

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γDC	γDW
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.
ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

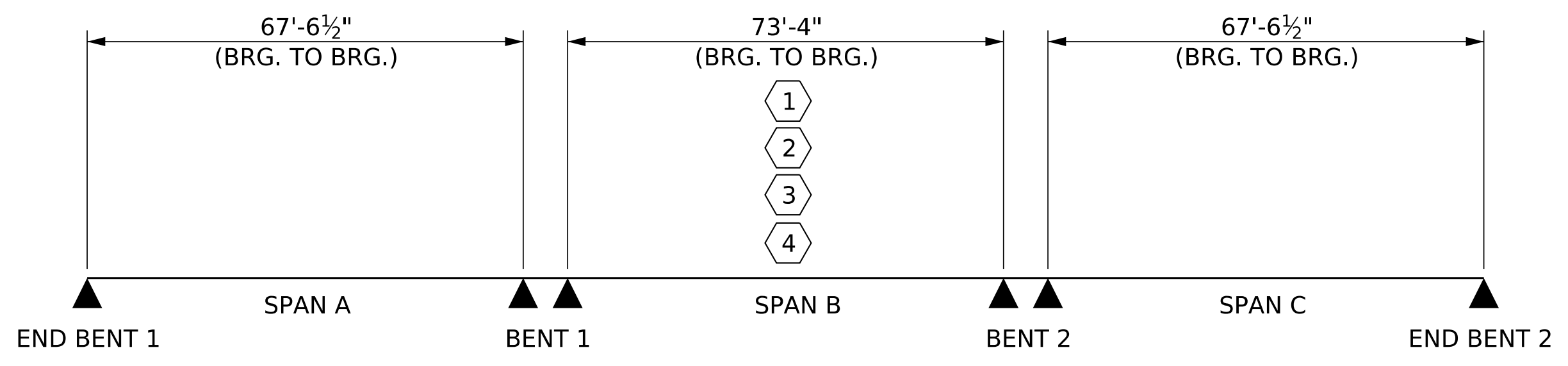
④ EMERGENCY VEHICLE LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

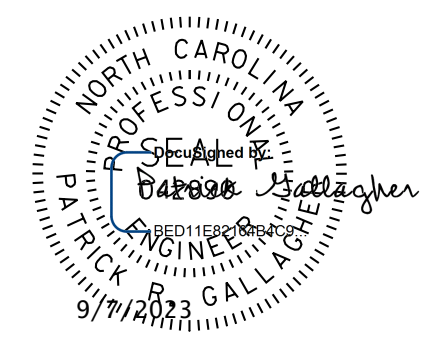
I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS																								
LOAD TYPE	VEHICLE	WEIGHT (W) (TONS)	#	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE									SERVICE III LIMIT STATE							COMMENT NUMBER		
						MOMENT					SHEAR				MOMENT									
						LIVE-LOAD FACTORS (γ LL)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	LIVE-LOAD FACTORS (γ LL)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION		DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD	HL-93 (INVENTORY)	N/A	①	1.06	--	1.75	0.720	1.12	B	EL	36.67	0.789	1.35	A	I	47.28	0.80	0.720	1.06	B	EL	36.67		
	HL-93 (OPERATING)	N/A		1.45	--	1.35	0.720	1.45	B	EL	36.67	0.789	1.90	A	I	54.03	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.40	50.40	1.75	0.720	1.48	B	EL	36.67	0.789	1.79	A	I	54.03	0.80	0.720	1.40	B	EL	36.67		
	HS-20 (OPERATING)	36.000		1.91	68.76	1.35	0.720	1.91	B	EL	36.67	0.789	2.36	A	I	54.03	N/A	--	--	--	--	--		
LEGAL LOAD	SINGLE VEHICLE (SV)	SNSH		3.18	42.93	1.40	0.720	4.19	B	EL	36.67	0.789	5.48	A	I	54.03	0.80	0.720	3.18	B	EL	36.67		
		SNGARBS2	20.000		2.30	46.00	1.40	0.720	3.03	B	EL	36.67	0.789	2.83	A	I	54.03	0.80	0.720	2.30	B	EL	36.67	
		SNAGRIS2	22.000		2.23	49.06	1.40	0.720	2.94	B	EL	36.67	0.789	2.62	A	I	54.03	0.80	0.720	2.23	B	EL	36.67	
		SNCOTTS3	27.250		1.58	43.06	1.40	0.720	2.09	B	EL	36.67	0.789	2.67	A	I	54.03	0.80	0.720	1.58	B	EL	36.67	
		SNAGGRS4	34.925		1.32	46.10	1.40	0.720	1.74	B	EL	36.67	0.789	2.21	A	I	54.03	0.80	0.720	1.32	B	EL	36.67	
		SNS5A	35.550		1.29	45.86	1.40	0.720	1.70	B	EL	36.67	0.789	2.26	A	I	54.03	0.80	0.720	1.29	B	EL	36.67	
		SNS6A	39.950		1.18	47.14	1.40	0.720	1.56	B	EL	36.67	0.789	2.06	A	I	54.03	0.80	0.720	1.18	B	EL	36.67	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	SNS7B	42.000		1.09	45.78	1.40	0.720	1.43	B	EL	36.67	0.789	1.97	A	I	54.03	0.80	0.720	1.09	B	EL	36.67	
		TNAGRIT3	33.000		1.44	47.52	1.40	0.720	1.90	B	EL	36.67	0.789	2.47	A	I	54.03	0.80	0.720	1.44	B	EL	36.67	
		TNT4A	33.075		1.45	47.96	1.40	0.720	1.91	B	EL	36.67	0.789	2.39	A	I	54.03	0.80	0.720	1.45	B	EL	36.67	
		TNT6A	41.600		1.18	49.09	1.40	0.720	1.56	B	EL	36.67	0.789	2.20	A	I	54.03	0.80	0.720	1.18	B	EL	36.67	
		TNT7A	42.000		1.19	49.98	1.40	0.720	1.57	B	EL	36.67	0.789	2.11	A	I	54.03	0.80	0.720	1.19	B	EL	36.67	
		TNT7B	42.000		1.23	51.66	1.40	0.720	1.62	B	EL	36.67	0.789	1.97	A	I	54.03	0.80	0.720	1.23	B	EL	36.67	
		TNAGRIT4	43.000		1.17	50.31	1.40	0.720	1.54	B	EL	36.67	0.789	1.90	A	I	54.03	0.80	0.720	1.17	B	EL	36.67	
EMERGENCY VEHICLE (EV)	EV2	28.750		1.75	50.31	1.30	0.720	2.47	B	EL	36.67	0.789	2.91	A	I	54.03	0.80	0.720	1.75	B	EL	36.67		
	EV3	43.000	④	1.15	49.45	1.30	0.720	1.62	B	EL	36.67	0.789	1.92	A	I	54.03	0.80	0.720	1.15	B	EL	36.67		



LRFR SUMMARY

PROJECT NO. B-4926
LENOIR COUNTY
STATION: 35+00.00 -L-



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
LRFR SUMMARY FOR
PRESTRESSED
CONCRETE GIRDERS
(NON-INTERSTATE TRAFFIC)

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Johnson, Mirmiran, & Thompson Inc.
4700 Falls of Neuse Rd, Suite 100,
Raleigh, NC, 27609
License No: C-3097

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-6
1			3			TOTAL SHEETS
2			4			39

W:\CADD\Structures\0317-01 - B-4926 Lenoir_20 & 3A Structures\Lenoir_3A\Drawings\02_01_LB4926_S1M1_LFR1_S06.dgn
 Date: 02/24/23 11:02:34 AM on Wednesday, September 06, 2023

DWN. BY: WDC	DATE: 03/2023	DRAWN BY: MAA 1/08	REV. 11/2/08RR	MAA/GM
CHKD. BY: PRG	DATE: 03/2023	CHECKED BY: GM/DI 2/08	REV. 10/1/11	MAA/GM
DES. EGR. OF RECORD: PRG	DATE: 03/2023		REV. 04/23	BNB/AAI