

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS																										
LOAD TYPE		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		HL-93 (INVENTORY)	N/A	⦿1	1.013	--	1.75	0.248	1.16	65'	EL	31.923	0.652	1.01	65'	EL	6.385	0.80	0.248	1.12	65'	EL	31.923			
		HL-93 (OPERATING)	N/A		1.313	--	1.35	0.248	1.50	65'	EL	31.923	0.652	1.31	65'	EL	6.385	N/A	--	--	--	--	--			
		HS-20 (INVENTORY)	36.000	⦿2	1.246	44.865	1.75	0.248	1.48	65'	EL	31.923	0.652	1.25	65'	EL	6.385	0.80	0.248	1.44	65'	EL	31.923			
		HS-20 (OPERATING)	36.000		1.616	58.159	1.35	0.248	1.92	65'	EL	31.923	0.652	1.62	65'	EL	6.385	N/A	--	--	--	--	--			
LEGAL LOAD		SINGLE VEHICLE (SV)		SNSH	13.500		3.163	42.696	1.4	0.248	4.07	65'	EL	31.923	0.652	3.64	65'	EL	6.385	0.80	0.248	3.16	65'	EL	31.923	
				SNGARBS2	20.000		2.395	47.893	1.4	0.248	3.08	65'	EL	31.923	0.652	2.61	65'	EL	6.385	0.80	0.248	2.39	65'	EL	31.923	
				SNAGRIS2	22.000		2.284	50.247	1.4	0.248	2.94	65'	EL	31.923	0.652	2.43	65'	EL	6.385	0.80	0.248	2.28	65'	EL	31.923	
				SNCOTTS3	27.250		1.575	42.917	1.4	0.248	2.03	65'	EL	31.923	0.652	1.82	65'	EL	6.385	0.80	0.248	1.57	65'	EL	31.923	
				SNAGGRS4	34.925		1.331	46.469	1.4	0.248	1.71	65'	EL	31.923	0.652	1.53	65'	EL	6.385	0.80	0.248	1.33	65'	EL	31.923	
				SNS5A	35.550		1.300	46.220	1.4	0.248	1.67	65'	EL	31.923	0.652	1.55	65'	EL	6.385	0.80	0.248	1.30	65'	EL	31.923	
				SNS6A	39.950		1.199	47.899	1.4	0.248	1.54	65'	EL	31.923	0.652	1.42	65'	EL	6.385	0.80	0.248	1.20	65'	EL	31.923	
				SNS7B	42.000		1.142	47.965	1.4	0.248	1.47	65'	EL	31.923	0.652	1.40	65'	EL	6.385	0.80	0.248	1.14	65'	EL	31.923	
		TRUCK TRACTOR SEMI-TRAILER (TTST)		TNAGRIT3	33.000		1.464	48.309	1.4	0.248	1.89	65'	EL	31.923	0.652	1.69	65'	EL	6.385	0.80	0.248	1.46	65'	EL	31.923	
				TNT4A	33.075		1.472	48.688	1.4	0.248	1.90	65'	EL	31.923	0.652	1.64	65'	EL	6.385	0.80	0.248	1.47	65'	EL	31.923	
				TNT6A	41.600		1.209	50.315	1.4	0.248	1.56	65'	EL	31.923	0.652	1.51	65'	EL	6.385	0.80	0.248	1.21	65'	EL	31.923	
				TNT7A	42.000		1.219	51.186	1.4	0.248	1.57	65'	EL	31.923	0.652	1.46	65'	EL	6.385	0.80	0.248	1.22	65'	EL	31.923	
				TNT7B	42.000		1.269	53.286	1.4	0.248	1.63	65'	EL	31.923	0.652	1.37	65'	EL	6.385	0.80	0.248	1.27	65'	EL	31.923	
				TNAGRIT4	43.000		1.201	51.645	1.4	0.248	1.55	65'	EL	31.923	0.652	1.32	65'	EL	6.385	0.80	0.248	1.20	65'	EL	31.923	
				TNAGT5A	45.000		1.130	50.836	1.4	0.248	1.45	65'	EL	31.923	0.652	1.32	65'	EL	6.385	0.80	0.248	1.13	65'	EL	31.923	
				TNAGT5B	45.000	⦿3	1.114	50.113	1.4	0.248	1.43	65'	EL	31.923	0.652	1.25	65'	EL	6.385	0.80	0.248	1.11	65'	EL	31.923	
EMERGENCY VEHICLE (EV)		EV2	28.750		1.876	53.935	1.3	0.248	2.34	65'	EL	31.923	0.652	1.96	65'	EL	6.385	0.80	0.248	1.87	65'	EL	31.923			
		EV3	43.000	⦿4	1.224	52.637	1.3	0.248	1.53	65'	EL	31.923	0.652	1.33	65'	EL	6.385	0.80	0.248	1.22	65'	EL	31.923			

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ DC	γ DW
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

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 **

⦿4

EMERGENCY VEHICLE LOAD RATING **

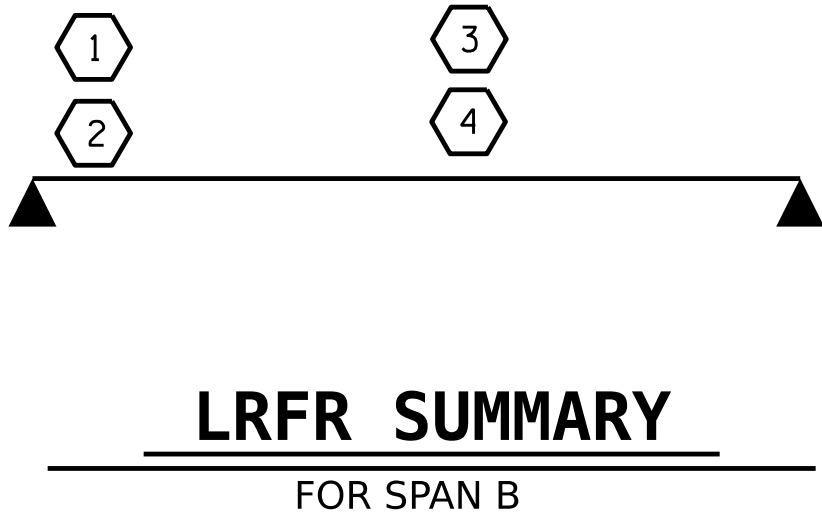
** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER

EL - EXTERIOR LEFT GIRDER

ER - EXTERIOR RIGHT GIRDER



PROJECT NO. HB-0030

MACON COUNTY

STATION: 16+10.49 -L-

SHEET 6 OF 7

DRAWN BY : G.DWIGHT LOFLIN

CHECKED BY : LOGAN C. YARBROUGH

DESIGN ENGINEER OF RECORD: LOGAN C. YARBROUGH

DATE : 01-2025

DATE : 01-2025

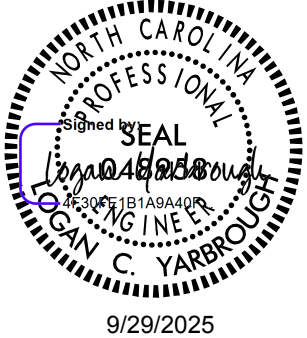
DATE : 08-2025

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DRMP

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PARK DRIVE SUITE 220,
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NC LICENSE NO. F-1524



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SPAN B
LRFR SUMMARY FOR
65' CORED SLAB UNIT
60° SKEW
(NON-INTERSTATE TRAFFIC)

REVISIONS					SHEET NO. S-06
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 26
2			4		