

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	1.02	---	1.75	0.880	1.430	A	E	49.850	0.890	1.220	A	E	70.070	0.80	0.880	1.020	A	E	49.850		
	HL-93 (OPERATING)	N/A		1.85	---	1.35	0.880	1.850	A	E	49.850	0.890	2.060	A	E	90.290	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.42	51.120	1.75	0.880	1.990	A	E	49.850	0.890	2.000	A	I	90.290	0.80	0.880	1.420	A	E	49.850		
	HS-20 (OPERATING)	36.000		2.58	92.880	1.35	0.880	2.580	A	E	49.850	0.890	2.620	A	I	90.290	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.36	45.360	1.40	0.880	5.910	A	E	49.850	0.890	6.400	A	I	90.290	0.80	0.880	3.360	A	E	49.850	
		SNGARBS2	20.000		2.43	48.600	1.40	0.880	4.280	A	E	49.850	0.890	4.440	A	I	90.290	0.80	0.880	2.430	A	E	49.850	
		SNAGRIS2	22.000		2.28	50.160	1.40	0.880	4.000	A	E	49.850	0.890	4.090	A	I	90.290	0.80	0.880	2.280	A	E	49.850	
		SNCOTTS3	27.250		1.67	45.508	1.40	0.880	2.940	A	E	49.850	0.890	3.120	A	I	90.290	0.80	0.880	1.670	A	E	49.850	
		SNAGGRS4	34.925		1.37	47.847	1.40	0.880	2.410	A	E	49.850	0.890	2.520	A	I	90.290	0.80	0.880	1.370	A	E	49.850	
		SNS5A	35.550		1.34	47.637	1.40	0.880	2.360	A	E	49.850	0.890	2.530	A	I	90.290	0.80	0.880	1.340	A	E	49.850	
		SNS6A	39.950		1.22	48.739	1.40	0.880	2.140	A	E	49.850	0.890	2.280	A	I	90.290	0.80	0.880	1.220	A	E	49.850	
	SNS7B	42.000		1.16	48.720	1.40	0.880	2.040	A	E	49.850	0.890	2.220	A	I	90.290	0.80	0.880	1.160	A	E	49.850		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.48	48.840	1.40	0.880	2.610	A	E	49.850	0.890	2.760	A	I	90.290	0.80	0.880	1.480	A	E	49.850	
		TNT4A	33.075		1.49	49.282	1.40	0.880	2.610	A	E	49.850	0.890	2.700	A	I	90.290	0.80	0.880	1.490	A	E	49.850	
		TNT6A	41.600		1.20	49.920	1.40	0.880	2.120	A	E	49.850	0.890	2.320	A	I	90.290	0.80	0.880	1.200	A	E	49.850	
		TNT7A	42.000		1.20	50.400	1.40	0.880	2.120	A	E	49.850	0.890	2.290	A	I	90.290	0.80	0.880	1.200	A	E	49.850	
		TNT7B	42.000		1.23	51.660	1.40	0.880	2.170	A	E	49.850	0.890	2.180	A	I	90.290	0.80	0.880	1.230	A	E	49.850	
		TNAGRIT4	43.000		1.18	50.740	1.40	0.880	2.080	A	E	49.850	0.890	2.110	A	I	90.290	0.80	0.880	1.180	A	E	49.850	
TNAGT5A		45.000		1.12	50.400	1.40	0.880	1.970	A	E	49.850	0.890	2.070	A	I	90.290	0.80	0.880	1.120	A	E	49.850		
TNAGT5B	45.000		③	1.11	49.950	1.40	0.880	1.950	A	E	49.850	0.890	2.010	A	I	90.290	0.80	0.880	1.110	A	E	49.850		

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)

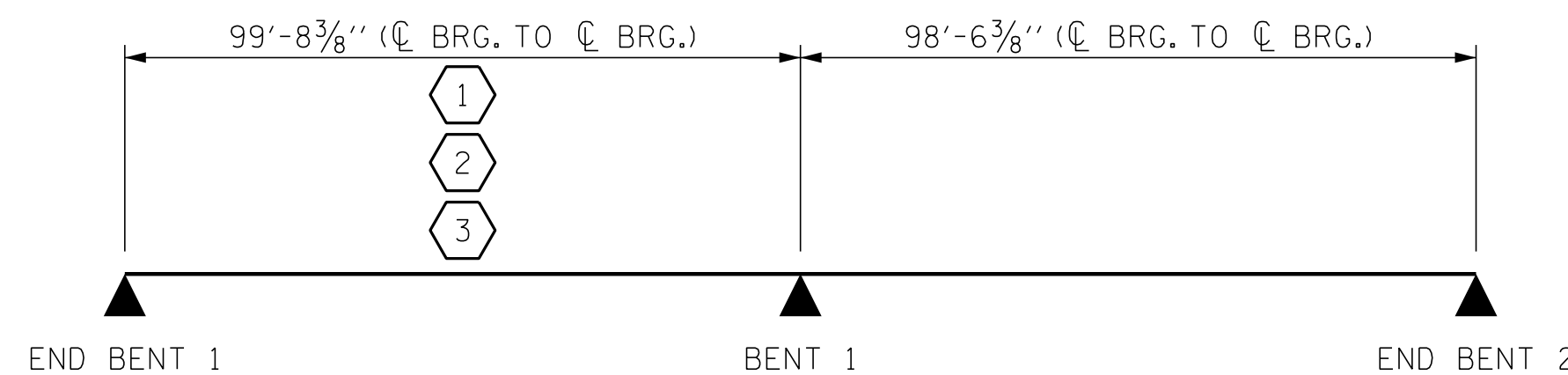
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
 E - EXTERIOR GIRDER



LRFR SUMMARY

PROJECT NO. U-5796
WAYNE COUNTY
 STATION: 27+41.30 -Y8-

ASSEMBLED BY : G.M. GILLAND DATE : 12-29-15
 CHECKED BY : D. HODGE DATE : 1-16
 DRAWN BY : MAA 1/08 REV. 11/2/08RR MAA/GM
 CHECKED BY : GM/DI 2/08 REV. 10/1/11 MAA/GM

ENGINEER OF RECORD

1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 Bus: 919 851 8077
 Fax: 919 851 8107
 LICENSE NO. F-0377

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:	S01-4
1			3			TOTAL SHEETS
2			4			34

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED