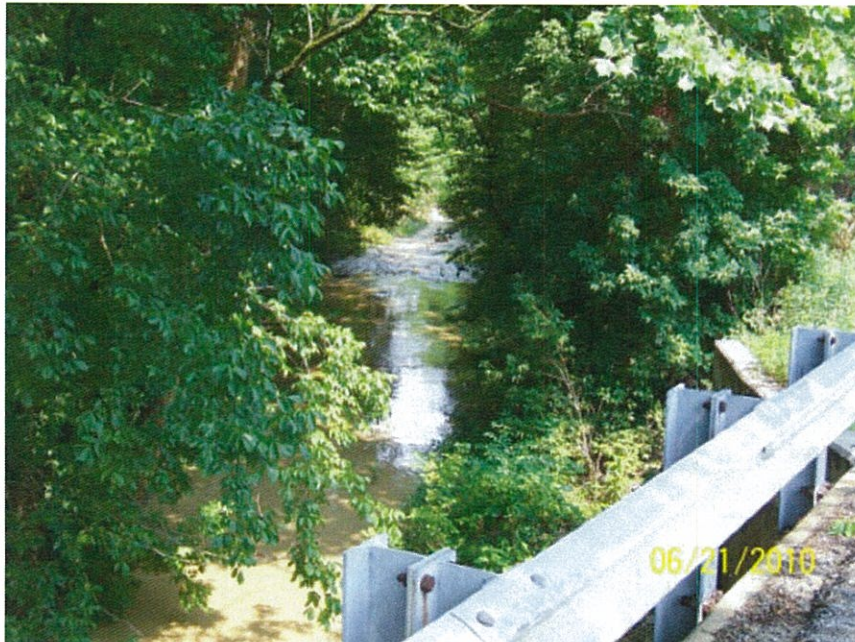
037B00025N



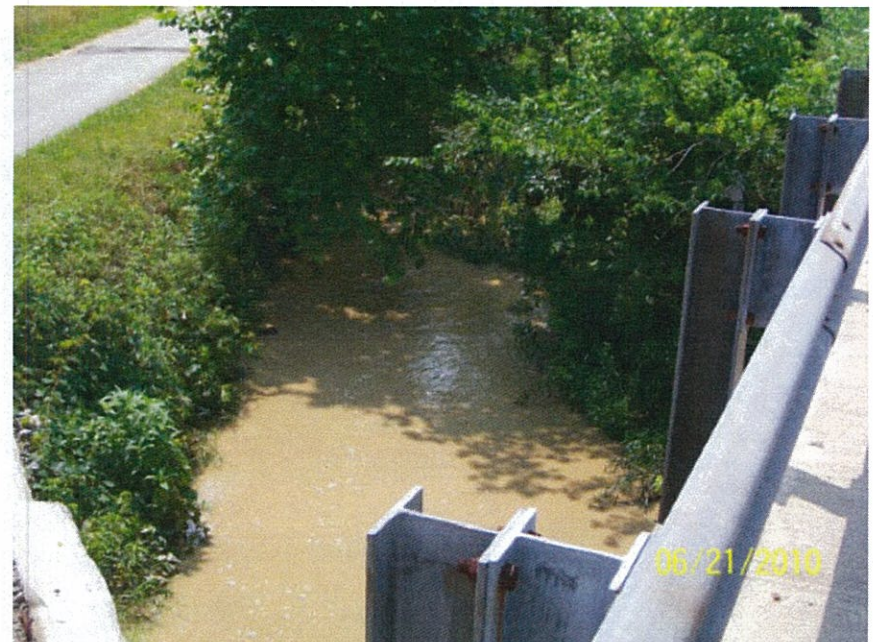
View north (cardinal direction)



View south (non-cardinal direction)



View east (downstream)



View west (upstream)

