Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	
17051	6822 0000 X	-1	82.90	ND

IDENTIFICATION

Bridge Description:

3-125ft. P/S CONCRETE GIRDERS, 3-CONT. PLATE GIRDER SPANS (200ft.-330ft.-200), 4-125ft., 3-125ft. CONT. PLATE GIRDER SPANS

1. State: Oklahoma
2. Division: Division 1
3. County: SEQUOYAH
4. City: Unknown
Admin Area: Unknown
5a. On/Under: Route On Structure
5b. Kind of Hwy: Interstate Hwy
5c. Lvl of Srvc: Mainline
5d. Route No.: 00040
5e. Dir. Sufx: N/A (NBI)
7. Facility Carried I-40
6. Feat. ARKANSAS RIVER
9. SEQUOYAH-MUSKOGEE CC
11. Mile Post: NA
13. LRS / Sub Rte: 6800022H / 00
16. Latitude: 35° 29' 16.49"
17. Longitude: 095° 05' 38.05"
98. Border Unknown (P)
% Responsible: 0.00
99. Border Brdg #: Unknown

INSPECTION

Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.
NBI:		1	24 months	7/17/2023	07/17/2025
FC:	Y	1	24 months	7/17/2023	7/17/2025
UW:	Y	0	60 months	7/19/2020	7/19/2025
OS:	Y	0	24 months	7/14/2022	7/17/2024

CLASSIFICATION

12.Base Hwy Net.: On Base Network
20. Toll Facility: On free road
21. Custodian: State
22. Owner: State
26. Function Class: 01 Rural Interstate
37. Historical Sig.: Not eligible for NRHP
100. Def. Hwy: On Interstate STRAHNE
101. Parallel Str.: No || bridge exists
102. Traffic Dir.: 2-way traffic
103. Temp. Str.: Not Applicable (P)
104. Hwy System: On the NHS
105. Fed Land Hwy: IRR-Indian Res Rd
110. Defense Hwy: On Interstate STRAHNE
112. NBIS Length: Long Enough

STRUCTURE TYPE AND MATERIALS

43a/b. Main Span: Steel Cont. / Girder-Floorbeam
44a/b. Appr. Span: P/S Conc. / Stringer/Girder
45. # of Main Spans: 10
46. # of Appr. Spans: 3
107. Deck Type: Concrete-Cast-in-Place
108a. Wearing Surface: Low Slump Concrete
108b. Membrane: Unknown
108c. Deck protection: Unknown

CONDITION

58.Deck: 6 Satisfactory
59.Sup.: 6 Satisfactory
60.Sub: 6 Satisfactory
62.Culvert: N/A (NBI)
61.Chan./Chan. Prot.: 6 Bank Slumping

Flowline Notes:

The Pier 5 footing is exposed up to 4"H x 5'L along the west face.
2020 Underwater Channel Notes: The channel in the vicinity of the bridge

AGE AND SERVICE

19. Detour Length: 5.0 mi
27. Year Built: 1967
28a/b. Lanes on/und: 4 / 0
29. ADT: 15,900
30. Year of ADT: 2020
42a/b. Type of Svc on/und: Highway / Waterway
106. Year Reconst,: 1983
109. Truck ADT: 36%

LOAD RATING AND POSTING

31. Design Load MS 18 (HS 20)
41. Post. Status: A Open, no restriction
70. Posting: 5 At/Above Legal Loads
Date Rated 10/01/2006
63.Op / 65.Inv. Rating Meth.: 1 LF Load Factor / 1 LF Load Factor

	H	HS	3-3	EV3	SHV
64. Operating Rating (tons):	30.40	54.70	92.80	0.00	0.00
66. Inventory Rating (tons):	18.20	32.80	55.70		

GEOMETRIC DATA

10. Vert. Clearance: 99.99 ft
32. Appr Rwy Width: 69.91 ft
33. Median: Closed Med w/o Barri
34. Skew: 0.00°
35. Struct. Flared: No flare
47Horizontal Clr: 30.00 ft
48. Length Max Span: 330.00 ft
49. Struct. Length: 2,003.16 ft
50a. Curb/Sdwlk Width L: 3.00 ft
50b. Curb/Sdwlk Width R: 3.00 ft
51. Width Curb to Curb: 60.00 ft
52. Width Out to Out: 68.50 ft
Deck Area: 136,247.76 sq. ft
53. Min.Vert.Cl.Ovr Brg: 99.99 ft
54a.Min.Vt.Undclr.Ref. N Feature not hwy c
54b. Min. Vert. Undclr.: 0.00 ft
55a. Min.Lat.Undclr.Ref: N Feature not hwy
55. Min.Lat.Underclr. R: 99.90 ft
56. Min.Lat.Underclr. L: 99.90 ft

