New York State
Department of Transportation
Bridge Inspection Report

Structure Information
BIN: 2006470  Region: 08  County: COLUMBIA  Locality: City of HUDSON
Feature Carried: 9GX  Feature Crossed: CSX TRANSPRTATION
Approximate Year Built: 1936  Orientation: 2 - NORTHEAST

structure is not owned or maintained by New York State Department of Transportation
Number of Spans: 1  Typical or Main Span Type: 02 - Stringer/Multi-Beam or Girder
This Structure is not a Ramp
Postings (As of Inspection Date):  Not Posted
Posted Vertical Clearance On:  Not Posted  Posted Vertical Clearance Under:  Not Posted

Inspection Date
May 26, 2015

New York State Inspection Overview
Type of Inspection: General
General Recommendation: 5
Computed Condition Rating: 4.517

Action Items
No Flags have been issued during this inspection
There are no vulnerability reviews recommended
No Diving Inspection Requested
No Further Investigation Requested

Inspector & Reviewer Information
Structure Inspected By: Roy Oppewall
Report Reviewed by: William Dritz

Signature Information
Inspection Signature: Roy Oppewall, P.E. 070370-1  Date: 7/21/15 7:29 AM
Reviewer Signature: William Dritz, P.E. 066606-1  Date: July 24, 2015
Report Printed: January 19, 2016

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## Structure Ratings

### Abutment Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Begin Abutment</th>
<th>End Abutment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint with Deck</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Bearings, Bolts, Pads</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Seat and Pedestals</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Backwall</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Stem (Breastwall)</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Erosion or Scour</td>
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<tr>
<td>Footings</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Piles</td>
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<tr>
<td>Recommendation</td>
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### Wingwall Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Begin Abutment</th>
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<tbody>
<tr>
<td>Walls</td>
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### Channel Elements

<table>
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<tr>
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<tr>
<td>Stream Alignment</td>
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<tr>
<td>Erosion and Scour</td>
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<tr>
<td>Waterway Opening</td>
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<td>Bank Protection</td>
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### Approach Elements

<table>
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<tr>
<th>Element</th>
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<tr>
<td>Drainage</td>
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<td>Embankment</td>
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<td>Settlement</td>
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<td>Erosion</td>
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<td>Pavement</td>
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<td>Guide Railing</td>
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## Span Ratings

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<tr>
<th>Element</th>
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<tr>
<td>Deck Elements</td>
<td>Wearing Surface</td>
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<td>Curbs</td>
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<td>Sidewalks &amp; Fascias</td>
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<td>Railings &amp; Parapets</td>
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<td>Secondary Members</td>
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<tr>
<td>Pier</td>
<td>Bearings, Bolts, Pads</td>
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<td>Pedestals</td>
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<td>Stem Solid Pier</td>
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<td>Utilities</td>
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<td>Sign Structures</td>
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<td>Utilities &amp; Supports</td>
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</tbody>
</table>
Federal NBI Ratings

- NBI Deck Condition: 6
- NBI Superstruct Condition: 6
- NBI Substruct Condition: 5
- NBI Channel Condition: N
- NBI Culvert Condition: N

Special Emphasis Requirements

Special Emphasis Inspection Requirements
- Non-Redundant/Fracture Critical Members: No
- Pin and Hangers: No
- Fatigue-Prone Welds: No
- Non-Categorized Fatigue-Prone Details: No
- Other (Specified in Text): No

Special Emphasis Detail Notes

NONE

Special Emphasis Certification

- Special Emphasis Certification: No
- Hands-On Inspection Waived/Exception: No
- Note:
GENERAL COMMENT
There are no photographs referenced for this comment

Abutment - Seat and Pedestals - Begin - Rated 4
Referenced Photos: 2,3
The bridge seat left girder G2, bay 1 and around girder G8 has heavy spalling up to 6" deep with loose and crumbly concrete. The rest of the seat has minor spalling up to 1" deep. No significant bearing loss found.

Abutment - Seat and Pedestals - End - Rated 4
Referenced Photos: 4
The end abutment seat outside the left fascia and around girder G8 has the most significant spalling up to 3" deep with loose and crumbly concrete. No bearing area loss. The front face has hairline cracks with efflorescence. The rest of the seats would rate '5'.

