Monroe County Board of Commissioners Agenda Request Form

Date to be heard 05/14/26 **Formal** ☑ **Work session** ☐ **Department** Auditor

Title to appear on Agenda: Resolution 2026-18 A Resolution concerning City of Bloomington Bridges 316 and 317

Vendor #

Executive Summary:

This resolution provides information gained from the County Bridge inspection program regarding two bridges within the City of Bloomington Corporate limits, but is not in the County inventory of Bridges. According to the County's bridge inspection contractor, one bridge, bridge 317, needs immediate attention.

Fund Name(s):	Fund Number(s):	Amount(s)
NA	NA	NA

Presenter: Jeff Cockerill/Lisa Ridge

Speaker(s) for Zoom purposes:

Name(s)	Phone Number(s)

(the speaker phone numbers will be removed from the document prior to posting)

Attorney who reviewed: Cockerill, Jeff

RESOLUTION 2026-18
RESOLUTION CONCERNING BRIDGES 316 AND 317.

A resolution to inform the City of Bloomington about the Conditions of Bridges 316 and 317.

WHEREAS, pursuant to Indiana Code 8-17-1-46 the County is responsible for the construction, reconstruction, maintenance, and inspection of a bridge that meets the following requirements:

(1) Is located in the county, including a bridge that is located within the corporate limits of a municipality.
(2) Has a span length greater than twenty (20) feet.
(3) Is not part of the state highway system.
(4) Meets either of the following:
    (A) The bridge was inspected by the county before January 1, 2024.
    (B) The bridge was added to the county inventory by the county executive after December 31, 2024

WHEREAS, Bridges 316 and 317 are in the Monroe County, within the Corporate limits of the City of Bloomington ("City"), span more than 20 feet, are not part of the state highway system; and,

WHERAS, Bridges 316 and 317 were neither inspected by the Monroe County ("County") before January 1, 2024 or added to the county inventory by the county executive after December 31, 2024; and,

WHEREAS, the County is not responsible for the construction, reconstruction, maintenance, or inspection of Bridges 316 and 317; and,

WHEREAS, the County's Cumulative Bridge fund is available for inspection of all bridges in the County, except those in the state highway system; and,

WHEREAS, it is the County's understanding that the City of Bloomington had inspected Bridges 316 and 317 in the past, but were not willing to continue to inspect the bridges; and,

WHEREAS, the County did utilize the cumulative bridge fund to inspect the bridges due to concerns about losing federal funding if the bridges were not inspected; and,

WHEREAS, the inspection for bridge 317, which is located on West Club House Drive, revealed significant issues, see attached exhibit A; and,

WHEREAS, inspectors of bridge 317 recommended "the bridge be posted for a load limit of 5 ton commercial loading with an emergency vehicle posting of 7 ton single axle, 8 ton tandem, and 11 ton gross load."

WHEREAS, the property surrounding Bridge 317 is owned by the City; and,

WHEREAS, the City has the general authority and responsibility to maintain the roadways within the corporate limits of the City.

NOW, THEREFORE, be it resolved by the Board of Commissioners of Monroe County, Indiana, that the City of Bloomington be informed that:

1. Pursuant to IC 8-17-1-46, Bridges 316 and 317 are within the City of Bloomington corporate limits and the maintenance of the bridges are not the responsibility of the County; and,
2. The County did incorporate the inspections of the Bridges 316 and 317 due to the understanding that the City of Bloomington would no longer inspect the bridges and failure to have the bridges inspected could affect future grant awards; and,
3. As stated in Exhibit A, for Bridge 317, which is located on West Club House Drive, it is recommended that "the bridge be posted for a load limit of 5 ton commercial loading with an emergency vehicle posting of 7 ton single axle, 8 ton tandem, and 11 ton gross load."
4. It was further recommended that the bridge be reinspected at a 12-month interval.
5. The County is forwarding this information to the City of Bloomington as the apparent agency responsible for posting the load limit, inspecting at 12-month intervals, and maintaining the

bridge.

6. The City is encouraged to reach out to the County Highway Department if they have any questions.

Adopted this 14th day of May, 2026.

MONROE COUNTY BOARD OF COMMISSIONERS

"YEAS"	"NAYS"
_____	_____
Julie Thomas, President	Julie Thomas, President
_____	_____
Jody Madeira, Vice President	Jody Madeira, Vice President
_____	_____
Lee Jones, Commissioner	Lee Jones, Commissioner

ATTEST:

_____

Brianne Gregory, Monroe County Auditor

Routine Inspection Report

Structure Information

B.ID.01 Bridge Number	5300184	
B.ID.02 Bridge Name	53-00317	
B.F.01 Feature Type - Number	01	01
B.F.01 Feature Type - Type	H - Highway	W - Waterway
B.F.02 Feature Location	C - Carried on bridge	B - Below bridge
B.F.03 Feature Name	W CLUB HOUSE DRIVE	UNT Griffy Creek

Inspection Information

B.IE.02 Inspection Begin Date		B.IE.04 Bridge Inspector	
B.IE.01 Inspection Type		Additional Inspectors:	

Condition Ratings Summary

B.C.01 Deck	**4**	B.C.07 Bridge Bearings	**4**
B.C.02 Superstructure	**4**	B.C.08 Bridge Joints	**N**
B.C.03 Substructure	**7**	B.C.09 Channel	**6**
B.C.04 Culvert	**N**	B.C.10 Channel Protection	**3**
B.C.05 Bridge Railing	**3**	B.C.11 Scour	**6**
B.C.06 Bridge Railing Transitions	**N**		

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

Location Map

B.L.02 County Code	53 - Monroe	B.L.05 Latitude	39.198125
B.L.11 Bridge Location	0.01 MILE WEST OF OLD SR 37 N	B.L.06 Longitude	-86.53702

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

Routine Inspection Summary

The bridge was added to the 2024 Phase II Monroe County Bridge Inventory. According to Section 21. IC 8-17-1-46 the City Municipality is the owner and responsible for maintenance for this bridge. The inspection frequency for the bridge was reduce to 12 months due to the deck and superstructure condition and load capacity.

The wearing surface is in fair condition. The deck is in poor condition. The superstructure is in poor condition. The substructure is in good condition. The culvert rating is not applicable. The channel is in satisfactory condition. The bridge was not assessed as scour critical.

The beams have isolated minor to major deterioration with beam 2 being in the worst condition. Beam 2 has an isolated major spall at midspan with 7 severed exposed strands at midspan. Concrete abutments have isolated minor deterioration. The block wall has widespread major failure with the southeast and southwest banks having failed, and the southwest wall is leaning towards the channel. An isolated moderate scour hole is observed at the upstream coping of the bridge. The channel has widespread minor scoured down to rock and has exposed both footings with 0.8-foot maximum scour at abutment 1 and 1.5-foot maximum scour at abutment 2, with no undermining at either abutment.

The bridge was posted for load on 4/16/2024: Commercial 9 tons; EV Single Axle 14 tons, EV Tandem 17tons, EV Gross 24 tons.

The bridge was built in 1960. No plans or shop drawings on file.

Recommended maintenance includes installing current standard bridge and approach rail with end treatments, repair erosion at all 4 corners, placing Class 2 riprap along both abutments, filling in the scour hole at the south coping of the bridge, and grouting the tie rod ends. The recommended major work is to replace the superstructure due to condition and load capacity.

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

Section 1: Bridge Identification

Subsection 1.1: Identification

B.ID.01 Bridge Number	5300184
B.ID.02 Bridge Name	53-00317
B.ID.03 Previous Bridge Number	

Subsection 1.2: Location

B.L.01 State Code	18 - Indiana	B.L.02 County Code	53 - Monroe
B.L.03 Place Code	5860	B.L.04 Highway Agency District	5 - Seymour
B.L.05 Latitude	39.198125	B.L.06 Longitude	-86.53702
B.L.07 Border Bridge Number	N	B.L.08 Border Bridge State or County Code	
B.L.09 Border Bridge Insp. Resp.		B.L.10 Border Bridge Designated Lead State	L03 - City or municipal highway agency
B.L.11 Bridge Location	0.01 MILE WEST OF OLD SR 37 N		
B.L.12 Metro. Planning Org.			

Subsection 1.3: Classification

B.CL.01 Owner	L03 - City or municipal highway agency	B.CL.02 Maintenance Responsibility	L03 - City or municipal highway agency
B.CL.03 Federal or Tribal Land Access	N - Not applicable	B.CL.04 Historic Significance	N - Bridge is not eligible for the National Register, and is not in a historic district eligible for the National Register
B.CL.05 Toll	N - Bridge does not carry a toll road and is not a toll bridge	B.CL.06 Emergency Evacuation Designation	

Section 2: Bridge Material and Type

Subsection 2.1: Span Material and Type

B.SP.01 Span Configuration Designation - Number	01
B.SP.01 Span Configuration Designation - Type	M - Main
B.SP.02 Number of Spans	1
B.SP.03 Number of Beam Lines	
B.SP.04 Span Material	C03 - Prestressed concrete – pre-tensioned
B.SP.05 Span Continuity	1 - Simple or single span
B.SP.06 Span Type	B02 - Box girder/beam – multiple adjacent
B.SP.07 Span Protective System	0 - None
B.SP.08 Deck Interaction	IM - Integral or monolithic

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

B.SP.09 Deck Material and Type	C03 - Prestressed concrete – pre-tensioned
B.SP.10 Wearing Surface	B01 - Bituminous (asphalt)
B.SP.11 Deck Protective System	0 - None
B.SP.12 Deck Reinforcing Protective System	0 - None
B.SP.13 Deck Stay-In-Place Forms	0 - None

Subsection 2.2: Substructure Material and Type

B.SB.01 Substructure Configuration Designation - Number	01
B.SB.01 Substructure Configuration Designation - Type	A - Abutment
B.SB.02 Number of Substructure Units	2
B.SB.03 Substructure Material	C01 - Reinforced concrete – cast-in-place
B.SB.04 Substructure Type	A01 - Abutment – cantilever/wall
B.SB.05 Substructure Protective System	0
B.SB.06 Foundation Type	F02 - Footing - on rock
B.SB.07 Foundation Protective System	0 - None

Subsection 2.3: Roadside Hardware

B.RH.01 Bridge Railings	I0-T	B.RH.02 Transitions	I0-T

Section 3: Bridge Geometry

B.G.01 NBIS Bridge Length	28	B.G.02 Total Bridge Length	28
B.G.03 Maximum Span Length	27	B.G.04 Minimum Span Length	27
B.G.05 Bridge Width Out-to-Out	28	B.G.06 Bridge Width Curb-to-Curb	28
B.G.07 Left Curb or Sidewalk Width	0	B.G.08 Right Curb or Sidewalk Width	0
B.G.09 Approach Roadway Width	25.3	B.G.10 Bridge Median	0 - No median
B.G.11 Skew	00	B.G.12 Curved Bridge	
B.G.13 Maximum Bridge Height		B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area		B.G.16 Calculated Deck Area	784.0
Culvert Barrel Length		Culvert Height	
Culvert Width			

Section 4: Features

Subsection 4.1: Feature Identification

B.F.01 Feature Type - Number	01	01
B.F.01 Feature Type - Type	H - Highway	W - Waterway
B.F.02 Feature Location	C - Carried on bridge	B - Below bridge

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025
B.F.03 Feature Name	W CLUB HOUSE DRIVE	UNT Griffy Creek	

Subsection 4.2: Routes

B.F.01 Feature Type - Number	01
B.F.01 Feature Type - Type	H - Highway
B.RT.01 Route Designation	R01
B.RT.02 Route Number	0
B.RT.03 Route Direction	2-T - TEMP - Two-way traffic - NS or
B.RT.04 Route Type	5 - City street
B.RT.05 Service Type	1 - Mainline

Subsection 4.3: Highways

B.F.01 Feature Type - Number	01
B.F.01 Feature Type - Type	H - Highway
B.H.01 Functional Classification	4 - Minor Arteria
B.H.02 Urban Code	T-U - TEMP - urban
B.H.03 NHS Designation	N - Non-NHS
B.H.04 National Highway Freight Network	N - Not on the NHFN
B.H.05 STRAHNET Designation	N - Not a STRAHNET route
B.H.06 LRS Route ID	
B.H.07 LRS Mile Point	0
B.H.08 Lanes on Highway	2
B.H.09 Annual Average Daily Traffic	950
B.H.10 Annual Average Daily Truck Traffic	5
B.H.11 Year of Annual Average Daily Traffic	2020
B.H.12 Highway Maximum Usable Vertical Clearance	99.9
B.H.13 Highway Minimum Vertical Clearance	99.9
B.H.14 Highway Minimum Horizontal Clearance, Left	
B.H.15 Highway Minimum Horizontal Clearance, Right	
B.H.16 Highway Maximum Usable Surface Width	28
B.H.17 Bypass Detour Length	3
B.H.18 Crossing Bridge Number	

Subsection 4.4: Railroads

Subsection 4.5: Navigable Waterways

B.F.01 Feature Type - Number	01
B.F.01 Feature Type - Type	W - Waterway
B.N.01 Navigable Waterway	N
B.N.02 Navigation Minimum Vertical Clearance	

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

B.N.03 Movable Bridge Maximum Navigation Vertical Clearance
B.N.04 Navigation Channel Width
B.N.05 Navigation Channel Minimum Horizontal Clearance
B.N.06 Substructure Navigation Protection

Section 5: Loads, Load Rating, and Posting

Subsection 5.1: Loads and Load Ratings

B.LR.01 Design Load	HS20 - HS-20	B.LR.02 Design Method	LFD - Load Factor Design
B.LR.03 Load Rating Date	03/15/2024	B.LR.04 Load Rating Method	LFR - Load Factor Rating
B.LR.05 Inventory Load Rating Factor	0.42	B.LR.06 Operating Load Rating Factor	0.70
B.LR.07 Controlling Legal Load Rating Factor	0.59	B.LR.08 Routine Permit Loads	C - Bridge does not carry routine permit loads. Routine permit loads are restricted from the bridge.

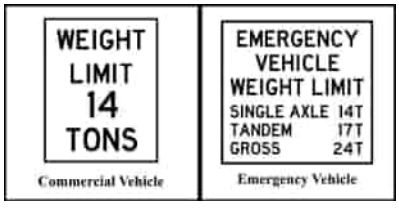
Subsection 5.2: Load Posting Status

B.PS.01 Load Posting Status	B.PS.02 Posting Status Date Change
PP	Apr 16 2024 12:00AM

Subsection 5.3: Load Evaluation and Posting

B.EP.01 Legal Load Configuration	B.EP.02 Legal Load Rating Factor	B.EP.03 Posting Type	B.EP.04 Posting Value

Maximum Allowable Weight Limit (Tons)	Maximum Allowable Tonnages on Signage
Max Allowable CV (Gross) Max Allowable EV (Single Axle) Max Allowable EV (Tandem) Max Allowable EV (Gross)	*Actual posted values may not exceed those as shown below **Sample Commercial Vehicle signage displayed is applicable only when B.EP.03 Posting Type includes G



B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

Section 6: Inspections

Subsection 6.1: Inspection Requirements

B.IR.01 NSTM Inspection Required	N - NSTM inspection not required.	B.IR.02 Fatigue Details	
B.IR.03 Underwater Inspection Required	N - Underwater inspection not required	B.IR.04 Complex Feature	

Subsection 6.2: Inspection Events

Section 7: Bridge Condition

Subsection 7.1: Component Condition Ratings

B.C.01 Deck	4 - POOR Widespread moderate or isolated major defects		
Prestressed Concrete Box Beams - See superstructure comments.			
B.C.01a Wearing Surface	5 - Fair Condition		
Bituminous - Wearing surface is not full width. Some minor map cracking along the shoulder. Some minor longitudinal cracks at bridge ends.			
B.C.01b Approach Slab	N - Not Applicable		
Not Applicable			
B.C.08 Bridge Joint Type	N - No Bridge Joints	B.C.08 Joint Location	N - NOT APPLICABLE Bridge does not have deck joints.
B.C.08 Bridge Joints	N - NOT APPLICABLE Bridge does not have deck joints.		
Not Applicable			
B.C.08a Terminal Joint	N - Not Applicable		
Not Applicable			
B.C.05 Bridge Railing	3 - SERIOUS Major defects		
TIMBER BOARDS AND POSTS - WIDESPREAD MAJOR ROTTING WITH SOME POSTS HAVING 100% SECTION LOSS AT CONNECTION TO BEAM.			
B.C.06 Bridge Railing Transitions	N - NOT APPLICABLE Component does not exist.		
Not Applicable			
B.C.02 Superstructure	4 - POOR Widespread moderate or isolated major defects		
Prestressed Concrete Box Beams - Minor leaching between beams. Beam 1 has isolated minor spalls with exposed stirrups at the east end. Beam 1 has some (3) minor hairline cracks with leaching at midspan and 1 isolated minor hairline crack at abutment 1. Beam 2 has an isolated major spall at midspan with 7 severed exposed strands. Beam 5 has an isolated minor spall with exposed steel at east end.			
B.C.07 Bridge Bearings	4 - POOR Widespread moderate or isolated major defects	B.C.07 Bearing Type	2 - Elastomeric
Elastomeric Bearing Pads - Widespread bearing pads have moderate movement.			
B.C.02a Paint	N - Not Applicable		
B.C.02a Paint Year		B.C.02a Paint Location	N - No Paint
Not Applicable			

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

B.C.03 Substructure	7 - GOOD Some minor defects.
Concrete Abutments - Leaking on abutments. Some minor hairline vertical cracks on both abutments. Isolated minor spall on abutment 2 under beams 6 and 7.	
B.C.03a Concrete Slopewall	N - Not Applicable
Not Applicable	
B.C.04 Culvert	N - NOT APPLICABLE Component does not exist.
Not Applicable	
B.C.09 Channel	6 - SATISFACTORY Widespread minor or isolated moderate defects.
Gravel Flowline - Isolated moderate scour hole at upstream coping of the bridge.	
B.C.10 Channel Protection	3 - SERIOUS Major defects
No Protection along Abutments and Stone Block Walls along Upstream and Downstream Banks with Riprap at the Southwest Corner - Widespread major failures in block walls. Block wall along southeast and southwest banks have failed and the southwest wall is leaning towards the channel.	
B.C.11 Scour	6 - Widespread minor or isolated moderate scour.
Channel scoured down to rock exposing both footings. Widespread minor scour along both abutments. 0.8 foot maximum scour at abutment 1, and 1.5 foot maximum scour at abutment 2. No undermining at either abutment.	

B.C.12 Bridge Condition Classification	P - Poor	B.C.13 Lowest Condition Rating Code	4 - POOR Widespread moderate or isolated major defects

B.C.14 NSTM Inspection	N - NOT APPLICABLE Component does not exist.
Not Applicable	
B.C.15 Underwater Inspection	N - NOT APPLICABLE Component does not exist.
Not Applicable	

Subsection 7.4: Appraisal

B.AP.01 Approach Roadway Alignment	G - Good
Bituminous Approaches - Straight and Level, Curve to West, Intersection to East, Drive at Southwest Corner - Widespread minor erosion at all bridge corners.	
B.AP.02 Overtopping Likelihood	2 - Very low – once every 51 to 99 years
Appears Adequate	
B.AP.03 Scour Vulnerability	A - Scour appraisal completed. Bridge determined to be stable for scour.
Abutments are founded on rock.	