APPRAISAL

36a. Brdg Rail: 1 Meets Standards
36b. Transition: 1 Meets Standards
36c. Appr. Rail: 1 Meets Standards
36d. Appr.Rail Ends: 1 Meets Standarc
67. Str Evaluation: 6 Equal Min Criteria
68. Deck Geom.: 4 Tolerable
69. Vert./Horiz. Undclr: Not applicable (NB
71. Waterway Adeq: 8 Equal Desirable
72. Appr. Alignment: 7 Above Min Criteria
113. Scour Critical: 8 Stable Above Footin

PROPOSED IMPROVEMENT

94. Bridge Cost: $20,219,922
95. Roadway Cost: $4,500,000
96. Total Cost: $26,119,163
97. Yr.of Cost Est.: 2015
75. Type of Work: 31 Repl-Load Capacity
76. Lngth of Improvement: 1,989.0 ft
114. Future ADT: 25,440
115. Yr.of Future ADT: 2040

NAVIGATION DATA

38. Nav. Control: Permit Required
39. Vert. Clearance: 52.0 ft
40. Horiz. Clearance: 300.0 ft
111. Pier Protect.: 2 In-Place, Function
116. Lift Bridge Vert. Clr.: 0.0 ft

OKLAHOMA ITEMS

200c. Temperature: 91
200d. Weather: Clear
201. Struc.Stl. ASTM Desig.: A-36 / -1
202. Waterprf.Membrane: -1
Date Installed: 01/01/1901
203. Type Exp. Device: Modular
Elastomeric Strip Seal Sealed Expansion Joint
204. Type of Railing: PTR-1 (round hand rail)
205. Material Quantity: -3.00
208a. Type of Abutment: Skeleton
b. Type of Found.: Steel Piling
209. Type of Pier/Found.: 2 / Yes
Spread Footing
210. Foundation Elev.: 4,300.00 | 4,240.00 | -1.00 | 4,290.00 | -1.00
211. Wear.Surf.Prot.Sys: Silane
Date Installed: 01/01/1901
211c. Silane Reapplied
211d. Date :
213. Utilities Attached: Communication

214a. Posted Weight Limit: NR
b. Posted Speed Limit: 70
c. Narrow/1way Brdg Sign: NA
d. Vertical Clr. Sign: NA
Adv. Warning Sign: NA
e. Navigation Lights?: Yes
Working/Not Working: No
215. Overpass: INTERSTATE
218. Functionally Obsolete : -
220. Bridge Redecked _
221. Substr.Cond.(U/W): Satisfactory Condition
222. Fill Over RCB:
223. Appr.Slab/Rwy Cond.: 6
225. Paint Type/Ovrct: Inorganic Zinc 3Coat Sys
N/A
226. Date Painted: 2010
227. Paint Color: Gray
233. Deck Forming:
238. School Bus Rte.: Current & Desired route
240. Appr. Rwy Type.: Asphalt/Bituminous
243. Grdr Spacing/No.: /

244. Span Lengths: 131 | 130 | 130 | 201 | 330 | 201 | 125 | 125
245. Girder Depth:
246a. Type of Ovelay: NA
b. Overlay Thickness: 0.00
c. Overlay Date: 01/01/1901
d. Ovly Depth Changed >1": _
247. Protective Systems: _
248. # Field Splices w/ Corrosion:
249. Scour Crit. POA Exists?: _
250. Headwall:
258. Plans w/Found.in ODOT File _
259. Scour Eval. in ODOT File: _
263. Interchange at Intersection: No
264. Interstate Milepoint: 290.66

Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	
17051	6822 0000 X	-1	82.90	ND

Inspection Date: 7/17/23 Dale Poorman

Invoice No.: 1055453 Inspected With:

BRIDGE NOTES:

Spans 1-3: Simple prestressed concrete girder approach spans (131.4 feet, 130 feet, 130 feet)
Spans 4-6: Continuous variable-depth steel girder main spans (201 feet, 330 feet, 201 feet)
Spans 7-10: Continuous steel girder approach spans (125 feet, 125 feet, 125 feet, 126 feet)
Spans 11-13: Continuous steel girder approach spans (126 feet, 125 feet, 126.3 feet)
w/ 18 inch safety curbs & 4ft median

Other/Special inspection items include:

- Modular joints support boxes and support beams at piers 3, 6 and 10.
- Cracks in floor beam 4, span 4:
  - Stringer 1 (1 5/8 and 1 1/2 inches).
  - Stringer 3 (2 3/8 inches)
- Cracks in lateral bracing gusset plates:
  - Span 8, girder 3 at floor beam 4 (8 1/2-inch-long crack in gusset plate).
  - Span 10, girder 2 at floor beam 2 – (18-inch-long crack in gusset plate weld).
  - Span 11, girder 2 at floor beam 1 – (8-inch-long and 6-inch-long cracks in gusset plate weld).
- Horizontal web splice terminations in spans 4 near floor beam 5, span 5 near floor beams 3 and 11, and span 6 near floor beam 3. Cracks or cored hole noted at:
  - Span 4, girder 2, near floor beam 5 (1-inch-long crack arrested by cored hole, 1 1/2-inch-long crack arrested by cored hole).
  - Span 4, girder 4, near floor beam 5 (7/16-inch-long crack arrested by a cored hole).
  - Span 5, girder 1, near floor beam 11 (3/4-inch-long crack stopping short of cored hole, 1 1/4-inch-long crack arrested by two cored holes).
  - Span 5, girder 2, near floor beam 11 (2-inch-long crack arrested by a cored hole).
  - Span 5, girder 3, near floor beam 11 (7/8-inch-long crack stopping short of cored hole).
  - Span 5, girder 4, near floor beam 3 (1 1/8-inch-long crack arrested by a cored hole, 1-inch-long crack arrested by a cored hole).
  - Span 5, girder 4, near floor beam 11 (1-inch-long crack arrested by a cored hole).
  - Span 6, girder 1, near floor beam 3 (both cracks arrested by a cored hole).
  - Span 6, girder 2, near floor beam 3 (1-inch-long crack arrested by a cored hole).
  - Span 6, girder 3, near floor beam 3 (Paint crack originally noted).
  - Span 6, girder 4, near floor beam 3 (1 1/4-inch-long crack arrested by a cored hole).

Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	
17051	6822 0000 X	-1	82.90	ND

INSPECTION NOTES: 7/17/23

PX – Recommendations:
- Replace missing north railing posts in span 8 and near pier 12.
- Splice gaps in metal rail of north railing in spans 5 and 9, and south railing in spans 1, 6 and 7.
- Patch spalls in driving surface.
- Repair cracks in bearing boxes at modular joint supports at pier 3. Also, install shim plates or additional support below bearing blocks to prevent future cracking.
- Replace modular joints at pier 3, 6 and 10.
- Replace pourable joint seals at west abutments and fixed joints and deck control joints.
- Replace strip seal expansion joint at east abutment.
- Replace missing or loose bolts at stringer connections.
- Arrest ends of cracks at:
  - Floor beam 4, span 4 under stringer 1.
  - Floor beam 4, span 4 under stringer 3.
  - Stringer diaphragm over floor beam 5, span 6, between stringers 3 and 4.
- Repair cracks in lateral bracing gusset plates:
  - Span 8, girder 3 at floor beam 4 – 8 1/2-inch-long crack in gusset plate.
  - Span 10, girder 2 at floor beam 2 – 18-inch-long crack in gusset plate weld.
  - Span 11, girder 2 at floor beam 1 – 8-inch-long and 6-inch-long cracks in gusset plate weld.
- Reattach lateral bracing vibration dampeners at:
  - Span 4, between girders 1 and 2, between floor beams 5 and.
  - Span 4, between girders 1 and 2 and between floor beams 8 and pier.
  - Span 4, between girders 3 and 4 and between floor beam 7 and pier.
  - Span 6, between girders 1 and 2 and between floor beams 2 and 3.
  - Span 6, between girders 3 and 4 and between floor beam 0 and 1 – fractured spring not functioning as intended.
  - Span 6, between girders 3 and 4 and between floor beam 6 and pier 6.
- Patch corrosion hole through lateral bracing gusset plate at girder 4, span 6 at pier 6
- Install crushed aggregate slope protection on east approach embankment.
- Remove debris from east abutment seat.
- Patching spall in pier 6, column 2 at top of web wall.
- Repair broken seismic cables at piers 6 and 10.
- Reset elastomeric bearings for girder 1 for span 4 at pier 3.
- Remove paint from stainless-steel sliding surfaces of elastomeric bearings at pier.

