

LOAD FACTORS:

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

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	1.17	--	1.75	0.730	1.53	A	I	60.9	0.950	1.19	A	I	115.6	0.80	0.730	1.17	A	I	60.9	1	
	HL-93 (OPERATING)	N/A		1.70	--	1.35	0.730	1.98	A	I	60.9	0.950	1.70	A	I	115.6	N/A	--	--	--	--	--	1	
	HS-20 (INVENTORY)	36.000	②	1.72	61.92	1.75	0.730	2.24	A	I	60.9	0.950	2.06	A	I	115.6	0.80	0.730	1.72	A	I	60.9	1	
	HS-20 (OPERATING)	36.000		2.78	100.08	1.35	0.730	2.91	A	I	60.9	0.950	2.78	A	I	110.2	N/A	--	--	--	--	--	1	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		4.21	56.84	1.40	0.730	6.86	A	I	60.9	0.950	7.18	A	I	110.2	0.80	0.730	4.21	A	I	60.9	1
		SNGARBS2	20.000		2.99	59.80	1.40	0.730	4.87	A	I	60.9	0.950	4.93	A	I	110.2	0.80	0.730	2.99	A	I	60.9	1
		SNAGRIS2	22.000		2.77	60.94	1.40	0.730	4.51	A	I	60.9	0.950	4.52	A	I	110.2	0.80	0.730	2.77	A	I	60.9	1
		SNCOTTS3	27.250		2.08	56.68	1.40	0.730	3.39	A	I	60.9	0.950	3.46	A	I	110.2	0.80	0.730	2.08	A	I	60.9	1
		SNAGGRS4	34.925		1.68	58.67	1.40	0.730	2.74	A	I	60.9	0.950	2.67	A	I	110.2	0.80	0.730	1.68	A	I	60.9	1
		SNS5A	35.550		1.65	58.66	1.40	0.730	2.69	A	I	60.9	0.950	2.65	A	I	110.2	0.80	0.730	1.65	A	I	60.9	1
		SNS6A	39.950		1.50	59.93	1.40	0.730	2.44	A	I	60.9	0.950	2.38	A	I	110.2	0.80	0.730	1.50	A	I	60.9	1
		SNS7B	42.000		1.42	59.64	1.40	0.730	2.32	A	I	60.9	0.950	2.27	A	I	115.6	0.80	0.730	1.42	A	I	60.9	1
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.82	60.06	1.40	0.730	2.97	A	I	60.9	0.950	2.86	A	I	110.2	0.80	0.730	1.82	A	I	60.9	1
		TNT4A	33.075		1.82	60.20	1.40	0.730	2.97	A	I	60.9	0.950	2.82	A	I	110.2	0.80	0.730	1.82	A	I	60.9	1
		TNT6A	41.600		1.47	61.15	1.40	0.730	2.39	A	I	60.9	0.950	2.34	A	I	115.6	0.80	0.730	1.47	A	I	60.9	1
		TNT7A	42.000		1.47	61.74	1.40	0.730	2.39	A	I	60.9	0.950	2.30	A	I	115.6	0.80	0.730	1.47	A	I	60.9	1
		TNT7B	42.000		1.49	62.58	1.40	0.730	2.43	A	I	60.9	0.950	2.24	A	I	115.6	0.80	0.730	1.49	A	I	60.9	1
		TNAGRIT4	43.000		1.44	61.92	1.40	0.730	2.34	A	I	60.9	0.950	2.16	A	I	115.6	0.80	0.730	1.44	A	I	60.9	1
		TNAGT5A	45.000		1.36	61.20	1.40	0.730	2.22	A	I	60.9	0.950	2.07	A	I	115.6	0.80	0.730	1.36	A	I	60.9	1
TNAGT5B	45.000	③	1.35	60.75	1.40	0.730	2.21	A	I	60.9	0.950	2.08	A	I	115.6	0.80	0.730	1.35	A	I	60.9	1		

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. GIRDERS DESIGNED AS SIMPLE SPANS FOR FLEXURE.
 GIRDERS DESIGNED AS SIMPLE-MADE-CONTINUOUS (FOR LIVE LOAD AND SUPERIMPOSED DEAD LOAD) FOR SHEAR.

⑥ CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

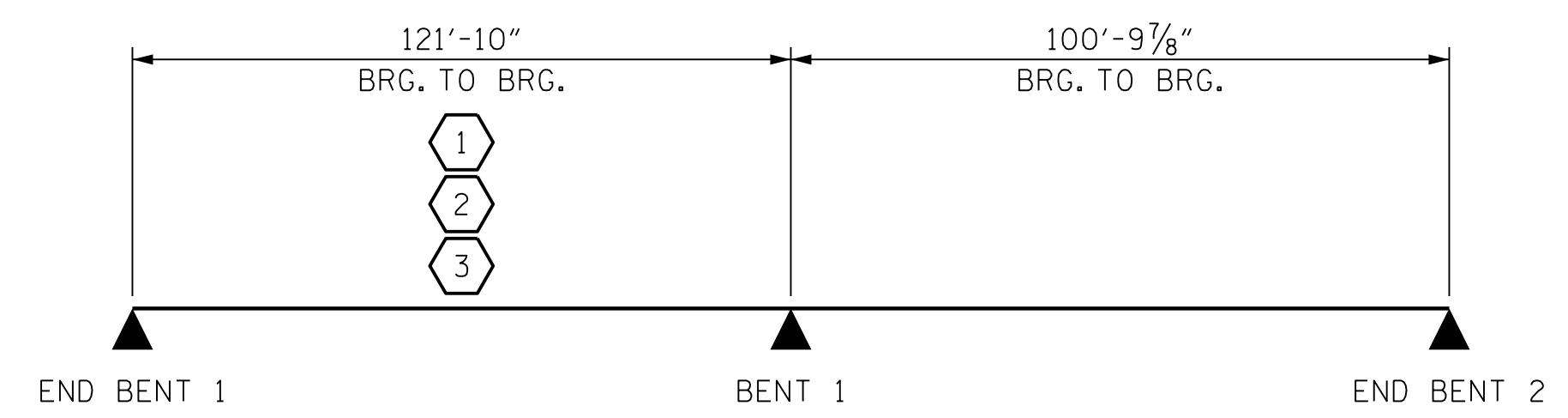
② DESIGN LOAD RATING (HS-20)

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-2233BB
RUTHERFORD COUNTY
 STATION: 26+65.52 -Y3-

4/22/2020 404_009_R2233BB_SMLLRFR_800663.dgn

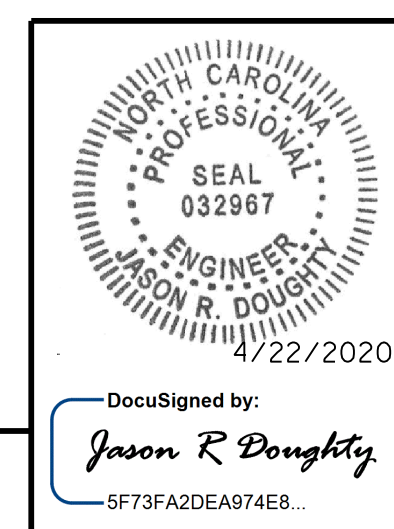
DESIGNED BY: J. BORUTA DATE: AUG 2019
 DRAWN BY: K. WHITE DATE: AUG 2019
 CHECKED BY: B. LOFLIN DATE: AUG 2019
 DESIGN ENGINEER OF RECORD: J. DOUGHTY DATE: NOV 2019

DRAWN BY: MAA 1/08
 CHECKED BY: GM/DI 2/08
 REV. 11/12/08RR MAA/GM
 REV. 10/1/11 MAA/GM
 REV. 12/17 MAA/THC



333 FAYETTEVILLE STREET, SUITE 500
 RALEIGH, NC 27601
 NC LICENSE NO. C-2979

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 UNLESS ALL SIGNATURES COMPLETED**



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:	
1			3			S4-5
2			4			TOTAL SHEETS 45