2026 Local Roads Conference Bridge Rehab/Repair

Nick West, PE
Grand Forks County Engineer

GRAND FORKS COUNTY
HEART OF THE RED RIVER VALLEY

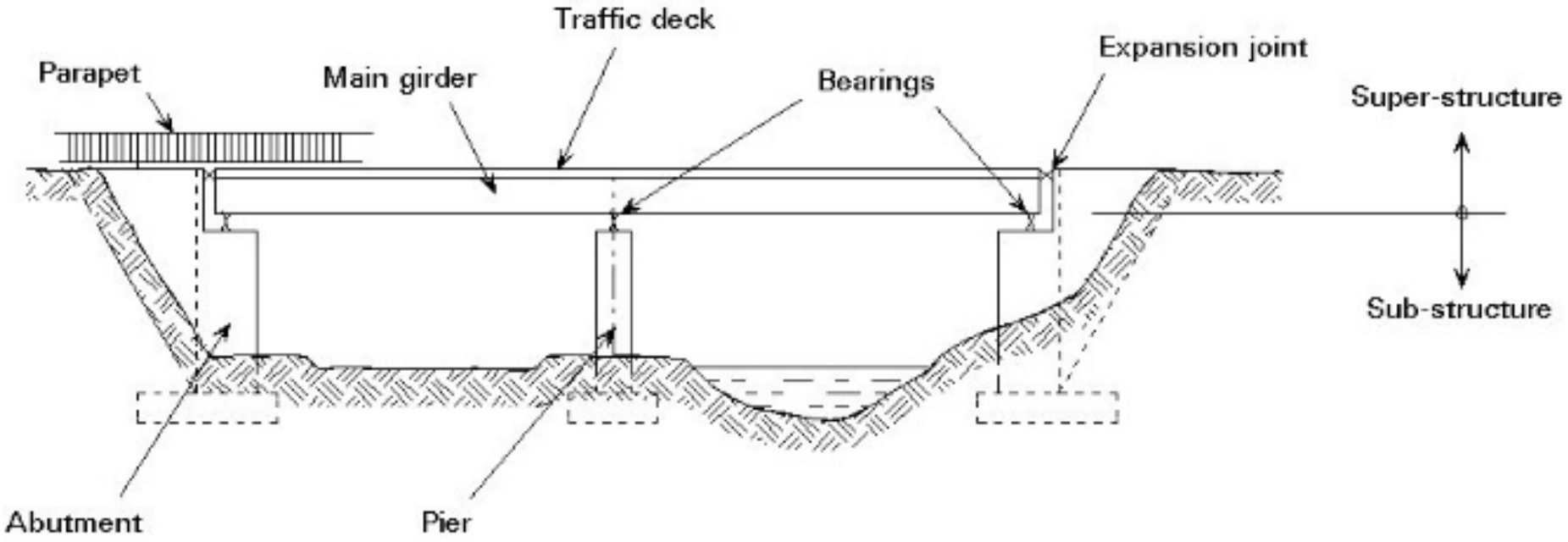
Grand Forks County Inventory

- 2015 – 279 Major Structures (most in ND)
- 2026 – 248 Major Structures

- 2024
  - 87 Structures had a problem
  - 67 Structures had a ton limit

- End of 2026 – 6 Structures with ton limit
  - 9 other structures with a known concern
- End of 2027 – Goal Zero Ton Limits!!!
    - (not including scour critical)

Bridge Components 101



So Your Bridge Needs Work

- Do we need the bridge?
  - Remove Immediately
  - Let Deteriorate then Remove
- Deficiency Okay ? – Goes to Single Family
- Rehabilitate
  - What part is the problem – Typically Beams & Deck
  - Salvaged Material
- Replace – not worth fixing

Project Selection

- Consider Tier System
- Snow Plow Routes
  - Equipment Weights ≈ 22 Tons
  - Bridges Less Than 22 Ton Limit
- Traffic Patterns – Thru Routes
- Spread Throughout County
- Legal Drains

Can’t Afford This Everywhere



Create Plan

Extract from
Veteran Employees

GRAND FORKS COUNTY
HEART OF THE RED RIVER VALLEY

Major Bridges with Ton Limit Inspection Form

	Date: 9-21-17
Bridge Number: 142-27.0	Location (Township/Section): Walle 14-23
Sufficiency Rating: 69.9	Posted Ton Limit: 32
Is bridge used/needed (yes/no/maybe) Explain:	
Usage of Roadway: (high / medium / low)	Priority Level of a Project (high / medium / low)
If no above, what should be done with exst bridge:	
If yes above: rehabilitate or replace (is substructure worth saving) See SIA, East abutment leaning	

Rehabilitate: specifically what is need: how many and size - stringers/beams, deck, material type, can it be widened, guardrail, county or contractor forces do work

Temp fix
- Consider welding supports on beams to stop abutment leaning... by some Time

Estimated Rehab Cost:

Replace: estimated replacement material type, size, length skew, erosion control, grading, elevation changes, surrounding structures, historic:

- Exst opening 25'x8'
- Recommend Dbl 12'x8' RCBC, total length 64' w/Ends
- Raise Rodd couple of feet to increase sight distance
- Not Historic
- No skew
- Lots of Rip rap to salvage & Reuse
- No immediate upstream structures
- Slightly rusted 12" W beams salvagable, 12 Each
- move new East slightly to align channel

- Contractor

Estimated Replacement Cost:

Inventory & Plan

Major Bridge Rehab/Replace Schedule
Bridges with Sufficiency Rating Under 50 or with a Ton Limit
SI&A from 2015/2016 Inspection
(Nick's preliminary analysis on how to eliminate bridges with ton limits) (this plan is continuously updated and open to discussion)

						Replacement						Rehabilitate - (assuming county forces install)											Road Status Bridges Less than 20 Ton
				Rehab (H)								Metal Beams					Timber Decking/Stringers (4"x12"x28')		Timber Cap (12"x12"x30')			Total Estimated	
	Location	Sufficiency	Posted	Replace (P)	Priority Level	Materials				Install	Total Est												
Bridge No	Township	Rating	Ton Limit	No H or P (N)	High/Med/Low	Type/Size	Total Feet	$/ft	Ends ($)	($)	$	Number	Size	Length (ft)	$/Each	Total Metal ($)	Number	$/Each	Number	$/Each	Total Timber ($)	$	Comment / Known Salvage
101-02.0	Elkmount 7-18	47.20	15	N	L																		let stand, remove, do not replace
101-04.1	Elkmount 19-20	52.00	14	H	M							16	W12x53	27	$1,100	$17,600	35	$250	4	$900	$12,350	$29,950	
103-27.0	Logan Center 17-20	78.90	21	H	L							6	S15x42.9	37	$1,200	$7,200	45	$250	4	$900	$14,850	$22,050	
103-34.0	Loretta 20-29	51.20	32	P	L	RCBC Dbl 12'x8'x44'	44	$1,600	$21,120	$50,000	$141,520												Consider SPP
104-02.2	Elkmount 10-11	40.00	24	P	L	Bridge					$500,000												Very Low/consider closing?
105-02.0	Elkmount 11-14	44.30	30	H	M											quad concrete tee's about $65,000, install $25,000						$90,000	(maybe RCBC?)
105-28.0	Logan Center 22-23	40.00	24	P	M	RCBC Dbl 12'x10'x44'	44	$1,800	$23,760	$50,000	$152,960												Consider Closing, Regrade Twp Rd to south
106-07.0	Ply 1-Ink 6	74.80	26	H	L							12	W16x77	36	$2,300	$27,600	44	$250	6	$900	$16,400	$44,000	
108-01.0	Inkster 5	63.30	24	H	M							10	W24x68	33	$1,900	$19,000	33	$250	0	$900	$8,250	$27,250	Quad Tee Ordered, Install 2019 — 8"x22"x33' Timber Stringers
110-12.0	Agnes 34-35	78.4	33	H	L							12	W12x53	25	$1,100	$13,200	33	$250	4	$900	$11,850	$25,050	8 - 12" various, 25'
110-19.0	Tarmore 4-9	41.0	20	H	L																		Rehab 2018, new metal beams — Trail
111-05.0	Inkster 25-26	58.3	19	P	L	Dbl 60" CMP	80	$90	$5,400	$10,000	$22,600												Sgl 90° downstream — Min Maint
111-30.0	Grate 34-35	49.0	23	P	M	RCBC Dbl 14'x9'x44'		$100,000		$40,000	$140,000												
112-18.0	Elm Grove 35-36	39.7	29	P	M	RCBC Tpl 16'x10'x60'	60	$3,100	$72,540	$100,000	$358,540												south branch Turtle river, Bridge?
113-27.0	Grate 31-32	42.0	17	P	M	RCBC Dbl 16'x6'x44'	44	$1,200	$22,440	$50,000	$147,240												Gravel
113-28.1	Grate 24-25	62.0	27	P	L	RCBC Dbl 14'x6'x44'	44	$1,700	$22,440	$50,000	$147,240												
114-33.0	Northwood 18	27.5	14	N	L																		let stand, remove, do not replace — Min Maint
115-34.0	Northwood 20	49.5	33	P	M	RCBC Dbl 10'x14'x50'	50	$3,000	$45,000	$70,000	$265,000												Recalc'd, no limit, 2018
118-05.0	Stra 25-John 30	47.8	20	P	M	RCBC Sgl 16'x8'x44'	44	$1,000	$13,200	$40,000	$97,200												Gravel
118-23.0	Arvilla 26-35	45.8	16	P	L	Dbl 72" CMP	80	$110	$6,000	$20,000	$34,800												minimum maintenance — Min Maint
119-05.0	Johnstown 29-30	40.0	18	P	L	RCBC Dbl 10'x6'x44'	44	$1,200	$15,840	$35,000	$103,640												Trail
119-08.1	Gilby 7-8	66.5	14	H	L							6	W12x53	24	$1,100	$6,600	32	$250	2	$900	$9,800	$16,400	Min Maint
122-08.0	Gilby 10-11	75.0	27	H	L							2	W16x50	36	$1,100	$2,200	44	$250	0	$900	$11,000	$13,200	
123-04.1	Johnstown 23	52.9	32	N	L																		field approach, little use, let stand or remove
124-04.0	John 24-Lev 19	85.9	10	H	L							6	W18x50	38	$1,400	$8,400	38	$250	0	$900	$9,500	$17,900	Recalc'd, no limit, 2018 — Trail
125-13.2	Mekinock 1-2	51.8	14	H	M							12	W16x77	35	$2,300	$27,600	43	$250	0	$900	$10,750	$38,350	Metal Beam Ordered, Install 2019, caps okay, rock yes — 10 - W12x30x 35' — Gravel
125-13.4	Mekinock 1-2	76.5	28	H	L							9	S18x70	37	$2,200	$19,800	45	$250	2	$900	$13,050	$32,850	
126-04.1	Levant 20-21	70.1	24	H	M							8	S15x42.9	33	$1,000	$8,000	41	$250	2	$900	$12,050	$20,050	
126-12.1	Lakeville 32-33	53.3	28	H	L											quad concrete tee's about $40,000, install $25,000						$65,000	
127-04.1	Levant 21-28	59.4	17	N	L																		maintain, then remove — Trail
127-07.0	Lakeville 4-9	64.4	18	N	L																		maintain, then remove — Trail
127-10.0	Lakeville 21-28	78.9	32	H	L							6	S15x42.9	28	$1,000	$6,000	36	$250	2	$900	$10,800	$16,800	
127-11.0	Lakeville 28	84.3	29	H	L							4	W12x53	23	$1,100	$4,400	31	$250	2	$900	$9,550	$13,950	very low priority
127-12.0	Lake 33-Bloom 5	47.3	16	H	M							12	W30x90	45	$4,500	$54,000	53	$300	2	$1,200	$18,300	$72,300	Beams Ordered, Install 2019 — Gravel
127-28.0	Fairfield 20-21	69.3	22	H	M							16	W12x53	27	$1,100	$17,600	35	$250	4	$900	$12,350	$29,950	Rehab 2018, new metal beams
128-14.0	Blooming 9-10	79.9	32	H	L							4	W12x53	25	$1,100	$4,400	33	$250	2	$900	$10,050	$14,450	Recalc'd, no limit, 2018
128-14.1	Blooming 9-10	71.4	32	P	M	RCBC Dbl 12'x6'x44'	44	$1,500	$19,800	$40,000	$125,800												medium/high priority, backwall leaning bad
129-19.0	Oakville 2-3	47.2	15	N	L																		Not Used, To be Removed 2018 or 2019 — Trail
129-28.0	Fairfield 22-23	71.4	33	H	L							7	S12x40.8	27	$900	$6,300	35	$250	2	$900	$10,550	$16,850	could salvage 27' S12, install all new W12, then take
130-21.0	Oakville 14	52.6	19	H	L							8	S12x40.8	24	$900	$7,200	32	$250	2	$900	$9,800	$17,000	salvaged beams and use on 24' bridge — Min Maint
131-06.0	Turtle River 31-32	74.8	26	H	M							4	W12x53	30	$1,100	$4,400	38	$250	2	$900	$11,300	$15,700	
131-18.0	Round Sk Rye 31	81.4	34	H	L							12	W18x77	30	$2,200	$26,400	48	$250	8	$900	$9,800	$35,800	Recalc'ed, no limit, 2018 — 30 - S15x42.9, 30' (rusted)
132-05.0	Turtle River 28-29	68.2	30	P	M	RCBC Dbl 10'x8'x50'	50	$1,800	$19,500	$35,000	$119,500												RCBC Ordered, Install 2019
132-23.0	Brenna 30-31	44.8	12	P	M	Dbl 60"x40' PP	80	$90	$5,200	$20,000	$32,400												Gravel
132-35.0	Michigan 29-30	64.3	20	H	M							9	S15x42.9	36	$1,000	$9,000	44	$250	2	$900	$12,800	$21,800	Quad Tee Ordered, Install 2019 — Gravel
134-34.0	Michigan 21-28	85.4	35	H	L							3	S12x40.8	25	$900	$2,700	33	$250	2	$900	$10,050	$12,750	
135-06.0	T.R. 35-Ferry 2	33.6	22	N	L																		Maintain, single family, grade road to east & remove
135-06.1	T.R. 35-Ferry 2	48.0	27	N	L																		let stand, remove, do not replace
135-30.0	Allendale 34-35	65.3	24	H	M							12	W16x77	29	$2,200	$26,400	37	$250	0	$900	$9,250	$35,650	stay at 26' width, could add more S15 instead
136-09.0	Ferry 13-18	31.5	18	P	M	Bridge (RCBC?)					$500,000												streamstats wrong, breakout RR flows to consider — Gravel
136-09.1	Ferry 13	43.0	14	N	L																		Not used, To be Removed 2018 or 2019 — Trail
136-30.0	Allendale 35-36	66.5	31	P	M	RCBC Dbl 14'x8'x44'	44	$1,800	$23,760	$40,000	$142,960												let stand, remove, do not replace — Gravel
137-09.1	Ferry East 18-19	25.5	17	N	L																		
138-30.0	Ferry East 20-29	81.3	34	H	L							4	S15x70	38	$2,200	$6,600	46	$250	2	$900	$13,300	$19,900	Recalc'd, no limit, 2018
139-11.0	Ferry East 28-33	56.3	17	H	L							10	W18x50	36	$1,400	$14,000	44	$250	2	$900	$12,800	$26,800	add 4" timber under W18 to get 22", single family — Gravel
139-31.0	Americus 5-8	70.1	27	H	L							12	W16x77	36	$2,200	$26,400	44	$250	2	$900	$12,800	$39,200	to residential subdivision — 12 - S15x42.9, 36'
140-31.2	Americus 4-9	84.0	35	H	M							2	S12x40.8	23	$900	$1,800	31	$250	2	$900	$9,550	$11,350	
140-31.3	Americus 3-4	33.3	13	N	L																		Let stand, Consider RCBC?, min maint road — Min Maint
141-31.4	Americus 3	68.3	23	H	L							9	W12x45	30	$1,000	$9,000	38	$250	2	$900	$11,300	$20,300	
142-27.0	Walle 14-23	69.9	32	P	L	RCBC Dbl 12'x10'x50'	50	$1,800	$27,000	$40,000	$157,000												
142-28.0	Walle 23-26	48.3	21	P	M	RCBC Dbl 12'x10'x50'	50	$1,800	$27,000	$40,000	$157,000												
143-28.0	Walle 24-25	30.8	24	P	M	Sgl 84"x120' CMP	120	$135	$4,000	$30,000	$50,200												3100 CY Fill
										Total:	$3,415,600					Total:	$862,700			Total:	$392,350
										Average:	$170,780					Average:	$28,757				
										Total:	$2,308,800										

11-truss not listed
3-truss on NRHP
6 N, 6 P, 2 H

Total Rehab (H)=	31	0	High
Total Replace (P)=	20	24	Medium
Total (N)=	11	38	Low
Total Bridges=	62	62	

<20 Tons 24
<15 Tons 9
<10 Tons 0

Trail	8
Min Maint	6
Gravel	10

Bridge Trailer



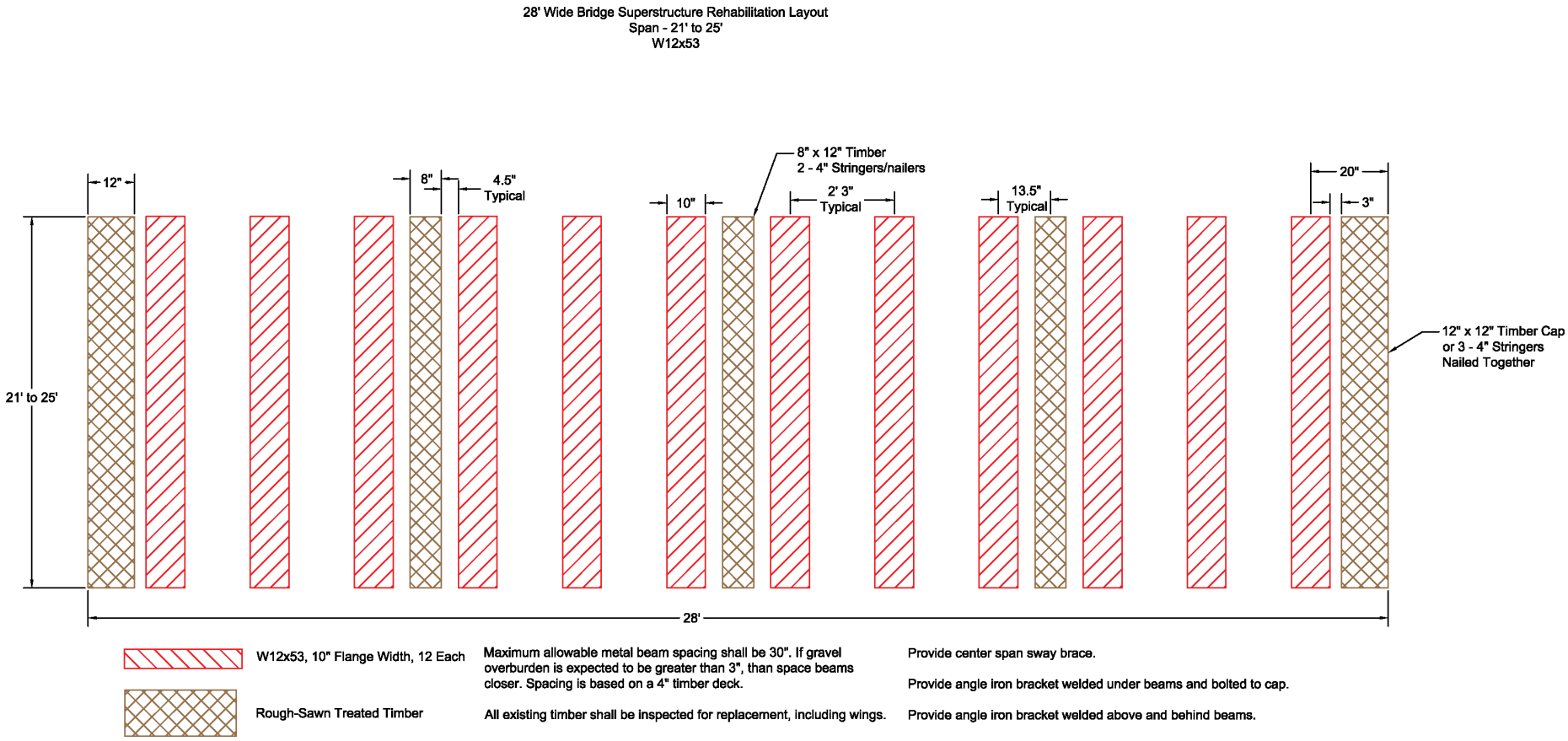
Bridge Trailer



Bridge Trailer



Pre-Designed Beam Layouts



Not Like This

Keep Metal Beam Spacing Equal



Check SI&A Sheets

Grand Forks County
Major Bridge Ton Limit Adjustment Schedule

List of Bridges where the Operating Rating has a difference of three tons or more from the actual posted ton limit

Bridge #	Location	Operating Rating	Posted Limit	Recommended Limit	Difference from Posted		Notes
101-02.0	Elmount 7-18	23	15	23	8	Raise	12-10-18
104-02.2	Elkmount 10-11	20	24	20	-4	Lower	12-10-18
110-19.0	Larimore 4-9	9	20	9	-11	Lower	Beams ordered to Rehab 10-31-18
111-30.0	Grace 34-35	19	23	19	-4	Lower	Replace 2018 Dbl RCBC 11-20-18
113-27.0	Grace 13-24	42	17	none	25	Raise	Replace 2018 Dbl RCBC 11-20-18
113-28.1	Grace 24-25	35	27	35	8	Raise	12-4-18
115-34.0	Northwood 20	41	33	none	8	Raise	Remove Posted Limit Immediately 6-19-18
118-23.0	Arvilla 26-35	20	16	20	4	Raise	12-4-18
119-05.0	Johnstown 29-30	23	18	23	5	Raise	8-22-18
119-08.1	Gilby 7-8	20	14	20	6	Raise	6-18-18
122-08.0	Gilby 10-11 Lakeville 31	30	27	30	3	Raise	12-3-18
125-13.4	Mekinock 1 ~~Blooming 6~~	32	28	32	4	Raise	12-4-18
127-07.0	Lakeville 4-9	23	18	23	5	Raise	12-10-18
127-12.0	Blooming 5 Lakeville 33	12	16	12	-4	Lower	Beams ordered to Rehab
127-28.0	Fairfield 20-21	35	22	35	13	Raise	Beams ordered to Rehab 7-16-18
128-14.0	Blooming 9-10	48	32	none	16	Raise	Remove Posted Limit Immediately 6-29-18
131-18.0	Blooming 36 Rye 31	38	34	none	4	Raise	Remove Posted Limit Immediately 6-29-18
138-10.0	Ferry East 20-29	40	34	none	6	Raise	Remove Posted Limit Immediately 6-14-18
141-31.4	Americus 3	26	23	26	3	Raise	7-16-18
142-28.0	Walle 23-26	18	21	18	-3	Lower	12-5-18
143-28.0	Walle 24-25	27	24	27	3	Raise	Plan to Replace in Couple Years 12-5-18
					Total	21	
					Total Raise	16	
					Total Lower	5	

From 2017 NDDOT Inspection SI&A
June 2018 (by Nick West)

5 Removed Ton Limit Completely

Do you need this Bridge – No!



135-34.0 Timber Rehab



135-34.0 Beam Layout



16 EA – W12x45x23’

135-34.0 Weld Bracing



135-34.0 Angle Bracing



135-34.0 Substructure



135-34.0 Riprap



135-34.0 – After



135-34.0 SI&A

	Before	After
Sufficiency Rating	48	97
Condition Deck	7 Good	9 Excellent
Condition Super	6 Satisfactory	9 Excellent
Condition Substructure	6 Satisfactory	7 Good
Operating Rating	8 Tons	96 Tons
Inventory Rating	5 Tons	58 Tons

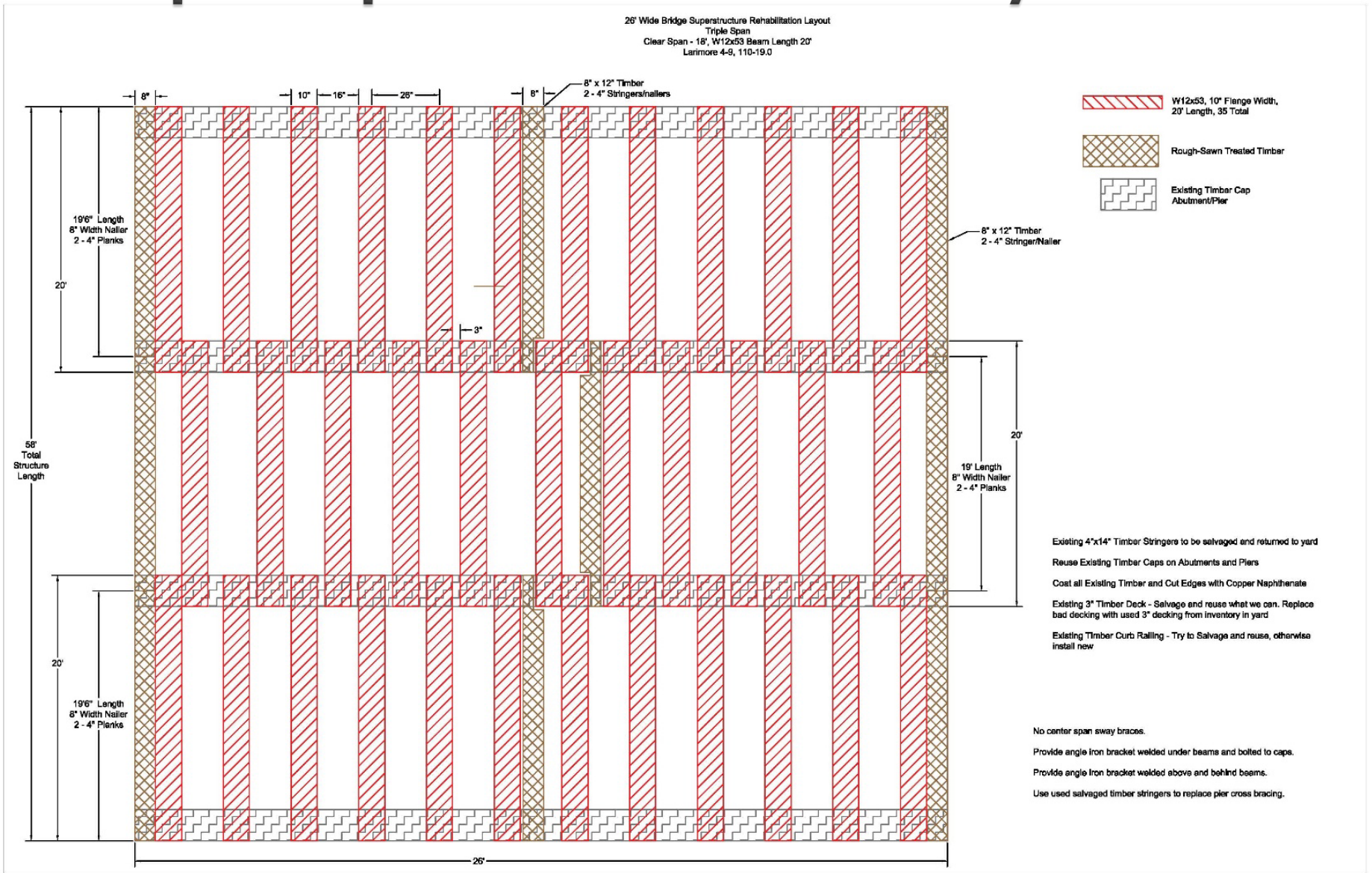
135-34.0 Costs

- County Forces
- Labor $5,600
- Equipment $4,600
- Materials $9,100
- Metal Beams $18,300
- Riprap $2,200
- Total $40,400

Triple Span Timber – Before Deteriorated Stingers



Triple Span Timber – Layout



Over Piers



Triple Span – Layout



Salvaged 3” Timber Deck



60’ Triple Span Costs

- County Forces
- Labor $9,500
- Equipment $6,800
- Materials $5,100
- Metal Beams $29,000
- Total $52,200

126-04.1 - Not Enough Beams



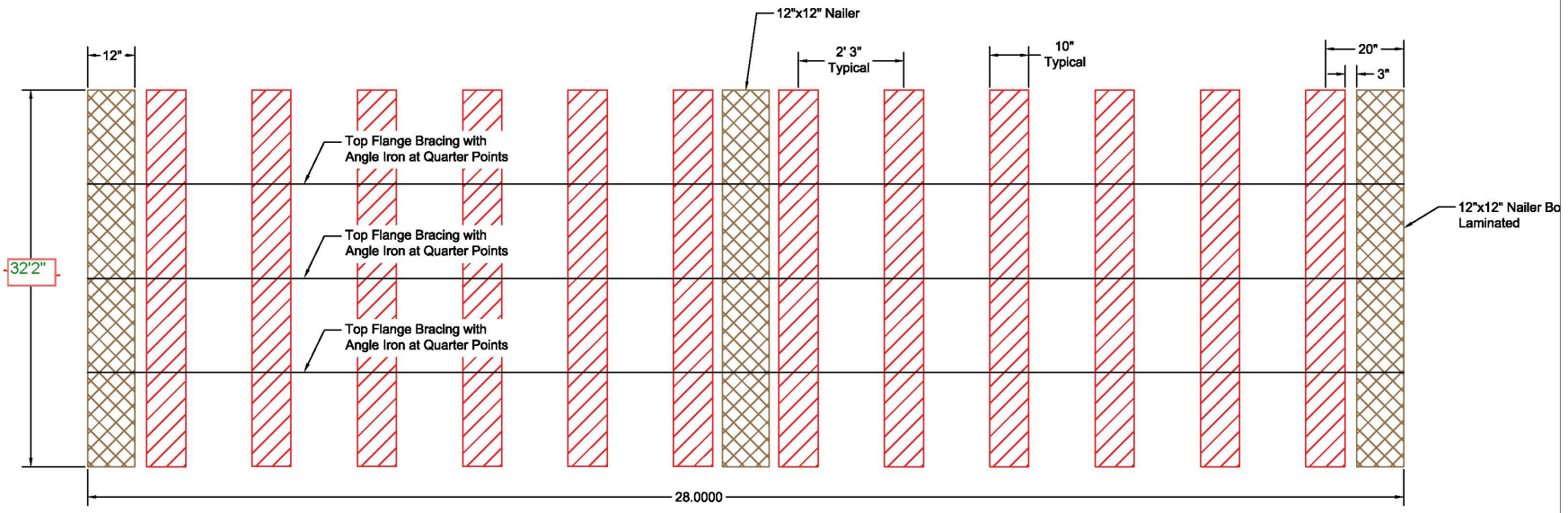
126-04.1 – Splice Pile



126-04.1

~~18-103-27.0~~
~~Logan Center 17/20~~
~~Exst 26' width, proposed 28' Width~~
~~Beam Length 35'10"~~

18-126-04.1
Levant 20-21
Beam Length 32'2"
Legal Drain 19
south side of CR 1 at CR 3 (east leg)



~~W16x67~~, 10.2" Flange Width, 12 Each Used
W16x77

Rough-Sawn Treated Timber

Remove Superstructure
Check Caps (replace if needed)
Existing Deck Width 26'
Proposed Deck Width 28'
Install New 4" Timber Deck

126-04.1



126-04.1



126-04.1



126-04.1

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
BRIDGE LOAD RATING SUMMARY

EXISTING BRIDGE DATA

Bridge ID	18-126-04.1	Year Built	1946	Yr Recon:	2026
Bridge Location (NBI Item 009)	6 East Johnstown	Design Loading	Unknown		
Material Main (Item 043A)	3 Steel	Length of Bridge	33.1	ft	
Design Main (Item 043B)	2 Stringer/Girder	Number of Spans	1		

BRIDGE CONDITION DATA

Superstructure Rating Item 059 (Culvert Rating Item 062)	5
Condition Factor	0.95

SOFTWARE

AASHTOWare BrR v7.6.1

BRIDGE DEAD LOAD DATA

Depth of Fill (Buried Structures)		
Utility/Additional Load		
Overlay Type		
Overlay Depth		in
Overlay Depth Measured		

SPECIFICATIONS

AASHTO Manual for Bridge Evaluation, 3rd Edition

AASHTO Standard Specifications for Highway Bridges, 17th Edition

NDDOT Load Rating Manual V2.5

LIVE LOAD DATA

ADTT (one-way)	<100
Emergency Vehicle Route[1]	No

LRFR RATINGS

Level	Vehicle	GVW (Tons)	Rating Factor	Rating Tons	Posting Tons[2]	Limit State	Mode	Member[3]	Span
Design	HL-93 (INV)	36							
	HL-93 (OPR)	36							
	HS-20 (INV)	36							
	HS-20 (OPR)	36							
Legal[5]	Type 3	25							
	Type 3-3	40							
	Type 3S2	36							
	NRL	40							
	SU4	27							
	SU5	31							
	SU6	35							
	SU7	39							
	~~EV2~~	~~29~~							
	~~EV3~~	~~43~~							
	ND 1	53							
Permit[5,6]	ND 2	59							