FX – Monitor:
- Terminations of horizontal web splices for crack propagation or initiation in spans 4 through 6.
- Lateral bracing gusset plate connections to web of girders at:
  - Span 10, girder 1 at floor beam 4
  - Span 11, girder 1 at floor beam 1
  - Span 11, girder 2 at floor beam 3
  - Span 12, girder 2 at floor beam 1
  - Span 12, girder 2 at floor beam 2
- Ends of prestressed concrete beams for deterioration associated with exposed strands.

ELEMENT CONDITION STATE DATA

Elem. / Env	Description	Unit	Total Qty	% 1	Qty. 1	% 2	Qty. 2	% 3	Qty. 3	% 4	Qty. 4
12 / 4	Re Concrete Deck	sq.ft	119,340.00	70%	83,518.00	30%	35,802.00	0%	20.00	0%	0.00
	PX – Small spalls and patches are typical along control joints. Deck offset 1in relative to east approach railing. Deck in new portion (spans 1 through 3 and 70ft in span 4) has transverse cracks of 0.020in spaced at 3ft to 5ft, span 3 has 0.030in diagonal cracking. Deck in original portion has transverse cracks of 0.050in spaced at 5ft to 10ft. Raised pavement markers is missing.										
107 / 4	Steel Opn Girder/Beam	ft	5,540.00	91%	5,036.00	9%	500.00	0%	4.00	0%	0.00
	FX – Cracks at horizontal web splice terminations in spans 4 near floor beam 5, and span 6 near floor beam 3 (Item 872 has splice terminations for span 5 near floor beams 3 and 11). Cracks or cored hole noted at: • Span 4, girder 2, near floor beam 5 (1-inch-long crack arrested by cored hole, 1 1/2-inch-long crack arrested by cored hole). • Span 4, girder 4, near floor beam 5 (7/16-inch-long crack arrested by a cored hole). • Span 6, girder 1, near floor beam 3 (both cracks arrested by a cored hole). • Span 6, girder 2, near floor beam 3 (1-inch-long crack arrested by a cored hole). • Span 6, girder 3, near floor beam 3 (Paint crack originally noted). • Span 6, girder 4, near floor beam 3 (1 1/4-inch-long crack arrested by a cored hole). FX – Lateral bracing gusset plates welded to girders web using backing bars. Cored holes through web with no visible crack at: • Span 10 (girder 1, FB 4). • Span 11 (girder 1, FB 1 and girder 2, FB 3). • Span 12 (girder 2, FB 1 and girder 2, FB 2). Lateral bracing gusset plates at FBs 3, 4, 5 in spans 4 and 6, and FBs 3 and 11 in span 5 have been flame-cut and reattached to the girder webs. Pack rust exists at isolated locations in the main girders between horizontal splices, FB connections, bolted bottom splice plates. Paint cracks at stiffener to girder bottom flange at span 6 (girder 3 at FB4 and girder 4 at FB7) and span 8 (girder 3 at FB 2 and girder 4 at FB 2). Welded nut or open hole on inboard web splice plate at span 5 (girder 1 near FB 9, and girder 3 near FBs 3, 5, and 9). Loose bolts in web splice plate at span 7 (girder 3 near FB 4) and span 11 (girder 4 near FB 4).										
515 / 4	Steel Protective Coating	sq.ft	330,000.00	0%	0.00	100%	330,000.00	0%	0.00	0%	0.00
	Paint is sound with corrosion reactivating under joints.										
109 / 4	Pre Opn Conc Girder/Beam	ft	4,140.00	100%	4,140.00	0%	0.00	0%	0.00	0%	0.00

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	ND
17051	6822 0000 X	-1	82.90	

No significant deficiencies were observed to the prestressed concrete girders in spans 1-3.

