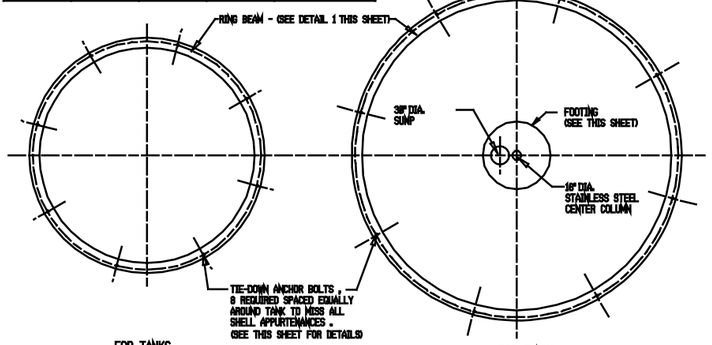
LOADING DATA FOR RING BEAM DESIGN

TANK		LOADS ON TOP OF RING BEAM														REMARKS
CAPACITY	DIAMETER	TANK SHELL LOAD - PLF (SEE NOTE a IN REMARKS)				LATERAL LOADS - KIPS					OVERTURNING MOMENT - FT-KIPS					a.) DEAD LOAD DOES NOT INCLUDE RING BEAM WEIGHT.
							SEISMIC 1		SEISMIC 2			SEISMIC 1		SEISMIC 2		
		DEAD LOAD	FUEL LOAD	LIVE LOAD	SNOW	WIND	DEAD LOAD + LIVE LOAD	DEAD LOAD + SNOW LOAD	DEAD LOAD + LIVE LOAD	DEAD LOAD + SNOW LOAD	WIND	LIVE LOAD	SNOW	LIVE LOAD	SNOW	
2,500	27'-0"	410	740	170	270	16	38	39	76	78	230	680	615	1,280	1,230	
5,000	31'-0"	575	1,270	195	310	27	74	75	148	150	500	1,775	1,600	3,725	3,750	
10,000	43'-0"	685	1,800	275	440	38	141	143	282	286	825	3,210	3,200	6,420	6,515	
25,000	63'-0"	1,000	2,160	400	640	64	339	342	678	684	1,590	8,800	9,000	17,760	18,005	
55,000	93'-0"	1,060	2,160	580	930	120	619	623	1,236	1,246	2,545	17,165	17,455	34,365	34,905	
80,000	112'-0"	1,200	2,190	700	1,120	117	854	861	1,708	1,722	3,865	19,815	18,495	36,825	36,895	
100,000	127'-0"	1,400	2,190	785	1,260	131	961	961	1,922	1,922	3,420	23,865	24,350	47,730	48,700	

CENTER COLUMN LOADS - KIPS

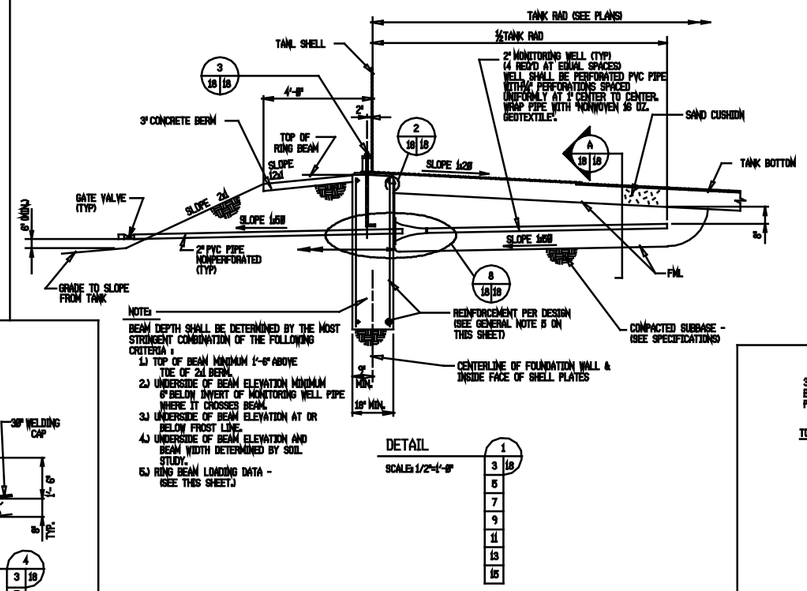
TANK CAPACITY	DEAD LOAD	LIVE LOAD	SNOW LOAD	REMARKS
55,000	32	54	87	
80,000	36	80	128	
100,000	40	100	160	

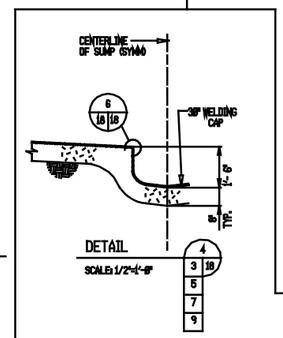


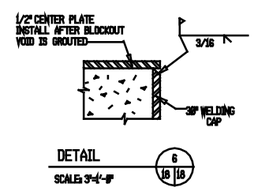
FOR TANKS
2,500 - BARREL
5,000 - BARREL
10,000 - BARREL
25,000 - BARREL

