

LOAD FACTORS:

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

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		
						LIVE-LOAD FACTORS (γ_{LL})	MOMENT					SHEAR					LIVE-LOAD FACTORS (γ_{LL})	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 (INVENTORY)	N/A	①	1.14	--	1.75	0.920	1.38	C	E	57.67	0.920	2.04	C	E	104.37	0.80	0.920	1.14	C	E	57.67		
	HL-93 (OPERATING)	N/A		1.78	--	1.35	0.920	1.78	C	E	57.67	0.920	2.69	C	E	104.37	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.64	59.04	1.75	0.920	1.99	C	E	57.67	0.920	2.88	C	E	104.37	0.80	0.920	1.64	C	E	57.67		
	HS-20 (OPERATING)	36.000		2.58	92.88	1.35	0.920	2.58	C	E	57.67	0.920	3.78	C	E	104.37	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.97	53.60	1.40	0.920	6.01	C	E	57.67	0.920	9.29	C	E	104.37	0.80	0.920	3.97	C	E	57.67	
		SNGARBS2	20.000		2.84	56.80	1.40	0.920	4.30	C	E	57.67	0.920	6.43	C	E	104.37	0.80	0.920	2.84	C	E	57.67	
		SNAGRIS2	22.000		2.65	58.30	1.40	0.920	4.01	C	E	57.67	0.920	5.90	C	E	104.37	0.80	0.920	2.65	C	E	57.67	
		SNCOTTS3	27.250		1.97	53.68	1.40	0.920	2.98	C	E	57.67	0.920	4.55	C	E	104.37	0.80	0.920	1.97	C	E	57.67	
		SNAGGRS4	34.925		1.60	55.88	1.40	0.920	2.43	C	E	57.67	0.920	3.65	C	E	10.97	0.80	0.920	1.60	C	E	57.67	
		SNS5A	35.550		1.57	55.81	1.40	0.920	2.38	C	E	57.67	0.920	3.64	C	E	104.37	0.80	0.920	1.57	C	E	57.67	
		SNS6A	39.950		1.42	56.73	1.40	0.920	2.16	C	E	57.67	0.920	3.27	C	E	104.37	0.80	0.920	1.42	C	E	57.67	
		SNS7B	42.000		1.35	56.70	1.40	0.920	2.05	C	E	57.67	0.920	3.16	C	E	104.37	0.80	0.920	1.35	C	E	57.67	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.73	57.09	1.40	0.920	2.62	C	E	57.67	0.920	3.97	C	E	104.37	0.80	0.920	1.73	C	E	57.67	
		TNT4A	33.075		1.73	57.22	1.40	0.920	2.62	C	E	57.67	0.920	3.90	C	E	104.37	0.80	0.920	1.73	C	E	57.67	
		TNT6A	41.600		1.40	58.24	1.40	0.920	2.12	C	E	57.67	0.920	3.32	C	E	10.97	0.80	0.920	1.40	C	E	57.67	
		TNT7A	42.000		1.40	58.80	1.40	0.920	2.12	C	E	57.67	0.920	3.26	C	E	104.37	0.80	0.920	1.40	C	E	57.67	
		TNT7B	42.000		1.43	60.06	1.40	0.920	2.16	C	E	57.67	0.920	3.12	C	E	104.37	0.80	0.920	1.43	C	E	57.67	
		TNAGRIT4	43.000		1.37	58.91	1.40	0.920	2.08	C	E	57.67	0.920	3.04	C	E	104.37	0.80	0.920	1.37	C	E	57.67	
TNAGT5A	45.000		1.30	58.50	1.40	0.920	1.97	C	E	57.67	0.920	2.97	C	E	104.37	0.80	0.920	1.30	C	E	57.67			
TNAGT5B	45.000	③	1.29	58.05	1.40	0.920	1.96	C	E	57.67	0.920	2.89	C	E	10.97	0.80	0.920	1.29	C	E	57.67			

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)

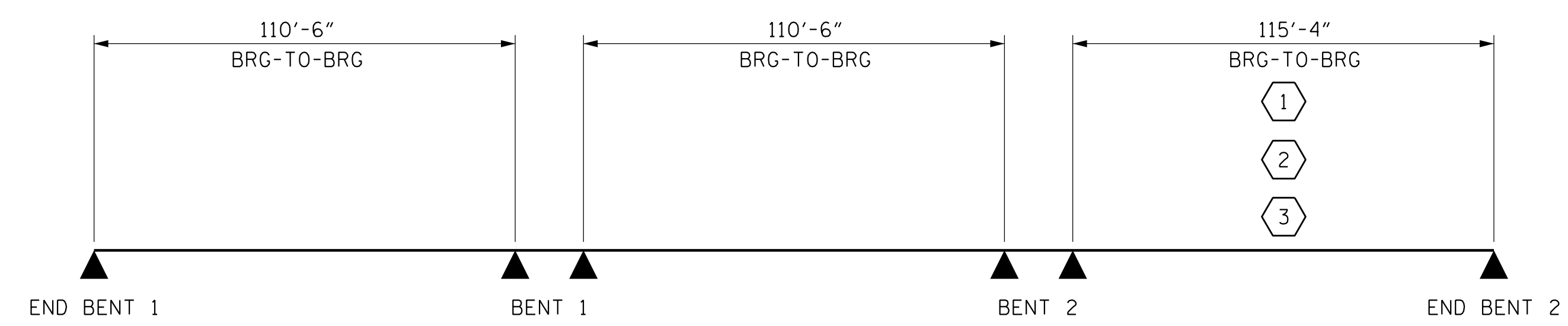
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. R-5819
 COLUMBUS COUNTY
 STATION: 40+06.72 -Y2- POT

SHEET 4 OF 4

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:	S1-4
1			3			TOTAL SHEETS
2			4			38

PLANS PREPARED BY:

NV5

NV5 ENGINEERS & CONSULTANTS, INC.
 3300 REGENCY PARKWAY, SUITE 100
 CARY, NC 27518
 P: 919.851.1912 www.nv5.com
 NC License # F-1333
 Formerly CALO Engineers & Consultants

THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:



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4/12/2022

STD. NO. LRFR1

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ASSEMBLED BY : J. A. PANDOLI	DATE : 6/21
CHECKED BY : M. D. METZGER	DATE : 8/21
DRAWN BY : MAA 1/08	REV. 11/12/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 12/17 MAA/THC