

LOAD FACTORS:

DESIGN LOAD RATING FACTORS

LOAD TYPE	MAX FACTOR	MIN FACTOR
DC	1.25	0.90
DW	1.50	0.65
EV	1.30	0.90
EH	1.35	0.90
ES	1.35	0.90
LS	1.75	--
WA	1.00	--

NOTE:

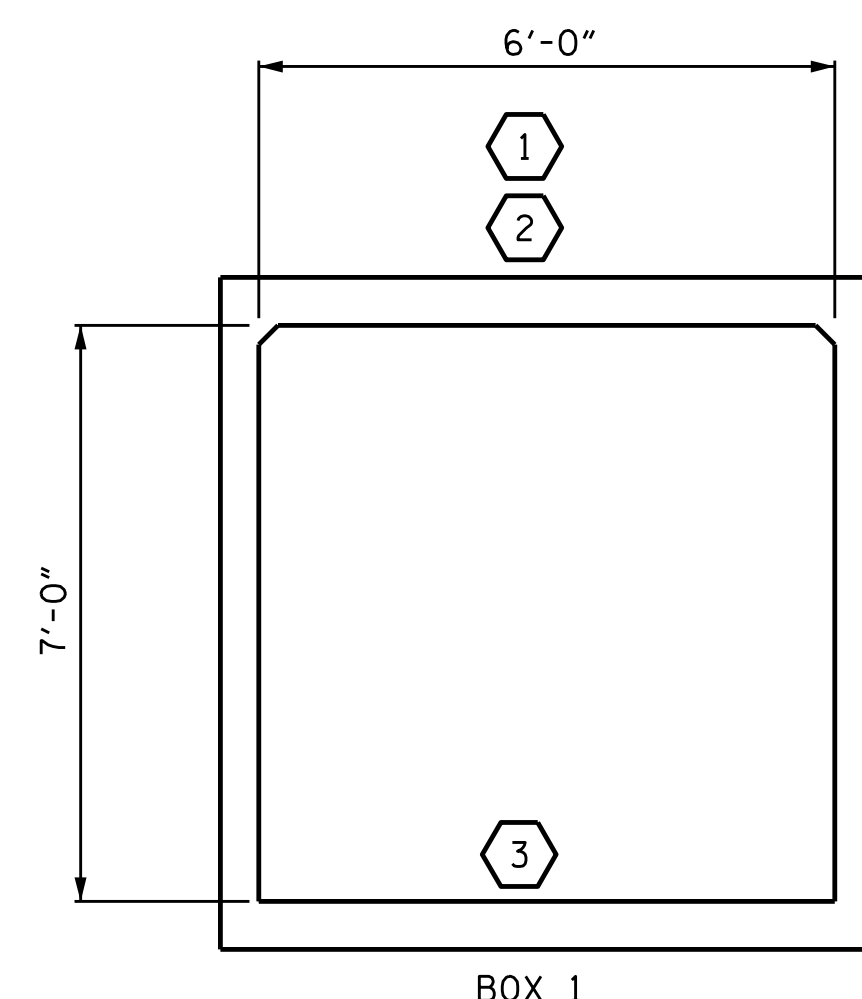
RATING FACTORS ARE BASED ON THE STRENGTH I LIMIT STATE.

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	

LOAD AND RESISTANCE FACTOR RATING (LRFR) SUMMARY FOR REINFORCED CONCRETE BOX CULVERTS																
LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE									COMMENT NUMBER	
						MOMENT					SHEAR					
						LIVE-LOAD FACTORS (%LL)	RATING FACTOR	BOX NO.	ELEMENT TYPE	DISTANCE FROM LEFT END OF ELEMENT (ft)	RATING FACTOR	BOX NO.	ELEMENT TYPE	DISTANCE FROM LEFT END OF ELEMENT (ft)		
DESIGN LOAD RATING	HL-93 (INVENTORY)	N/A	1	1.83	--	1.75	1.83	1	TOP SLAB	3.00	3.03	1	EXTERIOR WALL	0.67		
	HL-93 (OPERATING)	N/A		2.37	--	1.35	2.37	1	TOP SLAB	3.00	3.93	1	EXTERIOR WALL	0.67		
	HS-20 (INVENTORY)	36,000	2	1.97	70.92	1.75	1.97	1	TOP SLAB	3.00	3.05	1	EXTERIOR WALL	0.67		
	HS-20 (OPERATING)	36,000		2.55	91.80	1.35	2.55	1	TOP SLAB	3.00	3.96	1	EXTERIOR WALL	0.67		
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SH		3.93	49.13	1.40	3.93	1	TOP SLAB	3.00	3.86	1	EXTERIOR WALL	0.67		
		S3C	21,500		3.30	70.95	1.40	3.30	1	BOTTOM SLAB	3.00	3.82	1	EXTERIOR WALL	0.67	
		S3A	22,750		3.30	75.08	1.40	3.30	1	BOTTOM SLAB	3.00	3.82	1	EXTERIOR WALL	0.67	
		S4A	26,750		3.23	86.40	1.40	3.23	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
		S5A	30,500		3.82	116.51	1.40	4.11	1	BOTTOM SLAB	3.00	3.82	1	EXTERIOR WALL	0.67	
		S6A	34,500	3	3.17	109.37	1.40	3.17	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
		S7B	38,500		3.17	122.05	1.40	3.17	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
		S7A	40,000		3.17	126.80	1.40	3.17	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	T4A	28,250		3.30	93.23	1.40	3.30	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
		T5B	32,000		3.30	105.60	1.40	3.30	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
		T6A	36,000		3.23	116.28	1.40	3.23	1	BOTTOM SLAB	3.00	3.82	1	EXTERIOR WALL	0.67	
		T7A	40,000		3.23	129.20	1.40	3.23	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	
		T7B	40,000		3.18	127.20	1.40	3.18	1	BOTTOM SLAB	3.00	3.81	1	EXTERIOR WALL	0.67	



LRFR SUMMARY  
(LOOKING DOWNSTREAM)

PROJECT NO. I-5987B  
ROBESON COUNTY  
 STATION: 708+48.43 -L-

SHEET 3 OF 20

	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH STANDARD	
	LRFR SUMMARY FOR REINFORCED CONCRETE BOX CULVERTS (INTERSTATE TRAFFIC)	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED TGS ENGINEERS 706 HILLSBOROUGH STREET SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	REVISIONS NO. BY: DATE: NO. BY: DATE: 1 3 2 4	SHEET NO. C16-3 TOTAL SHEETS 20

ASSEMBLED BY : STM	DATE : 09/21
CHECKED BY : MGC	DATE : 03/22
DRAWN BY : WMC	7/II
CHECKED BY : GM	7/II
REV. 10/1/II	MAA/GM
REV. 12/17	MAA/THC