

LOAD FACTORS:

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

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	1	1.01	--	1.75	0.872	1.6	B	EL	41.537	1.076	2.16	B	I	41.537	0.80	1.076	1.01	A	I	46.037		
	HL-93(0pr)	N/A	--	2.07	--	1.35	0.872	2.07	B	EL	41.537	1.076	2.81	B	I	41.537	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.38	49.594	1.75	0.872	2.14	B	EL	41.537	1.076	2.58	B	I	41.537	0.80	0.827	1.38	A	I	46.037		
	HS-20(0pr)	36.000	--	2.78	99.989	1.35	0.872	2.78	B	EL	41.537	1.076	3.34	B	I	41.537	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.23	43.675	1.4	0.872	6.19	B	EL	41.537	1.076	7.11	B	I	41.537	0.80	0.844	3.23	B	I	41.537	
		SNGARBS2	20.000	--	2.36	47.127	1.4	0.872	4.55	B	EL	41.537	1.076	5.23	B	I	41.537	0.80	0.827	2.36	A	I	46.037	
		SNAGRIS2	22.000	--	2.21	48.606	1.4	0.872	4.28	B	EL	41.537	1.076	4.92	B	I	41.537	0.80	0.827	2.21	A	I	46.037	
		SNCOTTS3	27.250	--	1.61	43.827	1.4	0.872	3.08	B	EL	41.537	1.076	3.57	B	I	41.537	0.80	0.844	1.61	B	I	41.537	
		SNAGGRS4	34.925	--	1.32	46.208	1.4	0.872	2.55	B	EL	41.537	1.076	3.08	B	I	41.537	0.80	0.827	1.32	A	I	46.037	
		SNS5A	35.550	--	1.3	46.045	1.4	0.872	2.49	B	EL	41.537	1.076	3.19	B	I	41.537	0.80	0.827	1.30	A	I	46.037	
		SNS6A	39.950	--	1.18	47.131	1.4	0.872	2.28	B	EL	41.537	1.076	2.96	B	I	41.537	0.80	0.827	1.18	A	I	46.037	
	SNS7B	42.000	--	1.12	47.173	1.4	0.872	2.17	B	EL	41.537	1.076	2.98	B	I	41.537	0.80	0.827	1.12	A	I	46.037		
	TTST	TNAGRIT3	33.000	--	1.44	47.392	1.4	0.872	2.78	B	EL	41.537	1.076	3.48	B	I	41.537	0.80	0.827	1.44	A	I	46.037	
		TNT4A	33.075	--	1.44	47.632	1.4	0.872	2.79	B	EL	41.537	1.076	3.34	B	I	41.537	0.80	0.827	1.44	A	I	46.037	
		TNT6A	41.600	--	1.17	48.648	1.4	0.872	2.27	B	EL	41.537	1.076	3.32	B	I	41.537	0.80	0.827	1.17	A	I	46.037	
		TNT7A	42.000	--	1.17	49.182	1.4	0.872	2.27	B	EL	41.537	1.076	3.23	B	I	41.537	0.80	0.827	1.17	A	I	46.037	
		TNT7B	42.000	--	1.2	50.443	1.4	0.872	2.34	B	EL	41.537	1.076	2.86	B	I	41.537	0.80	0.827	1.20	A	I	46.037	
		TNAGRIT4	43.000	--	1.15	49.461	1.4	0.872	2.24	B	EL	41.537	1.076	2.75	B	I	41.537	0.80	0.827	1.15	A	I	46.037	
TNAGT5A		45.000	--	1.09	48.969	1.4	0.872	2.11	B	EL	41.537	1.076	2.82	B	I	41.537	0.80	0.827	1.09	A	I	46.037		
TNAGT5B	45.000	3	1.08	48.523	1.4	0.872	2.09	B	EL	41.537	1.076	2.61	B	I	41.537	0.80	0.827	1.08	A	I	46.037			

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)

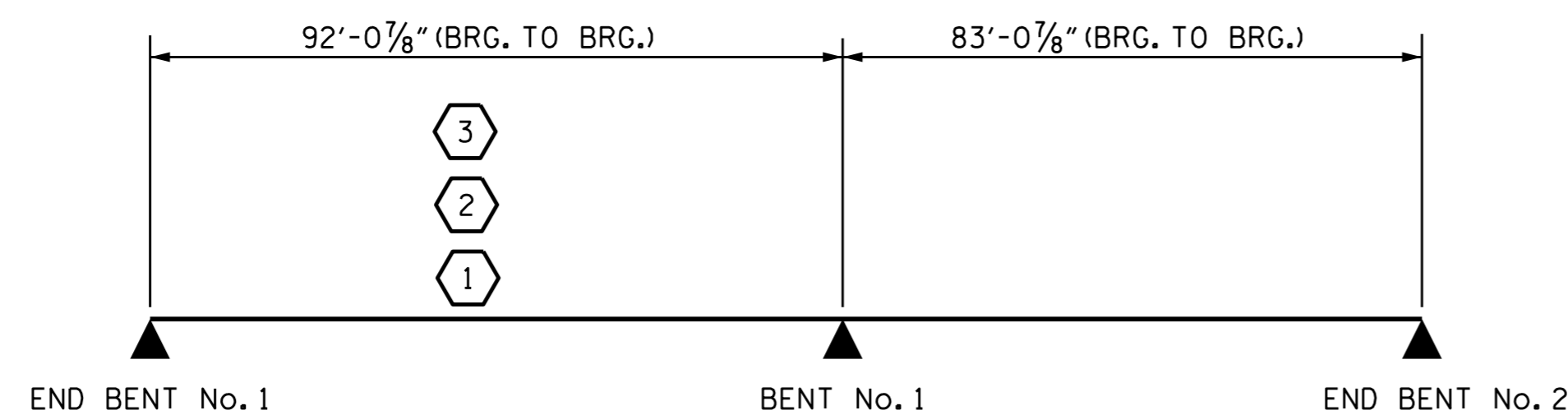
3 LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

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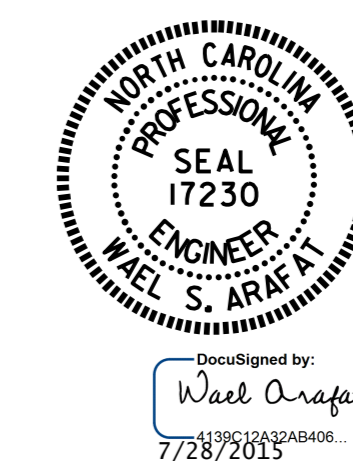
GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. R-2915A  
WATAUGA/ASHE COUNTY  
 STATION: 11+18.63 -L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 LRFR SUMMARY FOR  
 PRESTRESSED  
 CONCRETE GIRDERS  
 (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO. 5-4
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 31
2			4			

ASSEMBLED BY : V.X. NGUYEN DATE : 8-27-14  
 CHECKED BY : D. HODGE DATE : 2-15  
 DRAWN BY : MAA 1/08  
 CHECKED BY : GM/DI 2/08

REV. 11/12/08RR MAA/GM  
 REV. 10/1/11 MAA/GM  
 DESIGN ENGINEER OF RECORD: A.M. LEE DATE : 4/30/15