

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	
							LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD FACTORS	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 RATING		HL-93(Inv)	N/A	⬡1	1.974	--	1.75	0.278	2.49	B	EL	27	0.526	1.97	B	EL	5.4	0.80	0.278	2.27	B	EL	27	
		HL-93(Oper)	N/A	--	2.559	--	1.35	0.278	3.23	B	EL	27	0.526	2.56	B	EL	5.4	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	⬡2	2.358	84.885	1.75	0.278	3.12	B	EL	27	0.526	2.36	B	EL	5.4	0.80	0.278	2.84	B	EL	27	
		HS-20(Oper)	36.000	--	3.057	110.036	1.35	0.278	4.04	B	EL	27	0.526	3.06	B	EL	5.4	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SV	SNSH	13.500	--	5.965	80.53	1.4	0.278	8.19	B	EL	27	0.526	6.71	B	EL	5.4	0.80	0.278	5.97	B	EL	27	
		SNGARBS2	20.000	--	4.621	92.422	1.4	0.278	6.36	B	EL	27	0.526	4.86	B	EL	5.4	0.80	0.278	4.62	B	EL	27	
		SNAGRIS2	22.000	--	4.434	97.548	1.4	0.278	6.12	B	EL	21.6	0.526	4.55	B	EL	5.4	0.80	0.278	4.43	B	EL	27	
		SNCOTTS3	27.250	--	2.974	81.029	1.4	0.278	4.08	B	EL	27	0.526	3.36	B	EL	5.4	0.80	0.278	2.97	B	EL	27	
		SNAGGRS4	34.925	--	2.555	89.234	1.4	0.278	3.51	B	EL	27	0.526	2.85	B	EL	5.4	0.80	0.278	2.56	B	EL	27	
		SNS5A	35.550	--	2.494	88.65	1.4	0.278	3.42	B	EL	27	0.526	2.93	B	EL	5.4	0.80	0.278	2.49	B	EL	27	
		SNS6A	39.950	--	2.318	92.619	1.4	0.278	3.18	B	EL	27	0.526	2.7	B	EL	5.4	0.80	0.278	2.32	B	EL	27	
		SNS7B	42.000	--	2.209	92.776	1.4	0.278	3.03	B	EL	27	0.526	2.69	B	EL	5.4	0.80	0.278	2.21	B	EL	27	
	TTST	TNAGRIT3	33.000	--	2.836	93.596	1.4	0.278	3.89	B	EL	27	0.526	3.19	B	EL	5.4	0.80	0.278	2.84	B	EL	27	
		TNT4A	33.075	--	2.857	94.504	1.4	0.278	3.92	B	EL	27	0.526	3.08	B	EL	5.4	0.80	0.278	2.86	B	EL	27	
		TNT6A	41.600	--	2.366	98.442	1.4	0.278	3.25	B	EL	27	0.526	2.94	B	EL	5.4	0.80	0.278	2.37	B	EL	27	
		TNT7A	42.000	--	2.395	100.575	1.4	0.278	3.29	B	EL	27	0.526	2.76	B	EL	5.4	0.80	0.278	2.39	B	EL	27	
		TNT7B	42.000	--	2.499	104.94	1.4	0.278	3.43	B	EL	27	0.526	2.6	B	EL	5.4	0.80	0.278	2.50	B	EL	27	
		TNAGRIT4	43.000	--	2.365	101.706	1.4	0.278	3.25	B	EL	27	0.526	2.51	B	EL	5.4	0.80	0.278	2.37	B	EL	27	
		TNAGT5A	45.000	--	2.216	99.716	1.4	0.278	3.04	B	EL	27	0.526	2.53	B	EL	5.4	0.80	0.278	2.22	B	EL	27	
		TNAGT5B	45.000	⬡3	2.177	97.95	1.4	0.278	2.99	B	EL	27	0.526	2.38	B	EL	5.4	0.80	0.278	2.18	B	EL	27	

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:

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⬡ CONTROLLING LOAD RATING

⬡1 DESIGN LOAD RATING (HL-93)

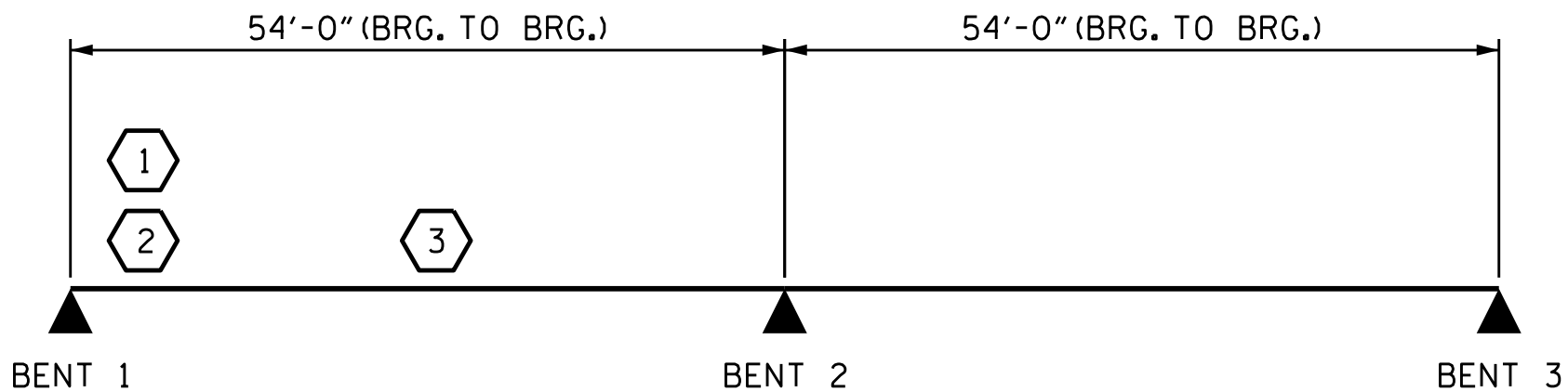
⬡2 DESIGN LOAD RATING (HS-20)

⬡3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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

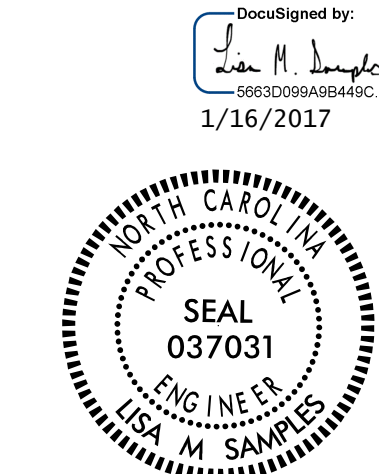


LRFR SUMMARY
FOR SPAN B & SPAN C

ASSEMBLED BY : J.M. KEPICH	DATE : 10/16
CHECKED BY : L.M. SAMPLES	DATE : 11/16
DRAWN BY : CVC 6/10	
CHECKED BY : DNS 6/10	



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DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

PROJECT NO. B-4950
CUMBERLAND/SAMPSON COUNTY
STATION: 18+27.50 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						REVISIONS			SHEET NO.
STANDARD LRFR SUMMARY FOR 55' CORED SLAB UNIT 90° SKEW (NON-INTERSTATE TRAFFIC) SPAN B & C						NO.	BY:	DATE:	S2-5
						1		3	
						2		4	
						TOTAL SHEETS			27