037B00025N



East (downstream) profile



West (upstream) profile



Underside of bridge from east side



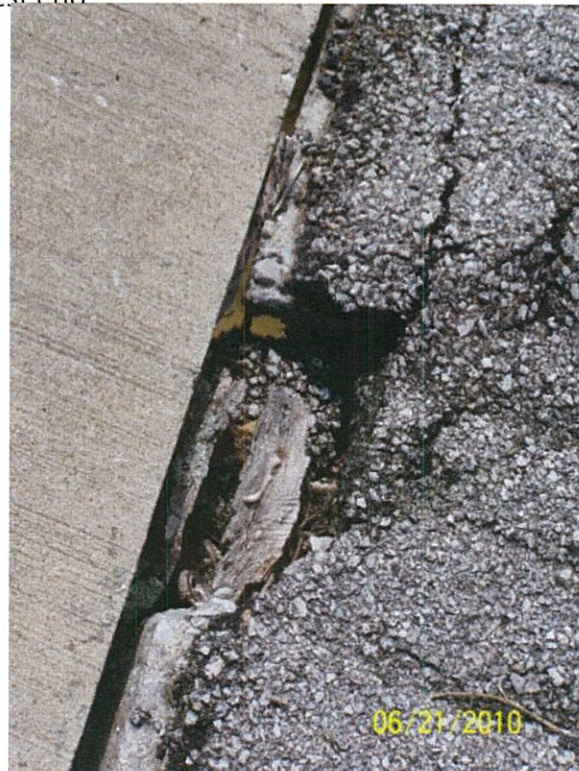
Approximate 20" X 16" hole in deck at west edge

037B00025N



< Steel exposed in west beam (and deck)

Exposed resteel in bottom of deck at
west end



< Smaller (8" X 24") spall and hole in deck at west side

Appendix J – Flood Insurance Rate Maps

LEGEND



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No base flood elevations determined.
- ZONE AE** Base flood elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Area of Special Flood Hazard formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no base flood elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); base flood elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



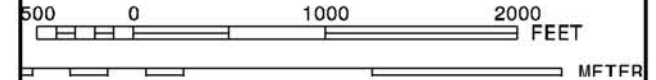
OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

Original Flood Insurance Program at 1-800-650-0620.



MAP SCALE 1" = 1000'



NFIP

PANEL 0015C

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP FRANKLIN COUNTY, KENTUCKY AND INCORPORATED AREAS

PANEL 15 OF 205

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FRANKLIN COUNTY	210280	0015	C

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
21073C0015C

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



1% annual chance floodplain boundary



0.2% annual chance floodplain boundary



Floodway boundary



Zone D boundary



CBRS and OPA boundary



Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.



Base Flood Elevation line and value; elevation in feet*

(EL 987)

Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988



Cross section line



Transect line

97°07' 30", 32°22' 30"

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

4276^{000m}E

1000-meter Universal Transverse Mercator grid values, zone 16

600000 FT

5000-foot grid ticks; Kentucky State Plane coordinate system, Single zone (FIPZONE 1600), Transverse Mercator

DX5510 x

Bench mark (see explanation in Notes to Users section of this FIRM panel)

● M1.5

River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE

FLOOD INSURANCE RATE MAP

SEPTEMBER 28, 2007

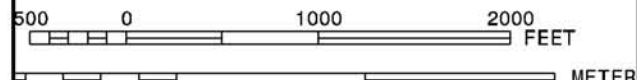
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

SEPTEMBER 28, 2007 – to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to change Special Flood Hazard Areas, to update map format, to update

On-line Flood Insurance Program at 1-800-650-6620.



MAP SCALE 1" = 1000'



NFIP

PANEL 0015C

FIRM

FLOOD INSURANCE RATE MAP

FRANKLIN COUNTY,

KENTUCKY

AND INCORPORATED AREAS

PANEL 15 OF 205

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY

FRANKLIN COUNTY

NUMBER

210280

PANEL

0015

SUFFIX

C

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER

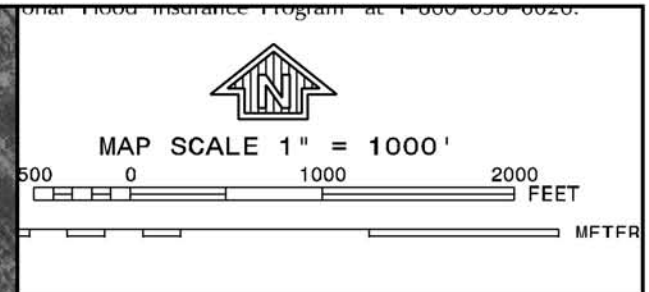
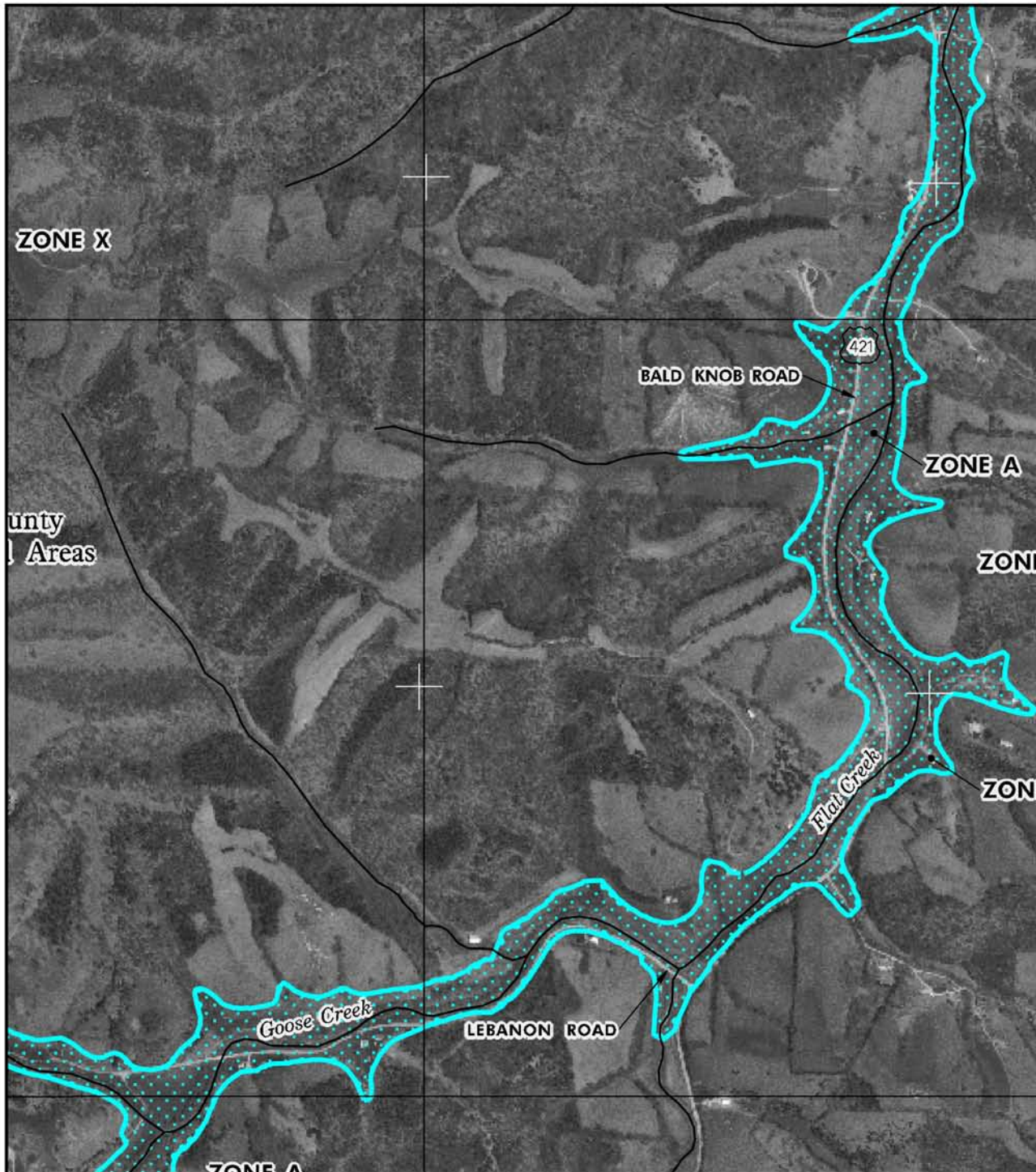
21073C0015C

EFFECTIVE DATE

SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0015C

FIRM
FLOOD INSURANCE RATE MAP
 FRANKLIN COUNTY,
 KENTUCKY
 AND INCORPORATED AREAS

PANEL 15 OF 205

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FRANKLIN COUNTY	210280	0015	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

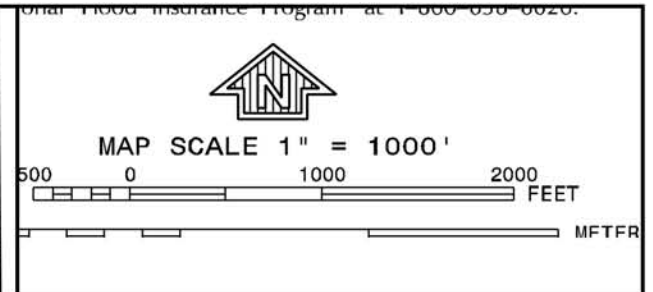


MAP NUMBER
21073C0015C

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0005C

FIRM
FLOOD INSURANCE RATE MAP
FRANKLIN COUNTY,
KENTUCKY
AND INCORPORATED AREAS

PANEL 5 OF 205
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FRANKLIN COUNTY	210280	0006	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
21073C0005C

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Appendix K - Threatened and Endangered Species Reports

Species Information

Federal Threatened, Endangered, and Candidate Species observations for selected counties

Linked life history provided courtesy of [NatureServe Explorer](#).

Records may include both recent and historical observations.

[US Status Definitions](#) [Kentucky Status Definitions](#)

List Federal Threatened, Endangered, and Candidate Species observations in 1 selected county.

Selected county is: Franklin.

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
Epioblasma torulosa rangiana	Northern Riffleshell	Bivalvia	Franklin	LE	E	Yes	Reference
Myotis grisescens	Gray Myotis	Mammalia	Franklin	LE	T	Yes	Reference
Myotis sodalis	Indiana Bat	Mammalia	Franklin	LE	E	Yes	Reference
Oceanodroma castro	Band-rumped Storm-petrel	Aves	Franklin	PS:C	N		Reference

4 species are listed

**Report of
Endangered, Threatened, and Special Concern
Plants, Animals, and Natural Communities
for Franklin County, Kentucky**

**Kentucky State Nature Preserves
Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)**

www.naturepreserves.ky.gov

Kentucky State Nature Preserves Commission

Key for County List Report

Within a county, elements are arranged first by taxonomic complexity (plants first, natural communities last), and second by scientific name. A key to status, ranks, and count data fields follows.

STATUS

KSNPC: Kentucky State Nature Preserves Commission status:

N or blank = none E = endangered T = threatened S = special concern H = historic X = extirpated

USESA: U.S. Fish and Wildlife Service status:

blank = none C = candidate LT = listed as threatened LE = listed as endangered
SOMC = Species of Management Concern

RANKS

GRANK: Estimate of element abundance on a global scale:

G1 = Critically imperiled	GU = Unrankable
G2 = Imperiled	G#? = Inexact rank (e.g. G2?)
G3 = Vulnerable	G#Q = Questionable taxonomy
G4 = Apparently secure	G#T# = Intraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species)
G5 = Secure	
GH = Historic, possibly extinct	GNR = Unranked
GX = Presumed extinct	GNA = Not applicable

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled	SU = Unrankable	Migratory species may have separate ranks for different population segments (e.g. S1B, S2N, S4M): S#B = Rank of breeding population S#N = Rank of non-breeding population S#M = Rank of transient population
S2 = Imperiled	S#? = Inexact rank (e.g. G2?)	
S3 = Vulnerable	S#Q = Questionable taxonomy	
S4 = Apparently secure	S#T# = Intraspecific taxa	
S5 = Secure	SNR = Unranked	
SH = Historic, possibly extirpated	SNA = Not applicable	
SX = Presumed extirpated		

COUNT DATA FIELDS

OF OCCURRENCES: Number of occurrences of a particular element from a county. Column headings are as follows:

E - currently reported from the county
H - reported from the county but not seen for at least 20 years
F - reported from county & cannot be relocated but for which further inventory is needed
X - known to have extirpated from the county
U - reported from a county but cannot be mapped to a quadrangle or exact location.

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new species of plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

KSNPC appreciates the submission of any endangered species data for Kentucky from field observations. For information on data reporting or other data services provided by KSNPC, please contact the Data Manager at:

Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)
email: naturepreserves@ky.gov
internet: www.naturepreserves.ky.gov

