

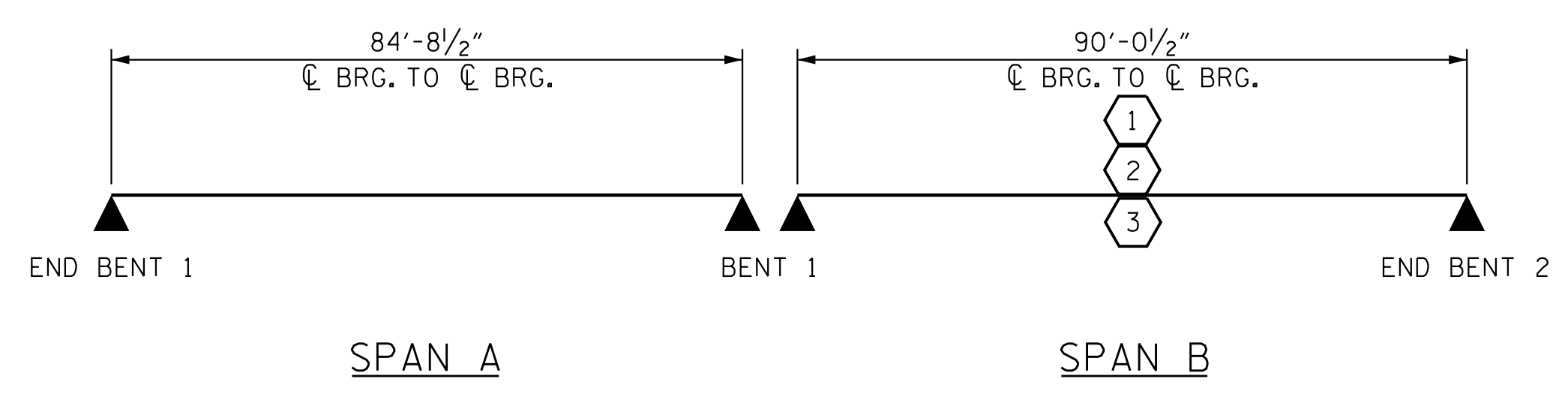
LOAD FACTORS:

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	1.40	--	1.75	.950	1.46	B	EL	45.0	.950	1.48	B	I	81.60	0.80	.950	1.40	B	I	45.0	
	HL-93 (OPERATING)	N/A		1.90	--	1.35	.950	1.90	B	EL	45.0	.950	1.95	B	I	81.60	N/A	--	--	--	--	--	
	HS-20 (INVENTORY)	36.000	2	1.90	68.4	1.75	.950	2.00	B	EL	45.0	.950	1.97	B	I	81.60	0.80	.950	1.90	B	I	45.0	
	HS-20 (OPERATING)	36.000		2.58	92.9	1.35	.950	2.60	B	EL	45.0	.950	2.58	B	I	81.60	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH		1.84	24.8	1.40	.950	2.40	B	EL	45.0	.950	2.50	B	I	81.60	0.80	.950	1.84	B	I	45.0	
		SNGARBS2	20.000		1.64	32.8	1.40	.950	2.14	B	EL	45.0	.950	2.27	B	I	81.60	0.80	.950	1.64	B	I	45.0
		SNAGRIS2	22.000		3.28	72.2	1.40	.950	4.29	B	EL	45.0	.950	4.38	B	I	81.60	0.80	.950	3.28	B	I	45.0
		SNCOTTS3	27.250		1.80	49.1	1.40	.950	2.35	B	EL	45.0	.950	2.51	B	I	81.60	0.80	.950	1.80	B	I	45.0
		SNAGGRS4	34.925		2.23	77.9	1.40	.950	2.91	B	EL	45.0	.950	3.07	B	I	81.60	0.80	.950	2.23	B	I	45.0
		SNS5A	35.550		1.56	55.5	1.40	.950	2.04	B	EL	45.0	.950	2.21	B	I	81.60	0.80	.950	1.56	B	I	45.0
		SNS6A	39.950		4.52	180.6	1.40	.950	5.91	B	EL	45.0	.950	6.27	B	I	81.60	0.80	.950	4.52	B	I	45.0
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		2.00	66.0	1.40	.950	2.61	B	EL	45.0	.950	2.73	B	I	81.60	0.80	.950	2.00	B	I	45.0
		TNT4A	33.075		2.00	66.2	1.40	.950	2.62	B	EL	45.0	.950	2.67	B	I	81.60	0.80	.950	2.00	B	I	45.0
		TNT6A	41.600		1.62	67.4	1.40	.950	2.12	B	EL	45.0	.950	2.33	B	I	81.60	0.80	.950	1.62	B	I	45.0
		TNT7A	42.000		1.63	68.5	1.40	.950	2.13	B	EL	45.0	.950	2.29	B	I	81.60	0.80	.950	1.63	B	I	45.0
		TNT7B	42.000		1.66	69.7	1.40	.950	2.17	B	EL	45.0	.950	2.17	B	I	81.60	0.80	.950	1.66	B	I	45.0
		TNAGRIT4	43.000		1.60	68.8	1.40	.950	2.09	B	EL	45.0	.950	2.10	B	I	81.60	0.80	.950	1.60	B	I	45.0
		TNAGT5A	45.000		1.51	68.0	1.40	.950	1.97	B	EL	45.0	.950	2.07	B	I	81.60	0.80	.950	1.51	B	I	45.0
TNAGT5B	45.000	3	1.50	67.5	1.40	.950	1.96	B	EL	45.0	.950	2.00	B	I	81.60	0.80	.950	1.50	B	I	45.0		

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.
 SPAN LENGTHS IN LRFR SUMMARY SKETCH BELOW ARE THOSE USED IN ANALYSIS MODEL FOR COMPOSITE DEAD LOAD AND LIVE LOAD.

#	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
(CONTINUOUS FOR LIVE LOAD)

PROJECT NO. R-2707E
CLEVELAND COUNTY
 STATION: 13+08.49 -Y42-

SHEET 4 OF 4

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



Stantec
 Stantec Consulting Services Inc.
 801 Jones Franklin Road
 Suite 300
 Raleigh, NC 27606
 Tel. (919) 851-6866
 Fax. (919) 851-7024
 www.stantec.com
 License No. F-0672

ASSEMBLED BY : J. B. GEILE	DATE : 1/11/23	DESIGN ENGINEER OF RECORD : J. T. KELVINGTON	DATE : 05/05/23
CHECKED BY : A. L. BOYKIN	DATE : 02/17/23		
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. S7-05	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			34	
2			4				