

Inspector: Schmidt,Eric

Inspection Date: 08/12/2025

Structure Number: 3110656

Facility Carried: NB IR 75

Ohio Bridge Inspection Summary Report**HAM-00075-1192R (3110656)**

B.L.04: District District 0844366 - LOCKLAND (HAM county)

B.CL.02: Major Maint 01 - State Highway Agency /

225 Routine Main A/B 01 - State Highway Agency /

221 Inspection A/B 01 - State Highway Agency /

5A: Inventory Route 1 00075

7: Facility On NB IR 75

6: Feature Ints MILL CR;BENSON ST;NSRR;S

9: Location 2.3 MI S OF SR 126

Lat, Lon 39.221681 ,-84.44815

Condition**B.C.01: Deck 6**

58.01: Wearing Surface 6

B.C.08: Joint 6**B.C.02: Superstructure 4**

59.01: Paint & PCS 6

B.C.03: Substructure 7**B.C.09: Channel 6****B.C.11: Scour 7****B.C.10: Channel Prot. 7****B.C.05: Bridge Railing 5****B.C.06: Transitions 5****B.C.07: Bearings 6****B.C.04: Culverts N****Ohio GA 4****Appraisal**

B.AP.03: Scour Vul. 0 - Scour appraisal has not been completed.

Geometric

48: Max Span Length (ft) 156.0

49: Structure Length (ft) 2418.0

52: Deck Width, Out-To-Out (ft) 54.3

424: Deck Area (sf) 131297.4

32: Appr Roadway Width (ft) 36.0

51: Road Width, Curb-Curb (ft) 50.0

50A: Curb/SW Width: Left (ft) 0

50A: Curb/SW Width: Right (ft) 0

34: Skew (deg) 0

33: Bridge Median 0 - No median

54B: Min Vert Underclearance (ft) 15.25

336A: Min Vert Clrnce IR Cardinal (ft) 99

336B: Min V Clr IR Non-Cardinal (ft) 0

578: Culvert Length (ft) 0

Load Posting

41: Op/Post/Closed A - Open

70: Posting 5 - Equal to or above legal loads

70.01: Date

70.02: Sign Type

734: Percent Legal (%) 105

704: Analysis Date 03/29/2019

63: Analysis Method 8 - Load and Resistance Factor Rating (LRFR) rating report by rating factor (RF)

Structure Type

43: Bridge Type 4 - Steel continuous

02 - Stringer/Multi-beam or Girder

N- Not Applicable

45: Spans Main / Approach 23 / 0

107: Deck Type 1 - Concrete Cast-in-Place

408: Composite Deck U - Unknown

414A Joint Type 1 8 - Elastomeric Strip Seal

414B: Joint Type 2 N - None

108A: Wearing Surface 2 - Integral Concrete (separate non-modified layer of concrete added to structural deck)

1 - Super Plasticized Dense Concrete (SDC)

422: WS Date 07/01/2009

423: WS Thick (in) 3.7

482: Protective Coating 5 - Paint System OZEU

483: PCS Date 06/01/1994

453: Bearing Type 1 3 - Sliding (Bronze)

455: Bearing Type 2 2 - Rockers & Bolsters

528: Foundn: Abut Fwd 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)

533: Foundn: Abut Rear 2 - Cast-in-Place reinforced Concrete Piles (Other diameter)

536: Foundn: Pier 1 2 - Cast-in-Place Reinforced Concrete Piles (Other diameter)

539: Foundn: Pier 2 N - None (Such as most Culverts)

Age and Service

27: Year Built/ 106 Rehab 1965 / 0000

42A: Service On 1 - Highway

42B: Service Under 8 - Highway - waterway - railroad

28A: Lanes on 03

28B: Lanes Under 02

19: Bypass Length 3

29: ADT 67075

109: % Trucks (%) 16

Inspections

B.IE.03 Routine Insp. 12 Months 08/10/2025

B.IE.03: NSTM Insp. Y 24 08/10/2025

B.IE.03: UW Insp. N

B.IE.03: Special Insp.

UBIT Insp. Y 24 08/10/2025

Drone Insp. Y 24 06/21/2021

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method using HL-93 loadings.

