Summary Report

Ohio Bridge Inspection Summary Report — CUY-00480-1842R_(1812548)

2: District	12 37240 - INDEPENDENCE (CUY county)	5A: Inventory Route	1 00480
21: Major Maint A/B	01 - State Highway Agency /	7: Facility On	IR 480 E.B.
225 Routine Main A/B	01 - State Highway Agency /	6: Feature Ints	CUYAHOGA RIVER-OHIO CANA
221 Inspection A/B	01 - State Highway Agency /	9: Location	.17 MI. E. OF JCT. SR-21
220: Inv. Location	CUY		

Condition

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

Appraisal

36: Rail, Tr, Gd, Term Std	0 1 1 1
72: Approach Alignment	8 - Equal to present desirable criteria
113: Scour Critical	9 - Foundations above flood waters
71: Waterway Adequacy	8 - Bridge Above Approaches

Geometric

48: Max Span Length (ft)	300.0
49: Structure Length (ft)	4155.0
52: Deck Width, Out-To-Out (ft)	73.0
424: Deck Area (sf)	303315.0
32: Appr Roadway Width (ft)	71.0
51: Road Width, Curb-Curb (ft)	69.5
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)	99
336A: Min Vert Clrnce IR Cardinal (ft)	17
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	07/01/2009
63: Analysis Method	6 - Load Factor (LF) rating reported by rating factor (RF) method using MS18 loading.

Structure Type

43: Bridge Type	4 - Steel continuous 03 - Girder and Floorbeam System N- Not Applicable
45: Spans Main / Approach	15 / 0
107: Deck Type	1 - Concrete Cast-in-Place
408: Composite Deck	N - Non-composite Construction
414A Joint Type 1	1 - Metal Finger
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	06/01/1989
423: WS Thick (in)	2.5
482: Protective Coating	5 - Paint System OZEU
483: PCS Date	10/31/2001
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	1 - Steel H Piles (Other size)
539: Foundn: Pier 2	0 - Other

Age and Service

27: Year Built/ 106 Rehab	1975 / 0000
42A: Service On	1 - Highway
42B: Service Under	8 - Highway - waterway - railroad
28A: Lanes on	04
28B: Lanes Under	04
19: Bypass Length	3
29: ADT	80534
109: % Trucks (%)	5

Inspections

		Months	
90: Routine Insp.		12	07/31/2020
92A: FCM Insp.	Y	24	08/25/2019
92B: Dive Insp.	N	0	
92C: Special Insp.	N	0	
92D: UBIT Insp.	Y	12	08/25/2019
92E: Drone Insp.			

Inspector Hammerschmidt,Steven

Elements

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	3 - Mod.	310934	sq. ft.	287468	16756	6710	0
	CS2- Areas on the underside of deck with minor spalls and delaminations and minor cracks up to 1/16" wide with light efflorescence. These locations were typically adjacent to the CS3 areas and at locations of transverse cracking on the underside of deck. CS3- Areas on the underside of deck with spalls greater than 1" deep and exposed reinforcement with minor loss and cracks exhibiting moderate efflorescence and rust staining. These locations were typical throughout the bridge in all spans. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
510 - Wearing Surfaces		296390	sq. ft.	284541	8899	2950	0
	CS2 - Areas of transverse and longitudinal cracking up to 1/16" wide and minor spalls along the joint headers. Cracking is typical in the negative moment regions. CS3 - Areas of spalls greater than 1" deep or with asphalt material filled in the spall. These locations are typically adjacent to the joints. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
107 - Steel Open Girder/Beam	3 - Mod.	16622	ft.	12100	4445	77	0
	CS2 - Areas of minor surface corrosion and at locations where stress relief holes have been drilled and there are no signs of crack propagation. These areas include locations near the transverse stiffeners and adjacent to the deck joints (hinge locations) CS3 - Areas where section loss (up to 10%) or pack rust is present. These locations are typically under the deck joints (hinge locations) and on the exterior faces of the girders at the splices. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						

Element Inspection

515 - Steel Protective Coating		603091	sq. ft.	464381	120618	15077	3015
	CS2 - Areas where the final coat is peeling and the final coat is appearing dull and has minor chalking. Locations include the exterior faces of Girders E and H and isolated areas on the bottom flange. CS3 - Areas where the final coat and primer are peeling and has loss of pigment. Locations include areas under and adjacent to the deck joints. CS4 - Areas where the bare metal is exposed and surface corrosion is present. Locations include areas adjacent to the drainage elements and on the exterior faces of Girders E and H at the splice plate locations. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
113 - Steel Stringer	3 - Mod.	24933	ft.	24542	387	4	0
	CS2 - Areas of minor surface corrosion typically adjacent to the expansion joint locations. CS3 - Areas in Span 2 where the welds between the stringer and floorbeam are broken or cracked. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
515 - Steel Protective Coating		150438	sq. ft.	149708	700	30	0
	CS2 - Areas where the final coat is peeling and has exposed the primer. Locations are isolated throughout the bridge. CS3 - Areas where the final coat and primer are peeling. Locations include areas under and adjacent to the deck joints. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
152 - Steel Floor Beam	3 - Mod.	11772	ft.	8161	3596	15	0
	CS2 - Areas with overcuts to the cope of the bottom strut and areas of minor surface corrosion. Locations are isolated throughout the bridge. CS3 - Areas with cracks at the cope of the bottom strut, areas of pack rust greater than 1/4" thick, and surface corrosion. Locations are isolated throughout the bridge and pack rust is between the top W-section and transverse stiffener connection. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						

Element Inspection

515 - Steel Protective Coating		148688	sq. ft.	110046	22303	14869	1470
	CS2 - Areas where the final coat is peeling. Locations are isolated throughout the bridge. CS3 - Areas where the final coat and primer are peeling. Locations include the top surface and edges of the diagonal and bottom strut member. CS4 - Areas where the bare metal is exposed and surface corrosion is present. Locations include the end floorbeams of the bridge and the floorbeams under the expansion joint locations. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
210 - Reinforced Concrete Pier Wall	3 - Mod.	429	ft.	322	34	73	0
	CS2 - Areas of delaminations, shallow spalls and unsealed cracks less than 1/16" wide. Locations are primarily isolated to the center "web" portion of the pier. CS3 - Areas that are currently being patched with exposed reinforcement and spalls greater than 1" deep and 6" in diameter. The greatest spalls are adjacent to the drainage components and on the corners. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
215 - Reinforced Concrete Abutment	3 - Mod.	161	ft.	96	63	2	0
	CS2 - Unsealed vertical cracks up to 1/16" wide throughout both abutments. CS3 - Corner spall at the south end of the Forward Abutment (2 LF) For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
234 - Reinforced Concrete Pier Cap	3 - Mod.	1033	ft.	915	63	55	0
	CS2 - Areas of vertical cracking in the pier cap up to 1/16" wide. Locations typically under the bearings and on the cantilever portion of the cap. CS3 - Areas that are currently being patched with exposed reinforcement and spalls greater than 1" deep and 6" in diameter. Locations are typically on the top side of the pier cap and on the bearing pedestals. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						

Element Inspection

300 - Strip Seal Expansion Joint	3 - Mod.	158	ft.	9	51	98	0
	CS2 - Portions of the joints with minor debris and minor spalls to the joint headers. CS3 - Portions of the joint where the gland is bulging out and minor loss of adhesion, gouges to steel joint armor, and areas where the joint is completely filled with debris. Typically the middle 1/3 length of the joint. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
305 - Assembly Joint without Seal	3 - Mod.	434	ft.	243	93	98	0
	CS2 - Minor gouges and surface corrosion to steel components. CS3 - Vertical and horizontal misalignment of the finger joints and gouges to isolated fingers. East side is typically higher with gouges throughout. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
311 - Movable Bearing	3 - Mod.	48	each	30	18	0	0
	CS2 - Minor accumulation of debris surrounding the rockers and minor areas of surface corrosion. Bearings located at the abutment or under Girders E and H adjacent to the expansion joints are typically in CS2. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
313 - Fixed Bearing	3 - Mod.	16	each	16	0	0	0
321 - Reinforced Concrete Approach Slab	3 - Mod.	3860	sq. ft.	3580	280	0	0
	CS2 - West Approach - Map cracking and isolated spalls that have been filled in with asphalt material adjacent to the joint header (210SF). East Approach - Isolated transverse cracks and minor spalls adjacent to the joint header (70SF). For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						

Element Inspection

331 - Reinforced Concrete Bridge Railing	3 - Mod.	8311	ft.	5877	1565	869	0
	CS2 - Areas include cracks less than 1/16" wide and delaminated areas. Locations are throughout both railings. CS3 - Areas include spalls greater than 1" in depth and 6" in diameter, exposed reinforcement, and heavy rust staining. Locations are typically on the top 1' of the railing and adjacent to the fence post bases. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
815 - Drainage	3 - Mod.	56	each	13	30	9	4
	CS2 - Scuppers that are partially blocked and locations where the downspout connector is misaligned. CS3 - Scuppers that are 75% blocked or the downspout connector is no longer connected. CS4 - Scuppers that are 100% blocked and no longer functioning. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
820 - Steel Seated-Hinge Assembly	3 - Mod.	16	each	11	5	0	0
	CS2 - Minor laminar rust and accumulation of debris surrounding the rocker bearing. Typically at locations were the drainage trough is filled with debris. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						
830 - Abutment Backwall	3 - Mod.	161	ft.	83	68	10	0
	CS2 - Areas of delaminations, shallow spalls, rust staining, and unsealed cracks less than 1/16" wide. CS3 - Areas with spalls greater than 6" in diameter, typically on the upper half of the backwall behind the beams. For additional information regarding condition states and a table of condition states broken down by span, refer to the 2020 Routine Element Level Inspection Report, attached in AssetWise.						

Inspector Comments - All

Inspector Comments - Deck and Approach

Deck

The deck overall exhibits delaminations with spalls and exposed reinforcement throughout the underside of the deck.

Approach

The approach roadway alignment is straight and no issues were noted during the inspection.

Inspector Comments - General Appraisal

Superstructure

The superstructure overall exhibits holes drilled in the girders to arrest existing cracks and to prevent future cracks, isolated cracks and overcuts at the floorbeam bottom strut cope, minor section loss and pack rust on the exterior faces of Girders E and H, and areas of paint failures typically adjacent to the deck joints.

Substructure

The substructure overall exhibits spalls with exposed reinforcement, delaminations, and cracking. The spalls and delaminations are typically adjacent to drainage downspouts and on the top of the pier caps. Concrete patching repairs are currently underway on the substructure units.

Culvert

N/A

Inspector Comments - Waterway

Waterway Adequacy

Waterway adequacy is sufficient and no deficiencies were noted during the inspection.

Channel

The channel alignment is straight and the banks are well lined with vegetation.

Scour Critical

No issues with scour were noted during the inspection.