B.AP.03a Scour Analysis Status		B.AP.03a Scour Analysis Date	

B.AP.03a Scour Analysis Determination
Hydraulics Comments

B.AP.03b Scour Analysis Status		B.AP.03b Date of Countermeasures Placed or Field Verified	2025-03-27T00:00:00

B.AP.03b Bridge Inspection Comments

B.AP.04 Scour Plan of Action	0 - A scour POA is not required.
Not Applicable	

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

B.AP.05 Seismic Vulnerability	N - Bridge does not require seismic evaluation due to low anticipated ground motion or agency prioritization.

Are cliff swallows or nests present?	No	Can bats or guano be seen or heard?	No
Delinquent		Delinquent Reason	

Subsection 7.5: Work Events

B.W.01 Year Built	1960
B.W.02 Year Work Performed	B.W.03 Work Performed

Element Level Condition Ratings

Subsection 7.3: Element Conditions

Element	Total Quantity	Units	B.CS.01 CS 1	B.CS.02 CS 2	B.CS.03 CS 3	B.CS.04 CS 4

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

Photos

PHOTO #01: APPROACH LOOKING EAST

PHOTO #02: APPROACH LOOKING WEST

PHOTO #03: ELEVATION LOOKING NORTH

PHOTO #04: ASPHALT PATCH AT NORTHEAST CORNER

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

PHOTO #05: ASPHALT CRACKING AT BRIDGE END & ROTTED TIMBER BRIDGE RAIL

PHOTO #06: TYPICAL BEARING PAD MOVED OUT & OVERHANGS BRIDGE SEAT

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

PHOTO #07: APPROACH LOOKING EAST LOAD POSTING

PHOTO #08: APPROACH LOOKING WEST LOAD POSTING

PHOTO #09: APPROACH LOOKING EAST ADVANCE LOAD POSTING

PHOTO #10: 1.5' OF SCOUR AT ABUTMENT 2 FOOTING

PHOTO #11: ISOLATED MAJOR SPALL WITH 7 SEVERED STRANDS ON BEAM 2 AT MIDSPAN

PHOTO #12: ISOLATED MODERATE SPALL ON BEAM 2 AT EAST END

PHOTO #13: SOUTHWEST WING FAILED

PHOTO #14: SCOUR HOLE AT SOUTH COPING

PHOTO #15: ISOLATED MINOR SPALL ON ABUTMENT 2

PHOTO #16: 0.8' OF SCOUR AT ABUTMENT 1 FOOTING

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

PHOTO #17: MINOR EROSION AT SOUTHEAST BRIDGE CORNER

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

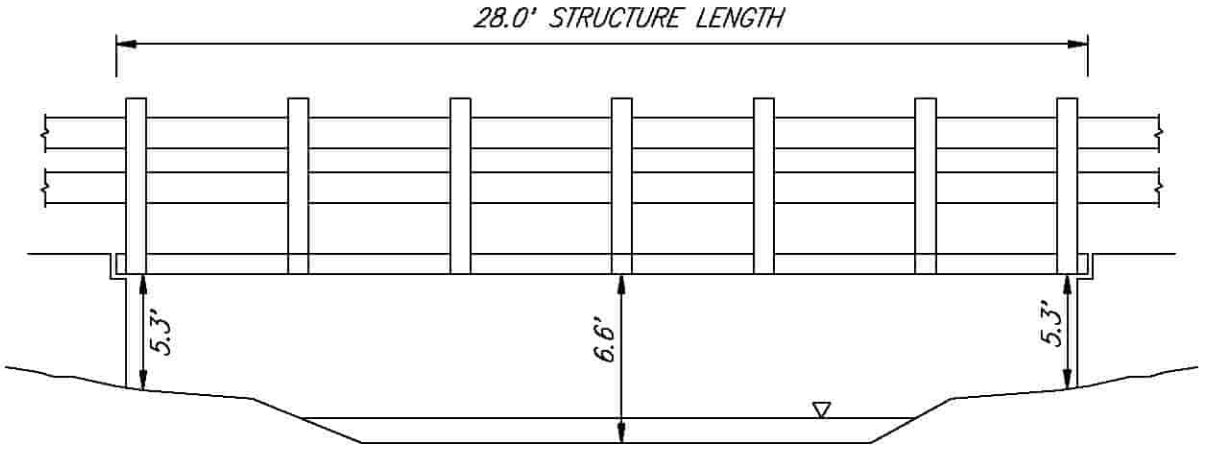
Maintenance Needs Reported

Date Reported:	03/27/2025	Priority:	4-Grey
Type:	Erosion Control / Rip Rap		
Comments:			
Recommendation:	Place class 1 riprap along both abutments.		
Status:	Open	WMS WO#:	

B.ID.01 Bridge Number	5300184	Inspector:	Sarah Mihalow
B.ID.02 Bridge Name	53-00317	Inspection Date:	03/27/2025

Maintenance Photos

MONROE 317



22 / 22

132

6.5' FROM WATER TO
LOW STRUCTURE

ELEVATION LOOKING NORTH

LOAD RATING SUMMARY

Monroe County Bridge 317

53-00317

NBI NUMBER

5300125

egis
IMAGINE. CREATE. ACHIEVE. a sustainable future

8320 Craig Street | Indianapolis, IN 46250
317.849.5832 | www.egis-group.com

Bridge Name:	Monroe County Bridge 317	Load Rater:	SS 04/23/2026
NBI #:	5300125	Reviewer 1:	RKH 04/24/2026
Rating Type:	Bridge Deterioration	Deterioration Included:	Yes
Design Load:	Unknown	Routine Permit Loads:	N
Design Method:	Unknown	Rating Program and Version:	AASHTOWare BrR 7.7.1.3001
Load Rating Method:	LFR	Rating Units:	US Customary

IDENTIFICATION

Structure Type:	Prestressed Concrete Box Beam Bridge	Plans Available:	No
Description:	Prestressed Concrete Box Beams- MULT	Shop Drawings Available:	No
County:	53- Monroe	Year Built:	1960
District:	05 - Seymour	Years Reconstructed:	N/A
Milepoint/Location:	50 ft W of N. Old Martinsville Rd.	Des. No.:	N/A

GEOMETRY

Spans:	1 span @ 27'-0"
# Beams & Spacing:	7- WS 12"x 48" Prestressed Concrete Box Beams, 4'-0" Beam Spacing
Left Overhang/Thickness:	2'-0"
O-to-O Coping:	28'-0"
Clear Roadway:	28'-0"
Misc.:	Under Fill
Misc.:	Skew 0°

DECK

Original Thickness:	N/A	Concrete f'c:	N/A
Structural Depth:	N/A	Reinforcing Fy:	N/A
Sacrificial WS:	N/A	Railing/Curb:	N/A
Add'l Wearing Surface:	1" Asphalt Wearing Surface	Sidewalks:	N/A
Stay-in-Place Forms:	N/A	Misc.:	N/A

CONCRETE BEAMS

Beam:	Adjacent Prestressed Concrete Box Beams, WS-12x48"	Concrete f'c:	5 ksi
Reinforcing Fy:	Grade 40 Rebar	Concrete f'ci:	4 ksi
Strand Material:	Grade 270 strands with Aps=0.153 sq. in. per strand	Residual Camber:	N/A
Misc.:	Assumed Stress Relieved		

STEEL BEAMS

Beam/Structural Steel:	N/A
Structural Steel/Material:	N/A
Misc.:	N/A
Misc.:	N/A

NOTES & REHAB SUMMARY

No plans were available for this structure.
The superstructure was noted as having some signs of distress. Minor leaching between beams. Beam 1 has spalls with exposed stirrups at east end. Beam 1 has 3 hairline longitudinal cracks with leaching at midspan. Beam 2 has a large spall at midspan with 10 exposed strands, 5 of them are severed. Beam 5 has a minor spall with exposed steel at east end.
The substructure was noted as having some signs of distress. Leaking on abutments. Vertical cracks on both abutments.
Due to the deterioration of the beams, 3 strands were taken out from Beam 1, and 10 strands were taken out from Beam 2.

Bridge Name:	Monroe County Bridge 317	Load Rater:	SS 04/23/2026
NBI #:	5300125	Reviewer 1:	RKH 04/24/2026
Rating Type:	Bridge Deterioration	Deterioration Included:	Yes
Design Load:	Unknown	Routine Permit Loads:	N
Design Method:	Unknown	Rating Program and Version:	AASHTOWare BrR 7.7.1.3001
Load Rating Method:	LFR	Rating Units:	US Customary

DESIGN LOADS

(future wearing surface ==> 0 psf)

Applicable Design Vehicle	Vehicle Configuration	Inventory Rating Factors	Load Capacity (tons)	Operating Rating Factors	Load Capacity (tons)
☑	HL-93	N/A	#VALUE!		
☐	~~*Fatigue*~~	~~*NA*~~			
☑	H-20	0.233	4.66		
☑	HS-20	0.213	7.66		
☑	HS-25	0.170	7.65		
☐	~~*Alternate Military*~~	~~*1.307*~~			
☐	~~*Toll Road Loading NO. 2 (90K)*~~				
☐	~~*Toll Road Loading NO. 1 (90K)*~~				
☐	~~*Special Toll Road Truck (126K)*~~				
☐	~~*Michigan Train Truck NO. 5*~~				
☐	~~*Michigan Train Truck NO. 8*~~				

NOTES

The beam 2 controlled the HS-20 inventory load rating in flexure. The load rating gives a 7 ton safe posting load; however, we will recommend a posting of 5 tons for this bridge.

The load capacity was determined using Load Factor Rating (LFR) analysis according to the Manual of Bridge Evaluation 6B.4.1; however, due to the noted deterioration we are going to lower the commercial vehicle safe posting load to 5 tons. Based on the assumptions made due to the lack of plans, existing conditions, we recommend a load limit of 5 tons.

Bridge Name:	Monroe County Bridge 317	Load Rater:	SS 04/23/2026
NBI #:	5300125	Reviewer 1:	RKH 04/24/2026
Rating Type:	Bridge Deterioration	Deterioration Included:	Yes
Design Load:	Unknown	Routine Permit Loads:	N
Design Method:	Unknown	Rating Program and Version:	AASHTOWare BrR 7.7.1.3001
Load Rating Method:	LFR	Rating Units:	US Customary

LEGAL & ROUTINE PERMIT LOADS

(future wearing surface ==> 0 psf)

# of Axles	Vehicle Configuration	Rating Factors	Load Capacity (tons)	Safe Posting Load (tons)
2	EV2	0.433	12.45	12
3	EV3	0.279	12.00	11

Single Axle (W2)	7.253
Tandem (W3)	8.649
Gross (GVW)	11.000

Applicable Routine Permit	# of Axles	Vehicle Configuration	Rating Factors	Load Capacity (tons)	Safe Posting Load (tons)
	varies	NRL	0.290	N/A	N/A
	2	H20-44	0.389	7.78	7
	2	Alternate Military	0.305	7.32	7
	3	HL-93	NA	#VALUE!	#VALUE!
	3	HS20-44	0.355	12.78	12
	3	AASHTO Type 3	0.430	10.75	10
	4	SU4	0.360	9.72	9
☐	~~*4*~~	~~*Toll Road Loading NO. 2*~~	~~*1.139*~~	~~*51.25*~~	~~*51*~~
	5	AASHTO Type 3S2	0.441	15.87	15
	5	SU5	0.329	10.19	10
☐	~~*5*~~	~~*Toll Road Loading NO. 1*~~	~~*1.149*~~	~~*51.70*~~	~~*51*~~
	6	AASHTO Type 3-3	0.522	20.88	20
	6	Lane Type	NA		
	6	SU6	0.303	10.54	10
☐	~~*7*~~	~~*Special Toll Road Truck*~~	~~*1.000*~~	~~*63.00*~~	~~*63*~~
	7/8	SU7	0.297	11.52	11
☐	~~*8*~~	~~*Michigan Train Truck NO. 5*~~	~~*1.329*~~	~~*89.04*~~	~~*89*~~
☐	~~*11*~~	~~*Michigan Train Truck NO. 8*~~	~~*1.314*~~	~~*88.16*~~	~~*88*~~

NOTES

Bridge Name:	Monroe County Bridge 317	Load Rater:	SS 04/23/2026
NBI #:	5300125	Reviewer 1:	RKH 04/24/2026
Rating Type:	Bridge Deterioration	Deterioration Included:	Yes
Design Load:	Unknown	Routine Permit Loads:	N
Design Method:	Unknown	Rating Program and Version:	AASHTOWare BrR 7.7.1.3001
Load Rating Method:	LFR	Rating Units:	US Customary

SPECIAL PERMIT LOADS

(future wearing surface ==> 0 psf)

# of Axels	Vehicle Configuration	Rating Factors	Load Capacity (tons)
11	Superload (258K)		
13	Superload (267K)		
14	Superload (350K)		
19	Superload (305K)		
19	Superload (480K)		

NOTES

Randall K Henderson — Engineer

2026-04-24 — Date

Rating Results Summary Report

Name: Copy of Monroe County Bridge 317 (LFR)
Bridge ID: 53-00317 (2026)
SNBI: 5300184 (2026)
Struct-Def: Monroe County Bridge 317
Member: Member 1
Member alt: Wizard Alternative

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State	Impact	Lane
Alt Military (LFR) (M...	Axle Load	LFR	Legal Operating	31.01	1.292	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
EV2-Indiana	Axle Load	LFR	Legal Operating	43.22	1.503	21.50	1 - (79.6)	Design Flexure - Co...	As Requested	As Requested
EV3-Indiana	Axle Load	LFR	Legal Operating	43.02	1.000	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Axle Load	LFR	Inventory	19.68	0.984	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Lane	LFR	Inventory	24.08	1.204	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Axle Load	LFR	Legal Operating	32.86	1.643	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Lane	LFR	Legal Operating	40.22	2.011	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Axle Load	LFR	Inventory	30.60	0.850	21.50	1 - (79.6)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Lane	LFR	Inventory	43.35	1.204	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Axle Load	LFR	Legal Operating	51.10	1.420	21.50	1 - (79.6)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Lane	LFR	Legal Operating	72.40	2.011	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Axle Load	LFR	Inventory	30.60	0.680	21.50	1 - (79.6)	Design Flexure - Co...	As Requested	As Requested
HS 25	Lane	LFR	Inventory	43.35	0.963	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
NRL	Axle Load	LFR	Legal Operating	49.96	1.249	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU4	Axle Load	LFR	Legal Operating	41.52	1.538	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
SU5	Axle Load	LFR	Legal Operating	43.88	1.415	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU6	Axle Load	LFR	Legal Operating	45.28	1.303	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU7	Axle Load	LFR	Legal Operating	48.95	1.263	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3 (Mod. Tire W...	Axle Load	LFR	Legal Operating	45.61	1.824	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3-3 (Mod. Tire...	Axle Load	LFR	Legal Operating	88.60	2.215	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3S2 (Mod. Tire...	Axle Load	LFR	Legal Operating	68.25	1.896	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested

Rating Results Summary Report

Name: Copy of Monroe County Bridge 317 (LFR)
Bridge ID: 53-00317 (2026)
SNBI: 5300184 (2026)
Struct-Def: Monroe County Bridge 317
Member: Member 2
Member alt: Wizard Alternative

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State	Impact	Lane
Alt Military (LFR) (M...	Axle Load	LFR	Legal Operating	7.31	0.305	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
EV2-Indiana	Axle Load	LFR	Legal Operating	10.51	0.366	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
EV3-Indiana	Axle Load	LFR	Legal Operating	10.14	0.236	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Axle Load	LFR	Inventory	4.66	0.233	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Lane	LFR	Inventory	5.60	0.280	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Axle Load	LFR	Legal Operating	7.79	0.389	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Lane	LFR	Legal Operating	9.35	0.468	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Axle Load	LFR	Inventory	7.65	0.213	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Lane	LFR	Inventory	10.08	0.280	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Axle Load	LFR	Legal Operating	12.78	0.355	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Lane	LFR	Legal Operating	16.84	0.468	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Axle Load	LFR	Inventory	7.65	0.170	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Lane	LFR	Inventory	10.08	0.224	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
NRL	Axle Load	LFR	Legal Operating	11.62	0.290	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU4	Axle Load	LFR	Legal Operating	9.72	0.360	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU5	Axle Load	LFR	Legal Operating	10.20	0.329	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU6	Axle Load	LFR	Legal Operating	10.53	0.303	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU7	Axle Load	LFR	Legal Operating	11.50	0.297	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
Type 3 (Mod. Tire W...	Axle Load	LFR	Legal Operating	10.75	0.430	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
Type 3-3 (Mod. Tire...	Axle Load	LFR	Legal Operating	20.89	0.522	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
Type 3S2 (Mod. Tire...	Axle Load	LFR	Legal Operating	15.87	0.441	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested

Rating Results Summary Report

Name: Copy of Monroe County Bridge 317 (LFR)
Bridge ID: 53-00317 (2026)
SNBI: 5300184 (2026)
Struct-Def: Monroe County Bridge 317
Member: Member 3
Member alt: Wizard Alternative

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State	Impact	Lane
Alt Military (LFR) (M...	Axle Load	LFR	Legal Operating	42.19	1.758	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
EV2-Indiana	Axle Load	LFR	Legal Operating	60.28	2.097	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
EV3-Indiana	Axle Load	LFR	Legal Operating	58.52	1.361	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Axle Load	LFR	Inventory	26.77	1.339	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Lane	LFR	Inventory	32.50	1.625	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Axle Load	LFR	Legal Operating	44.71	2.235	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Lane	LFR	Legal Operating	54.28	2.714	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Axle Load	LFR	Inventory	43.87	1.219	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Lane	LFR	Inventory	58.50	1.625	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Axle Load	LFR	Legal Operating	73.26	2.035	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Lane	LFR	Legal Operating	97.70	2.714	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Axle Load	LFR	Inventory	43.87	0.975	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Lane	LFR	Inventory	58.50	1.300	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
NRL	Axle Load	LFR	Legal Operating	67.43	1.686	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU4	Axle Load	LFR	Legal Operating	56.43	2.090	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU5	Axle Load	LFR	Legal Operating	59.21	1.910	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU6	Axle Load	LFR	Legal Operating	61.11	1.759	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU7	Axle Load	LFR	Legal Operating	66.59	1.719	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3 (Mod. Tire W...	Axle Load	LFR	Legal Operating	62.04	2.482	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3-3 (Mod. Tire...	Axle Load	LFR	Legal Operating	120.54	3.013	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3S2 (Mod. Tire...	Axle Load	LFR	Legal Operating	92.10	2.558	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested

Rating Results Summary Report

Name: Copy of Monroe County Bridge 317 (LFR)
Bridge ID: 53-00317 (2026)
SNBI: 5300184 (2026)
Struct-Def: Monroe County Bridge 317
Member: Member 7
Member alt: Wizard Alternative

