

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 x 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	1.026	--	1.75	0.867	1.236	A	EL	63.38	0.867	1.055	A	EL	88.73	0.80	0.867	1.026	A	EL	63.38		
	HL-93 (OPERATING)	N/A		1.368	--	1.35	0.867	1.602	A	EL	63.38	0.867	1.368	A	EL	88.73	N/A	--	--	--	--	--	--	
	HS-20 (INVENTORY)	36.000	②	1.405	50.566	1.75	0.867	1.832	A	EL	63.38	0.867	1.405	A	EL	88.73	0.80	0.867	1.522	A	EL	63.38		
	HS-20 (OPERATING)	36.000		1.821	65.549	1.35	0.867	2.375	A	EL	63.38	0.867	1.821	A	EL	88.73	N/A	--	--	--	--	--	--	
LEGAL LOAD RATING	SINGLE VEHICLE (SV) TRUCK TRACTOR SEMI-TRAILER (TTST)	SNSH		3.713	50.125	1.40	0.867	5.587	A	EL	63.38	0.867	4.316	A	EL	88.73	0.80	0.867	3.713	A	EL	63.38		
		SNGARBS2	20.000		2.645	52.895	1.40	0.867	3.979	A	EL	63.38	0.867	3.025	A	EL	88.73	0.80	0.867	2.645	A	EL	63.38	
		SNAGRIS2	22.000		2.457	54.044	1.40	0.867	3.696	A	EL	63.38	0.867	2.791	A	EL	88.73	0.80	0.867	2.457	A	EL	63.38	
		SNCOTTS3	27.250		1.844	50.250	1.40	0.867	2.775	A	EL	63.38	0.867	2.150	A	EL	88.73	0.80	0.867	1.844	A	EL	63.38	
		SNAGGRS4	34.925		1.494	52.169	1.40	0.867	2.248	A	EL	63.38	0.867	1.754	A	EL	88.73	0.80	0.867	1.494	A	EL	63.38	
		SNS5A	35.550		1.464	52.039	1.40	0.867	2.203	A	EL	63.38	0.867	1.761	A	EL	88.73	0.80	0.867	1.464	A	EL	63.38	
		SNS6A	39.950		1.324	52.898	1.40	0.867	1.992	A	EL	63.38	0.867	1.595	A	EL	88.73	0.80	0.867	1.324	A	EL	63.38	
		SNS7B	42.000		1.260	52.931	1.40	0.867	1.896	A	EL	63.38	0.867	1.552	A	EL	88.73	0.80	0.867	1.260	A	EL	63.38	
		TNAGRIT3	33.000		1.609	53.102	1.40	0.867	2.421	A	EL	63.38	0.867	1.907	A	EL	88.73	0.80	0.867	1.609	A	EL	63.38	
		TNT4A	33.075		1.611	53.289	1.40	0.867	2.424	A	EL	63.38	0.867	1.872	A	EL	88.73	0.80	0.867	1.611	A	EL	63.38	
		TNT6A	41.600		1.300	54.076	1.40	0.867	1.956	A	EL	63.38	0.867	1.625	A	EL	88.73	0.80	0.867	1.300	A	EL	63.38	
		TNT7A	42.000		1.297	54.486	1.40	0.867	1.952	A	EL	63.38	0.867	1.598	A	EL	88.73	0.80	0.867	1.297	A	EL	63.38	
		TNT7B	42.000		1.320	55.442	1.40	0.867	1.986	A	EL	63.38	0.867	1.526	A	EL	88.73	0.80	0.867	1.320	A	EL	63.38	
		TNAGRIT4	43.000		1.272	54.698	1.40	0.867	1.914	A	EL	63.38	0.867	1.481	A	EL	88.73	0.80	0.867	1.272	A	EL	63.38	
TNAGRIT5A	45.000		1.207	54.322	1.40	0.867	1.816	A	EL	63.38	0.867	1.455	A	EL	88.73	0.80	0.867	1.207	A	EL	63.38			
TNAGRIT5B	45.000		③	1.200	53.980	1.40	0.867	1.805	A	EL	63.38	0.867	1.411	A	EL	88.73	0.80	0.867	1.200	A	EL	63.38		

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)

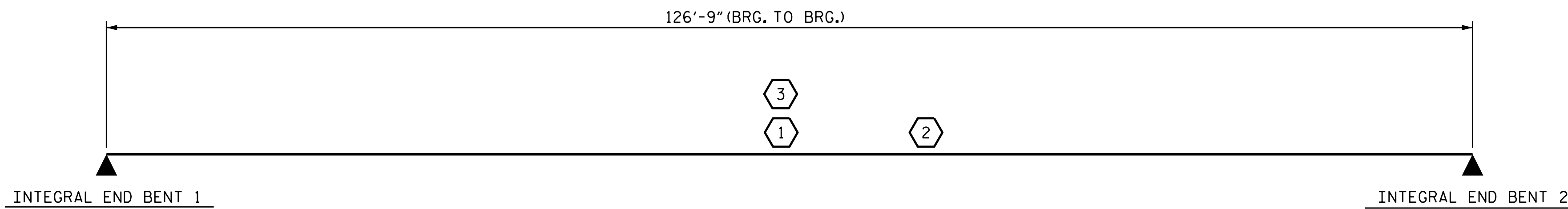
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

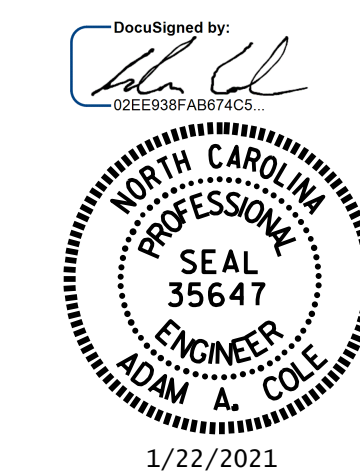
** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



PROJECT NO. B-5818
ANSON COUNTY
 STATION: 27+79.00 -L-



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (NON-INTERSTATE TRAFFIC)

ASSEMBLED BY : M. G. SHAIKH	DATE : 01/20/20
CHECKED BY : H. LOCKLEAR	DATE : 02/20/20
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 12/17 MAA/THC

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	REVISIONS						SHEET NO. S-4 TOTAL SHEETS 24
	NO.	BY:	DATE:	NO.	BY:	DATE:	
	1			3			
	2			4			