

Inspector: Ropelewski,Robert

Inspection Date: 09/21/2023

Structure Number: 4302915

Facility Carried: SR 84

Ohio Bridge Inspection Summary Report

LAK-00084-0633 (4302915)

2: District 85484 - WILLOUGHBY (LAK county)
ict
12

5A: Inventory Route 1 00084

21: Major Maint A/B 01 - State Highway Agency /

7: Facility On SR 84

225 Routine Main A/B 04 - City or Municipal Highway Agency /

6: Feature Ints CHAGRIN R. 1.81 MI W 306

221 Inspection A/B 01 - State Highway Agency /

9: Location 0.5 MI E SR174

220: Inv. Location DISTRICT 12

Lat, Lon 41.630103 ,-81.400317

Condition

58: Deck **5 - Fair Condition**
 58.01 Wearing Surface 5 - Fair (10-15%, 2% asphalt patch)
 58.02 Joint 5- Fair (obvious leaking, 1" offset)

59: Superstructure **5 - Fair Condition**
 59.01 Paint & PCS N - Not Applicable

60: Substructure **6 - Satisfactory Condition**

61: Channel **6**
61.01 Scour **6 - Satisfactory**

62: Culverts **N - Not Applicable**

67.01 GA **5**

Structure Type

43: Bridge Type 6 - Prestressed concrete continuous
 05 - Box Beam or Girders - Multiple
 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 3 - Compression Seal

414B: Joint Type 2 N - None

108A: Wearing Surface 6 - Bituminous
 N- Not Applicable

Appraisal

Sufficiency Rating 79.7 SD/FO 0 - ND

36: Rail, Tr, Gd, Term Std 1 N 1 1

72: Approach Alignment 6 - Equal to present minimum criteria

113: Scour Critical 5 - Scour within limits of footing or piles

71: Waterway Adequacy 6 - Occasional Overtopping of Approaches

422: WS Date 01/01/1984

423: WS Thick (in) 3.1

482: Protective Coating N - None or Not Applicable

483: PCS Date

453: Bearing Type 1 4 - Elastomeric (Plain)

455: Bearing Type 2 N - None

528: Foundn: Abut Fwd 4 - Spread Footing (on soil)

533: Foundn: Abut Rear 4 - Spread Footing (on Soil)

536: Foundn: Pier 1 4 - Spread Footing (on soil)

