

# Oklahoma Dept. of Transportation - Bridge Inspection Report

<b>NBI No.:</b> 18770	<b>Structure No.:</b> 5507 0071WX	<b>Local ID:</b>	<b>Suff. Rating:</b> 82.10	<b>ND</b>																		
<b>Bridge Description:</b> 47ft.,2-73ft.,47ft. CONT. I-BM. SPANS SK. 72 DEG.47ft.45.65ft.		<b>INSPECTION</b>																				
<b>IDENTIFICATION</b> 1. State: Oklahoma 2. Division: Division 4 3. County: OKLAHOMA 4. City: OKLA. CITY Admin Area: Unknown 5a. On/Under: Route On Structure 5b. Kind of Hwy: Interstate Hwy 5c. Lvl of Svc: Mainline 5d. Route No.: 00044 5e. Dir. Sufx: N/A (NBI)		Type    Insp. Req.    Insp. Done    Freq.    Insp. Date    Next Insp. NBI:                    1                    24 months    8/16/2022    08/16/2024 FC:                    N                    0                    NA                    NA UW:                    N                    0                    NA                    NA OS:                    N                    0                    NA                    NA																				
6. Feat. Intersect: U.P. R.R. & ST. UNDER 7. Facility Carried : I-44 SB 9. Location: 0.7 MI N I-40 11. Mile Post: 0.720 mi 13. LRS Inv. / Sub Rte: 5500007HV / 00 16. Latitude: 35° 28' 14.05" 17. Longitude: 097° 34' 46.72" 98. Border Brdg: Not Applicable (P) % Responsible: 0.00 99. Border Brdg #: Unknown		<b>CLASSIFICATION</b>																				
<b>STRUCTURE TYPE AND MATERIALS</b>		<b>CONDITION</b>																				
43a/b. Main Span: Steel Cont. / Stringer/Girder 44a/b. Appr. Span: N/A / Not Applicable (P) 45. # of Main Spans: 4 46. # of Appr. Spans: 0 107. Deck Type: Concrete-Cast-in-Place 108a. Wearing Surface: Low Slump Concrete 108b. Membrane: None 108c. Deck protection: None		58. Deck: 5 Fair 62. Culvert: N/A (NBI) <b>Flowline Notes</b> 59. Sup.: 5 Fair 61. Chan./Chan. Prot.: N/A (NBI) 60. Sub: 5 Fair																				
<b>AGE AND SERVICE</b>		<b>LOAD RATING AND POSTING</b>																				
19. Detour Length: 0.1 mi 27. Year Built: 1974 28a/b. Lanes on/und: 4 / 4 29. ADT: 70,350 30. Year of ADT: 2020 42a/b. Type of Svc on/und: Highway / Hwy-R.R.		31. Design Load: MS 18 (HS 20)    Date Rated: 01/06/2011 41. Post. Status: A Open, no restriction 70. Posting: 5 At/Above Legal Loads 63. Op / 65. Inv. Rating Meth.: 1 LF Load Factor / 1 LF Load Factor <table border="1" style="width: 100%; text-align: center;"> <tr> <td></td> <td><b>H</b></td> <td><b>HS</b></td> <td><b>3-3</b></td> <td><b>EV3</b></td> <td><b>SHV</b></td> </tr> <tr> <td>64. Operating Rating (tons):</td> <td>42.60</td> <td>55.20</td> <td>87.10</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>66. Inventory Rating (tons):</td> <td>25.60</td> <td>33.10</td> <td>52.20</td> <td>-1.00</td> <td></td> </tr> </table>				<b>H</b>	<b>HS</b>	<b>3-3</b>	<b>EV3</b>	<b>SHV</b>	64. Operating Rating (tons):	42.60	55.20	87.10	0.00	0.00	66. Inventory Rating (tons):	25.60	33.10	52.20	-1.00	
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<b>GEOMETRIC DATA</b>		<b>APPRAISAL</b>																				
