

S-13 Tri Co (Cheese Country) Bridge #40

State of Wisconsin  
 Department of Natural Resources  
[dnr.wi.gov](http://dnr.wi.gov)

**Motorized Recreation Grant Application**

For: (choose all that apply)

Form 8700-159 (R 02/2024)

Page 1 of 5

**Due Date: April 15**

- ATV/UTV Trail Aid
- Snowmobile Trail Aid

**Notice:** Completion of this form is required under Wisconsin Statutes 23.09(26) and 23.33. Failure to complete this form will result in denial of financial assistance. Personally identifiable information found on this form is not intended to be used for any other purpose. The Department of Natural Resources (DNR) may provide this information to requesters as required by Wisconsin's Public Records law {ss. 19.31 – 19.39, Wis. Stats.}.

**Instructions:** Applications may combine more than one source of funds. They may be submitted for consideration of traditional ATV, UTV, Snowmobile and Motorized Stewardship funding. Submit one copy of all forms and attachments. See Page 2 for necessary attachments. Send applications to your [Community Services Specialist](#).

DNR Use Only	
Category	Number

**Section 1: Applicant Information**

Applicant / Organization Name Tri-County Trail Commission			Check Recipient: Individual other than authorized individual to act on behalf of the applicant. <input checked="" type="checkbox"/> Select if the same as applicant.		
Individual Authorized to Act on Behalf of Applicant per Resolution Max Blackburn			Check Recipient Name (Name to Appear on Check) Max Blackburn		
Title Tri-County Trail Coordinator			Title Tri-County Trail Coordinator		
Address 700 Main Street			Address 700 Main Street		
City Darlington	State WI	ZIP Code 53530	City Darlington	State WI	ZIP Code 53530
Telephone Number (608) 776-4893		Email Address trails@lafayettecountywi.org			

**Section 2: Project Information Required for all Projects**

Project Title Cheese Country Trail Bridge #40 Replacement					Current Funded Miles	New Miles (if applicable)
County Green	Township 01 N	Range 6	Section 5	¼ ¼ SE	¼ SW	GPS Coordinates: Lat. 42.580256 Long. -89.809841

**Project Description Summary**

Proposed project is the complete replacement of Bridge #40 on the Cheese Country Trail over the Pecatonica River in Green County. Project scope is to include removing deteriorated components and replacement with a new structure.

During a routine bridge inspection, major deficiencies were found in the bridge structure requiring closing the structure to any use and continues to be closed.

Currently here is the breakdown of the request from all grant programs:

RTP = \$100,000.00 (8%)  
 ATV/UTV = \$753,316.00 (46%)  
 Snowmobile = \$753,316.00 (46%)

I certify that all maintenance land use agreements are on file.

**Estimated Cost**


Maintenance	Acquisition	Insurance	Development	Bridge Rehab.	Trail Rehab.	Total Estimated Cost
				\$1,506,632.00		\$1,506,632.00

Leave Blank – DNR Use Only

**Applicant Certification**

Printed Name of Authorized Official Max Blackburn	Official's Title Tri-County Trail Coordinator
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As the applicant's authorized official, I certify that, to the best of my knowledge, the information in this application is true and correct.

  
 Signature of Authorized Official

2/26/2026  
 Date Prepared

**Checklist for Maintenance and Projects**

Snowmobile	ATV/UTV	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Project is on public land and I will be applying for RTP funds for this project. \$ 100,000
<input type="checkbox"/>	<input type="checkbox"/>	Land Acquisition – consult your Regional Grant Specialist for required procedures

**Maintenance**

<input type="checkbox"/>	<input type="checkbox"/>	Current trail map identifying funded/unfunded miles.
<input type="checkbox"/>	<input type="checkbox"/>	Troutes – identify gas tax or no gas tax

**Bridge Rehab/Replace/New, Re-Route w/bridge – Must complete Appendix A**

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Quality photos showing need for rehabilitation (no snow photos)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	County wide trail map showing bridge location on the funded trail
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Aerial, wetland, topo, and plat maps showing bridge location with trails overlaid
<input type="checkbox"/>	<input type="checkbox"/>	Detailed construction plans (show length, width, rail height and approaches)
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Reroute - trail map showing old trail and proposed new trail with bridge location
<input checked="" type="checkbox"/>		
<input type="checkbox"/>		
	<input type="checkbox"/>	Identify season - Summer, Winter, Year-Round (Winter include rules)

**Trail Rehab/Qualified Troute – Must complete Appendix B**

<input type="checkbox"/>	<input type="checkbox"/>	Quality photos showing need for rehabilitation
<input type="checkbox"/>	<input type="checkbox"/>	County wide trail map showing the segment proposed for rehabilitation on the funded trail
<input type="checkbox"/>	<input type="checkbox"/>	Aerial, wetland, topo, and plat maps with the trails overlaid
<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	Depth and location of gravel to be used
	<input type="checkbox"/>	Identify season - Summer, Winter, Year-Round (Winter include rules)

**New Miles – Must complete Appendix B if development funds are requested**

<input type="checkbox"/>	<input type="checkbox"/>	Current county trail map identifying all requested segments.
<input type="checkbox"/>	<input type="checkbox"/>	Aerial and topo site maps for each segment requested. Include Town-Range-Section.
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	Construction plans for bridges or other structures. Include Appendix A
<input type="checkbox"/>		
	<input type="checkbox"/>	Troutes – identify gas tax or no gas tax
	<input type="checkbox"/>	Identify season - Summer, Winter, Year-Round (Winter include rules)

**Intensive Use Area**

	<input type="checkbox"/>	County, plat, wetland, topo maps showing project boundaries, trails, and elements
	<input type="checkbox"/>	Site plans showing any existing facilities along with proposed new construction including trails, riding courses, bridges, culverts, shelters, parking lots and toilets
	<input type="checkbox"/>	Preliminary construction plans for new trails, major grading, buildings, bridges, etc.
	<input type="checkbox"/>	

**New Support**

<input type="checkbox"/>	<input type="checkbox"/>	Campgrounds, shelter, etc. Please provide detailed information.
<input type="checkbox"/>	<input type="checkbox"/>	



