

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{DW}
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

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	1.32	--	1.75	0.810	1.65	B	E	47.38	0.940	1.34	B	I	8.91	0.80	0.760	1.32	B	I	47.38		
	HL-93 (OPERATING)	N/A		1.77	--	1.35	0.810	2.14	B	E	47.38	0.940	1.77	B	I	8.91	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.81	65.160	1.75	0.810	2.28	B	E	47.38	0.940	1.81	B	I	8.91	0.80	0.760	1.81	B	I	47.38		
	HS-20 (OPERATING)	36.000		2.37	85.320	1.35	0.810	2.95	B	E	47.38	0.940	2.37	B	I	8.91	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		4.28	57.780	1.40	0.900	6.66	A	I	23.62	0.940	5.70	A	I	9.02	0.80	0.760	4.28	B	I	47.38	
		SNGARBS2	20.000		3.11	62.000	1.40	0.810	4.88	B	E	47.38	0.940	4.01	B	I	8.91	0.80	0.760	3.11	B	I	47.38	
		SNAGRIS2	22.000		2.91	64.020	1.40	0.810	4.57	B	E	47.38	0.940	3.69	B	I	8.91	0.80	0.760	2.91	B	I	47.38	
		SNCOTTS3	27.250		2.13	58.043	1.40	0.900	3.32	A	I	23.62	0.940	2.81	B	I	8.91	0.80	0.760	2.13	B	I	47.38	
		SNAGGRS4	34.925		1.75	61.119	1.40	0.810	2.74	B	E	47.38	0.940	2.28	B	I	8.91	0.80	0.760	1.75	B	I	47.38	
		SNS5A	35.550		1.71	60.791	1.40	0.810	2.68	B	E	47.38	0.940	2.29	B	I	8.91	0.80	0.760	1.71	B	I	47.38	
		SNS6A	39.950		1.56	62.322	1.40	0.810	2.44	B	E	47.38	0.940	2.07	B	I	8.91	0.80	0.760	1.56	B	I	47.38	
		SNS7B	42.000		1.48	62.160	1.40	0.810	2.33	B	E	47.38	0.940	2.01	B	I	8.91	0.80	0.760	1.48	B	I	47.38	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.89	62.370	1.40	0.810	2.97	B	E	47.38	0.940	2.49	B	I	8.91	0.80	0.760	1.89	B	I	47.38	
		TNT4A	33.075		1.90	62.843	1.40	0.810	2.98	B	E	47.38	0.940	2.44	B	I	8.91	0.80	0.760	1.90	B	I	47.38	
		TNT6A	41.600		1.54	64.064	1.40	0.810	2.42	B	E	47.38	0.940	2.11	B	I	8.91	0.80	0.760	1.54	B	I	47.38	
		TNT7A	42.000		1.54	64.680	1.40	0.810	2.42	B	E	47.38	0.940	2.08	B	I	8.91	0.80	0.760	1.54	B	I	47.38	
		TNT7B	42.000		1.58	66.360	1.40	0.810	2.48	B	E	47.38	0.940	1.97	B	I	8.91	0.80	0.760	1.58	B	I	47.38	
		TNAGRIT4	43.000		1.51	64.930	1.40	0.810	2.38	B	E	47.38	0.940	1.91	B	I	8.91	0.80	0.760	1.51	B	I	47.38	
TNAGT5A	45.000		1.43	64.350	1.40	0.810	2.25	B	E	47.38	0.940	1.88	B	I	8.91	0.80	0.760	1.43	B	I	47.38			
TNAGT5B	45.000		③	1.42	63.900	1.40	0.810	2.23	B	E	47.38	0.940	1.81	B	I	8.91	0.80	0.760	1.42	B	E	47.38		

NOTES:

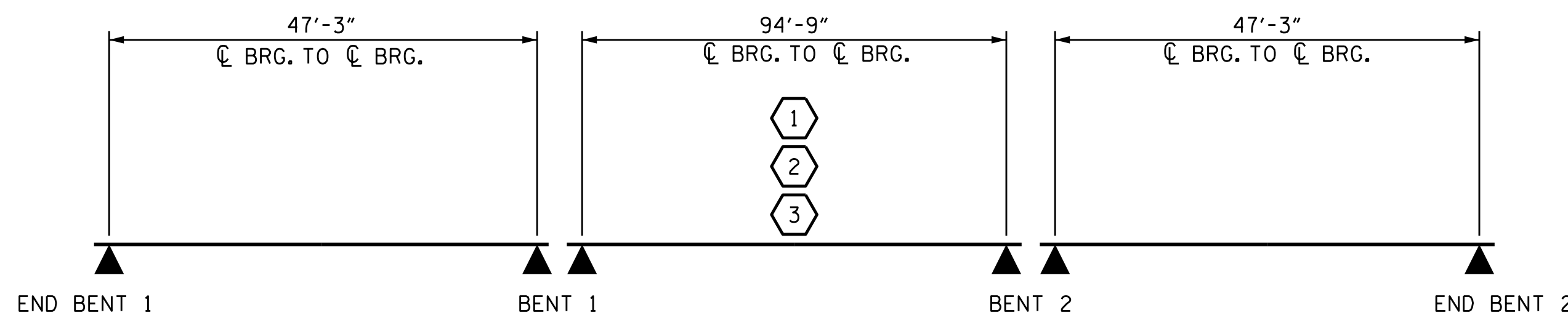
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

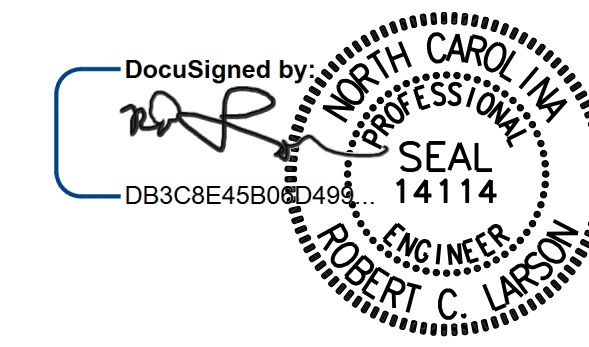
- 1.
- 2.
- 3.
- 4.

#	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	
E - EXTERIOR GIRDER	



LRFR SUMMARY

PROJECT NO. B-5703
 CUMBERLAND/HARNETT COUNTY
 STATION: 16+92.70 -L-



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

DESIGN ENGINEER OF RECORD	DATE: 7/1/2021
ASSEMBLED BY: A.K. ALLANKR	DATE: 03/05/18
CHECKED BY: R.C. LARSON	DATE: 03/05/18
DRAWN BY: MAA	REV. 11/12/08RR
CHECKED BY: GM/DI 2/08	REV. 10/1/11
	REV. 12/17

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

KCI Associates
 of North Carolina, P.A.
 4505 Falls of House Road, Suite 400 Raleigh, NC 27609-6270 Phone (919) 783-9241

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	
				TOTAL SHEETS: 29

KCI JOB NO: 251801945.13