

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 (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LOAD TYPE	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					LIVE-LOAD 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 (INVENTORY)	N/A	1	1.035	--	1.75	0.272	1.26	100'	EL	49.25	0.489	1.34	100'	EL	4.925	0.80	0.272	1.04	100'	EL	49.25		
	HL-93 (OPERATING)	N/A	--	1.633	--	1.35	0.272	1.63	100'	EL	49.25	0.489	1.73	100'	EL	4.925	N/A	--	--	--	--	--		
	HS-20 (INVENTORY)	36.000	2	1.44	51.84	1.75	0.272	1.75	100'	EL	49.25	0.489	1.81	100'	EL	4.925	0.80	0.272	1.44	100'	EL	49.25		
	HS-20 (OPERATING)	36.000	--	2.271	81.756	1.35	0.272	2.27	100'	EL	49.25	0.489	2.35	100'	EL	4.925	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500	--	3.413	46.079	1.4	0.272	5.19	100'	EL	49.25	0.489	5.59	100'	EL	4.925	0.80	0.272	3.41	100'	EL	49.25	
		SNGARBS2	20.000	--	2.473	49.452	1.4	0.272	3.76	100'	EL	49.25	0.489	3.91	100'	EL	4.925	0.80	0.272	2.47	100'	EL	49.25	
		SNAGRIS2	22.000	--	2.313	50.885	1.4	0.272	3.52	100'	EL	49.25	0.489	3.6	100'	EL	4.925	0.80	0.272	2.31	100'	EL	49.25	
		SNCOTTS3	27.250	--	1.696	46.228	1.4	0.272	2.58	100'	EL	49.25	0.489	2.78	100'	EL	4.925	0.80	0.272	1.70	100'	EL	49.25	
		SNAGGRS4	34.925	--	1.39	48.556	1.4	0.272	2.11	100'	EL	49.25	0.489	2.26	100'	EL	4.925	0.80	0.272	1.39	100'	EL	49.25	
		SNS5A	35.550	--	1.361	48.398	1.4	0.272	2.07	100'	EL	49.25	0.489	2.27	100'	EL	4.925	0.80	0.272	1.36	100'	EL	49.25	
		SNS6A	39.950	--	1.238	49.456	1.4	0.272	1.88	100'	EL	49.25	0.489	2.05	100'	EL	4.925	0.80	0.272	1.24	100'	EL	49.25	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	SNS7B	42.000	--	1.178	49.496	1.4	0.272	1.79	100'	EL	49.25	0.489	2	100'	EL	4.925	0.80	0.272	1.18	100'	EL	49.25	
		TNAGRIT3	33.000	--	1.506	49.709	1.4	0.272	2.29	100'	EL	49.25	0.489	2.46	100'	EL	4.925	0.80	0.272	1.51	100'	EL	49.25	
		TNT4A	33.075	--	1.510	49.942	1.4	0.272	2.3	100'	EL	49.25	0.489	2.41	100'	EL	4.925	0.80	0.272	1.51	100'	EL	49.25	
		TNT6A	41.600	--	1.224	50.926	1.4	0.272	1.86	100'	EL	49.25	0.489	2.09	100'	EL	4.925	0.80	0.272	1.22	100'	EL	49.25	
		TNT7A	42.000	--	1.225	51.442	1.4	0.272	1.86	100'	EL	49.25	0.489	2.05	100'	EL	4.925	0.80	0.272	1.22	100'	EL	49.25	
		TNT7B	42.000	--	1.254	52.657	1.4	0.272	1.91	100'	EL	49.25	0.489	1.96	100'	EL	4.925	0.80	0.272	1.25	100'	EL	49.25	
		TNAGRIT4	43.000	--	1.203	51.711	1.4	0.272	1.83	100'	EL	49.25	0.489	1.91	100'	EL	4.925	0.80	0.272	1.20	100'	EL	49.25	
TNAGT5A	45.000	--	1.139	51.236	1.4	0.272	1.73	100'	EL	49.25	0.489	1.87	100'	EL	4.925	0.80	0.272	1.14	100'	EL	49.25			
TNAGT5B	45.000	3	1.129	50.805	1.4	0.272	1.72	100'	EL	49.25	0.489	1.82	100'	EL	4.925	0.80	0.272	1.13	100'	EL	49.25			
EMERGENCY VEHICLE	EV2	28.750	--	2.129	61.213	1.3	0.272	2.87	100'	EL	49.25	0.489	3.06	100'	EL	4.925	0.80	0.272	2.13	100'	EL	49.25		
	EV3	43.000	4	1.403	60.325	1.3	0.272	1.89	100'	EL	49.25	0.489	2.06	100'	EL	4.925	0.80	0.272	1.40	100'	EL	49.25		