539: Foundn: Pier 2 0 - Other

Geometric

48: Max Span Length (ft) 64.0

49: Structure Length (ft) 194.0

52: Deck Width, Out-To-Out (ft) 40.0

424: Deck Area (sf) 7760

32: Appr Roadway Width (ft) 40.0

51: Road Width, Curb-Curb (ft) 34.0

50A: Curb/SW Width: Left (ft) 6

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

34: Skew (deg) 10

33: Bridge Median 0 - No median

54B: Min Vert Underclearance (ft) 0

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 1931 / 1984

42A: Service On 1 - Highway

42B: Service Under 5 - Waterway

28A: Lanes on 02

28B: Lanes Under 00

19: Bypass Length 2

29: ADT 7042

109: % Trucks (%) 2

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 07/01/1995

63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Inspections

	Months	
90: Routine Insp.	12	09/21/2023
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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	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
15-Prestressed Concrete Top Flange	3 - Mod.	7761	sq. ft.	7284	0	477	0
	See EL #104.						
510-Wearing Surfaces		6494	sq. ft.	0	5244	1250	0
	<p>Water leaking thru box beam joints. CS2 - Many cracks. Asphalt wearing surface over 5 years old.</p> <p>CS3 - Asphalt spalling off right edge over drip strip. Areas of asphalt break up thru out. Wide cracks over box beam joints. Asphalt patches, potholes.</p>						
104-Prestressed Concrete Closed Web/Box Girder	3 - Mod.	1910	ft.	1133	300	477	0
	<p>CS2 - Lightly mottled areas.</p> <p>CS3 - Leaking joints with efflorescence & rust stains in all spans. Numerous wet, mottled areas thru out. Spall/delam locations on box beams: span 1 = beam 3 and beam 10 near P1, span 2= beam 6, span 3 = beam 3 near mid-span (with one broken exposed strand), beam 4 rust stained delamination, beam 6 at P2, beam 7 two locations near mid-span. Fascia beams 1 and 10 spalled at grout plug over P1. Delams & spalls (with rebar/stirrup exposure) along top edge of right fascia box beam.</p>						
210-Reinforced Concrete Pier Wall	3 - Mod.	76	ft.	56	15	5	0
	<p>CS2 - Cracks. Scaling, heavier at waterline. Concrete patches. Rust stains, efflorescence and moisture. A few delams.</p> <p>CS3 - A few spalls. A few wide vertical cracks to both.</p>						
215-Reinforced Concrete Abutment	3 - Mod.	80	ft.	32	36	10	2
	<p>CS2 - Leaching cracks. Rust stains, efflorescence and moisture. Concrete patches. Honeycombed areas. Minor delams.</p> <p>CS3 - Rust stained cracks. Spall to forward-right near top.</p> <p>CS4- Void with exposed 360° rebar in rear abutment below right beam.</p>						
234-Reinforced Concrete Pier Cap	3 - Mod.	80	ft.	62	18	0	0
	CS2 - Cracks.						
302-Compression Joint Seal	3 - Mod.	80	ft.	20	30	10	20
	<p>CS2 - Cracks to ExJt headers. Areas of surface rust and shallow section loss. Few light gouges. Minor shallow spalls.</p> <p>CS3 - Areas of pushed up & torn seals to both.</p> <p>CS4 - Joint leaks to most of rear and minor spots to forward.</p>						
310-Elastomeric Bearing	3 - Mod.	120	each	119	1	0	0
	CS2 - Bearing pad has shifted under left fascia box beam at forward abutment.						
321-Reinforced Concrete Approach Slab	3 - Mod.	1700	sq. ft.	1700	0	0	0
	Paved over.						

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330-Metal Bridge Railing	3 - Mod.	382	ft.	0	257	45	80
<p>CS2 - Bolts missing on right rail posts 12-14 and left rail post 7 (holes in railing do not line up with holes in posts). Collision damage thru out. Galvanization has lost effectiveness throughout.</p> <p>CS3 - A few spalls at right rail post anchors, some with section loss to rail anchor bolts.</p> <p>CS4 - Many rusting thru holes in right rail.</p>							
815-Drainage	3 - Mod.	2	each	1	0	1	0
<p>CS3 - Areas of bent or loose drip strips. Several sections of drip strips missing from right edge.</p>							

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ODOT District: District 12

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Date Built: 07/01/1931

Major Maint: 01 - State Highway Agency

Facility Carried: SR 84

Traffic On: 1 - Highway

Rehab Date: 01/01/1984

Routine Maint: 04 - City or Municipal Highway Agency

Feature Inters: CHAGRIN R. 1.81 MI W 306

Traffic Under: 5 - Waterway

Insp. Resp A: 01 - State Highway Agency

FIPS Code: 85484 - WILLOUGHBY (LAK county)

Location: DISTRICT 12

0.5 MI E SR174

Insp Resp B:

Inspector

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Reviewer Seif,Youssef

Inspector Comments - Deck and Approach

Deck

Curbs/Sidewalk

Transverse cracks, some leaching and rust stained. Many shallow spalls, some with exposed rebar. Some delams.

Approach

Approach Wearing Surface

Approach Embankment

Cantilevered portion of forward-right wingwall is undermined as deep as 36". Both left approach walks have been ramped with asphalt.

Approach Guardrail

Minor collision damage thru out with several missing spacers at rear right and one at rear left. Some post rot throughout. Rusted thru holes at rear right. Galvanization losing effectiveness.

Signs

No bridge end markers.

Inspector Comments - General Appraisal

Superstructure

Substructure

Wingwalls

Many leaching cracks, rust stains, 10 sf of spalls with exposed rebar at forward-right. Both forward wingwalls are thru cracked. 2023 QAR sticker FWD right

Substructure Scour

3' deep scour holes at both piers. Pier 1 footing is exposed on East side most length with up to 6" of vertical face exposed with no undermining. Up to 10" of East side of of pier 2 footing vertical face is exposed with no undermining. Rear abutment footing exposed along entire length. Areas of loose sediment around piers. Note: All substructure units on rock.

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Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel Hydraulic Opening

A few logs hung up on upstream nose of P1.

Channel

Channel Alignment

Flow is mostly through spans 1 & 2 with debris and silting up in span 3.

Channel Protection

Some stone has washed away.

Scour Critical

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Pictures