Abutment - Stem (Breastwall) - Begin - Rated 4
Referenced Photos: 5,6
The begin abutment stem adjacent to the right wingwall has moderate scaling and spalls up to 3' L x 12" H x 3" D. There is efflorescence stains covering 20% of the area along with light scaling. The rest of the stem would rate '5'.

 Wingwall - Walls - Begin - Rated 4
Referenced Photos: 1,6,7,8,9
The begin left wingwall exhibits horizontal hairline map cracks with heavy efflorescence covering 30% of the face and several spalls along the top up to 15' L x 8" W x 8"D due to a hole in the deck/parapet allowing water to drain onto it.
The begin right wingwall is in better shape but still has a 15' long x 4" wide area of hairline map cracking and a 10' long section of spalls up to 8" high x 4" deep along the top as well as 6" deep spalling where it meets the stem.
The top of both wingwalls were covered with vegetation.

Wingwall - Walls - End - Rated 4
Referenced Photos: 10
The top of the end left wingwall exhibits map cracking with efflorescence and numerous spalls up to 3’ L x 2’ W x 4” D (6” at junction with stem).
The top of the end right wingwall exhibits map cracking with efflorescence and numerous spalls up to 4’ L x 2’ W x 3” D.
The top of both wingwalls were also covered with vegetation.
Approach - Drainage - Rated 1
Referenced Photos: 11,14
The begin approach drains away from the bridge, and the end approach drains towards the bridge. There is a catch basin located at each approach corner. The end left and end right catch basins are completely filled with debris and sediment and are not functioning. This allows water to drain onto the bridge, where evidence of ponding exists at the shoulders. The catch basins at the begin left and begin right are up to 80% filled with sediment and debris.

Approach - Erosion - Rated 4
Referenced Photos: 12
Behind the end right wingwall an erosion gully exists measuring 5'W x 2'D x 20'L extending down the bank. Another gully exists at the end right approximately 40 feet past the bridge measuring 5'W x 3'D x 20'L also extending down the slope. At this location, a round pot hole has formed at the 14th post from the bridge measuring 3'W x 1'D. Both gullies are heavily vegetated and are away from the shoulder of the road and do not jeopardize the stability of the embankment or the roadway. Other corners would rate '5'.

Approach - Pavement - Rated 4
Referenced Photos: 13,14,15,20
The pavement at both the begin and end approaches has several transverse, longitudinal and alligator cracks. The worst case is at the begin approach near the bridge. Additionally, the pavement around the catch basins has spalled and settled, the worst case measuring up to 2 inches near the begin right. At the end approach, the pavement surface is uneven from several dips in the road and affecting ride quality.

Approach - Guide Railing - Rated 4
Referenced Photos: 16,17
The guide railing at the begin left approach has minor impact damage 5 feet from the bridge. At the end right, the first 4 back up posts are leaning away from the guide railing creating a gap between the support and the rail up to 1 foot. Despite these deficiencies, the guide railing remains strong in all four quadrants.

Span 1-Deck Elements - Curbs - Rated 1
Referenced Photos: 18
The right curb is completely spalled away for the for the full length of the bridge. Rating lowered to '1'.

The left curb is in only slightly better condition with little reveal (measuring only 3/4" to 2") and would rate '3'.

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There is an asphalt concrete sidewalk located on the right side of the bridge. The sidewalk is cracked and ravelled throughout its full length with an uneven surface and vegetation growing through the cracks.

At the right side of the begin approach, a 15’ section of the sidewalk located 30’ from the bridge is settled and spalled. Beyond this segment, the sidewalk leads to a staircase that leads down a hill to a grassy area.

At the right side of the end approach, a 50’ section of sidewalk located 10’ from the bridge is missing. The transition from the sidewalk to the bridge is settled and spalled, exposing the top of the wingwall concrete and leaving a 4” drop from the bridge sidewalk to the approach sidewalk.

No safety flags are warranted for the above conditions since there is no pedestrian traffic in this area, and neither approach sidewalk provide pedestrian access.

Fascias would rate '5'.

**Span 1-Superstructure - Paint - Rated 3**

All of the girders are encased in concrete that is punky when hit with a hammer. The encasements have hairline cracks and heavy efflorescence on all girders for the full lengths. The bottom flanges of the girders are exposed with minor to moderate rust. No significant signs of any paint. No significant section loss visible.