Live Load	Live Load Type	Rating Method	Rating Level	Load Rating (Ton)	Rating Factor	Location (ft)	Location Span-(%)	Limit State	Impact	Lane
Alt Military (LFR) (M...	Axle Load	LFR	Legal Operating	41.68	1.737	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
EV2-Indiana	Axle Load	LFR	Legal Operating	59.55	2.071	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
EV3-Indiana	Axle Load	LFR	Legal Operating	57.82	1.345	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Axle Load	LFR	Inventory	26.45	1.322	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44	Lane	LFR	Inventory	32.10	1.605	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Axle Load	LFR	Legal Operating	44.17	2.209	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
H 20-44 Legal	Lane	LFR	Legal Operating	53.61	2.680	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Axle Load	LFR	Inventory	43.34	1.204	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44	Lane	LFR	Inventory	57.78	1.605	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Axle Load	LFR	Legal Operating	72.38	2.010	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 20-44 Legal	Lane	LFR	Legal Operating	96.49	2.680	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Axle Load	LFR	Inventory	43.34	0.963	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
HS 25	Lane	LFR	Inventory	57.78	1.284	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
NRL	Axle Load	LFR	Legal Operating	66.59	1.665	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU4	Axle Load	LFR	Legal Operating	55.74	2.064	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU5	Axle Load	LFR	Legal Operating	58.48	1.886	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU6	Axle Load	LFR	Legal Operating	60.36	1.737	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested
SU7	Axle Load	LFR	Legal Operating	65.79	1.698	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3 (Mod. Tire W...	Axle Load	LFR	Legal Operating	61.30	2.452	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3-3 (Mod. Tire...	Axle Load	LFR	Legal Operating	119.08	2.977	16.20	1 - (60.0)	Design Flexure - Co...	As Requested	As Requested
Type 3S2 (Mod. Tire...	Axle Load	LFR	Legal Operating	90.96	2.527	13.50	1 - (50.0)	Design Flexure - Co...	As Requested	As Requested

BEAM, LONGEST & NEFF, LLC

Job: Monroe County Bridge 317 **DES:** SS **DATE:** 2026-04-23

Item: LFR Rating Factors **CK:** RKH **DATE:** 2026-04-24

Vehicles from BrR (LFR)	RF + (Member No. 1)	RF + (Member No. 2)	RF * (Member No. 3)	Controlling RF
Alternate Miltiary Loading	1.292	0.305	1.758	0.305
EV2	1.503	0.366	2.097	0.366
EV3	1.000	0.236	1.361	0.236
H 20-44 (Axle)	0.984	0.233	1.339	0.233
H 20-44 (Lane)	1.204	0.280	1.625	0.280
H 20-44 (Legal) (Axle)	1.643	0.389	2.235	0.389
H 20-44 (Legal) (Lane)	2.011	0.468	2.714	0.468
HS 20-44 (Axle)	0.850	0.213	1.219	0.213
HS 20-44 (Lane)	1.204	0.280	1.625	0.280
HS 20-44 (Legal) (Axle)	1.420	0.355	2.035	0.355
HS 20-44 (Legal) (Lane)	2.011	0.468	2.714	0.468
HS 25 (Axle)	0.680	0.170	0.975	0.170
HS 25 (Lane)	0.963	0.224	1.300	0.224
NRL	1.249	0.290	1.686	0.290
SU4	1.538	0.360	2.090	0.360
SU5	1.415	0.329	1.910	0.329
SU6	1.303	0.303	1.759	0.303
SU7	1.263	0.297	1.719	0.297
Type 3	1.824	0.430	2.482	0.430
Type 3-3	2.215	0.522	3.013	0.522
Type 3S2	1.896	0.441	2.558	0.441

	Vehicles (LR Summary Sheet)	Rating Factors
	Design	
	HL-93	NA
	Fatigue	NA
	H-20	0.233
	HS-20	0.213
	HS-25	0.170
	Legal / Operating	
**	EV2	0.433
**	EV3	0.279

NRL	0.290
H-20	0.389
Alternate Military	0.305
HL-93	NA
HS-20	0.355
AASHTO Type 3	0.430
SU4	0.360
AASHTO Type 3S2	0.441
SU5	0.329
AASHTO Type 3-3	0.522
Lane-Type	NA
SU6	0.303
SU7	0.297

Notes:

\+ Sort Rating Results Summary Report Column "Live Load Type" 1st then sort "Rating Level" 2nd to get the RF's in correct order.

* If no member 3 then input 99

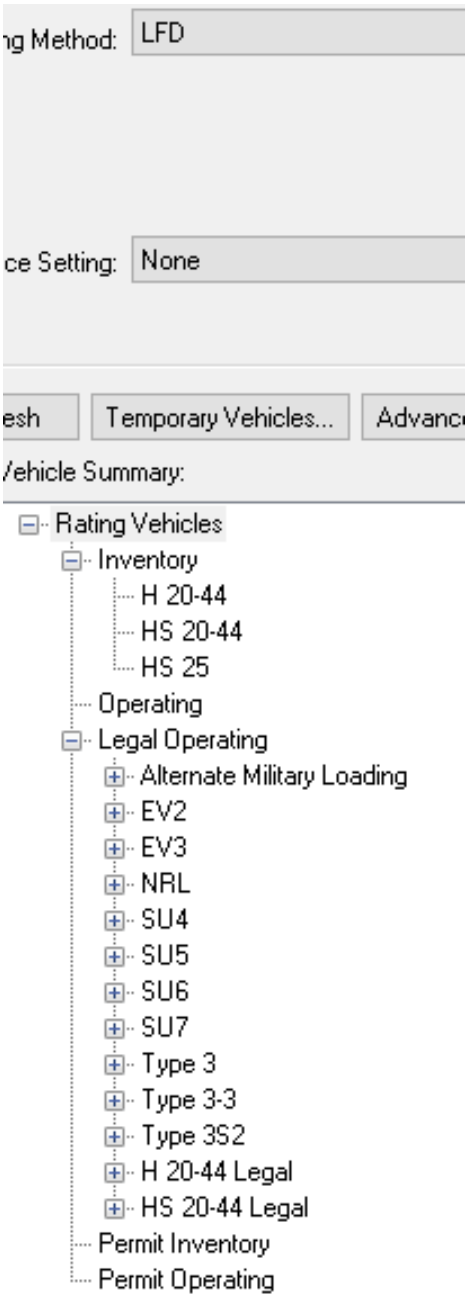
** EV Operating Live Load Factor (A_2)= 1.10

(Typical Operating Live Load Factor A_2 = 1.3; however, per INDOT BIM App. E Tbl. 6B.4.3-1 A_2 = 1.1 Assuming ADTT<1000 (1 direction) for both 1 EV & 10 EV crossings per Day)

DES: JJA 11/1/18 Rev: AVW 3/8/19
CHK: TSW 11/6/18 Chk Rev: JMH 3/8/19
Rev: AVW 3/26/19 REV: AVW 6/2/22 EV LF
Chk Rev: SJF 3/26/19 Chk Rev: KB 6/2/22

LFR Rating Vehicles

Vehicle Template from BrR



Vehicle	Tandem Train	Scale Factor	Impact	Single Lane Loaded
Alternate Mili	☐	1		☐
EV2	☐	1		☑
EV3	☐	1		☑
H 20-44	☐	1		☐
HS 20-44	☐	1		☐
NRL	☐	1		☐
SU4	☐	1		☐
SU5	☐	1		☐
SU6	☐	1		☐
SU7	☐	1		☐
Type 3	☐	1		☐
Type 3-3	☐	1		☐
Type 3S2	☐	1		☐
H 20-44 Leg	☐	1		☐
HS 20-44 Le	☐	1		☐
HS 25	☐	1		☐

Figures below are from INDOT BIM Part 3.

Truck Configuration
~~HL-93~~
~~Fatigue*~~
H-20
HS-20
HS-25
~~Alternate Military~~
~~Toll Road Loading No. 1~~
~~Toll Road Loading No. 2~~
~~Special Toll Road Truck~~
~~Michigan Train Truck #5~~
~~Michigan Train Truck #8~~

Not applicable

* The Fatigue configuration shall be used for evaluating the Fatigue Limit State per MBE Table 6A.4.2.2-1 whenever HL-93 is specified on applicable plans

Figure 3-4.1 Potential Design Vehicles

Truck Configuration	LRFR Subcategory
H-20	Routine Commercial Traffic
HS-20	Routine Commercial Traffic
Alternate Military	Routine Commercial Traffic
AASHTO Type 3	Routine Commercial Traffic
AASHTO Type 3S2	Routine Commercial Traffic
AASHTO Type 3-3	Routine Commercial Traffic
~~Lane-Type*~~	~~Routine Commercial Traffic~~
EV2	Routine Commercial Traffic
EV3	Routine Commercial Traffic
NRL**	Specialized Hauling
SU4	Specialized Hauling
SU5	Specialized Hauling
SU6	Specialized Hauling
SU7	Specialized Hauling

* Load and Resistance Factor Rating (LRFR) only
** Not to be used for load posting

Figure 3-4.2 Required Legal Vehicles

BEAM, LONGEST & NEFF, LLC

Job: Monroe County Bridge 317 **DES:** AE **DATE:** 3-13-24

Item: BrR DL for Adjacent Box Beam **CK:** SJM **DATE:** 3-14-24

DEAD LOAD CALCULATIONS FOR ADJACENT PRESTRESSED CONCRETE BOX BEAM

INPUT

		Is railing attached directly to ext. beam? =	N	
Beam Spacing, S =	4.00 ft	Non Sacrificial W.S. Thickness, t_{ws} =	1.0 in.	
Overhang Width, S_{ovr} =	2.00 ft	Non Sacrificial W.S. Type =	Asphalt	
Max. Deck Depth =	0.000 in.	Structural Deck Depth (avg.ext.bm.)=	0.0 in.	(Assumes 0.5" Sac. W.S.)
Min. Deck Depth =	0.0 in.	Avg. Sacrificial W.S., T_{sac}=	0.00 in.	
Deck Cross Slope =	2.0 %	Deck/Sidewalk Density, D =	0.150 kcf	
Left Br. Rail/Curb Type =	Timber	Left Sidewalk Width & Avg. Thick =	0.0 in. x	0.0 in.
Right Br. Rail/Curb Type =	Timber	Right Sidewalk Width & Avg. Thick =	0.0 in. x	0.0 in.
		Median Width & Avg. Thickness =	0.0 in. x	0.0 in.
Void Type =	None	Left Curb Width & Avg. Thickness =	0.0 in. x	0.0 in.
# of Voids =	0	Right Curb Width & Avg. Thickness =	0.0 in. x	0.0 in.
Void Avg. Ht or Diameter =	0.0 in.	Box Beam Depth, H =	12.0 in.	
Rect. Void Avg. Width =	0.0 in.	Box Beam Width, W =	48 in.	
Internal Diaph. Thickness =	0.0 in.	Additional Overhang Thickness, t_{ovr} =	0.000 in.	
# of Internal Diaphragms	0	Max Est. Camber (t_{cam}) =	0.00 in.	

Non-Standard Dead Load Calculations (This section must be checked manually)

- Assume 1/2" residual camber for all beams.

- Assumed Grade 40 reinforcing steel.

Non-Standard Wearing Surface =	0 pcf
Non-Standard Left Br. Rail/Curb Dead Load =	0.00 k/ft
Non-Standard Right Br. Rail/Curb Dead Load =	0.00 k/ft
Non-Standard Non-Composite Dead Load on Exterior Beam =	0.00 k/ft
Non-Standard Non-Composite Dead Load on Interior Beam =	0.00 k/ft

BEAM, LONGEST & NEFF, LLC

Job: Monroe County Bridge 317 **DES:** AE **DATE:** 3-13-24

Item: BrR DL for Adjacent Box Beam **CK:** SJM **DATE:** 3-14-24

OUTPUT

DEAD LOAD - ENTERED INTO BrR MODEL

Non Composite DC1 - Point Load

Internal Diaphragms = NA

Composite DC2 (If Beams Act Independently of each other, these loads Shall be adjusted in BrR)

Left Br. Rail/Curb =	Timber unit weight =	0.03 k/ft
Right Br. Rail/Curb =	Timber unit weight =	0.03 k/ft
Median Load =	0 in. x 0 in. Median unit weight =	0.00 k/ft
Max. Curb Load =	0 in. x 0 in. Curb unit weight =	0.00 k/ft

Wearing Surface DW

Non Sacrificial W.S. = t_{ws} = 1.0 in. Non-Sacrificial W.S. Density = 140 pcf

DEAD LOAD - INTERIOR BEAM - ENTERED AS MEMBER LOAD IN BrR

Interior Girder - Non Composite DC1 - Distributed Load

Non-Standard Load (If applied to interior beam only) =			0.000 k/ft
Addition Haunch =	$(W*t_{cam})/144*D/2$ =	(48*0)/144*0.15/2 =	0.000 k/ft
Sacrificial W.S. =	$(S)*T_{sac}/12*D$ =	(4*0)/12*0.15 =	0.000 k/ft
			0.00 k/ft

DEAD LOAD - EXTERIOR BEAM - ENTERED AS MEMBER LOAD IN BrR

Exterior Girder - Non Composite DC1 - Distributed Load

Non-Standard Load (If applied to exterior beam only) =			0.000 k/ft
Railing Load (If Beams Act Independently Apply this Load to Ext. Beam only) =			0.000 k/ft
Addition Haunch =	$(W*t_{cam})/144*D/2$ =	(48*0)/144*0.15/2 =	0.000 k/ft
Addl. Overhang =	$t_{ovr}*(S_{ovr}-W/12)*D$ =	0.00*[2.00-48.00/(2*12)]*0.15 =	0.000 k/ft
Sacrificial W.S. =	$(S)*T_{sac}/12*D$ =	(4)*(0/12)*0.15 =	0.000 k/ft
			0.00 k/ft

Job:	Monroe County Bridge 317	**DES:**	AE	**DATE:**	3-13-24
Item:	LFD Pretensioned Stress Limits	**CK:**	SJM	**DATE:**	3-14-24

LFD PRETENSIONED STRESS LIMITS

INPUT

Prestressing Type =	Prestressed
f'c =	5.0 ksi
f'ci =	4.0 ksi
Corrosive Exposure Condition =	Moderate

OUTPUT

Initial Allowable Compression =	0.60f'ci	= 0.6 * 4 =	**2.400 ksi**	*[AASHTO 9.15.2.1]*
Initial Allowable Tension =	3*(f'ci)^1/2 ≤ 200psi	= 3 * (4000)^1/2 =	**0.190 ksi**	*[AASHTO 9.15.2.1]*
Final Allowable Compression =	0.60f'c	= 0.6 * 5 =	**3.000 ksi**	*[AASHTO 9.15.2.2]*
Final Allowable Tension =	6*(f'c)^1/2	= 6 * (5000)^1/2 =	**0.424 ksi**	*[AASHTO 9.15.2.2]*
Final Allowable DL Comp. =	0.40f'c	= 0.40 *5 =	**2.000 ksi**	*[AASHTO 9.15.2.2]*
Final Allowable Slab Comp. =	Not Specified		**Leave Blank**	
Final Allowable Compression:				
(LL + 1/2(Pe + DL) =	0.40f'c	= 0.40 * 5 =	**2.000 ksi**	*[AASHTO 9.15.2.2]*

BEAM, LONGEST & NEFF, LLC

Job: Monroe County Bridge 317 **DES:** AE **DATE:** 3-13-24
Item: LFD Live Load Distribution Factors **CK:** SJM **DATE:** 3-14-24

LIVE LOAD DISTRIBUTION FACTORS FOR ADJACENT PRECAST CONCRETE BEAMS AS DECK

INPUT

Beam Type = Non-voided Rectangular Beam
Interior Beam Span Length, L = 27.00 ft
Exterior Beam Span Length, L_e = 27.00 ft
Overall Width of Bridge, W = 28.00 ft
Beam Spacing, S = 4.00 ft
Number of traffic lanes, N_L = 2
Number of Beams, N_b = 7
Bridge skew = 0.00 deg
Moment of Inertia, I = 6850 in^4
Poisson's ratio for girders, μ = 0.200
Overhang Width, wo = 2.000 ft
Edge of Slab to Curb, b = 0.000 ft
Beams Transversely Tied Together Yes

Channel or T-Beam Moment of Inertia, I_x

btf = yc =
wtf = I_X =
# of Webs/Stems & Tapers =
bw = Taper width =
dw = Taper height =

Input for calculating Saint-Venant torsion constant, J

b1 = 48.00 in	b3 =	b5 =
t1 = 12.00 in	t3 =	t5 =
b2 =	b4 =	b6 =
t2 =	t4 =	t6 =

SUMMARY

	Exterior LL Distribution Factors (Wheel Lines per Beam)	
	Spreadsheet	Design/Load Rating Software
Shear (1 lane) =	0.685	0.685
Shear at supports (1 lane) =	1.000	1.000
Moment (1 lane) =	0.685	0.685
Deflection (1 lane) =	0.286	0.286
Shear (2+ lanes) =	0.685	0.685
Shear at supports (2+ lanes) =	1.000	1.000
Moment (2+lanes) =	0.685	0.685
Deflection (2+ lanes) =	0.571	0.571

	Interior LL Distribution Factors (Wheel Lines per Beam)	
	Spreadsheet	Design/Load Rating Software
Shear (1 lane) =	0.685	0.685
Shear at supports (1 lane) =	1.000	1.000
Moment (1 lane) =	0.685	0.685
Deflection (1 lane) =	0.286	0.286
Shear (2+ lanes) =	0.685	0.685
Shear at supports (2+ lanes) =	1.000	1.000
Moment (2+lanes) =	0.685	0.685
Deflection (2+ lanes) =	0.571	0.571

LL Distribution Factor for Deflection

One Design Lane Loaded:

Dist. Factor = 2 wheels / N_b = 2 / 7 = **0.286**

Two or More Design Lane Loaded:

Reduction Factor = 1.00 *[AASHTO 3.12.1]*

Dist. Factor = 2 wheels * N_L * Reduction Factor / N_b = 2*2*1.00/7 = **0.571**

Job:	Monroe County Bridge 317	**DES:**	AE	**DATE:**	3-13-24
Item:	LFD Live Load Distribution Factors	**CK:**	SJM	**DATE:**	3-14-24

LIVE LOAD DISTRIBUTION FACTORS FOR ADJACENT PRECAST CONCRETE BEAMS AS DECK

OUTPUT

Saint-Venant Torsion Constant, J

For Circular Voided or Non-voided Rectangular Beams, Channels Beams, and Tee Beams: *[AASHTO 3.23.4.3]*

$J = \Sigma\{(1/3)bt^3(1 - 0.630t/b)\}$

J = (1/3)48*12^3*(1 - 0.630*12/48)

J = 23293 in^4

For Box-Section Beams: *[AASHTO 3.23.4.3]*

$$J = \frac{2tt_f(b-t)^2(d-t_f)^2}{bt + dt_f - t^2 - t_f^2} = \frac{NA}{NA} = \frac{NA}{NA}$$

J = NA

Saint-Venant torsion constant, J = **23293 in^4**

BEAM, LONGEST & NEFF, LLC

Job: Monroe County Bridge 317 **DES:** AE **DATE:** 3-13-24
Item: LFD Live Load Distribution Factors **CK:** SJM **DATE:** 3-14-24

EXTERIOR BEAM

OUTPUT

LL DISTRIBUTION FACTOR BY AASHTO EQUATION

$D.F. = S/D_e \leq 1$ (AASHTO 3-11)

$D_e = (5.75-0.5N_L)+0.7N_L(1-0.2C_e)^2$ (AASHTO 3-12)

$C_e = K(W/L_e)$ for $W/L_e <$ 1 (AASHTO 3-13)

$C_e = K$ for $W/L_e \geq$ 1 (AASHTO 3-13)

