

# Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 13224      Agency ID: 112B00029N      SR: 46.2      SD/FO: SD

**IDENTIFICATION**

State 1: 21 Kentucky      Struc Num 8: 112B00029N  
 Facility Carried 7: KY-2871      Location 9: .04 MI W OF JCT KY 1335  
 Rte.(On/Under)5A: Route On Structure      Rte. Signing Prefix 5B: 3 State Hwy  
 Level of Service 5C: 1 Mainline      Rte. Number 5D: 02871  
 Directional Suffix 5E: 0 N/A (NBI)      % Responsibility: Unknown  
 SHD District 2: District 5      County Code 3: Trimble (112)  
 Place Code 4: FIPS 0000      Mile Post 11: 0.257 mi  
 Feature Intersected 6: LITTLE KY RIVER  
 Latitude 16: 38d 36' 25"      Longitude 17: 085d 15' 46"  
 Border Bridge Code 98: Unknown (P)  
 Border Bridge Number 99:

**INSPECTION**

Frequency 91: 24 months      Inspection Date 90: 10/11/2013      Next Inspection: 10/11/2015  
 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: 10/11/2013      Next Elem. Insp. Due: 10/11/2015

**CLASSIFICATION**

Defense Highway 100: 0 Not a STRAHNET hwy      Parallel Structure 101: No || bridge exists  
 Direction of Traffic 102: 3 1-lane Br for 2-way      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: 08 Rural min 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: 4  
 Main Span Material/Design 43A/B:  
 5 Prestressed Concrete      05 Multiple Box Beam  
 Deck Type 107: 2 Concrete Precast Panel  
 Wearing Surface 108A: 1 Monolithic Concrete  
 Membrane 108B: 0 None  
 Deck Protection 108C: None

**CONDITION**

Deck 96: 4 Poor      Super 59: 4 Poor      Sub 60: 4 Poor  
 Culvert 62: N N/A (NBI)      Channel/Channel Protection 61: 7 Minor Damage

**AGE AND SERVICE**

Year Built 27: 1970      Year Reconstructed 106: 0  
 Type of Service on 42A: 1 Highway  
 Type of Service under 42B: 5 Waterway  
 Lanes on 28A: 1      Lanes Under 28B: 0      Detour Length 19: 9.9 mi  
 ADT 29: 397      Truck ADT 109: %      Year of ADT 30: 2013

**LOAD RATING AND POSTING**

Inventory Rating Method 65: 2 AS Allowable Stress      Operating Rating Method 63: 2 AS Allowable Stress  
 Inventory Rating 66: HS24.4      Operating Rating 64: HS39.4  
 Design Load 31: 4 M 18 (H 20)      Posting 70: 5 AS/Above Legal Loads  
 Posting status 41: A Open, no restriction

**GEOMETRIC DATA**

Length Max Span 48: 24.0 ft      Structure Length 49: 96.0 ft  
 Curb/Sdwk Width L 50A: 0.5 ft      Curb/Sidewalk Width R 50B: 0.5 ft  
 Width Curb to Curb 51: 14.0 ft      Width Out to Out 52: 15.0 ft  
 Approach Roadway Width 32: 17.0 ft      Median 33: 0 No median (w/ shoulders)  
 Deck Area: 1,440. sq. ft  
 Skew 34: 0.00°      Structure Flared 35: 0 No flare  
 Vertical Clearance 10: 99.99 ft      Horiz. Clearance 47: 14.00 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

**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: 2 Intolerable - Replace  
 Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)  
 Waterway Adequacy 71: 3 Intolerable - Correct      Approach Alignment 72: 4 Minimum Tolerable  
 Scour Critical 113: 8 Stable Above Footing

**PROPOSED IMPROVEMENTS**

Bridge Cost 94: \$ 180,000      Type of Work 75: 34 Widen w/ Deck Rahr  
 Roadway Cost 95: \$ 5,000      Length of Improvement 76: 8.5 ft  
 Total Cost 96: \$ 185,000      Future ADT 114: 430  
 Year of Cost Estimate 97: 1999      Year of Future ADT 115: 2033

