




BRIDGE LOAD RATING SUMMARY REPORT

OFFICE OF STRUCTURAL ENGINEERING

OHIO DEPARTMENT OF TRANSPORTATION

SFN (SNBI Bridge Number)	Ohio Bridge Number (Bridge Asset Name)	District	GPS Coordinates	
3431790	HAS-BRIDGE-00.045	11	LATITUDE:	LONGITUDE:
			40.425675	-81.1871667
Original Year Built	Year Re-built	Total length	Structure Type	Feature Intersected
Proposed	N/A	86 ft	XXX	CONOTTON CREEK
SPECIAL ASSUMPTIONS & COMMENTS	Rated by: AI 11/03/2025 Checked by: TDA 11/04/2025			
	Single span (83'-0" C/C Bearings) prestressed adjacent box beams (CB33-48) with 6" minimum composite reinforced concrete deck including 1" monolithic wearing surface; Skew = 0 degrees; 32'-0" O/O deck width; 6'-0" non-raised sidewalk on west side and Modified TST-1-99 railing on both sides; Design for FWS = 60 psf; Rated for FWS = 0 psf; Deck f'c = 4.5 ksi (Class QC2 Concrete); Prestressed Box Beam concrete f'c initial = 5.0 ksi, f'c final = 7.0 ksi; Prestressing strands (Low Relaxation) As = 0.167 sq in; Ultimate Strength = 270 ksi			
Please type or select on right using drop down arrow				
Load Rating Purpose:	1 - Initial Load Rating			
Bridge Appraisal Rating (0-9):	9			
Load rating Software:	3 - AASHTO BrR			
Software version:	7.6.1			
Rating Source:	1 - Plan information available for load rating analysis			
Load Rating Method:	LRFR - Load & Resistance Factor Rating (RF) - Code 8			
Design Loading:	A - HL93			
STRUCTURE RATING SUMMARY				
OHIO & AASHTO LEGAL VEHICLES				
Legal Load	GVW (Tons)	No of Axles	Rating Factor RF	Safe Weight (Tons)
2F1	15	2	6.402	15.00
3F1	23	3	4.282	23.00
5C1	40	5	3.388	40.00
Type 3	25	3	4.074	25.00
Type 3-3	40	6	3.367	40.00
Type 3S2	36	5	3.390	36.00
SPECIALIZED HAULING VEHICLES (SHV)				
SU4/4F1	27	4	3.718	27.00
SU5	31	5	3.310	31.00
SU6	34.75	6	3.068	34.75
SU7	38.75	7	2.863	38.75
EMERGENCY VEHICLES (EV)				
Check box if rating for EV3 <input checked="" type="checkbox"/>				
EV2	28.75	2	3.482	28.75
EV3	43	3	2.771	43.00
Permit Load (PL) Analysis **				
Loading Type	GVW (Tons)	No of Axles	Rating Factor	Calculated Load (Tons)
PL 60T	60	6	3.286	197.16
PL 65T	65	7	2.604	169.26
Controlling Legal Load RF				
150%		1.50		
PL Analysis Method				
Load & Resistance Factor Rating (LRFR)				
AGENCY/FIRM/OFFICE				
EMH&T				
Name	PE Number	Phone Number	Email	Report Date:
Abdul Saboor Ibrhaim Khail	90769	614-775-4631	aibrahimkhail@emht.com	2025-12-08
Rated By	Tyler D. Adams	80227	614-775-4602	tadams@emht.com
Reviewed By				

** ODOT bridges to be analyzed for permit trucks by policy.

Analysis for permit trucks is optional for non-ODOT bridges and at owner's discretion.