**Appendix A (continued)**

**Summarize Costs in Appropriate Categories:**

**Bridge Structure**

		Quote 1	Quote 2
		<input checked="" type="radio"/> Steel <input type="radio"/> Wooden	<input type="radio"/> Steel <input type="radio"/> Wooden
Bridge Dimensions:		12' X 451.5'	_____
Bridge Manufacturer:	TBD	_____	_____
Design Weight Load		25,000 lbs.	_____ lbs.
Cost of Structure:	1. Engineering	\$ 204,653	\$ _____
	2. Structure	\$ 1,203,840	\$ _____
	<b>Subtotal</b>	<b>\$ 1,408,493</b>	<b>\$ _____</b>

		Quote 1	Quote 2
		<input checked="" type="radio"/> Contractor or <input type="radio"/> Sponsor Estimate	<input type="radio"/> Contractor or <input type="radio"/> Sponsor Estimate
<b>Installation Costs:</b>			
1. Engineering	<i>(includes construction labor too see attached cost estimate)</i>	\$ 172,139	\$ _____
2. Site Preparation		\$ _____	\$ _____
3. Abutments		\$ _____	\$ _____
4. Pilings/Piers		\$ _____	\$ _____
5. Approaches		\$ _____	\$ _____
6. Riprap		\$ _____	\$ _____
7. Labor		\$ _____	\$ _____
8. Equipment Rental		\$ _____	\$ _____
9. Culverts		\$ _____	\$ _____
10. H & H Study		\$ _____	\$ _____
11. Wetland Delineation		\$ _____	\$ _____
12. Other <u>Soil Borings</u>		\$ 26,000	\$ _____
	<b>Subtotal</b>	<b>\$ 198,139</b>	<b>\$ _____</b>
	<b>Total Cost</b>	<b>\$ 1,606,632</b>	<b>\$ _____</b>

**For the application grant, you must take the lowest of the two quotes.**

**Entire Deck and Railing Projects**       Contractor    Sponsor    Club

Bridge Dimensions:	_____
Design Weight Load	_____ lbs.
1. Materials	\$ _____
2. Labor	\$ _____
<b>Total</b>	<b>\$ _____</b>





Bridge #40

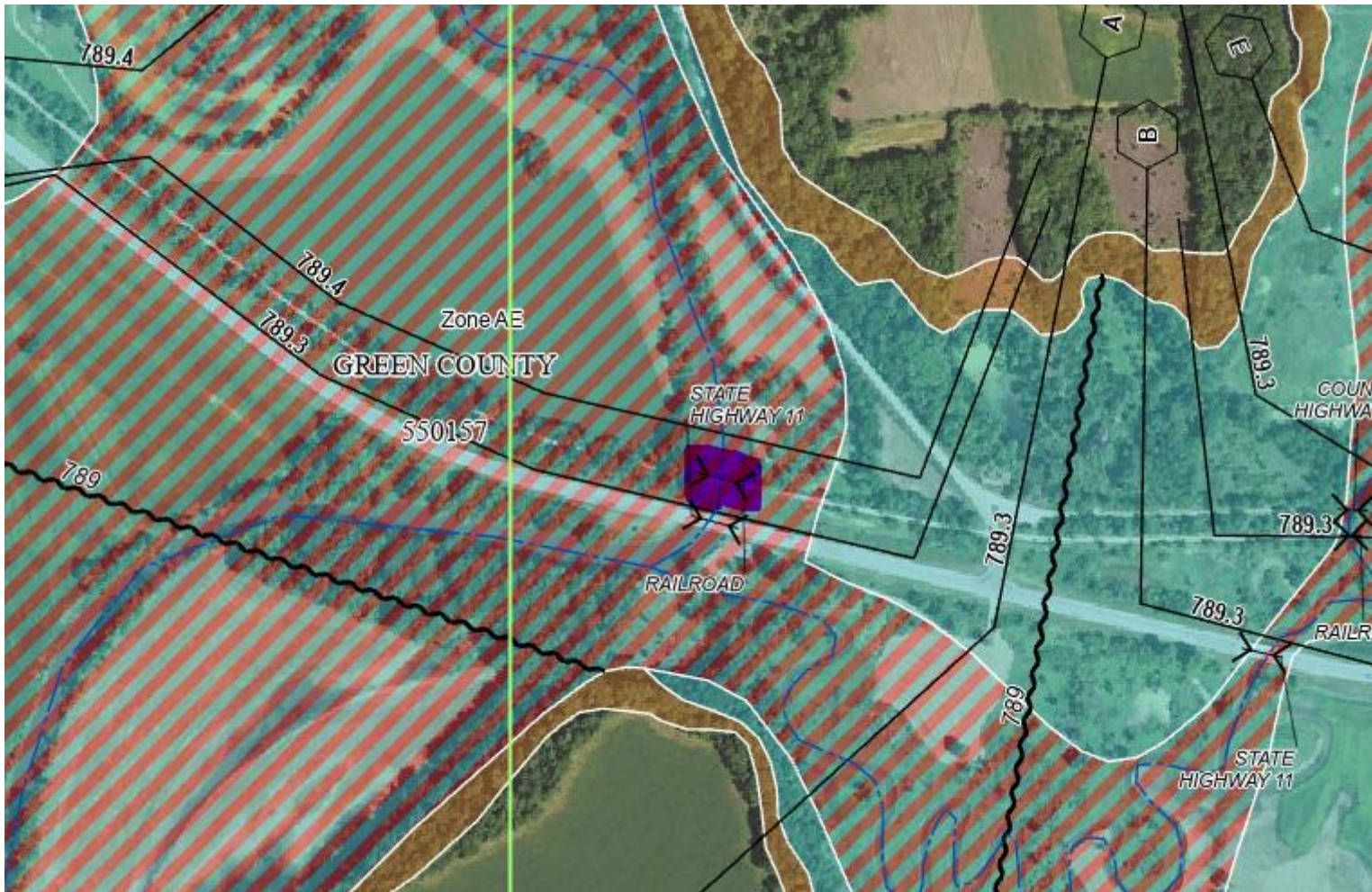
**Guidelines for Applicant**

Complete this form for each bridge structure you are submitting a grant application for. Provide any additional documents not requested on application checklist to substantiate your points, including actual deeded easements.

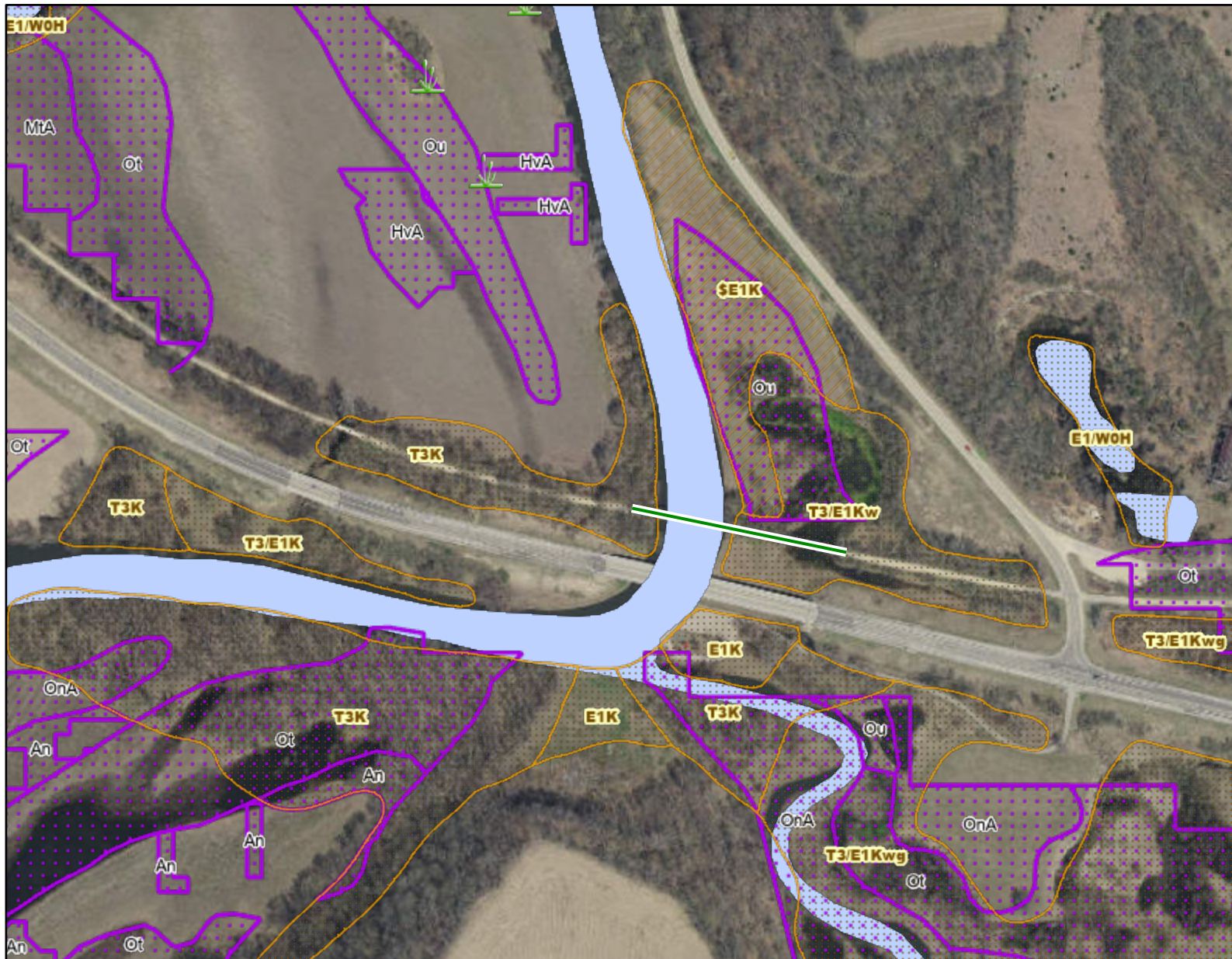
This ranking tool is used for both **Snowmobile** and **ATV/UTV Trail Aids** programs, though each program may score things differently. If you are seeking funding from **BOTH** programs for a dual use bridge, please score ALL questions

Category	Possible Points	Snow Points	ATV/UTV Points
<b>1 Condition of the Structure (max of 10 points)</b>			
Has a certified bridge inspection report that supports the project & demonstrates need. Copy of report needed. <b>Snowmobile Funded Projects</b>	10	10	
Calculation: 10 minus NBI Rating Score (0-9) <b>ATV Funded Projects</b> <i>Use overall NBI # if provided, or an average of the components. Redecking projects should just use the deck NBI #.</i>	10		9
<b>2 Permits (maximum points 4)</b>			
Consultation with DNR Water Mgmt Specialist has occurred & permit is likely, if needed	1	-	-
Permit in hand / Bridge already permitted	3	-	-
<b>3 Funding (maximum points 2) Has an application been submitted for other funding</b>			
50% or greater from other funding source(s)? (includes 50/50 Snow/ATV projects)	2	2	2
11% - 49% from other funding source(s)?	1	-	-
<b>4 Length of Written Easements or Land Use Agreement (max points 5)(ch. 23.09(26)(am)1 WI Stats)</b>			
On public land (County, State, Federal)	5	5	5
10 or more year deeded easement on private land or other public land, for <u>all portions of</u> that trail to the nearest road on each side of the bridge	5	-	-
3-9 year deeded easement on private land or other public land, for <u>all portions of that</u> trail to the nearest road on each side of the bridge	4	-	-
10 or more year deeded easement on private land or other public land, for <u>just the bridge</u> site	3	-	-
3-9 deeded easement on private land or other public land, for just the bridge site	2	-	-
10 or more year land use agreement (LUA, not deeded) on private land or other public land	1	-	-
3-9 year land use agreement (LUA, not deeded) on private land or other public land	0	-	-
<b>5 Miles Impacted – How many miles will need to rerouted if the structure is not replaced? Measured from nearest intersection on both sides of the bridge. (max 4 points)</b>			
Less than 20 miles <b>Snowmobile Funded Projects</b>	1	1	
20 miles or more <b>Snowmobile Funded Projects</b>	3	-	
No other snowmobile trails connect. <b>Snowmobile Funded</b> Explain:	4	-	
For ATV/UTV projects, describe the relocation (on routes? Trail?) Include sketch/map		✓	
<b>6 If ATV/UTV, Seasons of Use (max 3 points)</b>			
Year-Round or Summer Only <b>ATV/UTV Trail</b>	3		3
Winter Only <b>ATV/UTV Trail</b>	1		-
<b>DEDUCTIONS</b>			
<b>7 County Active Project Deduction (maximum deduction 1 point) A snowmobile active project is one that has exceeded it's initial grant period.</b>			
Two or more active projects - deduct 1 point	-1	-1	
<b>GRAND TOTAL</b>		<b>17</b>	<b>19</b>





Bridge is located in the purple highlighted area. This area is within FEMA regulated floodplain.