**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)      L/R Bridge Vertical Clearance 116:

**ELEMENT CONDITION STATE DATA**

Str Unit	Elmv/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	12/1	Bare Concrete Deck	(SF)	1,344	0%	0	0%	0	0%	0	100%	1,344	0%	0
1	104/1	P/S Conc Box Girder	(LF)	480	0%	0	35%	168	30%	144	35%	168	0%	0
1	210/1	R/Conc Pier Wall	(LF)	53	0%	0	36%	19	64%	34	0%	0	0%	0
1	215/1	R/Conc Abutment	(LF)	61	0%	0	100%	61	0%	0	0%	0	0%	0
1	301/1	Pourable Joint Seal	(LF)	46	0%	0	0%	0	100%	46	0%	0	0%	0
1	361/1	Scour Smart Flag	(EA)	1	0%	0	100%	1	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	503/1	Curbs	(LF)	192	0 %	0	50 %	96	25 %	48	25 %	48	0 %	0
1	508/1	Long. Shear Keys	(EA)	1	0 %	0	0 %	0	0 %	0	100 %	1	0 %	0

Str Unit	Elm/Env	Description	Element Notes
1	12/1	Concrete Deck - Bare	No repairs or action has been taken since last inspection. Overall poor condition remains. The asphalt pavement extends onto the bridge 10'-12' at each end - with wedges up to 12" thick - in an attempt to mitigate the abrupt change in the vertical alignment. The interior beams have spalling and cracking in the surface. The exterior beams are spalled and cracked. Most of the biggest spalls are patched with asphalt. The top and south side of the south exterior beams in spans 1, 2, and 3 are heavily spalled in the vicinity of the transverse tie rod location — resteel exposed with some section loss. In Span 1, the transverse tie rod has been cut off at the spall. The top of the north and south exterior beams in span 2 near the middle of the span has around 2 sq. ft. spall — patched with asphalt which has deteriorated, otherwise, the edges of other north exterior beams have light deterioration.
1	104/1	P/S Conc Closed Web/Box Girder	No repairs or action has been taken since last inspection. Overall poor condition remains. The interior beams have spalling and cracking in the surface. The exterior beams are spalled and cracked. The top and south side of the south exterior beams in spans 1, 2, and 3 are heavily spalled in the vicinity of the transverse tie rod location — resteel exposed with some section loss. In Span 1, the transverse tie rod has been cut off at the spall. The top of the north and south exterior beams in span 2 near the middle of the span has around 2 sq. ft. spall — patched with asphalt which has deteriorated, otherwise, the edges of other north exterior beams have light deterioration. Couldn't inspect the underside of the beams due to the deep water/scour. Beams have reduced bearing at Piers 3 & 4 because of the spalling/loss of section of the piers. Lateral tension rods filled with grout on left side. Not evident in spans 1 & 4.
1	210/1	Reinforced Conc Pier Wall	No repairs or action has been taken since last inspection. Overall poor condition remains. Pier 2 has moderate cracks and deterioration. Piers 3 & 4 have spalling/loss of section all across the piers at the bearing area. Beam 1 at Pier 3 has lost bearing due to the spalling. Footing of all piers have some undermining due to constriction scour.
1	215/1	Reinforced Conc Abutment	Abutments have minor cracks and deterioration.
1	301/1	Pourable Joint Seal	No repairs or action has been taken since last inspection. Overall poor condition remains. There is no sealant visible - just debris, and asphalt patches for the numerous spalls at the joints.
1	361/1	Scour	No repairs or action has been taken since last inspection. Overall poor condition remains. Scour is deep at the bridge - too deep to wade. Substructure footings are exposed, with undermining visible.
1	503/1	Reinforced Concrete Curbs and Ties	No repairs or action has been taken since last inspection. Overall poor condition remains. The wooden barriers are bent in several locations and have been dislodged at Beam 1 in Span 2. There is a large spall with exposed reinforcement at this location. Curbs are generally misaligned or completely missing.
1	508/1	Longitudinal Shear Keys	No repairs or action has been taken since last inspection. Overall poor condition remains. The joints have deteriorated and allow water to leak through the deck. There is cracking in the tops of the beams and spalling at the joints. Spalls have been filled with asphalt in many locations.

### BRIDGE NOTES

-Connector Road/KY 2871 runs from west to east, US 42 to the west and Carlisle Road/KY 1335 to the east.  
 -The bridge is in vertical curve, plus there is nearly a stop condition at the east end.

## Structure Inventory and Appraisal Sheet (English Units)

### PAST INSPECTION

Inspection Date: 10/11/2013

Type: 2 Standard (24 months)

Inspector: APORTER

Pontis User Key: APORTER - Shea

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

### PAST INSPECTION

Inspection Date: 10/12/2011

Type: 2 Standard (24 months)

Inspector: PSZAK

Pontis User Key: PSZAK - Pete Sza

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

Florence & Hutcheson. PJS and LMS.

