

Date: January 9, 2026
To: City of North Port Department of Public Works
From: HighSpans Engineering, Inc.

HighSpans

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Subject: Memorandum of Condition Assessment and Recommendations for Timber Pedestrian Bridges in the City of North Port

This memorandum provides a summary of the structural condition and recommendations of three timber pedestrian bridges owned and maintained by the City of North Port at locations indicated below. The bridges were inspected on December 10, 2025 by HighSpans Engineering and a more detailed report and condition assessment will be provided at a later date:

1. Adjacent to Sumter Blvd. over Canal R-86, (identified as Bridge 5 in Exhibit 1)
 - Location: 27°05'19.1"N 82°12'31.8"W
 - Bridge Length: 50' and Width: 8'-0"
2. Adjacent to SB Sumter Blvd. over Canal R-76, (identified as Bridge 6 in Exhibit 2)
 - Location: 27°05'35.1"N 82°12'30.3"W
 - Bridge Length: 50' and Width: 8'-0"
3. Adjacent to NB Sumter Blvd. over Canal R-76 (identified as Bridge 8 in Exhibit 3)
 - Location: 27°05'33.9"N 82°12'28.0"W
 - Bridge Length: 50' and Width: 8'-0"

All three bridges are of identical configuration and were constructed between 1998 and 2004 according to historic satellite imagery. Each bridge is supported on cast in place concrete end bents supported by spread footing foundations. The three bridges have identical structural configuration and age so defects identified in the inspections can be expected to be shared by all three of the bridges. See Exhibits 1 and 2 for photos of key defects discovered during the inspections.

All three bridges are in generally poor condition and exhibit both serviceability and structural deficiencies. The primary concern with serviceability is the condition of the railings. Severe rot of several railing posts has resulted in a loose and weak railing. Additionally, the railing design does not meet the current requirements of the Florida Building Code, Building Section 1015.4 which stipulates that no openings shall be greater than 4-inch whereas the current railings have 14-inch openings. In addition, the heavily deteriorated decking surface exhibits many irregularities that are not . Several gouges, rotted portions, splintering, and lifted edges create tripping hazards throughout the walking surface. While not a component of the bridge itself, the connecting sidewalk also exhibits several tripping hazards greater than ½-inches high due to ground settlements.

Structural deficiencies are present in the primary load carrying members of all three bridges. Rotting has been confirmed in the ends of all glulam arch beams with the maximum confirmed cavity being 14-inches deep along the length of the beam at Bridge 5. Due to the proximity to the concrete substructure,

most of the beam end is inaccessible and the extent of this issue is not fully known. At Bridge 8, rotting has also been identified at the top surface of the beams at midspan with a depth of up to 2-inches missing from the beam. Finally, partial delamination of the beams was identified at Bridges 5 and 8. This severe deterioration of the arch beams has significantly reduced the load carrying capacity of the bridges. Additional defects are also present in the foundations with loose anchor nuts, concrete spalling, and non-uniform settlement.

Our assessment also included an evaluation of repairs to attempt to restore the serviceability and structural capacity of the bridges, however these repairs were deemed to not be economically feasible, so they are provided below for information purposes only. **In summary, the bridges have structurally deteriorated to the point where repairs are not feasible and we therefore recommend they be closed immediately and scheduled for replacement at the City's earliest convenience.** It should be noted that the path for Bridge 5 may be redirected to a temporary path over the existing culvert crossing approximately 100 feet to the North of the existing bridge which would allow the path to remain open during the closure of this bridge.

Deteriorated Decking

- Overlay existing decking with 5/4" composite deck boards to restore walking surface.
- Provide solid rubber threshold mats at ends of bridge to provide ADA compliant slope up to decking overlay and utilize concrete screw anchors to secure threshold mat to concrete slab beneath.

Glulam Arch Beams

- Clean rot from arch beam ends and top surface and inject voids with wood epoxy.
- Provide metal flashings at ends of arch beams to protect from future water runoff.
- Seal openings/crevices created by delamination shown in Figures 8 and 9 with wood epoxy to prevent water intrusion and further deterioration.

Railing Posts

- Replace each rotten post with a group of four 2x4 Southern Yellow Pine (SYP) Grade No. 2 pressure treated for ground contact (UC4B). Reuse existing 3/4" bolts.

Railing Compliance with FBC Building 1015.4

- Attach vertical 2x2 wood pickets or PVC coated wire mesh to ensure no openings greater than 4".

Loose or Deteriorated Fasteners

- Tighten loose nuts at end of steel cross ties at Bridge 6, tension cross ties at Bridges 6 and 8, and tighten loose anchor nuts securing steel brackets to concrete substructures at Bridges 6 and 8.

Pedestrian Path Surface Irregularities

- Grind or recast adjacent concrete sidewalk at bridges to eliminate tripping hazards

Sincerely,



Thomas Waits, P.E. 55460
Chief Engineer
HighSpans Engineering

Exhibit 1 – Bridge Overview



Figure 1: Bridge #5



Figure 2: Bridge #6



Figure 3: Bridge #8

Exhibit 2 – Key Defects



Figure 4: Rot in arch beam end at Bridge 5 (typical for all bridges)



Figure 6: Rot in top of arch beam at Bridge 8



Figure 5: Rot in railing post at Bridge 8 (typical for all bridges)



Figure 7: Worn decking creating tripping hazard at Bridge 6 (typical for all bridges)

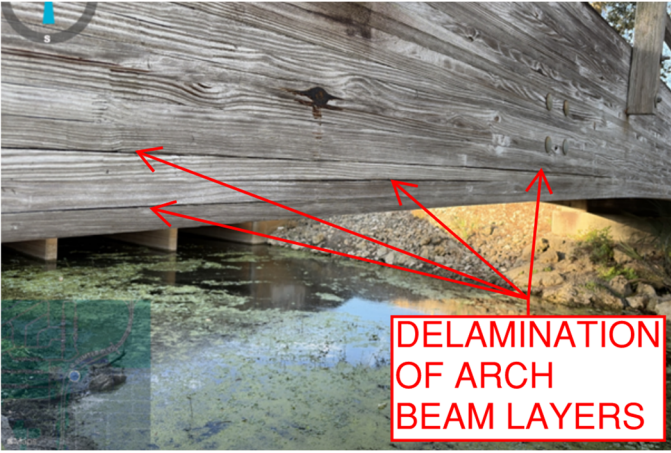


Figure 8: Delamination in Arch Beam at Bridge 8



Figure 9: Delamination in Arch Beam at Bridge 5