

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			
						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	1.05	--	1.75	0.87	1.38	A	ER	68.3	0.954	1.32	A	I	13.1	0.80	0.87	1.05	A	EL	68.3		
	HL-93 (OPERATING)	N/A	--	1.75	--	1.35	0.87	1.79	A	ER	68.3	0.954	1.75	A	I	13.1	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.59	57.2	1.75	0.87	2.09	A	ER	68.3	0.954	1.96	A	I	13.1	0.80	0.87	1.59	A	EL	68.3		
	HS-20 (OPERATING)	36.000	--	2.59	93.2	1.35	0.87	2.71	A	ER	68.3	0.954	2.59	A	I	13.1	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500	--	3.90	52.6	1.40	0.87	6.42	A	ER	68.3	0.954	6.49	A	I	13.1	0.80	0.87	3.90	A	EL	68.3	
		SNGARBS2	20.000	--	2.77	55.4	1.40	0.87	4.55	A	ER	68.3	0.954	4.45	A	I	13.1	0.80	0.87	2.77	A	EL	68.3	
		SNAGRIS2	22.000	--	2.56	56.3	1.40	0.87	4.22	A	ER	68.3	0.954	4.08	A	I	13.1	0.80	0.87	2.56	A	EL	68.3	
		SNCOTTS3	27.250	--	1.94	52.8	1.40	0.87	3.19	A	ER	68.3	0.954	3.16	A	I	13.1	0.80	0.87	1.94	A	EL	68.3	
		SNAGGRS4	34.925	--	1.56	54.4	1.40	0.87	2.58	A	ER	68.3	0.954	2.52	A	I	13.1	0.80	0.87	1.56	A	EL	68.3	
		SNS5A	35.550	--	1.53	54.4	1.40	0.87	2.52	A	ER	68.3	0.954	2.51	A	I	13.1	0.80	0.87	1.53	A	EL	68.3	
		SNS6A	39.950	--	1.38	55.1	1.40	0.87	2.28	A	ER	68.3	0.954	2.25	A	I	13.1	0.80	0.87	1.38	A	EL	68.3	
		SNS7B	42.000	--	1.32	55.4	1.40	0.87	2.17	A	ER	68.3	0.954	2.17	A	I	13.1	0.80	0.87	1.32	A	EL	68.3	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000	--	1.68	55.4	1.40	0.87	2.77	A	ER	68.3	0.954	2.73	A	I	13.1	0.80	0.87	1.68	A	EL	68.3	
		TNT4A	33.075	--	1.68	55.5	1.40	0.87	2.77	A	ER	68.3	0.954	2.69	A	I	13.1	0.80	0.87	1.68	A	EL	68.3	
		TNT6A	41.600	--	1.36	56.5	1.40	0.87	2.23	A	ER	68.3	0.954	2.25	A	I	13.1	0.80	0.87	1.36	A	EL	68.3	
		TNT7A	42.000	--	1.35	56.7	1.40	0.87	2.23	A	ER	68.3	0.954	2.22	A	I	13.1	0.80	0.87	1.35	A	EL	68.3	
		TNT7B	42.000	--	1.38	57.9	1.40	0.87	2.26	A	ER	68.3	0.954	2.14	A	I	13.1	0.80	0.87	1.38	A	EL	68.3	
		TNAGRIT4	43.000	--	1.33	57.1	1.40	0.87	2.18	A	ER	68.3	0.954	2.08	A	I	13.1	0.80	0.87	1.33	A	EL	68.3	
TNAGRIT5A	45.000	--	1.26	56.7	1.40	0.87	2.07	A	ER	68.3	0.954	2.02	A	I	13.1	0.80	0.87	1.26	A	EL	68.3			
TNAGRIT5B	45.000	③	1.25	56.2	1.40	0.87	2.06	A	ER	68.3	0.954	1.98	A	I	13.1	0.80	0.87	1.25	A	EL	68.3			

NOTES:

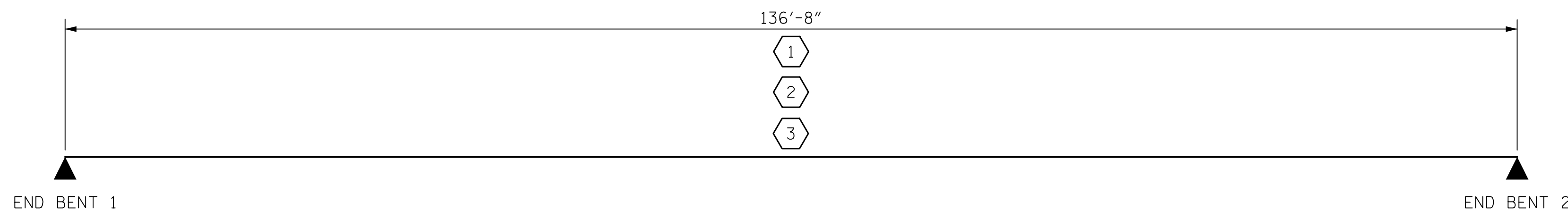
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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. R-5021
BRUNSWICK COUNTY
 STATION: POC 31+30.81 -YREV-

LRFR SUMMARY

DocuSigned by:

 12/7/2018
 ENGINEER
 BRUCE BOSLEY

DocuSigned by:

 12/7/2018
 ENGINEER
 PAUL J. BARBER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

ASSEMBLED BY : LLW	DATE : 12/17
CHECKED BY : RBB	DATE : 12/17
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM

HNTB		HNTB NORTH CAROLINA, P.C. NC License No. C-1554 343 E. Six Forks Rd., Suite 200, Raleigh, N.C. 27609	
DRAWN BY : L. WATERS	DATE : 6/18	DWG. NO. 5	TOTAL SHEETS 25
CHECKED BY : B. BOSLEY	DATE : 6/18		
DESIGN ENGINEER OF RECORD : B. BOSLEY	DATE : 12/18		

REVISIONS					SHEET NO.
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		