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	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12-Reinforced Concrete Deck	3 - Mod.	131177	sq. ft.	84868	45659	650	0
CS2: Unsealed transverse cracks on 2' to 5' centers throughout, some with effl. Deck ends at fwd., rear and interm. exp. joints have been replaced 3' wide full depth with HL longitudinal cracks in repairs. Couple areas of plywood left-in- place and areas of sound patches from full depth repairs. Several spans with delams and small shallow spalls in haunch areas. Resteel mat pattern visible in spans 14, 15, 17, 18, 19 and 21. CS3: Areas of unsealed cracking with spacing <1ft, dampness, efflor, delam, and spall with resteel exposed along deck edges at intermediate joints. Spotted areas of discolorations, mottling. Span 2, left edge of deck 20lf heavy map cracking, efflor, and stalag. Span 3 has 30sf of haunch spalling. Mottled/saturated/ heavy cracking to left and right deck edges at intermediate joint, (7sf). Delams at deck end along intermediate joint, (13sf). Span 4, bay 4, 20 sf. haunch spalling. Span 5, bay 4, 10 sf. haunch spalling. Bay 4, mottled, saturated area, (50sf). Span 6, bay 2, 5 sf. haunch spalling. Bay 2 has 4sf area of rust in area of trans and longi cracks. 1sf haunch spall bay 5. Span 7, area of full depth cracks with efflor, unsealed longitudinal/transverse cracks, 40sf area. Span 8 bay 6 2sf delam Span 9 has 4sf haunch spalling. Spall at right edge of deck. 2sf delam above pier 9 bay 6 Span 10 has 10 l.f. of haunch spalling. Bay 4 has a 2sf spall w/resteel exposed. 2x3 delam over Wyoming Ave Bay 6 span 10 Span 11 has 4sf area of through cracks/mottled. Span 12 5sf of haunch spalls over pier 12. Span 13 has spalls in area of joint in bays 3 and 4 and in deck edges along joint (12sf). Delam above pier 13 bay 1 Span 15, 30sf area of staining/rust HL cracks in bay 6 over drive for Mueller Roofing. Span 17, 4sf area through cracking. Narrow, long haunch spalling (24sf). Span 20, 20sf through cracking/mottled. Bay 3, with seepage and efflor. Span 22, 2sf delam at right fwd.							
510-Wearing Surfaces		120900	sq. ft.	116721	4000	163	16
CS2: A few unsealed transverse and short to10'l longitudinal cracks. Couple small sound concrete patches. Few areas of map cracking <.012in wide. Area between fast lane and center lane near forward end, patched with asphalt mix). CS3: Saw cut area, north of interm joint 5, left unfilled, 6" x 1' x approx. 3" deep. Area in middle lane breaking up (9sf) and a couple failing asphalt patches in W.S. Spall on north side of intermediate joint 3. A couple areas delamed along intermediate joints. Delam to patch in rt. fwd. area. Few longitudinal cracks in right lane, center of structure open .06" wide. Unsound patch north of interm. joint. 4 in center lane. 1x1 spall 2nd joint right lane. 2 spalls 1x1 left and middle lane at 4th joint. 1x1 saw cut hole in right lane. 2sf delam in right lane CS4: Pothole, breaking up middle lane towards forward, just south of Sheppard Lane. Pothole in slowlane just north of railroad tracks. Pothole, middle lane near expansion joint over Mueller. WO 192231 submitted 8/2/2024							
107-Steel Open Girder/Beam	3 - Mod.	16926	ft.	12267	4576	83	0

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[illegible]

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ODOT District: District 08

HAM-00075-1192R_(3110656)

Date Built: 07/01/1965

Major Maint: 01 - State Highway Agency

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Traffic On: 1 - Highway

Rehab Date:

Routine Maint: 01 - State Highway Agency

Feature Inters: MILL CR;BENSON ST;NSRR;S

Traffic Under: 8 - Highway - waterway - railroad

Insp. Resp A: 01 - State Highway Agency

FIPS Code: 44366 - LOCKLAND (HAM county)

Location: DISTRICT 08

2.3 MI S OF SR 126

Insp
Resp B:

Inspector

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Reviewer Collett,Brandon

Inspector Comments - Deck and Approach

Deck, Wearing Surface, Joints, Railing

Floor/Slab

Transverse cracks throughout all spans, 2' to 5' spacing, some with efflor. Deck ends at rear, fwd. and along intermediate joints that were previously repaired now with HL longitudinal cracks appearing. Sound concrete patches in areas of full depth repairs, some wooden forms still in place. Numerous spans have areas of haunch spalling, some narrow and long along beams. Few spans with mottled areas of saturation/rust staining and some spalls/delams. Less than 1% of saturation/rust staining or spalling thru out.

Bridge Wearing Surface

A few depressions in overlay. Longitudinal cracks, approx. 10ft long throughout surface, some open wider than .05" in center of structure. Random areas of sound patches, both concrete and asphalt with areas of some failing, some spalled patches, less than 1% distressed areas. cover missing on first light pole. 1x1 spall 2nd joint right lane.

