

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 × 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	1.36	--	1.75	0.293	1.36	A	EL	23.09	0.326	2.04	A	EL	1.63	0.80	0.293	1.37	A	EL	23.09		
	HL-93 (OPERATING)	N/A		1.76	--	1.35	0.293	1.76	A	EL	23.09	0.326	2.65	A	EL	1.63	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.67	60.120	1.75	0.293	1.67	A	EL	23.09	0.326	2.43	A	EL	1.63	0.80	0.293	1.68	A	EL	23.09		
	HS-20 (OPERATING)	36.000		2.17	78.120	1.35	0.293	2.17	A	EL	23.09	0.326	3.15	A	EL	1.63	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.32	44.820	1.40	0.293	4.14	A	EL	23.09	0.326	6.79	A	EL	1.63	0.80	0.293	3.32	A	EL	23.09	
		SNGARBS2	20.000		2.66	53.200	1.40	0.293	3.31	A	EL	23.09	0.326	4.96	A	EL	1.63	0.80	0.293	2.66	A	EL	23.09	
		SNAGRIS2	22.000		2.60	57.200	1.40	0.293	3.20	A	EL	27.71	0.326	4.66	A	EL	1.63	0.80	0.293	2.60	A	EL	27.71	
		SNCOTTS3	27.250		1.65	44.963	1.40	0.293	2.05	A	EL	23.09	0.326	3.40	A	EL	1.63	0.80	0.293	1.65	A	EL	23.09	
		SNAGGRS4	34.925		1.45	50.641	1.40	0.293	1.81	A	EL	23.09	0.326	2.92	A	EL	1.63	0.80	0.293	1.45	A	EL	23.09	
		SNS5A	35.550		1.42	50.481	1.40	0.293	1.76	A	EL	23.09	0.326	3.01	A	EL	1.63	0.80	0.293	1.42	A	EL	23.09	
		SNS6A	39.950		1.33	53.134	1.40	0.293	1.66	A	EL	23.09	0.326	2.78	A	EL	1.63	0.80	0.293	1.33	A	EL	23.09	
	TRUCK TRACTOR SEMI-TRAILER (TTS1)	SNS7B	42.000		1.27	53.340	1.40	0.293	1.58	A	EL	23.09	0.326	2.79	A	EL	1.63	0.80	0.293	1.27	A	EL	23.09	
		TNAGRIT3	33.000		1.64	54.120	1.40	0.293	2.04	A	EL	23.09	0.326	3.28	A	EL	1.63	0.80	0.293	1.64	A	EL	23.09	
		TNT4A	33.075		1.65	54.574	1.40	0.293	2.05	A	EL	23.09	0.326	3.15	A	EL	1.63	0.80	0.293	1.65	A	EL	23.09	
		TNT6A	41.600		1.38	57.408	1.40	0.293	1.72	A	EL	23.09	0.326	3.06	A	EL	1.63	0.80	0.293	1.38	A	EL	23.09	
		TNT7A	42.000		1.41	59.220	1.40	0.293	1.75	A	EL	23.09	0.326	2.83	A	EL	1.63	0.80	0.293	1.41	A	EL	23.09	
		TNT7B	42.000		1.46	61.320	1.40	0.293	1.82	A	EL	23.09	0.326	2.68	A	EL	1.63	0.80	0.293	1.46	A	EL	23.09	
		TNAGRIT4	43.000		1.40	60.200	1.40	0.293	1.74	A	EL	23.09	0.326	2.58	A	EL	1.63	0.80	0.293	1.40	A	EL	23.09	
TNAGT5A	45.000		1.30	58.500	1.40	0.293	1.62	A	EL	23.09	0.326	2.63	A	EL	1.63	0.80	0.293	1.30	A	EL	23.09			
TNAGT5B	45.000	③	1.27	57.150	1.40	0.293	1.58	A	EL	23.09	0.326	2.45	A	EL	1.63	0.80	0.293	1.27	A	EL	23.09			

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:

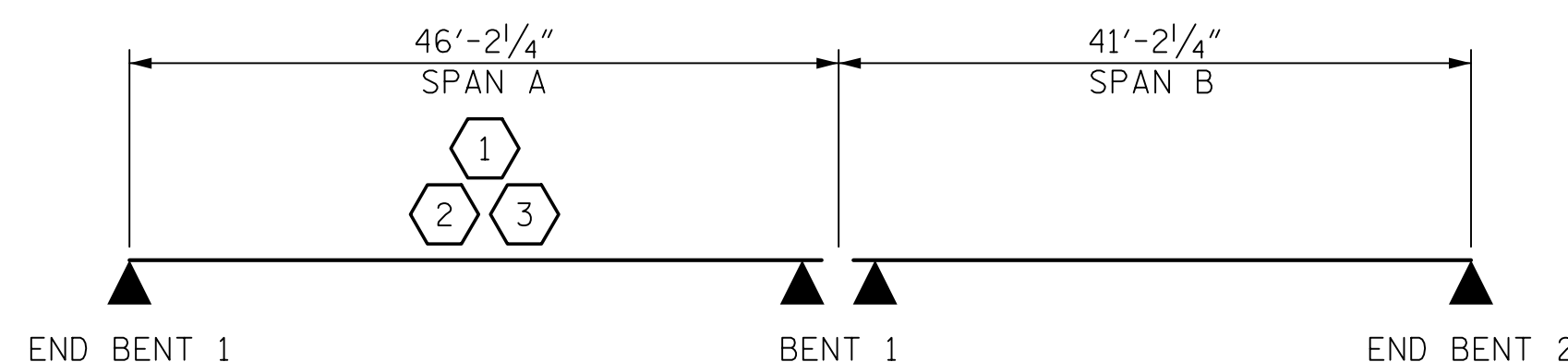
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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



LRFR SUMMARY

Mead & Hunt

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Raleigh, NC 27601
919-714-8670
meadhunt.com
NC License No. F-1235



PROJECT NO. B-4440
BRUNSWICK COUNTY
STATION: 18+90.36 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
LRFR SUMMARY FOR
CORED SLAB UNIT
(NON-INTERSTATE TRAFFIC)

DRAWN BY : J.S. HOBSON DATE : 2/15/15
CHECKED BY : J.A. LEE DATE : 2/17/15
DESIGN ENGINEER OF RECORD : J.A. LEE DATE : 2/17/15

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-04
1			3			TOTAL SHEETS
2			4			22

STD. NO. LRFR1