$K = \{(1 + \mu)\ I / J\}^{1/2}$ *[AASHTO 3.23.4.3]*

Limit: $(I/J)^{1/2} \leq$ 5.0 — 0.54229 ≤ 5.0 — OK *[AASHTO 3.23.4.3]*

skew ≤ 45 deg — 0 deg ≤ 45 deg — OK *[AASHTO 3.23.4.3]*

K = {(1 + 0.2) * 6850 / 23293}^1/2 = **0.594**

W/L_e = 28 / 27 = **1.037** > **1**

C_e = K = 0.594 = **0.594**

D_e = (5.75-0.5*2)+0.7*2*(1-0.2*0.59)^2 = **5.837**

S/D_e = 4 / 5.84 = **0.685**

LL DISTRIBUTION FACTOR BY LEVER RULE *[AASHTO 3.23.1.2]*

of Wheel Lines possible and Location with respect to centerline beam

	Number of Wheel Lines					
	1	2	3	4	5	6
Location (ft) =	0.00	6.00	10.00	16.00	20.00	26.00
Applicable? =	y	n	n	n	n	n
Dist. From Beam =	0.00	0	0	0	0	0
Dist. Used in Lever Rule =	4.00	0	0	0	0	0

Use 1 Truck Max

One Truck - Applicable
LLDF = (4.00+0.00)/4.00
= 1.000 x 1.0 Reduction Factor = 1.000

Two Trucks - Not Applicable
LLDF = (4.00+0.00+0.00+0.00)/4.00
= 1.000 x 1.0 Reduction Factor = 0.000

Three Trucks - Not Applicable
LLDF = (4.00+0.00+0.00+0.00+0.00+0.00)/4.00
= 1.000 x 0.9 Reduction Factor = 0.000

Exterior LL Distribution Factors	
Shear (1 lane) =	0.685
Shear at supports (1 lane) =	1.000
Moment (1 lane) =	0.685
Shear (2+ lanes) =	0.685
Shear at supports (2+ lanes) =	1.000
Moment (2+lanes) =	0.685

Job: Monroe County Bridge 317 **DES:** AE **DATE:** 3-13-24
Item: LFD Live Load Distribution Factors **CK:** SJM **DATE:** 3-14-24

INTERIOR BEAM

OUTPUT

LL DISTRIBUTION FACTOR BY AASHTO EQUATION

D.F. = S/D ≤ 1 (AASHTO 3-11)

D = $(5.75-0.5N_L)+0.7N_L(1-0.2C)^2$ (AASHTO 3-12)

C = K(W/L) for W/L < 1 (AASHTO 3-13)

C = K for W/L ≥ 1 (AASHTO 3-13)

K = $\{(1 + \mu)\ I / J\}^{1/2}$ *[AASHTO 3.23.4.3]*

Limit: $(I/J)^{1/2} \leq 5.0$ 0.5 ≤ 5.0 **OK** *[AASHTO 3.23.4.3]*

skew ≤ 45 deg 0 deg ≤ 45 deg **OK** *[AASHTO 3.23.4.3]*

K = {(1 + 0.2) * 6850 / 23293}^1/2 = **0.594**

W/L = 28 / 27 = **1.037** **>** **1**

C = K = 0.594 = **0.594**

D = (5.75-0.5*2)+0.7*2*(1-0.2*0.59)^2 = **5.837**

S/D = 4 / 5.84 = **0.685**

LL DISTRIBUTION FACTOR BY LEVER RULE *[AASHTO 3.23.1.2]*

# of Wheel Lines possible and Location with respect to centerline beam

	Number of Wheel Lines									
	1	2	3	4	5	6	7	8	9	10
Location (ft) =	0	6	-4	-10	10	16	-14	-20	20	26
Applicable? =	y	n	y	n	n	n	n	n	n	n
Dist. From Beam =	0	0	4	0	0	0	0	0	0	0
Dist. Used in Lever Rule =	4	0	0	0	0	0	0	0	0	0

Use 2 Trucks Max

One Truck - Applicable
LLDF = (4.00+0.00)/4.00
= 1.000 x 1.0 Reduction Factor = 1.000

Two Trucks - Applicable
LLDF = (4.00+0.00+0.00+0.00)/4.00
= 1.000 x 1.0 Reduction Factor = 1.000

Three Trucks - Not Applicable
LLDF = (4.00+0.00+0.00+0.00+0.00+0.00)/4.00
= 1.000 x 0.9 Reduction Factor = 0.000

Four Trucks - Not Applicable
LLDF = (4.00+0.00+0.00+0.00+0.00+0.00+0.00+0.00)/4.00
= 1.000 x 0.75 Reduction Factor = 0.000

Five Trucks - Not Applicable
LLDF = (4.00+0.00+0.00+0.00+0.00+0.00+0.00+0.00+0.00+0.00)/4.00
= 1.000 x 0.75 Reduction Factor = 0.000

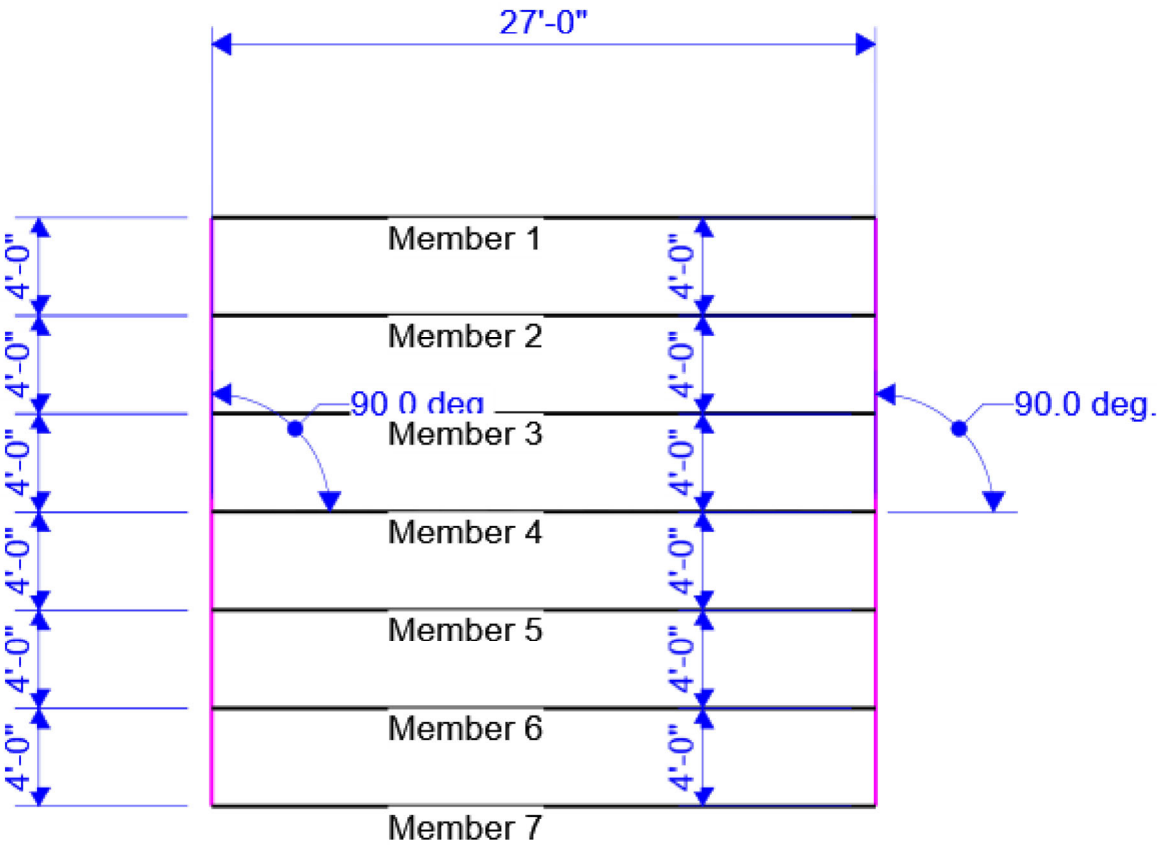
Job:	Monroe County Bridge 317	**DES:**	AE	**DATE:**	3-13-24
Item:	LFD Live Load Distribution Factors	**CK:**	SJM	**DATE:**	3-14-24

INTERIOR BEAM

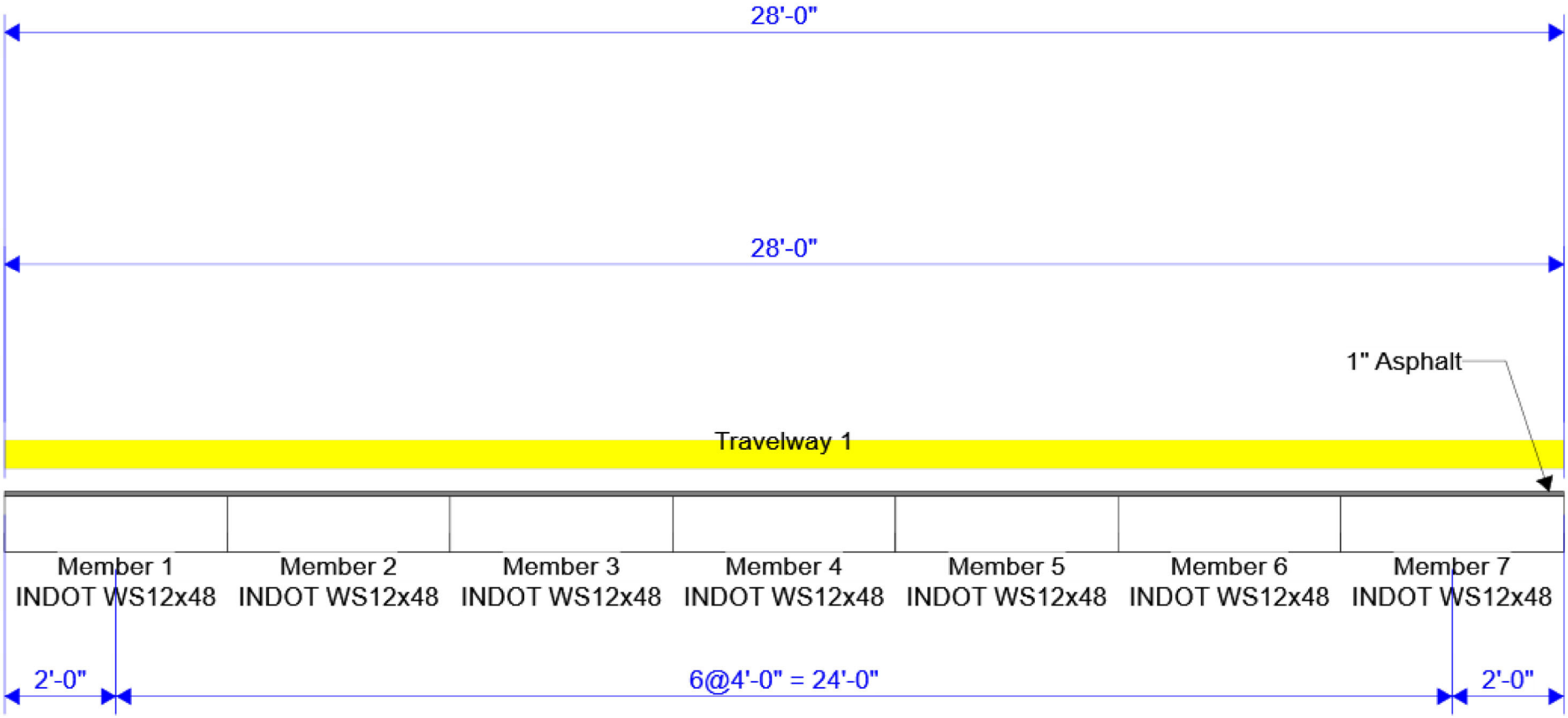
OUTPUT

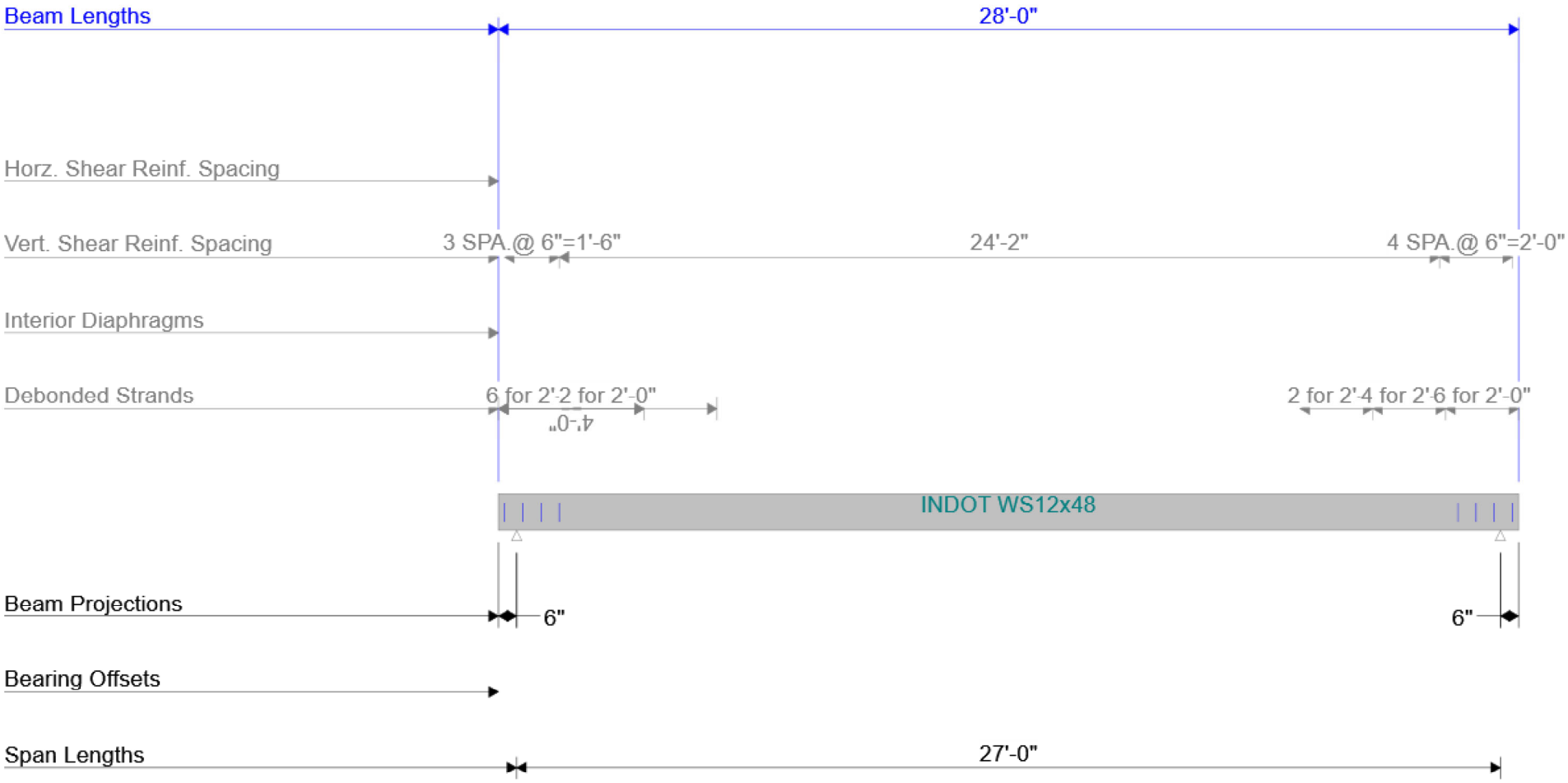
Interior LL Distribution Factors	
Shear (1 lane) =	0.685
Shear at supports (1 lane) =	1.000
Moment (1 lane) =	0.685
Shear (2+ lanes) =	0.685
Shear at supports (2+ lanes) =	1.000
Moment (2+lanes) =	0.685

53-00315.
Monroe County Bridge 315 (LFR) - Monroe County Bridge 315
W. Club House Dr. / Trib. of Griffy Creek
3/15/2024



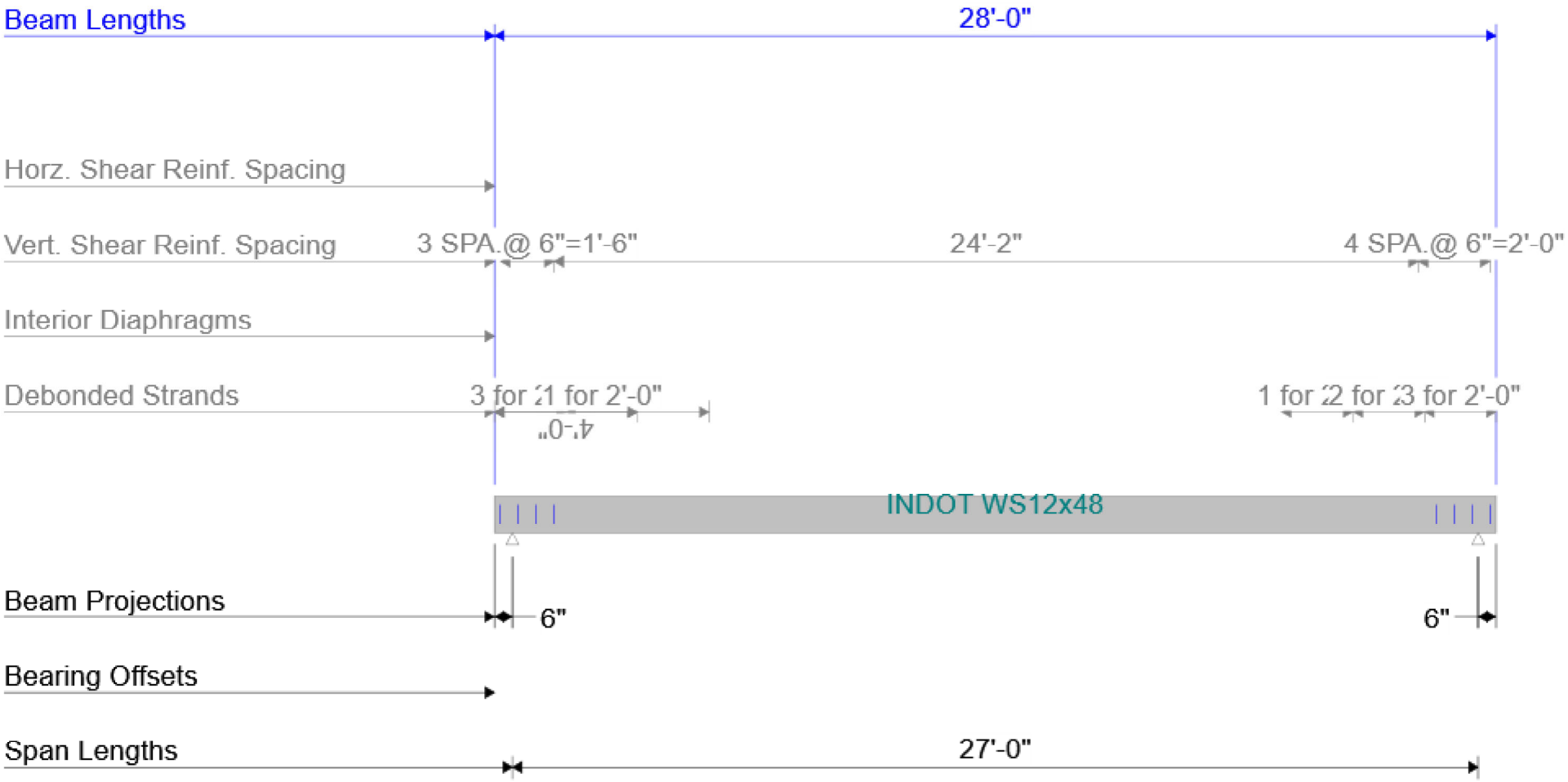
53-00315.
Monroe County Bridge 315 (LFR) - Monroe County Bridge 315
W. Club House Dr. / Trib. of Griffy Creek
3/15/2024