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

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# CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING \*\*

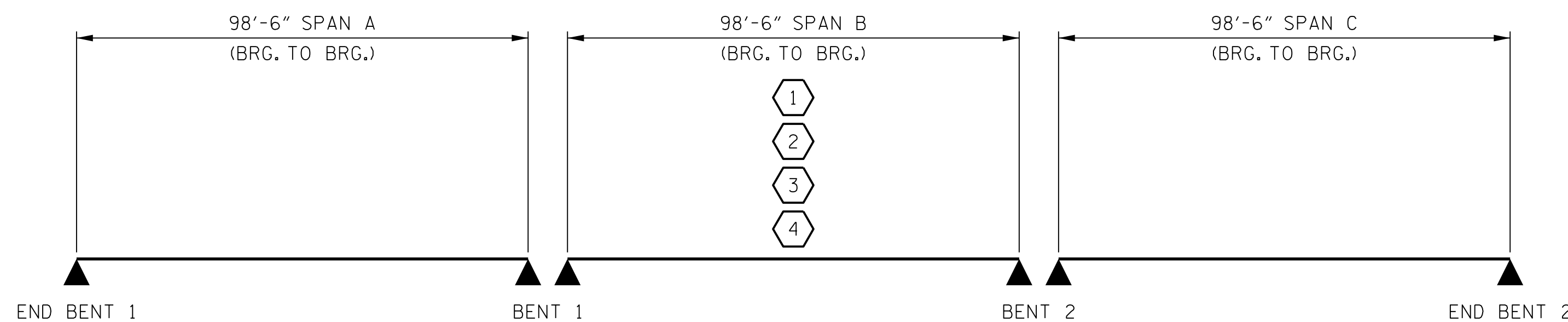
4 EMERGENCY VEHICLE LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

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GIRDER LOCATION

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

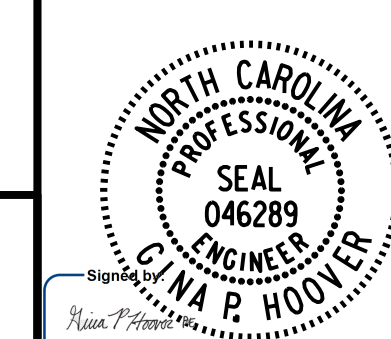


LRFR SUMMARY

PROJECT NO. **BR-0063**  
**ANSON** COUNTY  
 STATION: **20+15.00 -L-**

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 LRFR SUMMARY FOR  
 100' BOX BEAM UNIT  
 90° SKEW  
 (NON-INTERSTATE TRAFFIC)

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED



REVISIONS						SHEET No.
No.	BY:	DATE:	No.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			19

ASSEMBLED BY : K. E. LOFTON	DATE : 5-22
CHECKED BY : G. P. HOOVER	DATE : 9-23
DRAWN BY : TMG	11/11
CHECKED BY : AAC	11/11
REV. 06/23	APK/AAT

DRAWN BY : K. E. LOFTON	DATE : 5-22
CHECKED BY : G. P. HOOVER	DATE : 9-23
ENGINEER OF RECORD : G. P. HOOVER	DATE : 9-23

PLANS PREPARED BY : **ARCADIS**  
 175 REGENCY WOOD PLACE, SUITE 400  
 CARY, NORTH CAROLINA 27518  
 NC LICENSE No. 0486277  
 FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

10/2/2024

FILE: c:\pwwork\arcadis\p01\gino.hoover\dms89249\BR-0063\_Div\_10\_0030087\_smm\_1.rvt.dgn  
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