10. Vert. Clearance: 99.99 ft 32. Appr Rwy Width: 68.00 ft 33. Median: No median 34. Skew: 18.00° 35. Struct. Flared: No flare 47. Horizontal Clr: 70.70 ft 48. Length Max Span: 73.00 ft 49. Struct. Length: 242.00 ft 50a. Curb/Sdwk Width L: 0.00 ft 50b. Curb/Sdwk Width R: 0.00 ft 51. Width Curb to Curb: 70.70 ft 52. Width Out to Out: 73.70 ft Deck Area: 17,835.80 sq. ft 53. Min. Vert. Cl. Ovr Brg: 99.99 ft 54a. Min. Vt. Undclr. Ref.: H Hwy beneath stru 54b. Min. Vert. Undclr.: 26.17 ft 55a. Min. Lat. Undclr. Ref.: H Hwy beneath str 55. Min. Lat. Underclr. R: 6.10 ft 56. Min. Lat. Underclr. L: 0.00 ft		36a. Brgd Rail: 1 Meets Standards 36b. Transition: 1 Meets Standards 36c. Appr. Rail: 1 Meets Standards 36d. Appr. Rail Ends: 1 Meets Standard 67. Str Evaluation: 5 Above Min Toler 68. Deck Geom.: 7 Above Min Criteria 69. Vert./Horiz. Undclr: 4 Tolerable 71. Waterway Adeq: N Not applicable 72. Appr. Alignment: 8 Equal Desirable Crit 113. Scour Critical: N Not Over Waterway																				
<b>OKLAHOMA ITEMS</b>		<b>PROPOSED IMPROVEMENTS</b>																				
200c. Temperature: 84 200d. Weather: Clear 201. Struc. Stl. ASTM Desig.: -1 / -1 202. Waterprf. Membrane: -1 Date Installed: 01/01/1901 203. Type Exp. Device: Armored Joint 204. Type of Railing: SFP-1 205. Material Quantity: 2,030.00 208a. Type of Abutment: Skeleton b. Type of Found.: Steel Piling 209. Type of Pier/Found.: 4 / No Drilled Shaft-No Footing 210. Foundation Elev.: <table border="1" style="width: 100%; text-align: center;"> <tr> <td>-1.00</td> <td>-1.00</td> <td>-1.00</td> </tr> <tr> <td>-1.00</td> <td>-1.00</td> <td>-1.00</td> </tr> </table> 211. Wear. Surf. Prot. Sys: None Date Installed: 01/01/1901 211c. Silane Reapplied 211d. Date: 213. Utilities Attached: Power		-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	94. Bridge Cost: \$1,860,478 95. Roadway Cost: \$3,069,789 96. Total Cost: \$5,209,339 97. Yr. of Cost Est.: 2015 75. Type of Work: 31 Repl-Load Capacity 76. Lngth of Improvement: 279.9 ft 114. Future ADT: 112,560 115. Yr. of Future ADT: 2040														
-1.00	-1.00	-1.00																				
-1.00	-1.00	-1.00																				
		<b>NAVIGATION DATA</b>																				
		38. Nav. Control: NA-no waterway 39. Vert. Clearance: 0.0 ft 40. Horiz. Clearance: 0.0 ft 111. Pier Protect.: Not Applicable (P) 116. Lift Bridge Vert. Clr.: 0.0 ft																				
		214a. Posted Weight Limit: NR b. Posted Speed Limit: 60 c. Narrow/1way Brgd Sign: No d. Vertical Clr. Sign: Yes Adv. Warning Sign: No e. Navigation Lights?: NA Working/Not Working: NA 215. Overpass: INTERSTATE 218. Functionally Obsolete: - 220. Bridge Redecked: - 221. Substr. Cond. (U/W): 222. Fill Over RCB: 223. Appr. Slab/Rwy Cond.: 3 225. Paint Type/Ovrct: Red Lead 3 Coat System N/A 226. Date Painted: 1973 227. Paint Color: Silver 233. Deck Forming: Conventional Forming 238. School Bus Rte.: Current & Desired route 240. Appr. Rwy Type.: Concrete 243. Grdr Spacing/No.: 8.50 / 9																				
		244. Span Lengths: <table border="1" style="display: inline-table; text-align: center;"><tr><td>47</td></tr></table> <table border="1" style="display: inline-table; text-align: center;"><tr><td>73</td></tr></table> <table border="1" style="display: inline-table; text-align: center;"><tr><td>73</td></tr></table> 245. Girder Depth: 246a. Type of Overlay: Latex Modified b. Overlay Thickness: 2.00 c. Overlay Date: 07/20/1974 d. Ovlv Depth Changed >1": N 247. Protective Systems: <table border="1" style="width: 100%; height: 20px;"> <tr> <td></td> <td></td> </tr> </table> 248. # Field Splices w/ Corrosion: 249. Scour Crit. POA Exists?: - 250. Headwall: 258. Plans w/ Found. in ODOT File: Yes 259. Scour Eval. in ODOT File: 263. Interchange at Intersection: No 264. Interstate Milepoint: 120.96			47	73	73															
47																						
73																						
73																						