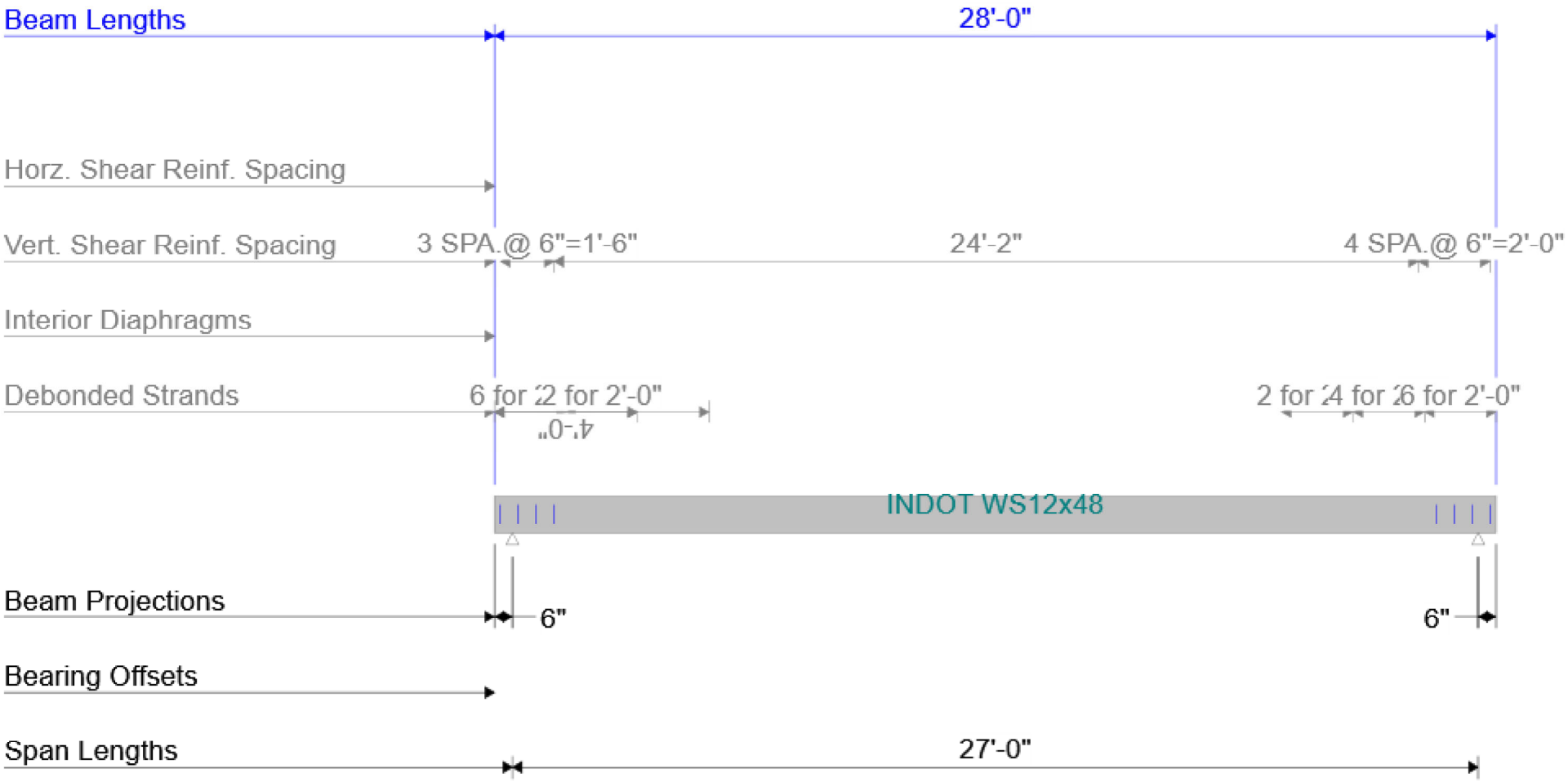


Notes:
* All beam length dimensions are horiz.
* X denotes diaphragm locations.

53-00315
Monroe County Bridge 315 (LFR) - Monroe County Bridge 315 - Member 2
3/18/2024

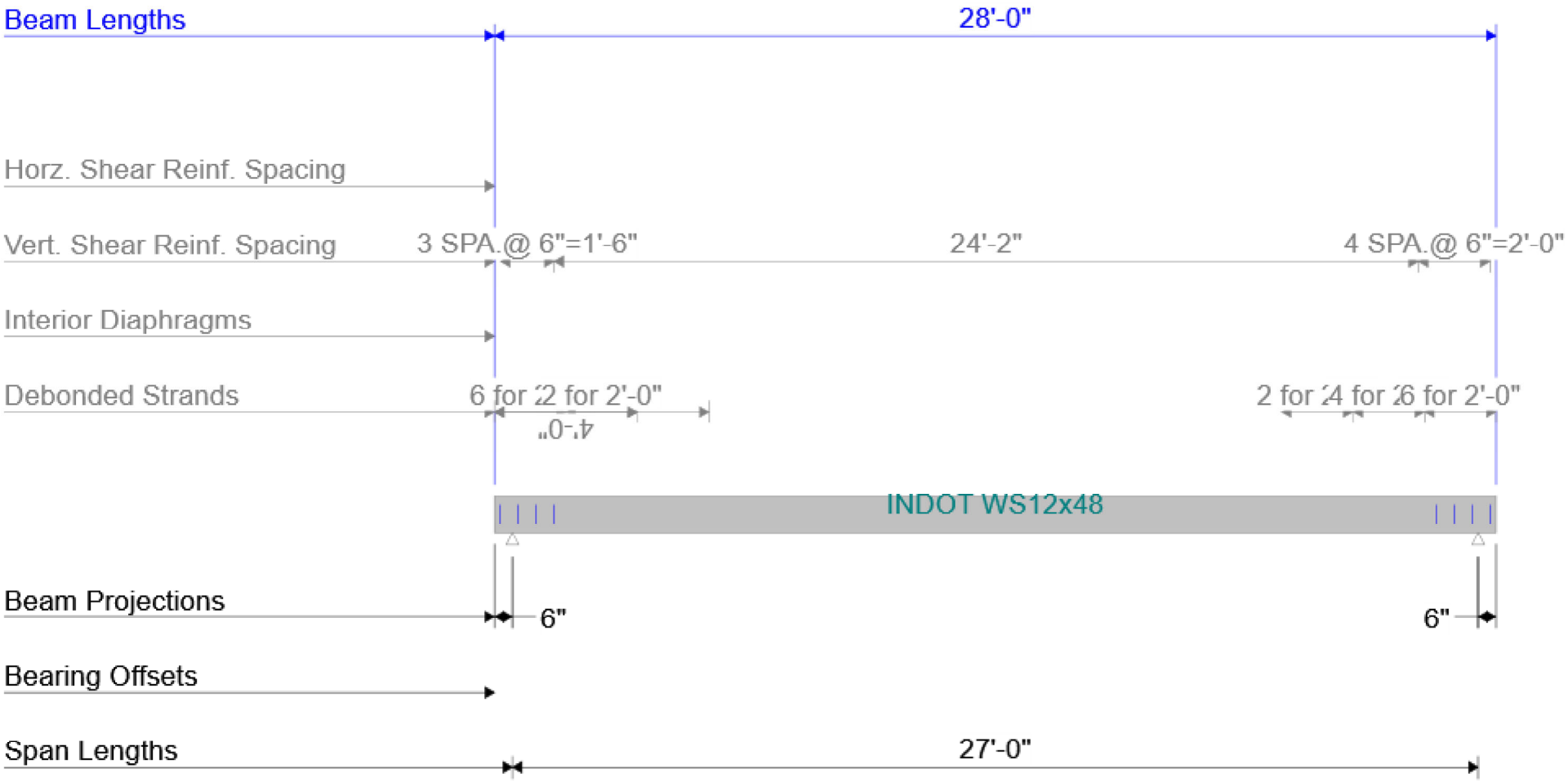


Notes:
* All beam length dimensions are horiz.
* X denotes diaphragm locations.



Notes:
* All beam length dimensions are horiz.
* X denotes diaphragm locations.

53-00315
Monroe County Bridge 315 (LFR) - Monroe County Bridge 315 - Member 7
3/18/2024



Notes:
* All beam length dimensions are horiz.
* X denotes diaphragm locations.

Member 1

Strand Layout - Span 1

Description type
- P and CGS only
- Strands in rows

Strand configuration type
- Straight/Debonded
- Harped
- Harped and straight debonded

Symmetry

Mid span

Debonding

Left

Section location (in)	Measured and debonded from
24	End of Beam
48.0000	End of Beam
72.0000	End of Beam

New Modify Delete

Right

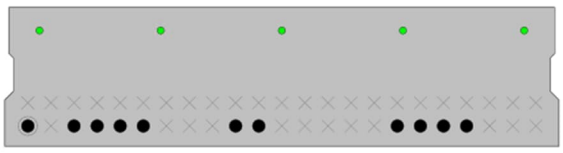
Section location (in)	Measured and debonded from
24.0000	End of Beam
48.0000	End of Beam
72.0000	End of Beam

New Modify Delete

OK Apply Cancel

160%

Notes:
Strand positions generated by the REVISED method.
Please refer to Help for a description of this method.



Number of strands = 11

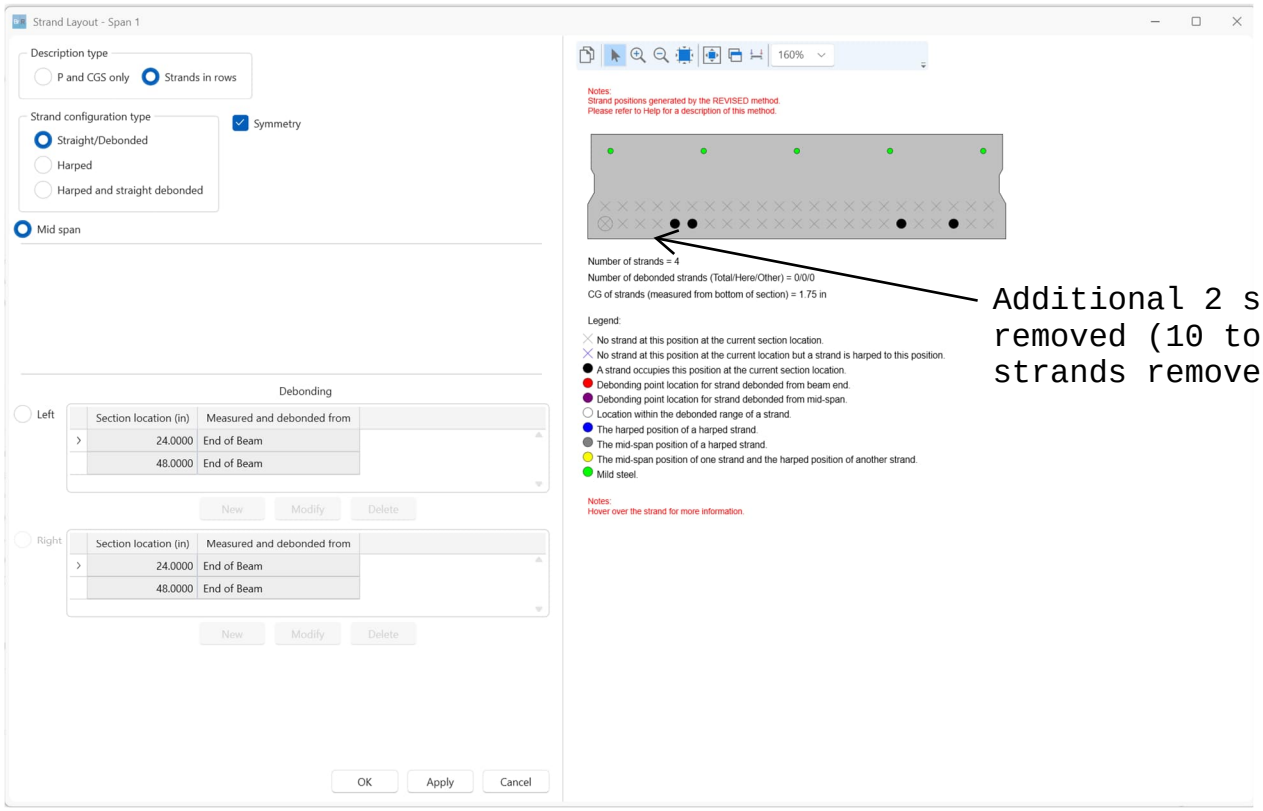
Number of debonded strands (Total/Here/Other) = 0/0/0

CG of strands (measured from bottom of section) = 1.75 in

Legend:

- No strand at this position at the current section location.
- No strand at this position at the current location but a strand is harped to this position.
- A strand occupies this position at the current section location.
- The strand is debonded from the end of the beam to the current section location.
- The strand is debonded from the mid-span to the current section location.
- The strand is debonded at other section location. Hover over the strand for more information.
- The harped position of a harped strand.
- The mid-span position of a harped strand.
- The mid-span position of one strand and the harped position of another strand.
- Mild steel.

Member 2



Additional 2 strands removed (10 total strands removed)

Member 3

Strand Layout - Span 1

Description type
- P and CGS only
- Strands in rows

Strand configuration type
- Straight/Debonded
- Harped
- Harped and straight debonded

Symmetry

Mid span

Debonding

Left

Section location (in)	Measured and debonded from
24	End of Beam
48.0000	End of Beam
72.0000	End of Beam

New Modify Delete

Right

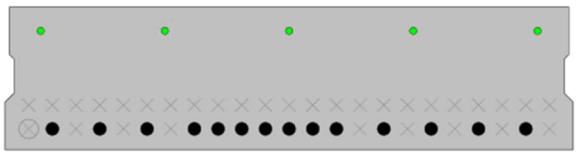
Section location (in)	Measured and debonded from
24.0000	End of Beam
48.0000	End of Beam
72.0000	End of Beam

New Modify Delete

OK Apply Cancel

160%

Notes:
Strand positions generated by the REVISED method.
Please refer to Help for a description of this method.



Number of strands = 14

Number of debonded strands (Total/Here/Other) = 0/0/0

CG of strands (measured from bottom of section) = 1.75 in

Legend:

- No strand at this position at the current section location.
- No strand at this position at the current location but a strand is harped to this position.
- A strand occupies this position at the current section location.
- The strand is debonded from the end of the beam to the current section location.
- The strand is debonded from the mid-span to the current section location.
- The strand is debonded at other section location. Hover over the strand for more information.
- The harped position of a harped strand.
- The mid-span position of a harped strand.
- The mid-span position of one strand and the harped position of another strand.
- Mild steel.

Member 7

Strand Layout - Span 1

Description type
- P and CGS only
- Strands in rows

Strand configuration type
- Straight/Debonded
- Harped
- Harped and straight debonded

Symmetry

Mid span

Debonding

Left

Section location (in)	Measured and debonded from
24	End of Beam
48.0000	End of Beam
72.0000	End of Beam

New Modify Delete

Right

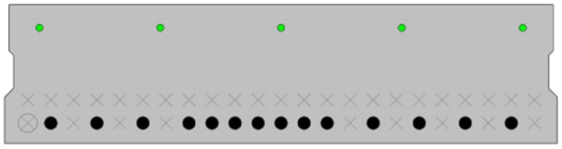
Section location (in)	Measured and debonded from
24.0000	End of Beam
48.0000	End of Beam
72.0000	End of Beam

New Modify Delete

OK Apply Cancel

160%

Notes:
Strand positions generated by the REVISED method.
Please refer to Help for a description of this method.



Number of strands = 14

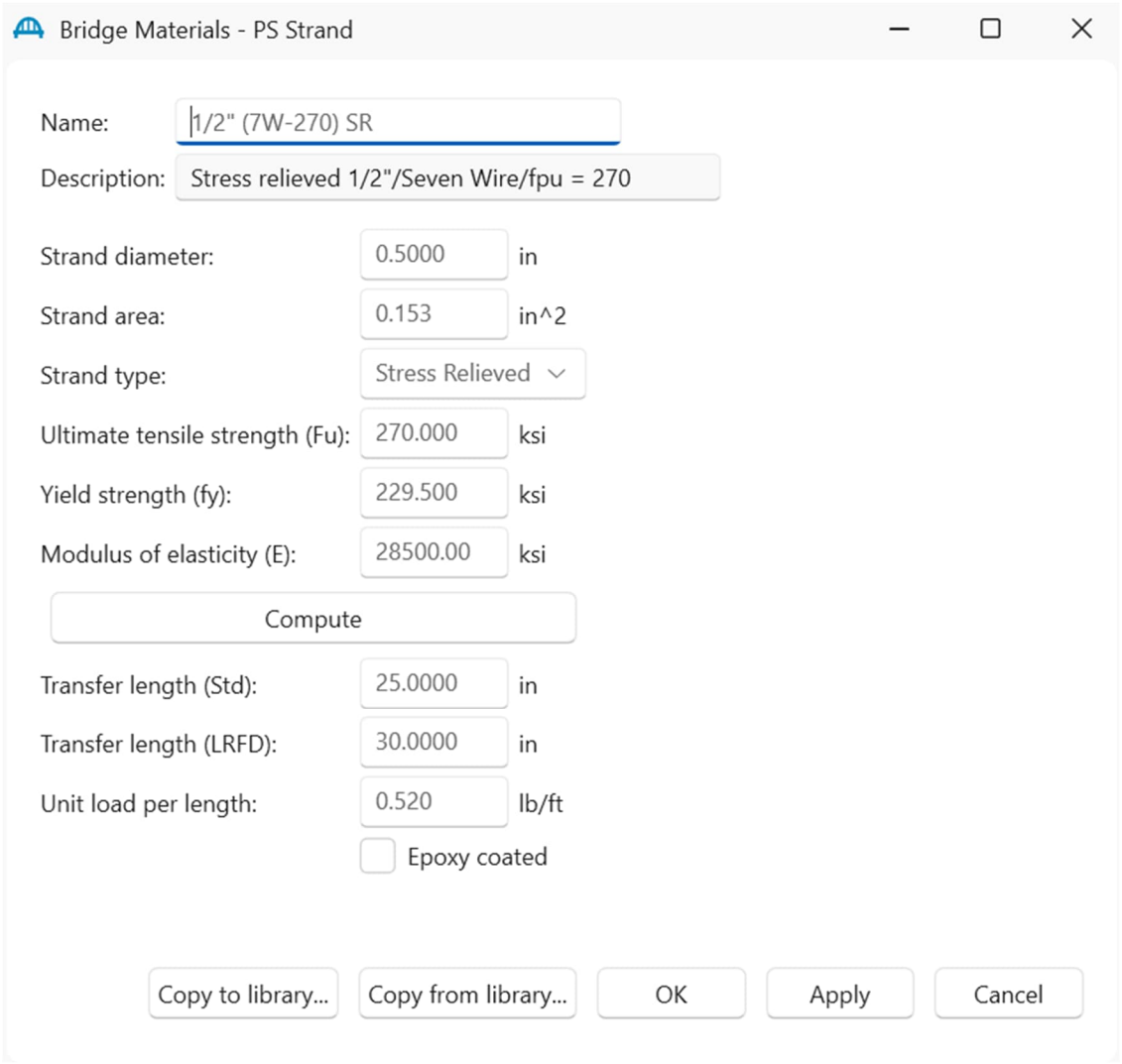
Number of debonded strands (Total/Here/Other) = 0/0/0

CG of strands (measured from bottom of section) = 1.75 in

Legend:

- No strand at this position at the current section location.
- No strand at this position at the current location but a strand is harped to this position.
- A strand occupies this position at the current section location.
- The strand is debonded from the end of the beam to the current section location.
- The strand is debonded from the mid-span to the current section location.
- The strand is debonded at other section location. Hover over the strand for more information.
- The harped position of a harped strand.
- The mid-span position of a harped strand.
- The mid-span position of one strand and the harped position of another strand.
- Mild steel.

Strand Properties



Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Bridge

Name	Copy of Monroe County Bridge 317 (LFR)	
Description	Copy of Simple Span Prestressed concrete Box Beam Bridge Location: 50 feet West of N. Old Martinsville Rd. Rated By SS Date: 4/23/2026 Reviewed By RKH on 4/24/2026	
Creation Timestamp	August 26, 2022	
Last Modified Timestamp	April 23, 2026	
Elevation		ft
X plane coodinate	0.00	ft
Y plane coodinate	0.00	ft
Recent ADTT Year		
Recent ADTT		
Previous ADTT Growth Rate		
Traffic Factor		
LRFD Constant Impact Factor	33.0	%
LRFD Fatigue Impact Factor	15.0	%
Impact Factor Adjustment		
Impact Factor Override		%
Impact Factor Type	Standard - AASHTO	
Template Indicator	false	
Bridge Completely Defined Indicator	false	
LRFD Multiple Presence Factors Reduce Based On ADTT Indicator	false	
ADT		
Directional PCT		%
Design ADTT		
Custom agency field one		
Custom agency field two		
Custom agency field three		
Custom agency field four		
Custom agency field five		
Custom agency field six		
Custom agency field seven		
Custom agency field eight		
Custom agency field nine		
Custom agency field ten		
Fatigue importance factor	Rural Roads, Low ADTT Routes	
Importance Factor Override Indicator	false	
Importance factor override		
Exp. annual ADTT growth rate	0.00	
ADTT(0)		
ADTT(present)		
ADTT(limit)		
Current Bridge Alt Name	53-00315	
Existing Bridge Alt Name	53-00315	
Feat. Intersected	Trib. of Griffy Creek	
Facility carried	W. Club House Dr.	
Location		
Year built	1960	
Length	28.00	ft
Route number		
Mi. post		mi
Average Daily Traffic Total		
Truck PCT		
Latitude		Degrees
Longitude		Degrees

Bridge Alt

Name	53-00315	
Description		
Creation Timestamp	August 26, 2022	
Last Modified Timestamp	August 26, 2022	
Reference Line Length		ft
Distance		ft
Offset		ft
Elevation		ft
Bearing		Degrees
Station		ft
Impact Factor Type	Standard - AASHTO	

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Longitudinal Force Load Distribution Type	Fixed & Expansion - Simplified	
Horizontal Curvature Indicator	false	
Bearing Location Type	Start	
Curved Bridge Alignment Type	Curved	
Curve Start Tangent Length		ft
Curve Length		ft
Curve Radius		ft
Curve Direction Type	Left	
Curve End Tangent Length		ft

Superstructure

Name	Alt 1	
Description		
Distance		ft
Last Creation TimeStamp		
Last Modified TimeStamp		
Station		ft
Angle	0.00	Degrees
Offset		ft
Vehicle Path Longitudinal Increment	4.000	ft
Existing Super Structure Alternative Name	Alt A	
Current Super Structure Alternative Name	Alt A	

Superstructure Loading Path

NSG Vehicle Path Type	Centered	
NSG Vehicle Center Line Location		ft
Adjacent Vehicle Path Type	None	
Adjacent Vehicle Center Line Location		ft

Superstructure Alternative

Name	Alt A
Description	
Creation Timestamp	
Last Modified Timestamp	
Superstructure Definition Name	Monroe County Bridge 317

Materials

Concrete Material

Name	INDOT PSC 5 ksi (US)	
Description	INDOT 5 ksi concrete (after 1962)	
Si Or Us Type	US Customary	
Compressive strength at 28 days (f'c)	5.000	ksi
Initial compressive strength (f'ci)	4.000	ksi
Coefficient of thermal expansion	0.0000060000	1/F
Density (for dead loads)	0.150	kcf
Density (for modulus of elasticity)	0.145	kcf
Std modulus of elasticity (Ec)	4074.28	ksi
Poisson's ratio	0.200	
Composition of concrete	Normal	
Shear factor	1.000	
Std initial modulus of elasticity		ksi
LRFD modulus of elasticity (Ec)	4291.19	ksi
LRFD initial modulus of elasticity		ksi
Splitting tensile strength (fct)		ksi
LRFD maximum aggregate size		in
Std modulus of rupture		ksi
LRFD modulus of rupture	0.54	ksi

Reinforcing Steel Material

Name	Grade 40	
Description	40 ksi reinforcing steel	
Si Or Us Type	US Customary	
Yield Strength	40.000	ksi
Modulus Of Elasticity	29000.00	ksi
Reinforcing Bar Type	Plain	

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Ultimate Strength	70.000	ksi

Beam Shapes

Steel Beam Shapes

PS Beam Shapes

PS I Beam Shapes

PS Box Beam Shapes

PS Box Beam-Circular Void

Name	INDOT WS12x48	
Description	WS12x48 INDOT Beam - 1962	
Type of void	Circular Void	
Nominal depth	12.0000	in
Depth	12.0000	in
Top width	47.2500	in
Bottom width	48.0000	in
Wall thickness		in
Top slab thickness		in
Bottom slab thickness		in
Shear key vertical location	4.0000	in
Shear key height	4.0000	in
Shear key depth	0.7500	in
Diameter	0.0000	in
Center to center distance of voids		in
CG void from bottom	6.0000	in
No. of voids		
Area	567.750	in^2
CG from bottom	5.9769	in
Moment of inertia	6850.000	in^4
Section modulus, top	1136.000	in^3
Section modulus, bot	1147.000	in^3
Half depth area for neg. flex	0.000	in^2
Half depth area for pos. flex	0.000	in^2
St. Venant torsional constant	23051.032	in^4
Volume/surface ratio	4.742	in
Nominal load	591.927	lb/ft
3-void (D1, D2, D1)	false	
D1		in
D2		in
Si or Us type	US Customary	
Use entered section properties	false	

Strand Grid

Row Number	Number Strands	Vertical Distance (in)	Horizontal Spacing (in)
1	23	1.7500	2.0000
2	23	3.7500	2.0000

Timber Beam Shapes

Rectangular Timber Beam Shapes

Appurtenances

Factors

Superstructures Definitions

Girder System Structure Def

Name	Monroe County Bridge 317
Description	Girder System structure definition generated using the design wizard

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Stage 2 dead load distribution	Uniformly to All Girders	
Stage 1 dead load distribution	Tributary Area	
Sustained modular ratio factor	3.000	
Deck crack control parameter		kip/in
Girder Spacing Display Type	Perpendicular	
With frame structure simplified definition	false	
Truck fraction		
Lanes available to trucks		
Override	false	
Deck exposure factor		
Distance From Left-most Girder To Structure Def Ref Line		ft
NBI Material Type	PC Concrete Continuous	
NBI Construction Type	Box Beam/Girder - Single	
Super Structure Service Life		
Standard Modified impact	0.000	
Standard Constant impact override	0.0	%
LRFD All other limit states	33.0	%
LRFD Fatigue and fracture limit states	15.0	%
Standard impact factor type	Standard - AASHTO	
Average humidity	70.000	%
Consider structural slab thickness for rating	true	
Consider structural slab thickness for design	true	
Consider wearing surface for rating	true	
Consider wearing surface for design	true	
LRFD: Model non-composite regions as non-composite	false	
LRFR: Model non-composite regions as non-composite	false	
Default units	US Customary	
Default Analysis Method	LFR	
Number Of Girders	7	
Number Of Spans	1	
Modeling type	Multi Girder System	

Span Lengths

Span	Length (ft)
1	27.0000

Load Case Description

Name	Description	Stage Name	Load Type	Load Application Time (Days)
DC1		Non-composite (Stage 1)	D,DC	
DC2		Composite (long term) (Stage 2)	D,DC	
DW		Composite (long term) (Stage 2)	D,DC	

Structure Framing Plan Details

Support Skew

Support Number	Frame Connections Indicator	Skew (Degrees)
1	FALSE	0.0000
2	FALSE	0.0000

Girder Spacings

Girder Bay Number	Start Spacing (ft)	End Spacing (ft)
1	4.00	4.00
2	4.00	4.00
3	4.00	4.00

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

4	4.00	4.00
5	4.00	4.00
6	4.00	4.00

Structure Typical Section

Concrete Deck

Total deck thickness	0.0000	in
Distance	0.00	ft
Length	27.00	ft
Width Left Start	-14.00	ft
Width Right Start	14.00	ft
Width Left End	-14.00	ft
Width Right End	14.00	ft
Straight Edge Indicator	false	
Continuous Over More Than Two Spans Indicator	false	
Deck Concrete Name	INDOT PSC 5 ksi (US)	
Deck Type	Concrete	

Travelway

Distance (ft)	Length (ft)	Number Of Lanes	Offset Left Start (ft)	Offset Left End (ft)	Offset Right Start (ft)	Offset Right End (ft)
0.00	27.00	2	-14.00	-14.00	14.00	14.00

Wearing Surface

Wearing surface material	Asphalt
Description	
Wearing surface density	140.000pcf
Wearing surface thickness	1.0000 in
Wearing Surface Load Case Name	DW

Prestress Porperties

Name	Wizard PS Properties	
Loss method	AASHTO Refined	
Jacking stress ratio	0.700	
P/S transfer stress ratio		
Final loss		ksi
Composite loss		ksi
Continuous loss		ksi
AASHTO Percentage DL		%
PCI Relax Coef1		
PCI Relax Coef2		
PCI Relax Coef3		
Ultimate creep loss		ksi
Maturity coefficient		
Ultimate shrinkage loss		ksi
PCI add'l times - 1		Days
PCI add'l times - 2		Days
PCI add'l times - 3		Days
PCI add'l times - 4		Days
PCI add'l times - 5		Days
PCI add'l times - 6		Days
PCI add'l times - 7		Days
PCI add'l times - 8		Days
PCI add'l times - 9		Days
PCI add'l times - 10		Days
Transfer time	24.0	Hours
AASHTO Relax Coef Base LRFD		ksi
AASHTO Relax Coef Elast Short LRFD		
AASHTO Relax Coef Shrink Creep LRFD		
AASHTO Relax Coef Base Std		ksi
AASHTO Relax Coef Elast Short Std		
AASHTO Relax Coef Shrink Creep Std		
Age at deck placement	48.00	Days
Final age	27375.00	Days

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Include elastic gains	false
PS Strand Name	1/2" (7W-270) SR

Stress Limits

Name	Wizard PS Stress Limit	
Description	Wizard PS Stress Limit	
Initial allowable compression (LRFD)	2.600	ksi
Initial allowable tension (LRFD)	0.190	ksi
Final allowable DL compression (LRFD)	2.250	ksi
Final allowable compression (LRFD)	3.000	ksi
Final allowable tension (LRFD)	0.425	ksi
Final allowable slab compression (LRFD)	2.000	ksi
Initial allowable compression (LFD)	2.400	ksi
Initial allowable tension (LFD)	0.190	ksi
Final allowable DL compression (LFD)	2.000	ksi
Final allowable compression (LFD)	3.000	ksi
Final allowable tension (LFD)	0.425	ksi
Final allowable slab compression (LFD)	2.000	ksi
Final allowable compression (LL+1/2(Pe+DL)) (LRFD)	2.000	ksi
Final allowable compression (LL+1/2(Pe+DL)) (LFD)	2.000	ksi
Concrete Name	INDOT PSC 5 ksi (US)	

Vertical Shear Reinforcement

Name	S18	
Number of legs	2.00	
Inclination (alpha)	90.0	Degrees
Vert Reinf Steel Name	Grade 40	
Bar Size	4	

Girder Member

Name	Member 1	
Description	Girder member generated using the design wizard	
Creation Timestamp		
Last Modified Timestamp		
Pedestrian load		lb/ft
Member Alternative Name-Current	Wizard Alternative	
Member Alternative Name-Existing	Wizard Alternative	

Member Loads

Distributed Member Loads

Direction Type	Distance (ft)	Length (ft)	Load Case Name	Load End (kip/ft)	Load Start (kip/ft)	WS Field Measured	Percent of Load Flexure (%)	Percent of Load Shear (%)	Description
X direction	0.00	27.00	DC1	0.030	0.030	FALSE	100.00	100.00	

Settlement

Load Case	Support Number	X Translation Settlement (in)	Y Translation Settlement (in)	Z Rotation Settlement (Radians)
	1			
	2			

Supports

General

Support Number	Support Type	X Translation Type	Y Translation Type	Z Rotation Type
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Override Z Rot Spring Const Indicator	Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)
False	1						
False	2						

ThreeD General

Support Number	Support Type	X Rotation Type	X Translation Type	Y Rotation Type	Y Translation Type	Z Rotation Type	Z Translation Type
1	Pinned	Free	Fixed	Free	Fixed	Free	Fixed
2	Roller	Free	Free	Free	Fixed	Free	Free

ThreeD Elastic

Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)	Override Z Rot Spring Const Indicator
1							False
2							False

Member Alt - Prestressed Concrete Box Beam - Schd

Name	Wizard Alternative	
Description	Member alternative generated using the design wizard	
Default units	US Customary	
Creation Timestamp		
Last Modified Timestamp		
Default rating method	LFR	
LFD Single LL Factor Moment	0.685	
LFD Single LL Factor Shear	0.685	
LFD Single LL Factor Shear At Supports	1.000	
LFD Single LL Factor Deflection	0.286	
LFD Multi LL Factor Moment	0.685	
LFD Multi LL Factor Shear	0.685	
LFD Multi LL Factor Shear At Supports	1.000	
LFD Multi LL Factor Deflection	0.571	
Haunch Embedded Flange Indicator	false	
Haunch Type	Flange edges	
Deck curing method	Moist-cured	
Interface type	Unroughened	
Cohesion factor	0.075	ksi
Friction factor	0.600	
Interface width		in
Default interface width to beam widths	true	
Service life	75.00	Years
Time composite		Days
Time of analysis		Years
Time continuous		Days
Deck drying time		Days
Consider deck differential shrinkage loads	false	
Beam Projection Start		in
Beam Projection End		in
Distribution factor input method	Simplified	
Sufficiently connected to act as a unit	false	
K1	0.200	
K2	0.800	ksi
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Distribution factor input method	Simplified	
Default Bolt Name		
Default Deck Concrete Name	INDOT PSC 5 ksi (US)	
Default Deck Reinf Steel Name	Grade 40	
Default Structural Steel Name		

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Default Weld Name		
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Reinf Steel Name	Grade 40	
Default Prestress Tendons Name	1/2" (7W-270) SR	
Override LRFD Factor Name		
Override LRFR Factor Name		
Beam curing method	Steam-cured	
Curing time		Days
Ignore positive moment at supports in ratings	false	
LRFD loss & stress calculations	Gross Cross Section	
LRFR loss & stress calculations	Gross Cross Section	
LRFD consider splitting resistance article	false	
LRFR consider splitting resistance article	false	
LRFR consider deck reinf. development length	false	
LRFD consider deck reinf. development length	false	
LRFD shear computational method	General Procedure	
LRFR ignore design & legal load shear	true	
Exposure factor bottom of beam		
Exposure factor top of beam		
LRFR consider permit load tensile steel stress	false	
LRFR ignore permit load shear	true	
LRFR shear computation method	General Procedure	
LRFR ignore long. reinf. in rating	true	
LRFD Consider Inclined Flexural Forces Indicator	false	
LRFR Consider Inclined Flexural Forces Indicator	false	
LRFD allow negative epsilon in general shear method	false	
LRFR allow negative epsilon in general shear method	false	
LRFD POIs generate at support points	true	
LRFR POIs generate at support points	true	
LRFD POIs generate at support face & critical shear points	true	
LRFR POIs generate at support face & critical shear points	true	
LRFD POIs generate at tenth points except supports	true	
LRFR POIs generate at tenth points except supports	true	
Cross Section Based Indicator	false	
Beam Projection Start		in
Beam Projection End		in
Impact Factor Type	Standard - AASHTO	
Impact Factor Adjustment		
Impact Factor Override		%
LRFD Constant Impact Factor	33.0	%
LRFD Fatigue Impact Factor	15.0	%
Default Rating Method	LFR	
LRFR condition factor	Good or Satisfactory	
LRFR system factor	All Other Girder/Slab Bridges	
LRFD POI Tenth Points Indicator	false	
LRFR POI Tenth Points Indicator	false	
LRFD POIs generate at section change points	true	
LRFR POIs generate at section change points	true	
LRFD POIs generate at user-defined points	true	
LRFR POIs generate at user-defined points	true	
LRFD distribution factor application method	By Point of Interest	
LRFR distribution factor application method	By Point of Interest	
LRFR field measured section properties	false	
LRFR system factor override	false	
Self load case	true	
Name	Wizard Alternative	
Description	Member alternative generated using the design wizard	
Additional self load		kip/ft
Additional self load percentage		%
Default Prestress Tendons Name	1/2" (7W-270) SR	
Default Mild Reinf Steel Name	Grade 40	
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Creation Timestamp		
Default Nail Name		
Allow cracking at grider ends	false	
Consider iterative minimum reinforcement factor	false	

Import Event

Beam Details

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

n	6.642	
Use Creep Indicator	false	
Force And Eccentricity Only Indicator	false	
Force		kip
Mid CGS		in
Left harp pt. dist. (X1)		ft
Right harp pt. dist. (X2)		ft
Left CGS		in
Right CGS		in
Left end	6.0000	in
Right end	6.0000	in
Strand Configuration	Straight/Debonded	
Left harp pt. radius		in
Right harp pt. radius		in
Length		ft
Length		ft
Web width		in
Web width		in
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Prestress Properties Name	Wizard PS Properties	
PS Shape Name	INDOT WS12x48	
Span Number	1	

Strand Layout

Row Position	Column Position	Debonding Left Distance (in))	Debonding Right Distance (in)	Harp Point Left Distance (ft)	Harp Point Left Radius Of Curvature (in)	Harp Point Right Distance (ft)	Harp Point Right Radius Of Curvature (in)	Harp Left End Row Position	Harp Left End Column Position	Harp Right End Row Position	Harp Right End Column Position	Measured And Debonded From Left Type	Measured And Debonded From Right Type
1	1							0	0	0	0	End of Beam	End of Beam
1	3							0	0	0	0	End of Beam	End of Beam
1	4							0	0	0	0	End of Beam	End of Beam
1	5	24.0000	24.0000					0	0	0	0	End of Beam	End of Beam
1	6	48.0000	48.0000					0	0	0	0	End of Beam	End of Beam
1	10	72.0000	72.0000					0	0	0	0	End of Beam	End of Beam
1	11							0	0	0	0	End of Beam	End of Beam
1	17	72.0000	72.0000					0	0	0	0	End of Beam	End of Beam
1	18	48.0000	48.0000					0	0	0	0	End of Beam	End of Beam
1	19	24.0000	24.0000					0	0	0	0	End of Beam	End of Beam
1	20							0	0	0	0	End of Beam	End of Beam

Mild Steel

Ver tDistance (in)	Bar Count	Bar Size	Bar Spacing (in)	Side Cover (in)	Material	Start Distance (ft)	Length (ft)	Fully Developed Start	Fully Developed End	Head at start	Head at end
10.00	5.00	5	10.50	3.00	Grade 40	-0.50	28.00	FALSE	FALSE		

Continous Support Detail

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Support Id	Bearing Distance Left (in)	Bearing Distance Right (in)

Stress Limit Ranges

Span	Name	Distance (ft)	Length (ft)
	Wizard PS Stress Limit		
1		-0.50	28.00

Vertical Shear Reinforcement Ranges

Span	Distance (ft)	Extend Vert Reinf Into Deck Indicator	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)
1	0.17	FALSE	1	S18	0.0000
1	0.17	FALSE	3	S18	6.0000
1	25.83	FALSE	4	S18	6.0000

Horizontal Shear Reinforcement Ranges

Composite Deck Indicator	Span	Distance (ft)	Composite Length (ft)	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)

Effective Supports

Span Number	From Start (in)	From End (in)
1		

Spec Selection

Analysis Method Type	Analysis Module	Selection Type	Spec Version Factors
ASR	AASHTO ASR	System Default	
LFR	AASHTO LFR	System Default	
LRFD	AASHTO LRFD	System Default	
LRFR	AASHTO LRFR	System Default	

Standard Live Load Distribution Factors - Simplified

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	0.685	1.000	0.685	0.286
Multi Lane	0.685	1.000	0.685	0.571

LRFD Live Load Distribution Factors

LRFD Live Load Distribution Factors: Simplified

Action Deflection

Distance (ft)	Length (ft)	Factor Variaton Type	Single Lane Factor	Multi Lane Factor	Start Single Lane Factor	End Single Lane Factor	Start Multi Lane Factor	End Multi Lane Factor
0.00	27.000		0.171	0.286	0.000	0.000	0.000	0.000

Girder Member

Name	Member 2
Description	Girder member generated using the design wizard
Creation Timestamp	
Last Modified Timestamp	

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Pedestrian load		lb/ft
Member Alternative Name-Current	Wizard Alternative	
Member Alternative Name-Existing	Wizard Alternative	

Member Loads

Settlement

Load Case	Support Number	X Translation Settlement (in)	Y Translation Settlement (in)	Z Rotation Settlement (Radians)
	1			
	2			

Supports

General

Support Number	Support Type	X Translation Type	Y Translation Type	Z Rotation Type
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Override Z Rot Spring Const Indicator	Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)
	1						
	2						

ThreeD General

Support Number	Support Type	X Rotation Type	X Translation Type	Y Rotation Type	Y Translation Type	Z Rotation Type	Z Translation Type
1	Roller	Free	Free	Free	Fixed	Free	Free
2	Roller	Free	Free	Free	Fixed	Free	Free

ThreeD Elastic

Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)	Override Z Rot Spring Const Indicator
1							
2							

Member Alt - Prestressed Concrete Box Beam - Schd

Name	Wizard Alternative
Description	Member alternative generated using the design wizard
Default units	US Customary
Creation Timestamp	
Last Modified Timestamp	
Default rating method	LFR
LFD Single LL Factor Moment	0.685
LFD Single LL Factor Shear	0.685
LFD Single LL Factor Shear At Supports	1.000
LFD Single LL Factor Deflection	0.286
LFD Multi LL Factor Moment	0.685
LFD Multi LL Factor Shear	0.685
LFD Multi LL Factor Shear At Supports	1.000
LFD Multi LL Factor Deflection	0.571

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Haunch Embedded Flange Indicator	false	
Haunch Type	Flange edges	
Deck curing method	Moist-cured	
Interface type	Unroughened	
Cohesion factor	0.075	ksi
Friction factor	0.600	
Interface width		in
Default interface width to beam widths	true	
Service life	75.00	Years
Time composite		Days
Time of analysis		Years
Time continuous		Days
Deck drying time		Days
Consider deck differential shrinkage loads	false	
Beam Projection Start		in
Beam Projection End		in
Distribution factor input method	Simplified	
Sufficiently connected to act as a unit	false	
K1	0.200	
K2	0.800	ksi
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Distribution factor input method	Simplified	
Default Bolt Name		
Default Deck Concrete Name	INDOT PSC 5 ksi (US)	
Default Deck Reinf Steel Name	Grade 40	
Default Structural Steel Name		
Default Weld Name		
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Reinf Steel Name	Grade 40	
Default Prestress Tendons Name	1/2" (7W-270) SR	
Override LRFD Factor Name		
Override LRFR Factor Name		
Beam curing method	Steam-cured	
Curing time		Days
Ignore positive moment at supports in ratings	false	
LRFD loss & stress calculations	Gross Cross Section	
LRFR loss & stress calculations	Gross Cross Section	
LRFD consider splitting resistance article	false	
LRFR consider splitting resistance article	false	
LRFR consider deck reinf. development length	false	
LRFD consider deck reinf. development length	false	
LRFD shear computational method	General Procedure	
LRFR ignore design & legal load shear	true	
Exposure factor bottom of beam		
Exposure factor top of beam		
LRFR consider permit load tensile steel stress	false	
LRFR ignore permit load shear	true	
LRFR shear computation method	General Procedure	
LRFR ignore long. reinf. in rating	true	
LRFD Consider Inclined Flexural Forces Indicator	false	
LRFR Consider Inclined Flexural Forces Indicator	false	
LRFD allow negative epsilon in general shear method	false	
LRFR allow negative epsilon in general shear method	false	
LRFD POIs generate at support points	true	
LRFR POIs generate at support points	true	
LRFD POIs generate at support face & critical shear points	true	
LRFR POIs generate at support face & critical shear points	true	
LRFD POIs generate at tenth points except supports	true	
LRFR POIs generate at tenth points except supports	true	
Cross Section Based Indicator	false	
Beam Projection Start		in
Beam Projection End		in
Impact Factor Type	Standard - AASHTO	
Impact Factor Adjustment		
Impact Factor Override		%
LRFD Constant Impact Factor	33.0	%
LRFD Fatigue Impact Factor	15.0	%
Default Rating Method	LFR	
LRFR condition factor	Good or Satisfactory	
LRFR system factor	All Other Girder/Slab Bridges	
LRFD POI Tenth Points Indicator	false	

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

LRFR POI Tenth Points Indicator	false	
LRFD POIs generate at section change points	true	
LRFR POIs generate at section change points	true	
LRFD POIs generate at user-defined points	true	
LRFR POIs generate at user-defined points	true	
LRFD distribution factor application method	By Point of Interest	
LRFR distribution factor application method	By Point of Interest	
LRFR field measured section properties	false	
LRFR system factor override	false	
Self load case	true	
Name	Wizard Alternative	
Description	Member alternative generated using the design wizard	
Additional self load		kip/ft
Additional self load percentage		%
Default Prestress Tendons Name	1/2" (7W-270) SR	
Default Mild Reinf Steel Name	Grade 40	
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Creation Timestamp		
Default Nail Name		
Allow cracking at grider ends	false	
Consider iterative minimum reinforcement factor	false	

Import Event

Beam Details

n	6.642	
Use Creep Indicator	false	
Force And Eccentricity Only Indicator	false	
Force		kip
Mid CGS		in
Left harp pt. dist. (X1)		ft
Right harp pt. dist. (X2)		ft
Left CGS		in
Right CGS		in
Left end	6.0000	in
Right end	6.0000	in
Strand Configuration	Straight/Debonded	
Left harp pt. radius		in
Right harp pt. radius		in
Length		ft
Length		ft
Web width		in
Web width		in
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Prestress Properties Name	Wizard PS Properties	
PS Shape Name	INDOT WS12x48	
Span Number	1	

Strand Layout

Row Position	Column Position	Debonding Left Distance (in))	Debonding Right Distance (in)	Harp Point Left Distance (ft)	Harp Point Left Radius Of Curvature (in)	Harp Point Right Distance (ft)	Harp Point Right Radius Of Curvature (in)	Harp Left End Row Position	Harp Left End Column Position	Harp Right End Row Position	Harp Right End Column Position	Measured And Debonded From Left Type	Measured And Debonded From Right Type
1	5							0	0	0	0	End of Beam	End of Beam
1	6	24.0000	24.0000					0	0	0	0	End of Beam	End of Beam
1	18	48.0000	48.0000					0	0	0	0	End of Beam	End of Beam
1	21							0	0	0	0	End of Beam	End of Beam

Mild Steel

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Ver tDistance (in)	Bar Count	Bar Size	Bar Spacing (in)	Side Cover (in)	Material	Start Distance (ft)	Length (ft)	Fully Developed Start	Fully Developed End	Head at start	Head at end
10.00	5.00		10.50	3.00		-0.50	28.00	FALSE	FALSE		
		5			Grade 40						

Continous Support Detail

Support Id	Bearing Distance Left (in)	Bearing Distance Right (in)

Stress Limit Ranges

Span	Name	Distance (ft)	Length (ft)
	Wizard PS Stress Limit		
1		-0.50	28.00

Vertical Shear Reinforcement Ranges

Span	Distance Extend (ft)	Vert Reinf Into Deck Indicator	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)
1	0.17	FALSE	1	S18	0.0000
1	0.17	FALSE	3	S18	6.0000
1	25.83	FALSE	4	S18	6.0000

Horizontal Shear Reinforcement Ranges

Composite Deck Indicator	Span Distance (ft)	Composite Length (ft)	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)

Effective Supports

Span Number	From Start (in)	From End (in)
1		

Spec Selection

Analysis Method Type	Analysis Module	Selection Type	Spec Version Factors
ASR	AASHTO ASR	System Default	
LFR	AASHTO LFR	System Default	
LRFD	AASHTO LRFD	System Default	
LRFR	AASHTO LRFR	System Default	

Standard Live Load Distribution Factors - Simplified

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	0.685	1.000	0.685	0.286
Multi Lane	0.685	1.000	0.685	0.571

Girder Member

Name	Member 3
Description	Girder member generated using the design wizard
Creation Timestamp	
Last Modified Timestamp	

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Pedestrian load		lb/ft
Member Alternative Name-Current	Wizard Alternative	
Member Alternative Name-Existing	Wizard Alternative	

Member Loads

Settlement

Load Case	Support Number	X Translation Settlement (in)	Y Translation Settlement (in)	Z Rotation Settlement (Radians)
	1			
	2			

Supports

General

Support Number	Support Type	X Translation Type	Y Translation Type	Z Rotation Type
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Override Z Rot Spring Const Indicator	Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)
	1						
	2						

ThreeD General

Support Number	Support Type	X Rotation Type	X Translation Type	Y Rotation Type	Y Translation Type	Z Rotation Type	Z Translation Type
1	Roller	Free	Free	Free	Fixed	Free	Free
2	Roller	Free	Free	Free	Fixed	Free	Free

ThreeD Elastic

Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)	Override Z Rot Spring Const Indicator
1							
2							

Member Alt - Prestressed Concrete Box Beam - Schd

Name	Wizard Alternative
Description	Member alternative generated using the design wizard
Default units	US Customary
Creation Timestamp	
Last Modified Timestamp	
Default rating method	LFR
LFD Single LL Factor Moment	0.685
LFD Single LL Factor Shear	0.685
LFD Single LL Factor Shear At Supports	1.000
LFD Single LL Factor Deflection	0.286
LFD Multi LL Factor Moment	0.685
LFD Multi LL Factor Shear	0.685
LFD Multi LL Factor Shear At Supports	1.000
LFD Multi LL Factor Deflection	0.571

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Haunch Embedded Flange Indicator	false	
Haunch Type	Flange edges	
Deck curing method	Moist-cured	
Interface type	Monolithic	
Cohesion factor	0.400	ksi
Friction factor	1.400	
Interface width		in
Default interface width to beam widths	true	
Service life	75.00	Years
Time composite		Days
Time of analysis		Years
Time continuous		Days
Deck drying time		Days
Consider deck differential shrinkage loads	false	
Beam Projection Start		in
Beam Projection End		in
Distribution factor input method	Simplified	
Sufficiently connected to act as a unit	false	
K1	0.250	
K2	1.500	ksi
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Distribution factor input method	Simplified	
Default Bolt Name		
Default Deck Concrete Name	INDOT PSC 5 ksi (US)	
Default Deck Reinf Steel Name	Grade 40	
Default Structural Steel Name		
Default Weld Name		
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Reinf Steel Name	Grade 40	
Default Prestress Tendons Name	1/2" (7W-270) SR	
Override LRFD Factor Name		
Override LRFR Factor Name		
Beam curing method	Steam-cured	
Curing time		Days
Ignore positive moment at supports in ratings	false	
LRFD loss & stress calculations	Gross Cross Section	
LRFR loss & stress calculations	Gross Cross Section	
LRFD consider splitting resistance article	false	
LRFR consider splitting resistance article	false	
LRFR consider deck reinf. development length	false	
LRFD consider deck reinf. development length	false	
LRFD shear computational method	General Procedure	
LRFR ignore design & legal load shear	true	
Exposure factor bottom of beam		
Exposure factor top of beam		
LRFR consider permit load tensile steel stress	false	
LRFR ignore permit load shear	true	
LRFR shear computation method	General Procedure	
LRFR ignore long. reinf. in rating	true	
LRFD Consider Inclined Flexural Forces Indicator	false	
LRFR Consider Inclined Flexural Forces Indicator	false	
LRFD allow negative epsilon in general shear method	false	
LRFR allow negative epsilon in general shear method	false	
LRFD POIs generate at support points	true	
LRFR POIs generate at support points	true	
LRFD POIs generate at support face & critical shear points	true	
LRFR POIs generate at support face & critical shear points	true	
LRFD POIs generate at tenth points except supports	true	
LRFR POIs generate at tenth points except supports	true	
Cross Section Based Indicator	false	
Beam Projection Start		in
Beam Projection End		in
Impact Factor Type	Standard - AASHTO	
Impact Factor Adjustment		
Impact Factor Override		%
LRFD Constant Impact Factor	33.0	%
LRFD Fatigue Impact Factor	15.0	%
Default Rating Method	LFR	
LRFR condition factor	Good or Satisfactory	
LRFR system factor	All Other Girder/Slab Bridges	
LRFD POI Tenth Points Indicator	false	

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

LRFR POI Tenth Points Indicator	false	
LRFD POIs generate at section change points	true	
LRFR POIs generate at section change points	true	
LRFD POIs generate at user-defined points	true	
LRFR POIs generate at user-defined points	true	
LRFD distribution factor application method	By Point of Interest	
LRFR distribution factor application method	By Point of Interest	
LRFR field measured section properties	false	
LRFR system factor override	false	
Self load case	true	
Name	Wizard Alternative	
Description	Member alternative generated using the design wizard	
Additional self load		kip/ft
Additional self load percentage		%
Default Prestress Tendons Name	1/2" (7W-270) SR	
Default Mild Reinf Steel Name	Grade 40	
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Creation Timestamp		
Default Nail Name		
Allow cracking at grider ends	false	
Consider iterative minimum reinforcement factor	false	

Import Event

Beam Details

n	6.642	
Use Creep Indicator	false	
Force And Eccentricity Only Indicator	false	
Force		kip
Mid CGS		in
Left harp pt. dist. (X1)		ft
Right harp pt. dist. (X2)		ft
Left CGS		in
Right CGS		in
Left end	6.0000	in
Right end	6.0000	in
Strand Configuration	Straight/Debonded	
Left harp pt. radius		in
Right harp pt. radius		in
Length		ft
Length		ft
Web width		in
Web width		in
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Prestress Properties Name	Wizard PS Properties	
PS Shape Name	INDOT WS12x48	
Span Number	1	

Strand Layout

Row Position	Column Position	Debonding Left Distance (in))	Debonding Right Distance (in)	Harp Point Left Distance (ft)	Harp Point Left Radius Of Curvature (in)	Harp Point Right Distance (ft)	Harp Point Right Radius Of Curvature (in)	Harp Left End Row Position	Harp Left End Column Position	Harp Right End Row Position	Harp Right End Column Position	Measured And Debonded From Left Type	Measured And Debonded From Right Type
1	2	24.0000	24.0000					0	0	0	0	End of Beam	End of Beam
1	4	48.0000	48.0000					0	0	0	0	End of Beam	End of Beam
1	6	72.0000	72.0000					0	0	0	0	End of Beam	End of Beam
1	8							0	0	0	0	End of Beam	End of Beam
1	9							0	0	0	0	End of Beam	End of Beam

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

1	10					0	0	0	0	End of Beam	End of Beam
1	11					0	0	0	0	End of Beam	End of Beam
1	12					0	0	0	0	End of Beam	End of Beam
1	13					0	0	0	0	End of Beam	End of Beam
1	14					0	0	0	0	End of Beam	End of Beam
1	16					0	0	0	0	End of Beam	End of Beam
1	18	72.0000	72.0000			0	0	0	0	End of Beam	End of Beam
1	20	48.0000	48.0000			0	0	0	0	End of Beam	End of Beam
1	22	24.0000	24.0000			0	0	0	0	End of Beam	End of Beam

Mild Steel

Ver tDistance (in)	Bar Count	Bar Size	Bar Spacing (in)	Side Cover (in)	Material	Start Distance (ft)	Length (ft)	Fully Developed Start	Fully Developed End	Head at start	Head at end
10.00	5.00	5	10.50	3.00	Grade 40	-0.50	28.00	FALSE	FALSE		

Continous Support Detail

Support Id	Bearing Distance Left (in)	Bearing Distance Right (in)

Stress Limit Ranges

Span	Name	Distance (ft)	Length (ft)
	Wizard PS Stress Limit		
1		-0.50	28.00

Deck Concrete Profile

Concrete Name	Distance (ft)	Structural Thickness (in)	Effective Width LRFD (in)	Effective Width Standard (in)	Length (ft)	Modular Ratio	Effective Width LRFD Start (in)	Effective Width Standard Start (in)	Effective Width LRFD End (in)	Effective Width Standard End (in)
INDOT PSC 5 ksi (US)	0.00				26.40					

Vertical Shear Reinforcement Ranges

Span	Distance (ft)	Extend Vert Reinf Into Deck	Indicator Number Of Spaces	Shear Reinf Def Name	Spacing (ft)
1	0.17	FALSE	1	S18	0.0000
1	0.17	FALSE	3	S18	6.0000
1	25.83	FALSE	4	S18	6.0000

Horizontal Shear Reinforcement Ranges

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Composite Deck Indicator	Span Distance (ft)	Composite Length (ft)	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)

Effective Supports

Span Number	From Start (in)	From End (in)
1		

Spec Selection

Analysis Method Type	Analysis Module	Selection Type	Spec Version Factors
ASR	AASHTO ASR	System Default	
LFR	AASHTO LFR	System Default	
LRFD	AASHTO LRFD	System Default	
LRFR	AASHTO LRFR	System Default	

Standard Live Load Distribution Factors - Simplified

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	0.685	1.000	0.685	0.286
Multi Lane	0.685	1.000	0.685	0.571

Girder Member

Name	Member 7	
Description	Girder member generated using the design wizard	
Creation Timestamp		
Last Modified Timestamp		
Pedestrian load		lb/ft
Member Alternative Name-Current	Wizard Alternative	
Member Alternative Name-Existing	Wizard Alternative	

