New York State Department of Transportation
Yellow Flag 3B190TW046

By: Thomas Barrell  
Flag Date: September 12, 2019

Superseding Information:  
This flag supersedes: YF 3B18WQW037

Structure Information

BIN: 3209800  
Region: 03 - SYRACUSE

Feature Carried: FREESE ROAD  
County: TOMPKINS

Feature Crossed: FALL CREEK  
Political Unit: Town of DRYDEN

Orientation: 8 - NORTHWEST  
Approximate Year Built: 1920

Posted Load Matches Inventory: Yes

Bridge Load Posting (Tons): 15

Primary Owner: 30 - County

Primary Maintenance Responsibility: 30 - County

Typical or Main Span Type: 3 - Steel, 10 - Truss - Thru

This Bridge is not a Ramp

Number of Spans: 2

Verbal Notification Information

Person Notified: Not Contacted  
Date:

Of:

Signature Information

Signature: Thomas Barrell, P.E. 087058-1  
Date: September 17, 2019

Reviewed By: Glenn Klein  
Date: September 18, 2019

Attachments: 7
Flagged Elements

<table>
<thead>
<tr>
<th>Parent Element</th>
<th>Element</th>
<th>Total Quantity</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Span Number : 1</td>
<td>113 - Steel Stringer</td>
<td>331</td>
<td>ft</td>
</tr>
<tr>
<td>Span Number : 2</td>
<td>113 - Steel Stringer</td>
<td>331</td>
<td>ft</td>
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Flagged Condition Description

Subject: Heavy Section Loss to the Stringer Flanges

Structure Information:
This structure is a two span continuous pony truss with a floorbeam and stringer floor system supporting an open steel grate deck (photo 1). The stringers are noted to be 12"27#WF in the plans in the BIN folder (tw=0.24" and tf=0.4").

2019 Conditions:
The stringer flanges in span 1 exhibit heavy section losses at several locations. There are several other locations with section losses greater than 1/3 of the flange thickness but they are adjacent stringers and are therefore included in a separate Red Flag. Section losses were taken at either midspan or where the lower cross bracing intersects the stringers (approx. 6 ft from the floorbeams). Where the cross bracing intersects, that is considered to be around midspan (stringer span lengths range from 13'-4"+/- to 14'-0"+/- long). Locations are as follows:

SPAN 1:
Stringer 2 in Panel 5: This stringer was reported to have 43% section loss to the bottom flange approx. 6 ft+/- from floorbeam 4 in 2016. Prior to 2017, a 1/4" thick steel plate was welded to the bottom flange. The plate is approx. 18" long. In 2017 and 2018 the section loss was noted to be 44% to the bottom flange and the plate was not mentioned. There are no plans or calculations for this plate in the BIN folder and it is unknown if it was designed. Therefore, this stringer is still included in this flag. Section loss to the bottom flange neglecting the plate is 32%. The average thickness to the bottom flange including the plate is 0.523" (original flange thickness is 0.4"). Top flange loss is approx. 5% (was 5%) (photos 2 and 3)

Stringer 3 in Panel 2 at midspan: Top flange loss is 5% and bottom flange loss is 55% (there were no previous losses) (photo 4). The stringer 2 losses in panel 2 are included for information purposes (see attached sketch).

SPAN 2:
Stringer 2 in Panel 4 at midspan: Top flange loss is 5% and bottom flange loss is 48% (there were no previous losses reported at midspan).

Stringer 2 in Panel 4 at 5-6 ft from floorbeam 4: Top flange loss is 24% (was 37%) and bottom flange loss is 39% (was 48%). (photo 5)

Note:
Two apparent overloads crossed the bridge during this inspection (large box trucks).
Attachment Description: General View of Underside of Span 1, Looking Back
Attachment Description: Span 1, Stringer 2 in Panel 5 near Midspan, Looking Right at Bottom Flange – 1
Attachment Description: Span 1, Stringer 2 in Panel 5 near Midspan, Looking Right at Bottom Flange – 2
Attachment Description: Span 1, Stringer 3 in Panel 2 at Midspan, Looking Back
<table>
<thead>
<tr>
<th>Photo Number: 5</th>
<th>Photo Filename: 19-3209800-DSCF0308.JPG</th>
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</thead>
</table>

**Attachment Description:** Span 2, Stringer 2 in Panel 4 near Midspan, Looking Right and Back
### SECTION LOSS DOCUMENTATION:

TL - Top flange thickness, LEFT side  
TR - Top flange thickness, RIGHT side  
Wt - Web thickness at top,  
Wm - Web at mid height,  
Wb - Web at bottom  
BL - Bottom flange thickness, LEFT side  
BR - Bottom flange thickness, RIGHT side

<table>
<thead>
<tr>
<th>Location</th>
<th>Span 1, Stringer 2, Panel 2, near midspan (assume full length)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
<td><strong>By</strong></td>
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<table>
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<tr>
<th><strong>Location</strong></th>
<th>Span 1, Stringer 3, Panel 2, near midspan (assume full length)</th>
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<td><strong>Date</strong></td>
<td><strong>By</strong></td>
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<th><strong>Location</strong></th>
<th>Span 1, Stringer 2, Panel 2, near midspan (assume full length)</th>
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<tbody>
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<td><strong>Date</strong></td>
<td><strong>By</strong></td>
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<td></td>
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### Attachment Description: 19_StringerSL_Span 1
### SECTION LOSS DOCUMENTATION:

- TL - Top flange thickness, LEFT side
- TR - Top flange thickness, RIGHT side
- Wt - Web thickness at top
- Wm - Web at mid height
- Wb - Web at bottom
- BL - Bottom flange thickness, LEFT side
- BR - Bottom flange thickness, RIGHT side

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<tr>
<th>Location</th>
<th>Date</th>
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<th>Top Flange</th>
<th>Web</th>
<th>Bottom Flange</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TL</td>
<td>TR</td>
<td>Wt</td>
<td>Wm</td>
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### SECTION LOSS SUMMARY

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<th>Top Flange</th>
<th>Web</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>TL</td>
<td>TR</td>
<td>Wt</td>
<td>Wm</td>
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### Attachment Description: 19_StringerSL_Span 2