

Ohio Bridge Inspection Summary Report

LAK-00535-0469 (4301862)

2: District 12 59430 - PAINESVILLE TWP (LAK 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 00535
 7: Facility On SR535
 6: Feature Ints SR 2 (LAK-2-1752)
 9: Location 1.1 MI E GRAND RIVER
 Lat, Lon 41.746894 , -81.216119

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 4 - Poor PCS (15-20% corr.)
60: Substructure **6 - Satisfactory Condition**
61: Channel **N**
61.01 Scour **N - Not Applicable**
62: Culverts **N - Not Applicable**
67.01 GA **5**

Structure Type

43: Bridge Type 4 - Steel continuous
 02 - Stringer/Multi-beam or Girder
 N- Not Applicable
 45: Spans Main / Approach 5 / 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 3 - Latex Concrete or similar additive
 N- Not Applicable

Appraisal

Sufficiency Rating 65.8 SD/FO 2 - FO
 36: Rail, Tr, Gd, Term Std 1 0 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 10/31/2004
 423: WS Thick (in) 1.2
 482: Protective Coating 0 - Other Paint
 483: PCS Date 01/01/1992
 453: Bearing Type 1 3 - Sliding (Bronze)
 455: Bearing Type 2 N - None
 528: Foundn: Abut Fwd 1 - Steel H Piles (Other size)
 533: Foundn: Abut Rear 1 - Steel H Piles (Other Size)
 536: Foundn: Pier 1 1 - Steel H Piles (Other size)
 539: Foundn: Pier 2 0 - Other

Geometric

48: Max Span Length (ft) 76.0
 49: Structure Length (ft) 314.0
 52: Deck Width, Out-To-Out (ft) 36.9
 424: Deck Area (sf) 11586.6
 32: Appr Roadway Width (ft) 30.0
 51: Road Width, Curb-Curb (ft) 30.0
 50A: Curb/SW Width: Left (ft) 2.0
 50A: Curb/SW Width: Right (ft) 2.0
 34: Skew (deg) 36
 33: Bridge Median 0 - No median
 54B: Min Vert Underclearance (ft) 14.97
 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 1964 / 0000
 42A: Service On 5 - Highway-pedestrian
 42B: Service Under 1 - Highway, with or w/out pedestrian
 28A: Lanes on 02
 28B: Lanes Under 04
 19: Bypass Length 2
 29: ADT 5209
 109: % Trucks (%) 11

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 07/01/1973
 63: Analysis Method 6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Inspections

90: Routine Insp. *Months* 12 09/01/2021
 92A: FCM Insp. N
 92B: Dive Insp. N
 92C: Special Insp. N
 92D: UBIT Insp. N
 92E: Drone Insp.
 Inspector Gerstenslager, Michael

Inspector: Michael Gerstenslager

Structure Number: 4301862

Inspection Date: 09/01/2021

Facility Carried: SR535

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.	11591	sq. ft.	10079	1100	50	362
	<p>CS 4: Spalls with 4 or more exposed rebar with section loss.</p> <p>CS 3 : Spalls with exposed rebar to right edge of floor over Westbound lanes. Delaminations.</p> <p>CS 2: Leaching cracks, some with stalactites. Epoxy injected areas. Rust stains from rebar chairs throughout.</p>						
805 - Wearing Surface - Monolithic Concrete		9420	sq. ft.	0	9420	0	0
	CS 2:						
107 - Steel Open Girder/Beam	3 - Mod.	1545	ft.	1239	275	30	1
	<p>CS 4: 2" rusting through hole in web of beam 1 at forward .</p> <p>CS 3: Heavy rusted section loss at beam ends. Deep gouge with 1/2" tear in lower flange to right fascia over Westbound lane 2.</p> <p>CS 2: Minor section loss to flanges throughout.</p>						
515 - Steel Protective Coating		13905	sq. ft.	0	12155	1300	450
	<p>CS 4: Areas of paint failure at beam ends and to flanges throughout.</p> <p>CS 3: Peeling and cracking to finish and primer coats. Areas of surface rust throughout.</p> <p>CS 2: Chalking and faded paint.</p>						
205 - Reinforced Concrete Column	3 - Mod.	16	each	10	6	0	0
	CS 2: Delaminations as large as 8 sf to P1C3 & 4, P2C1,P3C1 & 3, and P4C3 and cracks.						
215 - Reinforced Concrete Abutment	3 - Mod.	91	ft.	67	22	2	0
	<p>CS 3: 2' spall in bay 1 at rear.</p> <p>CS 2: Cracks, rust stains.</p>						

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234 - Reinforced Concrete Pier Cap	3 - Mod.	183	ft.	163	20	0	0
CS 2: Cracks and rust stains to P3 cap.							
305 - Assembly Joint without Seal	3 - Mod.	60	ft.	0	47	0	13
CS 4: Rusted through hole to rear-left curb plate. Asphalt patch to forward joint in Northbound lane.							
CS 2: A few gouges in armor. Section loss to armor. Cracks and concrete break up to both headers. Evidence of leakage down both backwalls.							
311 - Movable Bearing	3 - Mod.	25	each	0	15	0	10
CS 4: Abutment bearings have pack rust and are engulfed in debris.							
CS 2: Rust.							
313 - Fixed Bearing	3 - Mod.	5	each	0	5	0	0
CS 2: Rust.							
321 - Reinforced Concrete Approach Slab	3 - Mod.	1500	sq. ft.	733	733	34	0
CS 3: Concrete break up along both approach pavements.							
CS 2: Long diagonal cracks to both. Map cracking.							
331 - Reinforced Concrete Bridge Railing	3 - Mod.	628	ft.	537	85	6	0
CS 3: Spalls to inside of left rail.							
CS 2: Cracks, rust stains and small delaminations.							
815 - Drainage	3 - Mod.	16	each	0	15	0	1
CS 4: 1 plugged scupper at forward.							
CS 2: Partially plugged scuppers. Rusted section loss to grates.							
830 - Abutment Backwall	3 - Mod.	91	ft.	71	20	0	0
CS 2: Cracks.							

ODOT District: 12

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Date Built: 07/01/1964

Major Maint: 01 - State Highway Agency

Facility Carried: SR535

Traffic On: 5 - Highway-pedestrian

Rehab Date:

Routine Maint: 01 - State Highway Agency

Feature Inters: SR 2 (LAK-2-1752)

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

Insp: 01 - State Highway Agency

FIPS Code: 59430 - PAINESVILLE TWP (LAK county)

Location: DISTRICT 12

1.1 MI E GRAND RIVER

Resp A:

Insp

Resp B:

Inspector

Gerstenslager,Michael

Inspection Date 09/01/2021

Reviewer Seif,Youssef

Inspector Comments - Deck and Approach

Deck

Floor/Slab (SF)

Spalls forming over traffic - Over EB traffic: bay 1 over lane 2, bays 3 and 4 over lane 2, bay 4 over lane 1. Over WB traffic: bay 2 over lane 2 bay 3 over lane 1,

Edge of Floor/Slab (LF)

Leaching cracks. Mottled areas. A few spalls with exposed rebar.

Curbs/Sidewalk (LF)

Cracks, minor delams. Spalls, some with exposed rebar. Concrete patches.

Bridge Railing (LF)

Some rust severed hardware.

Expansion Joint (LF)

As much as 9" of dirt & debris on abutment seats.

Approach

Approach Wearing Surface (EA)

Cracks.

Inspector Comments - General Appraisal

Superstructure

Beams/Girders (LF)

Scrapes & old ground out gouges to lower flanges over WB mainline & ramp. A few scrapes to lower flanges over EB traffic. 2008 QAR STICKER 12-0010.

Diaphragm/X-Frames (EA)

Heavy rusting section loss to endframes. Horizontal angle to forward endframe 1 is rust severed. Rusted thru hole in forward endframe #4

Fatigue (LF)

Welded moment plates over piers 2, 3 & 4.

Substructure

Abutment Walls (LF)

Seat has heavy debris.

Slope Protection (EA)

Tears in grout bags. Small voids in forward slope. Forward right embankment has 4X4 hole with undermining up to 12".

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical

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Pictures