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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 $\gamma_{(LL)}$	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 $\gamma_{(LL)}$	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING		HL-93(Inv)	N/A	1	1.22	--	1.75	0.271	1.60	A	EL	24.483	0.612	1.22	A	EL	4.897	0.80	0.271	1.47	A	EL	24.483	
		HL-93(Opr)	N/A	--	1.58	--	1.35	0.271	2.07	A	EL	24.483	0.612	1.58	A	EL	4.897	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.45	52.207	1.75	0.271	1.98	A	EL	24.483	0.612	1.45	A	EL	4.897	0.80	0.271	1.82	A	EL	24.483	
		HS-20(Opr)	36.000	--	1.88	67.676	1.35	0.271	2.57	A	EL	24.483	0.612	1.88	A	EL	4.897	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SINGLE VEHICLE SV	SNSH	13.500	--	3.68	49.660	1.40	0.271	5.04	A	EL	24.483	0.612	4.05	A	EL	4.897	0.80	0.274	3.68	B	EL	19.483	
		SNGARBS2	20.000	--	2.92	58.482	1.40	0.271	3.98	A	EL	24.483	0.612	2.96	A	EL	4.897	0.80	0.271	2.92	A	EL	24.483	
		SNAGRIS2	22.000	--	2.78	61.151	1.40	0.271	3.85	A	EL	19.586	0.612	2.78	A	EL	4.897	0.80	0.271	2.83	A	EL	24.483	
		SNCOTTS3	27.250	--	1.84	50.106	1.40	0.271	2.51	A	EL	24.483	0.612	2.03	A	EL	4.897	0.80	0.274	1.84	B	EL	19.483	
		SNAGGRS4	34.925	--	1.61	56.079	1.40	0.271	2.19	A	EL	24.483	0.612	1.74	A	EL	4.897	0.80	0.271	1.61	A	EL	24.483	
		SNS5A	35.550	--	1.57	55.666	1.40	0.271	2.13	A	EL	24.483	0.612	1.80	A	EL	4.897	0.80	0.271	1.57	A	EL	24.483	
		SNS6A	39.950	--	1.46	58.493	1.40	0.271	1.99	A	EL	24.483	0.612	1.66	A	EL	4.897	0.80	0.271	1.46	A	EL	24.483	
		SNS7B	42.000	--	1.40	58.605	1.40	0.271	1.90	A	EL	24.483	0.612	1.67	A	EL	4.897	0.80	0.271	1.40	A	EL	24.483	
	TRUCK TRACTOR SEMI-TRAILER TTST	TNAGRIT3	33.000	--	1.79	59.194	1.40	0.271	2.44	A	EL	24.483	0.612	1.96	A	EL	4.897	0.80	0.271	1.79	A	EL	24.483	
		TNT4A	33.075	--	1.81	59.847	1.40	0.271	2.46	A	EL	24.483	0.612	1.88	A	EL	4.897	0.80	0.271	1.81	A	EL	24.483	
		TNT6A	41.600	--	1.51	62.701	1.40	0.271	2.05	A	EL	24.483	0.612	1.82	A	EL	4.897	0.80	0.271	1.51	A	EL	24.483	
		TNT7A	42.000	--	1.53	64.260	1.40	0.271	2.08	A	EL	24.483	0.612	1.69	A	EL	4.897	0.80	0.271	1.53	A	EL	24.483	
		TNT7B	42.000	--	1.60	66.995	1.40	0.271	2.17	A	EL	24.483	0.612	1.60	A	EL	4.897	0.80	0.271	1.60	A	EL	24.483	
		TNAGRIT4	43.000	--	1.51	65.091	1.40	0.271	2.06	A	EL	24.483	0.612	1.54	A	EL	4.897	0.80	0.271	1.51	A	EL	24.483	
		TNAGT5A	45.000	--	1.41	63.631	1.40	0.271	1.92	A	EL	24.483	0.612	1.57	A	EL	4.897	0.80	0.271	1.41	A	EL	24.483	
		TNAGT5B	45.000	3	1.39	62.342	1.40	0.271	1.89	A	EL	24.483	0.612	1.46	A	EL	4.897	0.80	0.271	1.39	A	EL	24.483	

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.

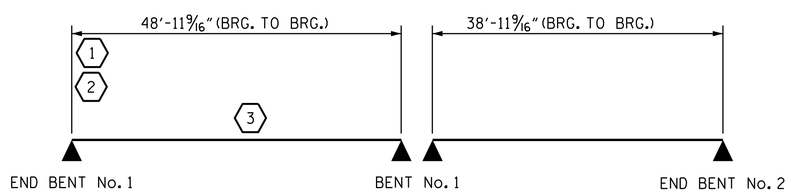
(#) CONTROLLING LOAD RATING

1. DESIGN LOAD RATING (HL-93)
2. DESIGN LOAD RATING (HS-20)
3. LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. 17BP.1.R.65
PASQUOTANK COUNTY
STATION: 13+96.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
LRFR SUMMARY FOR 50' & 40' CORED SLAB UNIT 75° SKEW
(NON-INTERSTATE TRAFFIC)

NORTH CAROLINA PROFESSIONAL SEAL 14045 ENGINEER TIMOTHY L. COGGINS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			20

ASSEMBLED BY : REZA KOUCHEKI DATE : 10/30/14
CHECKED BY : K.P. SEDAI DATE : 11/18/14
DRAWN BY : MAA 1/08 REV. 11/12/08RR MAA/GM
CHECKED BY : GM/DI 2/08 REV. 10/1/11 MAA/GM

09-DEC-2014 14:10
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