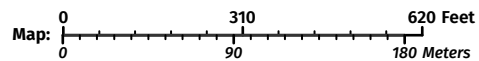


**Legend:** (some map layers may not be displayed)

- Wetland Class Points
  - Wetland too small to delineate
- Wetland Class Areas
  - Y
- Filled Areas
  - Wetland Indicators
- Rivers and Streams
  - Rivers and Streams
  - Intermittent Streams
- Open Water
  - Open Water
  - 24K Lakes and Open Water
- Municipalities
  - Civil Town
  - County Boundaries
  - WI State Boundary
  - Latest Leaf Off Index

**Notes:**

Bridge is located with Green Line



Service Layer Credits:  
Wetland Indicators & Soils: Surface Water Data Viewer Team, DNR Basic Feature VTL (WTM): Wisconsin Department of Natural Resources, GIS Section, Latest Leaf Off; Surface Water: WiDNR, USGS, and other data, Wetland Inventory NWI (Dynamic): Calvin Lawrence, Dennis Weise, Nina Rihl

Map projection: NAD 1983 HARN Wisconsin TM

This map is a product generated by a DNR web mapping application.

This map is for informational purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. The user is solely responsible for verifying the accuracy of information before using for any purpose. By using this product for any purpose user agrees to be bound by all disclaimers found here: <https://dnr.wisconsin.gov/legal>

Date Printed: 2/26/2026 2:07 PM

Bridge ID / Structure No.  <b>Bridge #40</b>	<b>Inspection Date:</b>	11.20.2025
	<b>Inspection TL:</b>	Nate Miller, PE
	<b>NBI Project No:</b>	2503501

Inspection Report for  
**Bridge #40**  
Cheese Country Trail over Pecatonica River



**Executive Summary**

**Recommended Inspection Frequency:**

- Not Applicable – **Recommend Immediate Closure.**

**Estimated Remaining Longevity:**

- The efforts required to return the bridge to service may not be economically feasible given the extent of the observed damage and complexities of the required repairs. Additional investigations would be required to fully develop a comprehensive rehabilitation plan. Preliminary recommended rehabilitation items are included later in this report.

**Summary of Channel Conditions:**

- Flood debris on Pier W1. 10ft vertical cut embankments throughout opening.

**Summary of Structural Conditions:**

- Multiple piles, pile caps, and blocking components are severely decayed and crushed in Pier W4.
- Advanced decay with initial signs of crushing timber in Pier W3.
- Rollers bearing assemblies are displaced in multiple bearings.

**Maintenance/Repair Recommendations:** *Refer to subsequent element descriptions for detailed component specific maintenance recommendations, if applicable.*

- **Owner notified of Critical Finding: Bridge should be immediately closed to all traffic.**

*Nate Miller*

Nathan W. Miller  
Bridge Inspection Team Leader, Inspector Number: 9601

11.20.2025

Date

<b>Bridge #40</b>	<b>Bridge ID / Structure No.</b>	<b>Inspection Date:</b> 11.20.2025
		<b>Inspection TL:</b> Nate Miller, PE
		<b>NBI Project No:</b> 2503501
Facility Owner/Managing Agency: Tri-County Trails Commission		Representative: Max Blackburn
Email: trails@lafayettecountywi.org		Phone: 608-776-4893

**Summary of Inspection Intent, Procedures, and Limitations**

- NBI Engineering Services personnel visited the above referenced structure to observe the existing conditions and collect information on behalf of The Tri-County Trail Commission. The purpose of this inspection was to determine the physical and functional condition of the bridge.
- Observations have been limited to readily available surface conditions. No destructive or invasive testing procedures, load rating, or detailed measurements have been performed as part of this inspection. NBI Engineering Services reserves the right to revise our opinions if additional evidence becomes available.
- Timber conditions were evaluated by visual inspection and acoustic sounding.
- Due to access limitations, assessment of components above 6 ft above grade was limited primarily to visual observation. Truss and pier components inspected from ground level and from deck via pole cam.
- No subsurface or underwater inspection efforts have been completed.
- The facility was open to traffic during the inspection.
- No plans or prior inspection information for the structure have been provided.

Time Log    Onsite: 8.5 Hours - Inspection started 11/19/2025 – completed 11/20/2025.

**Inventory Data**

Feature On:	Cheese Country Trail	Feature Under:	Pecatonica River
Lat./ Long.:	42.58023, -89.8098		
Orientation:	Traffic Direction: EB/WB	Channel Flow:	Upstream: North - Downstream: South

**Structure Type**

No. Spans:	5	Wearing Surface:	Concrete Deck
Deck	Cast-In-Place Concrete over Timber Cross-Ties		
Superstructure	4 Spans -Riveted Steel Truss. 1 Span-4-Ply Timber Beam.	No. Truss Lines:	2
		No. Beam Lines:	2
Substructure	Abutments: West: Masonry - East: Timber Pile with Timber Backwall Plank		
	Pier(s): W1: Masonry w/ Conc. Overbuild – W2: Masonry w/ Conc. Bearing Seat – W3/W4: Timber Pile Bent/Cribbing		

**Geometric - Dimensions are approximate.**

Width (O-O):	17.3' Deck O-O: 12.0'	Deck Length (O-O):	451.5'
Width (C-C):	11.6'	Span Length(s):	103'/103.5'/104.5'/118.0'/13.0'

**Assessments**

Quantity in CS

Assessment	Description	UOM	Total	1	2	3	4	Comments
9001	Drainage -Ends of Structure	EA	4			2		Well Vegetated. West Approach Undermined.
9004	Drainage - Structure	EA	0					No Bridge Deck Drains.
9030	Signs – Object Markers	EA	4		4			Present at All 4 Corners.
9035	Signs – Other	EA	2		1		1	“BRIDGE XING”. West Missing.
9035	Signs - Other	EA	2		1		1	“15 MPH ON BRIDGE”. West Missing.
9041	Slope Protection -Bare	EA	2		2			East Backwall Plank Undermined. West Embankment 20' From W. Abutment
9324	Approach Roadway -Asphalt	EA	2		2			East Patched w/ Gravel.