Bridge Railing

Unsealed vertical cracks, most with efflor., some with buildup. Horizontal cracking at right forward along top of rail with areas of unsoundness and horizontal crack in lower radius. Horizontal cracks can also be seen along areas of left rail. Random areas in exterior face of rails with map cracking and efflor. Random scrapes. Delams and spalls at expansion joints in lower haunches of rails.

Drainage

All scuppers are clogged. Leakage in connector runs throughout spans. Drainpipes at piers have several covers for cleanouts missing and are clogged. Heavy LOS to numerous downspouts. Medium debris at right shoulder.

Expansion Joints

Unsealed cracks in headers. Patch in rear slab header, center, failing. Debris in all joints, heaviest at rear and fwd. but not affecting movement. Impact damage to fwd. slab header due to lower profile of approach slab. Left forward joint has 4' tear in strip seal allowing leakage onto abutment. Glands torn or pulled loose at intermediate joints 2, 4 and 5, mainly in right shoulder. Spalls in fwd. header along slab have been repaired with asphalt.

Approach

Approach Wearing Surface

2020, Newer pavement at north end with milling to improve profile. Unsealed transverse cracks with map cracking at pvmt/slab joints, wider trans cracks in fwd. pavement. A couple spalls at fwd. pavement.

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Approach Slabs

Asphalt overlay has unsealed transverse cracks, unsealed map cracking and small shallow spalls along headers. Failing patch, center rear, at exp. jnt. header. Slight bump off structure due to slightly lower profile of slab at fwd. exp. jnt. Spalls left, rear. Also at left and right fwd. along exp joint headers with a failing patch at left. fwd.

Approach Embankment

Inspector Comments - General Appraisal

Superstructure, Bearings

Beams/Girders

Heavy pitting in area of hinges at intermediate joints and beam ends, rear and fwd. Other random areas of rust/corrosion to top flanges and bottom flanges, heavier under leaking connector runs for drainage. Bent stiffener in span 3, beam 3. Total of 121 repaired/relief holes drilled to previously found cracks in spans 4 thru 9 and span 21. 82 possible cracks in spans 4 thru 21. (See attached marked framing plan in "Other Files" for locations.) Fretting and bleeding rust at previously repaired bending crack locations.

Diaphragm/X-Frames

Bent cross-frame fwd. abut bay 6. Rust initiating on random frames, mainly in areas of intermediate joints. Span 20 has bent cross-frame in bay 3. Few end frames at intermediate joints have pack rust at gusset connections causing some distortion. 2022, rear abutment, bm 3, bay 2, cracked weld at lower flange connection. In span 13, in area of intermediate joint, pack rust has developed at several locations and caused some distortion and cracked few welds. Span 11 bay 6 rusted cross frame from leaking scupper.

Steel Floor Beams

2025: NSTM inspection performed by Gannet Flemming did not find any cracks. NSTM rating was raised to a 6. Report is on file at the District.

2023: Per Fracture Critical inspection performed by Collins Engineers; "For bridge HAM-1192, the crack was found in Pier 20, at the west face of the Girder 1 diaphragm, at the triaxial weld connecting the south plate to the diaphragm. This is the cap over Shepherd Ave. The crack measured 1-5/8" along the vertical weld. We have included a perspective photo showing the detail (MAS3-164) and then 2 photos of close ups of the crack. This is located towards the north end of the pier cap. " 11-14-23 Inspection by Brandon Collett, D-8 bridge engineer, found the suspected crack was just painted over slag. There is no crack (see attached inspection photo).

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2021; All floor beams were given a rating of "7", considered in good condition. Some rust/corrosion to interior and exterior of caps. Partially removed tack welds in all caps along backer rods, webs and bottom flanges. Relief holes drilled in caps at girder diaphragms as part of rehab project and at tips of bottom flanges.

Bearings

Rust/corrosion initiating on numerous bearings and plates. Cracks to welds of abutment bearings due to pack rust.

Lateral Bracing

Connection plate/web weld cracked. Pack rust between lateral angles and connection plates mainly under areas where the collector runs are leaking. Some rattling heard in span 13 south of hangers between beams 1 and 2.

Hanger Assembly

All hinges were refurbished. Freckled rust has initiated, mainly along bottom flanges. OS fascia pins and hangers beginning to rust. Old areas of loss of section; span #10, beam #5 hinge. Beam ends still show heavy pitting from old LOS under new paint. Several pins rotating in hinges, some with fretting rust. First set (span 2), pins turning: G-2 lower, G-3 upper, G-5 lower is fretting. second set: G-6, top and bottom rotating, G-7, rust and corrosion, old thinning, G-5 top nut spinning, G-4 bottom nut spinning, G-3, top nut spinning, G-2, top nut fretting rust, G-1 top nut fretting rust. Third set (span 10), G-2, G-4, top rotating, G-3, top fretting/rust pin rotating. G-7, top rotating. Fourth set G-7, rust at bottom, G-6, 5, 4, top nut turning, G-3, 2 both turning, G-1 top. Moderate rusting G-7, (span 9), rust and corrosion, old thinning. Two other outside pins with heavier rusting. G7, span 17, and G7, span 12. Span 7 beam 7 pack rust in bottom pin

Fatigue

Pack rust between lateral angles and connection plates. Span #10 lower lateral connection plate weld cracks. Stress-relief retrofit performed on steel box pier caps in 1993. Tack welds left in place, pier 5, 16 and 20. Errant and incomplete saw cuts in pier 16 at girders 3 and 4. 2013 consultant FC inspection of steel box girder pier caps. 2015: Consultant did FC Inspection reporting piers 5, 16 and 20 in "Good Condition (7) overall". 2017 consultant FC inspection of steel box girders. 2019 Palmer Engineering performed FC inspection on 5, 16 and 20 pier caps, in good condition. 2023; Collins Engineers inspected steel pier caps/floor-beams.

Protective Coating System

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Beam ends at abutments and hanger ends, repainted. Freckled rust has initiated, mainly along bottom flanges. Some fading/chalking to OS faces of exterior beams. Heavier flaking rust on OS lower flange, stiffener and web areas. OS hinge area in spans 3, 7 and 13 on right side, span 18 on left side, have areas of heavier rusting. Layers of rust to flanges under leaking connector runs for drainage and expansion joints.

Utilities

Light rust to anchor bolts & nuts. Most arms have light coating of rust. A few nuts not turned down 100%. Several light poles have been removed. Two poles, right, have electric access opening covered with electrical tape.

Substructure

2025 ***Vegetation thick underneath structure. ***

Abutments

Unsealed vertical cracks, full height, excess concrete on seat area at rear. Debris on abutment from joint, bay 1, fwd. Sealed spalls in fwd. abutment at bearings 3-7.

Pier Columns/Bents

Pier 1, column 2, rear, 18" top of footer exposed from scupper drain. Several columns have small spalls/delams where downspouts are connected. Few columns with HL unsealed vertical cracks, small random delams. Few columns with scrapes due to equipment from businesses under spans. Horiz cracks around a couple downspout brackets. Piers 10, 12 and 14 have columns with larger spalls where downspouts connect.

Pier Caps

Unsealed vertical cracks and small delams. P-5, north end cracked with efflor. P-13, horz hl cracking entire length. P-2 right cap end cracked with delam. Multiple vertical cracks in pier 8. Pier 8 has 1x1 shallow spall in right edge.

Backwalls

HL vertical cracks, with vertical cracks in repaired upper portions.

Wingwalls

Right rear cracked.

Slope Protection

Large amount of backfill on fwd. concrete slope protection at underdrains.

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Scour

2024 : Probed the columns at the north Mill Creek crossing. High flow unable to probe the columns at the south Mill creek crossing.

Culvert

Inspector Comments - Waterway

Channel Protection

Channel

Channel Protection

Approx. 100lf of concrete retaining walls in span 8, left, have collapsed bank with bank erosion in various locations; span 4 west channel bank shows major eroded ruts up to 3' deep due to scupper drains; east bank erosion and 50lf of slippage beneath span 6. A few rills around pier columns at rear piers.

Scour

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Bridge Inspection Report

Pictures

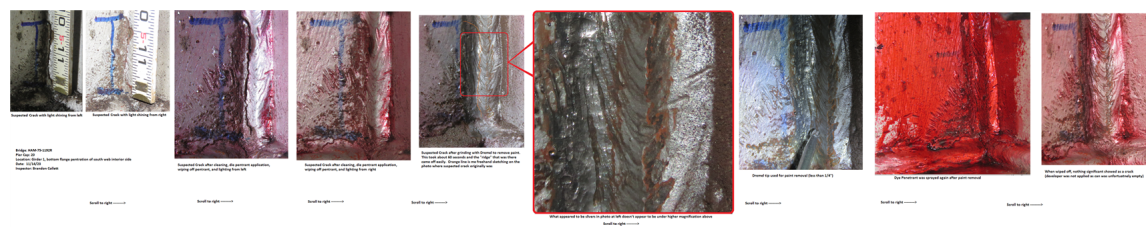


PHOTO 1

Description Pier cap 20 Possible crack inspection 11-14-23