

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	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 RATING	HL-93 (INVENTORY)	N/A	①	1.04	--	1.75	0.748	1.25	B	EL	64.900	1.124	1.43	B	EL	25.500	0.80	0.748	1.04	B	EL	64.900		
	HL-93 (OPERATING)	N/A		1.62	--	1.35	0.748	1.62	B	EL	64.900	1.124	1.95	B	EL	12.400	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.57	56.52	1.75	0.748	1.88	B	EL	64.900	1.124	2.21	B	EL	12.400	0.80	0.748	1.57	B	EL	64.900		
	HS-20 (OPERATING)	36.000		2.43	87.48	1.35	0.748	2.43	B	EL	64.900	1.124	2.90	B	EL	12.400	N/A	--	--	--	-	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.83	51.71	1.40	0.748	5.75	B	EL	64.900	1.124	7.54	B	EL	12.400	0.80	0.748	3.83	B	EL	64.900	
		SNGARBS2	20.000		2.73	54.60	1.40	0.748	4.08	B	EL	64.900	1.124	5.21	B	EL	12.400	0.80	0.748	2.73	B	EL	64.900	
		SNAGRIS2	22.000		2.53	55.66	1.40	0.748	3.79	B	EL	64.900	1.124	4.79	B	EL	12.400	0.80	0.748	2.53	B	EL	64.900	
		SNCOTTS3	27.250		1.90	51.78	1.40	0.748	2.85	B	EL	64.900	1.124	3.58	B	EL	12.400	0.80	0.748	1.90	B	EL	64.900	
		SNAGGRS4	34.925		1.54	53.78	1.40	0.748	2.31	B	EL	64.900	1.124	2.76	B	EL	12.400	0.80	0.748	1.54	B	EL	64.900	
		SNS5A	35.550		1.51	53.68	1.40	0.748	2.26	B	EL	64.900	1.124	2.65	B	EL	12.400	0.80	0.748	1.51	B	EL	64.900	
		SNS6A	39.950		1.36	54.33	1.40	0.748	2.04	B	EL	64.900	1.124	2.38	B	EL	12.400	0.80	0.748	1.36	B	EL	64.900	
	SNS7B	42.000		1.30	54.60	1.40	0.748	1.95	B	EL	64.900	1.124	2.29	B	EL	12.400	0.80	0.748	1.30	B	EL	64.900		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.66	54.78	1.40	0.748	2.48	B	EL	64.900	1.124	2.96	B	EL	12.400	0.80	0.748	1.66	B	EL	64.900	
		TNT4A	33.075		1.66	54.90	1.40	0.748	2.49	B	EL	64.900	1.124	2.92	B	EL	12.400	0.80	0.748	1.66	B	EL	64.900	
		TNT6A	41.600		1.34	55.74	1.40	0.748	2.01	B	EL	64.900	1.124	2.39	B	EL	12.400	0.80	0.748	1.34	B	EL	64.900	
		TNT7A	42.000		1.33	55.86	1.40	0.748	2.00	B	EL	64.900	1.124	2.35	B	EL	12.400	0.80	0.748	1.33	B	EL	64.900	
		TNT7B	42.000		1.36	57.12	1.40	0.748	2.03	B	EL	64.900	1.124	2.26	B	EL	12.400	0.80	0.748	1.36	B	EL	64.900	
		TNAGRIT4	43.000		1.31	56.33	1.40	0.748	1.96	B	EL	64.900	1.124	2.27	B	EL	12.400	0.80	0.748	1.31	B	EL	64.900	
TNAGT5A		45.000		1.24	55.80	1.40	0.748	1.86	B	EL	64.900	1.124	2.12	B	EL	12.400	0.80	0.748	1.24	B	EL	64.900		
TNAGT5B	45.000		③	1.23	55.35	1.40	0.748	1.85	B	EL	64.900	1.124	2.07	B	EL	12.400	0.80	0.748	1.23	B	EL	64.900		

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ _{DC}	γ _{DW}
	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.

COMMENTS:
 1.
 2.
 3.
 4.

CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

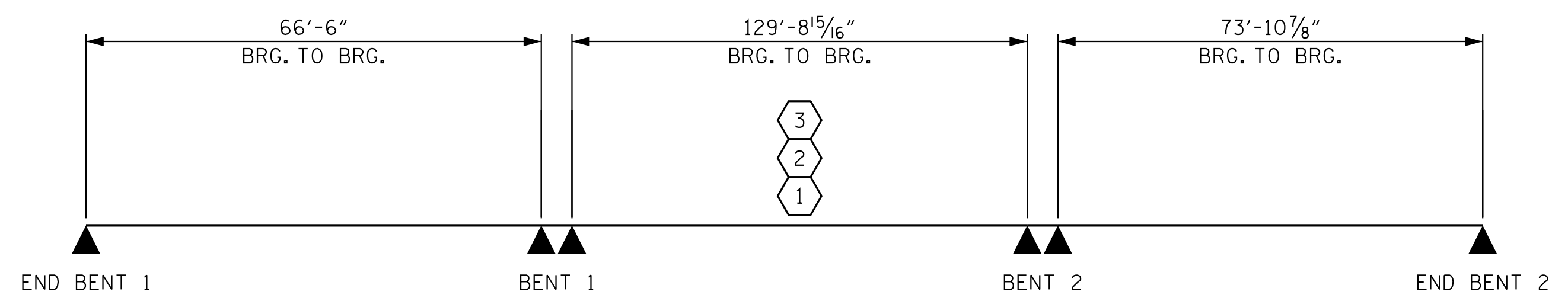
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

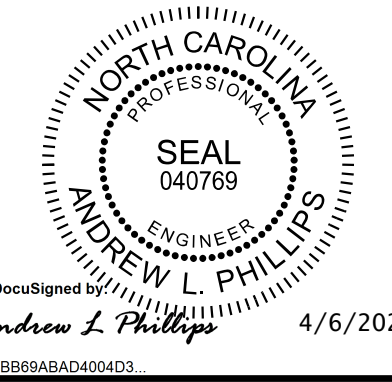
** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



PROJECT NO. B-5301
PITT COUNTY
 STATION: 25+98.05 -L-



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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			55

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

This document, together with the concepts and designs presented herein, is an integral part of the project. It is intended only for the specific bridge and shall not be used for any other project without the written authorization and approval of Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

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ASSEMBLED BY : D. D. LOWERY	DATE : 02/20
CHECKED BY : C. T. POOLE	DATE : 02/20
DRAWN BY : MAA 1/08	REV. 11/12/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 12/17 MAA/THC