

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			
						MOMENT					SHEAR					MOMENT								
						LIVELOAD FACTORS	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)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(Inv)	N/A	1	1.484	--	1.75	0.273	2.04	A	EL	36.75	0.507	1.56	A	EL	7.35	0.80	0.273	<b>1.48</b>	A	EL	<b>36.75</b>		
	HL-93(0pr)	N/A	--	2.028	--	1.35	0.273	2.64	A	EL	36.75	0.507	2.03	A	EL	7.35	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.947	70.08	1.75	0.273	2.67	A	EL	36.75	0.507	1.98	A	EL	7.35	0.80	0.273	<b>1.95</b>	A	EL	<b>36.75</b>		
	HS-20(0pr)	36.000	--	2.561	92.205	1.35	0.273	3.46	A	EL	36.75	0.507	2.56	A	EL	7.35	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13,500	--	4.403	59.442	1.4	0.273	7.55	A	EL	36.75	0.507	5.89	A	EL	7.35	0.80	0.273	4.40	A	EL	36.75	
		SNGARBS2	20,000	--	3.277	65.549	1.4	0.273	5.62	A	EL	36.75	0.507	4.18	A	EL	7.35	0.80	0.273	3.28	A	EL	36.75	
		SNAGRIS2	22,000	--	3.102	68.248	1.4	0.273	5.32	A	EL	36.75	0.507	3.88	A	EL	7.35	0.80	0.273	3.10	A	EL	36.75	
		SNCOTTS3	27,250	--	2.191	59.705	1.4	0.273	3.76	A	EL	36.75	0.507	2.94	A	EL	7.35	0.80	0.273	2.19	A	EL	36.75	
		SNAGGRS4	34,925	--	1.83	63.896	1.4	0.273	3.14	A	EL	36.75	0.507	2.44	A	EL	7.35	0.80	0.273	1.83	A	EL	36.75	
		SNS5A	35,550	--	1.789	63.605	1.4	0.273	3.07	A	EL	36.75	0.507	2.47	A	EL	7.35	0.80	0.273	1.79	A	EL	36.75	
		SNS6A	39,950	--	1.641	65.556	1.4	0.273	2.81	A	EL	36.75	0.507	2.25	A	EL	7.35	0.80	0.273	1.64	A	EL	36.75	
	TTST	SNS7B	42,000	--	1.563	65.632	1.4	0.273	2.68	A	EL	36.75	0.507	2.21	A	EL	7.35	0.80	0.273	1.56	A	EL	36.75	
		TNAGRIT3	33,000	--	2.001	66.029	1.4	0.273	3.43	A	EL	36.75	0.507	2.68	A	EL	7.35	0.80	0.273	2.00	A	EL	36.75	
		TNT4A	33,075	--	2.01	66.465	1.4	0.273	3.45	A	EL	36.75	0.507	2.61	A	EL	7.35	0.80	0.273	2.01	A	EL	36.75	
		TNT6A	41,600	--	1.642	68.325	1.4	0.273	2.82	A	EL	36.75	0.507	2.35	A	EL	7.35	0.80	0.273	1.64	A	EL	36.75	
		TNT7A	42,000	--	1.65	69.313	1.4	0.273	2.83	A	EL	36.75	0.507	2.3	A	EL	7.35	0.80	0.273	1.65	A	EL	36.75	
		TNT7B	42,000	--	1.706	71.672	1.4	0.273	2.93	A	EL	36.75	0.507	2.16	A	EL	7.35	0.80	0.273	1.71	A	EL	36.75	
		TNAGRIT4	43,000	--	1.624	69.831	1.4	0.273	2.78	A	EL	36.75	0.507	2.09	A	EL	7.35	0.80	0.273	1.62	A	EL	36.75	
TNAGT5A	45,000	--	1.531	68.917	1.4	0.273	2.63	A	EL	36.75	0.507	2.08	A	EL	7.35	0.80	0.273	1.53	A	EL	36.75			
TNAGT5B	45,000	3	1.513	68.095	1.4	0.273	2.59	A	EL	36.75	0.507	1.99	A	EL	7.35	0.80	0.273	<b>1.51</b>	A	EL	<b>36.75</b>			

LOAD FACTORS:

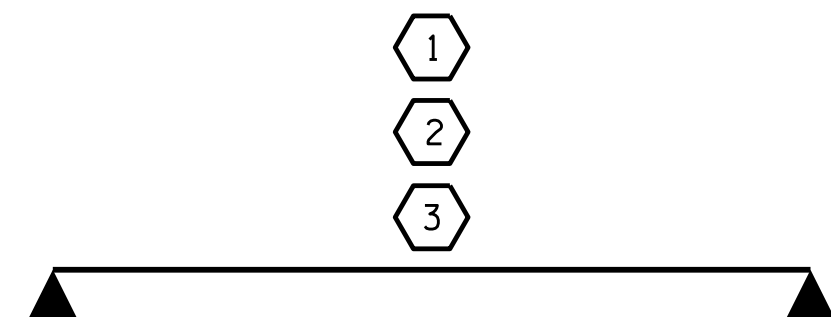
DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

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.

#	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

PROJECT NO. B-5546  
RANDOLPH COUNTY  
 STATION: 13+56.00-L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 LRFR SUMMARY FOR  
 75' BOX BEAM UNIT  
 90° SKEW  
 (NON-INTERSTATE TRAFFIC)

ASSEMBLED BY : D.A. DAVENPORT DATE : 10/08/14  
 CHECKED BY : J.K. BOWLES DATE : 01/20/15  
 DRAWN BY : TMG II/II  
 CHECKED BY : AAC II/II

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-26
1			3			TOTAL SHEETS
2			4			38