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<b>NBI No.:</b> 18770	<b>Structure No.:</b> 5507 0071WX	<b>Local ID:</b>	<b>Suff. Rating:</b> 82.10	<b>ND</b>
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Inspection Date: 8/16/22	Gary Hines	
Invoice No.: GLH0822	Inspected With: Gary Richardson	

**BRIDGE NOTES:**

Four span continuous steel beam structure with spans at 47'-74'-74'-47'.

**INSPECTION NOTES:** 8/16/22

G Hines inspection comments - 8/16/2022  
 PX - Trees need cut & sprayed at the SW wing area \* Satisfactory slopewalls in most areas - minor settlement noted & buckling at the bottom is developing on the north & South below #8 beam \* There is a power line for lighting outside the West curb \* Satisfactory side drains \* The road below is the SW access road to the State Fairgrounds (seasonal traffic - low ADT) \* PX - Lots of debris needs cleaned off the seats.

**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	17,109.00	92%	15,689.00	5%	800.00	4%	600.00	0%	20.00
PX - There is a large patch (asphalt) in span #3 with smaller patches elsewhere - most are at each of the fixed joints (2020 & 2022 photos). There is a very large pothole & patch in the R.H. lane at the 9th construction joint (2008; 2020 & 2022 photos) with another one in the L.H. lane. There are spalls & potholes present at all but the 2nd construction joint (2020 photo). The 1st joint is spalled out almost the entire deck width (past photo) with a small hole at bay #2 in span #1 (2020 photo from below). Light wear in each wheel lane. Many of the spalls are filled with asphalt & need repaired with concrete. The north panel section in span #3 is shifted ~2 inches to the left (no shear connectors according to the plans). Also see SF #958.											
510 / 4	Wearing Surfaces	sq.ft	17,109.00	59%	10,009.00	38%	6,500.00	4%	600.00	0%	0.00
PX - There is a large patch (asphalt) in span #3 with smaller patches elsewhere - most are at each of the fixed joints (2020 & 2022 photos). There is a very large pothole & patch in the R.H. lane at the 9th construction joint (2008; 2020 & 2022 photos) with another one in the L.H. lane. There are spalls & potholes present at all but the 2nd construction joint (2020 photo). The 1st joint is spalled out almost the entire deck width (past photo) with a small hole at bay #2 in span #1 (2020 photo from below). Light wear in each wheel lane. Many of the spalls are filled with asphalt & need repaired with concrete. Also see SF #958.											
107 / 4	Steel Opn Girder/Beam	ft	1,278.00	0%	0.00	100%	1,278.00	0%	0.00	0%	0.00
PX - The open girders have light to heavy surface rust with scaling on top of the bottom flanges and on the web areas. Some heavier rust is present on the webs near the joints (2022 photo at spans #3 & #4). Needs cleaned & painted in the near future.											
515 / 4	Steel Protective Coating	sq.ft	21,984.00	0%	0.00	0%	0.00	0%	0.00	100%	21,984.00
PX - The open girders have light to heavy surface rust with scaling on top of the bottom flanges and on the web areas. Some heavier rust is present on the webs near the joints - some areas have light exfoliation present. Needs cleaned & painted in the near future.											
205 / 4	Re Conc Column	each	12.00	100%	12.00	0%	0.00	0%	0.00	0%	0.00
The pier columns are in good condition with only minor deficiencies noted.											
215 / 4	Re Conc Abutment	ft	158.00	16%	26.00	71%	112.00	13%	20.00	0%	0.00
PX - There is light to heavy horizontal cracking near the edge of the seat on each abutment between most pedestals. The cracking extends into the 1st- 3rd- 6th & 7th pedestals on the North. There is some heavy spalling above the seat at the SW corner (2006 & 2020 photos) with moderate spalling in other areas above the South seat. The surface finish has failed in most areas of the South abutment with lots of debris on the seat.											
225 / 4	Steel Pile	(EA)	2.00	0%	0.00	0%	0.00	100%	2.00	0%	0.00
PX - There are two piles visible barely visible below the 7th & 8th beams on the South abutment - both have moderate exfoliation overall (2022 photo). Loss estimated at 25% at this time.											
234 / 4	Re Conc Pier Cap	ft	237.00	97%	229.00	3%	7.00	0%	1.00	0%	0.00
Some light to moderate cracking & stains from rebar chairs on & below the 3rd; 4th & 5th pedestal on bent #1 and on the 5th pedestal on bent #2 (2020 photo). Moderate popouts at the rebar chair feet noted on the bottom of each cap between the 2nd & 3rd columns in bents #1; #2 and #3. Some minor water stains noted on each cap from joint seepage in a few areas (2020 photo @ bent #3).											
302 / 4	Compressn Joint Seal	ft	158.00	0%	0.00	0%	0.00	0%	0.00	100%	158.00
PX - Both abutment joint seals have failed and asphalt was used to seal the gaps. The asphalt is now gone in most areas at the South joint (2010- 2012- 2014 - 2020 photos). There is 30ft. to 50ft. of the armor missing at each joint (2010 & 2020 photos at North). Needs rehabbed SOON. Very large gap at the SW shoulder area (see element #321).											
311 / 4	Moveable Bearing	each	36.00	0%	0.00	50%	18.00	50%	18.00	0%	0.00
PX - Most abutment bearings are very rusty due to water seepage thru the joints. Some initial loss noted on several bearings - mainly lower areas (2020 photo @ #5 on South). The South abutment bearings are rotated back 15 to 20 degrees. ALL abutment bearing have some shearing of one retaining ear due to skew forces. Most have shifted 1.5in. - 2.0in. (2008 & 2018 photos). The #2 bearing on the North does not touch the girder until loaded (2002 photo). 2022 - There are some added supports on (5) north abutment bearings (2022 photo). Supports look weak; two not carrying any load at this time.											
313 / 4	Fixed Bearing	each	9.00	11%	1.00	89%	8.00	0%	0.00	0%	0.00
The pedestal bearings on bent #2 have light to moderate surface rust only except for one.											
321 / 4	Re Conc Approach Slab	sq.ft	2.00	0%	0.00	0%	0.00	100%	2.00	0%	0.00