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky
 Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Franklin	Vascular Plants	<i>Arabis perstellata</i>	Braun's Rockcress	T / LE	G2 / S2	39	0	0	4	0
Franklin	Vascular Plants	<i>Elymus svensonii</i>	Svenson's Wildrye	T / SOMC	G3 / S2S3	16	0	0	3	0
Franklin	Vascular Plants	<i>Gentiana flavida</i>	Yellow Gentian	E /	G4 / S1S2	1	0	0	0	0
Franklin	Vascular Plants	<i>Lesquerella globosa</i>	Globe Bladderpod	E / C	G2 / S1	6	2	3	2	0
Franklin	Vascular Plants	<i>Lonicera reticulata</i>	Grape Honeysuckle	T /	G5 / S2	1	1	0	0	0
Franklin	Vascular Plants	<i>Oenothera triloba</i>	Stemless Evening-primrose	T /	G4 / S1S2	1	0	0	0	0
Franklin	Vascular Plants	<i>Onosmodium hispidissimum</i>	Hairy False Gromwell	E /	G4G5T4 / S1	0	1	0	0	0
Franklin	Vascular Plants	<i>Onosmodium occidentale</i>	Western False Gromwell	E /	G4? / S1	1	0	0	0	0
Franklin	Vascular Plants	<i>Perideridia americana</i>	Eastern Yampah	T /	G4 / S2	3	0	0	0	0
Franklin	Vascular Plants	<i>Philadelphus inodorus</i>	Mock Orange	T /	G4G5 / S1S2	1	0	0	0	0
Franklin	Vascular Plants	<i>Sagina fontinalis</i>	Water Stitchwort	E /	G3 / S1S2	2	0	0	0	0
Franklin	Vascular Plants	<i>Veratrum woodii</i>	Wood's Bunchflower	T /	G5 / S2	7	1	0	0	0
Franklin	Vascular Plants	<i>Viburnum molle</i>	Softleaf Arrowwood	S /	G5 / S3?	1	0	0	0	0
Franklin	Freshwater Mussels	<i>Alasmidonta marginata</i>	Elktoe	T / SOMC	G4 / S2	1	2	1	0	0
Franklin	Freshwater Mussels	<i>Epioblasma torulosa rangiana</i>	Northern Riffleshell	E / LE	G2T2 / S1	0	0	0	1	0
Franklin	Freshwater Mussels	<i>Simpsonaias ambigua</i>	Salamander Mussel	T / SOMC	G3 / S2S3	0	1	1	0	0
Franklin	Insects	<i>Dryobius sexnotatus</i>	Six-banded Longhorn Beetle	T / SOMC	GNR / S1	0	1	0	0	0
Franklin	Fishes	<i>Nocomis biguttatus</i>	Hornyhead Chub	S /	G5 / S2	1	4	0	0	0
Franklin	Amphibians	<i>Cryptobranchus alleganiensis alleganiensis</i>	Eastern Hellbender	E / SOMC	G3G4T3T4 / S1	1	0	0	0	0
Franklin	Amphibians	<i>Rana pipiens</i>	Northern Leopard Frog	S /	G5 / S3	1	0	1	0	0
Franklin	Breeding Birds	<i>Accipiter striatus</i>	Sharp-shinned Hawk	S /	G5 / S3B,S4N	1	0	0	0	0
Franklin	Breeding Birds	<i>Actitis macularius</i>	Spotted Sandpiper	E /	G5 / S1B	0	1	0	0	0
Franklin	Breeding Birds	<i>Ammodramus henslowii</i>	Henslow's Sparrow	S / SOMC	G4 / S3B	1	0	0	0	0
Franklin	Breeding Birds	<i>Gallinula chloropus</i>	Common Moorhen	T /	G5 / S1S2B	0	0	0	1	0

County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky
 Kentucky State Nature Preserves Commission

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences				
						E	H	F	X	U
Franklin	Breeding Birds	<i>Haliaeetus leucocephalus</i>	Bald Eagle	T / Delisted	G5 / S2B,S2S3N	1	0	0	0	0
Franklin	Breeding Birds	<i>Lophodytes cucullatus</i>	Hooded Merganser	T /	G5 / S1S2B,S3S4N	1	0	0	0	0
Franklin	Breeding Birds	<i>Pooecetes gramineus</i>	Vesper Sparrow	E /	G5 / S1B	0	1	0	0	0
Franklin	Breeding Birds	<i>Thryomanes bewickii</i>	Bewick's Wren	S / SOMC	G5 / S3B	1	1	0	0	0
Franklin	Mammals	<i>Myotis grisescens</i>	Gray Myotis	T / LE	G3 / S2	1	0	0	0	0
Franklin	Communities	<i>Calcareous mesophytic forest</i>		N /	GNR / S5	1	0	0	0	0
Franklin County Total:						90	16	6	11	0

Appendix L – Site Visit Pictures (June 20, 2011)

