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LOAD AND RESISTANCE FACTOR RATING (LRFD) 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					
							LIVELOAD FACTORS	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)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING		HL-93(Inv)	N/A	1	1.312	--	1.75	0.272	1.49	B	EL	46.75	0.492	1.42	B	EL	4.675	0.80	0.272	**1.31**	B	EL	**46.75**	
		HL-93(Opr)	N/A	--	1.845	--	1.35	0.272	1.94	B	EL	46.75	0.492	1.85	B	EL	4.675	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.804	64.941	1.75	0.272	2.05	B	EL	46.75	0.492	1.90	B	EL	4.675	0.80	0.272	**1.80**	B	EL	**46.75**	
		HS-20(Opr)	36.000	--	2.466	88.777	1.35	0.272	2.66	B	EL	46.75	0.492	2.47	B	EL	4.675	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SV	SNSH	13.500	--	4.246	57.316	1.4	0.272	6.04	B	EL	46.75	0.492	5.85	B	EL	4.675	0.80	0.272	4.25	B	EL	46.75	
		SNGARBS2	20.000	--	3.088	61.767	1.4	0.272	4.40	B	EL	46.75	0.492	4.10	B	EL	4.675	0.80	0.272	3.09	B	EL	46.75	
		SNAGRIS2	22.000	--	2.894	63.671	1.4	0.272	4.12	B	EL	46.75	0.492	3.78	B	EL	4.675	0.80	0.272	2.89	B	EL	46.75	
		SNCOTTS3	27.250	--	2.111	57.512	1.4	0.272	3.00	B	EL	46.75	0.492	2.91	B	EL	4.675	0.80	0.272	2.11	B	EL	46.75	
		SNAGGRS4	34.925	--	1.735	60.582	1.4	0.272	2.47	B	EL	46.75	0.492	2.38	B	EL	4.675	0.80	0.272	1.73	B	EL	46.75	
		SNS5A	35.550	--	1.698	60.373	1.4	0.272	2.42	B	EL	46.75	0.492	2.38	B	EL	4.675	0.80	0.272	1.70	B	EL	46.75	
		SNS6A	39.950	--	1.546	61.772	1.4	0.272	2.20	B	EL	46.75	0.492	2.16	B	EL	4.675	0.80	0.272	1.55	B	EL	46.75	
		SNS7B	42.000	--	1.472	61.826	1.4	0.272	2.10	B	EL	46.75	0.492	2.10	B	EL	4.675	0.80	0.272	1.47	B	EL	46.75	
	TTST	TNAGRIT3	33.000	--	1.882	62.108	1.4	0.272	2.68	B	EL	46.75	0.492	2.58	B	EL	4.675	0.80	0.272	1.88	B	EL	46.75	
		TNT4A	33.075	--	1.887	62.417	1.4	0.272	2.69	B	EL	46.75	0.492	2.53	B	EL	4.675	0.80	0.272	1.89	B	EL	46.75	
		TNT6A	41.600	--	1.532	63.725	1.4	0.272	2.18	B	EL	46.75	0.492	2.20	B	EL	4.675	0.80	0.272	1.53	B	EL	46.75	
		TNT7A	42.000	--	1.534	64.411	1.4	0.272	2.18	B	EL	46.75	0.492	2.16	B	EL	4.675	0.80	0.272	1.53	B	EL	46.75	
		TNT7B	42.000	--	1.572	66.032	1.4	0.272	2.24	B	EL	46.75	0.492	2.07	B	EL	4.675	0.80	0.272	1.57	B	EL	46.75	
		TNAGRIT4	43.000	--	1.506	64.77	1.4	0.272	2.14	B	EL	46.75	0.492	2.01	B	EL	4.675	0.80	0.272	1.51	B	EL	46.75	
		TNAGT5A	45.000	--	1.425	64.137	1.4	0.272	2.03	B	EL	46.75	0.492	1.97	B	EL	4.675	0.80	0.272	1.43	B	EL	46.75	
		TNAGT5B	45.000	3	1.413	63.564	1.4	0.272	2.01	B	EL	46.75	0.492	1.91	B	EL	4.675	0.80	0.272	**1.41**	B	EL	**46.75**	

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)

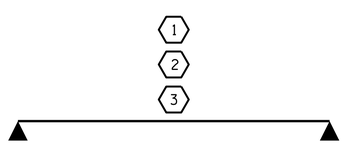
(2) DESIGN LOAD RATING (HS-20)

(3) LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



LRFR SUMMARY

FOR SPAN B

PROJECT NO. B-4803

ROCKINGHAM COUNTY

STATION: 16+05.00 -L-

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 14855 ENGINEER DOUGLAS R. CALHOUN

DocuSigned by: Douglas R. Calhoun 11/20/2014

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

LRFR SUMMARY FOR 95' BOX BEAM UNIT 90° SKEW (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			24

ASSEMBLED BY : ASHVIN PATEL DATE : 05/21/13
CHECKED BY : A. SORSENGINH DATE : 7/2013

DRAWN BY : TMG 11/11
CHECKED BY : AAC 11/11

19-NOV-2014 11:05
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asorsenginh

STD. NO. 39LRFR1_90S_95L