BIN 3314460
Podunk Road over Taughannock Creek
Town of Ulysses, Tompkins County

Historic Bridge Disposition (Bridge for Sale)

This document is dedicated to the listing of a historic bridge available for adaptive reuse. The bridge listed here is eligible for the National Register of Historic Places, and any sale will be awarded for $1.00 to the entity who develops the most responsive preservation proposal. Following selection, the successful proposer / entity must sign a bill of sale and enter into an agreement with the Tompkins County Highway Department to include provisions for restrictive covenants regarding the preservation and maintenance of the bridge.

Materials Available for Review:

01- Bridge Offer Document

02 – Bridge Location Map

03 – Bridge Inspection Report

04 – Bridge Flag information

05 – Draft section 106 document

To be considered, all proposals must be submitted electronically to kchapman@tompkins-co.org , and the subject line must read "PROPOSAL FOR ADAPTIVE REUSE OF THE PODUNK ROAD BRIDGE," and detail their plans for the preservation and reuse of the bridge meeting the conditions detailed in the Bridge Marketing Document.

BIN 3314460

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Town of Ulysses, Tompkins County

01- Bridge Offer Document

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Bridge Offer

The Tompkins County Highway Department is seeking parties interested in taking ownership of the **Podunk Road Bridge** in the Town of Ulysses. This bridge was originally constructed in 1915 and carries Podunk Road Bridge over Taughannock Creek.

The current owner, Tompkins County, in consultation with the Federal Highway Administration (FHWA) and the State Historic Preservation Office (SHPO) determined the bridge is eligible for listing in the National Register of Historic Places (NRHP). The investigation of historic properties within and nearby the project site began with a review of the County file and the collection of documentation of the Resource Eligibility Evaluation. It identified the Podunk Road Bridge as National Register eligible under Criterion A. This bridge is associated with historic event(s) or activities at the time of original construction.

BIN 3314460 is a 56-foot single span metal pin-connected Pratt through-truss that carries two 10 ft travel lanes. The bridge is made of two trusses with the floor hanging between them. Each member intersection is connected by a large metal pin. The bottom chord members are built up using channel shapes bound together by eye bars. The top chord members are built up using channel shapes bound together by a cover plate. The vertical tension members are double

angles connected by lacing bars. All the compression members are eye bars, either 1 or 2 individual eye bars per member. The metal grate deck sits on top of steel stringers which sit on floor beams suspended by a single plate at each truss panel point.

The existing bridge is currently load posted for **8 tons** and has been both red and yellow flags discovered during recent bridge inspections. For the most recent bridge inspection information, refer to the project Design Approval Document.

The most vulnerable locations on the bridge, are due to horizontal cracks and rust-thru perforations within the lower portion of the web bearing area on floor beams and stringers and the heavy section loss to stringer top and bottom flanges near the point of maximum bending on floor beams and stringers. A single truss cannot withstand the loss of a member, and each truss is unable to share load with the other. In a critical event, the entire bridge is likely to be lost.

The cost of dismantling and storing the existing bridge is estimated at approximately $97,500 (including a 15% contingency). This estimated cost excludes the removal of the lead-based paint from the steel structure in accordance with the US Environmental Protection Agency's requirements. In lieu of removing the lead-based paint a quid pro quo agreement to accept liability for the lead-based paint may be acceptable. The bridge foundations would be removed separately by the new bridge contractor.

Interested parties are required to meet certain conditions, which include:

- Provide a comprehensive written plan for the preservation and future use of the bridge, including any desired modifications, and the estimated cost of rehabilitation. It is preferred that the new owner be able to use the entire superstructure of the truss bridge.
- Maintain the structure and the features that give it historic significance according to prescribed standards.
- Assume all future legal and financial responsibility for the structure, including "hold harmless" agreements to the New York State Department of Transportation (NYSDOT) and to the Federal Highway Administration (FHWA). Post a performance bond.
- Provide proof of ability to assume the financial and administrative responsibilities of bridge ownership throughout its existence.

Agencies, jurisdictions, organizations, or private owners interested in obtaining ownership of the bridge for aesthetic, historic, recreation or other uses should contact Kelly Chapman, Tompkins County Highway Department, at (607) 274-0300 or email at kchapman@tompkins-co.org . This contact must be received no later than close of business on March 31 2026. Funding to assist with relocation or rehabilitation may be provided up to the estimated cost of bridge demolition. If an interested party secures its own federal funding, it is noted that any bridge preserved with federal funding shall thereafter not be eligible for any other highway funds pursuant to Public Law 100-17, Section 123(f) (Historic Bridges).

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Town of Ulysses, Tompkins County

02 – Bridge Location Map

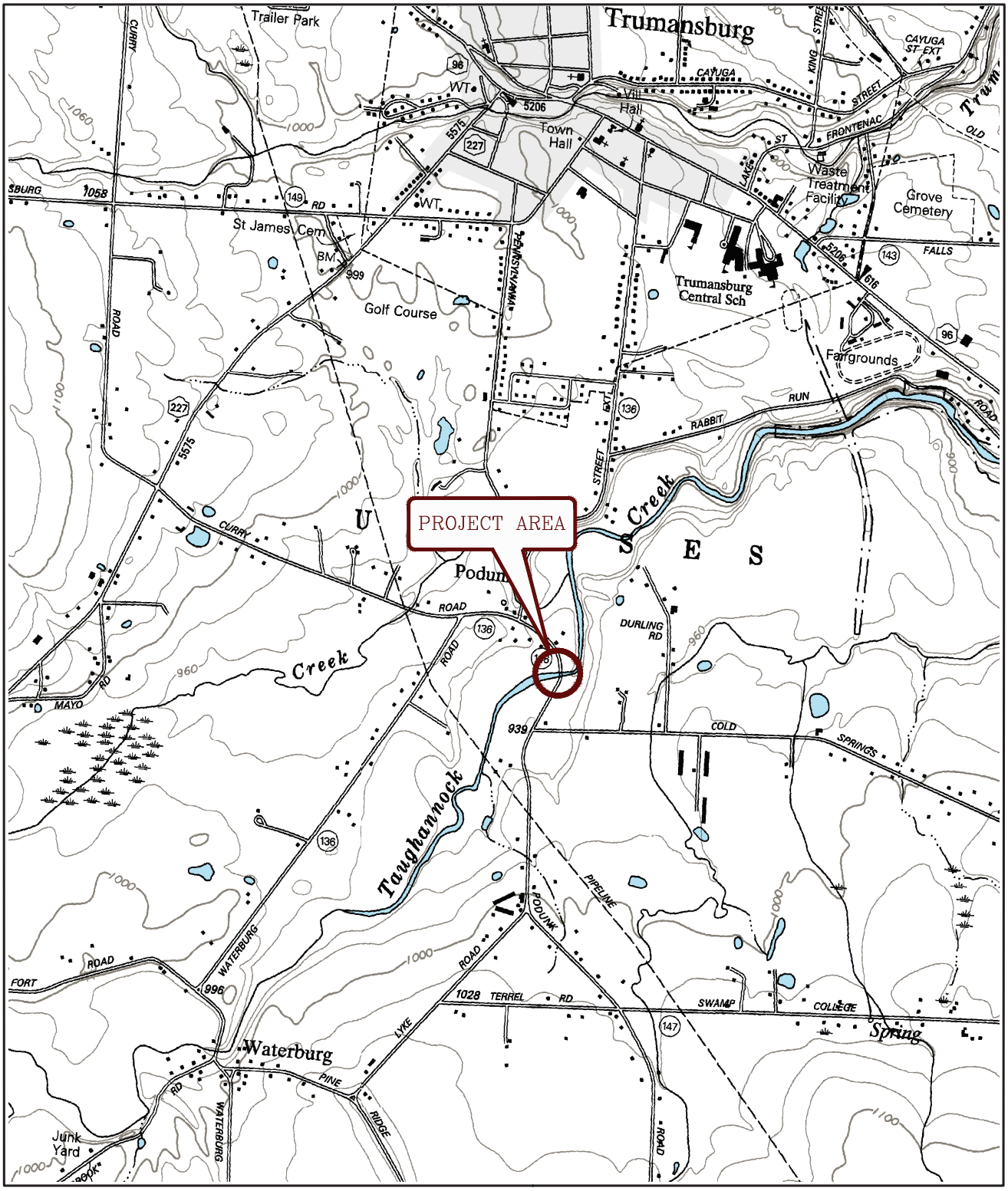

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FIGURE 1. SITE LOCATION MAP

TOMPKINS COUNTY HIGHWAY DEPARTMENT
PODUNK ROAD BRIDGE OVER TAUGHANNOCK CREEK
TOWN OF TRUMANSBURG | TOMPKINS COUNTY | NEW YORK

BIN 3314460

DATE:	NOVEMBER 2022
SCALE:	1" = 2,000'
PROJECT NO:	50515

MAP SOURCE: NYS DOT RASTER QUADRANGLE; TRUMANSBURG; CAYUGA, SCHUYLER, SENECA, AND TOMPKINS COUNTIES
DOT EDITION DATE: 1996 /USGS CONTOUR DATE:1970

BIN 3314460

Podunk Road over Taughannock Creek

Town of Ulysses, Tompkins County

03 – Bridge Inspection Report

New York State Department of Transportation
General Bridge Inspection Report

Inspection Date: August 11, 2025

Structure Information

BIN: **3314460**
Feature Carried: COUNTY ROAD 146
Feature Crossed: TAUGHANNOCK CREEK
Orientation: 1 - NORTH

Region: 03 - SYRACUSE
County: TOMPKINS
Political Unit: Town of ULYSSES
Approximate Year Built: 1915

Primary Owner: 30 - County
Primary Maintenance Responsibility: 30 - County
General Type Main Span: 3 - Steel, 10 - Truss - Thru
This Bridge is not a Ramp
Number of Spans: 1
Number of NSTM Spans: 1

Postings

Posted Load Matches Inventory: Yes
Posted Load in field: 15
Posted Vertical Clearances Match Inventory: Yes
Inventory On: Not Posted
Inventory Under: Not Posted

Number of Flags Issued

Red PIA: 0
Yellow: 1
Red: 0
Safety PIA: 0

New York State Inspection Overview

General Recommendation: 3

Federal SNBI Condition Ratings

Deck:	6	*Railing:*	7	*Channel:*	7
Superstructure:	4	*Railing Transition:*	5	*Channel Protection:*	8
Substructure:	5	*Bearings:*	5	*Scour:*	6
Culvert:	N	*Joints:*	4	*Underwater insp.:*	N
NSTM:	4				

Action Items

Non-Structural Condition Observations noted: YES
Vulnerability Reviews Recommended: NO
Diving Inspection Requested: NO
Further Investigation Requested: NO

Inspector & Reviewer Signature Information

Inspection Signature: Hao Cui, P.E. 089189-1 *Date:* September 13, 2025
Review Signature: John D. Seligman, P.E. 067549-1 *Date:* September 14, 2025
Processed by : Osman Y. Hag-Elsafi, P.E. 082139-1 *Date:* November 28, 2025

Report Printed: November 28, 2025 9:21:20 AM

Special Emphasis Inspection

Special Emphasis Detail	"Other" Special Emphasis Detail Description	Hands-On Insp Performed	Hands-On Inspection Note
Non-redundant Structures		Yes	2025: All special emphasis details were inspected 100% hands-on. See Element 120 – Steel Truss comments for details. Hao Cui, PE#089189, 8/11/25.
Field-welded repairs	Panel 3 Stringer S2 & Panel 5 Stringers S2-S4 at the end abutment	Yes	2025: All special emphasis details were inspected 100% hands-on and no defects were observed. Hao Cui, PE#089189, 08/11/25.
Stringer/Floorbeam Connection		Yes	2025: All special emphasis details were inspected 100% hands-on. See Element 113 - Steel Stringer comments for details. Hao Cui, PE#089189, 08/11/25.

Additional Information

Overloads Observed

No overload vehicles observed during this inspection.

Notes to Next Inspector

BIN Plate is located at the right side of the begin backwall.
2025 Access: Walking, Lightweight UBIU with temporary bridge closure.

Improvements Observed

2013: Truss counter members added to L1-U2 and L3-U4 on both trusses as a response to a Red Flag issued in 2012 for a load posting.
2015: The following improvements or repairs have been made at this site since the previous inspection: -New asphalt pavement has been placed across the Begin and End transitions.
-A new 4 foot long section of open steel deck grating has been placed at the Begin.
-At the Right Truss end post U04 – L05, previous impact damage has been straightened.
-All 5 stringers in floorbeam panel 1 have been replaced in kind.
-New Begin abutment bearings under all 5 stringers.
-New joint armor angles placed at Begin and End Abutments.
2020: The Begin and End approach roadways have received an asphalt overlay and stringer web repair plates have been installed at several locations since the 2019 Inspection.
2021: The Stringers S2 and S3 over FB4 have been repaired (Photo 8).
2022 – New 15 Ton load posting signs have been placed at both approaches since the previous inspection. New 15Ton Bridge warning signs have also been placed at both approaches since the previous inspection.
2023: None
2024: None.
2025:
-Asphalt patch at the begin joint.
-Steel Repair of Stringer S2 over Floorbeam FB2 and Stringer S4 over Floorbeam FB4.

Pedestrian Fence Height

None

Snow Fence

None

Bin Plate Condition

OK

Scour Critical Rating

5 - Bridge foundations determined to be stable for assessed or calculated scour condition. Scour is determined to be within the limits of footing or piles by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculations or by installation of properly designed countermeasures.

Bats, or signs of bats, present?

No

Field Notes

Staff Present During Inspection		
Name	**Title**	**Organization**
Bob O'dell	WZTC Crew	CP Ward
Mark Hetzel	UBIU Operator	CP Ward
Sushant Thapa	Assistant Team Leader	South Col Engineering, PC
Todd Erwin	WZTC Forman	CP Ward

General Equipment Required for Inspection*
Access Type
13 - Walking
18 - Light Weight Under Bridge Inspection Unit (UBIU)
28 - Lane Closure Without Shadow Vehicle

*** For span specific equipment requirements refer to the Active Inventory's "Access Needs" tab in BDIS.**

Detailed Time & Weather Conditions				
Field Date	**Arrival**	**Departure**	**Temp (F)**	**Weather Conditions**
08/11/2025	08:45 AM	02:15 PM	70	Cloudy

Inspection Times (hours)	
Time required for travel, inspection and report preparation	13
Lane closure usage	4
Railroad flagging time	No

Element Quantities

Element Assessment Summary Table							
Element	**Total Quantity**	**Unit**	**CS-1**	**CS-2**	**CS-3**	**CS-4**	**CS-5**
28 - Steel Deck with Open Grid	1165	ft^2		1035	130		0
29 - Steel Deck with Concrete Filled Grid	62	ft^2		62			0
113 - Steel Stringer	285	ft		98	171	16	0
120 - Steel Truss	114	ft		20	94		0
152 - Steel Floor Beam	83	ft		83			0
225 - Steel Pile	80	each	27	53			0
231 - Steel Pier Cap	50	ft			50		0
306 - Other Joint	42	ft		21	21		0
311 - Movable Bearing	7	each		5		2	0
313 - Fixed Bearing	7	each		7			0
330 - Metal Bridge Railing	118	ft	118				0
510 - Wearing Surfaces	1182	ft^2		1171	11		0
515 - Steel Protective Coating	5273	ft^2		2150	748	2375	0
800 - Erosion or Scour	130	ft	105	25			0
801 - Stream Hydraulics	1	each		1			0
830 - Secondary Members	1	each		1			0
831 - Steel Beam End	10	each		7	3		0
850 - Backwall	54	ft		28	22	4	0
851 - Abutment Pedestal	14	each		13	1		0

Element Assessment by Span							
Element**	**Total Quantity**	**Unit**	**CS-1**	**CS-2**	**CS-3**	**CS-4**	**CS-5**
Span Number : 1							
BA225 - Steel Pile	15	each		15			0
515 - Steel Protective Coating	200	ft^2				200	0
BA231 - Steel Pier Cap	25	ft			25		0
515 - Steel Protective Coating	25	ft^2			12	13	0
BA306 - Other Joint	21	ft			21		0
BA311 - Movable Bearing	7	each		5		2	0
515 - Steel Protective Coating	14	ft^2		4		10	0
BA800 - Erosion or Scour	25	ft	25				0
BA831 - Steel Beam End	5	each		2	3		0
BA850 - Backwall	27	ft		6	21		0

Element**	Total Quantity	Unit	CS-1	CS-2	CS-3	CS-4	CS-5
BA851 - Abutment Pedestal	7	each		6	1		0
BW225 - Steel Pile	25	each	15	10			0
515 - Steel Protective Coating	100	ft^2			25	75	0
BW800 - Erosion or Scour	40	ft	40				0
EA225 - Steel Pile	15	each		15			0
515 - Steel Protective Coating	200	ft^2				200	0
EA231 - Steel Pier Cap	25	ft			25		0
515 - Steel Protective Coating	25	ft^2			12	13	0
EA306 - Other Joint	21	ft		21			0
EA313 - Fixed Bearing	7	each		7			0
515 - Steel Protective Coating	14	ft^2		4		10	0
EA800 - Erosion or Scour	25	ft		25			0
EA831 - Steel Beam End	5	each		5			0
EA850 - Backwall	27	ft		22	1	4	0
EA851 - Abutment Pedestal	7	each		7			0
EW225 - Steel Pile	25	each	12	13			0
515 - Steel Protective Coating	130	ft^2			32	98	0
EW800 - Erosion or Scour	40	ft	40				0
28 - Steel Deck with Open Grid	1165	ft^2		1035	130		0
510 - Wearing Surfaces	1120	ft^2		1109	11		0
515 - Steel Protective Coating	1209	ft^2		121		1088	0
29 - Steel Deck with Concrete Filled Grid	62	ft^2		62			0
510 - Wearing Surfaces	62	ft^2		62			0
113 - Steel Stringer	285	ft		98	171	16	0
515 - Steel Protective Coating	1026	ft^2		410	308	308	0
120 - Steel Truss	114	ft		20	94		0
515 - Steel Protective Coating	1425	ft^2		1139	143	143	0
152 - Steel Floor Beam	83	ft		83			0
515 - Steel Protective Coating	433	ft^2			216	217	0
330 - Metal Bridge Railing	118	ft	118				0
515 - Steel Protective Coating	472	ft^2		472			0
801 - Stream Hydraulics	1	each		1			0
830 - Secondary Members	1	each		1			0

** Elements with a prefix designate the locations of BA-Begin Abutment, BW-Begin Wingwall, EA-End Abutment, EW-End Wingwall, CO-Culvert Outlet, and PR-Pier. No prefix generally indicates the element is part of the superstructure.

Inspection Notes

General Notes

No bats were found at the bridge.

Yellow Flag 3B25M3W029 (supersedes Yellow Flag 3B2468W021) for Top and bottom flange section loss to Stringers S2-S4 in all panels.

Element Condition Notes

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 28 - Steel Deck with Open Grid	1165	0	1035	130	0	0

Condition State 3 Note

Referenced Photo(s): 1, 2

Referenced Sketch(es): None

A narrow band of the steel grid deck under the bridge rails exhibits corrosion along the full length of the span. Section losses vary with some areas exhibiting corrosion holes (Photo 1). Rate 1' width along either side of the bridge deck CS3 for this condition.

In addition, the sleeper beams below the steel grid exhibit scattered corrosion holes (Photo 2). Rate 1% of the bridge deck CS3 for this condition.

Affected Quantity: 59' bridge rail length x 2 sides + 1165 SF x 0.01 = 130 SF

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 28 - Steel Deck with Open Grid-510 - Wearing Surfaces	1120	0	1109	11	0	0

Condition State 3 Note

Referenced Photo(s): 1

Referenced Sketch(es): None

Several isolated and scattered transverse bars within the steel grid deck are bent or broken. The bars do not protrude above the deck wearing surface in any location. Rate 1% of the deck area CS3 for this condition.

Affected Quantity: 1120 SF x 0.01 = 11 SF

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 28 - Steel Deck with Open Grid-515 - Steel Protective Coating	1209	0	121	0	1088	0

Condition State 4 Note

Referenced Photo(s): 3

Referenced Sketch(es): None

The paint on the steel grid deck has failed over an estimated 90% of the deck area, leading to surface corrosion with scattered areas of section loss and corrosion holes.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 113 - Steel Stringer	285	0	98	171	16	0

Common

Referenced Photo(s): 4, 5

Referenced Sketch(es): 6, 7, 8, 9

CS4:
Yellow Flag 3B25M3W029 (supersedes Yellow Flag 3B2468W021) was re-issued for Top and bottom flange section loss of Stringers S2-S4 at 5 locations. See Flag Report for details. An expedited load rating was requested due to large increase of stringer flange section loss at Panel 2 Stringer S3 at ½ L. The results are pending.

CS4: 16 LF

CS3:
Stringers S2-S4 at other locations exhibit varying section losses to their top and bottom flanges over the full length of the

span. See Stringer Flange Section Loss sketch for details.

Stringers S2-S5 also exhibit 10-15% full height web section loss at the begin abutment and over floorbeams (typically at locations without the web repair) (Photo 4).

Affected Quantity: 285 LF x 0.60 = 171 LF

CS2:
Stringer S2 over Floorbeam FB2 and Stringer S4 over Floorbeam FB4 have been repaired with strengthen plates (Photo 5). Previously issued Red Flag 3B2468W020 has been removed prior to this inspection.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 113 - Steel Stringer-515 - Steel Protective Coating	1026	0	410	308	308	0
Span 1: 120 - Steel Truss-515 - Steel Protective Coating	1425	0	1139	143	143	0
Span 1: 152 - Steel Floor Beam-515 - Steel Protective Coating	433	0	0	216	217	0

Common

Referenced Photo(s): 6, 7, 8

Referenced Sketch(es): None

CS4: The superstructure paint has failed over a portion of the various elements, leading to surface corrosion as well as areas of section loss.

The stringer paint has failed over an estimated 50% of Stringers 2-4, or 30% of the overall element quantity (Photo 6).
The truss paint has failed over an estimated 10% of the surface area, generally along the bottom chords and at the deck level of the vertical and diagonal members (Photo 7).

The floorbeam paint has failed over an estimated 50% of the surface area, leading to corrosion and minor section losses along the top and bottom flanges, as well as the webs near the truss connections (Photo 8).

CS3: An additional portion of the superstructure paint is in poor condition, generally exhibiting rust bleeding and blistering. This condition affects the remaining paint on Stringers S2-S4, 10% of the truss area, and the remainder of the floorbeam paint.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 120 - Steel Truss	114	0	20	94	0	0

Condition State 3 Note

Referenced Photo(s): 9, 10, 11, 12, 13, 14

Referenced Sketch(es): None

The vertical truss members exhibit scattered areas of pack rust between the transverse angle legs (Photo 9). Localized sections losses are estimated to be up to 25%, with overall section loss estimated at less than 10%.

The Truss 1 bottom chord eyebars are bent in three locations: L0L1 (Photo 10), L2L3, and L4L5.
The inboard eyebars of the Truss 1 diagonal members U1L2 (Photo 11) and L3U4 and the outboard eyebar of Truss 2 U1L2 are loose and can be easily deflected transversely up to 3” by hand.
The Truss 1 U4 pin caps are not tightly seated against the truss member, leaving a gap of approximately 1/16” on either end of the pin (Photo 12).
The Truss 2 U4L4 member is bent outwards by up to 1/4” as a result of a previous impact damage (Photo 13).
The Truss 2 bottom chord member L4L5 exhibits localized web section loss to both the inner and outer channels at L5 below member U4L5. There is a 1” wide x 3/4” high corrosion hole in the web of the inner channel in this location (Photo 14).

Affected Quantity: 94 LF

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA225 - Steel Pile-515 - Steel Protective Coating	200	0	0	0	200	0
Span 1: EA225 - Steel Pile-515 - Steel Protective Coating	200	0	0	0	200	0
Span 1: BW225 - Steel Pile-515 - Steel Protective Coating	100	0	0	25	75	0
Span 1: EW225 - Steel Pile-515 - Steel Protective Coating	130	0	0	32	98	0

Common

Referenced Photo(s): 15, 16

Referenced Sketch(es): None

CS4: The paint on the abutment and wingwall piles has failed over the entire abutment area, as well as an estimated 75% of the wingwall areas. The paint failure has led to surface corrosion as well as scattered areas of rust delamination, typically at the tops of the piles.

CS3: The remaining paint on the wingwall piles is in poor condition, generally exhibiting rust bleeding and blistering. Affected Quantity, Begin Wingwall: 25 SF; End Wingwall: 32 SF.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA231 - Steel Pier Cap	25	0	0	25	0	0
Span 1: EA231 - Steel Pier Cap	25	0	0	25	0	0

Condition State 3 Note

Referenced Photo(s): 17, 18

Referenced Sketch(es): None

The begin and end abutment steel cap beams exhibit corrosion and section loss along their horizontal and vertical legs over the full width of the substructures. Section losses typically up to 15% but at some locations corrosion holes present intermittently along the element width on the vertical legs (Photos 17 & 18).

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA231 - Steel Pier Cap-515 - Steel Protective Coating	25	0	0	12	13	0
Span 1: EA231 - Steel Pier Cap-515 - Steel Protective Coating	25	0	0	12	13	0

Common

Referenced Photo(s): 17, 18

Referenced Sketch(es): None

CS4: The paint on the abutment steel cap beams has failed over an estimated 50% of their surface area, leading to corrosion, section loss, and scattered corrosion holes on their vertical legs.

CS3: The remaining paint on the abutment steel cap beams is in poor condition, exhibiting rust bleeding and blistering throughout.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA306 - Other Joint	21	0	0	21	0	0

Condition State 3 Note

Referenced Photo(s): 19

Referenced Sketch(es): None

The begin abutment steel joint angle is higher than the surface of the steel deck by approximately 3/4” over the left and right lane. At the center, the steel deck is higher than joint armor for up to ¾”. The angle has numerous scrapes and gouges as a result.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA311 - Movable Bearing	7	0	5	0	2	0

Condition State 4 Note

Referenced Photo(s): 20

Referenced Sketch(es): None

CS4: The truss bearings at the begin abutment are overexpanded at an ambient temperature of 70 degrees. The Truss 1 bearing plate is overhanging the back of the masonry plate by 2”, reducing the bearing area by approximately 17%. The Truss 2 bearing plate is overhanging the back of the masonry plate by 5”, reducing the bearing area by approximately 42% (5” out of 12” bearing length).
Both bottom chords are in contact with the backwalls, preventing further expansion. This is a long standing condition, first documented in 2005.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA311 - Movable Bearing-515 - Steel Protective Coating	14	0	4	0	10	0
Span 1: EA313 - Fixed Bearing-515 - Steel Protective Coating	14	0	4	0	10	0

Condition State 4 Note

Referenced Photo(s): 4, 21

Referenced Sketch(es): None

The paint on the stringer bearings at each abutment has failed, leading to corrosion and minor section losses.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: 801 - Stream Hydraulics	1	0	1	0	0	0

Common

Referenced Photo(s): 22, 23, 24

Referenced Sketch(es): 2, 3, 4, 5

See attached Stream Hydraulics Defect History sketch.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA831 - Steel Beam End	5	0	2	3	0	0

Condition State 3 Note

Referenced Photo(s): 4

Referenced Sketch(es): None

Stringers S3-S5 exhibit 10-15% full height web section loss at the begin abutment.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA850 - Backwall	27	0	6	21	0	0

Condition State 3 Note

Referenced Photo(s): 25

Referenced Sketch(es): None

The begin abutment backwall is cracked and spalled between Stringers 1 and 5. The spalling measures up to 2.5” deep, and the cracks typically measure up to 1/4” wide. In Bay 4, the concrete is cracked x up to ½” wide and has become fully separated and is slightly loose.

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: EA850 - Backwall	27	0	22	1	4	0

Common

Referenced Photo(s): 26, 27, 28

Referenced Sketch(es): None

CS4:
The end abutment backwall is cracked through its full thickness at the right deck fascia. The portion of the backwall to the right of the crack is separated and rotated (the backwall is moves towards end for 2” at the crack while the tip of the backwall moves towards the stream for 3”-4”) (Photos 26 & 27).
Affected Quantity: 4 LF

CS3:
The top of the backwall under Stringer Bay 3 is spalled 1 SF x up to 4” deep adjacent to Stringer S4 (Photo 28).

	TQ	CS-1	CS-2	CS-3	CS-4	CS-5
Span 1: BA851 - Abutment Pedestal	7	0	6	1	0	0

Condition State 3 Note

Referenced Photo(s): 29

Referenced Sketch(es): None

At the abutment, the top of the steel cap and concrete fill on top of the steel piles supporting the truss and stringers and they are rated as abutment pedestal.

The concrete fill adjacent to Truss T2 bearing at the begin is spalled up to 10” deep. The spall has slightly undermined the truss bearing keeper plate for up to 2” deep.

Non-Structural Condition Observations

Category: APPROACH - Settlement Quantity: 22 Unit: ft

Referenced Element(s): NONE

Referenced Photo(s): 30,31
Referenced Sketch(es): NONE

The begin approach pavement is spalled and sunken along the begin abutment joint angle, causing a gap of up to 2” wide x 1” deep (Photo 30). Previously reported pothole near the center has been patched with asphalt.

The end approach pavement adjacent to the joint is spalled 2 SF x 2” D near the center (Photo 31).

Category: APPROACH - Railing Quantity: 18 Unit: ft

Referenced Element(s): NONE

Referenced Photo(s): 32
Referenced Sketch(es): NONE

The top rail of the begin left approach rail is disconnected from 6 consecutive posts, and there are scrapes along the rail in this area. The rail is slightly loose.

Category: ATTACHMENTS - Bridge Related Signs Quantity: 1 Unit: ea

Referenced Element(s): NONE

Referenced Photo(s): 33
Referenced Sketch(es): NONE

The begin left horizontal clearance marker panel is bent towards the begin at the bottom right corner.

Inspection Photographs

Photo Number: **1** Photo Filename: **25_3314460_DSCF2550.JPG**

Attachment Description:
The deck grating at the end left (corrosion with perforations), looking towards end left.

Photo Number: **2** Photo Filename: **25_3314460_DSCF2519.JPG**

Attachment Description:
The deck sleeper under Panel 3 Stringer Bay 2 (corrosion with perforation), looking towards end.

Photo Number: **3** Photo Filename: **25_3314460_DSCF2548.JPG**

Attachment Description:
General view of the top of the deck, looking towards end left.

Photo Number: **4** Photo Filename: **25_3314460_DSCF2506.JPG**

Attachment Description:
Stringer S4 at the begin abutment (web SL and bearing paint condition photo), looking towards begin left.

Photo Number: **5** Photo Filename: **25_3314460_DSCF2512.JPG**

Attachment Description:
Stringer S2 over Floorbeam FB2 (typ. stringer web repair), looking towards end right.

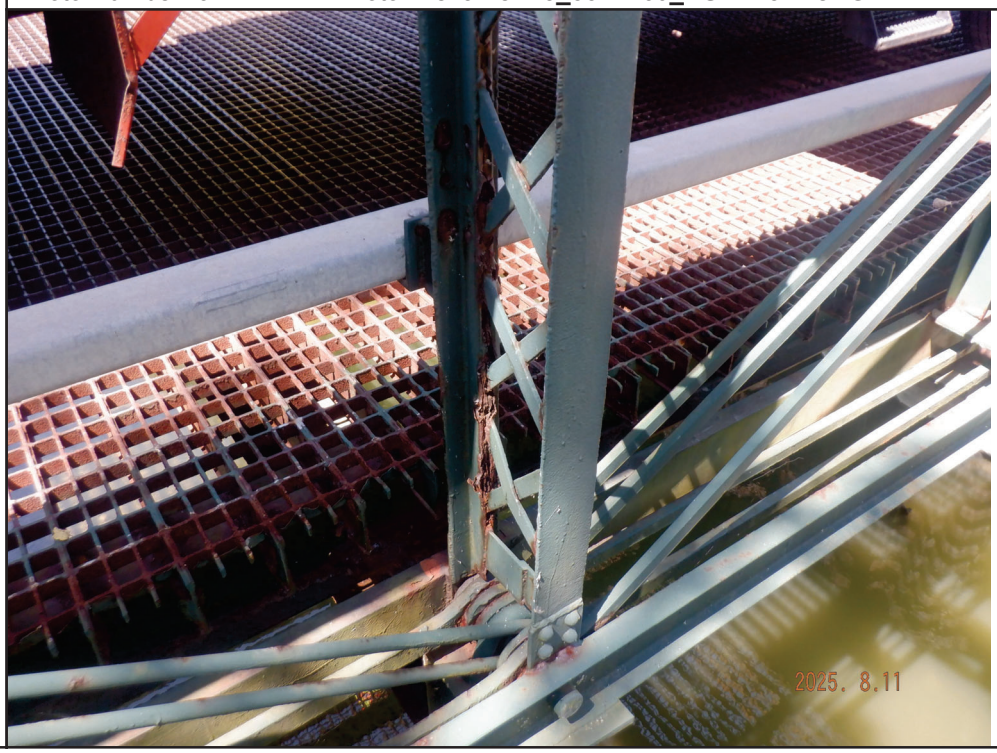
Photo Number: **6** Photo Filename: **25_3314460_DSCF2533.JPG**

Attachment Description:
Typical framing, looking towards begin.

Attachment Description: General view of Truss T2 above the deck (paint condition photo), looking towards end right.	Photo Number: **7** Photo Filename: **25_3314460_DSCF2546.JPG** 

Attachment Description: General view of Floorbeam FB1, begin face (paint condition photo), looking towards right.	Photo Number: **8** Photo Filename: **25_3314460_DSCF2509.JPG** 

Photo Number: **9** Photo Filename: **25_3314460_DSCF2544.JPG**



Attachment Description:
Truss T2, U3L3 near L3 (pack rust), looking towards end left.

Photo Number: **10** Photo Filename: **25_3314460_DSCF2497.JPG**

Attachment Description:
Truss T1, L0L1 (bent eyebars), looking towards begin.

Photo Number: **11** Photo Filename: **25_3314460_DSCF2498.JPG**

Attachment Description:
Truss T1, U1L2 (inboard eyebar loose), looking towards end left.

Photo Number: **12** Photo Filename: **25_3314460_DSCF2499.JPG**

Attachment Description:
Truss T1, U4 pin cap (not fully seated), looking towards end left.

Photo Number: **13** Photo Filename: **25_3314460_DSCF2547.JPG**

Attachment Description:
Truss T2, U4L4 (minor impact damage), looking towards end right.

Photo Number: **14** Photo Filename: **25_3314460_DSCF2538.JPG**

Attachment Description:
Truss T2, L4L5 at L5 (corrosion with perforation), looking towards end left.

Photo Number: **15** Photo Filename: **25_3314460_DSCF2525.JPG**

Attachment Description:
General view of the begin abutment, looking towards begin.

Photo Number: **16** Photo Filename: **25_3314460_DSCF2511.JPG**

Attachment Description:
General view of the end abutment, looking towards end.

Photo Number: **17** Photo Filename: **25_3314460_DSCF2507.JPG**

Attachment Description:
The left half of the begin abutment steel cap (corrosion with perforations), looking towards left.

Photo Number: **18** Photo Filename: **25_3314460_DSCF2537.JPG**

Attachment Description:
The end abutment steel cap (corrosion), looking towards end left.

Attachment Description: The top of the begin joint (height difference), looking towards left.	Photo Number: **19** Photo Filename: **25_3314460_DSCF2545.JPG** 

Attachment Description: Truss T2 bearing at the begin abutment (over-expansion), looking towards begin left.	Photo Number: **20** Photo Filename: **25_3314460_DSCF2502.JPG** 

Photo Number: **21** Photo Filename: **25_3314460_DSCF2542.JPG**

Attachment Description:
Stringer S4 bearing at the end abutment (paint condition photo), looking towards end left.

Photo Number: **22** Photo Filename: **25_3314460_DSCF2530.JPG**

Attachment Description:
The scour protection along the end abutment, looking towards end.

Photo Number: **23** Photo Filename: **25_3314460_DSCF2521.JPG**

Attachment Description:
Upstream channel, looking towards left.

Photo Number: **24** Photo Filename: **25_3314460_DSCF2523.JPG**

Attachment Description:
Downstream channel, looking towards right.

Photo Number: **25** Photo Filename: **25_3314460_DSCF2504.JPG**

Attachment Description:
The begin backwall under Stringer Bay 4 (cracking), looking towards begin.

Photo Number: **26** Photo Filename: **25_3314460_DSCF2540.JPG**

Attachment Description:
The end backwall at the right side (cracking and separation), looking towards end.

Photo Number: **27** Photo Filename: **25_3314460_DSCF2551.JPG**

Attachment Description:
The right portion of the end backwall (rotation), looking towards right.

Photo Number: **28** Photo Filename: **25_3314460_DSCF2543.JPG**

Attachment Description:
The end backwall under Stringer Bay 3 (spalling), looking towards end.

Photo Number: **29** Photo Filename: **25_3314460_DSCF2503.JPG**

Attachment Description:
Truss T2 bearing at the begin (spalling), looking towards begin left.

Photo Number: **30** Photo Filename: **25_3314460_DSCF2496.JPG**

Attachment Description:
General view of the begin approach pavement (spalling and settlement), looking towards left.

Photo Number: **31** Photo Filename: **25_3314460_DSCF2549.JPG**

Attachment Description:
The end approach pavement (spalling), looking towards right.

Photo Number: **32** Photo Filename: **25_3314460_DSCF2494.JPG**

Attachment Description:
The begin left approach guide railing (disconnected railing posts), looking towards begin left.

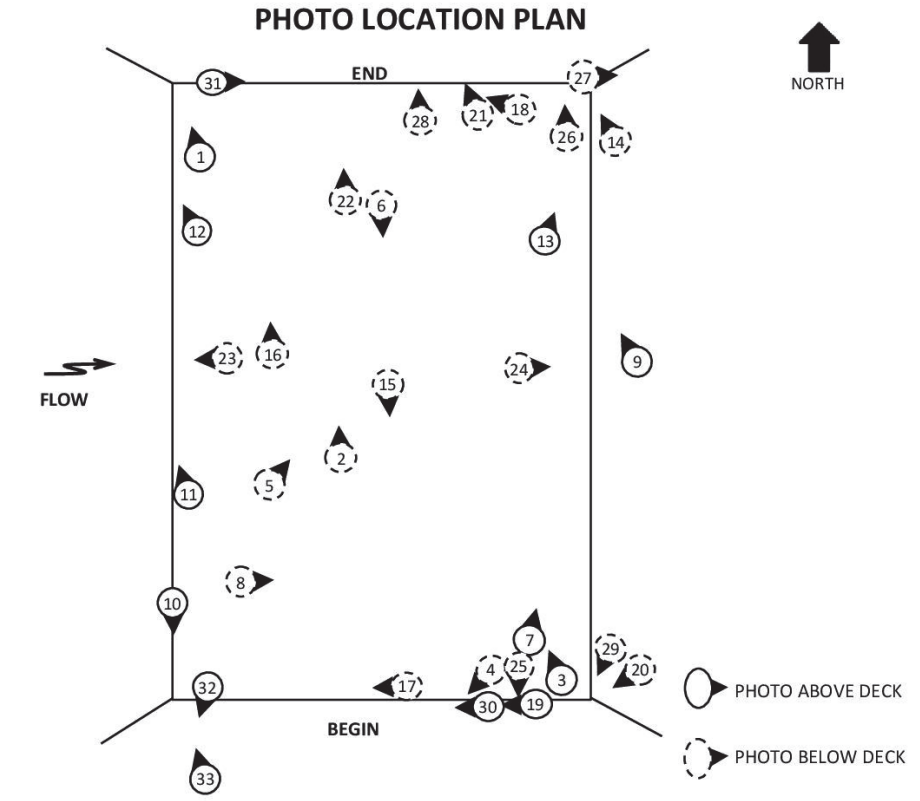
Photo Number: **33** Photo Filename: **25_3314460_DSCF2495.JPG**

Attachment Description:
The begin left horizonal clearance marker (impact damage), looking towards end left.

Inspection Sketches

Sketch Number: **1** Sketch Filename: **25_3314460_Photo Location Plan.jpg**

Feature Carried:	COUNTY ROAD 146	BIN:	3314460
Feature Crossed:	TAUGHANNOCK CREEK	Date:	8/11/2025

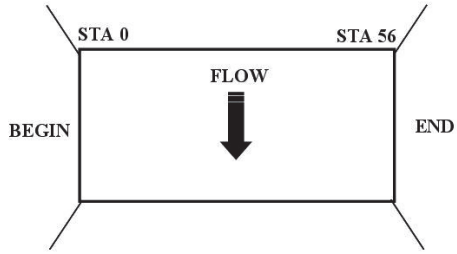


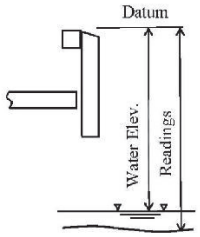
Sketch Description: 25_3314460_Photo Location Plan.jpg

Sketch Number: **2** Sketch Filename: **25_3314460_Channel Cross Section Readings 1-2.jpg**

RC 36 BIN 3314460

CHANNEL CROSS SECTION READINGS (Dropline):





Rail Height

LEFT FASCIA READINGS

Date	2020	2021	2022	2023	2024	2025
Station / By	VR	DGM		AJC	NV	HC
0	14.8	15.1	14.8	14.6	14.6	14.6
10	15.3	15.5	15.1	15.0	15.0	15.5
20	18.6	18.7	18.3	18.1	18.0	17.2
30	19.3	19.6	18.3	18.1	18.1	18.3
40	20.5	20.8	19.5	19.3	19.0	19.8
50	20.3	20.5	19.5	20.1	20.2	20.1
56	19.0	19.4	19.4	19.0	19.2	19.0
WE @ 56	17.3	17.5	17.5	16.8	17.1	17.0
To footing						

RIGHT FASCIA READINGS

Date	2019	2020	2021	2022	2024	2025
Station / By	VR	DGM			NV	HC
0	14.5	14.3	14.5	14.5	14.2	14.0
10	15.6	15.3	15.6	15.5	15.5	15.5
20	18.2	18.7	19.0	18.1	17.6	17.3
30	19.1	19.5	19.5	18.8	18.6	18.5
40	20.2	20.5	20.7	19.8	20.0	19.4
50	20.3	20.8	20.8	20.7	20.2	20.4
56	19.9	20.3	20.1	20.3	20.2	20.0
WE @ 56	16.7	17.3	17.5	17.5	17.2	17.3
To footing						

Shaded readings denote stream edge

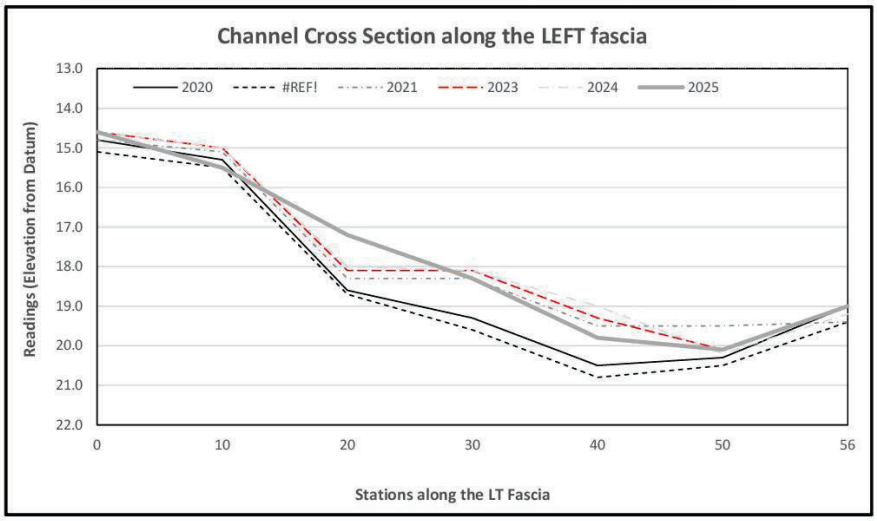
Date:	Comments
2017	Minor infilling along left and right sides of fascias
2020	Scour has generally increased along the Left and Right fascias, by up to 0.6' max. at Sta. 40 LT.
2021	No Siginificant changes in readings since last inspection
2022	Aggradation at up to 1.3' at left Sta 30 - 40 and up to 0.9' at right Sta 20.
2023	No Siginificant changes in readings since last inspection
2024	No Siginificant changes in readings since last inspection
2025	No Siginificant changes in readings since last inspection

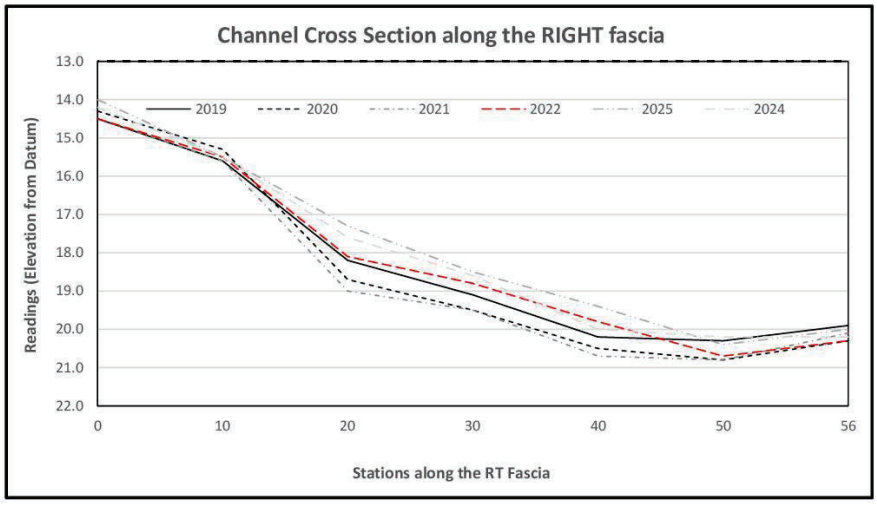
Sketch Description: 25_3314460_Channel Cross Section Readings 1-2.jpg

Sketch Number: **3** Sketch Filename: **25_3314460_Channel Cross Section Readings 2-2.jpg**

RC 36 BIN 3314460

CHANNEL CROSS SECTION READINGS (Dropline - graph of channel's bed):





Sketch Description: 25_3314460_Channel Cross Section Readings 2-2.jpg

Sketch Number: **4** Sketch Filename: **25_3314460_HVA Review.jpg**

Hydraulic Vulnerability Assessment (HVA) Review Form

BIN: 3314460	DATE: 8/11/2025	CURRENT NBI ITEM 113 SCR CODE: 5

A. HYDRAULIC REVIEW	Yes	No
1. Has the Condition State (CS) of any Stream Hydraulic (ADE 801) defects progressed to CS-4 since the last Inspection?		x
2. Are there significant changes (positive and/or negative) in the Stream Hydraulic (ADE 801) defects Condition States, when compared to past inspections?		x
B. FOUNDATION REVIEW		
3. Has the Condition State of the Erosion & Scour (ADE 800) defect progressed to CS-3 and/or CS-4 for more than 10% on a single substructure unit (pier footing, or abutment - ***not*** including wing walls) since the last inspection?		x
4. Are there significant changes (positive and/or negative) in the Erosion & Scour (ADE 800) Condition States, when compare to past inspections?		x

If the answer to any questions above is "Yes", then please attach the Stream Hydraulic Defect History Form:

Team Leader Name: Hao Cui ***Team Leader Comment:*** None

Regional Hydraulics Engineer Comment: _____

Insp. Q.-C. Engineer: _____ ***Date*** _____ ***Reg. Hydr. Engineer:*** _____ ***Date:*** _____

CODE	Description of *NBI Item 113 – Scour Critical Rating Code*
N	Bridge not over Waterway
U	Bridge is on Unknown Foundation
T	Bridge over tidal waters that has not been evaluated for scour, but considered low risk.
9	Bridge foundations (including Piers/piles) are on dry land well above flood levels
8	Bridge foundations determined to be stable for the assessed or calculated scour condition. Scour is determined to be above top of footing.
7	Countermeasures have been installed to mitigate an existing problem with scour and to reduce the risk of bridge failure during a flood event.
6	Scour calculation/evaluation has not been made.
5	Bridge foundations determined to be stable for assessed or calculated scour condition. Scour is determined to be within the limits of footing or piles by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculations or by installation of properly designed countermeasures.
4	Bridge foundations determined to be stable for assessed or calculated scour conditions; field review indicates action is required to protect exposed foundations.
3	Bridge is scour critical; bridge foundations determined to be unstable for assessed or calculated scour conditions. No scour observed at the bridge foundation.
2	Bridge is scour critical; field review indicates that extensive scour has occurred at bridge foundations.
1	Bridge is scour critical; field review indicates that failure of piers/abutments is imminent. Bridge is closed to traffic. Failure is imminent.
0	Bridge is scour critical. Bridge has failed and is closed to traffic

Sketch Description: 25_3314460_HVA Review.jpg

Sketch Number: **5** Sketch Filename: **25_3314460_Stream Hydraulics Defect History**

Agency Defined Element 801 - Stream Hydraulics
Defect History

BIN: 3314460

ADE 801 DEFECTS		CONDITION STATES (CS)				
		Baseline	Previous Inspections			Current Inspection
					Last	
		N/A	8/3/2022	8/17/2023	8/14/2024	8/11/2025
6120	Channel Alignment	2	2	2	2	2
6130	Channel Scour	2	2	2	2	2
6140	Waterway Opening	2	2	2	2	2
6150	Scour Protection	2	NA	NA	NA	2
6160	Bank Protection	1	1	1	1	1
6165	Bank Erosion	2	2	2	2	2
6180	Debris Near Bridge	1	1	1	1	1
6190	Countermeasures	NA	NA	NA	NA	NA
					ADE 801 - Controlling Condition State =	2

Inspector's Comment (comment required for each defect assessed CS-3 or CS-4):

Scour Protection (CS2)
There are riprap scour protections along the end abutment. Rating changed from NA to CS2 (Photo 22).

Upstream and downstream channel photos (Photos 23 and 24) are provided for future reference.

Team Leader:	Hao Cui, P.E.# 089189	Date:	8/11/2025

Sketch Description: 25_3314460_Stream Hydraulics Defect History Form_Automated.jpg

Sketch Number: **6** Sketch Filename: **25_3314460_Stringer Flange Section Loss Panels 1-2.jpg**

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

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 1, Stringer S3 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.360	0.000	0.350					0.350	0.000	0.400	11%	6%		
8/11/21	DGM	0.375	0.000	0.333					0.375	0.000	0.375	11%	6%		
8/2/22	RPD	0.350	0.000	0.330					0.350	0.000	0.340	15%	14%		
8/17/23	WMC	0.330	0.000	0.340					0.350	0.000	0.317	16%	17%		
8/14/24	NJV	0.330	0.000	0.340					0.310	0.000	0.273	16%	27%		
8/11/25	HC	0.330	0.000	0.340					0.310	0.000	0.260	16%	29%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, Stringer S2 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
9/5/19	ND								0.280	0.000	0.313		26%		
8/3/20	AML	0.310	0.000	0.320					0.300	0.000	0.240	21%	33%		
8/11/21	DGM	0.313	0.000	0.313					0.313	0.000	0.250	22%	30%		
8/2/22	RPD	0.310	0.000	0.310					0.290	0.000	0.250	23%	33%		
8/17/23	WMC	0.356	0.000	0.313					0.306	0.000	0.313	16%	23%		
8/14/24	NJV	0.380	0.000	0.300					0.350	0.000	0.377	15%	9%		
8/11/25	HC	0.380	0.000	0.300					0.350	0.000	0.375	15%	9%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, Stringer S3 near 2' from Floor Beam 1										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/2/22	RPD	0.210	2.500	0.210					0.300	0.000	0.250	68%	31%		
8/17/23	WMC	0.126	2.500	0.156					0.280	0.000	0.240	78%	35%		
8/14/24	NJV	0.370	2.500	0.057					0.337	0.000	0.217	67%	31%		
8/11/25	HC	0.370	2.500	0.060					0.320	0.000	0.215	52%	33%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, S3 near Mid-Length (Range = Remainder of Panel from 2')										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
9/5/19	ND	0.323	0.000	0.283					0.380	0.000	0.263	24%	20%		
8/3/20	AML	0.250	0.000	0.220					0.380	0.000	0.240	41%	23%		
8/11/21	DGM	0.218	0.000	0.250					0.375	0.000	0.250	42%	22%		
8/2/22	RPD	0.218	0.000	0.250					0.330	0.000	0.250	42%	28%		
8/17/23	WMC	0.326	0.000	0.220					0.340	0.000	0.320	32%	18%		
8/14/24	NJV	0.343	0.000	0.340					0.353	0.000	0.270	15%	22%		
8/11/25	HC	0.200	2.000	0.150					0.350	0.000	0.270	68%	23%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, Stringer S4 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
9/5/19	ND	0.320	0.000	0.333					0.300	0.000	0.276	18%	28%		
8/3/20	AML	0.330	0.000	0.330					0.310	0.000	0.270	18%	28%		
8/11/21	DGM	0.313	0.000	0.313					0.344	0.000	0.219	22%	30%		
8/2/22	RPD	0.310	0.000	0.260					0.340	0.000	0.220	29%	30%		
8/17/23	WMC	0.366	0.000	0.336					0.296	0.000	0.270	12%	29%		
8/14/24	NJV	0.383	0.000	0.320					0.323	0.000	0.357	12%	15%		
8/11/25	HC	0.350	0.000	0.350					0.330	0.000	0.350	13%	15%		

NOTES:

Sketch Description: 25_3314460_Stringer Flange Section Loss Panels 1-2.jpg

Sketch Number: **7** Sketch Filename: **25_3314460_Stringer Flange Section Loss Panel 3.jpg**

R/C 3/6 **BIN** 3314460

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

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 3, Stringer S2 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.350	0.000	0.330					0.390	0.000	0.290	15%	15%		
8/11/21	DGM	0.281	0.125	0.375					0.375	0.000	0.313	20%	14%		
8/2/22	RPD	0.220	0.750	0.320					0.350	0.000	0.310	40%	18%		
8/17/23	WMC	0.123	1.000	0.253					0.356	0.000	0.336	60%	14%		
8/14/24	NJV	0.143	1.000	0.313					0.360	0.000	0.293	52%	18%		
8/11/25	HC	0.150	1.000	0.315					0.360	0.000	0.340	48%	13%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 3, Stringer S3 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.310	0.000	0.360					0.390	0.000	0.350	16%	8%		
8/11/21	DGM	0.313	0.000	0.375					0.375	0.000	0.344	14%	10%		
8/2/22	RPD	0.310	0.000	0.370					0.360	0.000	0.340	15%	13%		
8/17/23	WMC	0.316	0.000	0.366					0.393	0.000	0.440	15%	-4%		
8/14/24	NJV	0.322	0.000	0.362					0.393	0.000	0.377	15%	4%		
8/11/25	HC	0.320	0.000	0.360					0.395	0.000	0.370	15%	4%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 3, Stringer S4 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.370	0.000	0.260					0.340	0.000	0.340	21%	15%		
8/11/21	DGM	0.375	0.000	0.281					0.344	0.000	0.313	18%	18%		
8/2/22	RPD	0.370	0.000	0.280					0.340	0.000	0.310	19%	19%		
8/17/23	WMC	0.370	0.000	0.276					0.376	0.000	0.343	19%	10%		
8/14/24	NJV	0.365	0.000	0.270					0.267	0.000	0.297	21%	30%		
8/11/25	HC	0.370	0.000	0.270					0.340	0.000	0.295	20%	21%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Panel 3, Stringer S4 2' from FB3										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/14/24	NJV	0.387	2.000	0.067					0.147	1.000	0.247	61%	58%		
8/11/25	HC	0.380	2.000	0.040					0.140	1.000	0.245	51%	57%		

NOTES:

Sketch Description: 25_3314460_Stringer Flange Section Loss Panel 3.jpg

Sketch Number: **8** Sketch Filename: **25_3314460_Stringer Flange Section Loss Panels 4-5.jpg**

R/C 3/6 **BIN** 3314460

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

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 4, Stringer S3 near Mid-Length (Range = Full length of panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.220	0.000	0.230					0.200	0.000	0.320	44%	35%		
8/11/21	DGM	0.219	0.000	0.219					0.219	0.000	0.313	45%	34%		
8/2/22	RPD	0.270	0.000	0.220					0.280	0.000	0.310	39%	26%		
8/17/23	WMC	0.333	0.000	0.303					0.310	0.000	0.380	21%	14%		
8/14/24	NJV	0.273	0.000	0.307					0.190	0.000	0.340	28%	34%		
8/11/25	HC	0.240	0.000	0.290					0.220	0.000	0.330	34%	31%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 5, Stringer S2 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.240	0.000	0.230					0.360	0.000	0.370	41%	9%		
8/11/21	DGM	0.281	0.000	0.188					0.344	0.000	0.375	41%	10%		
8/2/22	RPD	0.280	0.000	0.250					0.400	0.000	0.370	34%	4%		
8/17/23	WMC	0.363	0.000	0.296					0.436	0.000	0.423	18%	-7%		
8/14/24	NJV	0.380	0.000	0.233					0.310	0.000	0.287	23%	25%		
8/11/25	HC	0.380	0.000	0.230					0.310	0.000	0.285	24%	26%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 5, Stringer S3 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.280	0.000	0.280					0.350	0.000	0.380	30%	9%		
8/11/21	DGM	0.281	0.000	0.281					0.375	0.000	0.375	30%	6%		
8/2/22	RPD	0.280	0.000	0.280					0.350	0.000	0.350	30%	13%		
8/17/23	WMC	0.336	0.000	0.340					0.396	0.000	0.293	16%	14%		
8/14/24	NJV	0.280	0.000	0.287					0.327	0.000	0.267	29%	26%		
8/11/25	HC	0.280	0.000	0.280					0.325	0.000	0.310	30%	21%		

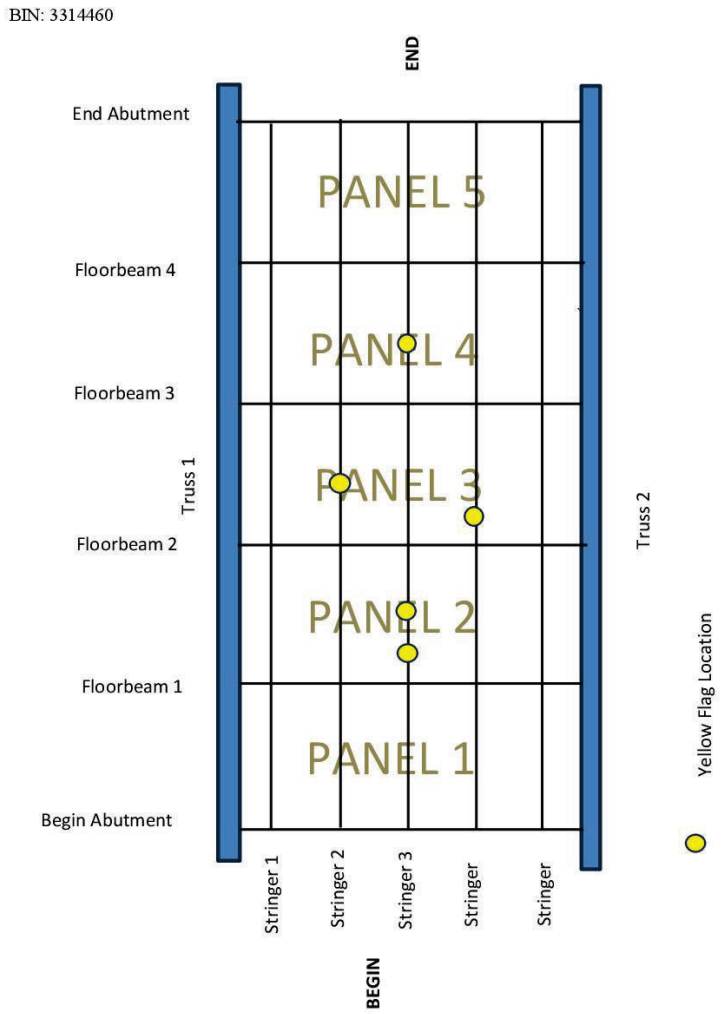
Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 5, Stringer S4 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.210	0.000	0.220					0.320	0.000	0.310	46%	21%		
8/11/21	DGM	0.250	0.000	0.188					0.343	0.000	0.313	45%	18%		
8/2/22	RPD	0.200	0.000	0.220					0.340	0.000	0.310	48%	19%		
8/17/23	WMC	0.376	0.000	0.253					0.383	0.000	0.383	21%	4%		
8/14/24	NJV	0.373	0.000	0.233					0.297	0.000	0.260	24%	30%		
8/11/25	HC	0.375	0.000	0.240					0.310	0.000	0.260	23%	29%		

NOTES:

Sketch Description: 25_3314460_Stringer Flange Section Loss Panels 4-5.jpg

Sketch Number: **9** Sketch Filename: **25_3314460_Flag Location.jpg**



Sketch Description: 25_3314460_Flag Location.jpg

Sketch Number: **10** Sketch Filename: **25_3314460_Load Rating Form.jpg**

LOAD RATING FIELD CHECK FORM

2022-2025 NYSDOT R-3 & R-7 BRIDGE INSPECTION SERVICES

Region/ County: 3/6 - TOMPKINS

☑ Town ☐ Village ☐ City: ULYSSES

BIN #: 3314460

Date Inspection Signed: 8/11/2025

Feature Carried: COUNTY ROAD 146

Feature Crossed: TAUGHANNOCK CREEK

Number of Spans: 1 **Flag Issues Affecting Load Rating?** ☐ No ☑ Yes - Flag Attached

Primary Member Type: STEEL THRU TRUSS (PONY TRUSS, EYEBAR CONSTRUCTION)

Deck Type: ☐ Concrete ☐ Steel ☑ Grate ☐ Timber ☐ None ☐ Other: **Deck Thickness:** 5"

Wearing Surface (WS):

☑ Mono ☐ Concrete ☐ Asphalt ☐ Timber ☐ Grate ☐ Soil ☐ Other **Current WS Thickness:**

Wearing Surface Notes:

Current Load Posting: ☐ NA 15 **Tons** **Currently R-Posted:** ☑ No ☐ Yes

Any changes since the prior BI that could affect the bridges load carrying capacity? ☐ No ☑ Yes

If *Yes*, what changes? (check box): ☐ Dead Load ☑ Section Loss ☐ New Structure ☐ Repairs ☐ Other:

Dead Load **- Note changes since previous Load Rating:**

None.

