

LOAD AND RESISTANCE FACTOR RATING (LRFD) 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								
						LIVELOAD FACTORS	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)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(Inv)	N/A	1	1.179	--	1.75	0.268	1.75	A	EL	39.224	0.584	1.27	A	EL	7.845	0.80	0.268	1.18	A	EL	39.224		
	HL-93(0pr)	N/A	--	1.644	--	1.35	0.268	2.27	A	EL	39.224	0.584	1.64	A	EL	7.845	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.564	56.305	1.75	0.268	2.33	A	EL	39.224	0.584	1.6	A	EL	7.845	0.80	0.268	1.56	A	EL	39.224		
	HS-20(0pr)	36.000	--	2.077	74.771	1.35	0.268	3.02	A	EL	39.224	0.584	2.08	A	EL	7.845	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.58	48.335	1.4	0.268	6.66	A	EL	39.224	0.584	4.81	A	EL	7.845	0.80	0.268	3.58	A	EL	39.224	
		SNGARBS2	20.000	--	2.647	52.933	1.4	0.268	4.92	A	EL	39.224	0.584	3.41	A	EL	7.845	0.80	0.268	2.65	A	EL	39.224	
		SNAGRIS2	22.000	--	2.498	54.946	1.4	0.268	4.64	A	EL	39.224	0.584	3.16	A	EL	7.845	0.80	0.268	2.50	A	EL	39.224	
		SNCOTTS3	27.250	--	1.781	48.534	1.4	0.268	3.31	A	EL	39.224	0.584	2.4	A	EL	7.845	0.80	0.268	1.78	A	EL	39.224	
		SNAGGRS4	34.925	--	1.48	51.695	1.4	0.268	2.75	A	EL	39.224	0.584	1.98	A	EL	7.845	0.80	0.268	1.48	A	EL	39.224	
		SNS5A	35.550	--	1.448	51.477	1.4	0.268	2.69	A	EL	39.224	0.584	2	A	EL	7.845	0.80	0.268	1.45	A	EL	39.224	
		SNS6A	39.950	--	1.325	52.939	1.4	0.268	2.46	A	EL	39.224	0.584	1.82	A	EL	7.845	0.80	0.268	1.33	A	EL	39.224	
	SNS7B	42.000	--	1.262	52.996	1.4	0.268	2.35	A	EL	39.224	0.584	1.79	A	EL	7.845	0.80	0.268	1.26	A	EL	39.224		
	TTST	TNAGRIT3	33.000	--	1.615	53.292	1.4	0.268	3	A	EL	39.224	0.584	2.17	A	EL	7.845	0.80	0.268	1.61	A	EL	39.224	
		TNT4A	33.075	--	1.621	53.618	1.4	0.268	3.01	A	EL	39.224	0.584	2.12	A	EL	7.845	0.80	0.268	1.62	A	EL	39.224	
		TNT6A	41.600	--	1.322	55.003	1.4	0.268	2.46	A	EL	39.224	0.584	1.89	A	EL	7.845	0.80	0.268	1.32	A	EL	39.224	
		TNT7A	42.000	--	1.327	55.736	1.4	0.268	2.47	A	EL	39.224	0.584	1.86	A	EL	7.845	0.80	0.268	1.33	A	EL	39.224	
		TNT7B	42.000	--	1.369	57.481	1.4	0.268	2.54	A	EL	39.224	0.584	1.75	A	EL	7.845	0.80	0.268	1.37	A	EL	39.224	
		TNAGRIT4	43.000	--	1.305	56.12	1.4	0.268	2.43	A	EL	39.224	0.584	1.69	A	EL	7.845	0.80	0.268	1.31	A	EL	39.224	
TNAGT5A		45.000	--	1.232	55.443	1.4	0.268	2.29	A	EL	39.224	0.584	1.68	A	EL	7.845	0.80	0.268	1.23	A	EL	39.224		
TNAGT5B	45.000	3	1.218	54.832	1.4	0.268	2.27	A	EL	39.224	0.584	1.61	A	EL	7.845	0.80	0.268	1.22	A	EL	39.224			

LOAD FACTORS:

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

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)

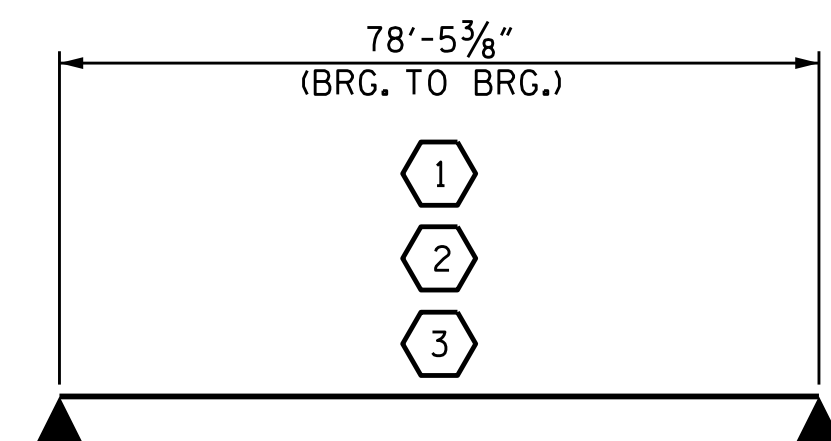
2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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

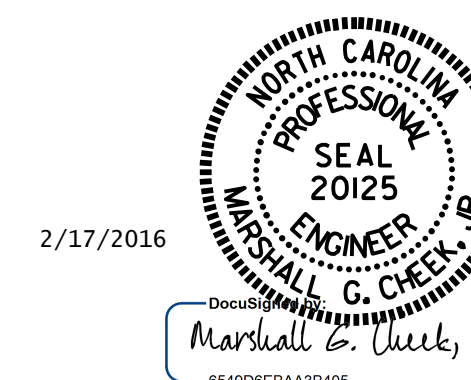


LRFR SUMMARY

PROJECT NO. B-5396
BUNCOMBE COUNTY
 STATION: 17+00.00 -L-

ASSEMBLED BY : M. POOLE DATE : 10-15
 CHECKED BY : B. N. GRADY DATE : 11-15
 DRAWN BY : TMG II/II
 CHECKED BY : AAC II/II

06-JAN-2016 13:39
 R:\Structures\Final Plans\B5396_5D_LRFR.dgn
 bngrady



2/17/2016

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
STANDARD LRFR SUMMARY FOR 80' BOX BEAM UNIT 105° SKEW (NON-INTERSTATE TRAFFIC)						S-3
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	18
1			3			
2			4			

STD. NO. 33LRFR1_75&105S_80L