

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{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 (γ_{LL})	MOMENT					SHEAR					LIVE-LOAD FACTORS (γ_{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	1.03	--	1.75	0.823	1.61	A	ER	74.82	1.148	1.03	A	I	0.00	1.30	0.823	1.66	A	ER	74.82		
	HL-93 (OPERATING)	N/A		1.33	--	1.35	0.823	2.09	A	ER	74.82	1.148	1.33	A	I	0.00	1.00	0.823	2.16	A	ER	74.82		
	HS-20 (INVENTORY)	36.00	②	1.58	56.88	1.75	0.823	2.51	A	ER	74.82	1.148	1.58	A	I	0.00	1.30	0.823	2.59	A	ER	74.82		
	HS-20 (OPERATING)	36.00		2.04	73.44	1.35	0.823	3.26	A	ER	74.82	1.148	2.04	A	I	0.00	1.00	0.823	3.37	A	ER	74.82		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		5.00	67.50	1.40	0.823	7.76	A	ER	74.82	1.148	5.00	A	I	0.00	1.30	0.823	6.42	A	ER	74.82	
		SNGARBS2	20.000		3.45	69.00	1.40	0.823	5.48	A	ER	74.82	1.148	3.45	A	I	0.00	1.30	0.823	4.53	A	ER	74.82	
		SNAGRIS2	22.000		3.16	69.52	1.40	0.823	5.07	A	ER	74.82	1.148	3.16	A	I	0.00	1.30	0.823	4.19	A	ER	74.82	
		SNCOTTS3	27.250		2.49	67.85	1.40	0.823	3.85	A	ER	74.82	1.148	2.49	A	I	0.00	1.30	0.823	3.19	A	ER	74.82	
		SNAGGRS4	34.925		1.99	69.50	1.40	0.823	3.10	A	ER	74.82	1.148	1.99	A	I	149.64	1.30	0.823	2.57	A	ER	74.82	
		SNS5A	35.550		1.98	70.39	1.40	0.823	3.04	A	ER	74.82	1.148	1.98	A	I	149.64	1.30	0.823	2.51	A	ER	74.82	
		SNS6A	39.950		1.78	71.11	1.40	0.823	2.74	A	ER	74.82	1.148	1.78	A	I	149.64	1.30	0.823	2.27	A	ER	74.82	
		SNS7B	42.000		1.71	71.82	1.40	0.823	2.61	A	ER	74.82	1.148	1.71	A	I	149.64	1.30	0.823	2.16	A	ER	74.82	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		2.14	70.62	1.40	0.823	3.33	A	ER	74.82	1.148	2.14	A	I	0.00	1.30	0.823	2.76	A	ER	74.82	
		TNT4A	33.075		2.11	69.79	1.40	0.823	3.33	A	ER	74.82	1.148	2.11	A	I	149.64	1.30	0.823	2.76	A	ER	74.82	
		TNT6A	41.600		1.77	73.63	1.40	0.823	2.68	A	ER	74.82	1.148	1.77	A	I	0.00	1.30	0.823	2.22	A	ER	74.82	
		TNT7A	42.000		1.74	73.08	1.40	0.823	2.68	A	ER	74.82	1.148	1.74	A	I	0.00	1.30	0.823	2.21	A	ER	74.82	
		TNT7B	42.000		1.70	71.40	1.40	0.823	2.71	A	ER	74.82	1.148	1.70	A	I	149.64	1.30	0.823	2.24	A	ER	74.82	
		TNAGRIT4	43.000		1.65	70.95	1.40	0.823	2.62	A	ER	74.82	1.148	1.65	A	I	149.64	1.30	0.823	2.17	A	ER	74.82	
		TNAGT5A	45.000		1.60	72.00	1.40	0.823	2.49	A	ER	74.82	1.148	1.60	A	I	0.00	1.30	0.823	2.06	A	ER	74.82	
TNAGT5B	45.000		③	1.58	71.10	1.40	0.823	2.48	A	ER	74.82	1.148	1.58	A	I	149.64	1.30	0.823	2.05	A	ER	74.82		
FATIGUE	HL-93 (INVENTORY)	$\gamma_{LL}=0.75$	--	--																				

③ CONTROLLING LOAD RATING

① DESIGN LOAD RATING (HL-93) **

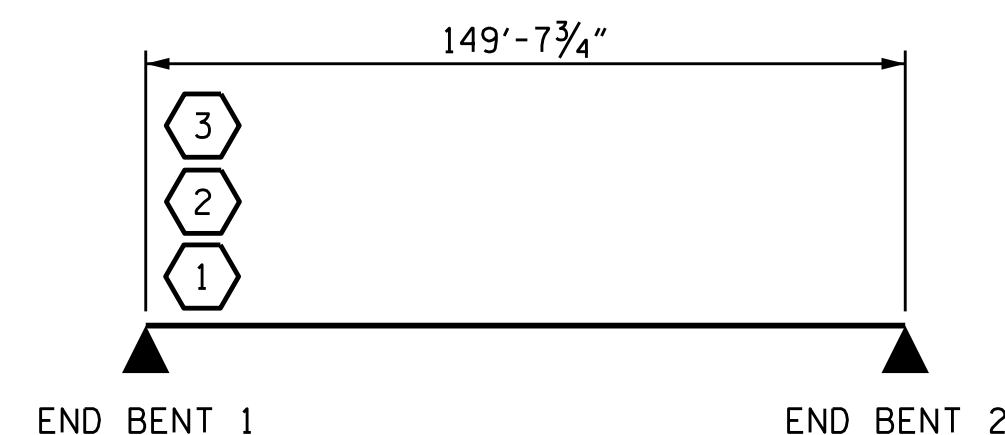
② DESIGN LOAD RATING (HS-20) **

③ LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

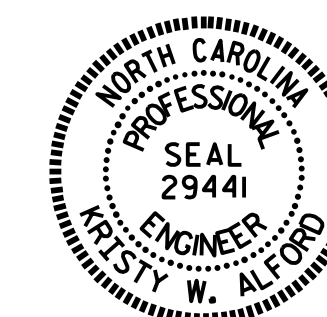
GIRDER LOCATION

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



LRFR SUMMARY

PROJECT NO. B-4490
CUMBERLAND COUNTY
 STATION: 29+57.01 -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 : A. SORSENGINH	DATE : 5/2015
CHECKED BY : J.P. ADAMS	DATE : 6/2015
DRAWN BY : MAA	1/08
CHECKED BY : GM/DI	2/08
REV. 11/2/08RR	MAA/GM
REV. 10/1/11	MAA/GM

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			84