

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	1.097	--	1.75	0.892	1.363	B	EL	59.70	0.941	1.264	B	EL	83.57	0.80	0.892	1.097	B	EL	59.70		
	HL-93 (OPERATING)	N/A		1.097	--	1.35	0.892	1.767	B	EL	59.70	0.941	1.639	B	EL	83.57	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.403	50.500	1.75	0.892	1.788	A	EL	40.70	0.939	1.403	A	EL	52.91	0.80	0.892	1.656	A	EL	40.7		
	HS-20 (OPERATING)	36.000		1.600	57.608	1.35	0.892	2.577	B	EL	59.70	0.941	2.170	B	EL	83.57	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV) TRUCK TRACTOR SEMI-TRAILER (TTST)	SNSH		3.814	51.496	1.40	0.892	5.149	A	EL	40.70	0.939	4.049	A	EL	52.91	0.80	0.892	3.814	A	EL	40.7		
		SNGARBS2	20.000		2.773	55.468	1.40	0.892	4.307	B	EL	59.70	0.941	3.594	B	EL	83.57	0.80	0.892	2.773	B	EL	59.70	
		SNAGRIS2	22.000		2.580	56.758	1.40	0.892	4.007	B	EL	59.70	0.941	3.319	B	EL	83.57	0.80	0.892	2.580	B	EL	59.70	
		SNCOTTS3	27.250		1.897	51.700	1.40	0.892	2.561	A	EL	40.70	0.939	2.025	A	EL	52.91	0.80	0.892	1.897	A	EL	40.7	
		SNAGGRS4	34.925		1.565	54.656	1.40	0.892	2.430	B	EL	59.70	0.941	2.085	B	EL	83.57	0.80	0.892	1.565	B	EL	59.70	
		SNS5A	35.550		1.533	54.511	1.40	0.892	2.381	B	EL	59.70	0.941	2.097	B	EL	83.57	0.80	0.892	1.533	B	EL	59.70	
		SNS6A	39.950		1.389	55.472	1.40	0.892	2.156	B	EL	59.70	0.941	1.901	B	EL	83.57	0.80	0.892	1.389	B	EL	59.70	
		SNS7B	42.000		1.322	55.509	1.40	0.892	2.052	B	EL	59.70	0.941	1.853	B	EL	83.57	0.80	0.892	1.322	B	EL	59.70	
		TNAGRIT3	33.000		1.688	55.700	1.40	0.892	2.621	B	EL	59.70	0.941	2.272	B	EL	83.57	0.80	0.892	1.688	B	EL	59.70	
		TNT4A	33.075		1.690	55.911	1.40	0.892	2.625	B	EL	59.70	0.941	2.227	B	EL	83.57	0.80	0.892	1.690	B	EL	59.70	
		TNT6A	41.600		1.365	56.794	1.40	0.892	2.120	B	EL	59.70	0.941	1.946	B	EL	83.57	0.80	0.892	1.365	B	EL	59.70	
		TNT7A	42.000		1.363	57.254	1.40	0.892	2.117	B	EL	59.70	0.941	1.913	B	EL	83.57	0.80	0.892	1.363	B	EL	59.70	
		TNT7B	42.000		1.389	58.331	1.40	0.892	2.157	B	EL	59.70	0.941	1.820	B	EL	83.57	0.80	0.892	1.389	B	EL	59.70	
		TNAGRIT4	43.000		1.337	57.493	1.40	0.892	2.076	B	EL	59.70	0.941	1.766	B	EL	83.57	0.80	0.892	1.337	B	EL	59.70	
TNAGR5A	45.000		1.268	57.070	1.40	0.892	1.970	B	EL	59.70	0.941	1.738	B	EL	83.57	0.80	0.892	1.268	B	EL	59.70			
TNAGR5B	45.000		③	1.260	56.686	1.40	0.892	1.956	B	EL	59.70	0.941	1.681	B	EL	83.57	0.80	0.892	1.260	B	EL	59.70		

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:

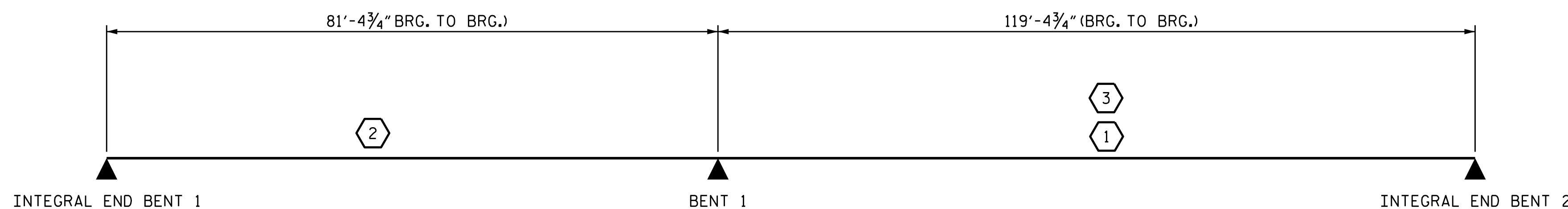
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

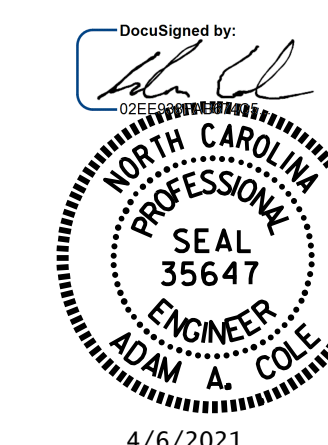
COMMENTS:

- 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-5813
CABARRUS COUNTY
 STATION: 21+85.00 -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 : 07/2019
CHECKED BY : H. LOCKLEAR	DATE : 08/2019
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.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			29