Section Loss (LOS) **- Include locations, ranges, member and % LOS; attach supporting documentation.**
[Ensure enough measurements (i.e.: 6 per flange); Include previous LOS]

See attached section loss summary sheet.

Additional Notes:

Any change to: **SILOPs** Page # NA **Bridge Plans** Sheet # NA

Team Leader: Hao Cui **PE #:** 089189 **Date:** 8/11/2025

Attachment(s): page(s) **ATTACH SILOP or PLAN SHEETS WITH FIELD CHANGES**

Sketch Description: 25_3314460_Load Rating Form.jpg

Sketch Number: **11** Sketch Filename: **25_3314460 Section Loss Summary 1-2.jpg**

BIN 3314460 Section Loss Summary

Stringer Section loss.

Panel 1:

- Panel 1, Stringer S2 10% web SL (Ranges: 2' at end).

- Panel 1, Stringer S3 at ½ L (Ranges: Full length of Panel): Top flange: 16% SL; Bottom flange: 29% SL; 15% web SL (Ranges: 2' at the begin and end).

-Panel 1, Stringer S4 at ½ L (Ranges: Full length of Panel): Top flange: 10% SL; Bottom flange: 10% SL; 15% web SL at begin 2' and 10% web SL at end 2'.

-Panel 1, Stringer S5 at ½ L (Ranges: Full length of Panel): Top flange: 10% SL; Bottom flange: 10% SL; 15% web SL at begin 2' and 10% web SL at end 2'.

Panel 2:

- Panel 2, Stringer S2 at ½ L (Ranges: Full length of Panel): Top flange: 15% SL; Bottom flange: 9% SL and 10% web SL at begin 2'.

- Panel 2, Stringer S3, 2' from Floorbeam FB1 (Range: 2' from floorbeam 1): Top flange: 52 % SL; Bottom flange: 33% SL and 15% web SL (Ranges: 2' from floorbeam 1).

-Panel 2, Stringer S3 at ½ L (Ranges: Remainder of Panel from 2'): Top flange: 68 % SL; Bottom flange: 23% SL.

-Panel 2, Stringer S4 at ½ L (Ranges: Full Length): Top flange: 13 % SL; Bottom flange: 15% SL and 10% web SL at begin 2'.

- Panel 2, Stringer S5:10% web SL at begin 2'.

Panel 3

-Panel 3, Stringer S2 at ½ L (Ranges: Full length of Panel): Top flange: 48 % SL; Bottom flange: 13% SL.

-Panel 3, Stringer S3 at ½ L (Ranges: Full length of Panel): Top flange: 15 % SL; Bottom flange: 4% SL.

-Panel 3, Stringer S4 at ½ L (Ranges: Full length of Panel): Top flange: 20 % SL; Bottom flange: 21% SL.

Sketch Description: 25_3314460 Section Loss Summary 1-2.jpg

Sketch Number: **12** Sketch Filename: **25_3314460 Section Loss Summary 2-2.jpg**

-Panel 3, Stringer S4, 2' from Floorbeam FB2 (Ranges:2' from floorbeam 2): Top flange: 51 % SL; Bottom flange: 57% SL .

Panel 4

-Panel 4, Stringer S3 at ½ L (Ranges: Full length of panel): Top flange: 34 % SL; Bottom flange: 31% SL.

-Panel 4, Stringer S4 at ½ L (Ranges: Full length of panel): Top flange: 10 % SL; Bottom flange: 10% SL.

Panel 5

-Panel 5, Stringer S2 at ½ L (Ranges: Full length of panel): Top flange: 24 % SL; Bottom flange: 26% SL

-Panel 5, Stringer S3 at ½ L (Ranges: Full length of panel): Top flange: 30 % SL; Bottom flange: 21% SL.

-Panel 5, Stringer S4 at ½ L (Ranges: Full length of panel): Top flange: 23 % SL; Bottom flange: 29% SL.

Stringer Web Repairs (assume no SL):

- Stringers S2-S4 at Panels 2 & 3 over Floorbeam 2
- Stringers S2-S4 at Panels 3 & 4 over Floorbeam 3
- Stringers S2-S4 at Panels 4 & 5 over Floorbeam 4
- All Stringers at end abutment

Floorbeams

All Floorbeam has up to 5% SL on top and bottom flange for whole length.

Trusses:

- All truss vertical members have up to 10% SL
- Truss T2, L4L5 at L5: 10% SL

Sketch Description: 25_3314460 Section Loss Summary 2-2.jpg

New York State Department of Transportation
Yellow Flag 3B25M3W029

By: Hao Cui
Flag Date: August 11, 2025

Superseding Information:
This flag supersedes: YF 3B2468W021

Structure Information

BIN: **3314460**
Feature Carried: COUNTY ROAD 146
Feature Crossed: TAUGHANNOCK CREEK
Orientation: 1 - NORTH

Region: 03 - SYRACUSE
County: TOMPKINS
Political Unit: Town of ULYSSES
Approximate Year Built: 1915

Posted Load Matches Inventory: Yes
Posted Load in field : 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: 1
Bridge Carries National Highway System: No

Verbal Notification Information

Person Notified: Not Contacted
Date:

Of:

Signature Information

Signature: Hao Cui, P.E. 089189-1
Date: August 14, 2025

Reviewed By: John D. Seligman
Date: August 15, 2025

Attachments: 9

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Flagged Elements

Parent Element	Element
Span Number : 1	
	113 - Steel Stringer

Flagged Condition Description

Subject: Stringers S2-S4 Top and Bottom Flange Section Loss

This structure is a steel truss with a stringer-floorbeam system and an open steel grate deck (Photo 1). The structure is load posted for 15 tons.

Flagged Condition:
The stringers exhibit the top and bottom flange section loss as follows:

-Panel 2, Stringer S3, 2’ from Floorbeam FB1: Top flange: 52 % SL with a 2.5” long corrosion hole on the top right flange (2024: 67%) (Photo 2); Bottom flange: 33% SL (2024: 31%)
-Panel 2, Stringer S3 at ½ L: Top flange: 68 % SL with a 2” long corrosion hole on the top right flange (2024: 15%) (Photo 3); Bottom flange: 23% SL (2024: 22%). The top of the web at this location also exhibits a 12” long x ¼” high perforation.
-Panel 3, Stringer S2 at ½ L: Top flange: 48 % SL with a 1” long corrosion hole on the top left flange (2024: 52%); Bottom flange: 13% SL (2024: 18%).
-Panel 3, Stringer S4, 2’ from Floorbeam FB2: Top flange: 51 % SL with a 2” long corrosion hole on the top right flange (2024: 61%) (Photo 4); Bottom flange: 57% SL with (3) x ¼” dia. corrosion hole on the bottom left flange (2024: 58%)
-Panel 4, Stringer S3 at ½ L (Photo 5): Top flange: 34 % SL (2024: 28%); Bottom flange: 31% SL (2024: 34%)

Panel 2, Stringer S3 mid-span flange section loss was added into the Yellow Flag in this inspection. Due to the large increase of top flange section loss at this location, an expedited load rating is also requested and the results are pending. At other flagged locations, minor or no significant changes were noticed since the last inspection.

See attached Stringer Flange Section Loss documentation for details (Photo Sketches 6-8). Also See Flagged Stringer Location Plan for details (Photo Sketch 9).

Section losses affect the full length of the stringers in each panel except where noted otherwise. Corrosion is active and is progressing, largely as a result of the open steel grate deck that allows leakage onto the stringers.

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Flag Photographs

Photo Number: **1** Photo Filename: **25_DSCF2533.JPG**

Attachment Description: **Typical framing, looking towards begin.**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **2** Photo Filename: **25_DSCF2517.JPG**

Attachment Description: **Panel 2, Stringer S3 at 2' from Floorbeam FB1 (Flange SL with perforation), looking towards begin left.**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **3** Photo Filename: **25_DSCF2515.JPG**

Attachment Description: **Panel 2, Stringer S3 at ½ L (Top right flange SL with perforation), looking towards begin left.**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **4** Photo Filename: **25_DSCF2526.JPG**

Attachment Description: **Panel 3, Stringer S4 at 2' from Floorbeam FB3 (Flange SL with perforation), looking towards begin left.**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **5** Photo Filename: **25_DSCF2528.JPG**

Attachment Description: **Panel 4, Stringer S3 at ½ L (Flange SL), looking towards right.**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **6** Photo Filename: **25_3314460_Stringer Flange Section Loss Panels 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

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 1, Stringer S3 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.360	0.000	0.350					0.350	0.000	0.400	11%	6%		
8/11/21	DGM	0.375	0.000	0.333					0.375	0.000	0.375	11%	6%		
8/2/22	RPD	0.350	0.000	0.330					0.350	0.000	0.340	15%	14%		
8/17/23	WMC	0.330	0.000	0.340					0.350	0.000	0.317	16%	17%		
8/14/24	NJV	0.330	0.000	0.340					0.310	0.000	0.273	16%	27%		
8/11/25	HC	0.330	0.000	0.340					0.310	0.000	0.260	16%	29%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, Stringer S2 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
9/5/19	ND								0.280	0.000	0.313		26%		
8/3/20	AML	0.310	0.000	0.320					0.300	0.000	0.240	21%	33%		
8/11/21	DGM	0.313	0.000	0.313					0.313	0.000	0.250	22%	30%		
8/2/22	RPD	0.310	0.000	0.310					0.290	0.000	0.250	23%	33%		
8/17/23	WMC	0.356	0.000	0.313					0.306	0.000	0.313	16%	23%		
8/14/24	NJV	0.380	0.000	0.300					0.350	0.000	0.377	15%	9%		
8/11/25	HC	0.380	0.000	0.300					0.350	0.000	0.375	15%	9%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, Stringer S3 near 2' from Floor Beam 1										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/2/22	RPD	0.210	2.500	0.210					0.300	0.000	0.250	68%	31%		
8/17/23	WMC	0.126	2.500	0.156					0.280	0.000	0.240	78%	35%		
8/14/24	NJV	0.370	2.500	0.057					0.337	0.000	0.217	67%	31%		
8/11/25	HC	0.370	2.500	0.060					0.320	0.000	0.215	52%	33%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, S3 near Mid-Length (Range = Remainder of Panel from 2')										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
9/5/19	ND	0.323	0.000	0.283					0.380	0.000	0.263	24%	20%		
8/3/20	AML	0.250	0.000	0.220					0.380	0.000	0.240	41%	23%		
8/11/21	DGM	0.218	0.000	0.250					0.375	0.000	0.250	42%	22%		
8/2/22	RPD	0.218	0.000	0.250					0.330	0.000	0.250	42%	28%		
8/17/23	WMC	0.326	0.000	0.220					0.340	0.000	0.320	32%	18%		
8/14/24	NJV	0.343	0.000	0.340					0.353	0.000	0.270	15%	22%		
8/11/25	HC	0.200	2.000	0.150					0.350	0.000	0.270	68%	23%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 2, Stringer S4 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
9/5/19	ND	0.320	0.000	0.333					0.300	0.000	0.276	18%	28%		
8/3/20	AML	0.330	0.000	0.330					0.310	0.000	0.270	18%	28%		
8/11/21	DGM	0.313	0.000	0.313					0.344	0.000	0.219	22%	30%		
8/2/22	RPD	0.310	0.000	0.260					0.340	0.000	0.220	29%	30%		
8/17/23	WMC	0.366	0.000	0.336					0.296	0.000	0.270	12%	29%		
8/14/24	NJV	0.383	0.000	0.320					0.323	0.000	0.357	12%	15%		
8/11/25	HC	0.350	0.000	0.350					0.330	0.000	0.350	13%	15%		

NOTES:

Attachment Description: **Stringer Section Loss Sketch Panels 1-2**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **7** Photo Filename: **25_3314460_Stringer Flange Section Loss Panel 3.**

R/C 3/6 **BIN** 3314460

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

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 3, Stringer S2 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.350	0.000	0.330					0.390	0.000	0.290	15%	15%		
8/11/21	DGM	0.281	0.125	0.375					0.375	0.000	0.313	20%	14%		
8/2/22	RPD	0.220	0.750	0.320					0.350	0.000	0.310	40%	18%		
8/17/23	WMC	0.123	1.000	0.253					0.356	0.000	0.336	60%	14%		
8/14/24	NJV	0.143	1.000	0.313					0.360	0.000	0.293	52%	18%		
8/11/25	HC	0.150	1.000	0.315					0.360	0.000	0.340	48%	13%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 3, Stringer S3 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.310	0.000	0.360					0.390	0.000	0.350	16%	8%		
8/11/21	DGM	0.313	0.000	0.375					0.375	0.000	0.344	14%	10%		
8/2/22	RPD	0.310	0.000	0.370					0.360	0.000	0.340	15%	13%		
8/17/23	WMC	0.316	0.000	0.366					0.393	0.000	0.440	15%	-4%		
8/14/24	NJV	0.322	0.000	0.362					0.393	0.000	0.377	15%	4%		
8/11/25	HC	0.320	0.000	0.360					0.395	0.000	0.370	15%	4%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 3, Stringer S4 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.370	0.000	0.260					0.340	0.000	0.340	21%	15%		
8/11/21	DGM	0.375	0.000	0.281					0.344	0.000	0.313	18%	18%		
8/2/22	RPD	0.370	0.000	0.280					0.340	0.000	0.310	19%	19%		
8/17/23	WMC	0.370	0.000	0.276					0.376	0.000	0.343	19%	10%		
8/14/24	NJV	0.365	0.000	0.270					0.267	0.000	0.297	21%	30%		
8/11/25	HC	0.370	0.000	0.270					0.340	0.000	0.295	20%	21%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Panel 3, Stringer S4 2' from FB3										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/14/24	NJV	0.387	2.000	0.067					0.147	1.000	0.247	61%	58%		
8/11/25	HC	0.380	2.000	0.040					0.140	1.000	0.245	51%	57%		

NOTES:

Attachment Description: **Stringer Section Loss Sketch Panel 3**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

Photo Number: **8** Photo Filename: **25_3314460_Stringer Flange Section Loss Panels 4-**

R/C 3/6 **BIN** 3314460

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

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 4, Stringer S3 near Mid-Length (Range = Full length of panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.220	0.000	0.230					0.200	0.000	0.320	44%	35%		
8/11/21	DGM	0.219	0.000	0.219					0.219	0.000	0.313	45%	34%		
8/2/22	RPD	0.270	0.000	0.220					0.280	0.000	0.310	39%	26%		
8/17/23	WMC	0.333	0.000	0.303					0.310	0.000	0.380	21%	14%		
8/14/24	NJV	0.273	0.000	0.307					0.190	0.000	0.340	28%	34%		
8/11/25	HC	0.240	0.000	0.290					0.220	0.000	0.330	34%	31%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 5, Stringer S2 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.240	0.000	0.230					0.360	0.000	0.370	41%	9%		
8/11/21	DGM	0.281	0.000	0.188					0.344	0.000	0.375	41%	10%		
8/2/22	RPD	0.280	0.000	0.250					0.400	0.000	0.370	34%	4%		
8/17/23	WMC	0.363	0.000	0.296					0.436	0.000	0.423	18%	-7%		
8/14/24	NJV	0.380	0.000	0.233					0.310	0.000	0.287	23%	25%		
8/11/25	HC	0.380	0.000	0.230					0.310	0.000	0.285	24%	26%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

Location		Floorbeam Panel 5, Stringer S3 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.280	0.000	0.280					0.350	0.000	0.380	30%	9%		
8/11/21	DGM	0.281	0.000	0.281					0.375	0.000	0.375	30%	6%		
8/2/22	RPD	0.280	0.000	0.280					0.350	0.000	0.350	30%	13%		
8/17/23	WMC	0.336	0.000	0.340					0.396	0.000	0.293	16%	14%		
8/14/24	NJV	0.280	0.000	0.287					0.327	0.000	0.267	29%	26%		
8/11/25	HC	0.280	0.000	0.280					0.325	0.000	0.310	30%	21%		

Section Size: W12X27 Flg. Width: 6.500 Flg. thickness: 0.400 Beam hgt. 11.960 Web thick.: 0.240

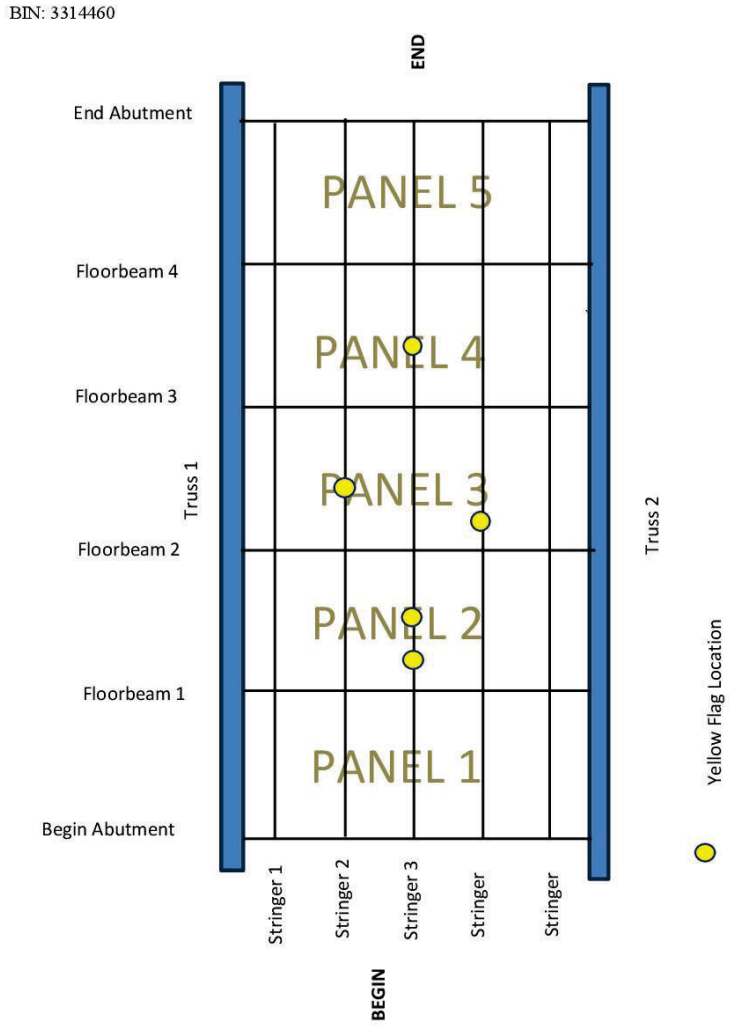
Location		Floorbeam Panel 5, Stringer S4 near Mid-Length (Range = Full-Length of Panel)										SECTION LOSS SUMMARY			
Date	By	Top Flange			Web				Bottom Flange			Top Flange	Bottom Flange	Web	Total
		TL	holes	TR	Wt	Wm	Wb	holes	BL	holes	BR				
8/3/20	AML	0.210	0.000	0.220					0.320	0.000	0.310	46%	21%		
8/11/21	DGM	0.250	0.000	0.188					0.343	0.000	0.313	45%	18%		
8/2/22	RPD	0.200	0.000	0.220					0.340	0.000	0.310	48%	19%		
8/17/23	WMC	0.376	0.000	0.253					0.383	0.000	0.383	21%	4%		
8/14/24	NJV	0.373	0.000	0.233					0.297	0.000	0.260	24%	30%		
8/11/25	HC	0.375	0.000	0.240					0.310	0.000	0.260	23%	29%		

NOTES:

Attachment Description: **Stringer Section Loss Sketch Panels 4-5**

Yellow Flag 3B25M3W029 BIN 3314460 Flag Date: August 11, 2025

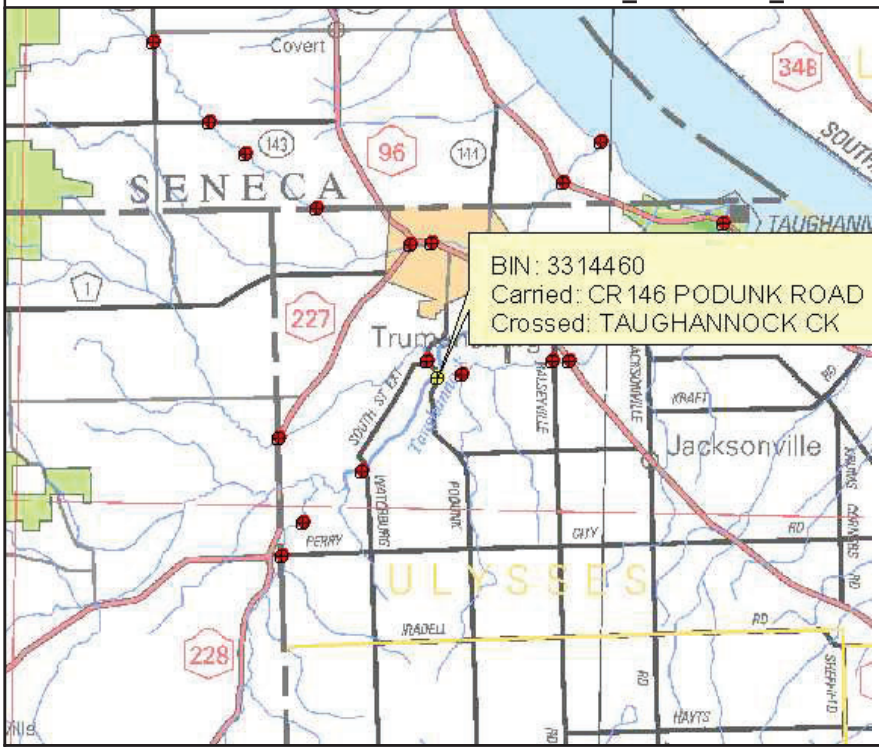
Photo Number: **9** Photo Filename: **25_3314460_Flag Location.jpg**



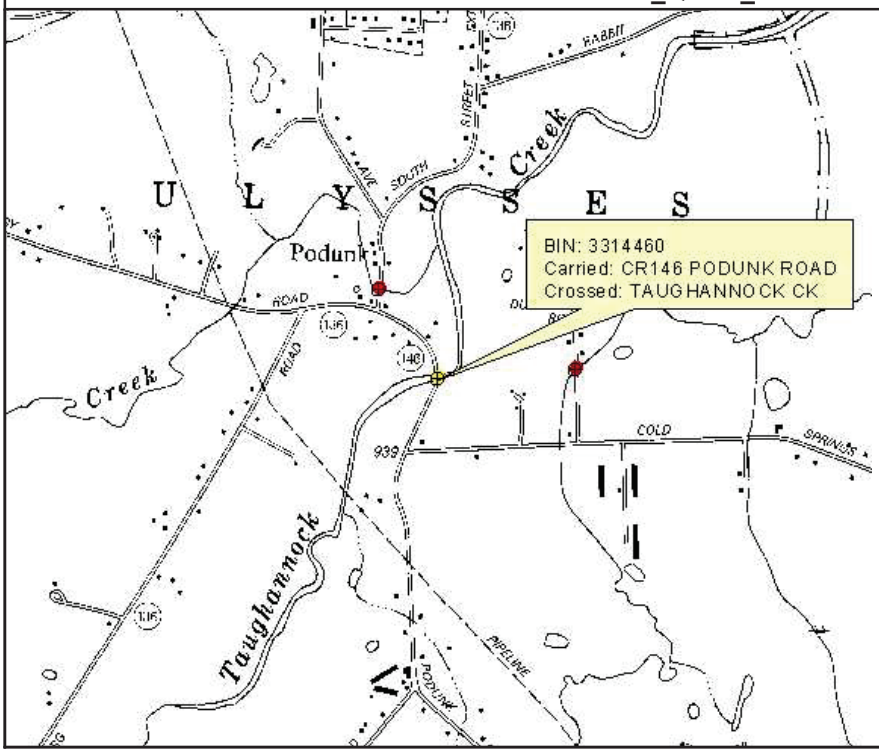
Attachment Description: **Flag Location Plan**

Standard Photographs

3314460_LOCATION_MAP.JPG



3314460_QUAD_MAP.JPG



AbutmentBegin.JPG

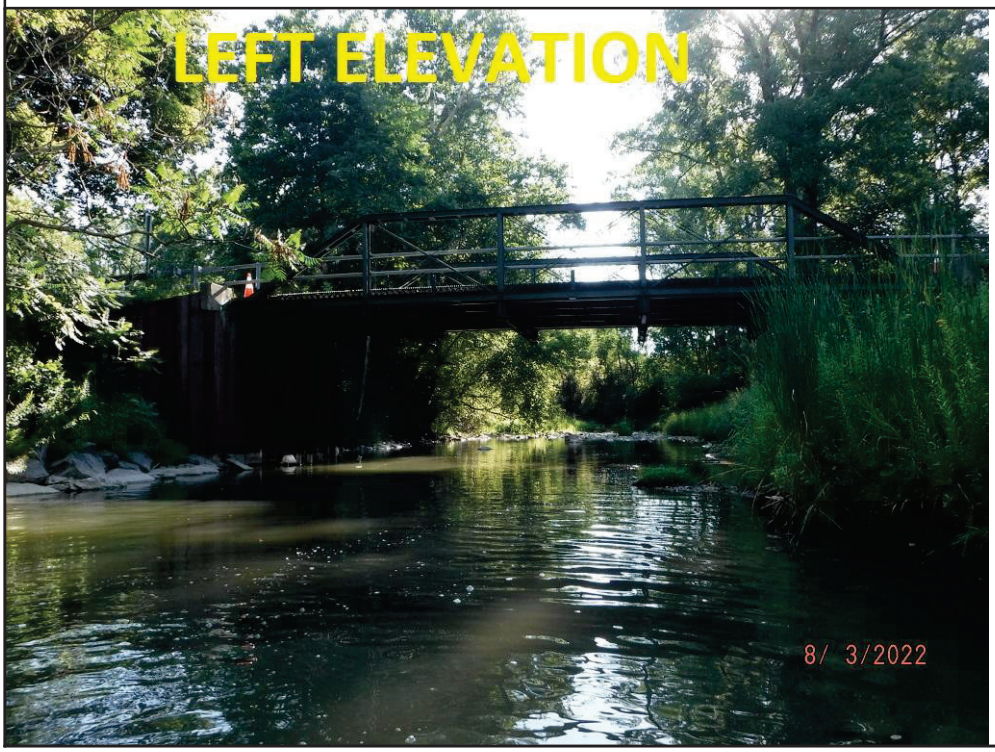
AbutmentEnd.JPG

ApproachBegin.JPG

ApproachEnd.JPG

BINPlate.JPG

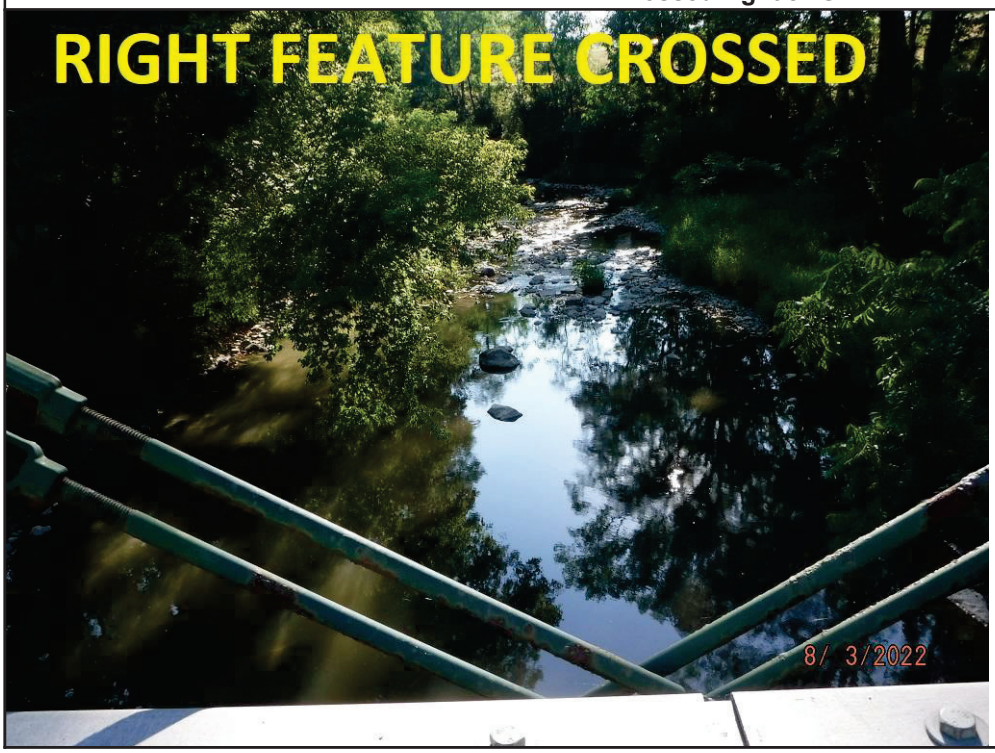
ElevationLeft.JPG



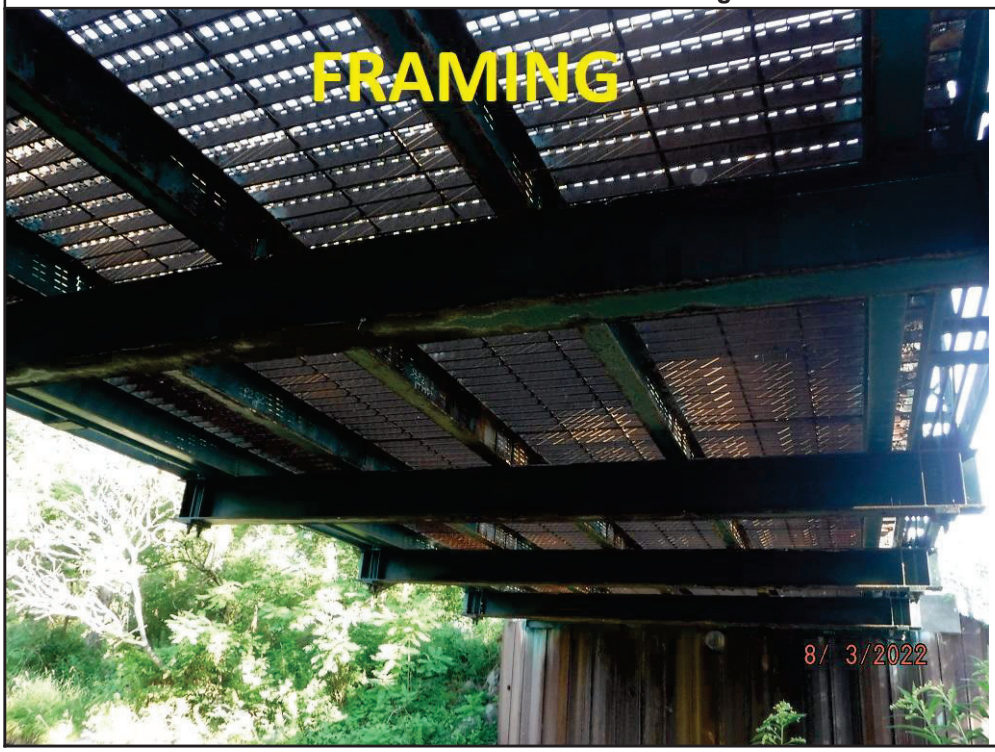
ElevationRight.JPG

F2CrossedLeft.JPG

F2CrossedRight.JPG



Framing.JPG



LoadPostingBegin.JPG

LoadPostingEnd.JPG

TopOfDeck.JPG

WingwallEndRight.JPG

BIN 3314460

Podunk Road over Taughannock Creek

Town of Ulysses, Tompkins County

04 – Bridge Flag information

New York State Department of Transportation
PIA Red Flag 3B25HPW015

By: Mike Kostakis
Flag Date: December 04, 2025

Superseding Information:
No Flags Superseded

Structure Information

BIN: **3314460**
Feature Carried: COUNTY ROAD 146
Feature Crossed: TAUGHANNOCK CREEK
Orientation: 1 - NORTH

Region: 03 - SYRACUSE
County: TOMPKINS
Political Unit: Town of ULYSSES
Approximate Year Built: 1915

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: 1
Bridge Carries National Highway System: No

Verbal Notification Information

Person Notified: Timothy Johnson
Date: December 04, 2025 10:59:00 AM

Of: NYSDOT Region 3

Signature Information

Signature: Mike Kostakis, P.E. 085074-1
Date: December 04, 2025

Reviewed By: John D. Seligman, P.E. 067549-1
Date: December 04, 2025

Attachments: 1

Flagged Elements

Parent Element	Element
Span Number : 1	
	113 - Steel Stringer

Flag Condition Category: 16 - Load Rating Calculation

Flagged Condition Description

Background:
This is single span pony truss with a stringer-floorbeam system supporting an open steel grating. The current posting of 15 Tons is based on a 2021 Level 1 Load Rating using Allowable Stress Rating (ASR).
Details:
As a result of higher section losses of Stringer 3 in Panel 2, the attached 2025 Level 2 Load Rating Summary indicates that the controlling H-Operating Rating (HOR) is now 11 Tons. According to EI 20-026 LOAD RATING/POSTING GUIDELINES FOR STATE-OWNED HIGHWAY BRIDGES the current 15 Ton Posting now needs to be lowered. Therefore, in accordance with the 2017 NYSDOT Bridge Inspection Manual with August 2024 Amend/addend, Appendix B, Section VI-Load Rating Flags, this condition is now a Mandatory Red Flag PIA.

Additional Information:
According to EI 20-026's Table 2 Safe Load Capacity Guidelines, the Level 2 Safe Load Capacity (SLC) is 0.8 x 11 Tons = 8 Tons

Flag Photographs

Photo Number: **1** Photo Filename: **2025 ASR Level 2 Load Rating Summary .png**

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State
H 20-44	Axle Load	ASR	Inventory	8.03	0.401	5.67	1 - (50.0)	Design Flexure - Steel
H 20-44	Axle Load	ASR	Operating	11.19	0.560	5.67	1 - (50.0)	Design Flexure - Steel
H 20-44	Lane	ASR	Inventory	11.88	0.594	5.67	1 - (50.0)	Design Flexure - Steel
H 20-44	Lane	ASR	Operating	16.56	0.828	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Axle Load	ASR	Inventory	14.45	0.401	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Axle Load	ASR	Operating	20.15	0.560	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Lane	ASR	Inventory	21.38	0.594	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Lane	ASR	Operating	29.81	0.828	5.67	1 - (50.0)	Design Flexure - Steel

Attachment Description: **2025 Level 2 Load Rating Summary (ASR)**

LEVEL I LOAD RATING REPORT

ANALYSIS OF BRIDGE STRINGERS IN RESPONSE TO NYSDOT YELLOW FLAG 3B25M3W029 AND RED FLAG 3B25HPW015

Podunk Road over Taughannock Creek
BIN 3314460
Town of Ulysses, Tompkins County

RECOMMENDED POSTING VALUE: 8 TON (ASD method)

(Truss Panel 2, Stringer 3 Controls)

Prepared for:

Tomkins County Highway Department
170 Bostwick Road
Ithaca, NY 14850

Prepared By:

LaBella
Powered by partnership.

300 STATE STREET
ROCHESTER, NY 14614

P: (585) 454-6110
F: (585) 454-3066
www.labellapc.com

LaBella
Powered by partnership.

PROJECT Podunk SHEET ____ OF ____

PROJECT NO. 2201321 CALC. BY JAC DATE 12-5-25

SUBJECT Flag SCALE ____

CHECKED BY Jcy 12-8-25

Labella Associates has been retained by Tompkins County to evaluate the flags that have been issued on Bin 3314460 - Podunk Road (CR146) over Taughannock Creek received on 8-11-2025.

Flag Locations:
- Panel 2, Stringer 3 FB1, Stringer 3 Mid
- Panel 3, Stringer 2 Mid, Stringer 4 FB3
- Panel 4, Stringer 3 Mid

Based on the section loss table from the 8-11-2025 inspection report, new section properties were computed to reflect the existing condition of the members.

All applied loads that are used have been taken from the 2012 load rating.

All flags were issued on Stringers. Only Stringers will be considered in this load rating.

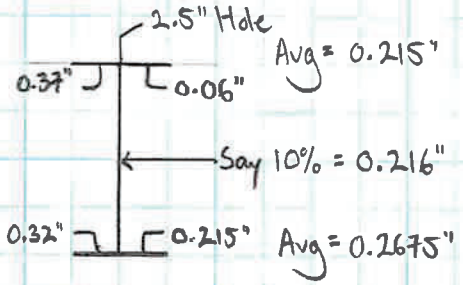
LaBella
Powered by partnership.

PROJECT Podunk SHEET ____ OF ____
PROJECT NO. 2201321 CALC. BY JAC DATE 12-5-25
SUBJECT Flag SCALE —
CHECKED BY Jcy 12-8-25

• Section Properties:

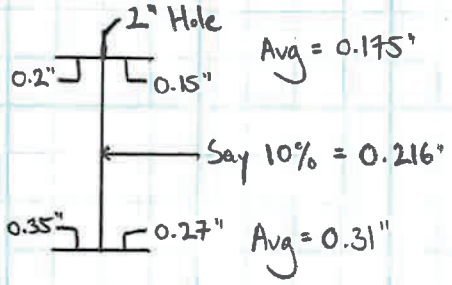
- Calculate section properties of all stringers flagged
- Base on previous load rating → will inflate properties by 1.413% to account for W-Shape vs. plate.

- Panel 2, Stringer 3 FB1:



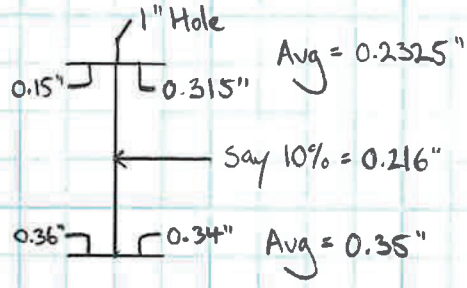
$A = 5.147 in^2$
$I = 112.648 in^4$
$S_t = 16.164 in^3$
$S_b = 22.616 in^3$

- Panel 2, Stringer 3 Mid:



$A = 5.354 in^2$
$I = 115.23 in^4$
$S_t = 15.814 in^3$
$S_b = 24.709 in^3$

- Panel 3, Stringer 2 Mid:

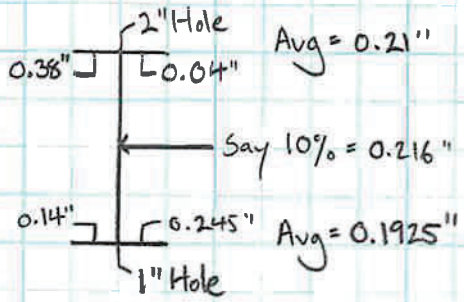


$A = 6.094 in^2$
$I = 143.762 in^4$
$S_t = 20.835 in^3$
$S_b = 28.468 in^3$

LaBella
Powered by partnership.

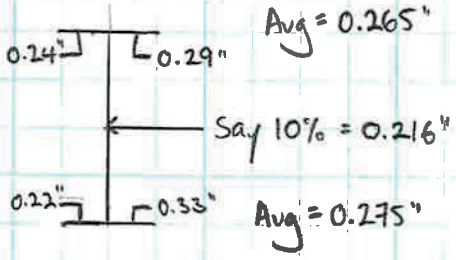
PROJECT Podunk SHEET ____ OF ____
PROJECT NO. 2201321 CALC. BY JAC DATE 12-5-25
SUBJECT Flag SCALE —
CHECKED BY JCY 12-8-25

- Panel 3, Stringer 4 FB3:



$A = 4.562\ in^2$
$I = 98.134\ in^4$
$S_t = 16.008\ in^3$
$S_b = 16.862\ in^3$

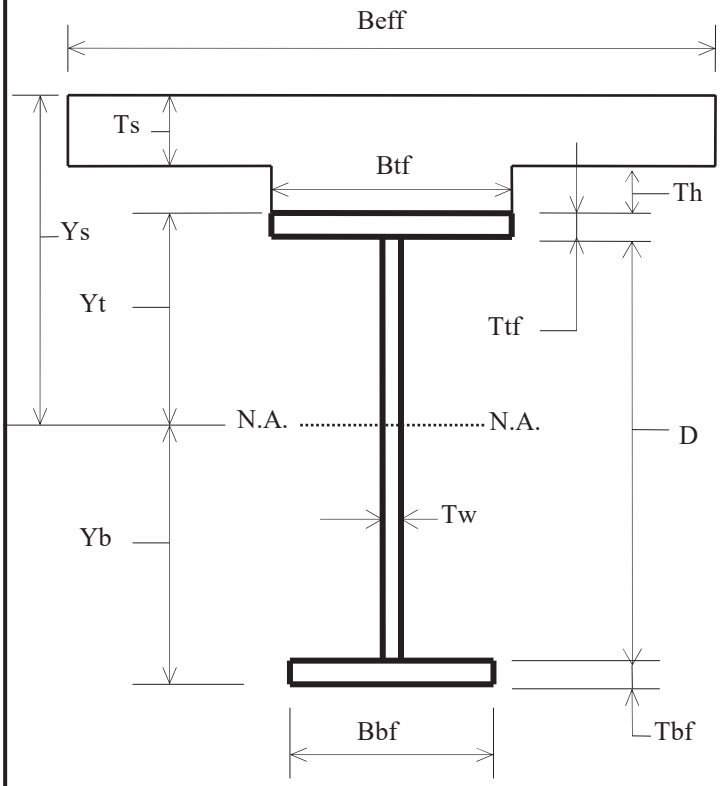
- Panel 4, Stringer 3 Mid:



$A = 6.059\ in^2$
$I = 148.516\ in^4$
$S_t = 24.609\ in^3$
$S_b = 25.108\ in^3$

LABELLA Associates, P.C.	BY: JAC	DATE: 12/5/2025	CHECKED BY: JCY	DATE: 12/8/2025	SHEET: ___ of ___
	PROJECT 2201321	PROJECT NAME: PODUNK ROAD BRIDGE			

STRINGER SECTION PROPERTIES



UNDETERIORATED 12WF27

GIRDER DIMENSIONS

Top Flange Width :	Btf	=	6.5000	in
Top Flange Thickness :	Ttf	=	0.4000	in
Web Depth :	D	=	11.1500	in
Web Thickness :	Tw	=	0.2400	in
Bottom Flange Width :	Bbf	=	6.5000	in
Bottom Flange Thickness :	Tbf	=	0.4000	in
Girder Depth :		=	11.9500	in

NON-COMPOSITE SECTION PROPERTIES:

D	=	11.950	in	I	=	201.217	in^4	A = 7.876 in^2
Yt	=	5.98	in	St	=	33.676	in^3	Qt = 15.015 in^3
Yb	=	5.98	in	Sb	=	33.676	in^3	Qb = 15.015 in^3

Undeteriorated I = 204.10 in^2 from AISC 5th Edition

Undeteriorated I = 201.217 in^2 Assuming Girder is made of Plates

Δ = 1.413% low therfore increase section properites

I	=	204.059	in^4	A	=	7.987	in^2	
St	=	34.152	in^3	Qt	=	15.227	in^3	
Sb	=	34.152	in^3	Qb	=	15.227	in^3	

Notes:

1 *Moment of Inertia of Haunch Concrete **IS** included in the section properties.*

2 *See "English" or "Metric" worksheet if haunch concrete is not to be considered in the section property calcs.*

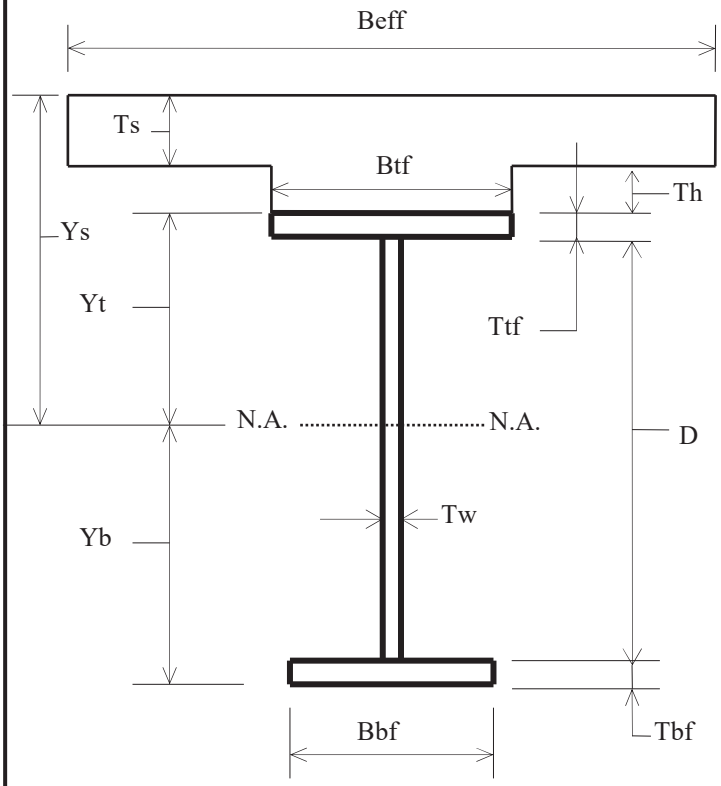
3 *Qt = statical moment about n.a. for the top flange used for the weld design*

4 *Qb = statical moment about n.a. for the bottom flange used for the weld design*

5 *Qs = statical moment about n.a. for the slab and haunch concrete used for shear stud design*

LABELLA Associates, P.C.	BY: JAC	DATE: 12/5/2025	CHECKED BY: JCY	DATE: 12/8/2025	SHEET: ___ of ___
	PROJECT 2201321	PROJECT NAME: PODUNK ROAD BRIDGE			

STRINGER SECTION PROPERTIES



PANEL 2 - STRINGER 3 FB 1

GIRDER DIMENSIONS

Top Flange Width :	Btf	=	4.0000	in
Top Flange Thickness :	Ttf	=	0.2150	in
Web Depth :	D	=	11.4675	in
Web Thickness :	Tw	=	0.2160	in
Bottom Flange Width :	Bbf	=	6.5000	in
Bottom Flange Thickness :	Tbf	=	0.2675	in
Girder Depth :		=	11.9500	in

NON-COMPOSITE SECTION PROPERTIES:

D	=	11.950	in	I	=	111.079	in^4	A = 5.076 in^2
Yt	=	6.97	in	St	=	15.939	in^3	Qt = 5.901 in^3
Yb	=	4.98	in	Sb	=	22.301	in^3	Qb = 8.428 in^3

Undeteriorated I = 204.10 in^2 from AISC 5th Edition

Undeteriorated I = 201.217 in^2 Assuming Girder is made of Plates

Δ = 1.413% low therfore increase section properites

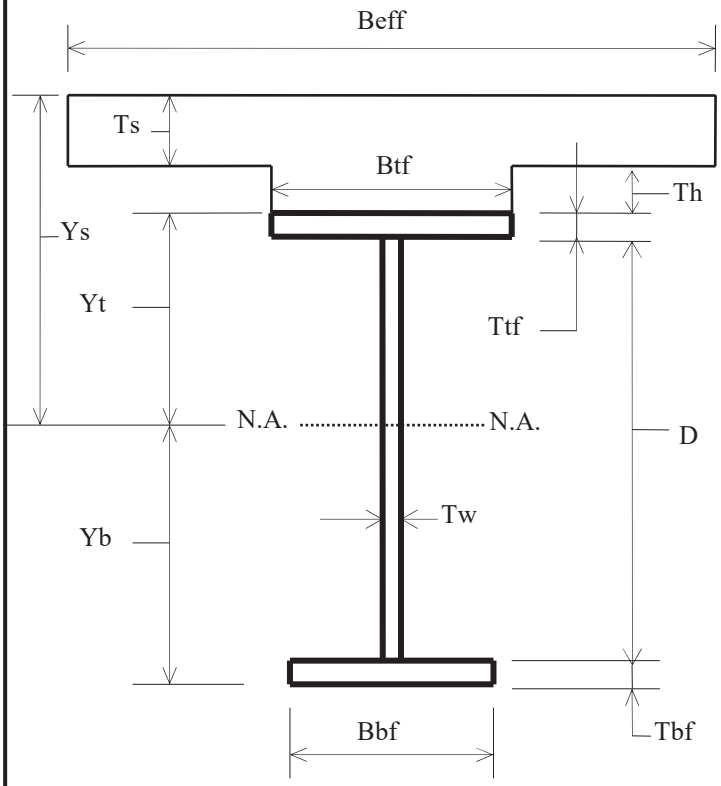
I	=	112.648	in^4	A	=	5.147	in^2	
St	=	16.164	in^3	Qt	=	5.984	in^3	
Sb	=	22.616	in^3	Qb	=	8.547	in^3	

Notes:

1. *Moment of Inertia of Haunch Concrete **IS** included in the section properties.*
2. *See "English" or "Metric" worksheet if haunch concrete is not to be considered in the section property calcs.*
3. *Qt = statical moment about n.a. for the top flange used for the weld design*
4. *Qb = statical moment about n.a. for the bottom flange used for the weld design*
5. *Qs = statical moment about n.a. for the slab and haunch concrete used for shear stud design*

LABELLA Associates, P.C.	BY: JAC	DATE: 12/5/2025	CHECKED BY: JCY	DATE: 12/8/2025	SHEET: ___ of ___
	PROJECT 2201321	PROJECT NAME: PODUNK ROAD BRIDGE			

STRINGER SECTION PROPERTIES



PANEL 2 - STRINGER 3 MID

GIRDER DIMENSIONS

Top Flange Width :	Btf	=	4.5000	in
Top Flange Thickness :	Ttf	=	0.1750	in
Web Depth :	D	=	11.4650	in
Web Thickness :	Tw	=	0.2160	in
Bottom Flange Width :	Bbf	=	6.5000	in
Bottom Flange Thickness :	Tbf	=	0.3100	in
Girder Depth :		=	11.9500	in

NON-COMPOSITE SECTION PROPERTIES:

D	=	11.950	in	I	=	113.625	in^4	A = 5.279 in^2
Yt	=	7.29	in	St	=	15.594	in^3	Qt = 5.669 in^3
Yb	=	4.66	in	Sb	=	24.365	in^3	Qb = 9.084 in^3

Undeteriorated I = 204.10 in^2 from AISC 5th Edition

Undeteriorated I = 201.217 in^2 Assuming Girder is made of Plates

Δ = 1.413% low therfore increase section properites

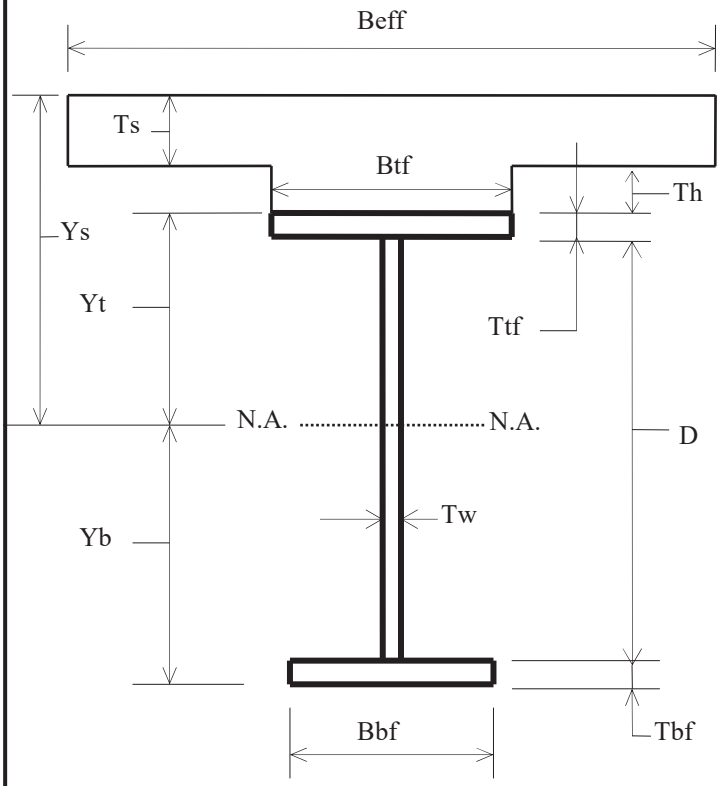
I	=	115.230	in^4	A	=	5.354	in^2	
St	=	15.814	in^3	Qt	=	5.749	in^3	
Sb	=	24.709	in^3	Qb	=	9.213	in^3	

Notes:

1 *Moment of Inertia of Haunch Concrete **IS** included in the section properties.*
2 *See "English" or "Metric" worksheet if haunch concrete is not to be considered in the section property calcs.*
3 *Qt = statical moment about n.a. for the top flange used for the weld design*
4 *Qb = statical moment about n.a. for the bottom flange used for the weld design*
5 *Qs = statical moment about n.a. for the slab and haunch concrete used for shear stud design*

LABELLA Associates, P.C.	BY: JAC	DATE: 12/5/2025	CHECKED BY: JCY	DATE: 12/8/2025	SHEET: ___ of ___
	PROJECT 2201321	PROJECT NAME: PODUNK ROAD BRIDGE			

STRINGER SECTION PROPERTIES



PANEL 3 - STRINGER 2 MID

GIRDER DIMENSIONS

Top Flange Width :	Btf	=	5.5000	in
Top Flange Thickness :	Ttf	=	0.2325	in
Web Depth :	D	=	11.3675	in
Web Thickness :	Tw	=	0.2160	in
Bottom Flange Width :	Bbf	=	6.5000	in
Bottom Flange Thickness :	Tbf	=	0.3500	in
Girder Depth :		=	11.9500	in

NON-COMPOSITE SECTION PROPERTIES:

D	=	11.950	in	I	=	141.760	in^4	A = 6.009 in^2
Yt	=	6.90	in	St	=	20.545	in^3	Qt = 8.675 in^3
Yb	=	5.05	in	Sb	=	28.072	in^3	Qb = 11.090 in^3

Undeteriorated I = 204.10 in^2 from AISC 5th Edition

Undeteriorated I = 201.217 in^2 Assuming Girder is made of Plates

Δ = 1.413% low therfore increase section properites

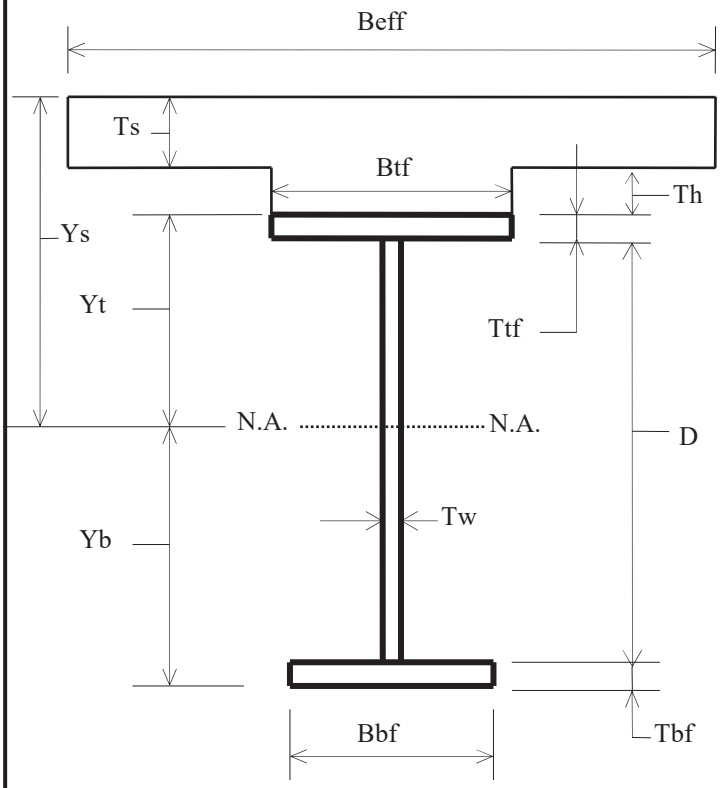
I	=	143.762	in^4	A	=	6.094	in^2	
St	=	20.835	in^3	Qt	=	8.797	in^3	
Sb	=	28.468	in^3	Qb	=	11.247	in^3	

Notes:

1 *Moment of Inertia of Haunch Concrete **IS** included in the section properties.*
2 *See "English" or "Metric" worksheet if haunch concrete is not to be considered in the section property calcs.*
3 *Qt = statical moment about n.a. for the top flange used for the weld design*
4 *Qb = statical moment about n.a. for the bottom flange used for the weld design*
5 *Qs = statical moment about n.a. for the slab and haunch concrete used for shear stud design*

LABELLA Associates, P.C.	BY: JAC	DATE: 12/5/2025	CHECKED BY: JCY	DATE: 12/8/2025	SHEET: ___ of ___
	PROJECT 2201321	PROJECT NAME: PODUNK ROAD BRIDGE			

STRINGER SECTION PROPERTIES



PANEL 3 - STRINGER 4 FB3

GIRDER DIMENSIONS

Top Flange Width :	Btf	=	4.5000	in
Top Flange Thickness :	Ttf	=	0.2100	in
Web Depth :	D	=	11.5475	in
Web Thickness :	Tw	=	0.2160	in
Bottom Flange Width :	Bbf	=	5.5000	in
Bottom Flange Thickness :	Tbf	=	0.1925	in
Girder Depth :		=	11.9500	in

NON-COMPOSITE SECTION PROPERTIES:

D	=	11.950	in	I	=	96.767	in^4	A = 4.498 in^2
Yt	=	6.13	in	St	=	15.785	in^3	Qt = 5.694 in^3
Yb	=	5.82	in	Sb	=	16.628	in^3	Qb = 6.060 in^3

Undeteriorated I = 204.10 in^2 from AISC 5th Edition

Undeteriorated I = 201.217 in^2 Assuming Girder is made of Plates

Δ = 1.413% low therfore increase section properites

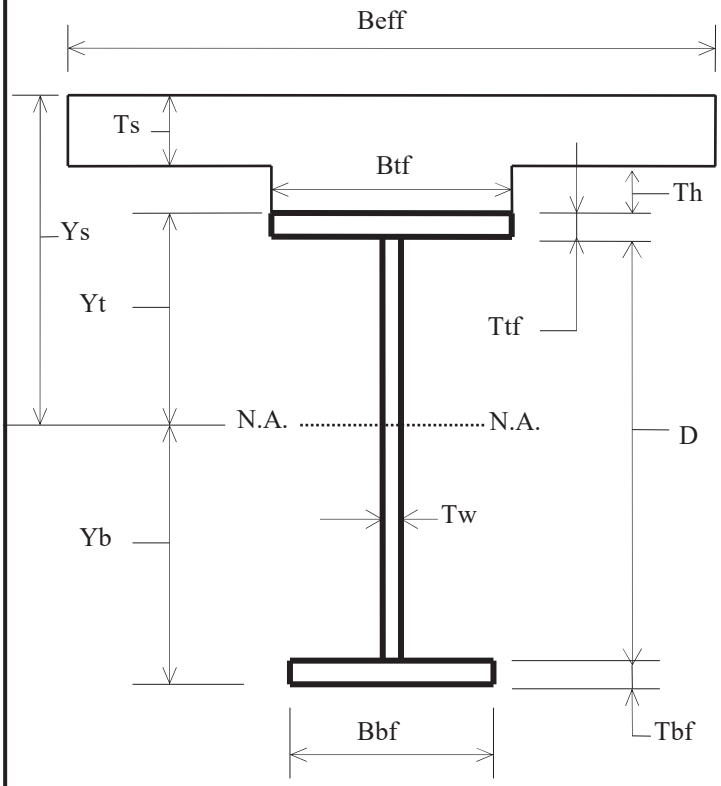
I	=	98.134	in^4	A	=	4.562	in^2	
St	=	16.008	in^3	Qt	=	5.774	in^3	
Sb	=	16.862	in^3	Qb	=	6.145	in^3	

Notes:

1 *Moment of Inertia of Haunch Concrete **IS** included in the section properties.*
2 *See "English" or "Metric" worksheet if haunch concrete is not to be considered in the section property calcs.*
3 *Qt = statical moment about n.a. for the top flange used for the weld design*
4 *Qb = statical moment about n.a. for the bottom flange used for the weld design*
5 *Qs = statical moment about n.a. for the slab and haunch concrete used for shear stud design*

LABELLA Associates, P.C.	BY: JAC	DATE: 12/5/2025	CHECKED BY: JCY	DATE: 12/8/2025	SHEET: ___ of ___
	PROJECT 2201321	PROJECT NAME: PODUNK ROAD BRIDGE			

STRINGER SECTION PROPERTIES



PANEL 4 - STRINGER 3 MID

GIRDER DIMENSIONS

Top Flange Width :	Btf	=	6.5000	in
Top Flange Thickness :	Ttf	=	0.2650	in
Web Depth :	D	=	11.4100	in
Web Thickness :	Tw	=	0.2160	in
Bottom Flange Width :	Bbf	=	6.5000	in
Bottom Flange Thickness :	Tbf	=	0.2750	in
Girder Depth :		=	11.9500	in

NON-COMPOSITE SECTION PROPERTIES:

D	=	11.950	in	I	=	146.447	in^4	A = 5.975 in^2
Yt	=	6.04	in	St	=	24.266	in^3	Qt = 10.167 in^3
Yb	=	5.91	in	Sb	=	24.759	in^3	Qb = 10.327 in^3

Undeteriorated I = 204.10 in^2 from AISC 5th Edition

Undeteriorated I = 201.217 in^2 Assuming Girder is made of Plates

Δ = 1.413% low therfore increase section properites

I	=	148.516	in^4	A	=	6.059	in^2	
St	=	24.609	in^3	Qt	=	10.311	in^3	
Sb	=	25.108	in^3	Qb	=	10.473	in^3	

Notes:

1 *Moment of Inertia of Haunch Concrete **IS** included in the section properties.*
2 *See "English" or "Metric" worksheet if haunch concrete is not to be considered in the section property calcs.*
3 *Qt = statical moment about n.a. for the top flange used for the weld design*
4 *Qb = statical moment about n.a. for the bottom flange used for the weld design*
5 *Qs = statical moment about n.a. for the slab and haunch concrete used for shear stud design*

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PROJECT Podunk SHEET ____ OF ____
PROJECT NO. 2201321 CALC. BY JAC DATE 12-5-25
SUBJECT Flag SCALE ____
CHECKED BY JCY 12-8-25

• Moment:

- Showing calculation for Panel 2, Stringer 3 Mid
- Applied moments provided on Sheet 16 of 21 of 2012 Load Rating

- Moments: DL1 = 0.4 k-ft = 4.8 k-in
DL2 = 1.8 k-ft = 21.6 k-in
LL+I = 56 k-ft = 672 k-in

- f_{bT}: (Top Fiber)
DL1 = $4.8\ k\text{-}in / 15.814\ in^3 = 0.304$ ksi (-)
DL2 = $21.6\ k\text{-}in / 15.814\ in^3 = 1.37$ ksi (-)
LL+I = $672\ k\text{-}in / 15.814\ in^3 = 42.5$ ksi (-)

- f_{bB}: (Bottom Fiber)
DL1 = $4.8\ k\text{-}in / 24.709\ in^3 = 0.194$ ksi (+)
DL2 = $21.6\ k\text{-}in / 24.709\ in^3 = 0.874$ ksi (+)
LL+I = $672\ k\text{-}in / 24.709\ in^3 = 27.2$ ksi (+)

- Top: $IR = \frac{0.55(33\ ksi) - (0.304\ ksi + 1.37\ ksi)}{42.5\ ksi} = 0.3886 \rightarrow 7.75\ Ton \rightarrow$ Say 7 Ton

$OR = \frac{0.75(33\ ksi) - (0.304\ ksi + 1.37\ ksi)}{42.5\ ksi} = 0.543 \rightarrow 10.86\ Ton \rightarrow$ Say 10 Ton

Per EI 20-026, Consider Stringer condition ≤ 3 (Table 2, Case 7)

$\therefore SLC = 0.8\ OR = 8\ Ton$

For Stringer effective Span = 11.33' and SLC = 8 Ton
→ From Table 3 → Maximum posting value = 8 Ton

-Refer to Stringer load rating summary spreadsheet for remaining Stringers.

By: JAC 12/8/2025

Ck'd: JCY 12/8/2025

Stringer Load Rating Summary - BIN 3314460 Podunk Road over Taughannock Creek, Town of Ulysses, Tompkins County

LOCATION		Section Mod.*	DL1 ** Moment	DL2 ** Moment	LL+I ** Moment	DL1 f_b	DL2 f_b	LL+I f_b	Inventory Rating		Operating Rating		Safe Load Cap. *** EI 20-026 Table 2 - Case 7		Recommended Posting Value ****
		(in^3)	(k·ft)	(k·ft)	(k·ft)	(ksi)	(ksi)	(ksi)	Factor	Tons	Factor	Tons	Factor	Tons	Tons
UNDETERIORATED STRINGER 12WF27	Top Flange	34.152	0.4	1.8	56.0	0.14	0.63	19.68	0.88	17	1.21	24	0.96	19	N/A
	Bottom Flange	34.152				0.14	0.63	19.68	0.88	17	1.21	24	0.96	19	
Panel 2, Stringer 3 FB1	Top Flange	16.164	0.3	1.2	35.8	0.22	0.89	26.58	0.64	12	0.88	17	0.70	14	23
	Bottom Flange	22.616				0.16	0.64	19.00	0.91	18	1.26	25	1.00	20	
Panel 2, Stringer 3 Mid	Top Flange	15.814	0.4	1.8	56.0	0.30	1.37	42.49	0.38	7	0.54	10	0.43	8	8
	Bottom Flange	24.709				0.19	0.87	27.20	0.62	12	0.87	17	0.69	13	
Panel 3, Stringer 2 Mid	Top Flange	20.835	0.4	1.8	56.0	0.23	1.04	32.25	0.52	10	0.72	14	0.57	11	18
	Bottom Flange	28.468				0.17	0.76	23.61	0.72	14	1.00	20	0.80	16	
Panel 3, Stringer 4 FB3	Top Flange	16.008	0.3	1.2	35.8	0.22	0.90	26.84	0.63	12	0.88	17	0.70	14	23
	Bottom Flange	16.862				0.21	0.85	25.48	0.67	13	0.92	18	0.73	14	
Panel 4, Stringer 3 Mid	Top Flange	24.609	0.4	1.8	56.0	0.20	0.88	27.31	0.62	12	0.86	17	0.68	13	21
	Bottom Flange	25.108				0.19	0.86	26.76	0.63	12	0.88	17	0.70	14	

NOTES

* Calculated from 08/11/2025 Section Loss Measurements in Red Flag Report

** Values obtained from previous Level 1 Load Rating performed 11/15/2012

*** Refer to NYSDOT EI 20-026 for determination of Safe Load Capacity - Table 2, Case 7

**** Refer to NYSDOT EI 20-026 for determination of Safe Load Capacity - Table 3

F_y = 33 ksi

Recommended Maximum Posting Value = 8

STRINGER REPAIR

REPAIR OF BRIDGE STRINGERS IN RESPONSE TO NYSDOT RED FLAG 3B2468W020

Podunk Road over Taughannock Creek
BIN 3314460
Town of Ulysses, Tompkins County

SEPTEMBER 6, 2024

Prepared for:

Tomkins County Highway Department
170 Bostwick Road
Ithaca, NY 14850

Prepared By:

LaBella
Powered by partnership.

300 STATE STREET
ROCHESTER, NY 14614

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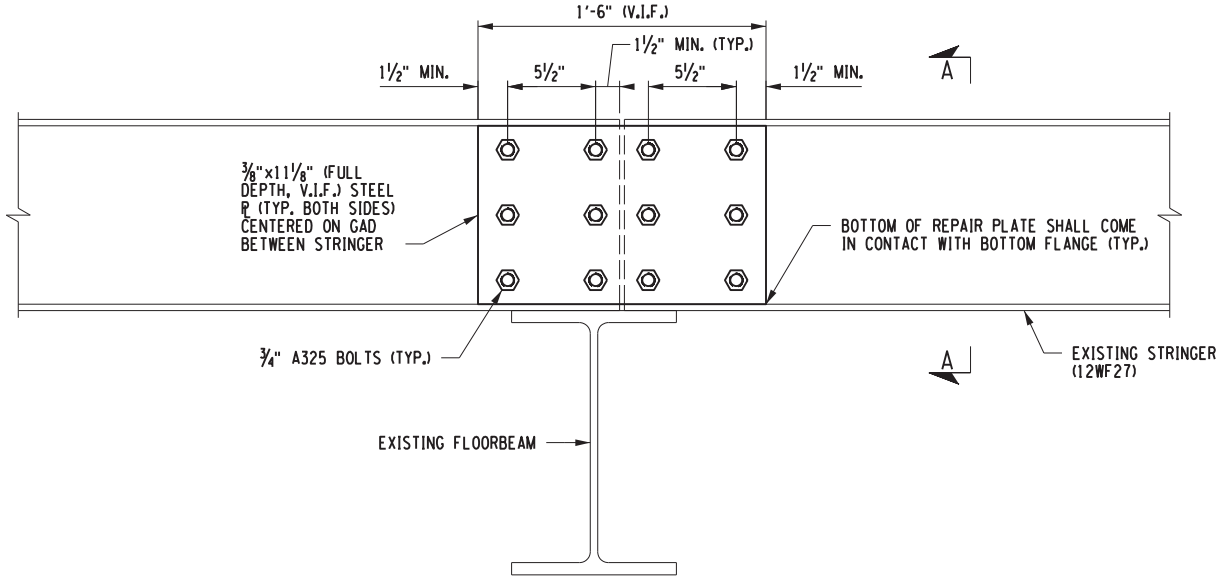
F: (585) 454-3066
www.labellapc.com

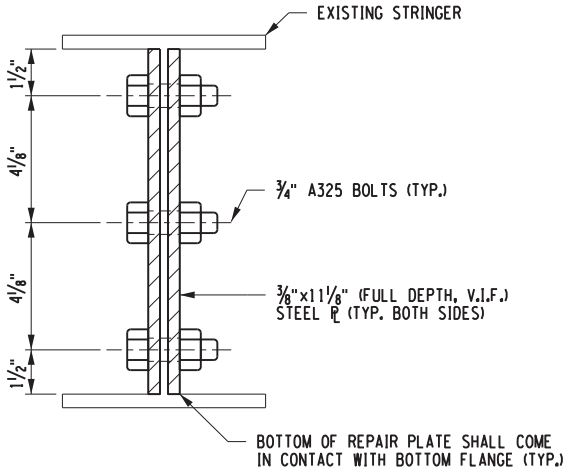
STATE OF NEW YORK
JEFFREY YOUNG
106588
LICENSED PROFESSIONAL ENGINEER



REPAIR ELEVATION
N.T.S.

NOTES:

1. THE SPECIFIED REPAIRS WILL BE PERFORMED AT STRINGER LINE 2 OVER FLOORBEAM 2 AND STRINGER LINE 4 OVER FLOORBEAM 4.
2. ⅜" REPAIR PLATE SHALL BE INSTALLED ON BOTH SIDES OF THE WEB AT EACH LOCATION
3. A LOAD RATING FOR THIS SAME REPAIR WAS PROVIDED IN 2020 WHICH SHOWS THAT AFTER THE REPAIR IS MADE, IT DOES NOT CONTROL THE LOAD RATING/POSTING.



SECTION A-A
N.T.S.

CLIENT
TOPMKINS COUNTY
HIGHWAY DEPARTMENT

ENGINEER
LaBella
Powered by partnership.
300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066
www.labellapc.com

CONTRACT NO.	SHEET NO.	TOTAL SHEETS
	1	1

PODUNK ROAD STEEL REPAIRS
BIN 3314460

PROJECT NO.
2223136

TOWN OF ULYSSES
TOMPKINS COUNTY
BIN 3314460

DATE
09/06/2024

STRINGER STEEL REPAIRS

DETAIL

PREPARED BY
JCY

DRAWING NO.
SH-1

FILE NAME = J:\Tompkins County\2223136 - Podunk Rd over Taughannock Creek\05.Design\Transpo\Red Flag 8-21-2024\Repair Detail.dgn
DATE/TIME = 9/6/2024 11:17:55 AM
USER =

Calculations

The attached calculations are from the 2020 flag response which used the same repair and show that after the repair is made, these locations will not control the load rating/posting.

LaBella
Powered by partnership.

PROJECT Podunk SHEET ____ OF ____
PROJECT NO. 2201321 CALC. BY JCY DATE 9-8-20
SUBJECT Flag SCALE -
CHECKED BY SLG 9/10/2020

- Repair:
  - Will elect to put a 3/8" plate on both sides of the web and weld to flanges, $F_y = 36^{ksi}$ (assumed)
  - Plates to extend 12" beyond the top flange of the floorbeam below
  - Develope new rating with repair
  - Assume web thickness is just the new plates

- Web Local Yielding [J10.2]:
  - bearing length = 3.25"

$$\frac{R_n}{\Omega} = \frac{F_{yw} t_w (2.5k + L_b)}{\Omega} = \frac{(36^{ksi})(.75")[(2.5)(1.125") + 3.25"]}{1.5}$$

$$= 109.13^{k} \text{ (controls)}$$

- Web Local Crippling [J10.3]:

$$\frac{L_b}{d} = \frac{3.25"}{11.95"} = .27 > .2 \quad , t_w = (2)(3/8") = .75"$$

$$\frac{R_n}{\Omega} = \frac{.4 t_w^2}{\Omega}\left[1 + \left(\frac{4L_b}{d} - 0.2\right)\left(\frac{t_w}{t_f}\right)^{1.5}\right]\sqrt{\frac{E F_{yw} t_f}{t_w}}$$

$$= \frac{(.4)(.75")^2}{2}\left[1 + \left(\frac{(4)(3.25")}{11.95"} - 0.2\right)\left(\frac{.75"}{(.4")(.9)}\right)^{1.5}\right]\sqrt{\frac{(29000)(36^{ksi})(.9)(.4")}{.75"}}$$

$$= 292.3^{k}$$

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PROJECT Podunk SHEET ____ OF ____
PROJECT NO. 2201321 CALC. BY JCY DATE 9-8-20
SUBJECT Flag SCALE -
CHECKED BY SLG 9/10/2020

- Web Sideways Buckling [J10.4]:

$$\frac{(h/t_w)}{(L_b/b_f)} = \frac{(10.375"/.75")}{(136"/6.5")} = .66 > 2.3 \rightarrow \text{applies}$$

$$\frac{R_n}{\Omega} = \frac{C_r t_w^2 t_f}{h^2 \Omega}\left[1 + .4\left(\frac{h/t_w}{L_b/b_f}\right)^3\right]$$

$$= \frac{(960000^{ksi})(.75")^2(.4" \times .9)}{(10.375")^2 (1.76)}\left[1 + .4\left(\frac{10.375"/.75"}{136"/6.5"}\right)^3\right]$$

$$= 1144.8^{k}$$

- Web Compression Buckling [J10.5]:

$$\frac{R_n}{\Omega} = \frac{24 t_w^3 \sqrt{E F_{yw}}}{h \Omega} = \frac{(24)(.75")^3 \sqrt{(29000)(36^{ksi})}}{(10.375")(1.67)} = 597.1^{k}$$

Applied Load is within d/2 of end → 50% reduction

$$\frac{R_n}{\Omega} = (1/2)(597.1^{k}) = 298.6^{k}$$

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PROJECT Podunk SHEET ____ OF ____
PROJECT NO. 2201321 CALC. BY JCy DATE 9-8-20
SUBJECT Flag SCALE -
CHECKED BY SLG 9/10/2020

- New Rating - Compression:

Controling Capacity = $\frac{R_n}{\Omega} = 109.13^{K}$

$$RF = \frac{C - A_1 D}{A_2 L}$$

Reactions: DL1 = 0.1^{K}
DL2 = 0.6^{K}
LL+I = 24.1^{K}

$$\text{Inventory (IR)} = \frac{109.13^{K} - (1)(0.1^{K} + 0.6^{K})}{(1)(24.1^{K})} = 4.499$$

$$\text{Operating (OR)} = \frac{(4/3)(109.13^{K}) - (1)(0.1^{K} + 0.6^{K})}{(1)(24.1^{K})} = 6.009$$

$$SLC = 0.8\,OR = (.8)(6.009)(20^{Ton}) = 96.14^{Ton}$$

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PROJECT Podunk SHEET ___ OF ___
PROJECT NO. 220 1321 CALC. BY JCY DATE 9-8-20
SUBJECT Flag SCALE -
CHECKED BY SLG 9/10/2020

- Repair Bolts:
  - Will use 3/4" A325 Bolts to connect repair plates to web
  - determine # of bolts to use

- Bearing Strength at Bolt Holes [J3.10]:

$$\frac{R_n}{\Omega} = \frac{1.2 L_c t F_u \leq 2.4 d t F_u}{\Omega} = \frac{(1.2)(1.0625")(.2275")(60^{ksi}) \leq (2.4)(3/4")(.2275")(60^{ksi})}{2}$$

$$= 8.70^{k} \leq 12.29^{k} \rightarrow \quad 8.70^{k}/bolt \quad (controls)$$

- Shear Strength [J3.6]:

$$\frac{R_n}{\Omega} = \frac{F_{nv} A_b}{\Omega} = \frac{(54^{ksi})(\pi/4)(3/4")^2}{2} = 11.93^{k}/bolt$$

- Rating - Bolts:
  - Use 6 bolts per stringer $\rightarrow R_n/\Omega = (6)(8.70^{k}/bolt) = 52.2^{k}$

$$\text{Inventory (IR)} = \frac{52.2^{k} - (1)(0.1^{k} + 0.6^{k})}{(1)(24.1^{k})} = 2.137$$

$$\text{Operating (OR)} = \frac{(4/3)(52.2^{k}) - (1)(0.1^{k} + 0.6^{k})}{(1)(24.1^{k})} = 2.859$$

$$SLC = 0.8\,OR = (.8)(2.859)(20^{Ton}) = 45.744^{Ton}$$

TOMPKINS COUNTY HIGHWAY DEPARTMENT

09/27/2024

BIN 3314460
RF 3B2468W020

FLOOR BEAM 2, STRINGER 2 REPAIR


TOMPKINS COUNTY HIGHWAY DEPARTMENT
09/27/2024
BIN 3314460
RF 3B2468W020
FLOOR BEAM 2, STRINGER 2 REPAIR


TOMPKINS COUNTY HIGHWAY DEPARTMENT
09/27/2024
BIN 3314460
RF 3B2468W020
FLOOR BEAM 4, STRINGER 4 REPAIR


TOMPKINS COUNTY HIGHWAY DEPARTMENT
09/27/2024
BIN 3314460
RF 3B2468W020
FLOOR BEAM 4, STRINGER 4 REPAIR

LaBella
Powered by partnership.

Transmitted via email to:

TO: Jim Morse – Tompkins County
(jmorse@tompkins-co.org)

CC: Jeff Young – LaBella Associates, D.P.C.
(jyoung@labellapc.com)

Hard copy will not be transmitted via U.S. Mail

September 27, 2024

Mr. Jim Morse
Tompkins County
170 Bostwick Road
Ithaca, NY 14850

RE: Podunk Road over Taughannock Creek
Red Structural Flag 3B2468W020

Dear Mr. Morse:

It has been brought to our attention that the repairs made in the field to address Red Structural Flag 3B2468W020 were slightly different than what was detailed in the drawings provided by LaBella Associates. Instead of using one 18" long plate on each side of the web, two 9" plates were used on each side of the web, on each stringer.

We have no objection to this repair alteration. The intent of the repair was to increase the bearing area and prevent the buckling of the webs due to the horizontal cracks at the base of the webs. Whether the 18" plate or the 9" plates are used, the goal is still achieved and the repairs made in the field are acceptable.

I trust that you will find this additional information meets your satisfaction. If you have any questions, please do not hesitate to contact me at 585-295-6293 or jyoung@labellapc.com.

Respectfully submitted,

LaBella Associates
Jeff Young, PE
Structural Engineer

New York State Department of Transportation
Red Flag 3B2468W020

By: Nicholas J. Voerg
Flag Date: August 14, 2024

Superseding Information:
No Flags Superseded

Structure Information

BIN: **3314460**
Feature Carried: COUNTY ROAD 146
Feature Crossed: TAUGHANNOCK CREEK
Orientation: 1 - NORTH

Region: 03 - SYRACUSE
County: TOMPKINS
Political Unit: Town of ULYSSES
Approximate Year Built: 1915

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: 1

Verbal Notification Information

Person Notified: Timothy Johnson
Date: August 15, 2024 10:11:00 AM

Of: NYSDOT Region 3

Signature Information

Signature: Nicholas J. Voerg, P.E. 099876-1
Date: August 16, 2024

Reviewed By: John D. Seligman
Date: August 16, 2024

Attachments: 4

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 1			
	113 - Steel Stringer	285	ft

Flagged Condition Description

Flagged Condition: Lower web steel cracks on 2 stringers over their floorbeam connections

This structure is a steel truss with a stringer-floorbeam system below an open steel grate deck. The structure is load posted for 15 tons; there are load posting signs on both approaches that are in good condition [Photos 1-2].

Above Floorbeam 2, Stringer 2 is cracked at the bottom of the web on both the Panel 2 and Panel 3 portions of the stringer, which is discontinuous over the floorbeam [Photo 3]. The Panel 2 (begin) side of the stringer is cracked 3.75” long, measured from the seam between the two stringer portions. The Panel 3 (end) side of the stringer is cracked 3” long, measured in the same fashion. There is minimal section loss in the area.

Above Floorbeam 4, Stringer 4 is cracked at the bottom of the web on both the Panel 4 and Panel 5 portions of the stringer, which is similarly discontinuous over the floorbeam [Photo 4]. The Panel 4 (begin) side of the stringer is cracked 1.25” long, and the Panel 5 (end) side of the stringer is cracked 2” long, measured in the same fashion as above. There is moderate section loss in the area.

It appears that this condition was more widespread throughout the structure in the past. Since then, web repair plates have been bolted to the stringers over the floorbeams in numerous locations.

Red Flag 3B2468W020 is issued as a new flag for these conditions.

Significance: As these cracks grow, the load path from the affected stringers to the floorbeams that support them is broken, causing more load to be taken up by the neighboring stringers. In conjunction with the widespread corrosion throughout the superstructure, this may lead to the overstressing of these neighboring stringers.

Flag Photographs

Photo Number: **1** Photo Filename: **RF-01.JPG**

Attachment Description: **Begin load posting sign – looking End Right**

Photo Number: **2** Photo Filename: **RF-02.JPG**

Attachment Description: **End load posting sign – looking Begin Left**

Photo Number: **3** Photo Filename: **RF-03.JPG**

Attachment Description: **Stringer 2 over Floorbeam 2, lower web cracked on both Begin and End portions – looking End Left**

Photo Number: **4** Photo Filename: **RF-04.JPG**

Attachment Description: **Stringer 4 over Floorbeam 4, lower web cracked on both Begin and End portions – looking End Right**

New York State Department of Transportation
PIA Red Flag 3B25HPW015

By: Mike Kostakis
Flag Date: December 04, 2025

Superseding Information:
No Flags Superseded

Structure Information

BIN: **3314460**
Feature Carried: COUNTY ROAD 146
Feature Crossed: TAUGHANNOCK CREEK
Orientation: 1 - NORTH

Region: 03 - SYRACUSE
County: TOMPKINS
Political Unit: Town of ULYSSES
Approximate Year Built: 1915

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: 1
Bridge Carries National Highway System: No

Verbal Notification Information

Person Notified: Timothy Johnson
Date: December 04, 2025 10:59:00 AM

Of: NYSDOT Region 3

Signature Information

Signature: Mike Kostakis, P.E. 085074-1
Date: December 04, 2025

Reviewed By: John D. Seligman, P.E. 067549-1
Date: December 04, 2025

Attachments: 1

Flagged Elements

Parent Element	Element
Span Number : 1	
	113 - Steel Stringer

Flag Condition Category: 16 - Load Rating Calculation

Flagged Condition Description

Background:
This is single span pony truss with a stringer-floorbeam system supporting an open steel grating. The current posting of 15 Tons is based on a 2021 Level 1 Load Rating using Allowable Stress Rating (ASR).
Details:
As a result of higher section losses of Stringer 3 in Panel 2, the attached 2025 Level 2 Load Rating Summary indicates that the controlling H-Operating Rating (HOR) is now 11 Tons. According to EI 20-026 LOAD RATING/POSTING GUIDELINES FOR STATE-OWNED HIGHWAY BRIDGES the current 15 Ton Posting now needs to be lowered. Therefore, in accordance with the 2017 NYSDOT Bridge Inspection Manual with August 2024 Amend/addend, Appendix B, Section VI-Load Rating Flags, this condition is now a Mandatory Red Flag PIA.

Additional Information:
According to EI 20-026's Table 2 Safe Load Capacity Guidelines, the Level 2 Safe Load Capacity (SLC) is 0.8 x 11 Tons = 8 Tons

Flag Photographs

Photo Number: **1** Photo Filename: **2025 ASR Level 2 Load Rating Summary .png**

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State
H 20-44	Axle Load	ASR	Inventory	8.03	0.401	5.67	1 - (50.0)	Design Flexure - Steel
H 20-44	Axle Load	ASR	Operating	11.19	0.560	5.67	1 - (50.0)	Design Flexure - Steel
H 20-44	Lane	ASR	Inventory	11.88	0.594	5.67	1 - (50.0)	Design Flexure - Steel
H 20-44	Lane	ASR	Operating	16.56	0.828	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Axle Load	ASR	Inventory	14.45	0.401	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Axle Load	ASR	Operating	20.15	0.560	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Lane	ASR	Inventory	21.38	0.594	5.67	1 - (50.0)	Design Flexure - Steel
HS 20-44	Lane	ASR	Operating	29.81	0.828	5.67	1 - (50.0)	Design Flexure - Steel

Attachment Description: **2025 Level 2 Load Rating Summary (ASR)**

BIN 3314460

Podunk Road over Taughannock Creek

Town of Ulysses, Tompkins County

05 – Draft section 106 document

FINDING DOCUMENTATION

PIN: 3756.97
Podunk Road Bridge over Taughannock Creek
Town of Ulysses, Tompkins County

1. PROJECT DESCRIPTION

Tompkins County is the sponsor for the Podunk Road Bridge (BIN 3314460) over Taughannock Creek project, a Locally Administered Federal Aid Project, with funding from the Federal Highway Administration administered by the New York State Department of Transportation (NYSDOT). The project, in the Town of Ulysses, consists of improving the bridge crossing and its adjacent approach roadways.

Appendix A shows approximate project limits (not to scale). The Area of Potential Effect (APE) is contained widthwise by the right-of-way property lines and is approximately 550 ft long lengthwise to allow for the roadway work and construction activity. Any proposed earthwork would affect only previously disturbed ground, going no deeper than the foundations of the existing structure.

The project surroundings are low-density residential with rural rolling wooded hills and farmland.

EXISTING CHARACTERISTICS OF CONCERN

Built in 1915, BIN 3314460 – Podunk Road (CR 146) over Taughannock Creek is a 56-foot single span metal pin-connected Pratt through-truss that carries two 10 ft travel lanes.

The existing bridge is currently load posted for 8 tons, limited by the red and yellow flags of the floor system. There is a red flag due to horizontal cracks and rust-thru perforations within the lower portion of the web bearing area on floorbeams and stringers. There is also a yellow flag due to heavy section loss to stringers top and bottom flanges near the maximum bending point on floorbeams and stringers. Additionally, the bridge is located on a horizontal curve and there have been several instances of truss members being impacted by vehicles.

Emergency vehicles and heavy construction vehicles are forced to avoid this crossing or require special accommodations. The ability to accommodate service vehicles is dependent on the load capacity and roadway width of the bridge.

PROJECT GOALS AND OBJECTIVES

The goal of this project is to provide a structurally safe, low-maintenance bridge over Taughannock Creek that supports passenger, commercial, and emergency vehicles, while minimizing environmental and property impacts.

The project objectives are as follows:

- Eliminate structural deficiencies
- Eliminate Geometric Deficiencies
- Provide a service life of 75 years or better (with routine maintenance)
- Minimize costs of maintenance and repair over the life of the structure

2. STEPS TAKEN TO IDENTIFY HISTORIC PROPERTIES

Investigation of historic properties within and nearby the project site began with a review New York State Historic Preservation Office (SHPO) Cultural Resources Information System (CRiS) information, the National Register of Historic Places, and the NYSDOT "Evaluation of National Register Eligibility – Historic Bridge Inventory and Management Plan." The Town of Ulysess historian was also contacted for any information regarding the structure or other historic features within the area of potential effect.

The CRiS review found that the bridge could be National Register eligible under Criterion A-1 (bridge is associated with historic event(s) or activities at the time of original construction). See CRiS findings in Appendix B.

The review of the National Register of Historic Places found no resources on the register in the vicinity of the project. See review information in Appendix B.

The review of the NYSDOT "Evaluation of National Register Eligibility – Historic Bridge Inventory and Management Plan" found that the bridge could meet eligibility criterion A-1, *Historical significance to local community* and eligibility criterion C-5, *Dates to period of early standardization*. However, the report also recommends that the bridge is non-eligible for the historic register since the bridge does not display innovations in material or design. See these materials in Appendix B.

The Town of Ulysses Historian has been contacted regarding the Podunk Road Bridge and this project, but to date no response has been received.

3. EVALUATION OF PROJECT IMPACT ON IDENTIFIED HISTORIC PROPERTIES

The Podunk Road Bridge (BIN 3314460) is the only National Register eligible resource located within the APE.

Built in 1915, BIN 3314460 – Podunk Road (CR 146) over Taughannock Creek is a 56-foot single span metal pin-connected Pratt through-truss that carries two 10 ft travel lanes. The bridge is made of two trusses with the floor hanging between them. Each member intersection is connected by a large metal pin. The bottom chord members are built up using channel shapes bound together by eye bars. The top chord members are built up using channel shapes bound together by a cover plate. The vertical tension members are double angles connected by lacing bars. All the compression members are eye bars, either 1 or 2 individual eye bars per member. The metal grate deck sits on top of steel stringers which sit on floorbeams suspended by a single plate at each truss panel point.

PROJECT ALTERNATIVES

The following alternatives were selected for initial consideration based on their merits for minimizing impacts on the historic property and meeting the project goals and objectives. They were each evaluated qualitatively to determine feasibility. Alternatives not dismissed from the qualitative analysis were evaluated quantitatively to approximately determine the scope of work, construction complexity, and future maintenance. Alternatives were also evaluated based on how they address existing safety and geometric deficiencies, including limited horizontal sight distances at the approaches and bridge roadway width.

ALTERNATIVE 1: REPLACEMENT WITH A STEEL MULTI-GIRDER SUPERSTRUCTURE

This alternative involves constructing a new roadway alignment slightly west of the existing bridge location and increasing the bridge length and width to improve the stream hydraulics and geometric design of the bridge and approach roadways.

This alternative consists of removing the existing truss superstructure along with removing the existing substructure. The existing truss superstructure will be marketed and if a suitable new owner is found moved to a new location. If the marketing effort fails, the structure will be demolished and of disposed of by the contractor.

The proposed bridge will be a steel multi-girder superstructure supported by integral abutments. The proposed structure will be 80 ft long with an out-to-out width of 31’-4” on the new roadway alignment shifted slightly west of the existing alignment. The 31’-4” out-to-out width consists of two 10’-0” travel lanes, two 4’-0” shoulders and two 1’-8” spaces for four-rail steel bridge railing with transition railing.

This alternative meets the project goals and objectives. Refer to the Preliminary Drawings in Appendix C, for the location of the new roadway alignment and proposed bridge structure.

Please refer to the Engineering Justification Report found in Appendix D, for a more detailed comparison of alternatives.

ALTERNATIVE 2: REPLACEMENT WITH A STEEL PONY TRUSS SUPERSTRUCTURE

This alternative involves constructing a new roadway alignment slightly west of the existing bridge location and increasing the bridge length and width to improve the geometric design of the bridge and approach roadways.

This alternative consists of removing the existing truss superstructure along with removing the existing substructure. The existing truss superstructure will be marketed and if a suitable new owner is found moved to a new location. If the marketing effort fails, the structure will be demolished and of disposed of by the contractor.

To mimic the existing bridge, this alternative would be designed as a steel pony truss superstructure founded on conventional pile supported abutments. The proposed structure would be 80 ft long with an out-to-out deck width of 31’-4” on the new roadway alignment shifted slightly west of the existing alignment. The 31’-4” out-to-out width consists of two 10’-0” travel

lanes, two 4'-0" shoulders and two 1'-8" spaces for a vertical face concrete barrier with transition railing. The expected CL to CL of truss distance will be 33'-2".

While this type of structure can be designed and built, it does not meet the general design standards as detailed in the "NYSDOT- Bridge Manual". The bridge manual, under *Section 3.2.4.3 – Superstructure Type Based on Span Lengths* refers to Table 3-3, Superstructure Type vs. Span Length. This table sates that the allowable single span length (feet) for a truss is for span lengths between 200 and 500 feet. The span length required for this crossing is 80 feet. This does not meet good design standards.

The "NYSDOT- Bridge Manual" under *Section 3.2.5.1.2 – Constructability* considers a truss to be a Complex Structure stating:

"Concrete segmental box girders, **steel trusses**, steel or concrete arches, steel box or tub girders, cable-stayed, and suspension bridges generally require specialized design and construction techniques compared to conventional alternatives. In addition, inspection and maintenance of these types of bridges will be more expensive. These superstructure types shall only be used when required by the Design Approval Document or justification for their use is approved by the DCES for Design/Bid/Build projects."

The "NYSDOT- Bridge Manual" *Section 3.2.5.1.3 – Durability and Inspection* topic named Access and Special Inspections reminds that a truss:

"Concrete arches, concrete segmental box girders, **steel trusses**, steel box or tub girders, cable- stayed, and suspension bridges can require special access equipment or training to perform inspections and routine maintenance. In addition, portions of the structures can be unique and require special inspections at increased intervals compared to the rest of the structure. This can become costly and burdensome and shall be taken into consideration when determining the structure type for a new or replacement bridge."

While this type of structure could achieve the objective of restoring the bridge crossing to a condition rating of 5 or higher for at least 75 years, it fails to meet good design practices or achieve the objective of minimizing life-cycle maintenance and repair costs. This option would result in higher maintenance, inspection demands, and significantly greater design and construction costs compared to other replacement alternatives.

ALTERNATIVE 3: REHABILITATION OF EXISTING BRIDGE

This alternative involves the repair or replacement of select structural members to strengthen the bridge to safely carry all legal load vehicles. This alternative will not address the current geometric or hydraulic deficiencies of the bridge.

The existing bridge deck width does not meet lane and shoulder width standards. There is also a sharp roadway curvature on both existing approaches limiting sight distance.

The open grate bridge deck, stringers, and floorbeams are failing and require extensive repairs at the very least and/or replacement. Any action taken to repair or replace these elements will

require the complete removal and replacement of the steel grate deck, which will add additional time, cost, and complexity to the rehabilitation option when compared to other alternatives.

This alternative does not meet the project goal of providing a structurally safe, low-maintenance bridge over Taughannock Creek, capable of supporting passenger, commercial, and emergency vehicles for at least 75 years using cost-effective methods to minimize life-cycle maintenance and repair costs. It also fails to address the project objectives of eliminating the structural and geometric deficiencies of BIN 3314460.

This alternative maintains geometrically deficiencies at the bridge and is not the most cost-effective method of reconstruction and is therefore unacceptable.

Please refer to the Engineering Justification Report found in Appendix D, for a more detailed analysis.

ALTERNATIVE 4: NULL ALTERNATIVE

This alternative involves no modifications or repairs to the superstructure, performing only routine maintenance and none of the physical deficiencies identified would be corrected. The current deteriorated state of the structure will remain and likely progress over time, further reducing the structural capacity and resulting in the eventual closure of the bridge.

A reasonable level of maintenance has not been able to prevent the gradual buildup of deterioration due to the difficulties inherent in the structure type. In particular, regions near horizontal cracks, rust-thru perforations and areas of heavy section loss. The areas of cracks and rust-thru perforations are located at specific spots on floorbeams and stringers as well as heavy section loss located near point of maximum bending on floorbeams and stringers. Refer to Appendix D for the red and yellow structural flag reports. These are critical concerns because it reduces the flexural capacity of the floorbeams and stringers.

The existing bridge deck width does not meet lane and shoulder width standards. The open grid bridge deck has isolated deteriorated locations and areas of deteriorated steel protective coating. There is also a sharp roadway curvature on both existing approaches.

This alternative does not address the project goals and objectives. The existing bridge is load posted for 8 tons which will continue to decrease if no modifications or repairs will be performed to the structure. This alternative allows further deterioration, leaves the bridge structurally and geometrically deficient, and is therefore unacceptable.

4. BASIS FOR RECOMMENDED PROJECT FINDING

The only alternative that meets all project goals and objectives is Alternative 1: Replacement with a Steel Multi-Girder Superstructure..

All alternatives were evaluated on their feasibility, practicality and lifetime costs. Based on this comparison, Alternative 1 was found to be the most advantageous despite having an adverse effect on the historic existing bridge.

The criteria of adverse effect have been evaluated in accordance with part 800.5(a) of the National Historic Preservation Act and we find that this undertaking will have an adverse effect on properties eligible for or listed on the National Register of Historic Places.

Under the preferred alternative the existing truss superstructure will be marketed and if a suitable new owner is found moved to a new location. If the marketing effort fails, the structure will be demolished and disposed of by the contractor. A HAER (Historic American Engineering Record) report, meeting the requirements of the Federal Register, will be commissioned to document, in detail, the existing pin connected (circa 1915) Pratt truss. Thus, ensuring the legacy of the structure within the state archives.

The Project Sponsor and the NYSDOT, in consultation with the SHPO and FHWA, will develop a Memorandum of Agreement (MOA) to resolve the Adverse Effect on the Podunk Road Bridge. The MOA will stipulate that an Historic American Engineering Report (HAER) Level II be prepared as part of the mitigation of the adverse effect."

5. PUBLIC INVOLVMENT

This project has been and will continue to be coordinated with FHWA, Town of Ulysses, neighborhood groups and other governmental agencies with jurisdiction in the project limits. As part of the public outreach process, a public meeting will be held, and a public notice will be published in a local newspaper with a deadline for acceptance of comments. This will be completed prior to final design.

a. Tribal Nation Consultation

In cooperation with NYSDOT and FHWA, Tompkins County and its consultant LaBella Associates, will provide information for Tribal Nation Consultation at key points in the design process to be shared with the appropriate tribal nations.

6. SUMMARY

In summary, the proposed project will ensure the continued linkage for the local community surrounding the town of Ulysses. The Podunk Road bridge serves as a historic and essential element within the local and regional transportation system. It requires replacement due to existing structural, geometric and safety deficiencies.

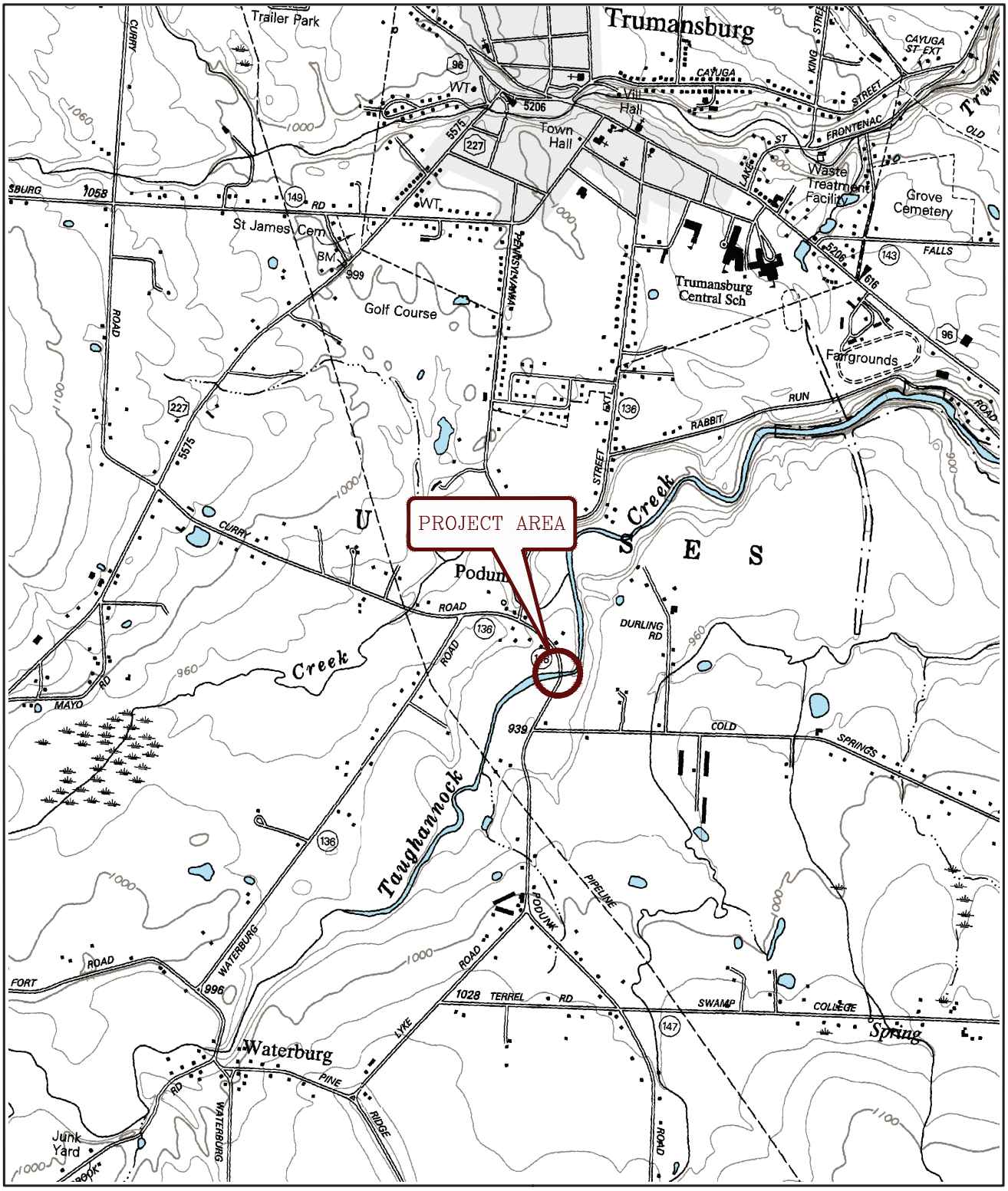
In recognition of the historic and engineering significance of the Podunk Road bridge, the existing truss will be documented by a HAER (Historic American Engineering Record) report, meeting the requirements of the Federal Register to detail the existing pin connected (circa 1915) Pratt truss. Thus, ensuring the legacy of the structure within the state archives.

7. ATTACHMENTS

Appendix A: Project Location Maps and Area of Potential Effect (APE)
Appendix B: Historic Property Investigation Documents
Appendix C: Preliminary Drawings of Proposed Alternatives
Appendix D: Engineering Justification Report
Appendix E: Photograph Log of Structure and Site
Appendix F: Bridge Marketing Package

Appendix A:

Project Location Maps and Area of Potential Effect (APE)



Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

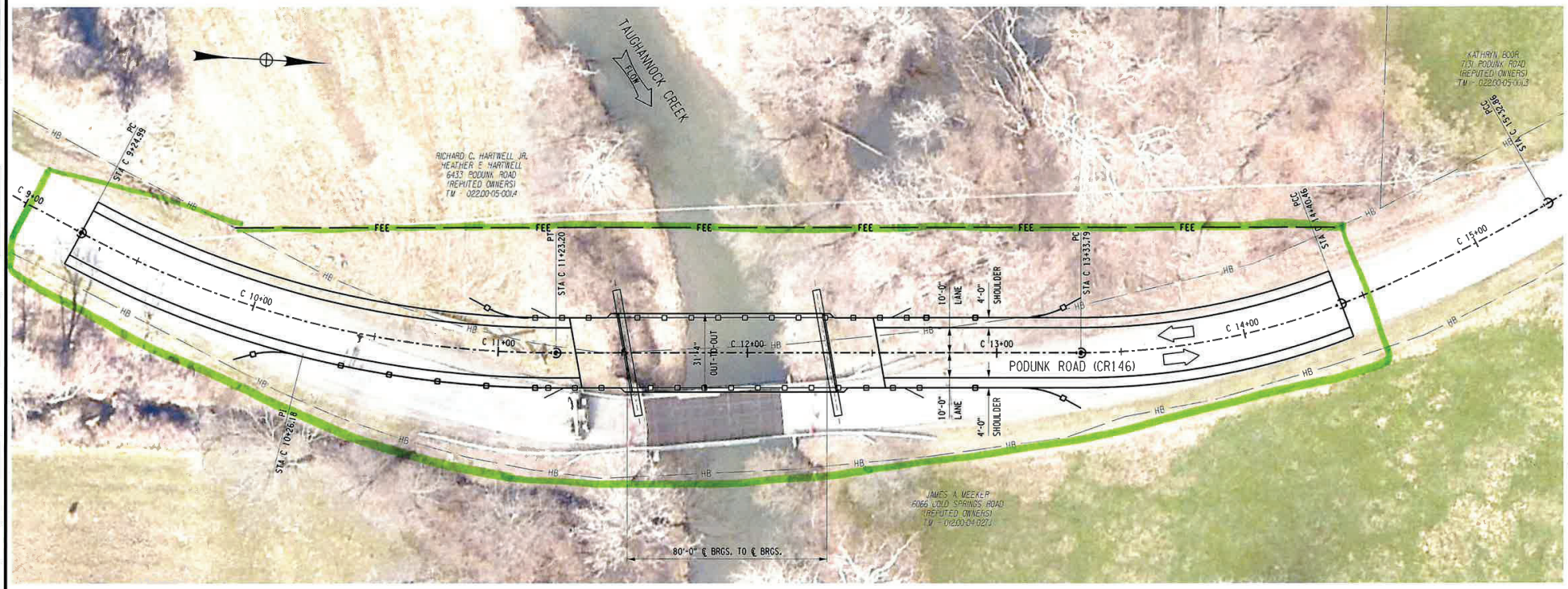
FIGURE 1. SITE LOCATION MAP

TOMPKINS COUNTY HIGHWAY DEPARTMENT
PODUNK ROAD BRIDGE OVER TAUGHANNOCK CREEK
TOWN OF TRUMANSBURG | TOMPKINS COUNTY | NEW YORK

BIN 3314460

DATE:	NOVEMBER 2022
SCALE:	1" = 2,000'
PROJECT NO:	50515

MAP SOURCE: NYS DOT RASTER QUADRANGLE; TRUMANSBURG; CAYUGA, SCHUYLER, SENECA, AND TOMPKINS COUNTIES
DOT EDITION DATE: 1996 /USGS CONTOUR DATE:1970



GENERAL PLAN

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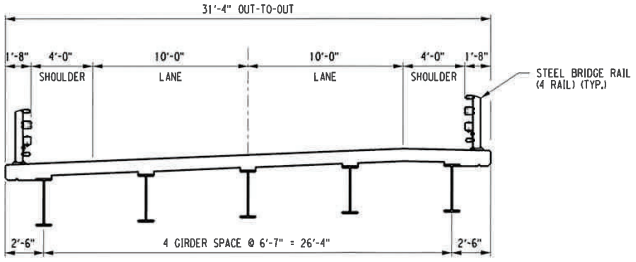
1" = 40'



PROPOSED BRIDGE SECTION

▭ - A.P.E.

BRIDGE REPLACEMENT PODUNK ROAD (CR146) OVER TAUGHANNOCK CREEK TOWN OF ULYSSES COUNTY: TOMPKINS REGION: 3	PIN	BRIDGES 3314460	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED GENERAL PLAN AND BRIDGE SECTION	CONTRACT NUMBER DRAWING NO. PLN-1 SHEET NO. 1

LaBella Powered by partnership.

TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER JOB MANAGER S. GAUTHIER DESIGN W. KANIECKI CHECK M. EDWARDS DRAFTING Y. GREGG CHECK S. GAUTHIER PROJECT MANAGER B. MILLER

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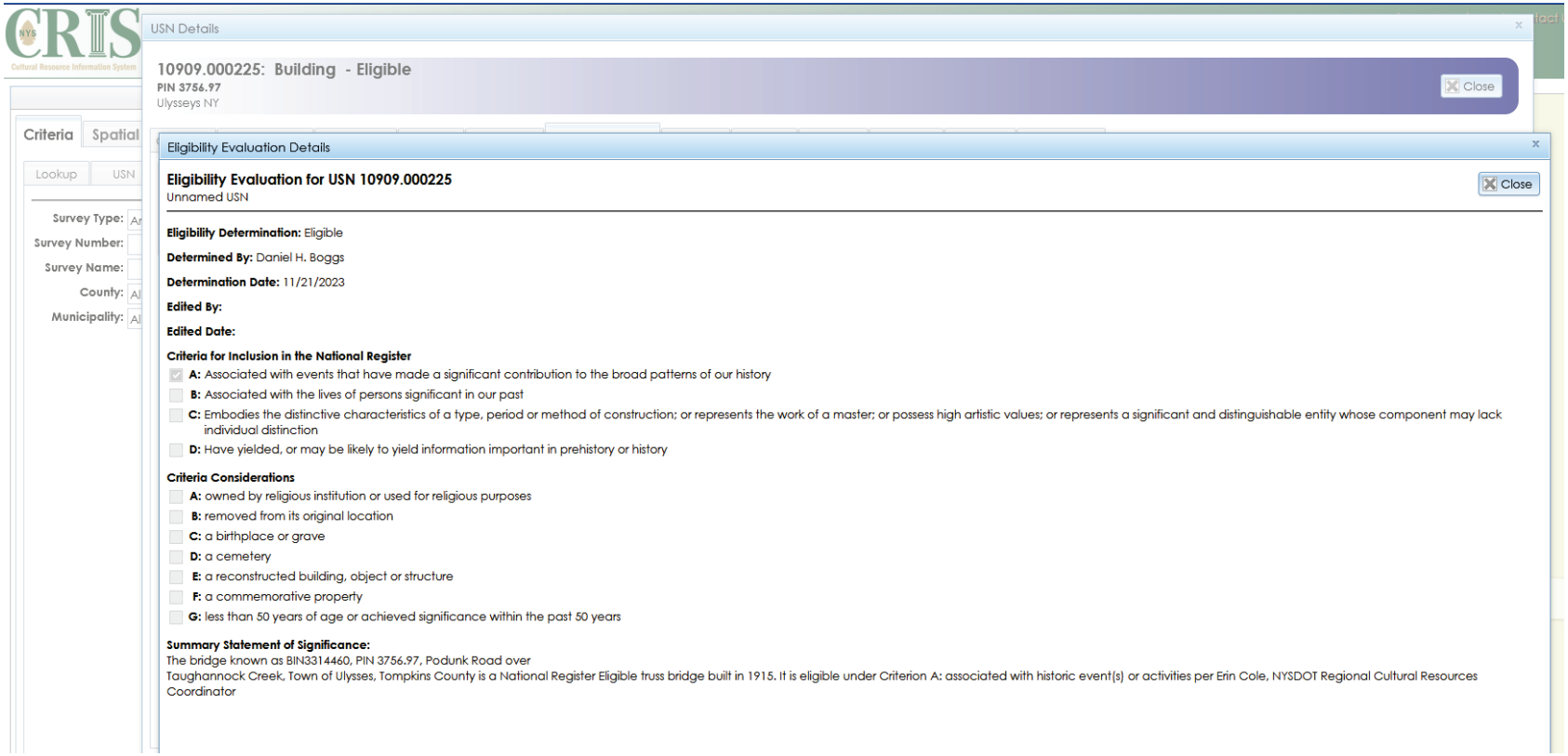
PIN 3756.97
Podunk Road over Taughannock Creek
Town of Ulysses, Tompkins County

CRIS Program - Screenshot



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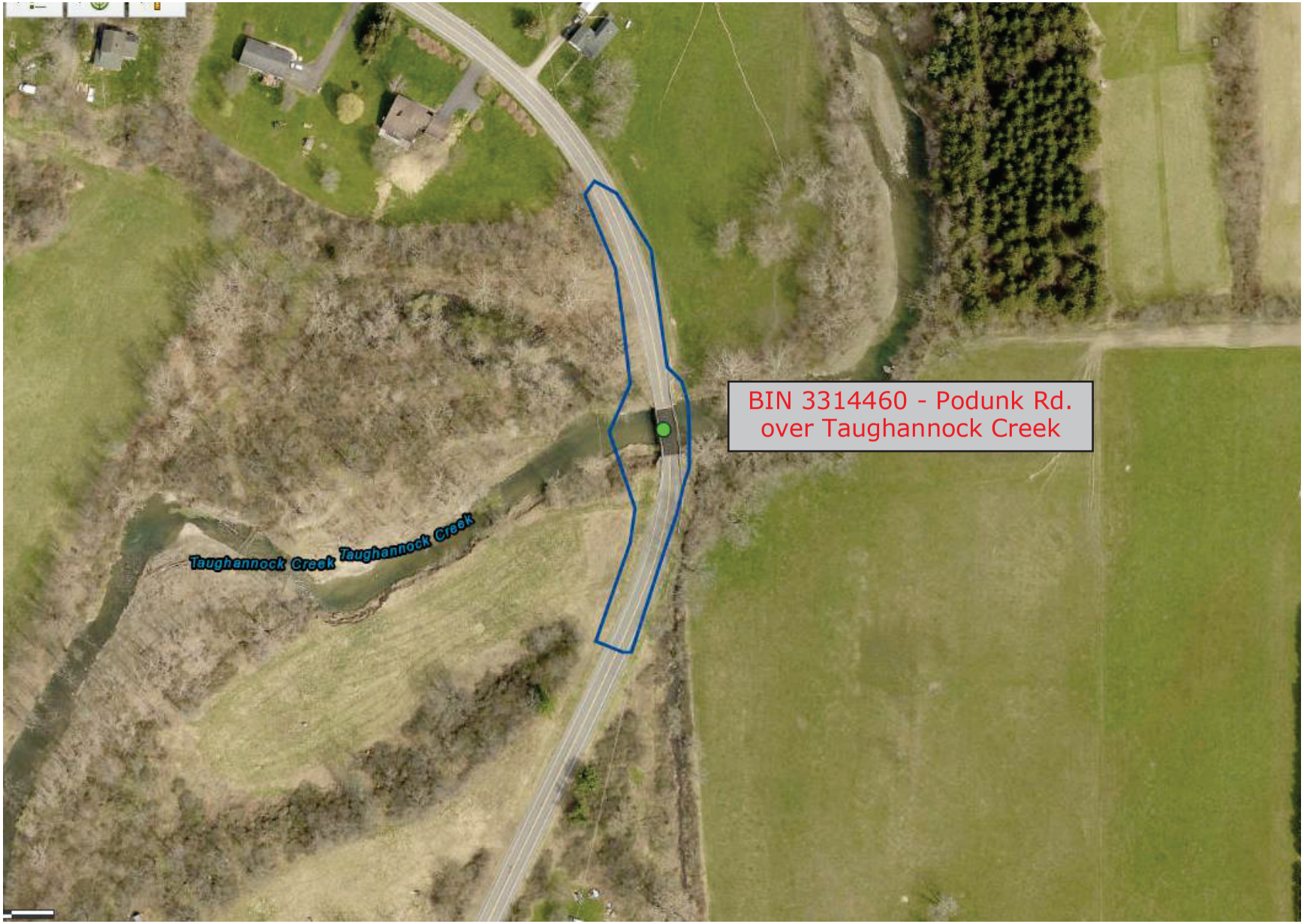
Podunk Road over Taughannock Creek
Town of Ulysses, Tompkins County



Appendix B:

Historic Property Investigation Documents

PIN: 3756.97
Podunk Road Bridge over Taughannock Creek Town of Ulysses, Tompkins County

One post-1908 bridge demonstrates the evolution of the bridge type and is recommended as eligible for the National Register under *Criterion C-7*. This bridge is an early example of a welded bridge.