Bridge #037B00023N



Figure 1: West Side of Structure



Figure 2: East Side of Structure



Figure 3: House to the Southeast



Figure 4: Field to the Southwest



Figure 5: Hill to the Northwest

Bridge #037B00024N



Figure 6: House and Pedestrian Bridge to the Southeast



Figure 7: Church to the Southwest



Figure 8: Home and Garage to the East



Figure 9: Taxidermy to the Northeast



Figure 10: Brush to the Northwest



Figure 11: Hill to the Southwest



Figure 12: Overhead Utilities at Structure

Bridge #037B00025N



Figure 13: Flags Fork Road to the Southwest



Figure 14: Home on Flags Fork Road



Figure 15: Home to the East



Figure 16: Southwest Wingwall

Appendix M – Utility Contacts for Franklin County

Utility Owners and Contact Persons

1. AT&T KY
29 Wills Branch
Prestonsburg, KY 41653
Jack Salyer, P.E.
JS2299@att.com
Office (606) 874-2715
Cell (606)424-9328
2. Frankfort Plant Board - **Electric**
P O Box 308
Frankfort, KY 40601
Vent Foster
(502) 352-4402
vfoster@fewpb.com
3. Frankfort Plant Board - **CATV**
P O Box 308
Frankfort, KY 40601
Carl Mitchell
(502) 352-4458
clmitchell@fewpb.com
4. Frankfort Plant Board - **Water**
P O Box 308
Frankfort, KY 40601
(502) 875-4501
David Billings
(502) 352-4468
dbillings@fewpb.com
5. Frankfort Municipal Sewer Board
1200 Kentucky Ave.
Frankfort, KY 40601
William Scalf
wscalf@frankfort.ky.gov
(502) 875-2448
6. Bluegrass Energy
P O Box 990 1201
Lexington Rd.
Nicholasville, KY 40356
Chris Brewer
chrisb@bgenergy.com
(859) 885-4191
(888) 224-7322
7. Peaks Mill Water District
2566 Perkins Rd.
Frankfort, KY 40601
Dale Gatewood
(502) 227-5740
(502) 695-2641 – Maint. Office
8. Farmdale Water District
100 Highwood Drive
Frankfort, KY 40601
David Robinson or
Burl Robinson
(502) 223-3562
10. Columbia Gas of Kentucky, Inc.
2001 Mercer Rd., PO Box 14241
Lexington, KY 40512
(859) 288-0249
David Lemons
dnlemons@nisource.com
cell – (859) 940-9210
11. LG&E KU
820 West Broadway
Louisville, KY 40202
Greg Geiser
work: (502) 627-3708
Greg.Geiser@lge-ku.com

Henry County and Franklin County
Item Number

LG&E Emergency Number (502) 589-1444
KU Emergency Number 1-800-331-7370

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| 12. | Elkhorn Water District
Telephone (502) 695-26412 | Dale Gatewood |
| 13. | Atmos Energy
130 Stonecrest Road Suite105
Shelbyville, KY 40065
(502) 633-2831 ext. 104 | Bernie Anderson
cell: 502-321-8073
bernie.anderson@atmosenergy.com |
| 14. | North Shelby Water
North Shelby Water District
P O Box 97
Bagdad, KY 40003 | Pete Hedges
PeteHedges@bellsouth.net
(502) 747-8942 |
| 15. | Kentucky Data Link (KDL now Windstream)
Project Manager
3701 Communications Way
Evansville, IN 47715 | Rick Cunico
ph: (618) 648-2420
Cell:812-760-6602
Fax: (812) 456-4731
(812) 759-7844(Maintenance)
WCI.maintenance.south@windstream.com |
| 16. | East Kentucky Power Coop
P O Box 707
Winchester, KY 40391

OR | Jason Witt
jason.witt@ekpc.coop
Cell: (859) 749-9110
Office (859) 745-9596

Barry Warner
Barry.warner@ekpc.coop
(859)745-9304 |
| 17. | Windstream Kentucky, Inc.
229 Lees Valley Road
Shepherdsville, KY 40165
OR
Barry Roberts

111 S. Main St.
Elizabethtown, KY 42071 | Roger Redford
cell – (270) 723-7549
roger.redford@windstream.com
(502) 957-7127

(270) 723-7358 |
| 18. | Insight Communications Company
4701 Commerce Crossings Dr.
Louisville, KY 40229 | Deno Barbour
(502) 357-4376
barbour.d@insightcom.com |

