

Inspector: Hazimihalis, Demetrios
 Inspection Date: 07/19/2023

Structure Number: 1830783
 Facility Carried: MILES ROAD CR 11

Ohio Bridge Inspection Summary Report

CUY-C0011-12.10 (1830783)

2: District 13358 - CHAGRIN FALLS (CUY county)
 District 12

5A: Inventory Route 1 15557

21: Major Maint A/B 02 - County Highway Agency /
 225 Routine Main A/B 02 - County Highway Agency /
 221 Inspection A/B 02 - County Highway Agency /
 220: Inv. Location CUY

7: Facility On MILES ROAD CR 11
 6: Feature Ints CHAGRIN RIVER
 9: Location 6344 FT E OF CHGRN RVR RD
 Lat, Lon 41.425826 , -81.398072

Condition	Structure Type
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58: Deck N - Not Applicable
 58.01 Wearing Surface 6 - Satisfactory (1-10% distress)
 58.02 Joint N - Not Applicable
59: Superstructure 4 - Poor Condition
 59.01 Paint & PCS N - Not Applicable
60: Substructure 6 - Satisfactory Condition
61: Channel 6
 61.01 Scour 7 - Good
62: Culverts N - Not Applicable
67.01 GA 4

43: Bridge Type 1 - Concrete
 11 - Arch - Deck
 N - Not Applicable
 45: Spans Main / Approach 1 / 0
 107: Deck Type N - Not Applicable
 408: Composite Deck N - Non-composite Construction
 414A Joint Type 1 N - None
 414B: Joint Type 2 N - None
 108A: Wearing Surface 6 - Bituminous
 N - Not Applicable

Appraisal	Inspection
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Sufficiency Rating 47.8 SD/FO 1 - SD
 36: Rail, Tr, Gd, Term Std 0 0 0 0
 72: Approach Alignment 7 - Better than present minimum criteria
 113: Scour Critical 8 - Stable for scour conditions
 71: Waterway Adequacy 9 - Bridge Above Flood Water Elevations

422: WS Date 01/01/1987
 423: WS Thick (in) 3.0
 482: Protective Coating N - None or Not Applicable
 483: PCS Date
 453: Bearing Type 1 N - None
 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 N - None (Such as most Culverts)
 539: Foundn: Pier 2 N - None (Such as most Culverts)

Geometric	Age and Service
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48: Max Span Length (ft) 119.0
 49: Structure Length (ft) 127.0
 52: Deck Width, Out-To-Out (ft) 30.4
 424: Deck Area (sf) 3860.8
 32: Appr Roadway Width (ft) 27.0
 51: Road Width, Curb-Curb (ft) 26.3
 50A: Curb/SW Width: Left (ft) 0
 50A: Curb/SW Width: Right (ft) 0
 34: Skew (deg) 0
 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	Inspections
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27: Year Built/ 106 Rehab 1915 / 1978
 42A: Service On 1 - Highway
 42B: Service Under 5 - Waterway
 28A: Lanes on 02
 28B: Lanes Under 00
 19: Bypass Length 3
 29: ADT 4146
 109: % Trucks (%) 7

Load Posting	Inspections
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41: Op/Post/Closed P - Posted for Load
 70: Posting 3 - 10.0-19.9% below legal loads
 70.01: Date 04/26/2019
 70.02: Sign Type 2- R12-H7 ("Emergency Vehicle Weight Limit", Axle Count, 2 trucks)
 734: Percent Legal (%) 85
 704: Analysis Date 01/29/2019
 63: Analysis Method 8 - Load and Resistance Factor Rating (LRFR) rating report by rating factor (RF) method using HL-93 loadings.

Inspections	Months
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90: Routine Insp. 12 07/19/2023
 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

Inspector Hazimihalis, Demetrios

DJHAZIMIHANIS
12/11/2023
PE# 70890

Inspector: Demetrios Hazimihalis

Inspection Date: 07/19/2023

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Facility Carried: MILES ROAD CR 11

Bridge Inspection Report

Executive Summary

REAR = WEST

Zone: W

See attached 2023 Updated Spall/DELAM Inspection Notes.
In-Depth Inspection performed in 2023 with Bridge Tracker.

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ODOT District: District 12

Date Built: 07/01/1915

Major Maint: 02 - County Highway Agency

Facility Carried: MILES ROAD CR 11

Traffic On: 1 - Highway

Rehab Date: 01/01/1978

Routine Maint: 02 - County Highway Agency

Feature Inters: CHAGRIN RIVER

Traffic Under: 5 - Waterway

Insp. 02 - County Highway Agency

FIPS Code: 13358 - CHAGRIN FALLS (CUY county)

Location: CUY

6344 FT E OF CHGRN RVR RD

Insp Resp A: Agency

Insp Resp B:

Inspector

Hazimihalis, Demetrios

Inspection Date

07/19/2023

Reviewer

Hazimihalis, Demetrios

Inspector Comments - Deck and Approach

Deck

Bridge Wearing Surface

Asphalt WS is worn. LONGGL cold JT, along CL, is spalled (Mostly sealed). Scattered asphalt patches totaling ~ 30 SF (Most in RIGHT lane near REAR).

