

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{DW}
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR 33" PRESTRESSED CONCRETE BOX BEAMS																								
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	1.17	--	1.75	0.271	1.46	C	EL	34.25	0.509	1.32	C	EL	34.25	0.80	0.271	1.17	C	EL	34.250		
	HL-93(0pr)	N/A	--	1.71	--	1.35	0.271	1.90	C	EL	34.25	0.509	1.71	C	EL	34.25	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.52	54.631	1.75	0.271	1.90	C	EL	34.25	0.509	1.65	C	EL	34.25	0.80	0.271	1.52	C	EL	34.250		
	HS-20(0pr)	36.000	--	2.14	77.155	1.35	0.271	2.46	C	EL	34.25	0.509	2.14	C	EL	34.25	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.38	45.683	1.40	0.271	5.29	C	EL	34.25	0.509	4.92	C	EL	34.25	0.80	0.271	3.38	C	EL	34.250	
		SNGARBS2	20.000	--	2.54	50.788	1.40	0.271	3.97	C	EL	34.25	0.509	3.50	C	EL	34.25	0.80	0.271	2.54	C	EL	34.250	
		SNAGRIS2	22.000	--	2.41	53.071	1.40	0.271	3.77	C	EL	34.25	0.509	3.25	C	EL	34.25	0.80	0.271	2.41	C	EL	34.250	
		SNCOTTS3	27.250	--	1.68	45.901	1.40	0.271	2.63	C	EL	34.25	0.509	2.45	C	EL	34.25	0.80	0.271	1.68	C	EL	34.250	
		SNAGGRS4	34.925	--	1.41	49.398	1.40	0.271	2.21	C	EL	34.25	0.509	2.04	C	EL	34.25	0.80	0.271	1.41	C	EL	34.250	
		SNS5A	35.550	--	1.38	49.154	1.40	0.271	2.16	C	EL	34.25	0.509	2.06	C	EL	34.25	0.80	0.271	1.38	C	EL	34.250	
		SNS6A	39.950	--	1.27	50.795	1.40	0.271	1.99	C	EL	34.25	0.509	1.88	C	EL	34.25	0.80	0.271	1.27	C	EL	34.250	
	SNS7B	42.000	--	1.21	50.858	1.40	0.271	1.89	C	EL	34.25	0.509	1.85	C	EL	34.25	0.80	0.271	1.21	C	EL	34.250		
	TTST	TNAGRIT3	33.000	--	1.55	51.193	1.40	0.271	2.43	C	EL	34.25	0.509	2.24	C	EL	34.25	0.80	0.271	1.55	C	EL	34.250	
		TNT4A	33.075	--	1.56	51.561	1.40	0.271	2.44	C	EL	34.25	0.509	2.18	C	EL	34.25	0.80	0.271	1.56	C	EL	34.250	
		TNT6A	41.600	--	1.28	53.137	1.40	0.271	2.00	C	EL	34.25	0.509	1.97	C	EL	34.25	0.80	0.271	1.28	C	EL	34.250	
		TNT7A	42.000	--	1.29	53.977	1.40	0.271	2.01	C	EL	34.25	0.509	1.93	C	EL	34.25	0.80	0.271	1.29	C	EL	34.250	
		TNT7B	42.000	--	1.33	55.992	1.40	0.271	2.08	C	EL	34.25	0.509	1.81	C	EL	34.25	0.80	0.271	1.33	C	EL	34.250	
		TNAGRIT4	43.000	--	1.27	54.418	1.40	0.271	1.98	C	EL	34.25	0.509	1.75	C	EL	34.25	0.80	0.271	1.27	C	EL	34.250	
TNAGT5A		45.000	--	1.19	53.640	1.40	0.271	1.86	C	EL	34.25	0.509	1.74	C	EL	34.25	0.80	0.271	1.19	C	EL	34.250		
TNAGT5B	45.000	3	1.18	52.942	1.40	0.271	1.84	C	EL	34.25	0.509	1.66	C	EL	34.25	0.80	0.271	1.18	C	EL	34.250			

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)

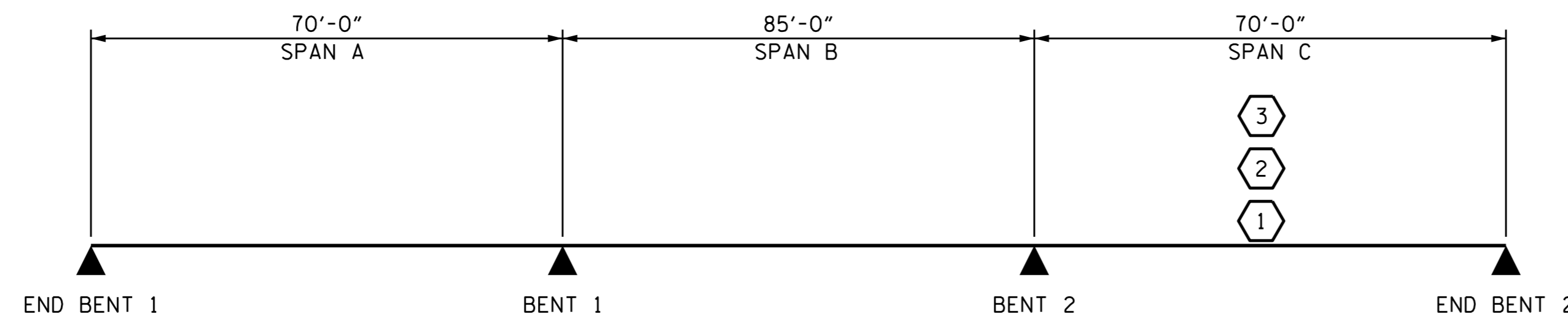
2 DESIGN LOAD RATING (HS-20)

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. B-4967
SCOTLAND & HOKE COUNTY
STATION: 16+74.50 -L-



DocuSigned by:
Ting Fang
5/10/2016

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
LRFR SUMMARY FOR
PRESTRESSED
CONCRETE GIRDERS
(NON-INTERSTATE TRAFFIC)

DESIGN ENGINEER OF RECORD: P. K. NEWTON DATE: 5/10/16	
ASSEMBLED BY: P. K. NEWTON DATE: 5/9/16	CHECKED BY: T. H. FANG DATE: 5/10/16
DRAWN BY: MAA 1/08	CHECKED BY: GM/DI 2/08
REV. 11/12/08RR MAA/GM	REV. 10/1/11 MAA/GM

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-4
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 23
2			4			