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**SNBI Condition Ratings & Commentary**

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**Deck (C.01) | 4 | Poor Condition – Deteriorating**

1. Concrete slab (wearing surface) over timber crossties(deck).
2. Moderate wear of concrete throughout wearing surface, most pronounced along wheel lines. Multiple unsealed moderate/wide width transverse cracks throughout concrete slab.
3. Timber crossties decayed and split at ends. Signs of decay throughout all timber components. Timber preservative treatment is no longer effective.

**Maintenance/Repair Recommendations**

No feasible rehabilitation options to extend longevity of component. Complete replacement of deck system should be considered as part of a comprehensive rehabilitation plan.

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**Railings (C.05) | 5 | Fair Condition – Stable**

1. (3) rows of W-beam bridge rail supported by angled timber posts.
2. Initial signs of incipient decay of timber components. Timber preservative treatment appears marginally effective.
3. Isolated areas of minor damage to w-beam curb rails.
4. Center post in south railing cracked near base anchorage.

**Maintenance/Repair Recommendations**

No feasible rehabilitation options to extend longevity of component. Complete replacement of railing system should be considered as part of a comprehensive rehabilitation plan.

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**Transition Railings (C.06) | N/A | Not Applicable**

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**Joints (C.08) | N/A | Not Applicable**

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**Superstructure (C.02) | 4 | Poor Condition - Deteriorating**

1. Spans W1-W4: Steel Pin-Connected Through Truss.
2. Surface corrosion throughout length of truss spans with isolated areas of section loss (pitting) and pack rust.
3. Pack rust with isolated areas of deformation of built-up members.
4. Widespread areas of minor damage to various truss members and floor beams.
5. Coating system has failed and offers no effective protection to steel elements.

**Superstructure (C.02) | 3 | Serious Condition - Deteriorating**

1. Span W5: (2) lines of timber beams each comprised of (4) through-bolt connected laminations.
2. Beams are decayed 50%-75% throughout with widespread prominent checking and generally appear hollow when sounded. Isolated areas of more advanced decay and signs of horizontal shear cracking.
3. No readily evident signs of crushing.
4. Beams are highly susceptible to overload damage.

**Maintenance/Repair Recommendations**

Evaluate economic feasibility of comprehensive superstructure rehabilitation and replacement. Efforts required to return bridge to service to include at least the following (additional investigations would be required to develop a complete rehabilitation plan):

- a. Removal of trees and vegetation growing through trusses-continued growth of tree around lower chord of south truss in span W2 will likely result in permanent damage to truss.
  - b. Complete additional NSTM/NDT inspections of truss spans.
  - c. Complete replacement of timber beams in span W5.
-

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**Bearings (C.07) | 2 | Critical Condition - Deteriorating**

1. Spans W1-W4: (16) Roller baskets at truss bearings.
2. Corrosion of bearing assemblies restricts movement.
3. Decayed timber cribbing resulting in loss of bearing area.
4. Multiple roller unseated from bearing assemblies.

**Maintenance/Repair Recommendations**

Remove debris from all bearings.  
Repair of damaged bearing assemblies and corrosion mitigation should be considered as part of a comprehensive rehabilitation plan.

**Substructure (C.03) | 1 | Imminent Failure – Deteriorating**

**West Abutment:**

1. Stone block masonry abutment. **Unknown bearing conditions.**
2. General masonry deterioration throughout with widespread areas of missing mortar in joints.

**Pier W1:**

1. Stone Block Masonry/Cast-In-Place Concrete Pier Wall. Limited Inspection Due to Access Limitations. **Unknown bearing conditions.**
2. General deterioration throughout with widespread areas of map cracking with efflorescence and missing mortar in joints.

**Pier W2:**

1. Stone Block Masonry Pier Wall w/ 5"-6" Cast-In-Place Concrete Leveling Course Under Span W3 Truss Bearings.
2. General deterioration throughout masonry with areas of horizontal cracking and surface spalling of blocks, and missing mortar throughout joints.
3. General deterioration throughout leveling course with widespread areas of exposed aggregate, concrete is largely free from moderate/wide width cracking

**Pier W3:**

1. Driven timber piles with timber cribbing/pile caps.
2. Decayed timber components throughout with initial signs of crushing.
3. Caps are decayed 75%-90% throughout with widespread cracking and splitting. Components generally appear hollow when sounded with soft/easily dented outer shells. Decay and splitting is more pronounced at the ends of cribbing.
4. Piles: Bearing piles sound hollow with an estimated 75%-90% loss of section.

**Pier W4:**

1. Driven timber piles with timber cribbing/pile caps.
2. **Decayed timber components throughout with readily evident signs of crushing. Multiple piles and caps are completely split/crushed. Pier is unstable.**

**East Abutment:**

1. Driven timber piles, timber pile caps, and timber backwall plank.
2. Decayed timber components throughout with no readily evident signs of crushing.
3. Caps are decayed 75%-90% throughout with widespread minor checking and generally appear hollow when sounded. More advanced decay throughout north half of cap with full depth vertical splitting of cap.
4. Piles: Bearing piles sound hollow with an estimated 75%-90% loss of section. Multiple piles split vertically.

**Maintenance/Repair Recommendations**

Evaluate hydraulic/economic feasibility of comprehensive substructure rehabilitation and replacement. Efforts required to return bridge to service to include at least the following (additional investigations would be required to develop a complete rehabilitation plan):

- a. Comprehensive concrete/masonry repair of the west abutment, and piers W1 and W2.
- b. Complete replacement of piers W3, W4, and the east abutment.

<b>Bridge ID / Structure No.</b>  <p style="text-align: center;"><b>Bridge #40</b></p>	<b>Inspection Date:</b>	11.20.2025
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	<b>NBI Project No:</b>	2503501

- c. Complete additional inspections of pier W1 after removal of built-up flood debris to assess the physical and scour conditions of, and adjacent to, the pier not readily accessible during this inspection.
- d. Complete an unknown foundation/scour analysis.

