

Appendix H – Structure Inventory and Appraisals

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 3304 Agency ID: 030B00018N SR: 66 SD/FO: FO

IDENTIFICATION
 State 1: 21 Kentucky Struc Num 8: 030B00018N
 Facility Carried 7: KY-54 Location 9: .45 MI EAST OF JCT KY 142
 Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 3 State Hwy
 Level of Service 5C: 1 Mainline Rte. Number 5D: 00054
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility : Unknown
 SHD District 2: District 2 County Code 3: Daviess (030)
 Place Code 4: FIPS 0000 Mile Post 11: 7.882 mi
 Feature Intersected 6: CANEY CREEK
 Latitude 16: 37d 43' 57" Longitude 17: 086d 58' 54"
 Border Bridge Code 98: Unknown (P)
 Border Bridge Number 99:

INSPECTION
 Frequency 91: 24 months Inspection Date 90: 11/17/2009 Next Inspection: 11/17/2011
 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: 11/17/2009 Next Elem. Insp. Due: 11/17/2011

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: 16 Urban Minor Arterial
 Defense Hwy 110: 0 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:
 1 Concrete 04 Tee Beam
 Deck Type 107: 1 Concrete-Cast-in-Place
 Wearing Surface 108A: 1 Monolithic Concrete
 Membrane 108B: 8 Unknown
 Deck Protection 108C: 8 Unknown

CONDITION
 Deck 58: 7 Good Super 59: 7 Good Sub 60: 7 Good
 Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 7 Minor Damage

LOAD RATING AND POSTING
 Inventory Rating Method 65: 2 AS Allowable Stress: Operating Rating Method 63: 2 AS Allowable Stress
 Inventory Rating 66: HS29.5 Operating Rating 64: HS42.2
 Design Load 31: 5 MS 18 (HS 20) Posting 70: 5 At/Above Legal Loads
 Posting status 41: A Open, no restriction

AGE AND SERVICE
 Year Built 27: 1960 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: 21.1 mi
 ADT 29: 9,930 Truck ADT 109: 7 % Year of ADT 30: 2010

APPRAISAL
 Bridge Rail 36A: 0 Substandard Approach Rail 36C: 1 Meets Standards
 Transition 36B: 1 Meets Standards Approach Rail Ends 36D: 1 Meets Standards
 Str. Evaluation 67: 7 Deck Geometry 68: 2 Intolerable - Replace
 Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)
 Waterway Adequacy 71: 7 Above Minimum Approach Alignment 72: 9 Above Desirable Crit
 Scour Critical 113: 8 Stable Above Footing

GEOMETRIC DATA
 Length Max Span 48: 24.9 ft Structure Length 49: 84.0 ft
 Curb/Sdwk Width L 50A: 1.5 ft Curb/Sidewalk Width R 50B: 1.5 ft
 Width Curb to Curb 51: 27.9 ft Width Out to Out 52: 33.5 ft
 Approach Roadway Width 32: 22.0 ft Median 33: 0 No median (w/ shoulders)
 Deck Area: 2,813.7 sq. ft
 Skew 34: 0.00 ° Structure Flared 35: 0 No flare
 Vertical Clearance 10: 99.99 ft Horiz. Clearance 47: 27.89 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

PROPOSED IMPROVEMENTS
 Bridge Cost 94: \$ 329,000 Type of Work 75: 34 Widen w/ Deck Reha
 Roadway Cost 95: \$ 0 Length of Improvement 76: 8.5 ft
 Total Cost 96: \$ 328,000 Future ADT 114: 11,220
 Year of Cost Estimate 97: 1994 Year of Future ADT 115: 2030

NAVIGATION DATA
 Navigation Control 38: 0 0
 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	12/1	Bare Concrete Deck	(SF)	2,394	100 %	2,394	0 %	0	0 %	0	0 %	0	0 %	0
1	110/1	R/Conc Open Girder	(LF)	420	100 %	420	0 %	0	0 %	0	0 %	0	0 %	0
1	205/1	R/Conc Column	(EA)	10	100 %	10	0 %	0	0 %	0	0 %	0	0 %	0
1	215/1	R/Conc Abutment	(LF)	80	100 %	80	0 %	0	0 %	0	0 %	0	0 %	0
1	234/1	R/Conc Cap	(LF)	58	100 %	58	0 %	0	0 %	0	0 %	0	0 %	0
1	301/1	Pourable Joint Seal	(LF)	67	0 %	0	100 %	67	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	331/1	Conc Bridge Railing	(LF)	168	0 %	0	100 %	168	0 %	0	0 %	0	0 %	0
1	359/1	Soffit Smart Flag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
1	503/1	RC Curb	(LF)	168	100 %	168	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elm/Env	Description	Element Notes
1	12/1	Concrete Deck - Bare	The concrete deck is worn to aggregate. The deck is map cracking.
1	110/1	Reinforced Conc Open Girder/Bear	< none >
1	205/1	Reinforced Conc Column or Pile Ex	< none >
1	215/1	Reinforced Conc Abutment	< none >
1	234/1	Reinforced Conc Cap	< none >
1	301/1	Pourable Joint Seal	The asphaltic material is coming out of the joints.
1	331/1	Reinforced Conc Bridge Railing	The concrete rails are worn and weathered with a few minor spalls. The rail columns has approximately 10 feet of rebar exposed due to shallow spalling of the concrete.
1	359/1	Soffit of Concrete Deck or Slab	There are cracks visible in the bottom of the deck at abutment 1&3 on the left side. There are 3 spalls in span 1 on the bottom of the deck with reinforcing steel exposed.
1	503/1	Reinforced Concrete Curb	< none >