Controlling Posting	N/A[7]
~~Emergency Vehicle Posting~~	~~N/A[8]~~

LFR/ASD/ENGR JUDGEMENT RATINGS

Rating Factor	Rating Tons	Posting Tons[4]	Mode	Member[3]	Span
1.10	39.6		Flexure	Deck	1
1.47	52.7		Flexure	Deck	1
3.04	76.1	N/A[7]	Flexure	Deck	1
3.18	99.9	N/A[7]	Flexure	Deck	1
3.26	99.9	N/A[7]	Flexure	Deck	1
2.38	95.2		Flexure	G1&G12	1
2.65	71.6	N/A[7]	Flexure	Deck	1
2.65	82.2	N/A[7]	Flexure	Deck	1
2.60	90.2	N/A[7]	Flexure	G1&G12	1
2.48	96.2	N/A[7]	Flexure	G1&G12	1
2.76	99.9	N/A[7]	Flexure	Deck	1
2.58	99.9	N/A[7]	Flexure	G1&G12	1

Remarks:
(12) new W16x77 beams were added to the superstructure of 50ksi. A brace was added to the top of the beams at quarter points. Superstructure condition factor not applied. Beams rated using LFR. Deck rated using ASR. The substructure was not rated.

[1] Within 1 mile of the interstate
[2] Safe posting load based determined according to MBE equation 6A.8.3-1
[3] Identify the girder using the format G1, G2, etc.
[4] Safe posting tons using LFD method are equal to the Operating Rating
[5] Rated for operating level for LFR/ASD
[6] Rated for unlimited crossings for LRFR
[7] RF≥1.0, No Posting Required
[8] No Posting required (Non EV route)
[9] Controlling Posting < 3 tons, closure is recommended

Load Rating Performed By/Firm:	Kathryn L DeWitt, PE / KLJ Engineering	
Initials/Date	KLD	7/8/2026
Load Rating Checked By/Firm:	Eric E Wiken, EI / KLJ Engineering	
Initials/Date	EEW	9/30/2026

Engineer Seal



Form Date: 3/1/2022 V. 7.3

128-14.0 - Poor Bridge



128-14.0 – Double 60's



109-27.0 - Severely Disformed



109-27.1 – CR 20



109-27.1 - CR 20



118-05.0 - Historic - Adopted



118-05.0 - Precast Box Beams



118-05.0



118-05.0



Damaged Timber Bridge



Damaged Bridge (2015)



Damaged Bridge Repaired (2015)



119-08.0 Low Water Crossing



Stabilize Timber Cap



Rotten Timber Stringer



Check Hydraulics – Before



Check Hydraulics – After



Reinforcing Timber Pile



Reinforcing Timber Pile



RCBC
Broken Wing



RCBC – Broken Wing



RCBC – Broken Wing



RCBC- Broken Wing



RCBC
Broken Wing



Concrete Bridge Wing – Before



Concrete Bridge Wing – After



Bridge Riprap



A Stitch in Time



A Stitch in Time May Save Nine



Quad Tee Leading Edge



Quad Tee Leading Edge



Eroded Under Abutment



Eroded Abutment – Riprap



Low Water Crossing Option



NDDOT Inspection Notification

Structure Inspection Notification

County			
Structure Number			
Location			
Reason for inspection (new/rehabilitation/repair)			
Who performed the work?			
Was Structure previously closed? (y/		**If so, when?**	
Date work was completed		**Curently posted for Load? (y/r**	

Location of Work Performed

Work performed on the following areas of the Structure			
Deck (y/n)		Pier(s) (y/n)	
Beam/Girder (y/n)		Abutment(s) (y/n)	
Pier/Abutment Caps (y/n)		Channel (riprap) (y/n)	
Other			

Was the work completed due to an Alert Code on the SI&A sheet (y/N)	
If yes, what Alert Code was repaired	

What work was completed on this Structure

Materials used (provide a description of the material properties, size, etc.)

Did you attach any of the following information with these sheet?

Photos		Material Spec info		Alert code		Plans	
Other							

NDDOT use only

Based on work performed, was an inspection required? (y/n)			
If yes, date of inspection		**By who**	
If no, explain reason inspection wasn't required			

Rehab Recommendations

- Riprap & Lots of it!
- Determine What Part of Bridge is Problem
- Beam Spacing (Design)
- Do Not Let Normal Water Touch the Bridge
- Timber – Seal Cut Ends
- Widen if possible – 28’ Goal
- Beam Bracing – On Top
- 4” Timber Deck –Treated Copper Naphthenate
- Materials – Metal, Timber, Concrete
- Riprap – Riprap – Riprap

Thank You

- Gerald Sieg, Superintendent
- 59 year veteran with Grand Forks County



Thank You

- Grand Forks County Commission
- GF County Bridge Crew
- Area Contractors
- ND State Legislature
- NDDOT
- KLJ

Questions
Nick West

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- Allendale Township Supervisor
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