

Inspector: Miller,Jason
 Inspection Date: 09/20/2023

Structure Number: 1807730
 Facility Carried: DETROIT RD - SR254

Ohio Bridge Inspection Summary Report

CUY-00002-0597 (1807730)

2: District 68056 - ROCKY RIVER (CUY county)
 District 12

5A: Inventory Route 1 00002

21: Major Maint A/B 01 - State Highway Agency /
 225 Routine Main A/B 04 - City or Municipal Highway /
 Agency
 221 Inspection A/B 01 - State Highway Agency /
 220: Inv. Location DISTRICT 12

7: Facility On DETROIT RD - SR254
 6: Feature Ints IR-90(CUY-90-0595)
 9: Location IR90 AND JCT SR254
 Lat, Lon 41.472528 , -81.857206

Condition

58: Deck **5 - Fair Condition**
 58.01 Wearing Surface 6 - Satisfactory (1-10% distress)
 58.02 Joint 4- Poor (heavy leaking, offset)
59: Superstructure **7 - Good Condition**
 59.01 Paint & PCS 5 - Fair (10-15% corr.)
60: Substructure **4 - Poor Condition**
61: Channel **N**
61.01 Scour **N - Not Applicable**
62: Culverts **N - Not Applicable**

67.01 GA **4**

Appraisal

Sufficiency Rating 45.6 SD/FO 1 - SD
 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

Geometric

48: Max Span Length (ft) 94.0
 49: Structure Length (ft) 249.0
 52: Deck Width, Out-To-Out (ft) 68.0
 424: Deck Area (sf) 16932
 32: Appr Roadway Width (ft) 54.0
 51: Road Width, Curb-Curb (ft) 54.0
 50A: Curb/SW Width: Left (ft) 6
 50A: Curb/SW Width: Right (ft) 6
 34: Skew (deg) 45
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 14.51
 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 (%) 150
 704: Analysis Date 08/11/2020
 8 - Load and Resistance Factor Rating

Structure Type

43: Bridge Type 4 - Steel continuous
 02 - Stringer/Multi-beam or Girder
 N- Not Applicable
 45: Spans Main / Approach 3 / 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)
 1 - Super Plasticized
 422: WS Date 07/01/1993
 423: WS Thick (in) 2.0
 482: Protective Coating 5 - Paint System OZEU
 483: PCS Date 09/22/2000
 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

Age and Service

27: Year Built/ 106 Rehab 1977 / 0000
 42A: Service On 5 - Highway-pedestrian
 42B: Service Under 1 - Highway, with or w/out pedestrian
 28A: Lanes on 04
 28B: Lanes Under 06
 19: Bypass Length 3
 29: ADT 9734
 109: % Trucks (%) 4

Inspections

		Months	
90: Routine Insp.		12	09/20/2023
92A: FCM Insp.	N	0	
92B: Dive Insp.	N	0	
92C: Special Insp.	N	0	
92D: UBIT Insp.	N	0	
92E: Drone Insp.	N	0	

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63: Analysis Method	(LRFR) rating report by rating factor (RF) 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.	16932	sq. ft.	11194	4230	1500	8
	CS 2 - Cracks. CS 3 - Delams, spalls (mostly over WB traffic). Rear-right corner spalled off. Wide cracks. CS 4 - Two spalls in span 2 with 4 or more rebar exposed.						
510-Wearing Surfaces		13446	sq. ft.	11721	1575	150	0
	CS2 - Map cracks and other cracks. CS3- Some wide cracking. Spalls near rear in SB lanes.						
107-Steel Open Girder/Beam	3 - Mod.	1944	ft.	1829	100	15	0
	CS2- Scrapes & gouges as deep as 1/2" and drilled out crack to right fascia over EB lane 3. Right fascia bent 1" east over EB traffic (at old collision damage). Other scrapes to beam 7 over EB lane 3. CS3- Isolated areas of moderate rusted section loss.						
515-Steel Protective Coating		23134	sq. ft.	11534	10000	1260	340
	CS2- Chalking, faded. Freckled rust. CS3- Peeling & blistering paint. CS4- Fire damage at forward abutment, left fascia. Areas of unprotected steel.						
205-Reinforced Concrete Column	3 - Mod.	10	each	4	1	4	1
	CS2- Cracking to P2C4. CS3- P2C1- Wide cracking and ~8 sf delam. P2C2- 6sf spall with exposed rebar. P1C1- Wide cracking and ~10 sf delam. P1C5- Wide cracking and ~15 sf delam. CS4- P2:C3, 4+ continuous rebars exposed.						
215-Reinforced Concrete Abutment	3 - Mod.	192	ft.	164	25	3	0
	CS2- Cracks. Some scaling at forward. Pop outs near bottom of forward. CS3- Spall and delaminated area at rear.						
521-Concrete Protective Coating		3456	sq. ft.	3448	0	0	8
	CS4- Not effective.						
234-Reinforced Concrete Pier Cap	3 - Mod.	180	ft.	130	10	40	0
	CS2- Diagonal crack to left cantilever and other wide cracks to top of cap. CS3- Crack as deep as 3" and 1" wide on South face of P1 above C5, large delam with shear-type crack to right cantilever of P1. Large delams, and wide cracks on P2 cap.						
521-Concrete Protective Coating		1620	sq. ft.	1620	0	0	0
305-Assembly Joint without Seal	3 - Mod.	136	ft.	0	88	6	42
	CS2- Areas of tar and debris in joints. CS3- Gouges to armor. Rusting section loss to forward. A few spalls to header. CS4- Areas of header spalled out that are asphalt patched. Rusting thru holes as large as 2" x 48" to all four sidewalk cover plates.						

