

## LOAD AND RESISTANCE FACTOR RATING (LRFD) 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			
						LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD FACTORS	MOMENT						
							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)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(Inv)	N/A	<b>1</b>	1.06	--	1.75	0.248	1.14	70'	ER	34.423	0.655	<b>1.06</b>	70'	ER	<b>6.885</b>	0.80	0.248	1.11	70'	ER	34.423		
	HL-93(0pr)	N/A	--	1.374	--	1.35	0.248	1.48	70'	ER	34.423	0.655	1.37	70'	ER	6.885	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	<b>2</b>	1.32	47.508	1.75	0.248	1.48	70'	ER	34.423	0.655	<b>1.32</b>	70'	ER	<b>6.885</b>	0.80	0.248	1.44	70'	ER	34.423		
	HS-20(0pr)	36.000	--	1.711	61.585	1.35	0.248	1.91	70'	ER	34.423	0.655	1.71	70'	ER	6.885	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.204	43.258	1.4	0.248	4.12	70'	ER	34.423	0.655	3.9	70'	ER	6.885	0.80	0.248	3.20	70'	ER	34.423	
		SNGARBS2	20.000	--	2.403	48.063	1.4	0.248	3.09	70'	ER	34.423	0.655	2.78	70'	ER	6.885	0.80	0.248	2.40	70'	ER	34.423	
		SNAGRIS2	22.000	--	2.282	50.21	1.4	0.248	2.94	70'	ER	34.423	0.655	2.58	70'	ER	6.885	0.80	0.248	2.28	70'	ER	34.423	
		SNCOTTS3	27.250	--	1.595	43.463	1.4	0.248	2.05	70'	ER	34.423	0.655	1.95	70'	ER	6.885	0.80	0.248	1.59	70'	ER	34.423	
		SNAGGRS4	34.925	--	1.339	46.755	1.4	0.248	1.72	70'	ER	34.423	0.655	1.62	70'	ER	6.885	0.80	0.248	1.34	70'	ER	34.423	
		SNS5A	35.550	--	1.309	46.526	1.4	0.248	1.68	70'	ER	34.423	0.655	1.65	70'	ER	6.885	0.80	0.248	1.31	70'	ER	34.423	
		SNS6A	39.950	--	1.203	48.069	1.4	0.248	1.55	70'	ER	34.423	0.655	1.5	70'	ER	6.885	0.80	0.248	1.20	70'	ER	34.423	
	SNS7B	42.000	--	1.146	48.129	1.4	0.248	1.47	70'	ER	34.423	0.655	1.48	70'	ER	6.885	0.80	0.248	1.15	70'	ER	34.423		
	TTST	TNAGRIT3	33.000	--	1.468	48.444	1.4	0.248	1.89	70'	ER	34.423	0.655	1.79	70'	ER	6.885	0.80	0.248	1.47	70'	ER	34.423	
		TNT4A	33.075	--	1.475	48.79	1.4	0.248	1.9	70'	ER	34.423	0.655	1.74	70'	ER	6.885	0.80	0.248	1.48	70'	ER	34.423	
		TNT6A	41.600	--	1.208	50.272	1.4	0.248	1.55	70'	ER	34.423	0.655	1.58	70'	ER	6.885	0.80	0.248	1.21	70'	ER	34.423	
		TNT7A	42.000	--	1.216	51.061	1.4	0.248	1.56	70'	ER	34.423	0.655	1.55	70'	ER	6.885	0.80	0.248	1.22	70'	ER	34.423	
		TNT7B	42.000	--	1.261	52.955	1.4	0.248	1.62	70'	ER	34.423	0.655	1.44	70'	ER	6.885	0.80	0.248	1.26	70'	ER	34.423	
		TNAGRIT4	43.000	--	1.197	51.476	1.4	0.248	1.54	70'	ER	34.423	0.655	1.4	70'	ER	6.885	0.80	0.248	1.20	70'	ER	34.423	
TNAGT5A		45.000	--	1.128	50.745	1.4	0.248	1.45	70'	ER	34.423	0.655	1.39	70'	ER	6.885	0.80	0.248	1.13	70'	ER	34.423		
TNAGT5B	45.000	<b>3</b>	1.113	50.088	1.4	0.248	1.43	70'	ER	34.423	0.655	1.33	70'	ER	6.885	0.80	0.248	<b>1.11</b>	70'	ER	<b>34.423</b>			

**LOAD FACTORS:**

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	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)

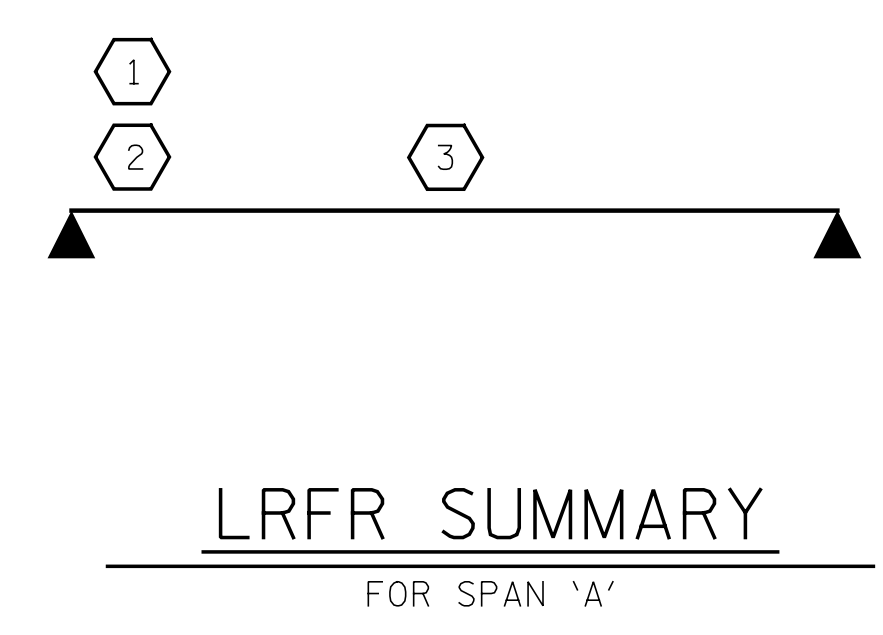
3 LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

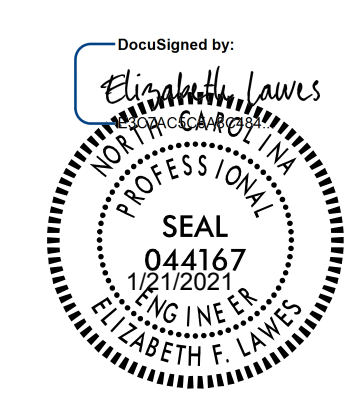
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**GIRDER LOCATION**

I - INTERIOR GIRDER  
EL - EXTERIOR LEFT GIRDER  
ER - EXTERIOR RIGHT GIRDER



PROJECT NO. BR-0011  
CHEROKEE COUNTY  
STATION: 15+45.00 -L-



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD  
LRFR SUMMARY FOR  
70' CORED SLAB UNIT  
60° SKEW  
(NON-INTERSTATE TRAFFIC)

ASSEMBLED BY : EFL      DATE : 1/13/2021  
CHECKED BY : KFS      DATE : 1/13/2021  
DRAWN BY : CVC      6/10  
CHECKED BY : DNS      6/10

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			15