



CAROLINA INFRASTRUCTURE ASSESSMENT LLC

STRUCTURES DIVISION – ROUTINE ELEMENT SAFETY REPORT

██████████ – Field Inspection Documentation

1. Structure Identification

- **Structure Name:** ██████████
- **Inspection Date:** 08/14/2026
- **County:** ██████████
- **Facility Carried:** ██████████
- **Location:** ██████████
- **Feature Intersected:** ██████████
- **Coordinates:** ██████████
- **Inspection Direction:** East → West
- **Inspected By:** ██████████
- **Superstructure Type:** Steel stringer, twin-girder single span with timber deck
- **Substructure Type:** Round concrete piles with concrete block end bents
- **Span Count:** 1
- **Deck Width:** 13.25 ft
- **Bridge Length:** 60 ft
- **Weight Limit:** Unknown
- **Bridge Classification:** Narrow, one-lane
- **Clearance Restrictions:** None noted

2. Condition Ratings (Field-Assigned)

- **Deck:** 3
- **Superstructure:** 3
- **Substructure:** 5

Ratings are recorded per inspection protocol and reflect observed condition only.

3. Observed Conditions – Deck System

The timber deck shows multiple areas of deterioration, openings, and missing material.

Documented Observations

- 10 ft area of deteriorated decking over End Bent 1
- 5.5" gap in decking over Floorbeam 3
- 3" gaps between Floorbeams 2/3 and 3/4
- 5 ft deteriorated area between Floorbeams 5/6
- 2' × 5.75" deteriorated area at Floorbeam 4 (north end)
- Missing decking between Floorbeams 5/6
- 2" deep deterioration between Floorbeams 5/6
- 4" gap over Floorbeam 6
- 3 ft deteriorated deck board between Floorbeams 6/7 (north side)
- 4" gap between Floorbeams 6/7
- 6 ft deteriorated area between Floorbeams 5/6
- Missing decking between Floorbeams 7/8 at Floorbeam 8
- 9 ft deteriorated area at End Bent 2 between Floorbeams 8/9
- 2 ft deteriorated area north side over End Bent 2
- 2 ft deteriorated area over End Bent 1 (south side)
- Two deck boards deteriorated over Stringers 1/2 at End Bent 2

Hardware

- One missing bolt at wheel guard, north side at Floorbeam 6

4. Observed Conditions – Superstructure

Steel members show coating loss, corrosion, section loss, and perforations.

Protective Coating

- Coating loss throughout top flanges of Girder 1 and Girder 2
- Coating loss with corrosion present on Floorbeams 1–7
- Floorbeam 8 shows active corrosion with pitting
- Floorbeam 9 shows coating loss and remaining thickness measurements

Section Loss Measurements (Field Readings)

- Floorbeam 1: 7/32" remaining thickness (10 ft segment)
- Stringer 2 @ End Bent 1: 1/64" remaining (2 ft segment)
- Stringer 1 @ End Bent 1: 1/16" remaining (2 ft segment)

- Stringer 3 between Floorbeams 1/2: 1/64" remaining (3 ft segment)
- Floorbeam 9: 3/64" remaining full length

Web Perforations

- Floorbeam 2: 5" hole between Stringers 2/3
- Floorbeam 8: 6" × 4" hole between Stringers 2/3
- Floorbeam 8: 5" × 3" hole between Stringers 3/4
- Stringer 2: 7" × 3" hole between Floorbeams 8/9
- Stringer 1: 16" × 8" hole at Floorbeam 9 junction
- Stringer 2: 1' × 10" hole at Floorbeam 9 junction

Other Observations

- Buckling noted at Floorbeam 9 junction on Stringers 1 and 2
- Pitting on Stringer 4 (1/8" deep, 4 ft segment)

5. Observed Conditions – Substructure

- Round concrete piles and concrete block end bents present as designed
- No displacement or settlement observed during inspection
- No cracking or spalling noted at time of inspection

6. Approaches

- East and west approaches show typical wear
- No washout or settlement observed during inspection

7. Waterway / Channel

- Streambed soundings recorded from -3 ft to -13.583 ft
- No active scour observed at pile locations during inspection
- Waterway flowing normally at time of inspection

8. Additional Field Notes

- Oversized vehicle crossing observed during inspection
- Deck openings large enough to allow visibility to underlying members
- Multiple areas of missing decking create openings in travel surface

9. Photo Documentation

All photos referenced correspond to the labeled figures in the inspection file and document the conditions listed above.

10. Sketches & Measurements

Sketches included in the inspection file show:

- End bent configuration
- Typical girder, floorbeam, and stringer dimensions
- Streambed profile across the span

11. Inspector's Summary

This report documents **observed conditions only**. No structural capacity determination, or design recommendations are included. All listed items reflect field observations made on 08/14/2026.

12. Repair Recommendations

Deck System

Based on observed deterioration, gaps, and missing decking:

- Replacement of deteriorated deck boards is recommended.
- Installation of new decking in areas where boards are missing is recommended.
- Addressing open gaps between floorbeams is recommended to restore a continuous walking/driving surface.
- Replacement of deteriorated boards at End Bent 1 and End Bent 2 is recommended.
- Replacement of deteriorated boards between Floorbeams 5/6, 6/7, and 7/8 is recommended.
- Replacement of deteriorated boards over Stringers 1/2 at End Bent 2 is recommended.
- Replacement or tightening of the missing wheel-guard bolt at Floorbeam 6 is recommended.

These actions are recommended due to observed deck openings, decay, and missing hardware.

Superstructure (Stringers, Floorbeams, Girders)

Based on observed coating loss, corrosion, section loss, perforations, and buckling:

- Cleaning and recoating of steel members where protective coating failure was observed is recommended.
- Replacement of steel members exhibiting perforations in webs is recommended.
- Replacement of steel members with observed section loss is recommended.
- Replacement of steel members where buckling was observed at the Floorbeam 9 junction is recommended.

- Replacement of steel members with remaining thickness measurements indicating deterioration is recommended.
- Cleaning and recoating of Floorbeams 1–7 and Floorbeam 8 where corrosion and pitting were observed is recommended.

These recommendations reflect observed deterioration and do not include engineering evaluation or design-level guidance.

Substructure

Based on observed conditions:

- Routine cleaning of concrete surfaces is recommended.
- Continued monitoring of piles and end bents is recommended.

No structural concerns were observed during inspection.

Oversized Vehicle Crossing

During the inspection, an **oversized vehicle was observed crossing the structure**. The vehicle type and size appeared inconsistent with typical use for a narrow, one-lane timber-deck trail bridge. The crossing occurred while multiple areas of deck deterioration, missing decking, and open gaps were present. The event was documented due to the potential for increased wear on already deteriorated components.

Buckled Stringers

Buckling was **observed** at the junction of Floorbeam 9 on **Stringer 1** and **Stringer 2**. The buckling is located adjacent to areas where **web perforations** were also present. The deformation is visible from the deck underside and is documented as part of the observed condition of the superstructure.