**Unknown Foundations**

Bridge has been identified as having unknown foundations, which is a classification for bridge substructures where the foundation type and bearing details are unknown and therefore cannot be appraised for scour vulnerability. Per the Wisconsin Structure Inspection Manual 5.24.1:

*These bridges with unknown foundations pose a potential problem from a scour safety perspective. Since the undermining of bridge foundations poses a risk to the public safety, it is crucial to evaluate all bridges over or near water and determine their susceptibility to scour. In addition to scour concerns, unknown foundations are also a concern when a bridge is considered for improvements.*

It is strongly recommended that an unknown foundation/scour analysis be completed. The results of this analysis will likely include the development and implementation of a plan of action (POA) for monitoring to reduce the risk to users from scour induced bridge failures surrounding flood events.

**Channel (C.09) | 5 | Fair Condition - Deteriorating**

- 1. Embankment Erosion: 10ft vertical cut embankments throughout opening. Top of 1:1 embankment within 20ft of west abutment. Erosion at the ear abutment has undermined the backwall/wing wall plank.
- 2. Drift: Large debris pile caught on the upstream (north) end of Pier W1. The northern extents of the sediment bar (or "island") surrounding Pier W1 could not readily be established due to debris, and the upstream end of the pier may be directly exposed to the channel flow.
- 3. Channel Change: Waterway flows through spans W1 and W2 and around Pier W1.
- 4. Adequacy of Opening: No readily visible signs of overtopping.

**Maintenance/Repair Recommendations**

*See Channel Protection/Scour.*

**Channel Protection (C.10) | 5 | Fair Condition - Deteriorating**

- 1. Vegetation: Channel is well vegetated.
- 2. Channel Protection: No channel armoring present-active erosion of unprotected embankments.

**Maintenance/Repair Recommendations**

Installation of channel protection would reduce likelihood of future erosion/scour issues. Erosion/scour countermeasures would likely be recommended if bridge is to be returned to service. The results of the unknown foundation/scour stability analysis will inform the design of the required channel protection.

**Scour (C.11) | 5 | Fair Condition/Unknown - Deteriorating**

- 1. Streambed Scour: Unable to verify scour conditions on upstream end of Pier W1 due to flood debris accumulation. Remaining substructure units beyond channel flow during inspection.

**Maintenance/Repair Recommendations**

Remove flood debris and complete additional scour investigations.

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		NBI Project No:	2503501

**Deck** **Deck Rating:** 4

Quantity in Condition State

	Element	Defect	Description	OUM	Total	1	2	3	4	
Wearing Surface	8514		<b>Wearing Surface-Concrete Overlay</b>	<b>6</b>	SF	5418		5248	170	
			<i>Retrofit C-I-P concrete slab over timber cross ties.</i>							
		3220		WS-Crack	SF				170	
			CS3: 14 transverse lines of moderate/wide width cracks across width of deck.							
	8911		WS-Abrasion/ Wear/ Rutting or Loss of Friction	0			5248			
			CS2: Concrete worn to large aggregate.							
Deck	31		<b>Deck-Timber</b>	<b>4</b>	SF	4515		1315	3200	
			<i>Timber Cross ties.</i>							
		1150		TBR-Checks/ Shakes/ Cracks/ Splits/ Delamination	SF			1315	3200	
	CS2: Signs of timber decay throughout. CS3: Full depth splitting and/or decay at end 2ft of 25% of cross ties. Assume 25% section loss across all cross ties.									
	9004		<b>Drainage-Structure</b>	<b>N</b>	EA					
	None. No bridge deck drains.									

**Bridge Railing** **Bridge Railing Rating:** 5

**Bridge Railing Transition Rating:** N

Quantity in Condition State

	Element	Defect	Description	OUM	Total	1	2	3	4
Railing	330		<b>Metal Bridge Railing</b>	<b>5</b>	LF	903		903	
			<i>(3) rows of W-beam bridge rail supported by angled timber posts.</i>						
		1140		TBR-Decay/ Section Loss/ Abrasion/ Wear	LF			903	
				CS2: Timber posts show initial signs of incipient decay and weather checking.					
	9001		Timber Preservative Treatment	LF					
			CS3: Timber preservative treatment marginally effective.						
	7000		Damage	LF					
			CS1: Isolated minor collision damage to rail.						

**Bridge Joints** **Bridge Joints Rating:** N

Quantity in Condition State

	Element	Defect	Description	OUM	Total	1	2	3	4
Joints			<b>Joint Type</b>	<b>N</b>	LF				
			<i>None. Concrete bridge deck runs continuously over length of structure.</i>						
				Defect	LF				
	N/A								

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## Superstructure

Superstructure Rating: **4**

Quantity in Condition State

Element	Defect	Description	OUM	Total	Quantity in Condition State					
					1	2	3	4		
Superstructure	120	<b>Superstructure-Steel-Truss</b>	<b>4</b>	LF	875		564	311		
		<i>Spans W1-W4: Riveted Steel Through Truss</i>								
		1000	STL-Corrosion	LF			282	220		
			CS2: Surface corrosion throughout with widespread areas of freckled rust. CS3: Areas of pack rust with deformation and pitting of built-up members, most prevalent in vertical members- Assume 25% of +/- length.							
		1020	Connection	LF			282	88		
			CS2: Widespread areas of pack rust with no distortion. Connections are in place and functioning as intended. CS3: Isolated areas of pack rust with deformation with of connections between faying surfaces of eye bars-Assume +/- 10% of length.							
		1900	Distortion	LF						
			Members generally appear properly aligned with no readily visible signs of distortion.							
		7000	Damage	LF				3		
			CS2: Widespread areas of damaged flanges and bent lattice bars throughout lower chords. CS2: Tree growing around Span W2/S. Truss L4-L5. No readily visible deformation. CS3: Span W2/S. Truss L4-L5 damaged/bent near displaced bearing							
	152		<b>Superstructure-Steel-Floor Beam</b>	<b>4</b>	LF	405		160	245	
			<i>Spans W1-W4: [27 Rows] Transverse Steel Floor Beams-Riveted Sections</i>							
		1000	STL-Corrosion	LF			80	200		
			CS2: Surface corrosion throughout with widespread areas of freckled rust. CS3: Widespread areas of section loss (pitting) at web stiffeners and near stringer connections and near truss connections-Assume +/-50% of length.							
		1020	Connection	LF			80	40		
		CS2: Widespread areas of pack rust with no/initial signs of distortion. Connections are in place and functioning as intended. CS3: Isolated areas of pack rust with deformation with of connections-Assume +/- 10% of length.								
	1900	Distortion	LF							
		Members appear properly aligned with no readily visible signs of distortion.								
	7000	Damage	LF				5			
		CS2: Widespread areas of damaged flanges throughout floor beams. CS3: Span W4/FB7 bottom flange bent/distorted (5-LF).								
113		<b>Superstructure-Steel-Stringer</b>	<b>4</b>	LF	1750		875	875		
		<i>Spans W1-W4: [4 Rows] Longitudinal Steel Stringers-Riveted Sections</i>								
	1000	STL-Corrosion	LF			875	875			
		CS2: Surface corrosion throughout with widespread areas of freckled rust. CS3: Widespread areas of section loss (loose flaking rust) on top flange under cross ties, at ends near floor beams, and pack rust with initial signs of deformation throughout built-up members-Assume +/-50% of length.								
	1020	Connection	LF							
		CS2: Isolated areas of pack rust with no/initial signs of distortion. Connections are in place and functioning as intended.								
	1900	Distortion	LF							
		Members appear properly aligned with no readily visible signs of distortion.								
	7000	Damage	LF							
		No readily visible signs of damage.								
3440		Steel Protective Coating - CS4: Paint system has completely failed-protective coatings are ineffective.								