Henry County and Franklin County
Item Number

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| 19. Sprint - Fiber Optics
11370 Enterprise Park Dr.
Sharonville, OH 45241 | Joe Thomas
Joseph.J.Thomas@Sprint.com
Office (513) 612-4204
Cell (937) 209-9754 |
| 20. AT&T Legacy
5390 Overbend Trail
Suwanee, GA 30024 | Scott Logeman
SL1213@att.com
(770) 335-8255 |
| 21. Kentucky American Water Company
2300 Richmond Rd
Lexington, KY 40502 | Wes Felts
Jon.felts@amwater.com
(859) 537-0762 cell
(859) 268-6360 office |
| 22. Shelby Energy Cooperative
P.O. Box 311, 620 Old Finchville Road
Shelbyville, KY 40065
(502) 633-4420 | Jason Ginn
Jason@shelbyenergy.com
cell: 502-643-2778 |

Railroad Companies

- 1. C.S.X. Transportation, Inc.**
Contacts:
David Hall, KY Liaison, (502) 815-1865
Milton Holder – crossings – cell (502) 817-2011
John Williams – crossings – cell (502) 376-8745, Office (502) 364-1133
Joe Malandruco (Florida) – signals (904) 245-1160

Appendix N - Cost Estimates and Recent Costs of Bridge Replacements in District 5

Preliminary Cost Estimates			
Detour Using Existing Routes			
	037B00023N	037B00024N	037B00025N
Design	\$ 200,000.00	\$ 125,000.00	\$ 150,000.00
Right of Way	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Utilities	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Construction	\$ 450,000.00	\$ 300,000.00	\$ 400,000.00
Total	\$ 710,000.00	\$ 485,000.00	\$ 610,000.00
Diversion			
	037B00023N	037B00024N	037B00025N
Design	\$ 225,000.00	\$ 150,000.00	\$ 175,000.00
Right of Way	\$ 40,000.00	\$ 40,000.00	\$ 40,000.00
Utilities	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Construction	\$ 650,000.00	\$ 450,000.00	\$ 600,000.00
Total	\$ 945,000.00	\$ 670,000.00	\$ 845,000.00
Realignment			
	037B00023N	037B00024N	037B00025N
Design	\$ 250,000.00	\$ 200,000.00	Not Feasible
Right of Way	\$ 50,000.00	\$ 75,000.00	
Utilities	\$ 30,000.00	\$ 30,000.00	
Construction	\$ 700,000.00	\$ 700,000.00	
Total	\$ 1,030,000.00	\$ 1,005,000.00	
Current Estimates Listed in the Highway Plan			
	037B00023N	037B00024N	037B00025N
Design	\$ 170,000.00	\$ 120,000.00	\$ 140,000.00
Right of Way	\$ 150,000.00	\$ 100,000.00	\$ 75,000.00
Utilities	\$ 30,000.00	\$ 60,000.00	\$ 30,000.00
Construction	\$ 390,000.00	\$ 200,000.00	\$ 300,000.00
Total	\$ 740,000.00	\$ 480,000.00	\$ 545,000.00

Recent Bridge Replacements in District 5										
County	Item #	Old Bridge #	New Bridge #	Length (ft)	Width (ft)	Type	Design (\$1000)	Right of Way (\$1000)	Utilities (\$1000)	Construction (\$1000)
Bullitt	1030	B58	B98	32	27	Arch	184	41	78	585
Franklin	1034	B40	B103	98	20	Box Beam	202	37	90	490
	1037	B79	B102	39	20	Box Beam	129	53	-	371
	1046	B48	B104	59	22	Box Beam	231	10	31	331
Henry	1035	B20	B80	32	30	Arch	127	32	13	401
	1042	C01	C49	32	16	Box Beam	153	21	-	257
	1043	B02	B81	60	39	Box Beam	264	-	49	1282
Jefferson	1038	C55	C253	33	22	Single/Spread Box	176	22	2	479
	1044	C08	C256	31	24	Culvert	123	7	3	441
	1047	C48	C258	45	30	Steel Girder	149	34	3	455
	1048	C163	C261	42	27	Single/Spread Box	145	20	9	363
	1049	C88	C259	22	27	Culvert	131	11	28	286
Spencer	1022	B14	B48	65	33	Single/Spread Box	161	-	15	396