

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		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		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		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		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		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		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		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		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		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		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		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		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		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		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	
EMERGENCY VEHICLE (EV)	EV2		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		
	EV3		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	
			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	

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γDC	γDW
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

NOTES:

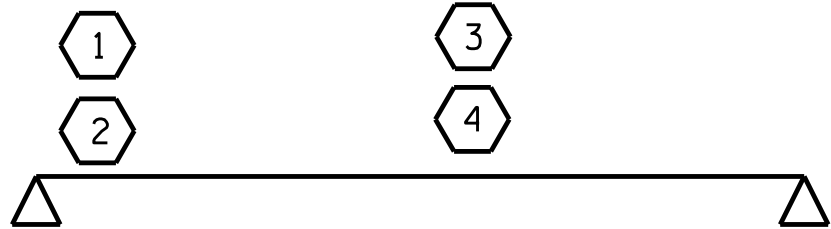
MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

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	



LRFR SUMMARY

FOR SPAN " A "

PROJECT NO. BP14-R010

CLAY COUNTY

STATION: 12+60.00 -L-

DESIGNED BY:	<u>E. LAWES</u>	DATE :	<u>NOV 2023</u>
DRAWN BY:	<u>J. WHEATLEY</u>	DATE :	<u>NOV 2023</u>
CHECKED BY:	<u>T. KIRSCHBAUM</u>	DATE :	<u>NOV 2023</u>
DESIGN ENGINEER OF RECORD:	<u>E. LAWES</u>	DATE :	<u>JUNE 2024</u>

DRAWN BY :	CVC	6/10	REV. BY :	BNB/AKP	06/23
CHECKED BY :	DNS	6/10			

	WSP USA Inc. 434 FAYETTEVILLE STREET SUITE 1500 RALEIGH, NC 27601 TEL: 1.919.836.4040 LICENSE NO. F-0165	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

STATE OF NORTH CAROLINA						
DEPARTMENT OF TRANSPORTATION						
RALEIGH						
STANDARD						
LRFR SUMMARY FOR						
65' CORED SLAB UNIT						
120° SKEW						
(NON-INTERSTATE TRAFFIC)						
REVISIONS					SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2	17		4			17

STD. NO. 24LRFR1_60&120S_65L