

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	1.07	--	1.75	0.790	1.370	B	ER	26.670	0.910	1.160	B	I	48.530	0.80	0.760	1.070	B	I	26.670				
	HL-93 (OPERATING)	N/A		1.53	--	1.35	0.790	1.780	B	ER	26.670	0.910	1.530	B	I	48.530	N/A	--	--	--	--	--				
	HS-20 (INVENTORY)	36.000	②	1.33	47.880	1.75	0.790	1.720	B	ER	26.670	0.910	1.410	B	I	48.530	0.80	0.760	1.330	B	I	26.670				
	HS-20 (OPERATING)	36.000		1.85	66.600	1.35	0.790	2.230	B	ER	26.670	0.910	1.850	B	I	48.530	N/A	--	--	--	--	--				
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		2.79	37.665	1.40	0.820	4.410	A	I	18.770	0.910	4.130	B	I	48.530	0.80	0.760	2.790	B	I	26.670			
		SNGARBS2	20.000		2.17	43.400	1.40	0.790	3.490	B	ER	26.670	0.910	2.980	B	I	48.530	0.80	0.760	2.170	B	I	26.670			
		SNAGRIS2	22.000		2.10	46.200	1.40	0.790	3.370	B	ER	26.670	0.910	2.780	B	I	48.530	0.80	0.760	2.100	B	I	26.670			
		SNCOTTS3	27.250		1.39	37.878	1.40	0.820	2.210	A	I	18.770	0.910	2.030	B	I	48.530	0.80	0.760	1.390	B	I	26.670			
		SNAGGRS4	34.925		1.20	41.910	1.40	0.790	1.930	B	ER	26.670	0.910	1.720	B	I	48.530	0.80	0.760	1.200	B	I	26.670			
		SNS5A	35.550		1.17	41.594	1.40	0.790	1.880	B	ER	26.670	0.910	1.770	B	I	48.530	0.80	0.760	1.170	B	I	26.670			
		SNS6A	39.950		1.09	43.546	1.40	0.790	1.750	B	ER	26.670	0.910	1.620	B	I	48.530	0.80	0.760	1.090	B	I	26.670			
	SNS7B	42.000		1.04	43.680	1.40	0.790	1.670	B	ER	26.670	0.910	1.620	B	I	48.530	0.80	0.760	1.040	B	I	26.670				
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.33	43.890	1.40	0.790	2.140	B	ER	26.670	0.910	1.930	B	I	48.530	0.80	0.760	1.330	B	I	26.670			
		TNT4A	33.075		1.34	44.321	1.40	0.790	2.160	B	ER	26.670	0.910	1.860	B	I	48.530	0.80	0.760	1.340	B	I	26.670			
		TNT6A	41.600		1.11	46.176	1.40	0.790	1.790	B	ER	26.670	0.910	1.780	B	I	48.530	0.80	0.760	1.110	B	I	26.670			
		TNT7A	42.000		1.12	47.040	1.40	0.790	1.810	B	ER	26.670	0.910	1.660	B	I	48.530	0.80	0.760	1.120	B	I	26.670			
		TNT7B	42.000		1.17	49.140	1.40	0.790	1.890	B	ER	26.670	0.910	1.560	B	I	48.530	0.80	0.760	1.170	B	I	26.670			
		TNAGRIT4	43.000		1.11	47.730	1.40	0.790	1.790	B	ER	26.670	0.910	1.500	B	I	48.530	0.80	0.760	1.110	B	I	26.670			
TNAGT5A		45.000		1.04	46.800	1.40	0.790	1.670	B	ER	26.670	0.910	1.520	B	I	48.530	0.80	0.760	1.040	B	I	26.670				
TNAGT5B	45.000		③	1.02	45.900	1.40	0.790	1.640	B	ER	26.670	0.910	1.420	B	I	48.530	0.80	0.760	1.020	B	I	26.670				
EMERGENCY VEHICLE (EV)	EV2	28.750		1.55	44.563	1.30	0.790	2.680	B	ER	26.670	0.910	2.280	B	I	48.530	0.80	0.760	1.550	B	I	26.670				
	EV3	43.000		④	1.01	43.430	1.30	0.790	1.740	B	ER	26.670	0.910	1.520	B	I	48.530	0.80	0.760	1.010	B	I	26.670			

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:

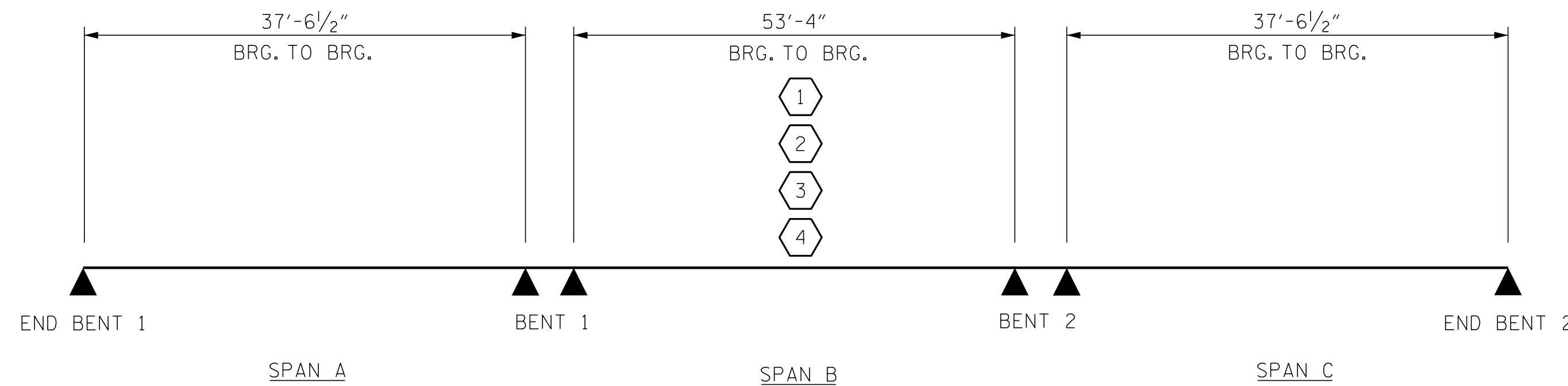
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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

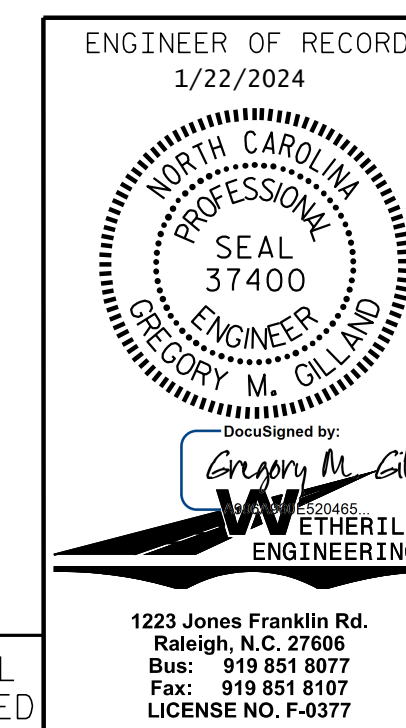


PROJECT NO. BR-0062
ANSON COUNTY
 STATION: 18+07.50 -L-

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 1/19/2024 8:40:57 AM

ASSEMBLED BY : J. PENDERGRAFT	DATE : 6-23
CHECKED BY : G. GILLAND	DATE : 7-23
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

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD LRFR SUMMARY FOR PRESTRESSED CONCRETE GIRDERS (NON-INTERSTATE TRAFFIC)					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-05
					TOTAL SHEETS 35

STD. NO. LRFR1