

Bridge Inspection Report

**01721
SH 7
over
Bear Creek**



Inspection Date: 12/01/2016

Inspected By: William Wood

Inspection Type(s): Routine
Fracture Critical

Inspector: William Wood
 Inspection Date: 12/01/2016

Structure Number: 01721
 Facility Carried: SH 7

Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	12/01/2016
(8) STRUCTURE NUMBER	01721	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 3 1 7 0	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	08 (3) COUNTY CODE 105	A. FRACTURE CRITICAL DETAIL	Y 24 12/01/2016
(4) PLACE CODE	00000	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	Bear Creek	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	SH 7		
(9) LOCATION	7.09 MI N Garland Co Line		
(11) MILEPOINT 7.089	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000007110 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 34.85032	(17) LONGITUDE -93.10063		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	5
A) KIND OF MATERIAL/DESIGN: 3 - Steel		(59) SUPERSTRUCTURE	5 (60) SUBSTRUCTURE 7
B) TYPE OF DESIGN/CONSTR: 10 - Truss - Thru		(61) CHANNEL & CHANNEL PROTECTION	7 (62) CULVERT N
(44) STRUCTURE TYPE, APPROACH SPANS			
A) KIND OF MATERIAL/DESIGN: 1 - Concrete			
B) TYPE OF DESIGN/CONSTR: 04 - Tee Beam			
(45) NUMBER OF SPANS IN MAIN 2	(46) NUMBER OF APPROACH 4		
(107) DECK STRUCTURE TYPE 1	(108A) WEARING SURFACE 1		
(108B) DECK MEMBRANE 0	(108C) DECK PROTECTION 0		
AGE OF SERVICE		LOAD RATING AND POSTING	
(27) YEAR BUILT 1933	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	2
(42) TYPE OF SERVICE ON 1 UNDER 5		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 00		(64) OPERATING RATING	38
(29) AVERAGE DAILY TRAFFIC 850	(19) BYPASS DETOUR LENGTH 10	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		(66) INVENTORY RATING	23
(109) AVERAGE DAILY TRUCK TRAFFIC 10		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.) 92	(49) STRUCTURE LENGTH (ft.) 344	(67) STRUCTURAL EVALUATION	5
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0		(68) DECK GEOMETRY	3
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 20.0		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(52) DECK WIDTH, OUT-TO-OUT (ft.) 21.6		(71) WATERWAY ADEQUACY	8
(32) APPROACH ROADWAY WIDTH (ft.) 21.0		(72) APPROACH ROADWAY ALIGNMENT	4
(33) BRIDGE MEDIAN 0 (34) SKEW (DEG.) 0		(36) TRAFFIC SAFETY FEATURE	
(35) STRUCTURE FLARED 0 (10) INV RTE, MIN VERT CLEAR (ft.) 99.99		36A) BRIDGE RAILINGS:	0
(47) TOTAL HORIZONTAL CLEARANCE (ft.) 20.0		36B) TRANSITIONS:	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	0
(54) VERTICAL UNDER CLEARANCE (ft.) N 0		36D) APPROACH GUARDRAIL ENDS:	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) N 99.9		(113) SCOUR CRITICAL BRIDGES	8
(56) MIN LATERAL UNDER CLEARANCE (ft.) 0		SUFFICIENCY RATING	2 STATUS 44.9
PROPOSED IMPROVEMENTS		CLASSIFICATION	
(75A) TYPE OF WORK PROPOSED 31	(75B) WORK DONE BY 1	(112) NBIS BRIDGE LENGTH	Y
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.) 340		(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(94) BRIDGE IMPROVEMENT COST (\$) 0		(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	02
(95) ROADWAY IMPROVEMENT COST (\$) 235		(100) STRAHNET HIGHWAY DESIGNATION	0
(96) TOTAL PROJECT COST 977		(101) PARALLEL STRUCTURE DESIGNATION	N
(97) YEAR OF IMPROVEMENT COST ESTIMATE 2003		(102) DIRECTION OF TRAFFIC	2
(114) FUTURE ADT 1300	(115) YEAR OF FUTURE ADT 2034	(103) TEMP STRUCTURE	
		(105) FEDERAL LANDS HIGHWAYS	0
		(110) DESIGNATED NATIONAL NETWORK	0
		(20) TOLL	3
		(21) MAINTENANCE RESPONSIBILITY	01
		(22) OWNER	01
		(37) HISTORICAL	5
		NAVIGATION DATA	
		(38) NAVIGATION CONTROL	0
		(111) PIER OR ABUTMENT PROTECTION	1
		(39) NAV VERT CLEARANCE (ft.)	0
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
		(40) NAV HORIZONTAL CLEARANCE (ft.)	0