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		Quantity in Condition State							
Element	Defect	Description	OUM	Total	1	2	3	4	
Superstructure	111	<b>Superstructure-Timber-Open Girder/ Beam</b> <i>Span W5: [2] beam lines of 4-ply timber beams.</i>	3	LF	28			28	
	1140	TBR-Decay/ Section Loss/ Abrasion/ Wear CS3: All beams decayed and sound hollow with an estimated 75% loss of section.		LF				14	
	1150	TBR-Checks/ Shakes/ Cracks/ Splits/ Delamination CS3: Prominent checking/horizontal shear cracking (+/- 3/16") throughout length of beams.		LF				14	
	1020	Connection Through-bolts pulling through sides of beams.		LF					
	1900	Distortion Beam appear properly aligned with no readily visible signs of distortion.		LF					
	7000	Damage No readily evident signs of crushing.		LF					
		Protective Coatings: CS4: Timber preservative treatment ineffective.							

**Bearings** **Bearing Rating:** **2**

		Quantity in Condition State							
Element	Defect	Description	OUM	Total	1	2	3	4	
Bearings		<b>Bearing Type</b> <i>Spans W1-W4: [16] Roller basket assemblies at truss bearings.</i>	2	EA	16		8		8
	1000	STL-Corrosion CS2: Tightly adhered surface corrosion with areas of section loss (pitting) throughout bearings.		EA			8		
	2240	BRG-Loss of Bearing Area CS4: Decayed/crushing timber cribbing below bearings in piers W3 & W4.		EA					6
	7000	Damage CS4: Span W1/South Bearing/West Abutment-East roller partially unseated from bearing basket. CS4: Span W2/South Bearing/Pier W2-West roller completely unseated from bearing basket.		LF					2
	3440	Steel Protective Coating - CS4: Paint system has completely failed-protective coatings are ineffective.							

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## Substructure

Substructure Rating: **4**

Quantity in Condition State

Element	Defect	Description	OUM	Total	1	2	3	4	
West Abutment	216	<b>Substructure-Masonry-Abutment</b> <i>West Abutment: Stone Block Masonry.</i>	<b>4</b>	LF	15		5	10	
	1610	MSN-Mortar Breakdown CS3: Widespread areas of missing mortar in joints (head joints: 75%_bed joints: 50%).	LF			5	10		
	4000	Settlement No readily visible signs of settlement.	LF						
	6000	Scour CS1: West abutment beyond channel flow. No signs of undermining. Top of 1:1 embankment within 20ft of west abutment.	LF						
	220	<b>Pile Cap/Footing</b> <i>Unknown Bearing Conditions.</i>	<b>U</b>	LF					
	8401	<b>Wingwall-Masonry</b> <i>West Abutment: Integral Stone Block Masonry Wingwalls/Parapets.</i>	<b>4</b>	EA	2			2	
	8903	WW-Deterioration CS3: Widespread areas of missing mortar in joints. Areas split/spalling block.	LF				2		
	6000	Scour CS1: Both wingwalls beyond channel flow. No signs of undermining.	LF						
	Protective Coatings: N/A.								
	Piers W1 & W2	210	<b>Substructure-RC-Pier Wall</b> <i>Pier W1: Stone Block Masonry/Cast-In-Place Concrete Pier Wall. Limited Inspection Due to Access Limitations. Pier W2: Stone Block Masonry Pier Wall w/ 5"-6" Cast-In-Place Concrete Leveling Course Under Span W3 Truss Bearings.</i>	<b>4</b>	LF	20			20
1080		PSC/ RC-Delamination/ Spall/ Patched Area/ Exposed Rebar or Prestressing CS3: Widespread areas of missing mortar in joints. Pier W1: Widespread areas of map cracking with efflorescence. Pier W2: Leveling Course: Widespread areas of exposed aggregate-largely free from moderate/wide width cracking. Scaling/spalling concrete at ends-no loss of bearing area. Horizontal cracking of blocks (10-LF0. Surface spalling of blocks (3-LF).	LF				20		
4000		Settlement No readily visible signs of settlement.	LF						
6000		Scour Pier W1: Unknown-Removal of debris required to asses conditions on upstream end of pier. Pier W2: Pier W2 beyond channel flow. No signs of undermining.	LF						
Protective Coatings: N/A.									
220	<b>Pile Cap/Footing</b> <i>Unknown Bearing Conditions.</i>	<b>U</b>	LF						

