

# Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 8569 Agency ID: 068B00003N SR: 26.5 SD/FO: FO

### IDENTIFICATION

State 1: 21 Kentucky Struc Num 8: 068B00003N  
 Facility Carried 7: KY-8 Location 9: .5 MI NE OF JCT KY 1306  
 Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 3 State Hwy  
 Level of Service 5C: 1 Mainline Rte. Number 5D: 00008  
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility : Unknown  
 SHD District 2: District 9 County Code 3: Lewis (068)  
 Place Code 4: FIPS 0000 Mile Post 11: 22.601 mi  
 Feature Intersected 6: KINNICONNICK CREEK  
 Latitude 16: 38d 36' 22" Longitude 17: 083d 09' 57"  
 Border Bridge Code 98: Unknown (P)  
 Border Bridge Number 99:

### INSPECTION

Frequency 91: 12 months Inspection Date 90: 9/28/2012 Next Inspection: 09/28/2013  
 FC Frequency 92A: 24 months FC Inspection Date 93A: 9/28/2012 Next FC Inspection: 9/28/2014  
 UW Frequency 92B: 24 months UW Inspection Date 93B: 6/18/2012 Next UW Inspection: 6/18/2014  
 SI Frequency 92C: NA SI Date 93C: NA Next SI: NA  
 Element Frequency: 12 months Element Inspection Date: 09/28/2012 Next Elem. Insp. Due: 09/28/2013

### 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: Unknown (NBI)  
 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough  
 Toll Facility 20: 3 On free road Functional Class 26: 07 Rural Mjr Collector  
 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

### STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 3  
 Main Span Material/Design 43A/B:  
 3 Steel 10 Truss-Thru  
 Deck Type 107: 1 Concrete-Cast-in-Place  
 Wearing Surface 108A: 1 Monolithic Concrete  
 Membrane 108B: 0 None  
 Deck Protection 108C: None

### CONDITION

Deck 58: 5 Fair Super 59: 5 Fair Sub 60: 6 Satisfactory  
 Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 5 Bank Prot Eroded

### LOAD RATING AND POSTING

Inventory Rating Method 65: 1 LF Load Factor Operating Rating Method 63: 1 LF Load Factor  
 Inventory Rating 66: HS8.3 Operating Rating 64: HS13.9  
 Design Load 31: 2 M 13.5 (H 15) Posting 70: 1 30.0-39.9%below  
 Posting status 41: A Open, no restriction

### AGE AND SERVICE

Year Built 27: 1930 Year Reconstructed 106: -4  
 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: 52.8 mi  
 ADT 29: 3,380 Truck ADT 109: 5 % Year of ADT 30: 2012

### APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: 1 Meets Standards  
 Transition 36B: 0 Substandard Approach Rail Ends 36D: 1 Meets Standards  
 Str. Evaluation 67: 4 Deck Geometry 68: 2 Intolerable - Replace  
 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

### GEOMETRIC DATA

Length Max Span 48: 164.0 ft Structure Length 49: 393.0 ft  
 Curb/Sdwk Width L 50A: 0.0 ft Curb/Sidewalk Width R 50B: 0.0 ft  
 Width Curb to Curb 51: 20.0 ft Width Out to Out 52: 21.0 ft  
 Approach Roadway Width 32: 20.0 ft Median 33: 0 No median (w/ shoulders)  
 Deck Area: 8,254.2 sq. ft  
 Skew 34: 0.00 ° Structure Flared 35: 0 No flare  
 Vertical Clearance 10: 15.08 ft Horiz. Clearance 47: 19.69 ft  
 Minimum Vertical Clearance Over Bridge 53: 15.1 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

### PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 1,208,000 Type of Work 75: 31 Repl-Load Capacity  
 Roadway Cost 95: \$ 30,000 Length of Improvement 76: 39.4 ft  
 Total Cost 96: \$ 1,238,000 Future ADT 114: 4,056  
 Year of Cost Estimate 97: 1994 Year of Future ADT 115: 2032