113 / 4	Steel Stringer	ft	5,540.00	98%	5,437.00	2%	100.00	0%	3.00	0%	0.00

PX – Bolts and/or nuts are missing in the stringer to floor beam connections at the following locations:
- Span 6, west side of floor beam 1, stringer 1 exhibits two missing bolts.
- Span 6, east side of floor beam 1, north face of stringer 3 exhibits a missing nut.
- Span 7, floor beam 2, stringer 4 exhibits four not fully seated bolts.
- Span 8, west face of floor beam 0, stringer 3 exhibits one missing bolt.
- Span 10, floor beam 0, stringer 3 exhibits four missing bolts.

PX – Stringer diaphragm between stringers 3 and 4, span 6 over FB 5 has an 8 1/2in crack.
Deck is lifting off stringers at several locations .
Stringer 2 diaphragm connection to FB 1, span 8 has 5 of 7 connection bolts not fully seated.
Stringer 3 connection to FB 1, span 6 has 1 broken bolt. Stringer 3 connection to FB at pier 9 is missing all 4 anchor bolts. Stringer 4 connection to FB 2, span 8 has all 4 bolts not fully seated.
Stringers in span 7 near pier 6 and span 13 near the east abutment have a partial length welded cover plates.

152 / 4	Steel Floor Beam	ft	3,536.00	0%	0.00	95%	3,346.00	5%	190.00	0%	0.00

PX – Span 4 FB 4 has cracks in web at top of vertical stiffener below stringer 1 (1 5/8in and 1 1/2in) and below stringer 3 (2 3/8in)
Member Alignment – Span 6 FB 4 has 1/4in sweep between girders 1 and 2.
Span 6 FB 2 between G3 and G4 has 11/16in local kink in lower strut.
Span 9 FB 0 at G4 has slight bow in lower gusset plate.
Painted over pack rust between FB components below deck control and expansion joints.
Loose bolts or oversized bolt holes at FB to girder connections at span 5 FB 8 G3, span 7 FB 3 G2, span 9 FB4 G2, span 11 FB 3 at G2 and Span 12 FB 2 at G2.

205 / 4	Re Conc Column	each	23.00	87%	20.00	9%	2.00	4%	1.00	0%	0.00

PX – Pier 6, column 2 exhibits a 5-square-foot spall with exposed and corroding reinforcing steel at the top of the web wall and a vertical crack extending the full height of the column.

210 / 4	Re Conc Pier Wall	ft	94.00	68%	64.00	32%	30.00	0%	0.00	0%	0.00

Minor hairline cracking exists in the concrete pier walls.
Pier 4 exhibits some water staining and vertical cracks to the stem wall.

215 / 4	Re Conc Abutment	ft	152.00	97%	147.00	3%	4.00	1%	1.00	0%	0.00

PX – E abutment breastwall has undermining with 20in of penetration beneath flowable fill (2013 repair) and no exposure of piles. Erosion is from leaking joint.
PX – Debris and ponding on E abutment seat (9in deep under median).
Erosion exists under remnants of the original W abutment with no affect to the replaced abutment .
Both abutments exhibit random hairline cracking with E abutment cracks up to 0.020in wide.

234 / 4	Re Conc Pier Cap	ft	837.00	33%	280.00	66%	550.00	1%	7.00	0%	0.00

PX – Seismic restraints, consisting of cable anchorages attached between the girder bottom flanges and the pier caps, exist at piers 6 and 10.
The cable anchorages for girders 1 through 4 at piers 6 and 10 are broken and are no longer functioning.
Pier 6 cap exhibits rust staining throughout and a spall to the bottom east edge of the south cantilever.
Pier 1 cap on the west and east faces at the south end exhibits 1/16-inch-wide x 20-foot-long crack 2-feet from the top.
Pier 10 cap exhibits a wide crack and delamination to the bottom west edge between girders 3 and 4.

300 / 4	Strip Seal Exp Joint	ft	69.00	0%	0.00	0%	0.00	0%	0.00	100%	69.00

Joint at east abutment.
PX – The pourable expansion joint seal at the west abutment is missing the joint seal for 10 feet in the westbound lanes and throughout the southern lane of the eastbound lanes. Seal is missing in EB lane.

