

LOAD FACTORS:

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

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE II LIMIT STATES.  
ALLOWABLE STRESS FOR SERVICE II LIMIT STATE ARE AS REQUIRED FOR DESIGN.

LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE										SERVICE II LIMIT STATE					COMMENT NUMBER			
						LIVE-LOAD FACTORS ( $\gamma_{LL}$ )	MOMENT					SHEAR					LIVE-LOAD FACTORS ( $\gamma_{LL}$ )	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 (INVENTORY)	N/A	1	1.13	--	1.75	0.831	1.56	A	EL	62.58	0.947	1.13	A	I	0.00	1.30	0.831	1.56	A	EL	62.58		
	HL-93 (OPERATING)	N/A		1.47	--	1.35	0.831	2.03	A	EL	62.58	0.947	1.47	A	I	0.00	1.00	0.831	2.02	A	EL	62.58		
	HS-20 (INVENTORY)	36.00	2	1.65	59.33	1.75	0.831	2.31	A	EL	62.58	0.947	1.65	A	I	0.00	1.30	0.831	2.30	A	EL	62.58		
	HS-20 (OPERATING)	36.00		2.14	76.91	1.35	0.831	3.00	A	EL	62.58	0.947	2.14	A	I	0.00	1.00	0.831	2.99	A	EL	62.58		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		5.18	69.93	1.40	0.831	7.03	A	EL	62.58	0.947	5.18	A	I	0.00	1.30	0.831	5.60	A	EL	62.58	
		SNGARBS2	20.000		3.59	71.80	1.40	0.831	5.01	A	EL	62.58	0.947	3.59	A	I	0.00	1.30	0.831	3.99	A	EL	62.58	
		SNAGRIS2	22.000		3.30	72.60	1.40	0.831	4.66	A	EL	62.58	0.947	3.30	A	I	0.00	1.30	0.831	3.71	A	EL	62.58	
		SNCOTTS3	27.250		2.58	70.31	1.40	0.831	3.49	A	EL	62.58	0.947	2.58	A	I	0.00	1.30	0.831	2.78	A	EL	62.58	
		SNAGGRS4	34.925		2.08	72.64	1.40	0.831	2.83	A	EL	62.58	0.947	2.08	A	I	0.00	1.30	0.831	2.25	A	EL	62.58	
		SNS5A	35.550		2.07	73.59	1.40	0.831	2.77	A	EL	62.58	0.947	2.07	A	I	0.00	1.30	0.831	2.21	A	EL	62.58	
		SNS6A	39.950		1.86	74.31	1.40	0.831	2.51	A	EL	62.58	0.947	1.86	A	I	0.00	1.30	0.831	2.00	A	EL	62.58	
		SNS7B	42.000		1.80	75.60	1.40	0.831	2.39	A	EL	62.58	0.947	1.80	A	I	0.00	1.30	0.831	1.90	A	EL	62.58	
	TRUCK TRACTOR SEMI-TRAILER (TTS1)	TNAGRIT3	33.000		2.24	73.92	1.40	0.831	3.05	A	EL	62.58	0.947	2.24	A	I	0.00	1.30	0.831	2.43	A	EL	62.58	
		TNT4A	33.075		2.21	73.10	1.40	0.831	3.06	A	EL	62.58	0.947	2.21	A	I	0.00	1.30	0.831	2.43	A	EL	62.58	
		TNT6A	41.600		1.86	77.38	1.40	0.831	2.47	A	EL	62.58	0.947	1.86	A	I	0.00	1.30	0.831	1.96	A	EL	62.58	
		TNT7A	42.000		1.84	77.28	1.40	0.831	2.46	A	EL	62.58	0.947	1.84	A	I	0.00	1.30	0.831	1.96	A	EL	62.58	
		TNT7B	42.000		1.78	74.76	1.40	0.831	2.50	A	EL	62.58	0.947	1.78	A	I	0.00	1.30	0.831	1.99	A	EL	62.58	
		TNAGRIT4	43.000		1.73	74.39	1.40	0.831	2.41	A	EL	62.58	0.947	1.73	A	I	125.16	1.30	0.831	1.92	A	EL	62.58	
		TNAGT5A	45.000		1.69	76.05	1.40	0.831	2.29	A	EL	62.58	0.947	1.69	A	I	0.00	1.30	0.831	1.82	A	EL	62.58	
TNAGT5B	45.000		1.65	74.25	1.40	0.831	2.28	A	EL	62.58	0.947	1.65	A	I	0.00	1.30	0.831	1.81	A	EL	62.58			
FATIGUE	HL-93 (INVENTORY)	$\gamma_{LL}=0.75$																						

# CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93) \*\*

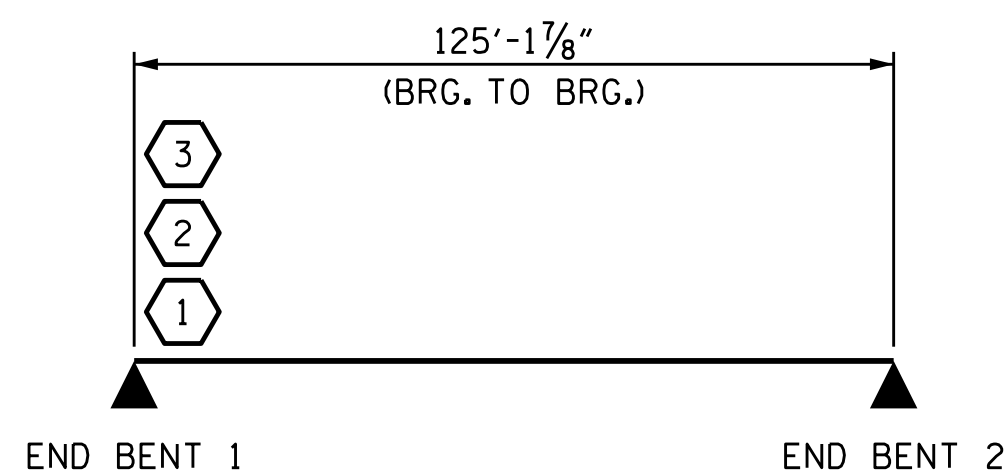
2 DESIGN LOAD RATING (HS-20) \*\*

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-4490  
CUMBERLAND COUNTY  
STATION: 35+23.40 -L-



DocuSigned by:  
Kristy W. Alford  
3/29/2016

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

ASSEMBLED BY : T.L. AVERETTE	DATE : 10/14
CHECKED BY : J.P. ADAMS	DATE : 07/15
DRAWN BY : MAA 1/08	REV. 11/2/08RR MAA/GM
CHECKED BY : GM/DI 2/08	REV. 10/1/11 MAA/GM

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-46
1			3			TOTAL SHEETS
2			4			84