



STATE OF OHIO DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION REPORT

Structure File Number: 1801325

Inventory Bridge Number: CUY 00010 08.690 N

SR 10 over VALLEY PKWY/ROCKY RIVER

Inspection Type: Routine

Inspection Date: 09/16/2014

District: 12

County: CUYAHOGA

Place Code (FIPS): FAIRVIEW PARK

Bridge Type: STEEL

Type of Service: HIGHWAY-PEDESTRIAN

Owner: OHIO STATE TRANSPORTATION DEPARTMENT

Inspection Responsibility: OHIO STATE TRANSPORTATION
DEPARTMENT

Maintenance Responsibility: OHIO STATE TRANSPORTATION
DEPARTMENT

Lead Inspector: Costa, Jose

Reviewed By: Costa, Jose

**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
APPROACH INSPECTION**

Structure File Number: 1801325

Inventory Bridge Number: CUY 00010 08.690 N

Bridge Type: 3 - STEEL/5 - ARCH/3 - DECK

Sufficiency Rating: 75.1

Date Built: 7/1/1935

District: 12 Place Code (FIPS): FAIRVIEW PARK

SR 10 over VALLEY PKWY/ROCKY RIVER

Type of Service on: HIGHWAY-PEDESTRIAN

APPROACH

(c6) Approach Summary: 6

Recommended: 5,6

c1. Approach Wearing Surface (EA)

Total Quantity	Condition Rating
2	2

Sealed transverse cracks and some patching. Small potholes.

c4. Embankment (EA)

Total Quantity	Condition Rating
4	2

The shale east embankments continue to slowly erode. The west embankments are heavily vegetated and act as floodplains during high water events.

c5. Guardrail (EA)

Total Quantity	Condition Rating
0.00	2

One post on north guardrail, east approach, is missing a spacer block. South guardrail, west approach, has collision damage.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
APPROACH INSPECTION PHOTOS

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
DECK INSPECTION**

Structure File Number: 1801325 Inventory Bridge Number: CUY 00010 08.690 N Bridge Type: 3 - STEEL/5 - ARCH/3 - DECK
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DECK

along the north curb in span 8. Downspout in Span 7, north side near Column 8 has a 2"x7" corrosion hole. Clean out cover in Span 6, north side, missing 7 out of 8 bolts. Scupper in in Span 6, north side, has 3 corrosion holes totaling 30 sq.in. Clogged downspout on north side of Pier 3 has blown out.

c13. Expansion Joint (LF)

Total Quantity	Condition Rating
0.00	1

Strip seal expansion joints are in good condition. No currently active leakage above towers observed. Joints are aligned well in roadway, but there is some misalignment in the north sidewalk above Towers 4 and 5, and in the south sidewalk in Spans 8 and 9. There is a 2"x1" gouge in the armor of the joint over Tower 7.

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE INSPECTION**

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SUPERSTRUCTURE

(59) NBIS Superstructure Summary: 6

Recommended: 5,6

c14. Alignment (EA)

Total Quantity	Condition Rating
9	1

All spans show proper alignment.

c15.1 Beams/Girders (LF)

Total Quantity	Condition Rating
0.00	2

Beams in approach spans 1-3 are in good condition.

c16. Diaphragm/Cross Frames (EA)

Total Quantity	Condition Rating
0.00	1

Diaphragms between girders and between arches are in good condition. Debris does accumulate on bottom flanges of some of the struts between arches because of the angle they are at.

c17. Stringers (LF)

Total Quantity	Condition Rating
0.00	1

Stringers are in good condition overall. One missing bolt on the bottom flange of Stringer 8 in Span 8. One anchor bolt missing for Stringer 4 at Tower 7.

c18. Floorbeams (LF)

Total Quantity	Condition Rating
0.00	1

Floorbeams in good condition overall. Multiple cracks noted in the non-structural, porous tack welds on the edges of the floorbeam bottom flanges, but no cracks in the base metal.

c25. Sway Bracing (EA)

Total Quantity	Condition Rating
0.00	

c26. Bearing Devices (EA)

Total Quantity	Condition Rating
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SUPERSTRUCTURE

0.00 2

Arch skewbacks have fretting corrosion indicating proper movement. Stringer sliding bearings at tops of towers are functioning properly. Girder bearings at abutments are working properly, but exterior bearings have corrosion.

c27. Arch (LF)

Total Quantity Condition Rating

0.00 2

The arches are in good condition overall, with random areas of peeling paint. Areas of previous section loss exist at bottoms of the arch columns, but are painted now and not actively corroding. The missing hatch on the north arch, Span 5, has not been repaired and is currently covered by a plastic bag.

c28. Arch Column/Hanger (EA)

Total Quantity Condition Rating

0.00 2

Arch columns are in fair condition with minor pack rust re-activating along the full heights of the columns on both interior and exterior faces. Surface corrosion and accumulation of debris in the bottom 3' of most columns. Reactivated pack rust has cracked some of the erection tack welds, but no propagation into base metal was noted.

c30. Protective Coating System (LF)

Total Quantity Condition Rating

0.00 2

The paint is in good condition on the superstructure and on the exterior faces of the columns and towers, but there is a general failure of the paint system inside the towers and columns, with peeling paint, surface corrosion and laminating corrosion. Also, the exterior beam bearings at the abutments have corrosion.

c31. Pins/Hangers/Hinges (EA)

Total Quantity Condition Rating

0000 2

Pins at ends of arches have surface corrosion.

c32. Fatigue (LF)

Total Quantity Condition Rating

0.00 1

The majority of the erection tack welds on the bottom flanges of the floorbeams are partially to fully cracked; none of these cracks have propagated into base metal. Riveted connections on the floorbeams are in good condition, with no cracks and no sheared rivets. The welds inside the towers are in good condition, although the welded stiffeners themselves have heavy section loss in some cases.

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SUBSTRUCTURE

(60) NBIS Substructure Summary: 6

Recommended: 5,6

c33. Abutment Walls (LF)

Total Quantity	Condition Rating
129.33	1

The abutments are in fair-to-good condition. Corrosion staining on the West Abutment wall is coming from the overhead utilities, not from rebar.

c35. Abutment Columns/Bents (EA)

Total Quantity	Condition Rating
0.00	

c34. Abutment Caps (LF)

Total Quantity	Condition Rating
129.33	1

There is a full-height crack below Stringer 8 on the East Abutment, and five partial-height cracks below Stringer 9.

c38. Pier Columns/Bents (EA)

Total Quantity	Condition Rating
0.00	2

The interiors of the towers have section loss in multiple locations. Multiple stiffeners inside bottom of Towers 5, 6 and 7 have 50%-100% section loss. Corrosion holes in plates of several towers from 1/8" up to 2-1/2" in diameter but not concentrated in any one plate. Vagrant belongings inside bottom of Tower 5. Smaller corrosion holes are present in Towers 4 and 8. Water is infiltrating the interiors of the steel columns of Pier 1 and causing laminating corrosion inside. The south column of Pier 3 and both columns of Pier 2 have light surface corrosion inside. There are several areas of patching on the concrete bases of the towers that are in good condition when sounded with hammer.

c36. Pier Walls (LF)

Total Quantity	Condition Rating
323.34	2

The web walls between the tower/arch bases have transverse cracking. There are several areas of patching are in good condition when sounded with hammer. There is a 5'x3'x3" spall with exposed rebar under the south skewback for Tower 8, but the exposed painted rebar is not actively corroding.

c37. Pier Caps (LF)

Total Quantity	Condition Rating
323.34	1

Tower caps in good condition, including paint. Raccoon fur and droppings inside most of the caps. Wire screens installed

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SUBSTRUCTURE

over tops of caps have failed to keep out raccoons (peeled open). The caps for the steel piers are in fair condition with some minor corrosion.

c39. Backwalls (LF)

Total Quantity	Condition Rating
129.33	1

Abutment backwalls are in good condition.

c40. Wingwalls (EA)

Total Quantity	Condition Rating
0.00	1

Wingwalls are in good condition.

c42. Scour (EA)

Total Quantity	Condition Rating
10	1

c43. Slope Protection (EA)

Total Quantity	Condition Rating
0.00	3

The gabions on the West Abutment slope have continued to slide and deform downward, and the manhole between the Pier 2 columns has been broken and displaced. The soil around the drains between the Pier 1 columns has been eroded. The East bank of the Rocky River consists of easily erodible shale and has sloughed up against and overtopped the concrete base of Tower 8. West side of Tower 8 is severely eroded.

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
CHANNEL INSPECTION**

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CHANNEL

(61) NBIS Channel Summary: 7

Recommended: 7,8,9

c51. Alignment (LF)

Total Quantity	Condition Rating
200.00	1

Channel is well aligned perpendicular to structure; normal flow is only under span 8.

c53. Hydraulic Opening (EA)

Total Quantity	Condition Rating
1	1

More than adequate. Extremely remote chance of overtopping.

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CHANNEL INSPECTION PHOTOS**

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
SIGNS/UTILITIES INSPECTION**

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SIGNS/UTILITIES

(41) Open, Posted or Closed: A

c57. Utilities (LF)

Total Quantity	Condition Rating
0.00	3

The utility supports and cages are heavily corroded. Several conduits are open. Raccoons use the utility conduits to get from the abutments to the towers.

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SIGNS/UTILITIES INSPECTION PHOTOS**

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
SUPPLEMENTAL INSPECTION**

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SUPPLEMENTAL

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
REVIEW**

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**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
JOINT MEASUREMENT**

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Date: _____

Joints Labeled Upstation

Inspector: _____

Joints Measured Longitudinal (not perpendicular to joint armor)

Joint No.	Location:		Location:		Location:		Location:	
	Temp (F)	Msmt (in)	Temp (F)	Msmt (in)	Temp (F)	Msmt (in)	Temp (F)	Msmt (in)

PIN AND HANGER DETAILED INSPECTION FORM



Bridge CUY - 00010 - 08.690
 Co. Rte. SLM

Inspection Date(s) 09/16/2014

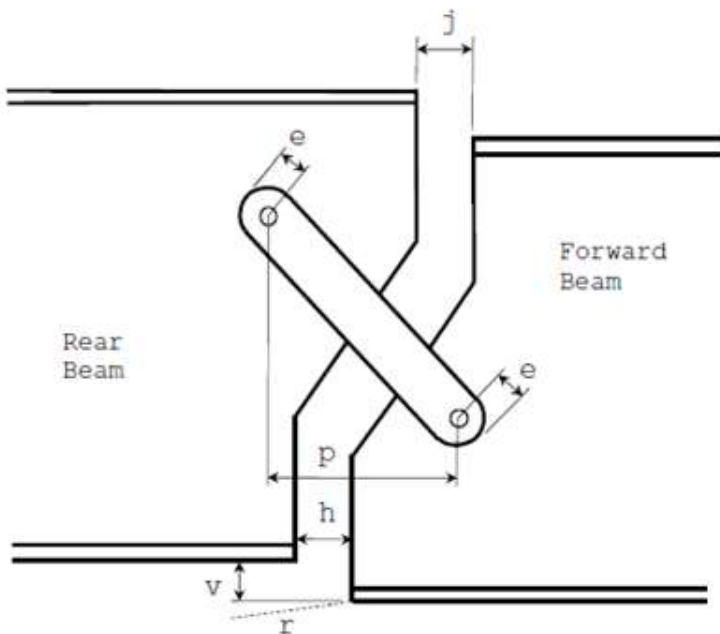
Access _____

Inspector(s) Costa, Jose

Temperature _____

Beams labeled left to right looking up

Beams labeled left to right looking up station.



Values are in inches:

h-horizontal at bottom of flange

j-joint b/w armor at beam;
longitudinal w/traffic

v-vertical (+) value where fwd. beam
is above, (-)below

r-rotation transverse (+) value fwd.
beam right, (-) left

p-pins (+) value top pin fwd. of
vertical, (-) rear

e-hanger ends from center of pin

t-any thickness measurements (label
locations on drawing)

**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
MAINTENANCE**

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