303 / 4	Assem Jnt With Seal	ft	207.00	0%	0.00	0%	0.00	0%	0.00	100%	207.00

PX – Modular joints have fractured or missing components, joint seals bulging/torn, joints closed:
Joint 3
Box 2 – W box unsupported.
Box 3 – Both box bottom plates fractured and missing under W end of support bar 1. Bearing blocks dislodged. Support bar 2 partially unsupported.
Box 4 – Both box bottom plates fractured.
Boxes 5 and 6 – E bearing block for support bar 1 missing.
Box 7 – W box bottom plate fractured under support bar 1.
Box 8 – W box supported by 6 3/4in over 22 1/4in length.
Box 15 – W box bottom plate fractured under support bar 1. Composite reinforcing above beam 10 exposed and box unsupported.
Box 16 – W box bottom plate fractured away, support bar 1 unsupported. E box bottom plate fractured.
Box 17 – W box not fully supported.
Joint 6 – equidistant bars broken/dislodged/missing, transverse separation beam sagging.
Box 2 – Transverse separation beam and repair plate fractured , sagging 1in. Longitudinal support bar broken free from transverse beam, dislodged.
Box 3 – Longitudinal support bar broken free from transverse beam, dislodged.
Joint 10 – equidistant bars broken/dislodged/missing.
Box 3 – Longitudinal support bar broken free from transverse beam, dislodged.

310 / 4	Elastomeric Bearing	each	76.00	97%	74.00	0%	0.00	3%	2.00	0%	0.00

PX – Span 4 bearings at pier 3, sliding surface painted:
G 1 – Sheared 2in east, bearing split at N end of E face, debonded from sole plate at S end of E face, rotated with S end 3 1/2in E and N end 1 5/8in E, PTFE pad distorted, near limits of expansion at 91F.
G 2 – Bulging along E edge, bottom edge lifting from pier seat.
G 3 – Bearing assembly not parallel with girder (offset 5/16in over 16 5/8in length).

311 / 4	Moveable Bearing	each	24.00	0%	0.00	63%	15.00	38%	9.00	0%	0.00

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	ND
17051	6822 0000 X	-1	82.90	

Bearings at piers 4, 6, 10 and E abutment have pack rust between rocker and masonry plate. Several bearing bolts broken/missing, pier 6 and E abutment worst.
E abutment bearings have corrosion with 1/16in painted over pitting, anchor bolts bent/broken from over expansion.
E abutment G1 and G2 bearings shifted 1in N, G3 and G4 bearings shifted 1in S.
Span 6, pier 6 bearings rocked up to 14 degree in expansion at 91F, bearings at pier 10 rocked up to 9 degrees expansion. Pier 4 G3 rocked more than other girders.

