

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LOAD FACTORS:

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

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	1.13	--	1.75	1.017	1.58	C	I	9.017	0.952	1.85	C	I	4.508	0.80	0.952	1.13	A	I	23.771		
	HL-93(Opr)	N/A	--	2.05	--	1.35	1.017	2.05	C	I	9.017	0.952	2.4	C	I	4.508	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.39	50.110	1.75	1.017	2.23	C	I	6.763	0.952	2.35	C	I	4.508	0.80	0.828	1.39	A	I	23.771		
	HS-20(Opr)	36.000	--	2.9	104.233	1.35	1.017	2.9	C	I	6.763	0.952	3.04	C	I	4.508	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	2.8	37.841	1.4	1.017	4.33	C	I	9.017	0.952	4.97	C	I	4.508	0.80	0.828	2.80	A	I	23.771	
		SNGARBS2	20.000	--	2.23	44.533	1.4	1.017	3.92	C	I	6.763	0.952	4.23	C	I	4.508	0.80	0.828	2.23	A	I	23.771	
		SNAGRIS2	22.000	--	2.17	47.786	1.4	1.017	4.06	C	I	6.763	0.952	4.27	C	I	4.508	0.80	0.828	2.17	A	I	23.771	
		SNCOTTS3	27.250	--	1.4	38.112	1.4	1.017	2.23	C	I	9.017	0.952	2.54	C	I	4.508	0.80	0.828	1.40	A	I	23.771	
		SNAGGRS4	34.925	--	1.22	42.634	1.4	1.017	2.3	C	I	9.017	0.952	2.64	C	I	4.508	0.80	0.828	1.22	A	I	23.771	
		SNS5A	35.550	--	1.19	42.308	1.4	1.017	2.16	C	I	9.017	0.952	2.7	C	I	4.508	0.80	0.828	1.19	A	I	23.771	
		SNS6A	39.950	--	1.12	44.542	1.4	1.017	2.11	C	I	9.017	0.952	2.57	C	I	4.508	0.80	0.828	1.11	A	I	23.771	
	SNS7B	42.000	--	1.06	44.631	1.4	1.017	2.07	C	I	9.017	0.952	2.57	C	I	4.508	0.80	0.828	1.06	A	I	23.771		
	TTST	TNAGRIT3	33.000	--	1.37	45.097	1.4	0.86	2.99	A	EL	23.771	0.952	3.48	C	I	4.508	0.80	0.828	1.37	A	I	23.771	
		TNT4A	33.075	--	1.38	45.615	1.4	1.017	2.56	C	I	6.763	0.952	2.82	C	I	4.508	0.80	0.828	1.38	A	I	23.771	
		TNT6A	41.600	--	1.15	47.882	1.4	1.017	2.33	C	I	9.017	0.952	2.7	C	I	4.508	0.80	0.828	1.15	A	I	23.771	
		TNT7A	42.000	--	1.17	49.125	1.4	1.017	2.47	C	I	6.763	0.952	2.8	C	I	4.508	0.80	0.828	1.17	A	I	23.771	
		TNT7B	42.000	--	1.22	51.197	1.4	1.017	2.26	C	I	9.017	0.952	2.56	C	I	4.508	0.80	0.828	1.22	A	I	23.771	
		TNAGRIT4	43.000	--	1.16	49.788	1.4	1.017	2.38	C	I	9.017	0.952	2.64	C	I	4.508	0.80	0.828	1.16	A	I	23.771	
TNACT5A		45.000	--	1.08	48.623	1.4	0.86	2.37	A	EL	23.771	0.952	2.64	C	I	4.508	0.80	0.828	1.08	A	I	23.771		
TNACT5B	45.000	3	1.06	47.597	1.4	0.86	2.32	A	EL	23.771	0.952	2.59	C	I	4.508	0.80	0.828	1.06	A	I	23.771			

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)

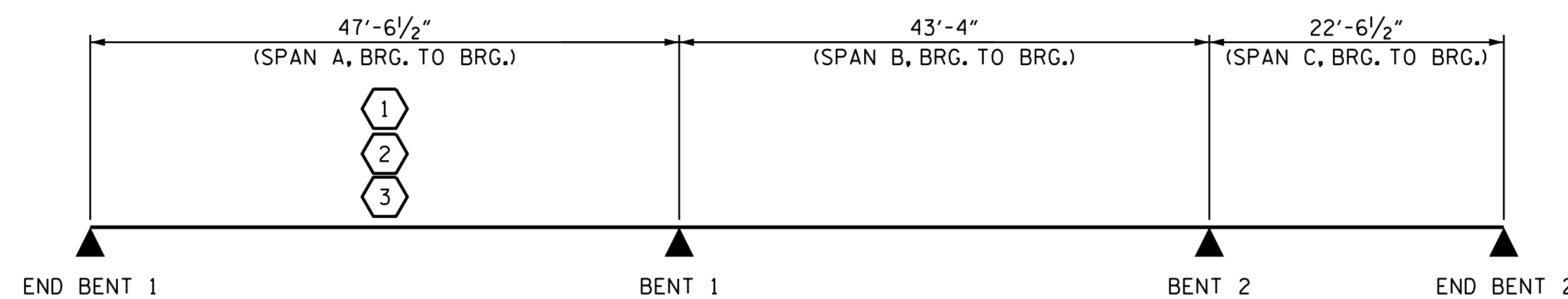
2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

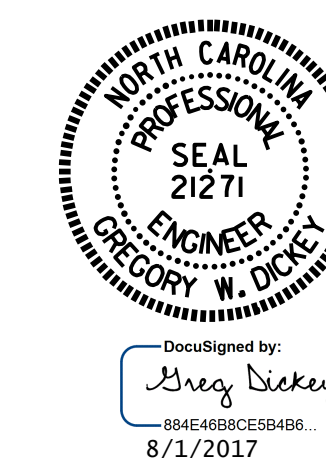
GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. B-5236
NEW HANOVER COUNTY
 STATION: 15+64.40 -L-



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

DRAWN BY: A. K. PATEL DATE: 6/2/16
 CHECKED BY: M. M. AHMED DATE: 6/7/16
 DESIGN ENGINEER OF RECORD: A. K. PATEL DATE: 6/7/17

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-4
2			4			TOTAL SHEETS 35