### NAVIGATION DATA

Navigation Control 38: 0 Permit Not Required  
 Vertical Clearance 39: 0.0 ft Horizontal Clearance 40: 0.0 ft  
 Pier Protection 111: 1 Not Required 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	18/1	P Conc Deck/Thin Ovl	(SF)	7,703	0 %	0	100 %	7,703	0 %	0	0 %	0	0 %	0
1	113/1	Paint Stl Stringer	(LF)	1,920	76 %	1,450	13 %	242	9 %	177	3 %	51	0 %	0
1	121/1	P/Stl Thru Truss/Bot	(LF)	768	62 %	475	14 %	107	23 %	176	1 %	9	0 %	1
1	126/1	P/Stl Thru Truss/Top	(LF)	768	58 %	448	42 %	320	0 %	0	0 %	0	0 %	0
1	152/1	Paint Stl Floor Beam	(LF)	518	51 %	262	15 %	80	28 %	143	6 %	33	0 %	0
1	205/1	R/Conc Column	(EA)	4	50 %	2	50 %	2	0 %	0	0 %	0	0 %	0

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1	215/1	R/Conc Abutment	(LF)	66	67 %	44	30 %	20	3 %	2	0 %	0	0 %	0
1	302/3	Compressn Joint Seal	(LF)	60	50 %	30	50 %	30	0 %	0	0 %	0	0 %	0
1	311/1	Moveable Bearing	(EA)	6	0 %	0	100 %	6	0 %	0	0 %	0	0 %	0
1	313/1	Fixed Bearing	(EA)	6	0 %	0	100 %	6	0 %	0	0 %	0	0 %	0
1	334/1	Metal Rail Coated	(LF)	768	58 %	446	39 %	300	0 %	0	3 %	22	0 %	0
1	359/1	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
1	361/1	Scour Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
1	362/1	Traf Impact SmFlag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
1	363/1	Section Loss SmFlag	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
1	503/1	Curbs	(LF)	768	88 %	672	10 %	80	0 %	0	2 %	16	0 %	0
1	602/1	Vibrati/Oscillation	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
1	604/1	2nd Elem Dist	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
1	606/3	Drains	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
1	609/1	Debris on Superstruc	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
1	611/1	Embankment Erosion	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
1	613/1	Vegetation	(EA)	1	0 %	0	0 %	0	100 %	1	0 %	0	0 %	0
1	614/3	Eros Contr	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elm/Env	Description	Element Notes
1	18/1	Concrete Deck - Protected w/ Thin	Wearing surface has areas of minor transverse cracking and localized spalling, but is in fair condition at this time. A large amount of the top portion of top flange of stringers is embedded in concrete and can not be visually inspected. See photos.
1	113/1	Painted Steel Stringer	Stringer have moderate to heavy pitting with section loss at floor beam connections and clip angles. These areas have the heaviest section loss especially exterior stringers. A large amount of the top portion of top flange of stringers is embedded in concrete and can not be visually inspected. See photos.
1	121/1	Painted Steel Bottom Chord Thru	Bottom truss has light to moderate pitting with some minor section loss at connection locations. Span 3-L0, L1, L2 have 20% loss of section at vertical portion of angle. Dirt and debris needs to be cleaned off lower cord. Lower cord gusset plates have section loss at various locations (Span 2 L-5 D/S has a 1/2" x 1/2" area of section loss at lower cord connection). Lower vertical gusset plate at D/S L-1 in span 1 has two areas of rust through measuring 1/2" x 1/2" and 1" x 1" near the lower cord connection. Batton plates have areas of rust through with section loss at Span 1 upstream L-2 and Span 2 upstream L-6. Inside of upstream lower cord has flaking corrosion. This is typical at both the upstream and downstream sides. See photos.
1	126/1	Painted Steel Thru Truss (excl. bot	Upper truss members and bracing have areas of light pitting. New paint has arrested progression of section loss. Portals and sway bracing have moderate impact damage. Several section of lattice work, (especially at the end posts) have rust through at various locations. The lower portion of the upper chord that is in the splash zone has areas of rusting throughout with more advanced deterioration. See photos.
1	152/1	Painted Steel Floor Beam	Floor beams have areas of rusting and section loss at beam ends near connections. Progression of section loss is minimal at this time due to protective coating of new paint. See photos.
1	205/1	Reinforced Conc Column or Pile Ex	Pier columns have some cracking with efflorescence. Otherwise, they appear to be in satisfactory condition at this time. See photos.
1	215/1	Reinforced Conc Abutment	Abutments have some minor cracking and spalling. Abutment 1 has a couple of small shallow cover spalls with exposed steel. Abutment 4 has some areas of delamination cracking. Abutment 1 has some minor erosion of the backfill. Erosion control (cribbing and rock) have been placed at the upstream and downstream ends of abutment 1. A large area of erosion is present in front of abutment 4. This will continue to progress and will need to be monitored. See photos.
1	302/3	Compression Joint Seal	Transverse joints 1 and 2 are filled with debris. Joints 3 and 4 are in satisfactory condition at this time. See photos.
1	311/1	Moveable Bearing (roller, sliding, et	Bearings have areas of rusting and flaking with minor section loss. Bearings need to be cleaned and painted. See photos.
1	313/1	Fixed Bearing	Bearings have areas of rusting and flaking with minor section loss. Bearings need to be cleaned and painted. Anchor bolts are virtually completely missing (deteriorated) from the upstream and downstream bearings at abutment 4. These bolts need to be replaced. See photos.
1	334/1	Metal Bridge Railing - Coated	Metal railing has areas of surface rusting with minor impact damage throughout. Railing has moderate to heavy pitting and several areas with small rust through holes. Lattice on railing also has several sections of rust through. See photos.
1	359/1	Soffit of Concrete Deck or Slab	Deck underside has areas of cracking with efflorescence and some minor spalling. The deck overhangs have cracking and spalling with exposed steel. Deck overhangs deterioration is most advanced at joint locations. See photos.
1	361/1	Scour	The large area of embankment erosion at abutment 4 is due to previous flooding. See photos.
1	362/1	Traffic Impact	Portals and sway bracing have moderate impact damage. See photos.
1	363/1	Section Loss	See elements for details.
1	503/1	Reinforced Concrete Curbs and Tir	Curbs have some areas of cracking, scaling, and spalling with exposed steel. The worst location is the downstream curb in span 3 between L1 and L2. It has an approximate 4' section of heavy spalling with exposed reinforcement. Concrete is rotten at this location. Only minor section loss of reinforcement at this time. See photo.
1	602/1	Vibrati/Oscillation	See element #604 for details.

