

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	1.48	--	1.75	0.774	2.07	B	EL	37.13	1.151	1.48	B	G2	14.3	0.80	0.774	1.93	B	EL	37.13	1	
	HL-93 (OPERATING)	N/A		1.96	--	1.35	0.774	2.68	B	EL	37.13	1.151	1.96	B	G2	14.3	N/A	--	--	--	--	--	1	
	HS-20 (INVENTORY)	36.000	②	1.86	66.9	1.75	0.774	2.72	B	EL	37.13	1.151	1.86	B	G2	14.3	0.80	0.774	2.53	B	EL	37.13	1	
	HS-20 (OPERATING)	36.000		2.44	87.8	1.35	0.774	3.52	B	EL	37.13	1.151	2.44	B	G2	14.3	N/A	--	--	--	--	--	1	
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		5.69	76.8	1.40	0.774	7.70	B	EL	37.13	1.151	5.69	B	G2	14.3	0.80	0.774	5.73	B	EL	37.13	1
		SNGARBS2	20.000		4.04	80.8	1.40	0.774	5.72	B	EL	37.13	1.151	4.04	B	G2	14.3	0.80	0.774	4.26	B	EL	37.13	1
		SNAGRIS2	22.000		3.75	82.5	1.40	0.774	5.41	B	EL	37.13	1.151	3.75	B	G2	14.3	0.80	0.774	4.03	B	EL	37.13	1
		SNCOTTS3	27.250		2.77	75.4	1.40	0.774	3.83	B	EL	37.13	1.151	2.77	B	G2	14.3	0.80	0.774	2.85	B	EL	37.13	1
		SNAGGRS4	34.925		2.30	80.3	1.40	0.774	3.20	B	EL	37.13	1.151	2.30	B	G2	14.3	0.80	0.774	2.38	B	EL	37.13	1
		SNS5A	35.550		2.33	82.8	1.40	0.774	3.12	B	EL	37.13	1.151	2.34	B	G2	14.3	0.80	0.774	2.33	B	EL	37.13	1
		SNS6A	39.950		2.13	85.0	1.40	0.774	2.86	B	EL	37.13	1.151	2.14	B	G2	14.3	0.80	0.774	2.13	B	EL	37.13	1
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		2.56	84.4	1.40	0.774	3.49	B	EL	37.13	1.151	2.56	B	G2	14.3	0.80	0.774	2.60	B	EL	37.13	1
		TNT4A	33.075		2.48	82.0	1.40	0.774	3.51	B	EL	37.13	1.151	2.48	B	G2	14.3	0.80	0.774	2.61	B	EL	37.13	1
		TNT6A	41.600		2.14	89.0	1.40	0.774	2.87	B	EL	37.13	1.151	2.27	B	G2	14.3	0.80	0.774	2.14	B	EL	37.13	1
		TNT7A	42.000		2.15	90.3	1.40	0.774	2.88	B	EL	37.13	1.151	2.20	B	G2	14.3	0.80	0.774	2.15	B	EL	37.13	1
		TNT7B	42.000		2.05	86.1	1.40	0.774	2.98	B	EL	37.13	1.151	2.05	B	G2	14.3	0.80	0.774	2.22	B	EL	37.13	1
		TNAGRIT4	43.000		1.98	85.1	1.40	0.774	2.83	B	EL	37.13	1.151	1.98	B	G2	14.3	0.80	0.774	2.11	B	EL	37.13	1
		TNAGT5A	45.000		1.97	88.6	1.40	0.774	2.67	B	EL	37.13	1.151	1.97	B	G2	14.3	0.80	0.774	1.99	B	EL	37.13	1
TNAGT5B	45.000	③	1.87	84.1	1.40	0.774	2.64	B	EL	37.13	1.151	1.87	B	G2	14.3	0.80	0.774	1.97	B	EL	37.13	1		
EMERGENCY VEHICLE (EV)	EV2	28.750		2.78	79.9	1.30	0.774	4.04	B	EL	37.13	1.151	2.78	B	G2	14.3	0.80	0.774	3.01	B	EL	37.13	1	
	EV3	43.000	④	1.85	79.6	1.30	0.774	2.65	B	EL	37.13	1.151	1.85	B	G2	14.3	0.80	0.774	1.97	B	EL	37.13	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:

- TYPICAL SECTION IN EACH SPAN HAS VARIABLE GIRDER SPACING AND VARIABLE DECK OVERHANGS. THEREFORE, AVERAGE VALUES FOR BOTH GIRDER SPACING AND DECK OVERHANG USED TO FORMULATE RATING VALUES.

⊛ CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93)

② DESIGN LOAD RATING (HS-20)

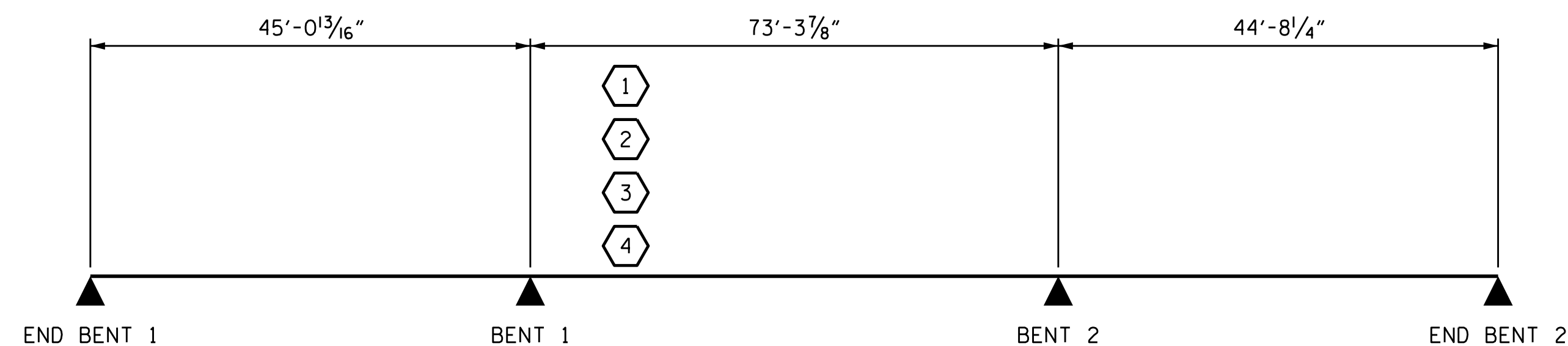
③ LEGAL LOAD RATING **

④ EMERGENCY VEHICLE LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



PROJECT NO. 17BP.14.R.204
JACKSON COUNTY
STATION: 24+58.00-L-

LRFR SUMMARY
AVERAGE BEARING TO BEARING DIMENSIONS SHOWN.

ASSEMBLED BY : LAB	DATE : 1/23
CHECKED BY : RDE	DATE : 7/23
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM
	REV. 04/23 BNB/AAI

*****SYSTEM*****
*****DCN*****
*****USERNAME*****

11/15/2023 | 7:42 AM EST

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-6
TOTAL SHEETS 47