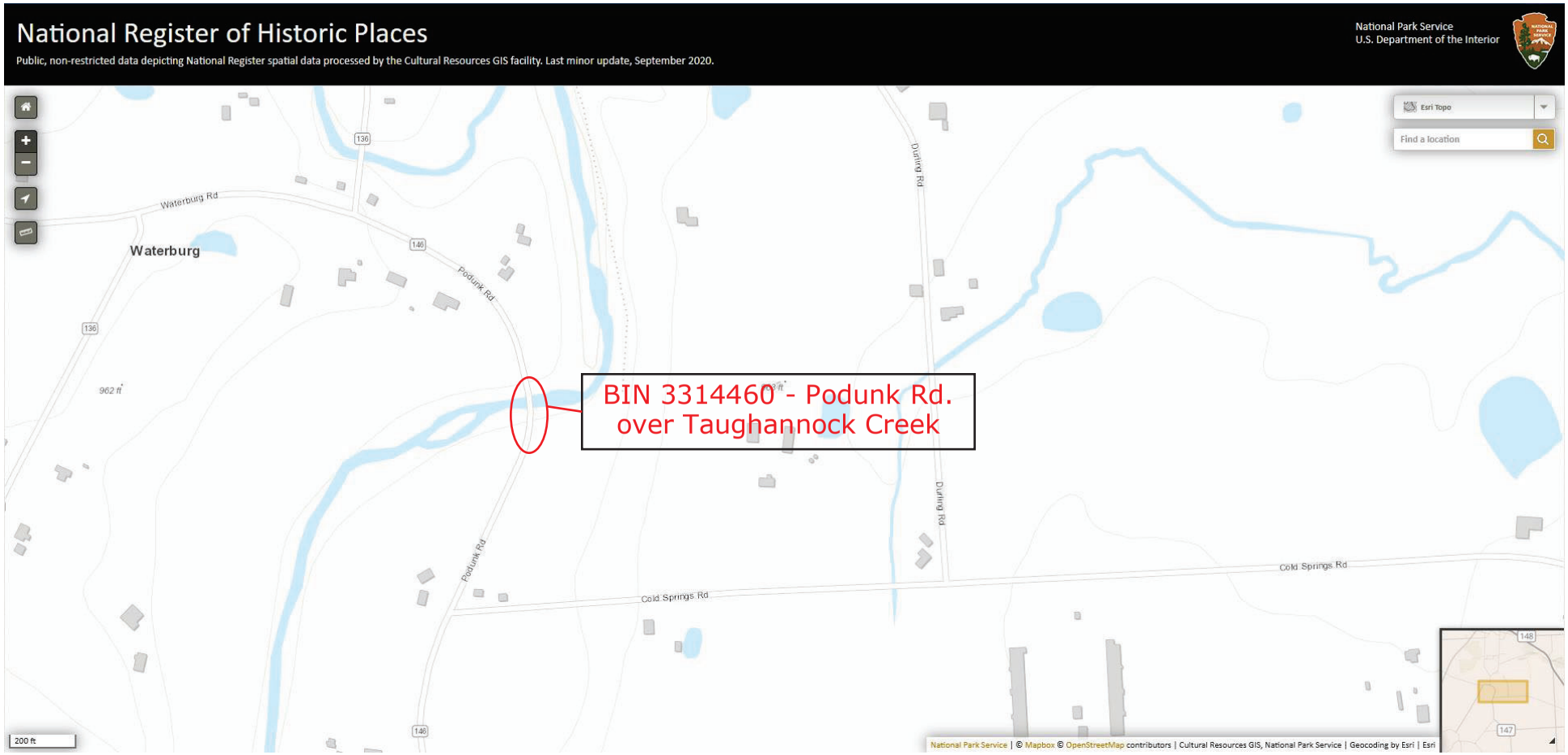
Fourteen post-1925 bridges represent common examples of an established type and are recommended as non-eligible for the National Register. These bridges do not display innovations in material or design, and they do not have known historical associations (as identified through contextual study research and questionnaire responses). In addition, four of these bridges lack integrity, having either replaced or added main members.

Eligible Post-Standardization Pratt Trusses

BIN	Region	County	Eligibility Criterion	Explanation
1029040	8	Columbia	C-3 C-6	Phoenix Bridge Company. Half-hip.
2206410	2	Oneida	A-1 C-5	Historical significance to local community. Dates to period of early standardization.
2207590	3	Cortland	C-6	Half-hip.
3209750	3	Tompkins	A-1 C-5 C-6	Historical significance to local community. Dates to period of early standardization. Multiple span, half-hip.
3209800	3	Tompkins	A-1 C-5 C-6	Historical significance to local community. Dates to period of early standardization. Multiple span.
3303051	1	Greene	C-7	Early welded.
3307470	2	Hamilton	C-5	Dates to period of early standardization.
3314460	3	Tompkins	A-1 C-5	Historical significance to local community. Dates to period of early standardization.
3316440	4	Livingston	C-5	Dates to period of early standardization.
3335030	6	Tioga	C-5	Dates to period of early standardization.
3335730	7	Clinton	A-1 C-5	Historical significance to local community. Dates to period of early standardization.
3339800	7	Lewis	C-5	Dates to period of early standardization.
3353050	9	Delaware	C-5	Dates to period of early standardization.
3354650	9	Schoharie	C-5	Dates to period of early standardization.

PIN: 3756.97
Podunk Road Bridge over Taughannock Creek
Town of Ulysses, Tompkins County

National Register of Historic Places
Project area search



Edwards, Merton

From: Bayer, Chris
Sent: Thursday, January 23, 2025 2:50 PM
To: Edwards, Merton
Subject: FW: [Ext] Re: Podunk Road (CR146) Bridge Project

See email below.

I never heard back from him on if there was anything at the town historical society museum.

Chris Bayer, PE
LaBella Associates | Project Manager

585-727-3180 **cell**
585-295-6294 **direct**
585-454-6110 **office**

From: historian@Ulysses.ny.us <touhistorian@gmail.com>
Sent: Sunday, April 16, 2023 9:39 PM
To: Bayer, Chris <cbayer@labellapc.com>
Subject: [Ext] Re: Podunk Road (CR146) Bridge Project

Mr. Bayer:

My apologies for the long delay in responding to your e-mail. .A period of ill health and some changes in technology have delayed access to this e-mail account..

In any case, I suspect that you may already know that there are two documents at the Tompkins County History center that may be of some use to you. One is the original "Road Opening Book" for the Town of Ulysses and the second is the "Town of Ulysses Board Records" 1795-1823. I will be at the Ulysses Historical Society Museum tomorrow and will see what might be in the files there on the bridge.

Sincerely,

John Wertis
Ulysses Town Historian

On Tue, Mar 21, 2023 at 1:48 PM Bayer, Chris <cbayer@labellapc.com> wrote:

> John,
>
> LaBella Associates is working with Tompkins County on the federally funded Podunk Road Bridge over Taughannock Creek project. This bridge is listed as Historic Eligible on the NYS SHPO site.

As part of our documentation during preliminary design, we need to identify all historic properties at the site. I am reaching out to the town to see if you have any historic information on the bridge.

Please review your records and let me know if there is anything you can provide. Feel free to reach out to me with any questions.

Chris Bayer, PE

LaBella Associates | Project Manager

585-727-3180 **cell**

585-295-6294 **direct**

585-454-6110 **office**

300 State Street, Suite 201

Rochester, NY 14614

labellapc.com

Edwards, Merton

From: Edwards, Merton
Sent: Monday, January 27, 2025 12:07 PM
To: clerk@townofulyssesny.gov
Cc: Bayer, Chris
Subject: Podunk Road (CR146) over Taughannock Creek Bridge Project
Attachments: CRIS program Info on Podunk.docx

Ulysses Town Historian,

LaBella Associates is working with Tompkins County on the federally funded Podunk Road Bridge over Taughannock Creek project. This bridge is listed as Historic Eligible on the NYS SHPO site as A-1: Historical significance to local community. As part of our documentation during preliminary design, we need to identify all historic properties at the site. I am reaching out to the town to see if you have any further historic information on the bridge.

I have attached the information I have found to aid your search.

Please review your records and let me know if there is anything you can provide. Feel free to email me or call at 585.301.1997, with any questions.

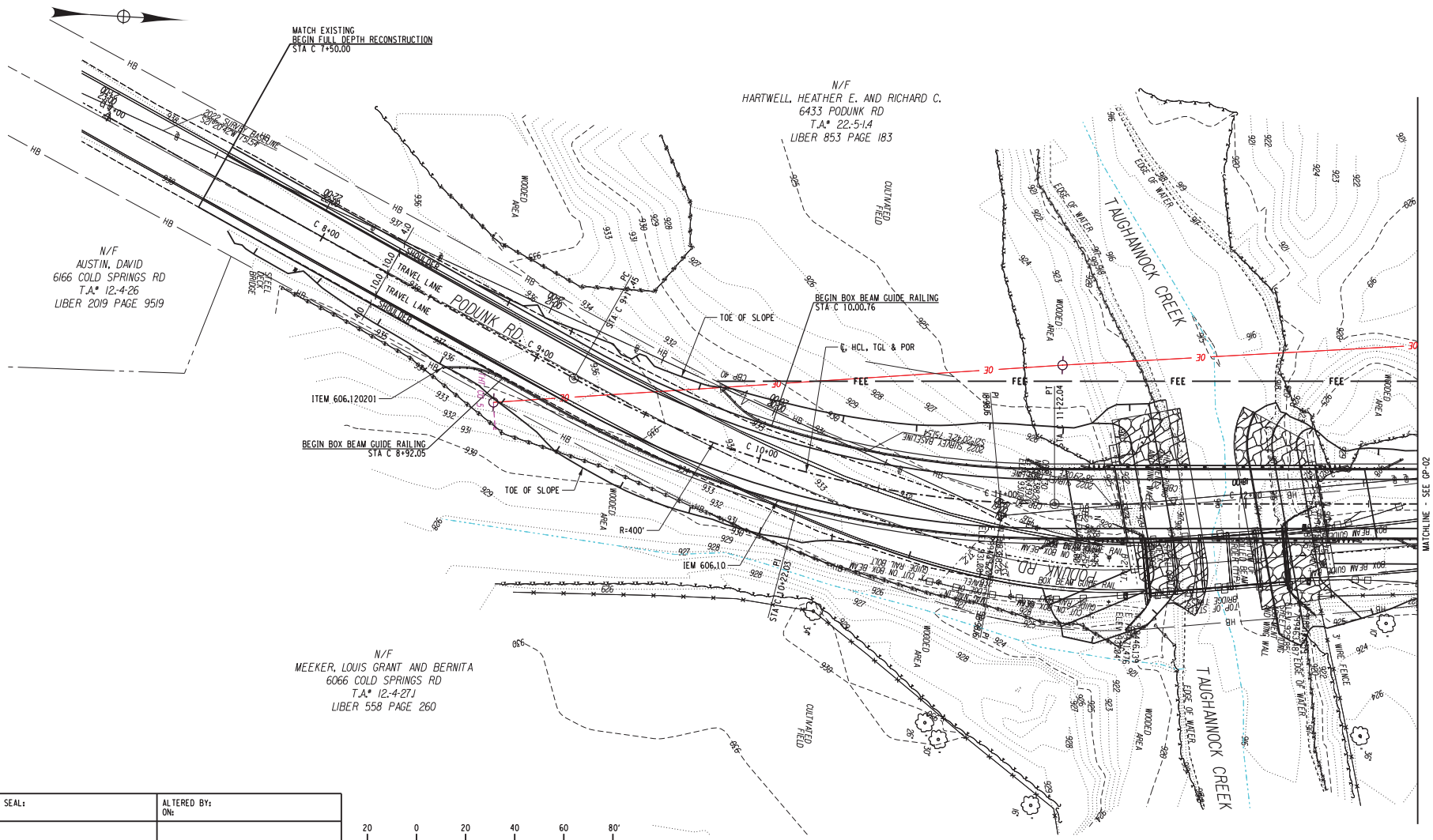
Thank you,
Mert

Merton J. Edwards, P.E.
LaBella Associates | Construction Services Manager

585-770-2519 **direct**
585-454-6110 **office**
585-301-1997 **cell**
medwards@Labellapc.com
300 State Street, Suite 201
Rochester, NY 14614
labellapc.com

Appendix C:

Preliminary Drawings of Proposed Alternatives



AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

BRIDGE REPLACEMENT	PIN	BRIDGES	CULVERTS
PODUNK ROAD (CR146)		3314460	
OVER TAUGHANNOCK CREEK			
TOWN OF ULYSSES			
COUNTY: TOMPKINS REGION: 3			

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

HIGHWAY PLAN

CONTRACT NUMBER

DRAWING NO. GP-01
SHEET NO. 1

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TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER | JOB MANAGER S. GAUTHIER | DESIGN W. KANIECKI | CHECK M. EDWARDS | DRAFTING V. GREGG | CHECK S. GAUTHIER | PROJECT MANAGER B. MILLER

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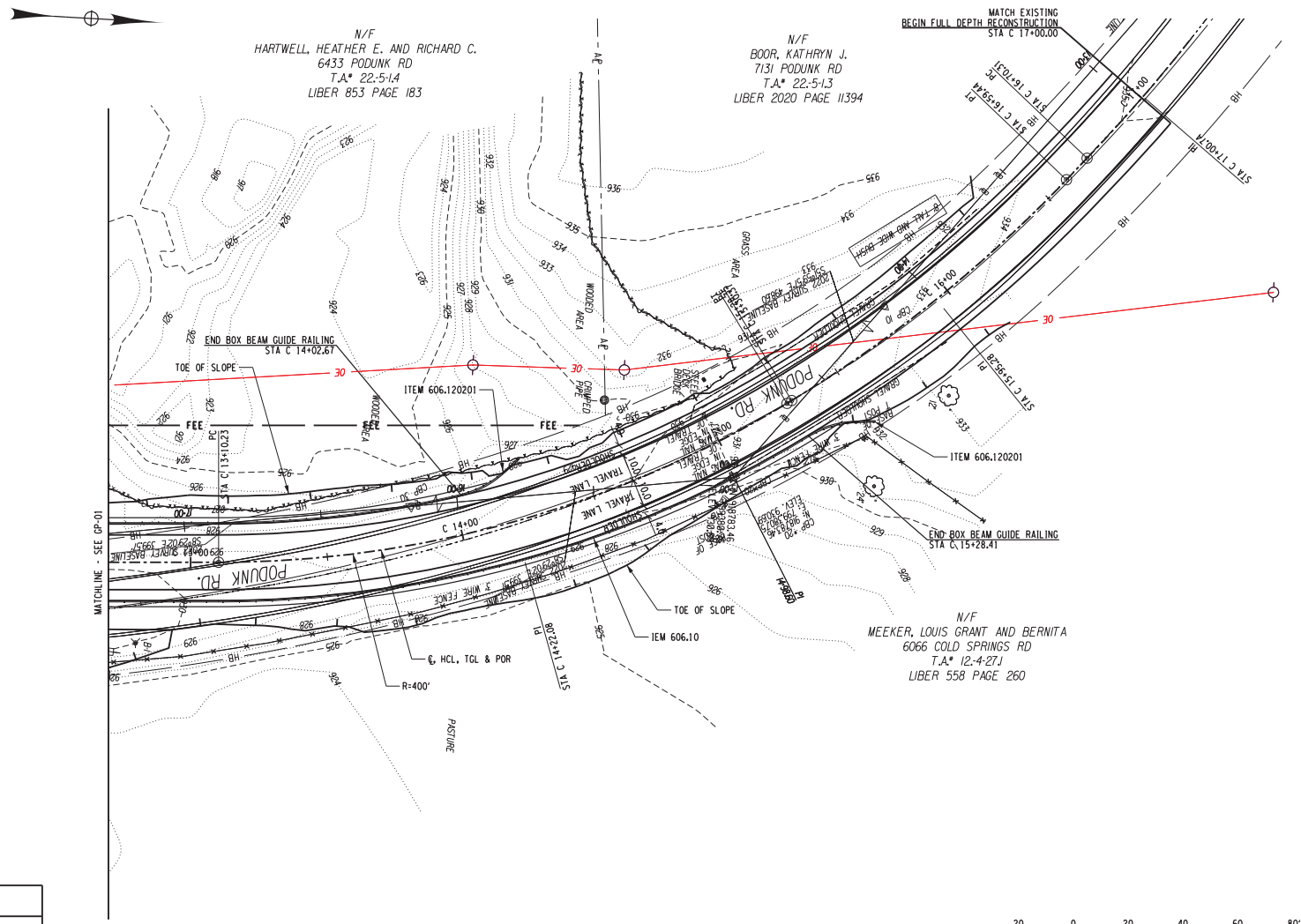

AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

BRIDGE REPLACEMENT	PIN	BRIDGES	CULVERTS
PODUNK ROAD (CR146)		3314460	
OVER TAUGHANNOCK CREEK			
TOWN OF ULYSSES			
COUNTY: TOMPKINS REGION: 3			

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

CONTRACT NUMBER

HIGHWAY PLAN

DRAWING NO. GP-02
SHEET NO. 2

LaBella
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TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER | JOB MANAGER S. GAUTHIER | DESIGN W. KANIECKI | CHECK M. EDWARDS | DRAFTING V. GREGG | CHECK S. GAUTHIER | PROJECT MANAGER B. MILLER

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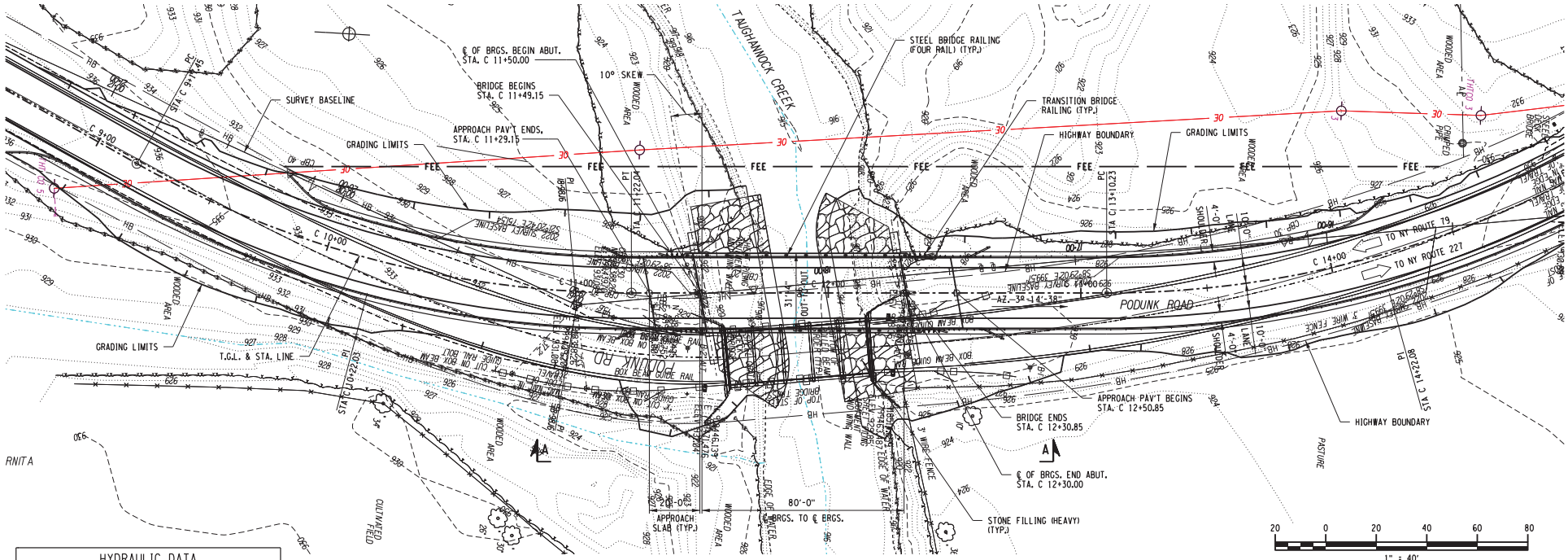
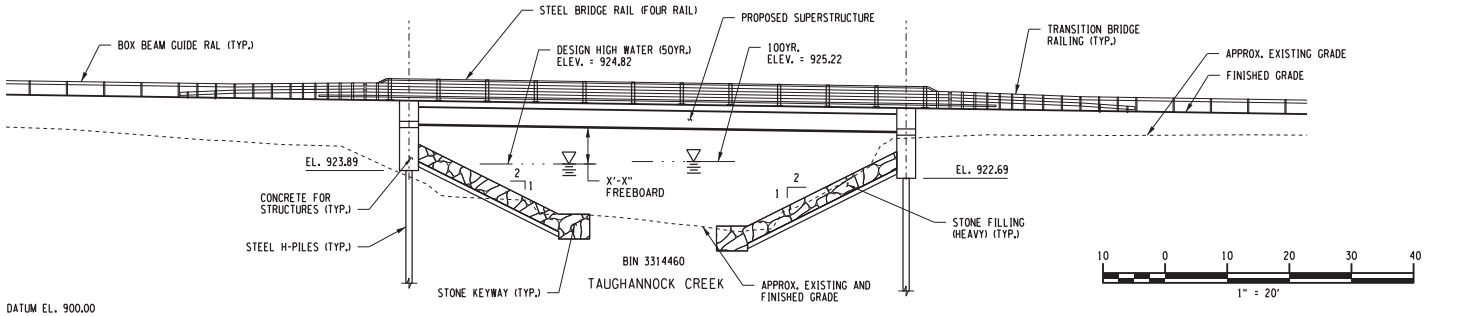


PLAN



ELEVATION A-A

HYDRAULIC DATA			
DRAINAGE AREA X.X (SQ. MILES)		BASIC FLOOD	DESIGN FLOOD
RECURRENCY INTERVAL	(YEARS)	100	50
PEAK DISCHARGE	(ft^3/S)	X.XX	X.XX
RESERVOIR ELEVATION	EXISTING	925.68	925.14
	PROPOSED	925.22	924.82
AVG. VELOCITY THRU STRUCTURE	ft/SEC.	X.X	X.X
	MINIMUM CHANNEL EL. ft.		

LOAD RATING (LFD)		
INVENTORY	HS X.X	X.X TONS
OPERATING	HS X.X	X.X TONS
LRFR RATING FACTORS		
INVENTORY	HL-93	X.X TONS
OPERATING	HL-93	X.X TONS

AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

BRIDGE REPLACEMENT
PODUNK ROAD (CR146)
OVER TAUGHANNOCK CREEK
TOWN OF ULYSSES
COUNTY: TOMPKINS REGION: 3

PIN

BRIDGES 3314460

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

GENERAL PLAN AND ELEVATION

CONTRACT NUMBER

DRAWING NO. ST-1
SHEET NO. 3

LaBella Powered by partnership.

TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER | JOB MANAGER S. GAUTHIER | DESIGN W. KANIECKI | CHECK M. EDWARDS | DRAFTING V. GREGG | CHECK S. GAUTHIER | PROJECT MANAGER B. MILLER

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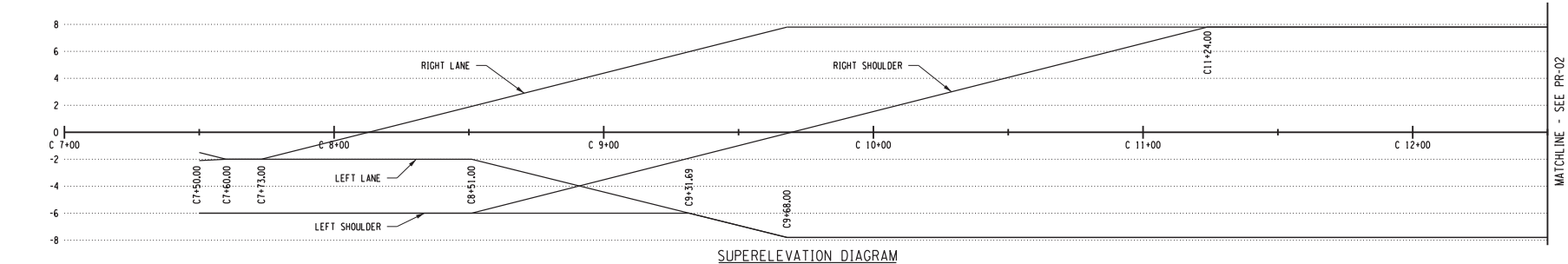
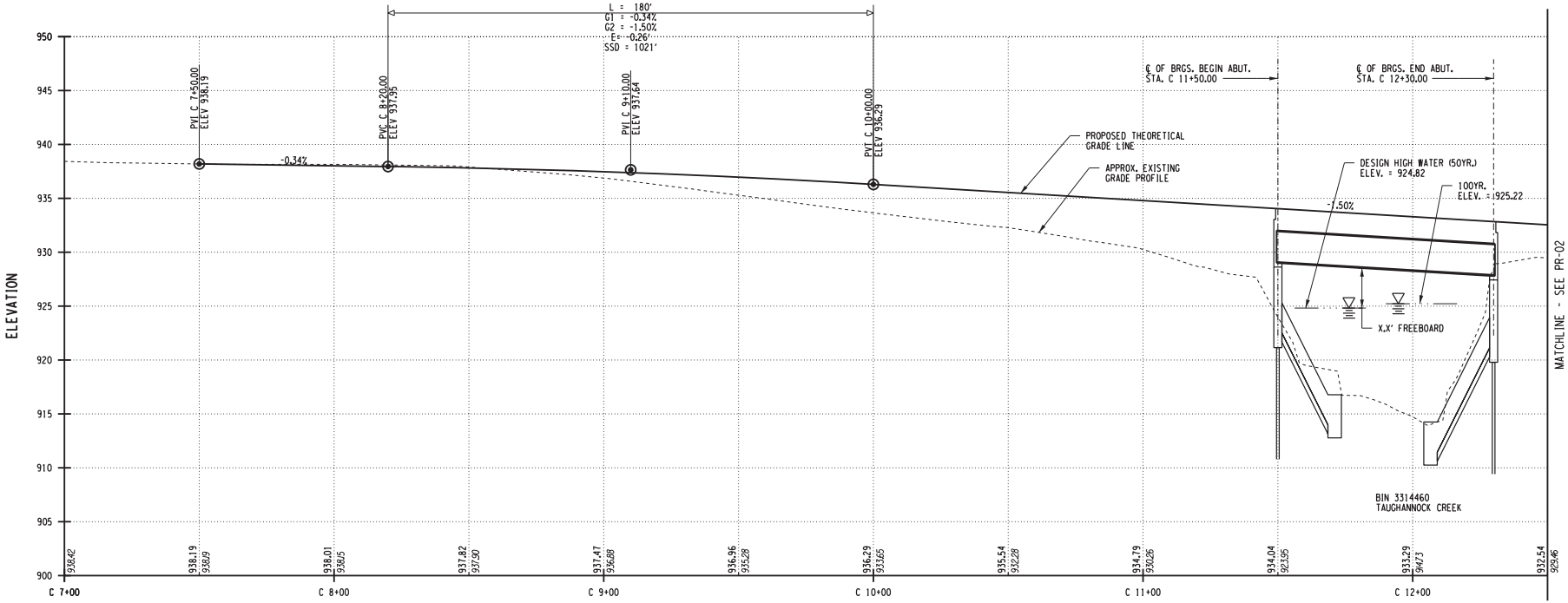


SUPERELEVATION DIAGRAM



PODUNK ROAD PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 10'

AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

BRIDGE REPLACEMENT
PODUNK ROAD (CR146)
OVER TAUGHANNOCK CREEK
TOWN OF ULYSSES
COUNTY: TOMPKINS REGION: 3

PIN

BRIDGES 3314460

CULVERTS

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

CONTRACT NUMBER

PROFILE

DRAWING NO. PR-01
SHEET NO. 4

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TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER | JOB MANAGER S. GAUTHIER | DESIGN W. KANIECKI | CHECK M. EDWARDS | DRAFTING V. GREGG | CHECK S. GAUTHIER | PROJECT MANAGER B. MILLER

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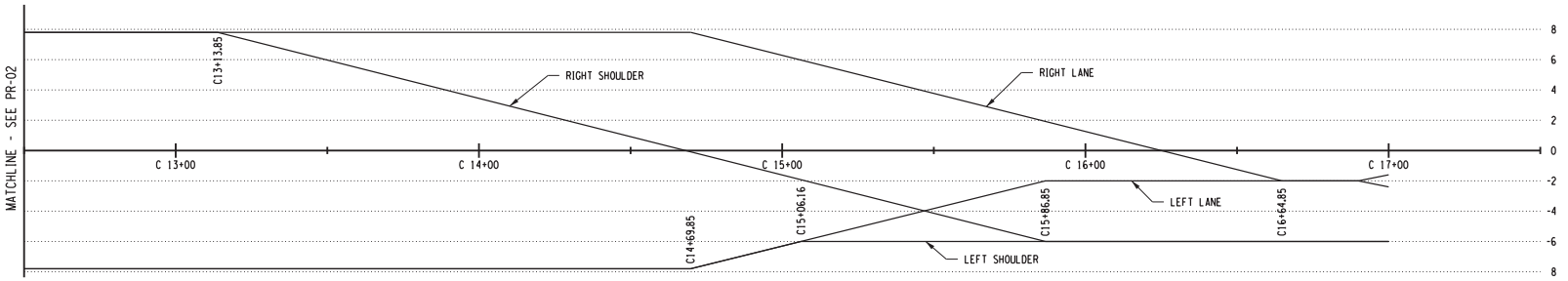
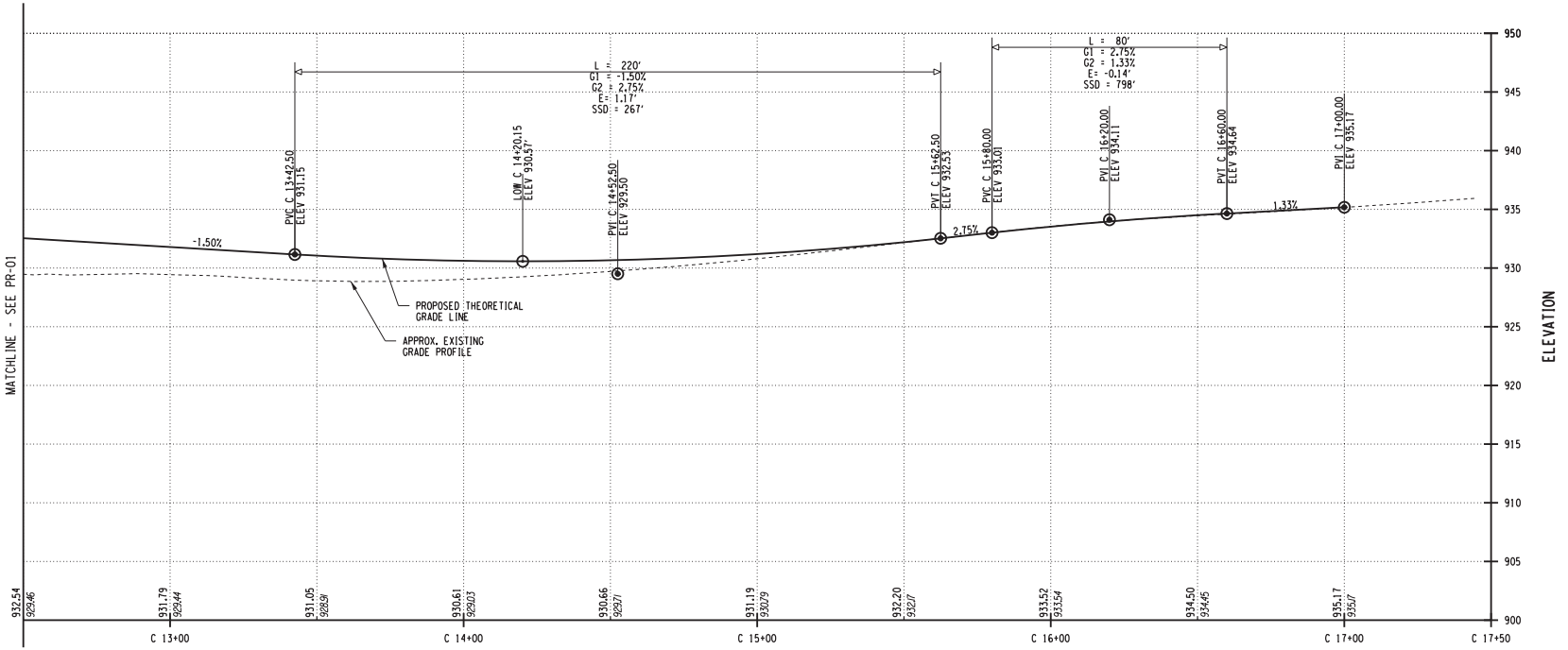