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Str Unit	Elm/Env	Description	Element Notes
1	604/1	Second Element Distress	Cross bracing and portals have impact damage. See photos. Cross bracing on deck underside vibrates when loaded. Lower cord batton plates have pack rust causing severl plates to buldge at both upstream and downstream sides. Seveal plates have rust through holes. These holes are small approximately (2" x 2") at this time but will continue to worsen. See photos at various locations.
1	606/3	Drains	Drains are open at this time. See photos.
1	609/1	Debris (On/Around Super)	Some debris has accumulated on the lower members of the truss and should be removed.
1	611/1	Embankment Erosion	A large area of embankment erosion is present at abutment 4. This area of erosion is due to previous flooding and has progressed since the last inspection on 05-06-11. If this erosion is not corrected soon, it will begin to affect the approach roadway. This needs to be monitored. See photos.
1	613/1	Vegetation	Vegetation around and under bridge needs to be cut and sprayed. See photos.
1	614/3	Erosion Control/Protection	Erosion control (cribbing and rock) have been placed at the upstream and downstream ends of abutment 1. It is functioning well at this time. See photos.

### BRIDGE NOTES

-81.9

### PAST INSPECTION

Inspection Date: 09/28/2012

Type: 4 FracCrit (24 months)

Inspector: RROGERS

Pontis User Key: RROGERS - Rick

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

This is a fracture critical rope access inspection that began on 09-28-12. Due to inclement weather this inspection will be completed at a later date. Fracture critical rope access inspection was completed on 10-03-12 by D-9 and D-6. Traffic control was provided by Lewis County State Maintenance.