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Rollup

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	3874	sq. ft.	0	3874	0	0
1080 - Delamination/Spall/Patched Area		874		0	874	0	0
1130 - Cracking (RC and Other)		3000		0	3000	0	0
16 - Reinforced Concrete Top Flange	1- Ben.	2760	sq. ft.	0	2760	0	0
1120 - Efflorescence/Rust Staining		1380		0	1380	0	0
1130 - Cracking (RC and Other)		1380		0	1380	0	0
510 - Wearing Surfaces		1200	sq. ft.	0	1200	0	0
3210 - Delamination/Spall/Patched Area/Pothole (Wearing Surfaces)		300		0	300	0	0
3220 - Crack (Wearing Surface)		900		0	900	0	0
110 - Reinforced Concrete Open Girder/Beam	1- Ben.	360	ft.	359	1	0	0
1090 - Exposed Rebar		1		0	1	0	0
120 - Steel Truss	1- Ben.	360	ft.	0	360	0	0
1000 - Corrosion		360		0	360	0	0
515 - Steel Protective Coating		10953	sq. ft.	0	0	5500	5453
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		5500		0	0	5500	0
3440 - Effectiveness (Steel Protective Coatings)		5453		0	0	0	5453
152 - Steel Floor Beam	1- Ben.	440	ft.	0	332	108	0
1000 - Corrosion		440		0	332	108	0
515 - Steel Protective Coating		1540	sq. ft.	0	0	1162	378
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		1162		0	0	1162	0
3440 - Effectiveness (Steel Protective Coatings)		378		0	0	0	378
162 - Steel Gusset Plate	1- Ben.	64	each	0	64	0	0
1000 - Corrosion		64		0	64	0	0
515 - Steel Protective Coating		1024	sq. ft.	0	0	524	500
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		524		0	0	524	0
3440 - Effectiveness (Steel Protective Coatings)		500		0	0	0	500
205 - Reinforced Concrete Column	1- Ben.	10	each	10	0	0	0
215 - Reinforced Concrete Abutment	1- Ben.	44	ft.	44	0	0	0
234 - Reinforced Concrete Pier Cap	1- Ben.	114	ft.	114	0	0	0
305 - Assembly Joint without Seal	1- Ben.	60	ft.	0	60	0	0
2360 - Adjacent Deck or Header		60		0	60	0	0
311 - Movable Bearing	1- Ben.	4	each	0	4	0	0
1000 - Corrosion		4		0	4	0	0
515 - Steel Protective Coating		16	sq. ft.	0	0	16	0
3440 - Effectiveness (Steel Protective Coatings)		16		0	0	16	0

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313 - Fixed Bearing	1- Ben.	4	each	0	4	0	0
1000 - Corrosion		4		0	4	0	0
515 - Steel Protective Coating		16	sq. ft.	0	0	16	0
3440 - Effectiveness (Steel Protective Coatings)		16		0	0	16	0
330 - Metal Bridge Railing	1- Ben.	540	ft.	180	360	0	0
1000 - Corrosion		360		0	360	0	0
515 - Steel Protective Coating		1800	sq. ft.	540	0	1260	0
3440 - Effectiveness (Steel Protective Coatings)		1260		0	0	1260	0
334 - Masonry Bridge Railing	1- Ben.	60	ft.	0	60	0	0
1610 - Mortar Breakdown (Masonry)		60		0	60	0	0

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Main - Pony Trusses

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	3874	sq. ft.	0	3874	0	0
	MINOR TO MODERATE CRACKING & MINOR SCALE THROUGHOUT DECK. SEVERAL PATCHED AREAS. MINOR SPALLING AROUND PATCHED AREAS. MAJOR CRACKING & MINOR SPALLING AT JOINTS. MINOR TO MODERATE CRACKING W / EFFLOR IN SOFFIT. MINOR SPALLING W / REBAR EXPOSED IN SOFFIT.						
1080 - Delamination/Spall/Patched Area		874			874		
1130 - Cracking (RC and Other)		3000			3000		
120 - Steel Truss	1- Ben.	360	ft.	0	360	0	0
	MODERATE RUST & PITTING THROUGHOUT TRUSSES. SOME MINOR SECTION LOSS.						
1000 - Corrosion		360			360		
515 - Steel Protective Coating		10953	sq. ft.	0	0	5500	5453
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		5500				5500	
3440 - Effectiveness (Steel Protective Coatings)		5453					5453
152 - Steel Floor Beam	1- Ben.	440	ft.	0	332	108	0
	COND. 2 - 332 LF - MODERATE CHALKING & PEELING OF THE PAINT. COND. 3 - 108 LF - MINOR TO MODERATE SURFACE RUST & PITTING ON APPROX. 2' OF ENDS OF BEAMS AT CONNECTIONS TO BOTTOM CHORD & VERTICALS. MODERATE RUST, PITTING & MINOR SECTION LOSS TO BOTTOM OF WEB & FLANGES OF FLOOR BEAMS AT PIERS 3 & 5. APPROX. 1/4" SECTION LOSS TO A 4" X 228" AREA OF WEB AT THE BOTTOM. APPROX. 1/8" SECTION LOSS TO TOP & BOTTOM FLANGES ALONG ENTIRE LENGTH OF BEAM AT PIER 3. NEW BOTTOM FLANGE ADDED TO FLOOR BEAM AT PIER 3. NEW BOTTOM FLANGE ADDED APPROX. 10" ABOVE ORIGINAL BOTTOM FLANGE. NONE OF BEAM WAS REMOVED. BEAM CLEANED & PAINTED. FLOOR BEAM AT PIER 3 HAS SEVERAL HOLES RUSTED THROUGH WEB BELOW NEW BOTTOM FLANGE & OLD BOTTOM FLANGES IS KNIFED EDGED. MINOR SECTION LOSS TO FLOOR BEAM AT PIER 5.						
1000 - Corrosion		440			332	108	
515 - Steel Protective Coating		1540	sq. ft.	0	0	1162	378
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		1162				1162	
3440 - Effectiveness (Steel Protective Coatings)		378					378
162 - Steel Gusset Plate	1- Ben.	64	each	0	64	0	0
	MINOR TO MODERATE RUST & MINOR PACK RUST THROUGHOUT PLATES.						
1000 - Corrosion		64			64		
515 - Steel Protective Coating		1024	sq. ft.	0	0	524	500

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3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		524				524	
3440 - Effectiveness (Steel Protective Coatings)		500					500
205 - Reinforced Concrete Column	1- Ben.	6	each	6			
MINOR CRACKING IN COLUMNS & VERTICAL CRACKING IN WEB WALLS. MINOR SCALE AT FLOW LINE ON COLUMNS AT PIER 4.							
234 - Reinforced Concrete Pier Cap	1- Ben.	78	ft.	78			
MINOR VERTICAL CRACKING.							
305 - Assembly Joint without Seal	1- Ben.	60	ft.	0	60	0	0
MINOR POPPING IN PLATES AT PIERS 3 & 4. MAJOR CRACKING & MINOR SPALLING AT JOINTS.							
2360 - Adjacent Deck or Header		60			60		
311 - Movable Bearing	1- Ben.	4	each	0	4	0	0
MINOR RUST & SECTION LOSS ON BEARINGS.							
1000 - Corrosion		4			4		
515 - Steel Protective Coating		16	sq. ft.	0	0	16	0
3440 - Effectiveness (Steel Protective Coatings)		16				16	
313 - Fixed Bearing	1- Ben.	4	each	0	4	0	0
MINOR RUST & SECTION LOSS ON BEARINGS.							
1000 - Corrosion		4			4		
515 - Steel Protective Coating		16	sq. ft.	0	0	16	0
3440 - Effectiveness (Steel Protective Coatings)		16				16	
330 - Metal Bridge Railing	1- Ben.	360	ft.	0	360	0	0
MINOR TO MODERATE RUST THROUGHOUT RAIL.							
1000 - Corrosion		360			360		
515 - Steel Protective Coating		1260	sq. ft.	0	0	1260	0
3440 - Effectiveness (Steel Protective Coatings)		1260				1260	

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Approach - 3 Beam R/C Tee Beam

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16 - Reinforced Concrete Top Flange	1- Ben.	2760	sq. ft.	0	2760	0	0
	MINOR TO MODERATE DELAM, CRACKING, SCALING & MINOR SPALLING THROUGHOUT DECK. MODERATE CRACKING W / EFFLOR. IN SIDES OF DECK & SOFFIT IN OVERHANGS IN SPANS 1 & 2 AND 5 & 6.						
1120 - Efflorescence/Rust Staining		1380			1380		
1130 - Cracking (RC and Other)		1380			1380		
510 - Wearing Surfaces		1200	sq. ft.	0	1200	0	0
3210 - Delamination/Spall/Patched Area/Pothole (Wearing Surfaces)		300			300		
3220 - Crack (Wearing Surface)		900			900		
110 - Reinforced Concrete Open Girder/Beam	1- Ben.	360	ft.	359	1	0	0
	MINOR DELAM, CRACKING & SPALLING IN CONCRETE DIAPHRAGMS BETWEEN BEAMS 2 & 3 AT PIER 2 BK. & AHD. SIDES. MINOR VERTICAL CRACKING AT MIDSPAN. COND. 2 - 1 LF - MINOR SPALLING W / REBAR EXPOSED IN BEAM 1 IN SPAN 6.						
1090 - Exposed Rebar		1			1		
205 - Reinforced Concrete Column	1- Ben.	4	each	4			
	MINOR CRACKING. MINOR VERTICAL CRACKING IN WEB WALLS.						
215 - Reinforced Concrete Abutment	1- Ben.	44	ft.	44			
234 - Reinforced Concrete Pier Cap	1- Ben.	36	ft.	36			
	MINOR CRACKING.						
330 - Metal Bridge Railing	1- Ben.	180	ft.	180			
515 - Steel Protective Coating		540	sq. ft.	540			
334 - Masonry Bridge Railing	1- Ben.	60	ft.	0	60	0	0
	MINOR TO MODERATE CRACKING IN MORTAR JOINTS.						
1610 - Mortar Breakdown (Masonry)		60			60		

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Pictures



PHOTO 1

Description Elevation



PHOTO 2

Description Roadway

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Deck/Culvert Notes

DECK - MINOR TO MODERATE CRACKING & MINOR SCALE THROUGHOUT DECK. SEVERAL PATCHED AREAS. MINOR SPALLING AROUND PATCHED AREAS. MAJOR CRACKING & MINOR SPALLING AT JOINTS. MINOR TO MODERATE CRACKING W / EFFLOR IN SOFFIT. MINOR SPALLING W / REBAR EXPOSED IN SOFFIT.
RAIL - MINOR TO MODERATE RUST THROUGHOUT RAIL.
SLIDE PLATES - MINOR POPPING IN PLATES AT PIERS 3 & 4. MAJOR CRACKING & MINOR SPALLING AT JOINTS.

SuperStructure Notes

TRUSSES - MODERATE RUST & PITTING THROUGHOUT TRUSSES. SOME MINOR SECTION LOSS.
FLOOR BEAMS - COND. 2 - 332 LF - MODERATE CHALKING & PEELING OF THE PAINT.
COND. 3 - 108 LF - MINOR TO MODERATE SURFACE RUST & PITTING ON APPROX. 2' OF ENDS OF BEAMS AT CONNECTIONS TO BOTTOM CHORD & VERTICALS. MODERATE RUST, PITTING & MINOR SECTION LOSS TO BOTTOM OF WEB & FLANGES OF FLOOR BEAMS AT PIERS 3 & 5. APPROX. 1/4" SECTION LOSS TO A 4" X 228" AREA OF WEB AT THE BOTTOM. APPROX. 1/8" SECTION LOSS TO TOP & BOTTOM FLANGES ALONG ENTIRE LENGTH OF BEAM AT PIER 3. NEW BOTTOM FLANGE ADDED TO FLOOR BEAM AT PIER 3. NEW BOTTOM FLANGE ADDED APPROX. 10" ABOVE ORIGINAL BOTTOM FLANGE. NONE OF BEAM WAS REMOVED. BEAM CLEANED & PAINTED. FLOOR BEAM AT PIER 3 HAS SEVERAL HOLES RUSTED THROUGH WEB BELOW NEW BOTTOM FLANGE & OLD BOTTOM FLANGES IS KNIFED EDGED. MINOR SECTION LOSS TO FLOOR BEAM AT PIER 5.
GUSSET PLATES - MINOR TO MODERATE RUST & MINOR PACK RUST THROUGHOUT PLATES.
BEARINGS - MINOR RUST & SECTION LOSS ON BEARINGS.
R/C TEE BEAMS - MINOR DELAM, CRACKING & SPALLING IN CONCRETE DIAPHRAGMS BETWEEN BEAMS 2 & 3 AT PIER 2 BK. & AHD. SIDES. MINOR VERTICAL CRACKING AT MIDSPAN.
COND. 2 - 1 LF - MINOR SPALLING W / REBAR EXPOSED IN BEAM 1 IN SPAN 6.

SubStructure Notes

ABUTMENTS - GOOD
COLUMNS - MINOR CRACKING IN COLUMNS & VERTICAL CRACKING IN WEB WALLS. MINOR SCALE AT FLOW LINE ON COLUMNS AT PIER 4.
CAPS - MINOR VERTICAL CRACKING.

CHANNEL: GRAVEL & ROCK - MINOR SCOUR AT PIER 4 COLUMN 2.