

# 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	1.01	--	1.75	0.872	1.48	A	I-2	32.124	1.118	1.76	A	I-2	19.275	0.80	1.118	1.01	A	I-2	32.124		
	HL-93(0pr)	N/A	--	1.92	--	1.35	0.872	1.92	A	I-2	32.124	1.118	2.28	A	I-2	19.275	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.37	49.339	1.75	0.872	2.00	A	I-2	32.124	1.118	2.16	A	I-2	19.275	0.80	0.872	1.37	A	I-2	32.124		
	HS-20(0pr)	36.000	--	2.59	93.251	1.35	0.872	2.59	A	I-2	32.124	1.118	2.80	A	I-2	19.275	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.01	40.676	1.40	0.872	5.49	A	I-2	32.124	1.118	6.05	A	I-2	19.275	0.80	0.872	3.01	A	I-2	32.124	
		SNGARBS2	20.000	--	2.28	45.589	1.40	0.872	4.15	A	I-2	32.124	1.118	4.41	A	I-2	19.275	0.80	0.872	2.28	A	I-2	32.124	
		SNAGRIS2	22.000	--	2.17	47.812	1.40	0.872	3.96	A	I-2	32.124	1.118	4.14	A	I-2	19.275	0.80	0.872	2.17	A	I-2	32.124	
		SNCOTTS3	27.250	--	1.50	40.885	1.40	0.872	2.73	A	I-2	32.124	1.118	3.03	A	I-2	19.275	0.80	0.872	1.50	A	I-2	32.124	
		SNAGGRS4	34.925	--	1.27	44.243	1.40	0.872	2.31	A	I-2	32.124	1.118	2.59	A	I-2	19.275	0.80	0.872	1.27	A	I-2	32.124	
		SNS5A	35.550	--	1.24	44.008	1.40	0.872	2.26	A	I-2	32.124	1.118	2.67	A	I-2	19.275	0.80	0.872	1.24	A	I-2	32.124	
		SNS6A	39.950	--	1.14	45.595	1.40	0.872	2.08	A	I-2	32.124	1.118	2.47	A	I-2	19.275	0.80	0.872	1.14	A	I-2	32.124	
	SNS7B	42.000	--	1.09	45.657	1.40	0.872	1.98	A	I-2	32.124	1.118	2.48	A	I-2	19.275	0.80	0.872	1.09	A	I-2	32.124		
	TTST	TNAGRIT3	33.000	--	1.39	45.982	1.40	0.872	2.54	A	I-2	32.124	1.118	2.91	A	I-2	19.275	0.80	0.872	1.39	A	I-2	32.124	
		TNT4A	33.075	--	1.40	46.340	1.40	0.872	2.55	A	I-2	32.124	1.118	2.80	A	I-2	19.275	0.80	0.872	1.40	A	I-2	32.124	
		TNT6A	41.600	--	1.15	47.876	1.40	0.872	2.10	A	I-2	32.124	1.118	2.73	A	I-2	19.275	0.80	0.872	1.15	A	I-2	32.124	
		TNT7A	42.000	--	1.16	48.698	1.40	0.872	2.11	A	I-2	32.124	1.118	2.59	A	I-2	19.275	0.80	0.872	1.16	A	I-2	32.124	
		TNT7B	42.000	--	1.21	50.679	1.40	0.872	2.20	A	I-2	32.124	1.118	2.38	A	I-2	19.275	0.80	0.872	1.21	A	I-2	32.124	
		TNAGRIT4	43.000	--	1.14	49.131	1.40	0.872	2.08	A	I-2	32.124	1.118	2.30	A	I-2	19.275	0.80	0.872	1.14	A	I-2	32.124	
TNAGT5A		45.000	--	1.08	48.368	1.40	0.872	1.96	A	I-2	32.124	1.118	2.34	A	I-2	19.275	0.80	0.872	1.07	A	I-2	32.124		
TNAGT5B	45.000	3	1.06	47.685	1.40	0.872	1.93	A	I-2	32.124	1.118	2.18	A	I-2	19.275	0.80	0.872	1.06	A	I-2	32.124			

### 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)

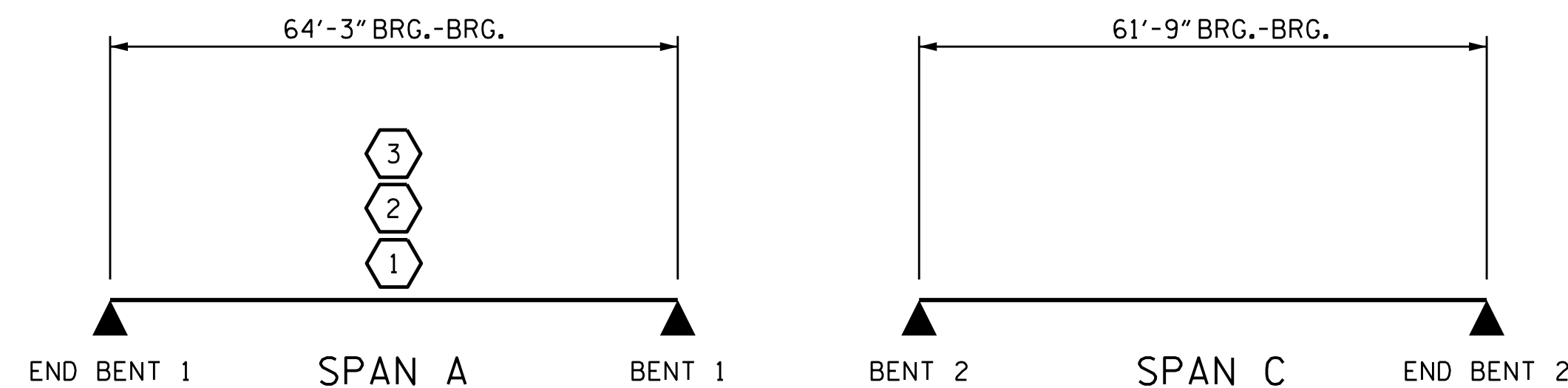
3 LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

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GIRDER LOCATION

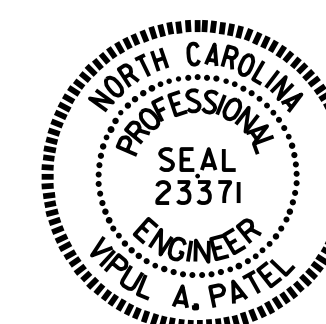
I - INTERIOR GIRDER  
EL - EXTERIOR LEFT GIRDER  
ER - EXTERIOR RIGHT GIRDER



### LRFR SUMMARY

PROJECT NO. B-5136  
CABARRUS COUNTY  
 STATION: 21+74.92 -L-

SHEET 1 OF 2



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:	S-6
1			3			TOTAL SHEETS 75
2			4			

ASSEMBLED BY : G. W. DICKEY	DATE : 5/31/13
CHECKED BY : R. L. CHESSON	DATE : 7/15/13
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
DESIGN ENGINEER OF RECORD: V. A. PATEL DATE : 1/5/15	