

# Ohio Bridge Inspection Summary Report

**LAK-00006-0206 (4305434)**

2: District 12 85512 - WILLOUGHBY HILLS (LAK county)  
 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 LAK

5A: Inventory Route 1 00006  
 7: Facility On CHARDON RD  
 6: Feature Ints IR-271  
 9: Location LAK-271-1.05

Condition	
<b>58: Deck</b>	<b>5 - Fair Condition</b>
58.01 Wearing Surface	6 - Satisfactory (1-10% distress)
58.02 Joint	6- Satisfactory (isolated leaking)
<b>59: Superstructure</b>	<b>5 - Fair Condition</b>
59.01 Paint & PCS	2 - Critical PCS (30-40% corr.)
<b>60: Substructure</b>	<b>4 - Poor Condition</b>
<b>61: Channel</b>	<b>N</b>
<b>61.01 Scour</b>	<b>N - Not Applicable</b>
<b>62: Culverts</b>	<b>N - Not Applicable</b>

Structure Type	
43: Bridge Type	4 - Steel continuous
	02 - Stringer/Multi-beam or Girder
	N- Not Applicable
45: Spans Main / Approach	6 / 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

**67.01 GA 4**

Appraisal				
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	06/01/2006
423: WS Thick (in)	1.2
482: Protective Coating	8 - Paint System A with intermediate tie coat
483: PCS Date	01/01/1988
453: Bearing Type 1	2 - Rockers & Bolsters
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	4 - Spread Footing
539: Foundn: Pier 2	0 - Other

Geometric	
48: Max Span Length (ft)	95.0
49: Structure Length (ft)	492.0
52: Deck Width, Out-To-Out (ft)	36.8
424: Deck Area (sf)	18084.0
32: Appr Roadway Width (ft)	35.0
51: Road Width, Curb-Curb (ft)	30.0
50A: Curb/SW Width: Left (ft)	2.2
50A: Curb/SW Width: Right (ft)	2.2
34: Skew (deg)	32
33: Bridge Median	0 - No median
54B: Min Vert Underclearance (ft)	15.79
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	1963 / 0000
42A: Service On	5 - Highway-pedestrian
42B: Service Under	1 - Highway, with or w/out pedestrian
28A: Lanes on	02
28B: Lanes Under	06
19: Bypass Length	1
29: ADT	5796
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	07/01/1973
63: Analysis Method	6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Inspections		
	<i>Months</i>	
90: Routine Insp.	12	10/26/2020
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: 10/26/2020

Structure Number: 4305434  
 Facility Carried: CHARDON RD

Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
<b>12 - Reinforced Concrete Deck</b>	3 - Mod.	17823	sq. ft.	13323	2600	1900	0
805 - Wearing Surface - Monolithic Concrete		14730	sq. ft.	14015	700	15	0
<b>107 - Steel Open Girder/Beam</b>	3 - Mod.	2455	ft.	1943	500	10	2
515 - Steel Protective Coating		29403	sq. ft.	0	23103	5800	500
<b>205 - Reinforced Concrete Column</b>	3 - Mod.	15	each	8	0	7	0
<b>215 - Reinforced Concrete Abutment</b>	3 - Mod.	84	ft.	47	14	23	0
<b>234 - Reinforced Concrete Pier Cap</b>	3 - Mod.	191	ft.	181	8	2	0
<b>305 - Assembly Joint without Seal</b>	3 - Mod.	55	ft.	43	10	2	0
<b>311 - Movable Bearing</b>	3 - Mod.	30	each	0	20	10	0
<b>313 - Fixed Bearing</b>	3 - Mod.	5	each	0	5	0	0
<b>321 - Reinforced Concrete Approach Slab</b>	3 - Mod.	1500	sq. ft.	1340	120	40	0
<b>331 - Reinforced Concrete Bridge Railing</b>	3 - Mod.	976	ft.	436	500	40	0
<b>815 - Drainage</b>	3 - Mod.	11	each	5	4	2	0
<b>830 - Abutment Backwall</b>	3 - Mod.	83	ft.	68	10	5	0

ODOT District: 12

## LAK-00006-0206\_(4305434)

Date Built: 07/01/1963

Major Maint: 01 - State Highway Agency

Facility Carried: CHARDON RD

Traffic On: 5 - Highway-pedestrian

Rehab Date:

Routine Maint: 04 - City or Municipal Highway Agency

Feature Inters: IR-271

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

Insp: 01 - State Highway Agency

FIPS Code: 85512 - WILLOUGHBY HILLS (LAK county)

Location: LAK

LAK-271-1.05

Resp A:

Insp

Resp B:

Inspector

Persanyi,Andrea

Inspection Date

10/26/2020 12:00:00 AM

Reviewer Seif,Youssef

### Inspector Comments - Deck and Approach

#### Deck

##### Floor/Slab (SF)

Timber sub-decked over traffic. Transverse leaching cracks, mottled areas, stalactites, epoxy injected areas. 75+ sf of spalls. Full depth repair in bay 1 over NB mainline.

##### Edge of Floor/Slab (LF)

A few cracks.

##### Bridge Wearing Surface (SF)

Minor delams, a few cracks, area of spalling and asphalt patches in EB berm.

##### Curbs/Sidewalk (LF)

Cracks, delams & spalls with exposed rebar to curbs and sidewalks.

##### Bridge Railing (LF)

Some fence base plate anchor bolt nuts not fully tightened down. Spalls, some with exposed rebar & anchor bolts. Delams. Aluminum rail is loose at rear-left and right rail is damaged in two location.

##### Deck Drainage (EA)

Rusting thru holes to some downspouts.

##### Expansion Joint (LF)

Minor rusting section loss to armor. Minor gouges in forward armor. Asphalt patches to forward exjt header. Small rusting through holes in forward-right curb plate. Rust staining down backwalls.

#### Approach

##### Approach Wearing Surface (EA)

Cracks, asphalt patches, areas of asphalt break up in rear-left berm & forward-right berm.

##### Approach Slab (SF)

Cracks (some wide in both slabs along right edge line). Asphalt patch along forward exjt header in EB lane. concrete deterioration along exjt header EB and right berm at rear.

##### Approach Guardrail (EA)

Minor collision damage to rear-right & forward-left guardrail. Spall in rear-right concrete approach parapet. Rusted through holes in turn down at rear-right, some post rot.

##### Signs (EA)

No bridge end markers.

## **Inspector Comments - General Appraisal**

### **Superstructure**

#### **Beams/Girders (LF)**

Rusting section loss, heavier along exterior lower flange of fascia beams & near abutments with multiple thru holes at both ends of left fascia (rear endframe #1 completely severed from the beam). Two consecutive bent stiffeners on outside face of left fascia over SB lane #2.

#### **Diaphragm/X-Frames (EA)**

Bent horizontal xframe angle in bay 1 near the bent stiffeners noted in beam comments above. A few other bent horizontal angles. Endframe rusting section loss with thru holes in rear bays 1 & 4.

#### **Bearing Devices (EA)**

Rusting section loss, heavy to abutment rockers. Pack rust forming.

#### **Protective Coating System (LF)**

Rust, peeling (especially at xframe connections), blistering.

#### **Fatigue (LF)**

Plates welded to webs at welded splices.

#### **Utilities (LF)**

Utility lines from poles attached to right railing.

### **Substructure**

#### **Abutment Walls (LF)**

Cracks, rust stains, delams, failed concrete patches. Large spalls with 360° rebar exposure, some go into seats (spalled to edge of masonry plates of rear rocker #5 & forward rocker #3). Some delams & spalls to cheekwalls.

#### **Pier Caps (LF)**

Minor delams & cracks. 2 SF spall on P5 cap. Concrete patch on P1 cap.

#### **Pier Columns/Bents (EA)**

Delams as large as 15 SF to P3C1 & C3, P4C1 & C3, P5C3. 2 SF spall on P4C3. Note: some columns are fiber-wrapped.

#### **Backwalls (LF)**

Spalls, cracks, some leaching.

#### **Slope Protection (EA)**

As much as 13" of rear abutment footer & 9" of forward abutment footer are exposed.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

Scour Critical