313 / 4	Fixed Bearing	each	24.00	0%	0.00	100%	24.00	0%	0.00	0%	0.00
	No significant deficiencies.											
321 / 4	Re Conc Approach Slab	sq.ft	4.00	0%	0.00	75%	3.00	25%	1.00	0%	0.00
	E approach slab recently overlaid with asphalt. 1/16in longitudinal and map cracks in W approach slab.											
330 / 4	Metal Bridge Railing	ft	3,978.00	100%	3,973.00	0%	0.00	0%	5.00	0%	0.00
	PX – Rail for N bridge railing missing adjacent posts in span 8 and near pier 12, spalls with exposed reinforcing at post location at pier 12. PX – Gaps in rail at N railing in spans 5 and 9, S railing in spans 5, 6 and 7.											
919 / 4	St.(Rail) Prot. Coat	sq.ft	7,500.00	0%	0.00	100%	7,500.00	0%	0.00	0%	0.00
	aluminum railing.											
331 / 4	Re Conc Bridge Railing	ft	5,967.00	0%	0.00	100%	5,939.00	0%	28.00	0%	0.00
	Concrete bridge railing and curb typically exhibits 0.020-inch to 0.030-inch-wide cracking spaced at 3 to 5 feet with leaching and minor rust staining and isolated locations of spalling with exposed reinforcing steel. The worst spalling exists to the south curb in span 6 with a 20-foot-long x up to 6-inch-deep spall. The following locations exhibit minor impact damage with heavy cracking and/or spalling with exposed reinforcement: -North railing in spans 3 and 4. -North face of the median railing over piers 10 and 12.											
819 / 4	PS Conc.Gird.End(5Ft	ft	360.00	99%	356.00	1%	4.00	0%	0.00	0%	0.00
	FX – End of beams spalling with exposed strands: • Span 1, B1 at pier 1 - crack extending 30in up web and spall in bottom flange exposing 9 strands. • Span 2, B12 at pier 2 - spall in bottom flange exposing 23 strands. • Span 3, B1 at pier 2 – crack extending 31 inches down the web and spall exposing 3 strands. • Span 3, B12 at pier 2 – 12in x 4in spall exposing 3 strands. • Span 3, B1 at pier 3 - spall in bottom flange exposing 4 strands. • Span 3, B12 at pier 3 - spall in bottom flange exposing 26 strands and in web exposing 4 strands. Span 3, B6 at pier 3 bottom flange has the ends of the mild steel anchors for sole plate exposed.											
859 / 4	Soffit	each	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
	Original spans exhibits full depth x full width transverse cracking up to 0.030-inch-wide spaced at 2 to 6 feet with minor efflorescence. Cracking is heavier over piers. Shallow spalls exist sporadically adjacent to girder top flanges throughout the main spans. Isolated areas of the soffit overhangs exhibit spalling with exposed reinforcement adjacent to the joints . Soffit between girders 2 and 3 exhibits rust staining and small pop-outs due to shallow cover of reinforcing steel chairs. Soffit below median in span 4 over pier 3 exhibits a 2SF spall with exposed and corroded reinforcing steel.											
865 / 4	St.Open Gird End(5Ft	ft	120.00	50%	60.00	50%	60.00	0%	0.00	0%	0.00
	Pack rust up to 1/2in between connection stiffeners and FB lower strut gusset plates.											
870 / 4	Concrete Wingwall	each	4.00	100%	4.00	0%	0.00	0%	0.00	0%	0.00
	No significant deficiencies.											
872 / 4	St.Gird Und Const.Jt	ft	760.00	74%	560.00	26%	200.00	0%	0.00	0%	0.00
	FX – Cracks at horizontal web splice terminations in spans 4 near floor beam 5, and span 6 near floor beam 3 (Item 107 has splice terminations for spans 4 and 6). Cracks or cored hole noted at: • Span 5, girder 1, near floor beam 11 (3/4-inch-long crack stopping short of the cored hole, 1 1/4-inch-long crack arrested by two cored holes). • Span 5, girder 2, near floor beam 11 (2-inch-long crack arrested by a cored hole). • Span 5, girder 3, near floor beam 11 (7/8-inch-long crack stopping short of the cored hole). • Span 5, girder 4, near floor beam 3 (1 1/8-inch-long crack arrested by a cored hole, 1-inch-long crack arrested by a cored hole). • Span 5, girder 4, near floor beam 11 (1-inch-long crack arrested by a cored hole).											
877 / 4	St. Stringer End(5Ft)	ft	120.00	50%	60.00	33%	40.00	17%	20.00	0%	0.00
	Deck is lifting off the stringers at several locations. This separation can eventually cause an uneven riding surface increasing impact on the superstructure and further accelerating deck deterioration. The stringers are generally in good condition with negligible surface corrosion in isolated locations.											
879 / 4	St.Strng.Un Const.Jt	ft	760.00	100%	760.00	0%	0.00	0%	0.00	0%	0.00
	Deck is lifting off the stringers at several locations. This separation can eventually cause an uneven riding surface increasing impact on the superstructure and further accelerating deck deterioration. The stringers are generally in good condition with negligible surface corrosion in isolated locations.											
890 / 4	Steel SIP Form	each	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
	Stay-in-place forms typically exhibit areas of surface and laminating corrosion near the interface with the original deck surface.											
906 / 4	Sealed Exp.Jt.(SEJ-3	ft	69.00	100%	69.00	0%	0.00	0%	0.00	0%	0.00
	Joint at pier 1. No significant deficiencies.											
909 / 4	Pourable Fix Jt.Seal	ft	1,311.00	0%	0.00	0%	0.00	0%	0.00	100%	1,311.00

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	ND
17051	6822 0000 X	-1	82.90	

Fixed poured seal joints at west abutment, pier 2, and deck control joints.
PX – The compression joint seal at the east abutment has pushed through the full length and the joint is closed . The seal in the westbound lanes is impacted with soil and gravel in the inside shoulders and partially covered in a light amount of worn asphalt. The joint header in the westbound lanes exhibits a 24-inch-wide x 9-inch-long x 2-inch-deep spall in the northern lane. The seal in the eastbound lanes is missing causing the joint to leak and allowing drainage to pass onto the bearing seat at the east abutment. The joint armor in the eastbound lanes exhibits a 1/2-inch vertical offset with the bridge side joint armor lower than the approach joint armor .
Several of the deck control joints exhibit minor spalling adjacent to the joints and missing joint seals.