BRIDGE NOTES

-89.9

PAST INSPECTION

Inspection Date: 11/17/2009 Type: 2 Standard (24 months)
 Inspector: RSEMONES Pontis User Key: RSEMONES - Rot
 Scope:
 NBI: Other: Element:
 Underwater: Fracture Critical:

INSPECTION NOTES

The poured seal joints looked satisfactory at the time of the inspection. The railing on both sides have experienced some spalling exposing the rebar in the rail columns. (See photos)

Structure Inventory and Appraisal Sheet (English Units)

PAST INSPECTION

Inspection Date: 11/29/2007 Type: 2 Standard (24 months)
Inspector: DLARKIN Pontis User Key: DLARKIN - Denny

Scope:
NBI: Other: Element:
Underwater: Fracture Critical:

INSPECTION NOTES

PAST INSPECTION

Inspection Date: 11/01/2005 Type: 1 SIA (Initial Inventory)
Inspector: DLARKIN Pontis User Key: DLARKIN - Denny

Scope:
NBI: Other: Element:
Underwater: Fracture Critical:

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

Structure Inventory and Appraisal Sheet (English Units)

Bridge Key: 3303 Agency ID: 030B00017N SR: 66 SD/FO: FO

IDENTIFICATION

State 1: 21 Kentucky Struc Num 8: 030B00017N
 Facility Carried 7: KY-54 Location 9: .50 MI WEST OF JCT KY 142
 Rte.(On/Under)5A: Route On Structure Rte. Signing Prefix 5B: 3 State Hwy
 Level of Service 5C: 1 Mainline Rte. Number 5D: 00054
 Directional Suffix 5E: 0 N/A (NBI) % Responsibility : Unknown
 SHD District 2: District 2 County Code 3: Daviess (030)
 Place Code 4: FIPS 0000 Mile Post 11: 5.787 mi
 Feature Intersected 6: BARNETT CREEK
 Latitude 16: 37d 44' 16" Longitude 17: 087d 01' 09"
 Border Bridge Code 98: Unknown (P)
 Border Bridge Number 99:

INSPECTION

Frequency 91: 24 months Inspection Date 90: 11/17/2009 Next Inspection: 11/17/2011
 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: 11/17/2009 Next Elem. Insp. Due: 11/17/2011

CLASSIFICATION

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 Highway System 104: 0 Not on NHS NBIS Length 112: Long Enough
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STRUCTURE TYPE AND MATERIALS

Number of Approach Spans 46: 0 Number of Spans Main Unit 45: 3
 Main Span Material/Design 43A/B:
 1 Concrete 04 Tee Beam
 Deck Type 107: 1 Concrete-Cast-in-Place
 Wearing Surface 108A: 4 Low Slump Concrete
 Membrane 108B: 8 Unknown
 Deck Protection 108C: 8 Unknown

CONDITION

Deck 58: 7 Good Super 59: 7 Good Sub 60: 7 Good
 Culvert 62: N N/A (NBI) Channel/Channel Protection 61: 7 Minor Damage

LOAD RATING AND POSTING

Inventory Rating Method 65: 2 AS Allowable Stress: Operating Rating Method 63: 2 AS Allowable Stress
 Inventory Rating 66: HS25.5 Operating Rating 64: HS40.0
 Design Load 31: 4 M 18 (H 20) Posting 70: 5 At/Above Legal Loads
 Posting status 41: A Open, no restriction

AGE AND SERVICE

Year Built 27: 1954 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: 21.1 mi
 ADT 29: 10,900 Truck ADT 109: 7 % Year of ADT 30: 2010

APPRAISAL

Bridge Rail 36A: 0 Substandard Approach Rail 36C: 1 Meets Standards
 Transition 36B: 1 Meets Standards Approach Rail Ends 36D: 1 Meets Standards
 Str. Evaluation 67: 7 Deck Geometry 68: 2 Intolerable - Replace
 Underclearance, Vertical and Horizontal 69: N Not applicable (NBI)
 Waterway Adequacy 71: 7 Above Minimum Approach Alignment 72: 9 Above Desirable Crit
 Scour Critical 113: 8 Stable Above Footing

GEOMETRIC DATA

Length Max Span 48: 29.9 ft Structure Length 49: 99.1 ft
 Curb/Sdwk Width L 50A: 1.5 ft Curb/Sidewalk Width R 50B: 1.5 ft
 Width Curb to Curb 51: 25.9 ft Width Out to Out 52: 31.0 ft
 Approach Roadway Width 32: 24.0 ft Median 33: 0 No median (w/ shoulders)
 Deck Area: 3,071.6 sq. ft
 Skew 34: 0.00 ° Structure Flared 35: 0 No flare
 Vertical Clearance 10: 99.99 ft Horiz. Clearance 47: 25.92 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

PROPOSED IMPROVEMENTS

Bridge Cost 94: \$ 359,000 Type of Work 75: 34 Widen w/ Deck Reha
 Roadway Cost 95: \$ 0 Length of Improvement 76: 9.8 ft
 Total Cost 96: \$ 358,000 Future ADT 114: 12,317
 Year of Cost Estimate 97: 2004 Year of Future ADT 115: 2030

NAVIGATION DATA

Navigation Control 38: 0 0
 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	22/1	P Conc Deck/Rigid Ov	(SF)	2,574	100 %	2,574	0 %	0	0 %	0	0 %	0	0 %	0
1	110/1	R/Conc Open Girder	(LF)	495	100 %	495	0 %	0	0 %	0	0 %	0	0 %	0
1	205/1	R/Conc Column	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
1	215/1	R/Conc Abutment	(LF)	62	100 %	62	0 %	0	0 %	0	0 %	0	0 %	0
1	234/1	R/Conc Cap	(LF)	60	98 %	59	2 %	1	0 %	0	0 %	0	0 %	0
1	301/1	Pourable Joint Seal	(LF)	62	0 %	0	50 %	31	50 %	31	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	331/1	Conc Bridge Railing	(LF)	236	100 %	236	0 %	0	0 %	0	0 %	0	0 %	0
1	358/1	Deck Cracking SmFlag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0
1	359/1	Soffit Smart Flag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
1	503/1	RC Curb	(LF)	236	100 %	236	0 %	0	0 %	0	0 %	0	0 %	0
1	611/1	Embankment Erosion	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elm/Env	Description	Element Notes
1	22/1	Concrete Deck - Protected w/ Rigid	The concrete deck overlay is worn to aggregate.
1	110/1	Reinforced Conc Open Girder/Bear	< none >
1	205/1	Reinforced Conc Column or Pile Ex	< none >
1	215/1	Reinforced Conc Abutment	< none >
1	234/1	Reinforced Conc Cap	There is a small crack approximately 2.5 feet in length on the west face of the north pier cap. It appears to be corner spalling only.
1	301/1	Pourable Joint Seal	The joints over pier 2 has failed. The joint over pier 3 is loosing cohesion due to minor 'D' cracking of the overlay and is leaking.
1	331/1	Reinforced Conc Bridge Railing	< none >
1	358/1	Deck Cracking	Unsealed cracks exist in the deck that are of moderate size and density.
1	359/1	Soffit of Concrete Deck or Slab	There are a few small areas in the bottom of the deck with cracks and small amounts of efflorescence present in these cracks.
1	503/1	Reinforced Concrete Curb	< none >
1	611/1	Embankment Erosion	The slopes under span 1 & 3 have some minor erosion present. Abutment 4 is undermined in one area on the left side exposing 1 conc. pile.

BRIDGE NOTES

-80

PAST INSPECTION

Inspection Date: 11/17/2009 Type: 2 Standard (24 months)
 Inspector: RSEMONES Pontis User Key: RSEMONES - Rot
 Scope:
 NBI: Other: Element:
 Underwater: Fracture Critical:

INSPECTION NOTES

Diagonal crack in pier cap. It seems to be corner spalling of the pier cap (See Photo)

Structure Inventory and Appraisal Sheet (English Units)

PAST INSPECTION

Inspection Date: 11/30/2007 Type: 2 Standard (24 months)
Inspector: DLARKIN Pontis User Key: DLARKIN - Denny

Scope:
NBI: Other: Element:
Underwater: Fracture Critical:

INSPECTION NOTES

PAST INSPECTION

Inspection Date: 11/01/2005 Type: 1 SIA (Initial Inventory)
Inspector: DLARKIN Pontis User Key: DLARKIN - Denny

Scope:
NBI: Other: Element:
Underwater: Fracture Critical:

INSPECTION NOTES

INSPECTOR WORK CANDIDATES