**Additional Inspection Notes**

**Diving Reference**

There was no dive referenced for this inspection.

**Overloads Observed**

No overload vehicles were noted during this inspection.

**Notes to Next Inspector**

Bucket truck used for easier access.

Railroad protection was provided by CSX. Trains were required to stop before the bridge and receive the bridge inspectors authorization to proceed. CSX personnel were not on site. This was not a main-line track.

**Improvements Observed**

No improvements were observed during this inspection.
BIN Plate and Fencing information
The BIN Plate is in OK condition.
No Pedestrian Fence.
No Snow Fence.

Field Notes

Staff Present During Inspection
TL: Roy Oppewall P.E.; ATL: Daniel Schneider; ATLT: Travia Bailey

Inspection Time & Permit Requirements
Time Required to Inspect Bridge: 6 Hours

Lane Closure Usage:
Railroad Flagging Time: No railroad flagging required

Detailed Time & Weather

<table>
<thead>
<tr>
<th>Field Date</th>
<th>Arrival</th>
<th>Departure</th>
<th>Temp (F)</th>
<th>Weather Conditions</th>
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<td>05/26/2015</td>
<td>08:30 AM</td>
<td>11:30 AM</td>
<td>68</td>
<td>Partially cloudy</td>
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Inspection Photographs

Top of begin left wingwall looking back

[Image: Top of begin left wingwall looking back]

Photo Number: 1  Photo Filename: Begin left bridge seat looking back.JPG

Begin abutment bridge seat bay 1 looking back

[Image: Begin abutment bridge seat bay 1 looking back]

Photo Number: 2  Photo Filename: Begin abut bridge seat bay 1 looking back.JPEG
Begin Abutment seat under G8 looking back

End left bridge seat with spalls looking ahead
Begin stem looking begin left

Begin stem at right wingwall with scaling and spalls looking back

Photo Number: 5  Photo Filename: Begin stem looking begin left.JPG

Photo Number: 6  Photo Filename: Begin abut with scaling and spalls looking back
Begin left wingwall with spalling looking begin right

Photo Number: 7  Photo Filename: Begin left wingwall with spalling looking

Top of begin left wingwall with cracks and spalls looking begin

Photo Number: 8  Photo Filename: Top of begin left wingwall with cracks and
<table>
<thead>
<tr>
<th>Photo Number</th>
<th>Photo Filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Top of begin right wingwall with cracks and spall looking begin</td>
</tr>
<tr>
<td>10</td>
<td>End left wingwall with spall at top looking right</td>
</tr>
<tr>
<td>Photo Number</td>
<td>Photo Filename</td>
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<tr>
<td>--------------</td>
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</tr>
<tr>
<td>11</td>
<td>DSC01110.JPG</td>
</tr>
<tr>
<td>12</td>
<td>End right approach near bridge looking right</td>
</tr>
</tbody>
</table>
Begin approach pavement with transverse crack looking back left

Catch basin begin right approach with pavement cracks and potholes in the pavement looking ahead left
End right approach pavement with cracks looking ahead

Photo Number: 15  Photo Filename: End right approach pavement with cracks looking ahead

End right approach rail looking begin

Photo Number: 16  Photo Filename: End right approach rail looking begin.jpg
Begin left approach bridge rail with collision damage looking end left

Broken up right sidewalk looking begin
Underside of framing looking end

Photo Number: 19  Photo Filename:  Underside of framing looking end right.

Begin approach looking ahead

Photo Number: 20  Photo Filename:  DSC01114.JPG
Inspection Sketches

NYS DEPT. OF TRANSPORTATION

BIN: 2006470  DATE: 5/26/2015

FEATURE CARRIED: 9G

FEATURE CROSSED: CSX Transportation

Vertical clearance readings taken from top of RR rail to bottom of girder.
Standard Photographs

2006470_LOCATION_MAP.JPG

BIN: 2006470
Carried: 9G
Crossed: CSX TRANSPORT
BIN: 2006470 Bridge Inspection Report
Inspection Date: May 26, 2015

AbutmentEnd.JPG

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ApproachBegin.JPG