Roche de Boeuf Bridge
Physical Condition Report
May 2026

The Roche de Boeuf Bridge is an earthen filled concrete arch structure which originally carried an interurban trolley line for the Ohio Electric Company. The construction of the bridge was completed in January 1908. The structure was abandoned by the interurban railroad in 1937 but carried vehicular traffic in the 1940's after the downstream Waterville bridge partially collapsed after a vehicle impact. The original structure was 1,220 ft. in length and contained twelve concrete arch spans varying in length between 75 ft. and 90 ft., concrete spandrel walls confining the earthen fill and piers anchored into bedrock.

The Roche de Boeuf bridge is not assigned a Structure File Number (SFN) and there are no previous bridge inspection reports for the bridge as it has not carried public vehicular traffic since the 1940's (National Bridge Inspection Standards were adopted in 1971). The bridge does not have an active load rating.

The component condition inspection summary presented below was completed utilizing existing bridge photos and drone videos. Component condition ratings are assigned values with a range of 9-0, where 9 is a bridge in excellent condition and a 0 is a bridge that has failed. The ratings were derived based on the guidance in the following documents:

- 2025 ODOT Manual of Bridge Inspection and Inventory
- The American Association of State Highway and Transportation Officials (AASHTO) Manual for Bridge Element Inspection
- Federal Highway Administration Specifications for the National Bridge Inventory (SNBI)

While there are some portions of the underside of the arch spans that may not be in poor or failed condition, the overall arch rating must consider all arch elements, including the edges and spandrel walls which are mostly in poor or failed condition. A closed spandrel arch bridge relies on the spandrel walls to support a usable bridge surface. Current bridge conditions show failures of the spandrel walls on both sides of the bridge affecting 10 of the 12 arch spans.

In summary, while there may be portions of the underside of the arch spans where the concrete visibly is not in poor condition, the overall summary ratings of the structure must take into account all areas of the arch system**, which result in a rating of "0 – Failed" for the overall Ohio General Appraisal rating due to the superstructure condition.**

The ODOT Office of Structural Engineering condition ratings and rating justifications are presented below.

Controlling Component Condition Ratings

B.C.01 - Deck Condition Rating (same as superstructure for this type of bridge) – *0 – Failed:* This bridge does not have a structural deck, but to function properly, it would need a driving surface that is supported by the arches, fill material, and the arch spandrel walls. Given that the spandrel walls are failed in most locations, this bridge could not safely carry a usable surface for pedestrians or vehicles.
B.C.02 - Superstructure Condition Rating – *0 – Failed*: There are 6 sections of the spandrel wall that have completely failed over the piers and an additional 3 spandrel locations that are in a state of failing. The only spans of the arch that visually seem stable enough to continue carrying their dead load are the 2 north end spans nearest S River Rd.
B.C.03 – Substructure Condition Rating – *5 – Fair*: Pier condition from waterline to arch spring line are in fair condition throughout. There are isolated areas of severe spalling, but overall performance of the substructure does not seem to be affected.

North end span (looking downstream) showing sound spandrel wall

Span 11 (looking downstream) showing mostly sound spandrel walls. There is evidence that spandrel failure is starting to occur over the pier to the right.

Typical condition of failed arch spandrels over piers. There are outer sections of the arch that have failed with only the rebar hanging. This condition below would justify a General Appraisal rating of a “0” if it occurred at a singular location. This issue is occurring at 50% of the pier locations.

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