Rating Results Summary Report

Name: Bridge Street over Conotton Creek
Struct-Def: Single Span PS Box Beams

Bridge ID: 3431790
Member: G1

NBI: 3431790
Member alt: Exterior Beam

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State	Impact	Lane
EV2	Axle Load	LRFR	Legal	100.11	3.482	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
EV3	Axle Load	LRFR	Legal	119.15	2.771	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
HL-93 (US)	Truck + Lane	LRFR	Inventory	60.52	1.681	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
HL-93 (US)	Truck + Lane	LRFR	Operating	78.46	2.179	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
HL-93 (US)	Tandem + Lane	LRFR	Inventory	73.56	2.043	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
HL-93 (US)	Tandem + Lane	LRFR	Operating	95.36	2.649	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
OH-2F1	Axle Load	LRFR	Legal	96.02	6.402	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
OH-3F1	Axle Load	LRFR	Legal	98.49	4.282	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
OH-5C1	Axle Load	LRFR	Legal	135.53	3.388	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
PL 60T	Axle Load	LRFR	Permit	197.14	3.286	75.00	1 - (90.4)	STRENGTH-II Concr...	As Requested	As Requested
PL 65T	Axle Load	LRFR	Permit	169.28	2.604	75.00	1 - (90.4)	STRENGTH-II Concr...	As Requested	As Requested
SU4	Axle Load	LRFR	Legal	100.38	3.718	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
SU5	Axle Load	LRFR	Legal	102.61	3.310	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
SU6	Axle Load	LRFR	Legal	106.63	3.068	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
SU7	Axle Load	LRFR	Legal	110.94	2.863	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
Type 3	Axle Load	LRFR	Legal	101.86	4.074	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
Type 3-3	Axle Load	LRFR	Legal	134.67	3.367	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
Type 3S2	Axle Load	LRFR	Legal	122.04	3.390	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested

Rating Results Summary Report

Name: Bridge Street over Conotton Creek
Struct-Def: Single Span PS Box Beams

Bridge ID: 3431790
Member: G2

NBI: 3431790
Member alt: Interior Beam

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State	Impact	Lane
EV2	Axle Load	LRFR	Legal	122.93	4.276	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
EV3	Axle Load	LRFR	Legal	146.31	3.403	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
HL-93 (US)	Truck + Lane	LRFR	Inventory	68.36	1.899	41.50	1 - (50.0)	SERVICE-III PS Tensi...	As Requested	As Requested
HL-93 (US)	Truck + Lane	LRFR	Operating	96.34	2.676	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
HL-93 (US)	Tandem + Lane	LRFR	Inventory	79.41	2.206	41.50	1 - (50.0)	SERVICE-III PS Tensi...	As Requested	As Requested
HL-93 (US)	Tandem + Lane	LRFR	Operating	117.09	3.253	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
OH-2F1	Axle Load	LRFR	Legal	117.91	7.861	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
OH-3F1	Axle Load	LRFR	Legal	120.94	5.258	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
OH-5C1	Axle Load	LRFR	Legal	166.42	4.161	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
PL 60T	Axle Load	LRFR	Permit	247.03	4.117	75.00	1 - (90.4)	STRENGTH-II Concr...	As Requested	As Requested
PL 65T	Axle Load	LRFR	Permit	212.12	3.263	75.00	1 - (90.4)	STRENGTH-II Concr...	As Requested	As Requested
SU4	Axle Load	LRFR	Legal	123.26	4.565	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
SU5	Axle Load	LRFR	Legal	126.00	4.064	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
SU6	Axle Load	LRFR	Legal	130.93	3.768	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
SU7	Axle Load	LRFR	Legal	136.22	3.515	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
Type 3	Axle Load	LRFR	Legal	125.08	5.003	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
Type 3-3	Axle Load	LRFR	Legal	165.36	4.134	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested
Type 3S2	Axle Load	LRFR	Legal	149.85	4.163	75.00	1 - (90.4)	STRENGTH-I Concre...	As Requested	As Requested

MODIFIED TST-1-99 RAILING:

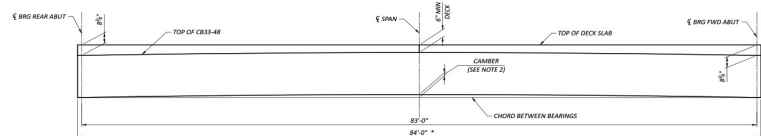
Steel Rail Weight = 0.13 klf (steel rail components and 10% for bolts)

Total Weight 0.13 klf

ADDITIONAL LOADS:

INCREASED DECK THICKNESS DUE TO CAMBER:

Extra thickness due to camber = 2.22 in
 Beam width = 48.00 in
 Concrete Unit Wt. = 0.150 kips/ft³
 Precast DC = 0.11 klf



INTERMEDIATE DIAPHRAGM LOADS

Width = 37.00 in
 Depth = 22.00 in
 Thickness = 1.50 ft
 Concrete Unit Wt. = 0.150 kips/ft³
 Precast DC = 1.27 klf

END DIAPHRAGM LOADS

Width = 37.00 in
 Depth = 22.00 in
 Thickness = 3.25 ft
 Concrete Unit Wt. = 0.150 kips/ft³
 Precast DC = 2.76 klf