916 / 4	St.Bearing Assembly	each	76.00	97%	74.00	0%	0.00	3%	2.00	0%	0.00

Bearings showed some surface corrosion and some pack rust between assemblies.

956 / 4	St. Cracking/Fatigue	each	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00

FX – Cracks at horizontal web splice terminations in spans 4 near floor beam 5, span 5 near floor beams 3 and 11, and span 6 near floor beam 3.
Cracks or cored hole noted at:

- Span 4, girder 2, near floor beam 5 (1-inch-long crack arrested by cored hole, 1 1/2-inch-long crack arrested by cored hole).
- Span 4, girder 4, near floor beam 5 (7/16-inch-long crack arrested by a cored hole).
- Span 5, girder 1, near floor beam 11 (3/4-inch-long crack stopping short of the cored hole, 1 1/4-inch-long crack arrested by two cored holes).
- Span 5, girder 2, near floor beam 11 (2-inch-long crack arrested by a cored hole).
- Span 5, girder 3, near floor beam 11 (7/8-inch-long crack stopping short of the cored hole).
- Span 5, girder 4, near floor beam 3 (1 1/8-inch-long crack arrested by a cored hole, 1-inch-long crack arrested by a cored hole).
- Span 5, girder 4, near floor beam 11 (1-inch-long crack arrested by a cored hole).
- Span 6, girder 1, near floor beam 3 (both cracks arrested by a cored hole).
- Span 6, girder 2, near floor beam 3 (1-inch-long crack arrested by a cored hole).
- Span 6, girder 3, near floor beam 3 (Paint crack originally noted).
- Span 6, girder 4, near floor beam 3 (1 1/4-inch-long crack arrested by a cored hole).

957 / 4	Pack Rust Smart Flag	each	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00

Pack rust up to 1/2-in thick exists between some girder vertical web stiffeners and floor beam truss lower chord gusset plates and between horizontal splice flanges. Minor pack rust up to 1/4-in thick is developing at girder bottom flange splice plates where girder ends butt up against each other. Pack rust is active in many locations and worse at expansion joints.
At floor beam 6 in span 4 between girders 3 and 4; 1/2-thick painted over pack rust exists between the floor beam web and the connection plate at girder 4. Similar condition at floor beam 8 at girder 4 over pier 6; in span 6. Similar conditions occur sporadically but with less severity.
Floor beam 8 between girders 3 and 4 over pier 6; span 6; the floor beam truss lower chord exhibits pack rust up to 1/2 inch between the center gusset plate and the lower chord angle with 1/16-inch deep section loss to the gusset plate. Similar condition in span 7 over pier 6.
FX – Pack rust is typically developing between the diaphragm top flange and the deck soffits ; up to 1/16-inch at random locations.

958 / 4	Concrete Cracking SF	each	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

Deck in new portion (spans 1 through 3 and 70ft in span 4) has transverse cracks of 0.020in spaced at 3ft to 5ft, span 3 has 0.030in diagonal cracking. Deck in original portion has transverse cracks of 0.050in spaced at 5ft to 10ft.

963 / 4	Steel Section Loss SF	each	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

Areas of painted over pitting are present throughout the bridge primary members. Minor section loss is active at areas of pack rust, generally at deck joints.

968 / 4	Erosion SF	each	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00

PX – E abutment breastwall has undermining with 20in of penetration beneath flowable fill (2013 repair) and no exposure of piles. Erosion is from leaking joint.
Erosion exists under remnants of the original W abutment with no affect to the replaced abutment .

969 / 4	OutOfPlane Dist./Load	each	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

Member Alignment – Span 6 FB 4 has 1/4in sweep between girders 1 and 2.

974 / 4	Straight Gird.Diaphr	each	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

PX – Stringer diaphragm between stringers 3 and 4, span 6 over FB 5 has an 8 1/2in crack.
Pack rust exists between diaphragm top flange and deck soffit .