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18770	5507 0071WX		82.10	ND							
PX - Both approach slabs were mud jacked in the past. The North slab was repaired since 2014 (roadway section only) and it is now cracked. There is a large spall on the South against the deck near the centerline (2020 photo). The SW & NW shoulder areas are also broken (2010 photo) & the South approach roadway has been milled to reduce the bump. Repairs noted on the north shoulder since 2012.											
331 / 4	Re Conc Bridge Railing	ft	484.00	34%	164.00	60%	291.00	6%	29.00	0%	0.00
PX - The SW corner has moderate damage. The traffic railing has 2 sections on the inside that have light spalls with rebar exposed with some delamination & about half of rest of the rail has scaling & popouts. Still serviceable at this time.											
859 / 4	Soffit	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
There is a large spall & delamination in bay #2 of span #1 with a hole (2020 photo). Light to moderate spalls below the rail at the construction joints. Some minor defect noted along the diaphragms with other minor defects (2020 photo @ bent #3).											
865 / 4	St.Open Gird End(5Ft)	(LF)	90.00	0%	0.00	68%	61.00	32%	29.00	0%	0.00
PX - Some abutment ends (mainly #1 thru #5) have light to moderate exfoliation & loss started along the top & bottom flanges (2ft -5ft. each)(2020 photo @ #5 on South abut). Lots of heavy surface rust on most areas of each end (2020 photo @ bent #3). The beam ends at the South abutment are pressing into the backwall. Needs cleaned & painted SOON.											
870 / 4	Concrete Wingwall	(EA)	4.00	100%	4.00	0%	0.00	0%	0.00	0%	0.00
872 / 4	St.Gird Und Const.Jt	(LF)	810.00	0%	0.00	92%	747.00	8%	63.00	0%	0.00
PX - Many of the girder ends have light exfoliation & loss started along the top flange below the construction joints (2020 photo @ bent #3). Mostly the outer beams are affected at this time. Lots of heavy surface rust on most areas of each end. Needs cleaned & painted SOON. Loss not serious at this time.											
909 / 4	Pourable Fix Jt.Seal	(LF)	635.00	0%	0.00	22%	141.10	33%	211.70	44%	282.20
PX - There are 9 construction joints total. There are spalls & patches along each joint - worst are at #1- 7- 8- & 9 (photo @ #1; 2022 photo @ 7-8-9). Most of the spalls have been patched with asphalt. The sealant itself is deteriorated overall with seepage evident below. From 4ft to 50ft is affected each joint - 13ft average (2020 photos @ #1; #7; #8 & #9). All need redone soon.											
957 / 4	Pack Rust Smart Flag	(EA)	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00
Pack rust exists between the diaphragms and the beams under the leaking joints (2020 photo @ bay #2 in span #1).											
958 / 4	Concrete Cracking SF	(EA)	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
PX - The deck has some light to moderate transverse cracks that have not been sealed. Some light pattern cracks are present in scattered areas.											
960 / 4	Settlement SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
PX - Due to a combination of skew & roadway forces the deck is rotating CCW - up to 2.5in. of offset noted. The abutment bearings are shifting out of position up to 5in.. In addition the end panels DO NOT have shear connectors & the panels are moving laterally at a different rate. Not serious at this time - except for bearing alignment.											
963 / 4	Steel Section Loss SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
Loss to the girders or the two exposed piles is not significant at this time.											
966 / 4	Exposed Abut.Piling SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
PX - There are two piles visible barely visible below the 7th & 8th beams on the South abutment (2022 photo). Both have moderate exfoliation overall - loss estimated at 25%.											
973 / 4	Horizontal Force SF	(EA)	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
The beam ends at the South abutment are pressing into the backwall (2022 photo @ #8; typical).											

