

LOAD FACTORS:

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

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
						LIVE-LOAD FACTORS (%LL)	MOMENT					SHEAR					LIVE-LOAD FACTORS (%LL)	MOMENT								
							DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (++)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (++)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (++)				
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	①	1.15	--	1.75	0.89	1.15	E	I	33.88	1.03	1.19	D	I	88.01	0.80	0.82	1.22	D	I	46.38	1			
	HL-93 (OPERATING)	N/A		1.49	--	1.35	0.89	1.49	E	I	33.88	1.03	1.62	D	I	88.01	N/A	--	--	--	--	--	1			
	HS-20 (INVENTORY)	36.000	②	1.50	54.00	1.75	0.89	1.50	E	I	33.88	1.03	1.73	F	I	47.36	0.80	0.82	1.68	D	I	46.38	1			
	HS-20 (OPERATING)	36.000		1.94	69.84	1.35	0.89	1.94	E	I	33.88	1.03	2.65	D	I	84.04	N/A	--	--	--	--	--	1			
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH	13.500		3.91	52.79	1.40	0.89	4.19	E	I	33.88	1.03	6.71	A	I	83.59	0.80	0.89	3.91	E	I	33.88	1		
		SNGARBS2	20.000		2.88	57.60	1.40	0.89	3.13	E	I	33.88	1.03	4.61	A	I	83.59	0.80	0.82	2.88	D	I	46.38	1		
		SNAGRIS2	22.000		2.70	59.40	1.40	0.89	2.97	E	I	40.79	1.03	4.23	A	I	83.59	0.80	0.82	2.70	D	I	46.38	1		
		SNCOTTS3	27.250		1.95	53.14	1.40	0.89	2.08	E	I	33.88	1.03	3.27	A	I	83.59	0.80	0.89	1.95	E	I	33.88	1		
		SNAGGRS4	34.925		1.62	56.58	1.40	0.89	1.75	E	I	33.88	1.03	2.59	D	I	84.04	0.80	0.82	1.62	C	I	46.38	1		
		SNS5A	35.550		1.58	56.17	1.40	0.89	1.71	E	I	33.88	1.03	2.58	D	I	84.04	0.80	0.82	1.58	B	I	46.38	1		
		SNS6A	39.950		1.44	57.53	1.40	0.89	1.57	E	I	33.88	1.03	1.83	D	I	87.97	0.80	0.82	1.44	B	I	46.38	1		
		SNS7B	42.000		1.37	57.54	1.40	0.89	1.49	E	I	33.88	1.03	1.76	D	I	87.97	0.80	0.82	1.37	D	I	46.38	1		
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3	33.000		1.75	57.75	1.40	0.89	1.91	E	I	33.88	1.03	2.78	D	I	84.04	0.80	0.82	1.75	B	I	46.38	1		
		TNT4A	33.075		1.76	58.21	1.40	0.89	1.92	E	I	33.88	1.03	2.79	A	I	83.59	0.80	0.82	1.76	B	I	46.38	1		
		TNT6A	41.600		1.43	61.49	1.40	0.89	1.57	E	I	33.88	1.03	1.84	D	I	87.98	0.80	0.82	1.43	D	I	46.38	1		
		TNT7A	42.000		1.43	64.35	1.40	0.89	1.58	E	I	33.88	1.03	1.81	D	I	87.98	0.80	0.82	1.43	B	I	46.38	1		
		TNT7B	42.000		1.46	65.70	1.40	0.89	1.64	E	I	33.88	1.03	2.07	E	I	47.71	0.80	0.82	1.46	D	I	46.38	1		
		TNAGRIT4	43.000		1.40	58.24	1.40	0.89	1.56	E	I	33.88	1.03	1.68	D	I	87.98	0.80	0.82	1.40	C	I	46.38	1		
		TNACT5A	45.000		1.33	55.86	1.40	0.89	1.47	E	I	33.88	1.03	1.61	D	I	87.98	0.80	0.82	1.33	D	I	46.38	1		
TNACT5B	45.000	③	1.32	55.44	1.40	0.89	1.45	E	I	33.88	1.03	1.58	D	I	87.98	0.80	0.82	1.32	D	I	46.38	1				

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.

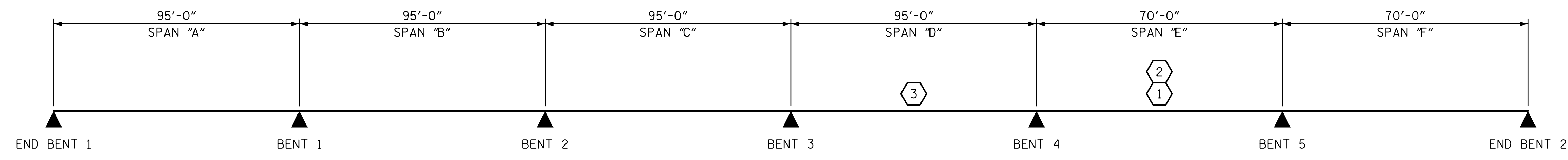
COMMENTS:  
 1. DISTANCE FROM LEFT END OF SPAN IS MEASURED FROM THE LEFT  $\phi$  BEARING.  
 2.  
 3.  
 4.

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

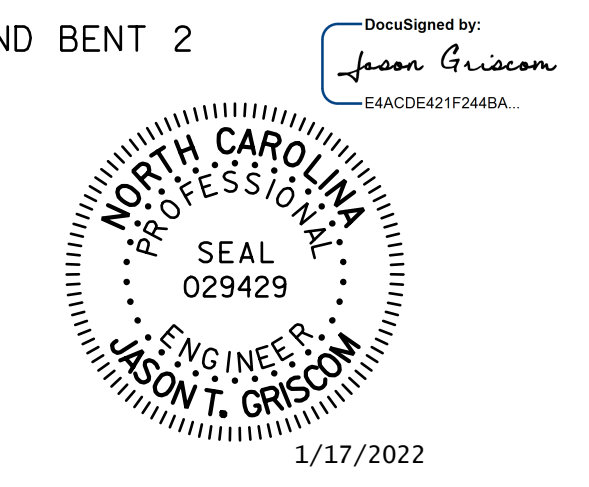
GIRDER LOCATION

I - INTERIOR GIRDER  
 E - EXTERIOR GIRDER



LRFR SUMMARY

PROJECT NO. B-5810  
CABARRUS COUNTY  
 STATION: 23+17.00 -L-



STV ENGINEERS, INC.  
 900 West Trade St., Suite 715  
 Charlotte, NC 28202  
 NC License Number F-0991

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STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

LRFR SUMMARY FOR  
 PRESTRESSED  
 CONCRETE GIRDERS  
 (NON-INTERSTATE TRAFFIC)

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

TOTAL SHEETS: 36

ASSEMBLED BY : LGH DATE : 6-19  
 CHECKED BY : MLO DATE : 12-19  
 DESIGN ENGINEER OF RECORD : J. GRISCOM DATE : 1-22

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