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Element	Defect	Description	OUM	Total	Quantity in Condition State				
					1	2	3	4	
Piers W3 & W4	235	<b>Substructure-Timber-Pile Cap Pier</b> <i>Timber Pile Caps/Cribbing - Assume 25-LF Per Pier</i>	<b>1</b>	LF	50				50
		TBR-Decay/ Section Loss/ Abrasion/ Wear		LF					<b>50</b>
		1140 CS4: Caps sound hollow throughout length estimated 75%-90% decay/section loss throughout length. Prominent horiz. and vert. checking (>0.08") throughout. Pier W3: Various degrees of vertical splitting throughout cribbing, more severe at ends. Initial signs of crushing of Row W1 cribbing. Pier W4: Widespread split/crushed cribbing throughout pier. Cribbing is in an active state of collapse and is unstable.							
		Protective Coatings: CS4: Timber preservative treatment ineffective.							
	228	<b>Substructure-Timber-Pile-Pier</b> <i>Timber Piles - [3 Rows] of [8] Bearing Piles Per Pier.</i>	<b>3</b>	EA	48				48
		TBR-Decay/ Section Loss/ Abrasion/ Wear		EA					<b>48</b>
		1140 <b>CS4: Piles sound hollow throughout with prominent vertical checking/splitting. Estimated 75%-100% decay/section loss of piles. Pile shells soft/easily damaged. Multiple piles in Pier W4 are completely split and are unstable.</b>							
		4000 Settlement No readily visible signs of settlement.		EA					
		6000 Scour Piers W3 & W4 beyond channel flow during inspection.		EA					
		Protective Coatings: CS4: Timber preservative treatment ineffective.							

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Element	Defect	Description	OUM	Total	Quantity in Condition State					
					1	2	3	4		
East Abutment	216	<b>Substructure-Timber-Abutment</b> <i>Timber Backwall Plank - Timber pile with backwall plank abutment.</i>	4	LF	28			28		
		1140 TBR-Decay/ Section Loss/ Abrasion/ Wear CS3: Timber plank showing signs of incipient decay.		LF				14		
		4000 Settlement No readily visible signs of settlement.		LF						
		6000 Scour Both abutments beyond channel flow. CS3: Erosion has undermined east backwall plank 1"-6" (14-LF).		LF				14		
	Protective Coatings: CS4: Timber preservative treatment ineffective.									
	235	<b>Substructure-Timber-Pile Cap-Abutment</b> <i>East Abutment: Timber Pile Cap - Timber Pile with Backwall Plank Abutment.</i>	2	LF	14					14
		1140 TBR-Decay/ Section Loss/ Abrasion/ Wear CS4: Cap sounds hollow throughout with soft/easily dented shell-estimated 75%-90% decay/section loss. Prominent horiz. and vert. checking throughout. No definitive signs of crushing. Full depth vertical split through north half of cap.		LF						14
	Protective Coatings: CS4: Timber preservative treatment ineffective.									
	228	<b>Substructure-Timber-Pile-Abutment</b> <i>East Abutment: Timber Piles - Timber Pile with Backwall Plank Abutment.</i>	2	EA	5			1		4
		1140 TBR-Decay/ Section Loss/ Abrasion/ Wear [5] Bearing piles. CS4: Tops of piles sound hollow with moderate to wide checking throughout. No definitive signs of crushing. (1)-1"-2" Wide Vertical Spilt in Pile. Estimated % Decay: S1-90%_S2-75%_S3-90%(1)_S4-90%(1)_S5-90%(1).		EA				1		4
Protective Coatings: CS4: Timber preservative treatment ineffective.										
8400	<b>Wingwall-Timber</b> <i>Integral timber wingwalls. Backwall plank extends beyond bearing piles-no supplemental wingwall piles.</i>	4	EA	4				4		
	8903 WW-Deterioration CS3: Wingwall plank showing signs of incipient decay.		EA					4		
	6000 Scour CS3: Erosion has undermined east wingwall planks 1"-1'.		EA							
Protective Coatings: CS4: Timber preservative treatment ineffective.										

Bridge ID / Structure No.

### Bridge #40

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Inspection TL: Nate Miller, PE

NBI Project No: 2503501

Inspection Photos:

All photos taken at above referenced inspection date unless noted otherwise.



Photo 1 – Trail View Looking East.



Photo 2 - Trail View Looking West.



Photo 3 – Upstream Looking North.



Photo 4 – Downstream Looking South.



Photo 5 – Side View Looking North-West Spans.



Photo 6 – Side View Looking North-East Spans.



Photo 7 – Pier W4 Looking North.



Photo 8 – Pier W4 Looking North.



Photo 9 – Pier W4 Looking North.



Photo 10 – Pier W4 Looking North-Cribbing.



Photo 11 – Pier W4 Looking North.



Photo 12 – Pier W4 Looking North-Cribbing.



Photo 13 – Pier W4 Looking North-Piles.



Photo 14 – Pier W4 Looking North-Front Face.



Photo 15 – Pier W4 Looking West-North Bearing.



Photo 16 – Pier W4 Looking West-North Bearing.



Photo 17 – Pier W4 Looking South.



Photo 18 – Pier W4 Looking West.



Photo 19 – West Abutment.



Photo 20 – Pier W1 – Upstream (North) End.



Photo 21 – Pier W1 Looking East.



Photo 22 – Pier W1 Looking West.



Photo 23 – Pier W2 Looking East.



Photo 24 – Pier W2 Looking West.



Photo 25 – Pier W3 Looking East.



Photo 26 – Pier W3 Looking West.



Photo 27 – Pier W3 Looking North.



Photo 28 – Pier W3 Looking West.



Photo 29 – Pier W3 Looking East.



Photo 30 – Pier W3 Looking South.



Photo 31 – Pier W3 Looking East.



Photo 32 – Pier W3 Looking West.



Photo 33 – Pier W4 Looking East.



Photo 34 – West Abutment.



Photo 35 – East Abutment-Piles S2-S1.



Photo 36 – East Abutment-North End.



Photo 37 – Span W2-SE. Bearing Over Pier W2.



Photo 38 – Span W2-SE. Bearing Over Pier W2.



Photo 39 – Span W1-S. Bearing Over W. Abutment.



Photo 40 – Span W2-South Truss L4-L5.



Photo 41 – Pier W1 Looking West.



Photo 42 – Span W4-Floor Beam 7 (East).



Photo 43 – Deck.



Photo 44 – Span W1-South Truss L3.



Photo 45 – Span W1-Floor Beam 1 Looking East.



Photo 46 – Span W3-South Truss L3.



Photo 47 – Span W3-South Truss L1.



Photo 48 – Trail View Looking East.

Additional Photos Available -End of Report-