# BRIDGE UNDER ROUTE REPORT

**NBI No.:**  
18770

**Structure No.:**  
5507 0071WX

**Local ID:**

**Bridge Description:**

**ROUTE ON THE STRUCTURE**

47ft.,2-73ft.,47ft. CONT. I-BM. SPANS SK. 72 DEG.47ft.45.65ft.

- 1. State: Oklahoma
- 2. Division: Division 4
- 3. County: OKLAHOMA
- 4. City: OKLA. CITY  
Admin Area: Unknown
- 7. Facility Carried : I-44 SB
- 9. Location: 0.7 MI N I-40
- 16. Latitude: 35° 28' 14.05"
- 22. Owner: State

**INVENTORY ROUTE**

- 5a. On/Under: 1 Route On Structure
- 5b. Kind of Hwy: 1 Interstate Hwy
- 5c. Lvl of Srvc: 1 Mainline
- 5d. Route No.: 00044
- 5e. Dir. Sufx: 0 N/A (NBI)

17. Longitude: 097° 34' 46.72"

- 12. Base Hwy Net.: On Base Network
- 20. Toll Facility: On free road
- 26. Function Class: 11 Urban Interstate
- 100. Def. Hwy: On Interstate STRAHNE
- 102. Traffic Dir.: 1-way traffic
- 104. Hwy System: On the NHS
- 105. Fed Land Hwy: N/A (NBI)
- 110. Defense Hwy: On Interstate STRAHNE

**ROUTE UNDER THE STRUCTURE:**

**Roadway Name: BLACK GOLD DRIVE UNDER**

**INVENTORY ROUTE:**

- 5a. Inventory Route: 2 One Route Under
- 5b. Kind of Highway: 5 City Street
- 5c. Level of Service: 1 Mainline
- 5d. Route No.: 00000
- 5e. Dir. Suffix: 0 N/A (NBI)

- 10. Min. Vert. Clr.: 26.17
- 12. Base Hwy Network: Not on Base Network
- 13. LRS Rte./SubRte: -1 / -1
- 19. Detour Len.: 0.00
- 20. Toll Facility: On free road
- 26. Function Class: 16 Urban Minor Arterial
- 28b. Lanes Und.: 4
- 29. ADT: 200
- 32. Appr. Rwy Width: 48.00

- 47. Total Horiz. Clr.: 57.41
- 51. Roadway Width: 70.70
- 100. Defense Hwy: Not a STRAHNET hwy
- 102. Traffic Direction: 2-way traffic
- 104. Hwy System: Not on NHS
- 105. Fed. Land Hwy.: N/A (NBI)
- 109. Truck ADT%: 5
- 110. Natl. Trk Netwk: Not part of natl netwo
- 114. Future ADT: 320

Agency Field: 1.(Und.Rte.) U      2. (Vert. X-Ref.): -1      3. (Compass Dir.): E      4. (VC Posted N/E): 2602      5. (VC Posted S/W): 2602

Notes: