

**STATE OF OHIO DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION FIELD REPORT**

Structure File Number: 1801503

Inventory Bridge Number: CUY 00010 16.130 N

Bridge Type: 3 - STEEL/4 - TRUSS/3 - DECK

Sufficiency Rating: 48.4

Date Built: 7/1/1932

District: 12 Place Code (FIPS): CLEVELAND

SR 10 over CUY RIVER VALLEY & FI RR

Type of Service on: HIGHWAY-PEDESTRIAN

Key: "Qty" = Quantity for Element Level inspection; "(LF)" = Linear Feet; "(SF)" = Square Feet; "(EA)" = Each or count; "CR" = 1-4 Condition Rating or average of worst span unless Summary item 9-0, then the average of entire bridge influenced by the bold boxes; "TR" = Transition Rating or weighted average of condition states; "d" = dedicated or specific chart and guidance, all others use Material specific chart/guidance; "c" = condition prefix; "N" = NBIS rating

Inspection Procedures

Next Insp Cycle is in 2016 and Est. Hours is and TTC is MT-95.31 and other TT notes include. with 2014 lead insp. EF and truck req'd . . .

Comments

APPROACH

c1. Approach Wearing Surface

East approach pavement in good condition. West approach pavement has about 20% spalls, patches, or cracks.

c2. Approach Slabs

No signs of settlement or shifting.

c5. Guardrail

Minor surface spalling and staining.

DECK

c7.1 Floor/Slab

Isolated spalls, throughout, delaminations with efflorescence and exposed steel about to spall. Heavier distress adjacent to the expansion joints and scuppers. Many of the previous spalls appear to have been coated with rust inhibitor and still show active corrosion.

Large spalled areas in all bays of east approach tunnel. Consecutive transverse bars broken in East Subway. Heavy deterioration at expansion joints.

c7.2 Edge of Floor/Slab

Isolated spalls throughout, cracking adjacent to expansion joints and floorbeam extensions.

c8. Wearing Surface

Overall good condition. Few hairline cracks, evidence of very isolated ponding.

c9. Curb/Sidewalk/Walkway

North walk has been previously repaired at expansion joints. Minimal areas of delamination or light cracking with moisture. South walk shows more deterioration. Area adjacent to steel curb has been patched and sealed in areas. Steel curb shows minor surface corrosion.

c11. Railing

Stained cracks in concentrated in the lower third of the entire inside lengths of the exterior parapets. Bikeway railing is in good condition throughout.

c12. Drainage

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Minor debris in deck scuppers.

c13. Expansion Joint

Evidence of leakage through joint membranes. Deck armor in good condition and level with wearing surface.

SUPERSTRUCTURE

c17. Stringers

Very isolated instances of corrosion at floorbeam connections. Minor web loss in areas, isolated through holes.

c18. Floorbeams

Most distress including staining and minor section loss concentrated at deck expansion joints.

c19. Truss Verticals

The verticals are generally good condition, with scattered corrosion to flange angles, especially below deck joints. In Span 1, NE U10L10 has 50% section loss to the outstanding legs of its east flange angles. Nearby, SI U10L10 has deep pitting to both flange angles.

c20. Truss Diagonals

The diagonals are in good condition, with active pack rust common to the exterior corners of the north exterior and south exterior diagonal members. Exterior diagonals adjacent to abandoned utility supports have remnants of a bracket welded to its web plates. Elsewhere, several diagonals have lower stay plates with deep section losses or perforations.

c21. Truss Upper Chord

The top chord is in good condition with few significant findings noted. Junction box drains dripping onto the upper chord has caused light corrosion to several exterior upper chord members. At expansion joints, dirt and construction debris is present inside some upper chord connections with the verticals.

c22. Truss Lower Chord

The majority of the lower chord is in good condition apart from various degrees of section loss and pack rust located between the flange angles and the web plates. Portions of the flange angles of the exterior lower chords have pockets of deep pitting or perforations. The greatest section loss generally is located in Spans 11 and 13. In these spans, twelve lower chord members have between 5% and 22% net section loss as reported by the 2014 inspection report. The chords downstream of expansion joints have significant pack rust. Specifically, the interior chords at span 9 downstream of expansion joint 4 have about 2 inches of pack rust between the upper flange angles.

There is a longitudinal crack in the top north flange angle on the south exterior lower chord in Span 12 between panel points 3 and 4 that has not grown since the previous inspection.

Four members have over 10% estimated/measured section loss. One member has a longitudinal crack in an internally redundant flange angle.

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c23. Truss Gusset Plate

Truss gusset plates below deck joints show the most distress. Section loss is most severe at these locations but generally present everywhere. Previously documented laminar tear in the south gusset at Unit 7 lower chord Panel Point 7 shows no growth. Advanced section loss commonly occurs above the lower chord and along the edges and ends of diagonal connections. Also commonly occurring are bows along the long free edges of the gussets caused by pack rust.

The upper chord gusset plates are in good condition with little corrosion observed. Areas of heaviest corrosion occur below deck expansion joints. The gussets at the upper chord floorbeam connections below junction box drains are pitted.

c24. Lateral Bracing

Lateral bracing gussets below deck joints have section lost and pack rust causing their corners to peel away from the lateral bracing members, especially below deck joints.

c25. Sway Bracing

The sway bracing is in good condition having only minor pack rust and corrosion at the connections to the verticals below deck joints.

c26. Bearing Devices

Debris and water accumulation in some of the truss bearings. Section loss generally occurring around the pins in the gussets that house the pin assembly.

c30. Protective Coating System

Scattered areas of peeling and bubbling, especially at expansion joints where water infiltration and active corrosion is occurring. There are several areas on the superstructure with active pack rust between gussets, web plates, angles, and lacing, with the worst areas below or downstream of deck joints.

c31. Pins/Hangers/Hinges

South interior truss line pin to zero force member is dislodged at Unit 13 lower chord Panel Point 12.

SUBSTRUCTURE

c33. Abutment Walls

Minimal staining and hairline cracks in abutment faces.

c38. Pier Columns/Bents

Areas of cracking/delamination concentrated around previously patched areas. Base of pier 8 north column west face has a hole approximately 2' x 3' into lower column cell filled with trash.

Patches on pier columns cracked but intact.

c37. Pier Caps

Pier caps are in good condition. Pier towers were not considered in the rating but are in poor condition and pose a risk to public safety. Many of the pier tower roofs have

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been removed, but those that remain show active degradation with debris accumulating below. Advise against walking on manhole lids due to casting corrosion.

Pier 9: Deep, non-structural spall not repaired in 2002 rehab present below NE Truss.

c39. Backwalls

Vertical crack approximated 12'-6" in East Pylon backwall behind the north exterior truss line between the sandstone fascia and abutment concrete.

c42. Scour

The bridge had an underwater bridge inspection on July 14, 2015 by GPI under contract with Jones-Stuckey. See Attached. They found a change in the exposure of the footing at Pier 10 (West Pier), Column D, where the exposure of the footing has advanced since the 2010 dive inspection. "The maximum vertical exposure was measured to be 3.7 feet. 9.5 horizontal feet of footing are exposed along the south side and 18 horizontal feet are exposed on the east face of the footer." No change significant change was noted at other locations. Pier 9 (East Pier) , Column A shown less exposure to the footing. Timber debris is still lodged at the northeast corner of pier 10.

CHANNEL

c51. Alignment

The channel alignment is in fair condition. Water is flowing along the south column of Pier 10 and the north column of Pier 9. Channel has sharp meanders.

c52. Protection

The bulkhead protecting the east bank at Pier 9 has failed.

c53. Hydraulic Opening

All navigation lights are not operating. Unable to get SMS to open the Navigation Lights text field/rating section.