## Structure Inventory and Appraisal Sheet (English Units)

### PAST INSPECTION

Inspection Date: 11/24/2009

Type: 2 Standard (24 months)

Inspector: EHOUSE

Pontis User Key: EHOUSE - Eddie

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

-

### PAST INSPECTION

Inspection Date: 03/10/2008

Type: 2 Standard (24 months)

Inspector: DDUDGEON

Pontis User Key: DDUDGEON - Da

#### Scope:

NBI:

Other:

Element:

Underwater:

Fracture Critical:

### INSPECTION NOTES

-

## Structure Inventory and Appraisal Sheet (English Units)

### PAST INSPECTION

Inspection Date: 02/01/2006

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-12AB8A64-00000004	replace	Bridge	Approved	Medium	No	11/24/2009

**112B00029N Inspection 10-11-2013**



**Roadway Approach - Looking Back**



**Roadway Approach - Looking Ahead**

**112B00029N Inspection 10-11-2013**



**Pier 3 Joint**



**Pier 2 Joint**



**112B00029N Inspection 10-11-2013**



**Abutment 5 Joint**



**Pier 4 Joint**



**112B00029N Inspection 10-11-2013**



**Abutment 1 Joint**



**Elevation - Looking North**

**112B00029N Inspection 10-11-2013**



**Elevation – Looking South**



**Abutment 5 Elevation - Looking Northeast**



**112B00029N Inspection 10-11-2013**

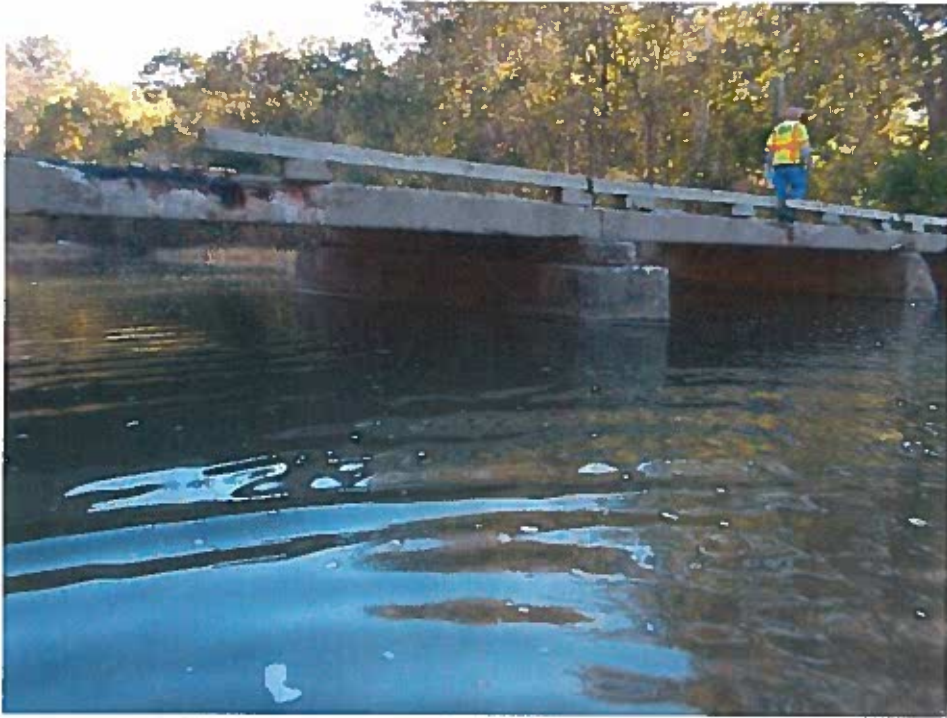


**Pier 4 Elevation – Looking Northeast**



**Pier 3 Elevation – Looking Northeast and Lateral Tensioning Rods Spans 2 & 3**

## 112B00029N Inspection 10-11-2013



Pier 2 Elevation – Looking Northeast and Beam Spalling with Exposed Reinforcement



Abutment 1 Elevation – Looking Northwest



## 112B00029N Inspection 10-11-2013



Bare Concrete Deck, R/Conc Box Girders, and Longitudinal Shear Keys (Typical)



Pier 4 – Spalling with Exposed Reinforcement

**112B00029N Inspection 10-11-2013**



**Beam 5, Span 3 – Spall with Exposed Reinforcement at Lateral Tension Rod Location**



**112B00029N Inspection 10-11-2013**



**Pier 4 - Scour**



**Missing Curb, Right Side of Span 1**

SAMPLE ID: 05340CBH140020  
 SAMPLER: chodge  
 DATE SAMPLED: 08/27/2014  
 TYPE OF INSPECTION: PACP  
 P/S NAME: HALL CONTRACTING @ SHEPERDSVILLE  
 P/S NUMBER: COP000223  
 MATERIAL DESCRIPTION: PCCP  
 PRODUCT NAME:  
 QUANTITY: 0  
 CLNDR: ELI-61-B  
 SAMPLE LOCATION:  
 DISTRICT: 05  
 USAGE:

28 Day Break  
 9-24-14

CONTRACT ID	PROJECT	LINE ITEM	ITEM CD	ITEM DESCRIPTION
131216	DE01500651316	0080	02071	JPC PAVEMENT-11 IN

DESTINATION LAB(s)	LAB NAME
DL05210	D-05 Materials Section
DL05340	D-05 Shepherdsville Section

TEST METHOD	DESCRIPTION
COCONCCOMP	CONCRETE CYLINDER STRENGTH
COCONCLAS	CONCRETE PLASTIC TESTS

48610 — 3868 — 2

48610 - 3471 - 2

41440 - 3298 - 2

$Avg = 3,545.67$

28 Day Break  
9-23-14

SAMPLE ID: 05340CBH140017  
SAMPLER: chodge  
DATE SAMPLED: 08/26/2014  
TYPE OF INSPECTION: PACP  
P/S NAME: HALL CONTRACTING @ SHEPERDSVILLE  
P/S NUMBER: COP000223  
MATERIAL DESCRIPTION: PCCP  
PRODUCT NAME:  
QUANTITY: 0 SAMPLE SIZE:  
CLNDR: ELI-60-A  
SAMPLE LOCATION:  
DISTRICT: 05 USAGE:

CONTRACT ID	PROJECT	LINE ITEM	ITEM CD	ITEM DESCRIPTION
131216	DE01500651316	0080	02071	JPC PAVEMENT-11 IN

DESTINATION LAB(s)	LAB NAME
DL05210	D-05 Materials Section
DL05340	D-05 Shepherdsville Section

TEST METHOD	DESCRIPTION
COCONCCOMP	CONCRETE CYLINDER STRENGTH
COCONCPAS	CONCRETE PLASTIC TESTS

45030 - 3583 - 2  
49260 - 3920 - 2  
47890 - 3811 - 2  
Avg: 3,771.33

SAMPLE ID: 05340CBH140018  
 SAMPLER: chodge  
 DATE SAMPLED: 08/26/2014  
 TYPE OF INSPECTION: PACP  
 P/S NAME: HALL CONTRACTING @ SHEPERDSVILLE  
 P/S NUMBER: COP000223  
 MATERIAL DESCRIPTION: PCCP  
 PRODUCT NAME:  
 QUANTITY: 0  
 CLNDR: ELI-60-B  
 SAMPLE LOCATION:  
 DISTRICT: 05  
 USAGE:

28 Day Break  
 9-23-14

CONTRACT ID	PROJECT	LINE ITEM	ITEM CD	ITEM DESCRIPTION
131216	DE01500651316	0080	02071	JPC PAVEMENT-11 IN

DESTINATION LAB(s)	LAB NAME
DL05210	D-05 Materials Section
DL05340	D-05 Shepherdsville Section

TEST METHOD	DESCRIPTION
COCONCCOMP	CONCRETE CYLINDER STRENGTH
COCONCPAS	CONCRETE PLASTIC TESTS

46140 - 3672 - 2

45070 - 3587 - 2

48420 - 3853 - 2

Avg: 3,704

SAMPLE ID: 05340CBH140019

SAMPLER: chodge

DATE SAMPLED: 08/27/2014

TYPE OF INSPECTION: PACP

P/S NAME: HALL CONTRACTING @ SHEPERDSVILLE

P/S NUMBER: COP000223

MATERIAL DESCRIPTION: PCCP

PRODUCT NAME:

QUANTITY: 0

SAMPLE SIZE:

CLNDR: ELI-61-A

SAMPLE LOCATION:

DISTRICT: 05

USAGE:

28-Day Break

9-24-14

CONTRACT ID	PROJECT	LINE ITEM	ITEM CD	ITEM DESCRIPTION
131216	DE01500651316	0080	02071	JPC PAVEMENT-11 IN

DESTINATION LAB(s)	LAB NAME
DL05210	D-05 Materials Section
DL05340	D-05 Shepherdsville Section

TEST METHOD	DESCRIPTION
COCONCCOMP	CONCRETE CYLINDER STRENGTH
COCONCPAS	CONCRETE PLASTIC TESTS

46580 - 3707 - 2

41770 - 3324 - 2

47430 - 3774 - 2