

LOAD FACTORS:

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

## 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 (INVENTORY)	N/A	①	1.13	--	1.75	0.789	1.23	B	EL	24.200	0.914	1.21	B	I	9.300	0.80	0.766	1.13	B	I	24.200		
	HL-93 (OPERATING)	N/A		1.59	--	1.35	0.789	1.59	B	EL	24.200	0.914	2.14	B	I	14.200	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	②	1.40	50.40	1.75	0.789	1.52	B	EL	24.200	0.914	1.77	B	I	9.300	0.80	0.766	1.40	B	I	24.200		
	HS-20 (OPERATING)	36.000		1.98	71.28	1.35	0.789	1.98	B	EL	24.200	0.914	2.54	B	I	9.300	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		2.88	38.88	1.40	0.789	3.90	B	EL	24.200	0.914	5.42	B	I	9.300	0.80	0.766	2.88	B	I	24.200	
		SNGARBS2	20.000		2.26	45.20	1.40	0.789	3.07	B	EL	24.200	0.914	3.99	B	I	9.300	0.80	0.766	2.26	B	I	24.200	
		SNAGRIS2	22.000		2.20	48.40	1.40	0.789	2.97	B	EL	19.200	0.914	3.76	B	I	9.300	0.80	0.766	2.20	B	I	24.200	
		SNCOTTS3	27.250		1.44	39.24	1.40	0.789	1.95	B	EL	24.200	0.914	2.62	B	I	4.300	0.80	0.766	1.44	B	I	24.200	
		SNAGGRS4	34.925		1.24	43.31	1.40	0.789	1.69	B	EL	24.200	0.914	2.31	B	I	9.300	0.80	0.766	1.24	B	I	24.200	
		SNS5A	35.550		1.21	43.02	1.40	0.789	1.65	B	EL	24.200	0.914	2.41	B	I	9.300	0.80	0.766	1.21	B	I	24.200	
		SNS6A	39.950		1.13	45.14	1.40	0.789	1.54	B	EL	24.200	0.914	2.24	B	I	9.300	0.80	0.766	1.13	B	I	24.200	
	SNS7B	42.000		1.08	45.36	1.40	0.789	1.47	B	EL	24.200	0.914	2.27	B	I	9.300	0.80	0.766	1.08	B	I	24.200		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.39	45.87	1.40	0.789	1.88	B	EL	24.200	0.914	2.64	B	I	9.300	0.80	0.766	1.39	B	I	24.200	
		TNT4A	33.075		1.40	46.31	1.40	0.789	1.90	B	EL	24.200	0.914	2.52	B	I	9.300	0.80	0.766	1.40	B	I	24.200	
		TNT6A	41.600		1.17	48.67	1.40	0.789	1.58	B	EL	24.200	0.914	2.45	B	I	39.100	0.80	0.766	1.17	B	I	24.200	
		TNT7A	42.000		1.18	49.56	1.40	0.789	1.60	B	EL	24.200	0.914	2.20	B	I	39.100	0.80	0.766	1.18	B	I	24.200	
		TNT7B	42.000		1.23	51.66	1.40	0.789	1.67	B	EL	24.200	0.914	2.16	B	I	9.300	0.80	0.766	1.23	B	I	24.200	
		TNAGRIT4	43.000		1.17	50.31	1.40	0.789	1.58	B	EL	24.200	0.914	2.07	B	I	9.300	0.80	0.766	1.17	B	I	24.200	
TNAGT5A		45.000		1.09	49.05	1.40	0.789	1.48	B	EL	24.200	0.914	2.14	B	I	9.300	0.80	0.766	1.09	B	I	24.200		
TNAGT5B	45.000	③	1.07	48.15	1.40	0.789	1.45	B	EL	24.200	0.914	1.82	B	I	14.200	0.80	0.766	1.07	B	I	24.200			

**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)

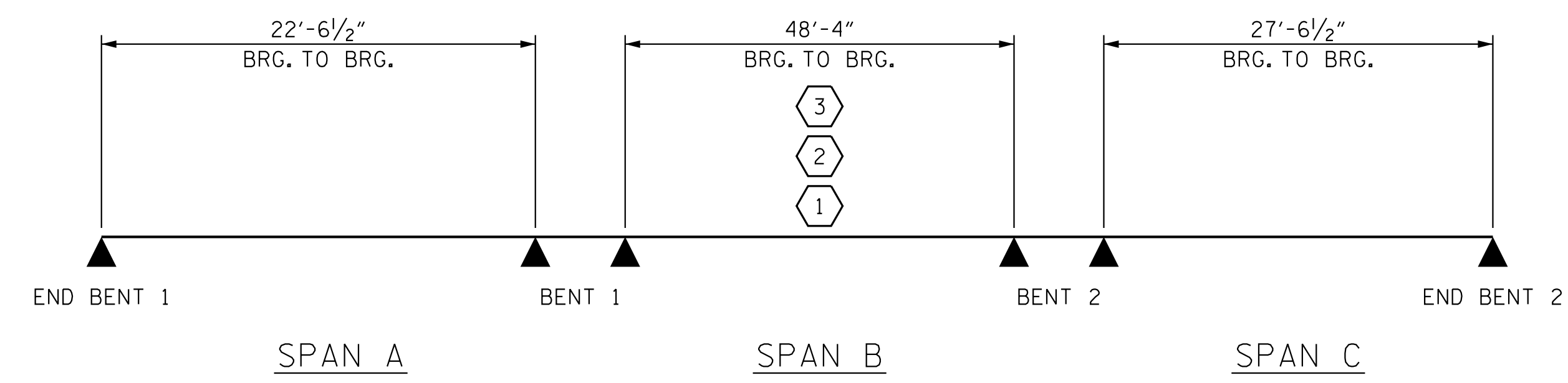
③ LEGAL LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

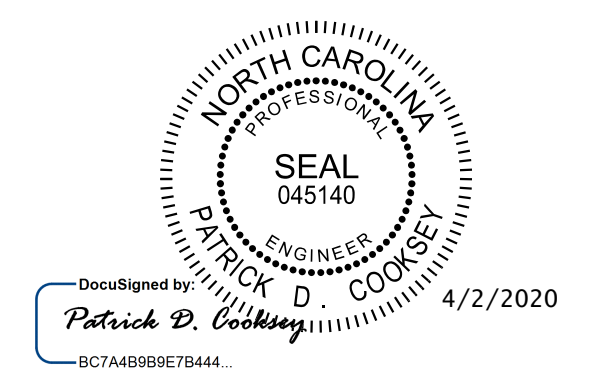
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GIRDER LOCATION

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



PROJECT NO. B-5534  
DUPLIN COUNTY  
 STATION: 21+68.50 -L-



**Kimley»Horn**  
 421 Fayetteville Street, Suite 600  
 Raleigh, NC 27601-1772  
 Phone (919) 677-2000 NC LICENSE # F-0102

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

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			34

**DOCUMENT NOT CONSIDERED FINAL  
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STD. NO. LRFR1

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ASSEMBLED BY : D. D. LOWERY DATE : 02/2020  
 CHECKED BY : J. C. WILSON DATE : 02/2020  
 DRAWN BY : MAA 1/08 REV. 11/27/08RR MAA/GM  
 CHECKED BY : GM/DI 2/08 REV. 10/1/11 MAA/GM  
 REV. 12/17 MAA/THC