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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
							LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD 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(Inv)	N/A	**1**	1.06	--	1.75	0.275	1.38	35'	EL	16.982	0.623	1.2	35'	EL	1.698	0.80	0.275	**1.06**	35'	EL	**16.982**	
		HL-93(Opr)	N/A	--	1.549	--	1.35	0.275	1.79	35'	EL	16.982	0.623	1.55	35'	EL	1.698	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	**2**	1.377	49.573	1.75	0.275	1.82	35'	EL	13.586	0.623	**1.38**	35'	EL	**1.698**	0.80	0.275	1.41	35'	EL	16.982	
		HS-20(Opr)	36.000	--	1.785	64.262	1.35	0.275	2.36	35'	EL	13.586	0.623	1.79	35'	EL	1.698	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SV	SNSH	13.500	--	2.424	32.72	1.4	0.275	3.95	35'	EL	16.982	0.623	3.55	35'	EL	1.698	0.80	0.275	2.42	35'	EL	16.982	
		SNGARBS2	20.000	--	2.082	41.635	1.4	0.275	3.34	35'	EL	13.586	0.623	2.68	35'	EL	1.698	0.80	0.275	2.08	35'	EL	13.586	
		SNAGRIS2	22.000	--	2.076	45.668	1.4	0.275	3.31	35'	EL	13.586	0.623	2.56	35'	EL	1.698	0.80	0.275	2.08	35'	EL	13.586	
		SNCOTTS3	27.250	--	1.213	33.066	1.4	0.275	1.98	35'	EL	16.982	0.623	1.79	35'	EL	1.698	0.80	0.275	1.21	35'	EL	16.982	
		SNAGGRS4	34.925	--	1.123	39.207	1.4	0.275	1.83	35'	EL	16.982	0.623	1.6	35'	EL	1.698	0.80	0.275	1.12	35'	EL	16.982	
		SNS5A	35.550	--	1.09	38.739	1.4	0.275	1.77	35'	EL	16.982	0.623	1.69	35'	EL	1.698	0.80	0.275	1.09	35'	EL	16.982	
		SNS6A	39.950	--	1.052	42.014	1.4	0.275	1.71	35'	EL	16.982	0.623	1.58	35'	EL	1.698	0.80	0.275	1.05	35'	EL	16.982	
		SNS7B	42.000	**3**	1.004	42.153	1.4	0.275	1.63	35'	EL	16.982	0.623	1.62	35'	EL	1.698	0.80	0.275	**1.00**	35'	EL	**16.982**	
	TTST	TNAGRIT3	33.000	--	1.299	42.872	1.4	0.275	2.11	35'	EL	16.982	0.623	1.85	35'	EL	1.698	0.80	0.275	1.30	35'	EL	16.982	
		TNT4A	33.075	--	1.298	42.933	1.4	0.275	2.11	35'	EL	16.982	0.623	1.75	35'	EL	1.698	0.80	0.275	1.30	35'	EL	16.982	
		TNT6A	41.600	--	1.137	47.314	1.4	0.275	1.85	35'	EL	16.982	0.623	1.71	35'	EL	1.698	0.80	0.275	1.14	35'	EL	16.982	
		TNT7A	42.000	--	1.175	49.358	1.4	0.275	1.92	35'	EL	16.982	0.623	1.59	35'	EL	1.698	0.80	0.275	1.18	35'	EL	16.982	
		TNT7B	42.000	--	1.156	48.536	1.4	0.275	1.88	35'	EL	16.982	0.623	1.54	35'	EL	1.698	0.80	0.275	1.16	35'	EL	16.982	
		TNAGRIT4	43.000	--	1.17	50.308	1.4	0.275	1.89	35'	EL	13.586	0.623	1.48	35'	EL	1.698	0.80	0.275	1.17	35'	EL	16.982	
		TNAGT5A	45.000	--	1.079	48.572	1.4	0.275	1.76	35'	EL	16.982	0.623	1.56	35'	EL	1.698	0.80	0.275	1.08	35'	EL	16.982	
		TNAGT5B	45.000	--	1.041	46.853	1.4	0.275	1.69	35'	EL	16.982	0.623	1.4	35'	EL	1.698	0.80	0.275	1.04	35'	EL	16.982	

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)

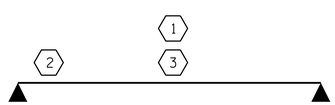
(2) DESIGN LOAD RATING (HS-20)

(3) LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

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



LRFR SUMMARY

FOR SPAN 'A'

PROJECT NO. 17BP.1.R.93

PERQUIMANS COUNTY

STATION: 17+08.00 -L-

PLANS PREPARED BY:

NV5 ENGINEERS & CONSULTANTS, INC.
3300 REGENCY PARKWAY, SUITE 100
CARY, NC 27518
P: 919.851.1912 www.NV5.com
NC License # F-1333
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THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:

DocuSigned by: Garwin Dale Wilson
DocuSign Envelope ID: 0DC8C6A04380E45282

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER GARWIN DALE WILSON 045282

3/26/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
LRFR SUMMARY FOR 35' CORED SLAB UNIT 105° SKEW
(NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			24

STD. NO. 21LRFR1_75&105S_35L

ASSEMBLED BY :	W. B. ALLEN	DATE :	5/19
CHECKED BY :	G. F. WILSON	DATE :	8/19
DRAWN BY : CVC	6/10		
CHECKED BY : DNS	6/10		

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