Member Loads

Distributed Member Loads

Direction Type	Distance (ft)	Length (ft)	Load Case Name	Load End (kip/ft)	Load Start (kip/ft)	WS Field Measured	Percent of Load Flexure (%)	Percent of Load Shear (%)	Description
X direction	0.00	27.00	DC1	0.030	0.030	FALSE	100.00	100.00	

Settlement

Load Case	Support Number	X Translation Settlement (in)	Y Translation Settlement (in)	Z Rotation Settlement (Radians)
	1			
	2			

Supports

General

Support Number	Support Type	X Translation Type	Y Translation Type	Z Rotation Type
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Override Z Rot Spring Const Indicator	Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)
	1						
	2						

ThreeD General

Support Number	Support Type	X Rotation Type	X Translation Type	Y Rotation Type	Y Translation Type	Z Rotation Type	Z Translation Type
1	Roller	Free	Free	Free	Fixed	Free	Free
2	Roller	Free	Free	Free	Fixed	Free	Free

ThreeD Elastic

Support Number	X Rotation Spring Constant (kip-in/rad)	X Translation Spring Constant (kip/ft)	Y Rotation Spring Constant (kip-in/rad)	Y Translation Spring Constant (kip/ft)	Z Rotation Spring Constant (kip-in/rad)	Z Translation Spring Constant (kip/ft)	Override Z Rot Spring Const Indicator
1							
2							

Member Alt - Prestressed Concrete Box Beam - Schd

Name	Wizard Alternative	
Description	Member alternative generated using the design wizard	
Default units	US Customary	
Creation Timestamp		
Last Modified Timestamp		
Default rating method	LFR	
LFD Single LL Factor Moment	0.685	
LFD Single LL Factor Shear	0.685	
LFD Single LL Factor Shear At Supports	1.000	
LFD Single LL Factor Deflection	0.286	
LFD Multi LL Factor Moment	0.685	
LFD Multi LL Factor Shear	0.685	
LFD Multi LL Factor Shear At Supports	1.000	
LFD Multi LL Factor Deflection	0.571	
Haunch Embedded Flange Indicator	false	
Haunch Type	Flange edges	
Deck curing method	Moist-cured	
Interface type	Unroughened	
Cohesion factor	0.075	ksi
Friction factor	0.600	
Interface width		in
Default interface width to beam widths	true	
Service life	75.00	Years
Time composite		Days
Time of analysis		Years
Time continuous		Days
Deck drying time		Days
Consider deck differential shrinkage loads	false	
Beam Projection Start		in
Beam Projection End		in
Distribution factor input method	Simplified	
Sufficiently connected to act as a unit	false	
K1	0.200	
K2	0.800	ksi
Allow distribution factors to be used to compute effects of permit loads with routine traffic	true	
Allow distribution factors to be used to compute effects of permit loads with routine traffic	false	
Distribution factor input method	Simplified	
Default Bolt Name		
Default Deck Concrete Name	INDOT PSC 5 ksi (US)	
Default Deck Reinf Steel Name	Grade 40	
Default Structural Steel Name		
Default Weld Name		

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Reinf Steel Name	Grade 40	
Default Prestress Tendons Name	1/2" (7W-270) SR	
Override LRFD Factor Name		
Override LRFR Factor Name		
Beam curing method	Steam-cured	
Curing time		Days
Ignore positive moment at supports in ratings	false	
LRFD loss & stress calculations	Gross Cross Section	
LRFR loss & stress calculations	Gross Cross Section	
LRFD consider splitting resistance article	false	
LRFR consider splitting resistance article	false	
LRFR consider deck reinf. development length	false	
LRFD consider deck reinf. development length	false	
LRFD shear computational method	General Procedure	
LRFR ignore design & legal load shear	true	
Exposure factor bottom of beam		
Exposure factor top of beam		
LRFR consider permit load tensile steel stress	false	
LRFR ignore permit load shear	true	
LRFR shear computation method	General Procedure	
LRFR ignore long. reinf. in rating	true	
LRFD Consider Inclined Flexural Forces Indicator	false	
LRFR Consider Inclined Flexural Forces Indicator	false	
LRFD allow negative epsilon in general shear method	false	
LRFR allow negative epsilon in general shear method	false	
LRFD POIs generate at support points	true	
LRFR POIs generate at support points	true	
LRFD POIs generate at support face & critical shear points	true	
LRFR POIs generate at support face & critical shear points	true	
LRFD POIs generate at tenth points except supports	true	
LRFR POIs generate at tenth points except supports	true	
Cross Section Based Indicator	false	
Beam Projection Start		in
Beam Projection End		in
Impact Factor Type	Standard - AASHTO	
Impact Factor Adjustment		
Impact Factor Override		%
LRFD Constant Impact Factor	33.0	%
LRFD Fatigue Impact Factor	15.0	%
Default Rating Method	LFR	
LRFR condition factor	Good or Satisfactory	
LRFR system factor	All Other Girder/Slab Bridges	
LRFD POI Tenth Points Indicator	false	
LRFR POI Tenth Points Indicator	false	
LRFD POIs generate at section change points	true	
LRFR POIs generate at section change points	true	
LRFD POIs generate at user-defined points	true	
LRFR POIs generate at user-defined points	true	
LRFD distribution factor application method	By Point of Interest	
LRFR distribution factor application method	By Point of Interest	
LRFR field measured section properties	false	
LRFR system factor override	false	
Self load case	true	
Name	Wizard Alternative	
Description	Member alternative generated using the design wizard	
Additional self load		kip/ft
Additional self load percentage		%
Default Prestress Tendons Name	1/2" (7W-270) SR	
Default Mild Reinf Steel Name	Grade 40	
Default Stirrup Reinf Steel Name	Grade 40	
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Creation Timestamp		
Default Nail Name		
Allow cracking at grider ends	false	
Consider iterative minimum reinforcement factor	false	

Import Event

Beam Details

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

n	6.642	
Use Creep Indicator	false	
Force And Eccentricity Only Indicator	false	
Force		kip
Mid CGS		in
Left harp pt. dist. (X1)		ft
Right harp pt. dist. (X2)		ft
Left CGS		in
Right CGS		in
Left end	6.0000	in
Right end	6.0000	in
Strand Configuration	Straight/Debonded	
Left harp pt. radius		in
Right harp pt. radius		in
Length		ft
Length		ft
Web width		in
Web width		in
Default Beam Concrete Name	INDOT PSC 5 ksi (US)	
Prestress Properties Name	Wizard PS Properties	
PS Shape Name	INDOT WS12x48	
Span Number	1	

Strand Layout

Row Position	Column Position	Debonding Left Distance (in))	Debonding Right Distance (in)	Harp Point Left Distance (ft)	Harp Point Left Radius Of Curvature (in)	Harp Point Right Distance (ft)	Harp Point Right Radius Of Curvature (in)	Harp Left End Row Position	Harp Left End Column Position	Harp Right End Row Position	Harp Right End Column Position	Measured And Debonded From Left Type	Measured And Debonded From Right Type
1	2	24.0000	24.0000					0	0	0	0	End of Beam	End of Beam
1	4	48.0000	48.0000					0	0	0	0	End of Beam	End of Beam
1	6	72.0000	72.0000					0	0	0	0	End of Beam	End of Beam
1	8							0	0	0	0	End of Beam	End of Beam
1	9							0	0	0	0	End of Beam	End of Beam
1	10							0	0	0	0	End of Beam	End of Beam
1	11							0	0	0	0	End of Beam	End of Beam
1	12							0	0	0	0	End of Beam	End of Beam
1	13							0	0	0	0	End of Beam	End of Beam
1	14							0	0	0	0	End of Beam	End of Beam
1	16							0	0	0	0	End of Beam	End of Beam
1	18	72.0000	72.0000					0	0	0	0	End of Beam	End of Beam
1	20	48.0000	48.0000					0	0	0	0	End of Beam	End of Beam
1	22	24.0000	24.0000					0	0	0	0	End of Beam	End of Beam

Mild Steel

Vert Distance (in)	Bar Count	Bar Size	Bar Spacing (in)	Side Cover (in)	Material	Start Distance (ft)	Length (ft)	Fully Developed Start	Fully Developed End	Head at start	Head at end

Des: SS Date: 4/23/2026
Chk: RKH Date: 4/24/2026

10.00	5.00		10.50	3.00		-0.50	28.00	FALSE	FALSE
		5			Grade 40				

Continous Support Detail

Support Id	Bearing Distance Left (in)	Bearing Distance Right (in)

Stress Limit Ranges

Span	Name	Distance (ft)	Length (ft)
	Wizard PS Stress Limit		
1		-0.50	28.00

Deck Concrete Profile

Concrete Name	Distance (ft)	Structural Thickness (in)	Effective Width LRFD (in)	Effective Width Standard (in)	Length (ft)	Modular Ratio	Effective Width LRFD Start (in)	Effective Width Standard Start (in)	Effective Width LRFD End (in)	Effective Width Standard End (in)
INDOT PSC 5 ksi (US)	0.00				26.40					

Vertical Shear Reinforcement Ranges

Span	Distance (ft)	Extend Vert Reinf Into Deck	Indicator	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)
1	0.17	FALSE		1	S18	0.0000
1	0.17	FALSE		3	S18	6.0000
1	25.83	FALSE		4	S18	6.0000

Horizontal Shear Reinforcement Ranges

Composite Deck Indicator	Span	Distance (ft)	Composite Length (ft)	Number Of Spaces	Shear Reinf Def Name	Spacing (ft)

Effective Supports

Span Number	From Start (in)	From End (in)
1		

Spec Selection

Analysis Method Type	Analysis Module	Selection Type	Spec Version Factors
ASR	AASHTO ASR	System Default	
LFR	AASHTO LFR	System Default	
LRFD	AASHTO LRFD	System Default	
LRFR	AASHTO LRFR	System Default	

Standard Live Load Distribution Factors - Simplified

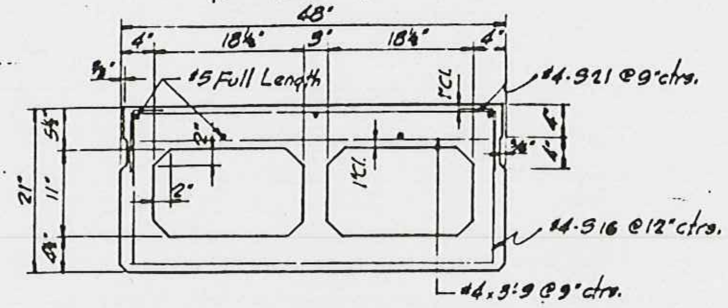
Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	0.685	1.000	0.685	0.286
Multi Lane	0.685	1.000	0.685	0.571

PRESTRESSED NON-COMPOSITE BOX BEAMS 4'-0 WIDE

WS-21

SECTION PROPERTIES

A = 600.79 in²
I = 32,619 in⁴
ST = 3180 in³
SB = 3036 in³
YB = 10.74 in



STANDARD STRAND 250 K

SPAN C.C. BRG. (Feet)	Steel for Temp. End Stress	1 — 3/8" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	1 — 1/2" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	WEIGHT (lbs.)
35	.95	18	1		2	10	1		2	24,000
			2				2			
			3				3			
37	1.21	20	1		2	12	1		1	25,300
			2				2			
			3				3			
39	1.33	22	1		2	13	1			26,500
			2				2		1	
			3				3			
41	1.44	24	1		2	14	1		1	27,800
			2				2			
			3				3			
43	1.56	26	1		2	13	1			29,000
			2				2		1	
			3				3			
45	1.67	28	1		1	16	1		1	30,300
			2				2			
			3				3			
47	1.94	29	1	2@1'-9		18	1	2@1'-9		31,500
		2	2				2			
			3				3			

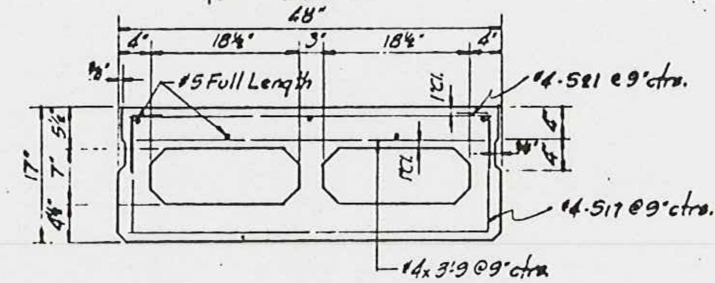
HIGH STRENGTH STRAND 270 K

SPAN C.C. BRG. (Feet)	Steel for Temp. End Stress	1 — 3/8" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	1 — 1/2" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	WEIGHT (lbs.)
33	1.00	16	1		2	9	1			24,000
			2				2		1	
			3				3			
37	1.16	18	1		2	10	1		1	25,300
			2				2			
			3				3			
39	1.27	20	1		1	11	1			26,500
			2				2		1	
			3				3			
41	1.41	21	1		2	12	1		1	27,800
			2				2			
			3				3			
43	1.55	23	1		2	13	1			29,000
			2				2		1	
			3				3			
45	1.69	25	1			14	1	2@1'-9		30,300
			2		1		2			
			3				3			
47	1.82	27	1	2@1'-9		18	1	1@1'-9		31,500
			2		1		2			
			3				3			

WS-17

SECTION PROPERTIES

A = 556.75 in²
I = 18,390 in⁴
ST = 2206 in³
SB = 2123 in³
YB = 8.65 in



STANDARD STRAND 250 K

SPAN C.C. BRG. (Feet)	Steel for Temp. End Stress	1 — 3/8" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	1 — 1/2" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	WEIGHT (lbs.)
23	.56	11	1		2	6	1		2	14,800
			2		1		2			
			3				3			
25	.69	13	1		2	7	1		2	16,000
			2				2			
			3				3			
27	.92	15	1		2	9	1			17,200
			2				2		1	
			3				3			
29	1.03	17	1		2	10	1		1	18,300
			2				2			
			3				3			
31	1.13	19	1		2	11	1			19,500
			2				2		1	
			3				3			
33	1.40	22	1		1	13	1			20,600
			2				2			
			3				3			
35	1.52	24	1		1	14	1	2@1'-3		21,800
			2				2			
			3				3			
37	1.63	27	1	3@1'-3		15	1	2@1'-5		23,000
			2				2			
			3				3			
39	1.89	29	1	5@1'-3		17	1	2@1'-3, 2@2'-10		24,100
			2		1		2			
			3				3			

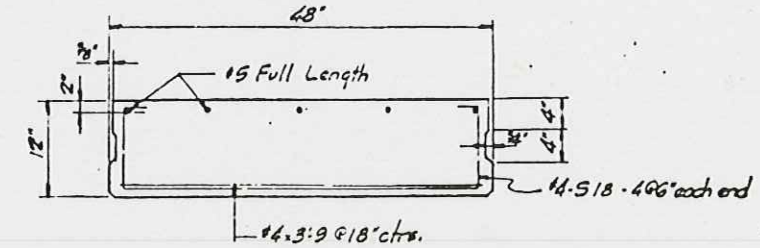
HIGH STRENGTH STRAND 270 K

SPAN C.C. BRG. (Feet)	Steel for Temp. End Stress	1 — 3/8" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	1 — 1/2" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	WEIGHT (lbs.)
23	.67	10	1		2	6	1		1	14,800
			2				2			
			3				3			
25	.81	11	1		2	7	1			16,000
			2		1		2		1	
			3				3			
27	.94	13	1		2	8	1		1	17,200
			2				2			
			3				3			
29	1.08	15	1		2	9	1			18,300
			2				2			
			3				3			
31	1.22	17	1		2	10	1			19,500
			2				2			
			3				3			
33	1.35	19	1		2	11	1			20,600
			2				2			
			3				3			
35	1.49	21	1			12	1	2@1'-5		21,800
			2		1		2			
			3				3			
37	1.79	24	1	4@1'-5		14	1	2@1'-5, 2@2'-10		23,000
			2				2			
			3				3			
39	1.98	26	1	4@1'-5, 2@2'-10		19	1	2@1'-6, 1@2'-10		24,100
			2				2			
			3				3			

WS-12

SECTION PROPERTIES

A = 567.75 in²
I = 6850 in⁴
ST = 1136 in³
SB = 1147 in³
YB = 5.97 in



STANDARD STRAND 250 K

SPAN C.C. BRG. (Feet)	Steel for Temp. End Stress	1 — 3/8" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	1 — 1/2" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	WEIGHT (lbs.)
15	1.06	12	1		1	7	1			9,500
			2				2			
			3				3			
17	1.22	14	1		1	8	1			10,600
			2				2			
			3				3			
19	1.56	16	1	2@1'-0		10	1	2@2'-0		11,800
			2				2			
			3				3			
21	1.71	19	1	2@1'-0, 1@2'-0		11	1	2@1'-0, 1@2'-0		13,000
			2				2			
			3				3			
23	2.03	21	1	2@1'-0, 2@2'-0, 1@3'-0		13	1	2@2'-0, 2@6'-0		14,200
			2				2			
			3				3			
25	2.20	24	1	2@1'-0, 2@2'-0, 2@3'-0		14	1	2@1'-0, 2@3'-0, 2@4'-0		15,400
			1	2@4'-0			2			
			2				3			
27	2.73	28	1	2@1'-0, 2@2'-0, 2@3'-0		17	1	2@1'-0, 2@3'-0, 2@5'-0		16,600
			1	2@4'-0, 2@5'-0			1	2@7'-0		
			2				2			

HIGH STRENGTH STRAND 270 K

SPAN C.C. BRG. (Feet)	Steel for Temp. End Stress	1 — 3/8" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	1 — 1/2" STRAND No.	1 — Row	2 — # BOND BREAK	3 — Extra # Strand #	WEIGHT (lbs.)
15	1.05	10	1		2	6	1		1	9,500
			2				2			
			3				3			
17	1.23	12	1		1	7	1			10,600
			2				2			
			3				3			
19	1.45	13	1	1@1'-0		8	1	2@1'-0		11,800
			2				2			
			3				3			
21	1.60	17	1	2@1'-0, 1@2'-0		10	1	2@1'-0, 2@3'-0		13,000
			2				2			
			3				3			
23	1.98	19	1	2@1'-0, 2@2'-0, 1@3'-0		11	1	2@1'-0, 2@4'-0		14,200
			2				2			
			3				3			
25	2.38	22	1	2@1'-0, 2@2'-0, 2@3'-0		13	1	2@2'-0, 2@4'-0, 1@5'-0		15,400
			1	2@4'-0			2			
			2				3			
27	2.56	23	1	3@1'-0, 2@2'-0, 2@3'-0		14	1	2@2'-0, 2@4'-0, 2@6'-0		16,600
			1	2@4'-0, 2@6'-0			2			
			2				3			

REVISIONS	
10/1/65	Clearances
7/1/70	stirrups
9-1-71	Clearances

PRESTRESSED NON-COMPOSITE BOX BEA[MS]
4'-0 WIDE

STATE OF INDIANA

SCALE:- NONE — MAY 5 1965

RECOMMENDED FOR APPROVAL:- C. R. Rumiser (signature) — ENGINEER OF BRIDGE DESIGN

APPROVED: C. J. Klingelhofer (signature) — ENGINEER OF PLANS AND SPEC.

APPROVED: N. W. Steinkamp (signature) — CHIEF DIVISION OF DESIGN

APPROVED: (signature) — CHIEF HIGHWAY ENGINEER

BRIDGE STD. PB8B

DESIGNED ____ CK'D ____
DRAWN DCS CK'D MP
TRACED ____ CK'D ____

186