

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 _{L1})	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 _{L1})	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (FT)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.14	---	1.75	0.800	1.430	A	E	45.060	0.840	1.260	A	E	63.370	0.80	0.800	1.140	A	E	45.060		
	HL-93 (OPERATING)	N/A		1.73	---	1.35	0.800	1.850	A	E	45.060	0.910	1.730	A	I	72.530	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.55	55.800	1.75	0.800	1.950	A	E	45.060	0.910	1.710	A	I	72.530	0.80	0.800	1.550	A	E	45.060		
	HS-20 (OPERATING)	36.000		2.26	81.360	1.35	0.800	2.530	A	E	45.060	0.910	2.260	A	I	72.530	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.63	49.005	1.40	0.800	5.710	A	E	45.060	0.910	5.460	A	I	72.530	0.80	0.800	3.630	A	E	45.060	
		SNGRBS2	20.000		2.65	53.000	1.40	0.800	4.170	A	E	45.060	0.910	3.810	A	I	72.530	0.80	0.800	2.650	A	E	45.060	
		SNAGRIS2	22.000		2.48	54.560	1.40	0.800	3.910	A	E	45.060	0.910	3.520	A	I	72.530	0.80	0.800	2.480	A	E	45.060	
		SNCOTTS3	27.250		1.80	49.050	1.40	0.800	2.840	A	E	45.060	0.910	2.640	A	I	72.530	0.80	0.800	1.800	A	E	45.060	
		SNAGGRS4	34.925		1.48	51.689	1.40	0.800	2.340	A	E	45.060	0.910	2.150	A	I	72.530	0.80	0.800	1.480	A	E	45.060	
		SNS5A	35.550		1.45	51.548	1.40	0.800	2.290	A	E	45.060	0.910	2.170	A	I	72.530	0.80	0.800	1.450	A	E	45.060	
		SNS6A	39.950		1.32	52.734	1.40	0.800	2.090	A	E	45.060	0.910	1.960	A	I	72.530	0.80	0.800	1.320	A	E	45.060	
		SNS7B	42.000		1.26	52.920	1.40	0.800	1.990	A	E	45.060	0.910	1.920	A	I	72.530	0.80	0.800	1.260	A	E	45.060	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.61	53.130	1.40	0.800	2.540	A	E	45.060	0.910	2.370	A	I	72.530	0.80	0.800	1.610	A	E	45.060	
		TNT4A	33.075		1.62	53.582	1.40	0.800	2.550	A	E	45.060	0.910	2.310	A	I	72.530	0.80	0.800	1.620	A	E	45.060	
		TNT6A	41.600		1.31	54.496	1.40	0.800	2.070	A	E	45.060	0.910	2.040	A	I	72.530	0.80	0.800	1.310	A	E	45.060	
		TNT7A	42.000		1.32	55.440	1.40	0.800	2.070	A	E	45.060	0.910	2.000	A	I	72.530	0.80	0.800	1.320	A	E	45.060	
		TNT7B	42.000		1.35	56.700	1.40	0.800	2.130	A	E	45.060	0.910	1.870	A	I	72.530	0.80	0.800	1.350	A	E	45.060	
		TNAGRIT4	43.000		1.29	55.470	1.40	0.800	2.040	A	E	45.060	0.910	1.810	A	I	72.530	0.80	0.800	1.290	A	E	45.060	
TNAGT5A	45.000		1.22	54.900	1.40	0.800	1.930	A	E	45.060	0.910	1.790	A	I	72.530	0.80	0.800	1.220	A	E	45.060			
TNAGT5B	45.000	③	1.21	54.450	1.40	0.800	1.910	A	E	45.060	0.910	1.720	A	I	72.530	0.80	0.800	1.210	A	E	45.060			

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:

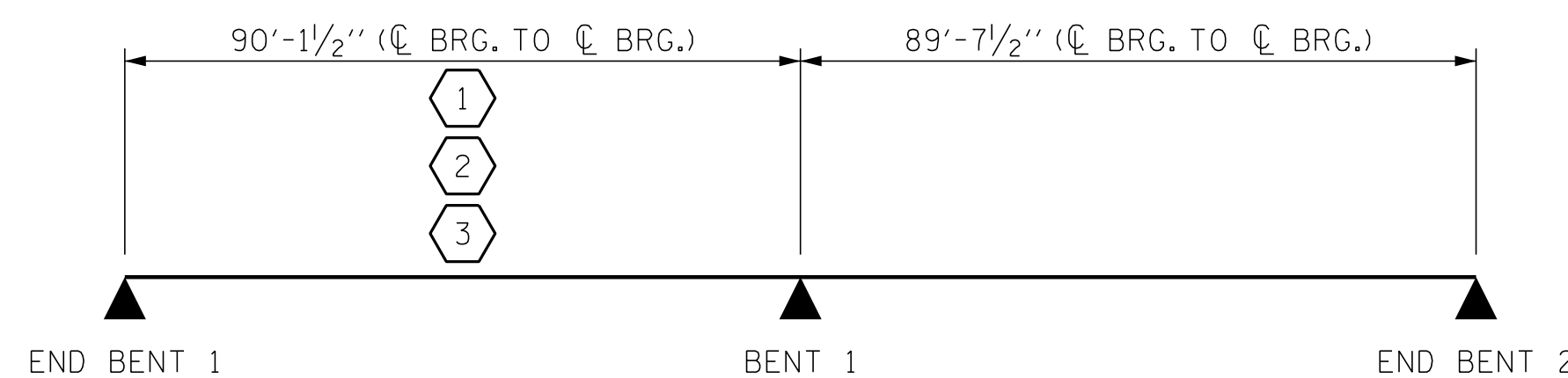
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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 E - EXTERIOR GIRDER

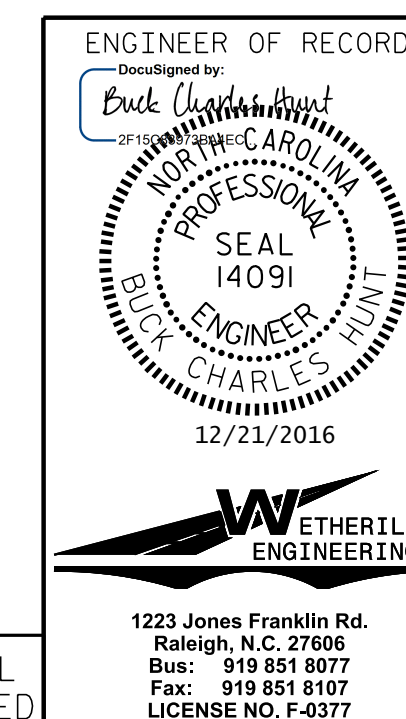


LRFR SUMMARY

PROJECT NO. R-5311A
HERTFORD COUNTY
 STATION: 25+47.22 -Y1-

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ASSEMBLED BY : G.M. GILLAND	DATE : 2-29-16
CHECKED BY: B.C. HUNT	DATE : 2-29-16
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM



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. S01-4
					TOTAL SHEETS 61

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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