- **FWD-LEFT:** 3" deep core hole.
- **REAR-RIGHT:** Spalled 1/4 SF x 1-1/2" deep adjacent to patch.

Bridge Railing

(21" Concrete. 41" to top of tube rail).

Aluminum railing:

- **LEFT:** Damaged from impact. Four (4) aluminum anchor posts (Posts 15-18) are slightly damaged (scraped/bent) and torn ~1" at top on FWD side. REAR side top rail attachment bolt on post 16 and post 17 have been pulled into washer/post hole slightly bending/damaging washer. One top rail attachment bolt (Two (2) per post) is missing on 5th post from REAR.
- **RIGHT:** Bottom rail is missing one attachment bolt to anchor post (At 13th post from the REAR end).

All of the bridge rail splices are loose, and several have failed causing rails to be discontinuous:

- **LEFT:** Three (3) top rail splices and two (2) bottom rails splices failed. Top rail at FWD-LEFT splice protrudes 1" into oncoming traffic.
- **RIGHT:** Two (2) top rail splices and one (1) bottom rail splice failed.

Concrete parapet: Scattered small spalls/DELAMs/coating failure:

- **LEFT:** Interior face: ~35 SF. Exterior face: ~30 SF.
- **RIGHT:** Interior face: ~15 SF spall/DELAM. Exterior face: ~4 SF Spall/DELAM near top (Over REAR edge of channel).

Approach

Approach Wearing Surface

Numerous transverse cracks (Up to 1/2" wide) at both APPRs (Most sealed). LONGGL cold

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JT, along CL, is sealed.

Approach Guardrail

All four GRAILS have been hit (Scrape marks visible) and/or are slightly damaged.

- **FWD-RIGHT:** Type A end terminal: Web of steel block-out on eastern most steel post is corroded through (~95% failed).

BTAs: No backer plates, nesting, block outs or posts on three (3) BTAs (Both REAR and FWD-RIGHT). Anchor bolts grouted into concrete parapets.

- **REAR-LEFT:** End terminal has 21" long dent/scrape. Through hole in web of steel block out.
- **FWD-LEFT BTA:** One (1) block-out dry rotten.
- **FWD-RIGHT BTA:** Two (2) anchor bolts are bent.

Signs

Type 3 object markers are low.

- **REAR-RIGHT:** Sign is 32" off ground.
- **FWD-LEFT:** Sign is 32" off ground. Vegetation blocking signs.

Inspector Comments - General Appraisal

Superstructure

Arch

Edges of arch have been repaired leaving a rough CJ running from end to end. Area around CJ repair are spall/DELAM totaling 565 SF (~27% of arch- North Half = 279 SF; South Half = 286 SF). 1 SF spall/DELAM at edge of arch at hinge. Several leach stained transverse cracks extend into the intrados of the arch. Majority of the CL transverse JT is spall/DELAM. Worst spalled area is at apex of arch exposing two (2) corroded REINF (LTV: 4-1/2' x 4' x 4"). Second worst spalled area is along LEFT CJ just above FWD hinge (6 SF x 5" deep). See 2023 Field Notes for details.

The intrados of the arch/curtain wall below the REAR and FWD hinges are spalled/DELAM at the corners:

REAR (102 SF Total):

- **LEFT:** 33 SF.
- **RIGHT:** 63 SF with a 6 SF x up to 14" deep spall along the mudline. 3 SF DELAM at centerline along mudline.

FWD (111 SF Total):

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- **LEFT:** 50 SF.
- **RIGHT:** 70 SF.

Arch Spandrel Walls

Both are slightly spalled around REAR/FWD hinge JTs and at CL ~ 1 SF. Areas of scattered rust stains.

- **REAR-LEFT:** Honeycombed 5 SF. Rust stains at REAR hinge with a ~2 SF x 2" deep spall with exposed REINF. 12 SF slight DELAM East of CL.
- **REAR-RIGHT:** ~2 SF spall 7" deep.

Utilities

- **LEFT:** UTIL brackets and U-bolts are corroded.
- **RIGHT:** Scattered corrosion on brackets, bracket anchor bolts and hanger rods. Pipe appears to be bent to the LEFT and down at the 8th hanger. The 7th, 8th and 9th hanger rods are not vertical (Lean to the LEFT - Hanger 8 the worst).

Substructure

Wingwalls

Stone WWs: Mortar missing between stones.

- **REAR-RIGHT:** 20" wide concrete fill between arch and stone WW is spalled 6 SF x up to 28" deep. Spall/missing mortar creates a void in stone WW at mudline (LTV along WW: 7" x 16" (AT mudline) to 30" x 42").
- **FWD-RIGHT:** Several stones (~6) are cracked/spalled along top and/or bottom edge (Up to 4' long by 6" height). Two (2) cap stones have ~ 30% loss along bottom edge. Void along bottom at RIGHT (LTV along Road: 33" x 16' x 8"). Bricks around/under conduit in WW are missing, creating a void (LTV: 33" x 31" x 27") above/under the pipe (~ 2' high under pipe). Exposed portion of conduit is heavily pack rusted.

Culvert

Inspector Comments - Waterway

Waterway Adequacy

Channel

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Channel Protection

Concrete channel protection under bridge has been washed downstream.

Scour Critical