SUPERELEVATION DIAGRAM



STATION

PODUNK ROAD PROFILE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 10'

AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS
DESCRIPTION OF ALTERATIONS:

BRIDGE REPLACEMENT	PIN	BRIDGES	CULVERTS
PODUNK ROAD (CR146)		3314460	
OVER TAUGHANNOCK CREEK			
TOWN OF ULYSSES			
COUNTY: TOMPKINS REGION: 3			

ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED

PROFILE

CONTRACT NUMBER

DRAWING NO. PR-02
SHEET NO. 5

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TOMPKINS HIGHWAY DEPARTMENT

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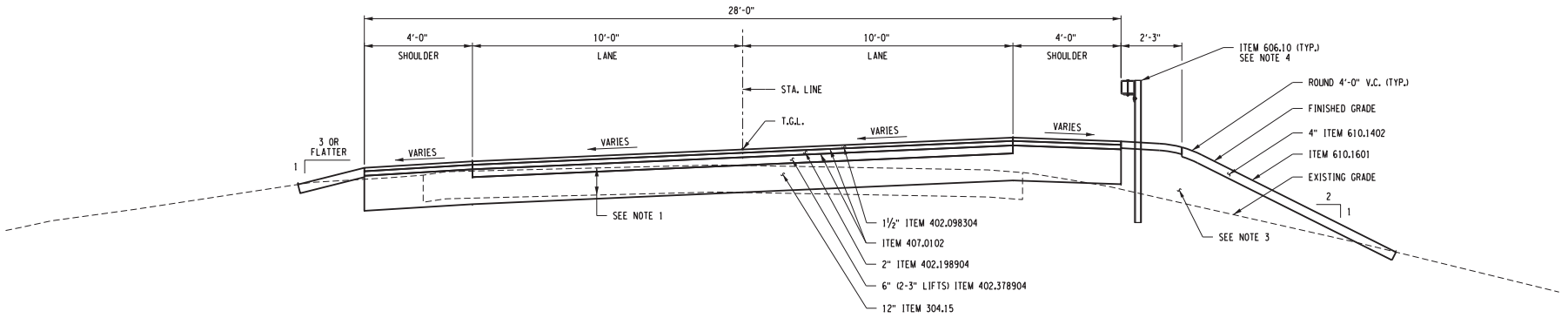
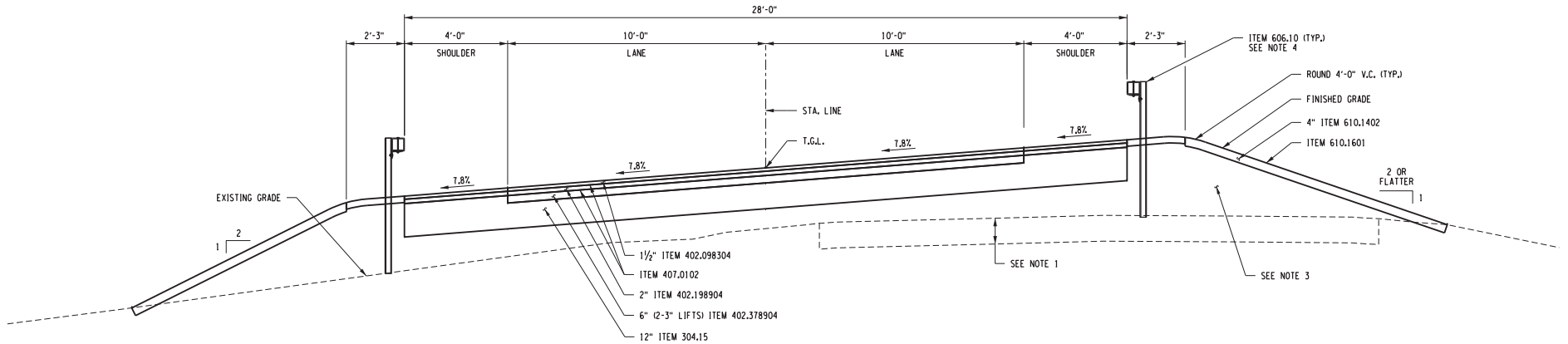


TYPICAL FULL DEPTH HIGHWAY SECTION

LOOKING UPSTATION
SCALE: ¼" = 1'-0"



TYPICAL FULL DEPTH HIGHWAY SECTION

LOOKING UPSTATION
SCALE: ¼" = 1'-0"

AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	BRIDGE REPLACEMENT PODUNK ROAD (CR146) OVER TAUGHANNOCK CREEK TOWN OF ULYSSES COUNTY: TOMPKINS REGION: 3	PIN	BRIDGES 3314460	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED HIGHWAY SECTIONS	CONTRACT NUMBER DRAWING NO. TS-01 SHEET NO. 6

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER | JOB MANAGER S. GAUTHIER | DESIGN W. KANIECKI | CHECK M. EDWARDS | DRAFTING V. GREGG | CHECK S. GAUTHIER | PROJECT MANAGER B. MILLER

FILE NAME = \\projects2\projects\NZY\Tompkins County\2223136 - Podunk Rd over Taughannock Creek\06_Drawings\Transpo\3314460_cpb_typ.dgn
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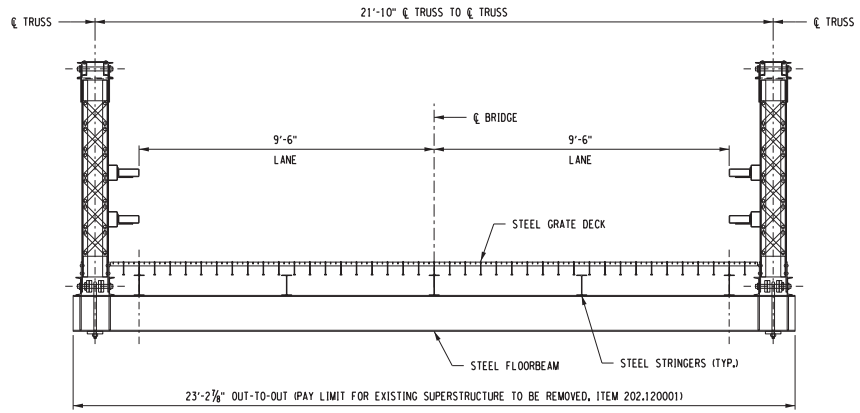
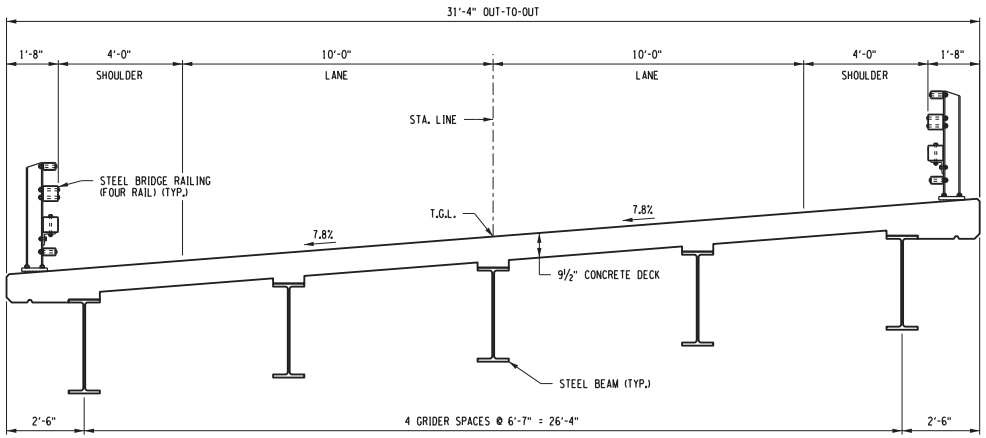


EXISTING BRIDGE SECTION
SCALE: ¼" = 1'-0"



BRIDGE SECTION
SCALE: ¼" = 1'-0"

AFFIX SEAL: ON:	ALTERED BY: ON:

AS-BUILT REVISIONS DESCRIPTION OF ALTERATIONS:	BRIDGE REPLACEMENT PODUNK ROAD (CR146) OVER TAUGHANNOCK CREEK TOWN OF ULYSSES COUNTY: TOMPKINS REGION: 3	PIN	BRIDGES 3314460	CULVERTS	ALL DIMENSIONS IN ft UNLESS OTHERWISE NOTED BRIDGE SECTIONS	CONTRACT NUMBER DRAWING NO. TS-02 SHEET NO. 7

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TOMPKINS HIGHWAY DEPARTMENT

DESIGN SUPERVISOR S. GAUTHIER | JOB MANAGER S. GAUTHIER | DESIGN W. KANIECKI | CHECK M. EDWARDS | DRAFTING V. GREGG | CHECK S. GAUTHIER | PROJECT MANAGER B. MILLER

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Appendix D:

Engineering Justification Report

ENGINEERING JUSTIFICATION REPORT
PIN 3756.97 – BIN 3314460
Podunk Road (CR 146) over Taughannock Creek
Town of Ulysses, Tompkins County

This Engineering Justification Report describes the comparison between rehabilitation or replacement of the Podunk Road (CR 146) over Taughannock Creek Bridge.

The comparison will focus on the structural, operational, and geometric improvements of the Podunk Road (CR 146) over Taughannock Creek crossing to best meet the stated project objectives to restore the bridge crossing to a condition rating to 5 or greater, for at least 75 years using cost effective techniques to minimize the life cycle cost of maintenance and repair.

EXISTING BRIDGE

The existing bridge was built in 1915. BIN 3314460 – Podunk Road (CR 146) over Taughannock Creek is a 56-foot single span metal pin-connected Pratt through-truss that carries two 10 ft travel lanes. The bridge consists of two trusses with the floor hanging between them. Each member intersection is connected by a large metal pin. The bottom chord members are built up using channel shapes bound together by eye bars. The top chord members are built up using channel shapes bound together by a cover plate. The vertical tension members are double angles connected by lacing bars. All compression members are eye bars, with 1 or 2 eye bars per member. The metal grate deck sits on top of steel stringers which sit on floor beams suspended by a single plate at each truss panel point. The bridge is located on a horizontal curve and there have been several instances of truss members being impacted by vehicles.

STRUCTURAL DEFICIENCIES

- The existing bridge is structurally deficient, and currently posted at 8 Tons.
- The open grid bridge deck has isolated areas of deteriorated steel protective coating and has areas of broken load bars that need repair and or replacement.
- To fully rehabilitate the existing structure, the stringers, floor beams, and open grid bridge deck will need to be removed and replaced. Trusses will need to be strengthened and require localized steel repairs.

GEOMETRIC DEFICIENCIES

- The existing bridge width does not meet lane and shoulder width standards.
- Despite making these repairs the existing bridge would still be geometrically deficient for both bridge width and horizontal alignment due to the curvature of the approach roadways.
- There is also a sharp roadway curvature on both existing approaches limiting sight distance.

COST

- The estimated cost to rehabilitate the bridge is $1,541,843 which is 60 % of the estimated preferred alternative replacement cost of $2,600,000.
- The rehabilitation option does not resolve the structural deficiencies since the structural deterioration would continue requiring future repairs.

REPLACEMENT BRIDGE

PROJECT ALTERNATIVES

The following alternatives were selected for initial consideration based on their merits for minimizing impacts on the historic property and meeting the project goals and objectives. They were each evaluated qualitatively to determine feasibility. Alternatives not dismissed from the qualitative analysis were evaluated quantitatively to approximately determine the scope of work, construction complexity, and future maintenance. Alternatives were also evaluated based on how they address existing safety and geometric deficiencies, including limited horizontal sight distances at the approaches and bridge roadway width.

ALTERNATIVE 1: REPLACEMENT WITH A STEEL MULTI-GIRDER SUPERSTRUCTURE

This alternative involves constructing a new roadway alignment slightly west of the existing bridge location and increasing the bridge length and width to improve the geometric design of the bridge and approach roadways.

This alternative consists of removing the existing truss superstructure along with removing the existing substructure. The existing truss superstructure will be marketed and if a suitable new owner is found moved to a new location. If the marketing effort fails, the structure will be demolished and of disposed of by the contractor.

The proposed bridge will be a steel multi-girder superstructure supported by integral abutments. The proposed structure will be 80 ft long with an out-to-out width of 31’-4” on the new roadway alignment shifted slightly west of the existing alignment. The 31’-4” out-to-out width consists of two 10’-0” travel lanes, two 4’-0” shoulders and two 1’-8” spaces for four-rail steel bridge railing with transition railing.

This alternative meets the project goals to provide a structurally safe, low-maintenance bridge over Taughannock Creek that supports passenger, commercial, and emergency vehicles, while minimizing environmental and property impacts. It also meets the project objectives to eliminate structural and geometric deficiencies, provide a structure with a

service life of 75 years or better (with routine maintenance) and minimize the costs of maintenance and repair over the life of the structure.

Refer to the chart on the last page of this report for a side-by-side alternatives comparison.

Refer to the Preliminary Drawings in Appendix C, for the location of the new roadway alignment and proposed bridge structure.

ALTERNATIVE 2: REPLACEMENT WITH A STEEL PONY TRUSS SUPERSTRUCTURE

This alternative involves constructing a new roadway alignment slightly west of the existing bridge location and increasing the bridge length and width to improve the geometric design of the bridge and approach roadways.

This alternative consists of removing the existing truss superstructure along with removing the existing substructure. The existing truss superstructure will be marketed and if a suitable new owner is found moved to a new location. If the marketing effort fails, the structure will be demolished and of disposed of by the contractor.

The proposed bridge would be a steel pony truss superstructure founded on conventional pile supported abutments. The proposed structure will be 80 ft long with an out-to-out deck width of 31’-4” on the new roadway alignment shifted slightly west of the existing alignment. The 31’-4” out-to-out width consists of two 10’-0” travel lanes, two 4’-0” shoulders and two 1’-8” spaces for a vertical face concrete barrier with transition railing. The expected CL to CL of truss distance will be 33’-2”.

This alternative meets the project goal to provide a structurally safe bridge over Taughannock Creek that supports passenger, commercial, and emergency vehicles, while minimizing environmental and property impacts. It also meets the project objectives to eliminate structural and geometric deficiencies, while providing a service life of 75 years or better (with routine maintenance). However, does not minimize the costs of maintenance and repair over the life of the structure. Truss structures, because of their special nature require higher levels of maintenance, inspection demands, and significantly greater construction costs compared to other alternatives.

Refer to the chart on the last page of this report for a side-by-side alternatives comparison.

ALTERNATIVE 3: REHABILITATION OF EXISTING BRIDGE

This alternative involves the repair or replacement of select structural members to

strengthen the bridge to safely carry all legal load vehicles. This alternative will not address the current geometric or hydraulic deficiencies of the bridge.

The existing bridge deck width does not meet lane and shoulder width standards. There is also a sharp roadway curvature on both existing approaches limiting sight distance.

The open grate bridge deck, stringers, and floorbeams are failing and require extensive repairs at the very least and/or replacement. Any action taken to repair or replace these elements will require the complete removal and replacement of the steel grate deck, which will add additional time, cost, and complexity to the rehabilitation option when compared to other alternatives.

This alternative does not meet the project goals to provide a structurally safe, low-maintenance bridge over Taughannock Creek, capable of supporting passenger, commercial, and emergency vehicles for at least 75 years using cost-effective methods to minimize life-cycle maintenance and repair costs. It also fails to address the project objectives of eliminating the structural and geometric deficiencies of BIN 3314460.

This alternative maintains geometrically deficiencies at the bridge and is not the most cost-effective method of reconstruction and is therefore unacceptable.

Refer to the chart on the last page of this report for a side-by-side alternatives comparison.

ALTERNATIVE 4: NULL ALTERNATIVE

This alternative involves no modifications or repairs to the superstructure, performing only routine maintenance and none of the physical deficiencies identified would be corrected. The current deteriorated state of the structure will remain and likely progress over time, further reducing the structural capacity and resulting in the eventual closure of the bridge.

A reasonable level of maintenance has not been able to prevent the gradual buildup of deterioration due to the difficulties inherent in the structure type. In particular, regions near horizontal cracks, rust-thru perforations and areas of heavy section loss. The areas of cracks and rust-thru perforations are located at specific spots on floorbeams and stringers as well as heavy section loss located near point of maximum bending on floorbeams and stringers. Refer to Appendix D for the red and yellow structural flag reports. These are critical concerns because it reduces the flexural capacity of the floorbeams and stringers.

The existing bridge deck width does not meet lane and shoulder width standards. The open grid bridge deck has isolated deteriorated locations and areas of deteriorated steel protective coating. There is also a sharp roadway curvature on both existing approaches.

This alternative does not address the project goals nor objectives. The existing bridge is load posted for 8 tons which will continue to decrease if no modifications or repairs will be performed to the structure. This alternative allows further deterioration, leaves the bridge structurally and geometrically deficient, and is therefore unacceptable.

The preferred alternative that meets the project goals and objectives is Alternative 1: Replacement with a Steel Multi-Girder Superstructure.

The criteria of adverse effect have been evaluated in accordance with part 800.5(a) of the National Historic Preservation Act and we find that this undertaking will have an adverse effect on properties eligible for or listed on the National Register of Historic Places.

Under the preferred alternative the existing truss superstructure will be marketed and if a suitable new owner is found moved to a new location. If the marketing effort fails, the structure will be demolished and disposed of by the contractor. A HAER (Historic American Engineering Record) report, meeting the requirements of the Federal Register, will be commissioned to document, in detail, the existing pin connected (circa 1915) Pratt truss. Thus, ensuring the legacy of the structure within the state archives. The Project Sponsor and the NYSDOT, in consultation with the SHPO and FHWA, will develop a Memorandum of Agreement (MOA) to resolve the Adverse Effect on the Podunk Road Bridge. The MOA will stipulate that an Historic American Engineering Report (HAER) Level II be prepared as part of the mitigation of the adverse effect."

Refer to the chart on the last page of this report for a side-by-side alternatives comparison.

SUMMARY

In summary, there are no feasible and cost-effective means to rehabilitate the existing bridge to eliminate the structural or geometric deficiencies. For this reason, it has been concluded that bridge replacement is the only feasible alternative.

ENGINEERING JUSTIFICATION REPORT
PIN 3756.97 – BIN 3314460
Podunk Road (CR 146) over Taughannock Creek
Town of Ulysses, Tompkins County

PIN: 3756.97 Podunk Road Bridge over Taughannock Creek Town of Ulysses, Tompkins County				
	ALTENATIVE 1	**ALTENATIVE 2**	**ALTENATIVE 3**	**NULL**
	REPLACEMENT with a Steel Multi - Girder Bridge	*REPLACEMENT* with a Steel Pony Truss	*REHABILITATION* of the existing 1915 Pratt Truss bridge	*NO WORK* no modification or repairs to the existing 1915 Pratt Truss bridge
GOALS				
Structurally Safe	YES	YES	YES	NO
Meets current geometric standards	YES	YES	NO	NO
Lowest Lifetime Maintenance Costs	YES	NO	NO	NO
OBJECTIVES				
Eliminate structural deficiencies	YES	YES	YES	NO
eliminate geometric deficiencies	YES	YES	NO	NO
provide a service life of 75 year or better (with routine maintenance)	YES	YES	NO	NO
minimize costs of construction, maintenance and repair over the life of the structure	YES	NO	NO	NO
CONSTRUCTION COSTS	**3.2 M**	**6.30 M**	**1.54 M**	**0 M**
PREVENTATIVE CYCLICAL MAINTENANCE	**MAINTENANCE FREQUENCY**			
- bridge washing	2 Yrs	1 Yr	1 Yr	1 Yr
- bridge deck sealing	6 Yrs	6 Yrs	N/A	N/A
-concrete sealing	6 Yrs	6 Yrs	N/A	N/A
- bridge painting	15 Yrs	12 Yrs	10 Yrs	10 Yrs
-bearing maintenance & lubrication	N/A	4 Yrs	N/A	N/A
-bridge deck overlay	25 Yrs	25 Yrs	N/A	N/A
CORRECTIVE MAINTENANCE				
- bridge deck replacement	40 Yrs	40 Yrs	N/A	N/A
-truss repairs to remedy bridge inspection flags	N/A	40 Yrs	10 Yrs	1 Yr
- bridge joint sealing \ replacement	N/A	20 Yrs	10 Yrs	N/A

Appendix E:

Photograph Log of Structure and Site

Photo 1: View of Podunk Road Bridge, from Podunk Road facing north.

Photo 2: View of Podunk Road Bridge, from Podunk Road facing south.

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

339 East Avenue, Suite 200
Rochester, NY 14604
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Fax (585) 546-1634

Photos 1-2
NYSDOT PROJECT SUBMITTAL PACKAGE
Section 106 of the National Historic Preservation Act
Replacement of Podunk Road over Taughannock Creek
PIN: 3756.97 Town of Ulysses
Tompkins County, New York

Date: December 2022

Scale: Photo not to scale

Drawn by: BB

Source: Digital photo taken by Lu Engineers, September 2022.

Photo 3: View of Podunk Road Bridge, from Podunk Road facing north.

Photo 4: View of Podunk Road Bridge, from Podunk Road facing south.

Lu Engineers
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Rochester, NY 14604
Tel. (585) 385-7417
Fax (585) 546-1634

Photos 3-4
NYSDOT PROJECT SUBMITTAL PACKAGE
Section 106 of the National Historic Preservation Act
Replacement of Podunk Road over Taughannock Creek
PIN: 3756.97 Town of Ulysses
Tompkins County, New York

Date: December 2022

Scale: Photo not to scale

Drawn by: BB

Source: Digital photo taken by Lu Engineers, September 2022.

Photo 5: View of Podunk Road, from Podunk Road Bridge facing north.

Photo 6: View of Podunk Road, from Podunk Road Bridge facing south.

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Photos 5-6
NYSDOT PROJECT SUBMITTAL PACKAGE
Section 106 of the National Historic Preservation Act
Replacement of Podunk Road over Taughannock Creek
PIN: 3756.97 Town of Ulysses
Tompkins County, New York

Date: December 2022

Scale: Photo not to scale

Drawn by: BB

Source: Digital photo taken by Lu Engineers, September 2022.

Photo 7: View of Podunk Road Bridge, from Taughannock Creek facing east.

Photo 8: View of Podunk Road Bridge, from Taughannock Creek facing west.

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Fax (585) 546-1634

Photos 7-8
NYSDOT PROJECT SUBMITTAL PACKAGE
Section 106 of the National Historic Preservation Act
Replacement of Podunk Road over Taughannock Creek
PIN: 3756.97 Town of Ulysses
Tompkins County, New York

Date: December 2022

Scale: Photo not to scale

Drawn by: BB

Source: Digital photo taken by Lu Engineers, September 2022.

Appendix F:

Bridge Marketing Package

BIN 3314460
Podunk Road over Taughannock Creek
Town of Ulysses, Tompkins County

Bridge Offer

The Tompkins County Highway Department is seeking parties interested in taking ownership of the **Podunk Road Bridge** in the Town of Ulysses. This bridge was originally constructed in 1915 and carries Podunk Road Bridge over Taughannock Creek.

The current owner, Tompkins County, in consultation with the Federal Highway Administration (FHWA) and the State Historic Preservation Office (SHPO) determined the bridge is eligible for listing in the National Register of Historic Places (NRHP). The investigation of historic properties within and nearby the project site began with a review of the County file and the collection of documentation of the Resource Eligibility Evaluation. It identified the Podunk Road Bridge as National Register eligible under Criterion A. This bridge is associated with historic event(s) or activities at the time of original construction.

BIN 3314460 is a 56-foot single span metal pin-connected Pratt through-truss that carries two 10 ft travel lanes. The bridge is made of two trusses with the floor hanging between them. Each member intersection is connected by a large metal pin. The bottom chord members are built up using channel shapes bound together by eye bars. The top chord members are built up using channel shapes bound together by a cover plate. The vertical tension members are double

angles connected by lacing bars. All the compression members are eye bars, either 1 or 2 individual eye bars per member. The metal grate deck sits on top of steel stringers which sit on floor beams suspended by a single plate at each truss panel point.

The existing bridge is currently load posted for 8 tons and has an active red and yellow flag. The conditions are as follows:

Red Flag Condition

The Floorbeam Panel 5, Stringer S2 and S3 webs have horizontal cracks and/or rust-thru perforations within the lower portion of their bearing areas over Floorbeam FB4 as follows:

Floorbeam Panel 5, Stringer S2 has a 1.1875” Long horizontal crack / rust-thru perforation located just above the bottom flange at its Begin edge over Floorbeam FB4. Web bearing area section loss is 37% and Full-Depth web section loss for shear is negligible.

Floorbeam Panel 5, Stringer S3 has a 1.75” Long horizontal crack located just above the bottom flange at its Begin edge over Floorbeam FB4. Web bearing area section loss is 59% and Full-Depth web section loss for shear is 5%.

The Floorbeam Panel 4 and Panel 5 Stringers are not positioned evenly over the Floorbeam FB4 top flange, and the typical Panel 5 stringer bearing length is ‘only’ 3.25” Long (of the 10.25” Wide floorbeam top flange).

Yellow Flag Condition

The Stringer Top and Bottom Flanges exhibit heavy active corrosion with moderate to heavy section loss at several locations throughout the span. Representative caliper measurements taken near mid-length indicate heavy top and/or bottom flange section loss as follows:

Floorbeam Panel 2, Stringer S2 has 21% Top Flange section loss and 33% Bottom Flange section loss near Mid-Length.

Floorbeam Panel 2, Stringer S3 has 41% Top Flange section loss and 23% Bottom Flange section loss near Mid-Length.

Floorbeam Panel 4, Stringer S3 has 44% Top Flange section loss and 35% Bottom Flange section loss near Mid-Length.

Floorbeam Panel 5, Stringer S2 has 41% Top Flange section loss and 9% Bottom Flange section loss near Mid-Length.

Floorbeam Panel 5, Stringer S3 has 30% Top Flange section loss and 9% Bottom Flange section loss near Mid-Length.

Floorbeam Panel 5, Stringer S4 has 46% Top Flange section loss and 21% Bottom Flange section loss near Mid-Length.

The most vulnerable locations on the bridge, are at the horizontal cracks and rust-thru perforations within the lower portion of the web bearing area on floor beams and stringers and the heavy section loss to stringer top and bottom flanges near the point of maximum bending on

floor beams and stringers. A single truss cannot withstand the loss of a member, and each truss is unable to share load with the other. In a critical event, the entire bridge is likely to be lost.

The cost of dismantling and storing the existing bridge is estimated at approximately $80,500 (including a 15% contingency). This estimated cost excludes the removal of the lead-based paint from the steel structure in accordance with the US Environmental Protection Agency's requirements. In lieu of removing the lead-based paint a quid pro quo agreement to accept liability for the lead-based paint may be acceptable. The bridge foundations would be removed separately by the new bridge contractor.

Interested parties are required to meet certain conditions, which include:

- Provide a comprehensive written plan for the preservation and future use of the bridge, including any desired modifications, and the estimated cost of rehabilitation. It is preferred that the new owner be able to use the entire superstructure of the truss bridge.
- Maintain the structure and the features that give it historic significance according to prescribed standards.
- Assume all future legal and financial responsibility for the structure, including "hold harmless" agreements to the New York State Department of Transportation (NYSDOT) and to the Federal Highway Administration (FHWA). Post a performance bond.
- Provide proof of ability to assume the financial and administrative responsibilities of bridge ownership throughout its existence.

Agencies, jurisdictions, organizations, or private owners interested in obtaining ownership of the bridge for aesthetic, historic, recreation or other uses should contact Kelly Chapman, Tompkins County Highway, at (607) 274-0300 or email at kchapman@tompkins-co.org . This contact must be received no later than close of business on March 20th, 2026. Funding to assist with relocation or rehabilitation may be provided up to the estimated cost of bridge demolition. If an interested party secures its own federal funding, it is noted that any bridge preserved with federal funding shall thereafter not be eligible for any other highway funds pursuant to Public Law 100-17, Section 123(f) (Historic Bridges).