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311-Movable Bearing	3 - Mod.	24	each	0	8	16	0
CS2- Surface rusting. CS3- Pack rust to abutment rockers.							
313-Fixed Bearing	3 - Mod.	8	each	0	8	0	0
CS2- All have surface rust.							
321-Reinforced Concrete Approach Slab	3 - Mod.	2700	sq. ft.	2449	125	75	51
CS2 - A few cracks. CS3- Wide full-length cracks to both. CS4- Asphalt patches along ExJt to both.							
331-Reinforced Concrete Bridge Railing	3 - Mod.	588	ft.	368	215	5	0
Bent post to left rail over WB lane 1. Fence posts at forward right removed by accident damage. CS2- Cracks. CS3- A few spalls & delams.							
521-Concrete Protective Coating		2940	sq. ft.	2940	0	0	0
815-Drainage	3 - Mod.	12	each	1	11	0	0
CS2- Partially plugged scupper troughs with vegetation growing.							
830-Abutment Backwall	3 - Mod.	192	ft.	167	15	10	0
CS2- Vertical cracks, some leaching. CS3- Large spall with exposed rebar in rear bay 5. Loose delams. Other spalls.							
521-Concrete Protective Coating		768	sq. ft.	748	0	0	20
CS4- Not effective.							

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ODOT District: District 12

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Date Built: 07/01/1977

Major Maint: 01 - State Highway Agency

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Traffic On: 5 - Highway-pedestrian

Rehab Date:

Routine Maint: 04 - City or Municipal Highway Agency

Feature Inters: IR-90(CUY-90-0595)

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

Insp. Resp A: 01 - State Highway Agency

FIPS Code: 68056 - ROCKY RIVER (CUY county)

Location: DISTRICT 12

IR90 AND JCT SR254

Insp Resp B:

Inspector

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Reviewer Seif,Youssef

Inspector Comments - Deck and Approach

Deck

Floor/Slab

Spalls over Westbound traffic in bay 1 over lane 1, bay 7 over high-speed berm, lane 1, 2,3 and low speed berm, bay 4 over lane 2.

Spalls over Eastbound traffic in bay 7 over lane 3 and bay 4 over lane 2 and bay 6 over lane 2.

Curbs/Sidewalk

Cracks. Concrete patches. Scaling. Delams. Spall with exposed rebar to left curb near forward. Other spalls.

Approach

Approach Wearing Surface

A few sealed cracks.

Approach Guardrail

Some rusting through holes to rails. Post rot.

Signs

No bridge end markers.

Inspector Comments - General Appraisal

Superstructure

Diaphragm/X-Frames

Rusted section loss with rusted thru holes in forward bays 1 & 7 and rear bay 7. Collision damage to horizontal angle in bay 7 over EB lane 3.

Utilities

Some disconnected conduits in bays 6. Some broken straps. Disconnected junction box laying on P2 in bay 1. Rusting section loss to hardware. Under bridge lighting at rear abutment is missing 1 lamp & another is hanging from wire.

Substructure

Slope Protection.

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Slight uneven settlement at forward.

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Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical