

Ohio Bridge Inspection Summary Report

CUY-00422-1804R (1814931)

2: District 12 72928 - SOLON (CUY county)
 21: Major Maint A/B 01 - State Highway Agency /
 225 Routine Main A/B 01 - State Highway Agency /
 221 Inspection A/B 01 - State Highway Agency /
 220: Inv. Location DISTRICT 12

5A: Inventory Route 1 00422
 7: Facility On USR 422
 6: Feature Ints SR 91 SOM CENTER RD
 9: Location 5 MI E I-271

Condition

58: Deck **7 - Good Condition**
 58.01 Wearing Surface 7 - Good (1% distress)
 58.02 Joint 7- Good (no leaking)
59: Superstructure **6 - Satisfactory Condition**
 59.01 Paint & PCS 4 - Poor PCS (15-20% corr.)
60: Substructure **7 - Good Condition**
61: Channel **N**
61.01 Scour **N - Not Applicable**
62: Culverts **N - Not Applicable**

Structure Type

43: Bridge Type 4 - Steel continuous
 02 - Stringer/Multi-beam or Girder
 N- Not Applicable
 45: Spans Main / Approach 4 / 0
 107: Deck Type 1 - Concrete Cast-in-Place
 408: Composite Deck N - Non-composite Construction
 414A Joint Type 1 2 - Sliding Metal Plate Angle
 414B: Joint Type 2 N - None
 108A: Wearing Surface 2 - Integral Concrete (separate non-modified layer of concrete added to structural deck)
 2- MicroSilica

67.01 GA 6

Appraisal

Sufficiency Rating 93.6 SD/FO 2 - FO
 36: Rail, Tr, Gd, Term Std 1 1 1 1
 72: Approach Alignment 8 - Equal to present desirable criteria
 113: Scour Critical N - Not over waterway
 71: Waterway Adequacy N - Not Applicable

422: WS Date 07/01/1975
 423: WS Thick (in) 2.0
 482: Protective Coating 3 - Paint System A
 483: PCS Date 01/01/1975
 453: Bearing Type 1 2 - Rockers & Bolsters
 455: Bearing Type 2 N - None
 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 0 - Other

Geometric

48: Max Span Length (ft) 51.0
 49: Structure Length (ft) 171.0
 52: Deck Width, Out-To-Out (ft) 42.3
 424: Deck Area (sf) 7233.3
 32: Appr Roadway Width (ft) 38.0
 51: Road Width, Curb-Curb (ft) 37.8
 50A: Curb/SW Width: Left (ft) 0
 50A: Curb/SW Width: Right (ft) 0
 34: Skew (deg) 6
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 18.12
 336A: Min Vert Clrnce IR Cardinal (ft) 99
 336B: Min V Clr IR Non-Cardinal (ft) 0
 578: Culvert Length (ft) 0

Age and Service

27: Year Built/ 106 Rehab 1975 / 0000
 42A: Service On 1 - Highway
 42B: Service Under 1 - Highway, with or w/out pedestrian
 28A: Lanes on 02
 28B: Lanes Under 05
 19: Bypass Length 1
 29: ADT 14583
 109: % Trucks (%) 7

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 (%) 150
 704: Analysis Date 07/01/1975
 63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Inspections

90: Routine Insp. *Months* 12 06/28/2021
 92A: FCM Insp. N
 92B: Dive Insp. N
 92C: Special Insp. N
 92D: UBIT Insp. N
 92E: Drone Insp.
 Inspector Persanyi, Andrea

Inspector: Andrea Persanyi
 Inspection Date: 06/28/2021

Structure Number: 1814931
 Facility Carried: USR 422

Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	3 - Mod.	7244	sq. ft.	6882	362	0	0
CS 2 - A few transverse leaching cracks. Minor delams.							
510 - Wearing Surfaces		6456	sq. ft.	6134	322	0	0
CS 2 - A few cracks throughout.							
107 - Steel Open Girder/Beam	3 - Mod.	855	ft.	0	727	128	0
CS 2 - Surface rust, CS 3 - Rust heavier along lower flanges. Rusting section loss near beam ends.							
515 - Steel Protective Coating		6074	sq. ft.	0	4774	1000	300
CS 2 - Peeling & faded paint. CS 3 - Surface rust. CS 4 - Paint failure at beam ends.							
205 - Reinforced Concrete Column	3 - Mod.	9	each	9	0	0	0
215 - Reinforced Concrete Abutment	3 - Mod.	86	ft.	74	12	0	0
CS 2 - Cracks. Rust stains.							
234 - Reinforced Concrete Pier Cap	3 - Mod.	128	ft.	127	1	0	0
CS 2 - Minor delams.							
303 - Assembly Joint with Seal	3 - Mod.	85	ft.	76	8	1	0
CS 2 - Both joint seals starting to separate. Gouges to rear riser bar. CS 3 - ExJt banging at rear abutment with no visible movement of armor at top. Cracks & spalls to forward exJt header.							
311 - Movable Bearing	3 - Mod.	20	each	0	10	10	0
CS 2 - Surface rust. CS 3 - Areas of heavy rust and pack rust. P1 and P3 rockers slightly tipped in at 85° f.							
313 - Fixed Bearing	3 - Mod.	5	each	0	5	0	0
321 - Reinforced Concrete Approach Slab	3 - Mod.	1900	sq. ft.	912	950	38	0
CS 2 - Cracks. CS 3 - Concrete break up along nearly entire right edge of rear slab. 3 SF concrete break up in lane #2 along forward approach wearing surface. 3 SF asphalt patch in rear lane #2 and two 4 SF asphalt patches along forward exJt header.							
331 - Reinforced Concrete Bridge Railing	3 - Mod.	342	ft.	322	17	3	0
CS 2 - A few cracks. Minor scaling. CS 3 - Spall to top edge of right rail and toe.							

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Element Inspection

815 - Drainage	3 - Mod.	6	each	4	2	0	0
CS 2 - partially plugged scuppers							
830 - Abutment Backwall	3 - Mod.	86	ft.	84	0	2	0
CS 3 - A few cracks. Small spalls in rear bay 2 & forward bay 1.							

ODOT District: 12

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Facility Carried: USR 422

Traffic On: 1 - Highway

Rehab Date:

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Feature Inters: SR 91 SOM CENTER RD

Traffic Under: 1 - Highway, with or w/out pedestrian

Insp: 01 - State Highway Agency

FIPS Code: 72928 - SOLON (CUY county)

Location: DISTRICT 12

5 MI E I-271

Resp A:

Insp

Resp B:

Inspector

Persanyi, Andrea

Inspection Date 06/28/2021

Reviewer Seif, Youssef

Inspector Comments - Deck and Approach

Deck

Approach

Approach Wearing Surface

Small potholes in rear & forward lane #1. Minor asphalt break up against both slabs.

Approach Guardrail

Collision damage with one damaged post at rear-left.

Inspector Comments - General Appraisal

Superstructure

Beams/Girders (LF)

2008 QAR sticker 12-0013.

Diaphragm/X-Frames

Surface rust. Areas of heavy rusting section loss to end frames with thru holes in rear bay 3 & forward bay 1.

Bearing Devices (EA)

Fatigue (LF)

Welded cover plates at center pier.

Utilities

Damaged conduit on P2C1.

Substructure

Pier Columns/Bents (EA)

Note: 5 of 9 columns fiber wrapped.

Slope Protection

Cracks, some wide. Uneven settlement. Rear concrete is buckling & undermining below bay 1 & breaking up along drainage trough. Portion of forward concrete is collapsed with advanced undermining below bay 1 near top & broken up around base of pier columns.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical