

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			
						LIVE-LOAD FACTORS (%LL)	MOMENT					SHEAR					LIVE-LOAD FACTORS (%LL)	MOMENT						
							DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (++)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (++)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (++)	
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.08	--	1.75	0.80	1.18	A	E	59.75	0.90	1.22	A	I	11.4	0.80	0.80	1.08	A	E	59.75		
	HL-93 (OPERATING)	N/A		1.54	--	1.35	0.80	1.54	A	E	59.75	0.90	1.70	A	I	11.4	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.57	56.52	1.75	0.80	1.73	A	E	59.75	0.90	1.83	A	I	11.4	0.80	0.80	1.57	A	E	59.75		
	HS-20 (OPERATING)	36.000		2.24	80.64	1.35	0.80	2.24	A	E	59.75	0.90	2.42	A	I	11.4	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.80	51.30	1.40	0.80	5.24	A	E	59.75	0.90	6.10	A	I	11.4	0.80	0.80	3.80	A	E	59.75	
		SNGARBS2	20.000		2.72	54.40	1.40	0.80	3.74	A	E	59.75	0.90	4.19	A	I	11.4	0.80	0.80	2.72	A	E	59.75	
		SNAGRIS2	22.000		2.53	55.66	1.40	0.80	3.48	A	E	59.75	0.90	3.84	A	I	11.4	0.80	0.80	2.53	A	E	59.75	
		SNCOTTS3	27.250		1.89	51.50	1.40	0.80	2.60	A	E	59.75	0.90	2.94	A	I	11.4	0.80	0.80	1.89	A	E	59.75	
		SNAGGRS4	34.925		1.53	53.44	1.40	0.80	2.11	A	E	59.75	0.90	2.34	A	I	11.4	0.80	0.80	1.53	A	E	59.75	
		SNS5A	35.550		1.50	53.33	1.40	0.80	2.07	A	E	59.75	0.90	2.34	A	I	11.4	0.80	0.80	1.50	A	E	59.75	
		SNS6A	39.950		1.36	54.33	1.40	0.80	1.87	A	E	59.75	0.90	2.10	A	I	11.4	0.80	0.80	1.36	A	E	59.75	
		SNS7B	42.000		1.30	54.60	1.40	0.80	1.78	A	E	59.75	0.90	2.03	A	I	11.4	0.80	0.80	1.30	A	E	59.75	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.65	54.45	1.40	0.80	2.28	A	E	59.75	0.90	2.55	A	I	11.4	0.80	0.80	1.65	A	E	59.75	
		TNT4A	33.075		1.66	54.90	1.40	0.80	2.28	A	E	59.75	0.90	2.50	A	I	11.4	0.80	0.80	1.66	A	E	59.75	
		TNT6A	41.600		1.34	55.74	1.40	0.80	1.84	A	E	59.75	0.90	2.12	A	I	11.4	0.80	0.80	1.34	A	E	59.75	
		TNT7A	42.000		1.34	56.28	1.40	0.80	1.84	A	E	59.75	0.90	2.08	A	I	11.4	0.80	0.80	1.34	A	E	59.75	
		TNT7B	42.000		1.36	57.12	1.40	0.80	1.88	A	E	59.75	0.90	2.00	A	I	11.4	0.80	0.80	1.36	A	E	59.75	
		TNAGRIT4	43.000		1.31	56.33	1.40	0.80	1.81	A	E	59.75	0.90	1.94	A	I	11.4	0.80	0.80	1.31	A	E	59.75	
		TNACT5A	45.000	③	1.24	55.80	1.40	0.80	1.71	A	E	59.75	0.90	1.89	A	I	11.4	0.80	0.80	1.24	A	E	59.75	
TNACT5B	45.000	③	1.24	55.80	1.40	0.80	1.70	A	E	59.75	0.90	1.84	A	I	11.4	0.80	0.80	1.24	A	E	59.75			

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.

③ CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

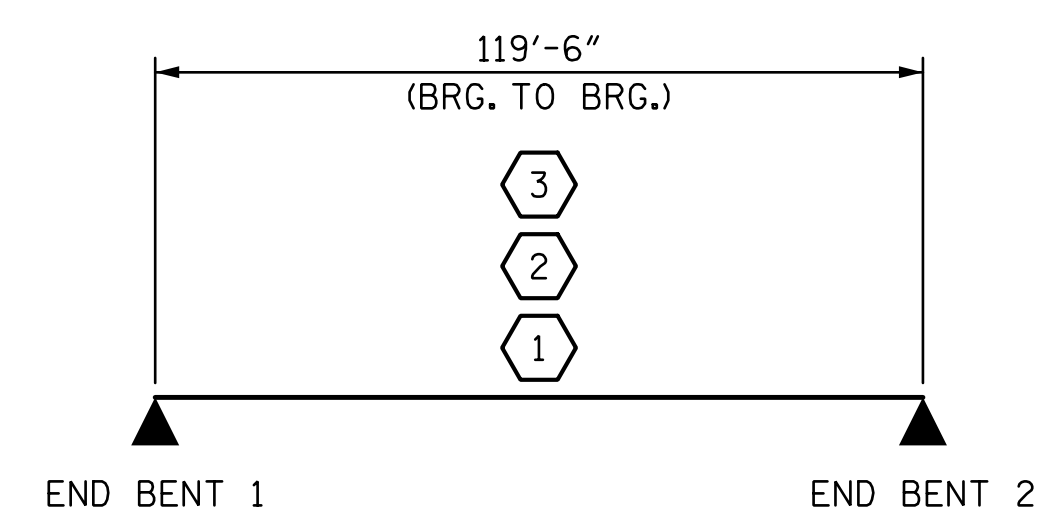
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
 E - EXTERIOR GIRDER



LRFR SUMMARY

PROJECT NO. R-2707C
CLEVELAND COUNTY
 STATION: 32+31.41 -Y11REV2-

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DRAWN BY: MBC DATE: 9-16
 CHECKED BY: KGB DATE: 9-16
 DESIGN ENGINEER OF RECORD: T. LAWS DATE: 9-16

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LRFR SUMMARY FOR
 PRESTRESSED
 CONCRETE GIRDERS
 (NON-INTERSTATE TRAFFIC)

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S11-04
 TOTAL SHEETS 27

STV ENGINEERS, INC.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-5991

DocuSigned by:
 Tony R. Laws, Jr.
 3762017

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