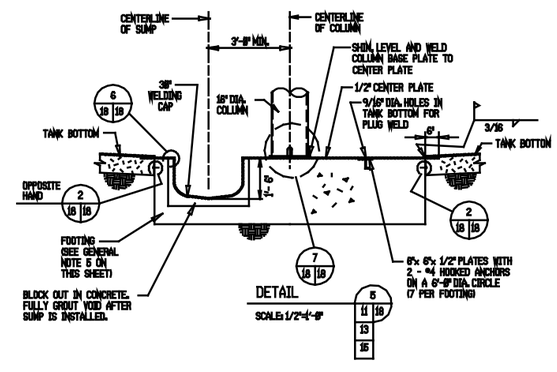
FOR TANKS
55,000 - BARREL
80,000 - BARREL
100,000 - BARREL

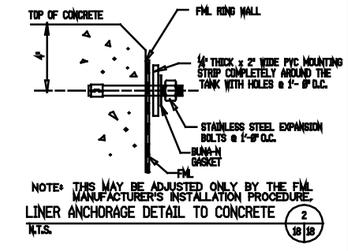
RING BEAM PLAN
N.T.S.

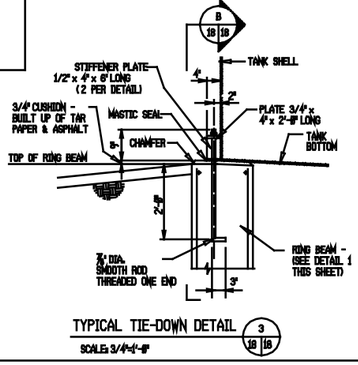








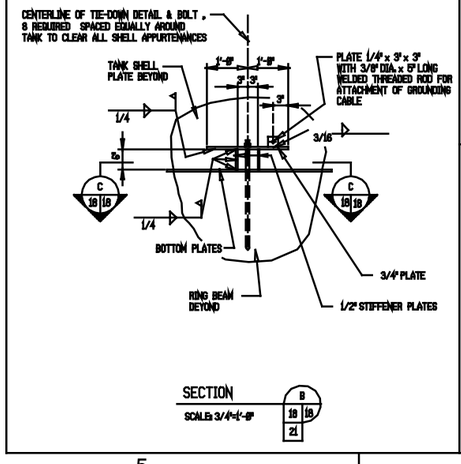


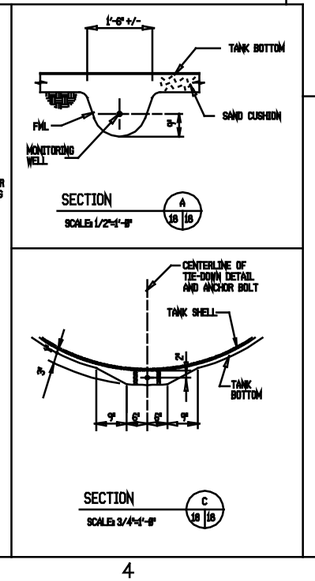


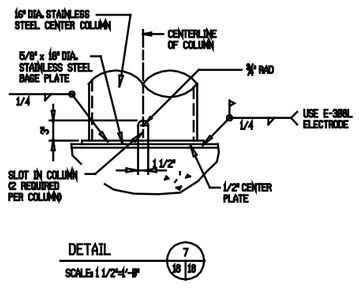
GENERAL NOTES.

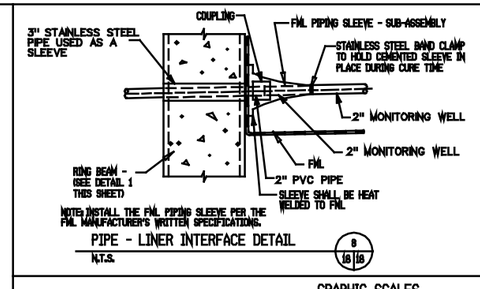
1. CONCRETE STRENGTH FOR RING BEAMS AND COLUMN FOOTING SHALL BE A MINIMUM OF 4000 P.S.I. AT 28 DAYS.
2. REINFORCING STEEL SHALL BE ASTM 615, GRADE 60.
3. PROVIDE STAGGERED LAPS "CLASS B" FOR HORIZONTAL REBARS IN RING BEAM.
4. DETAIL, FABRICATE AND PLACE REINFORCING STEEL PER A.C.I. 315 AND 318 (1983).
5. THE RING WALL AND COLUMN FOOTING SIZE, TYPE, AND REINFORCING REQUIREMENTS SHALL BE GOVERNED BY AND DESIGNED FOR SPECIFIC SITE SOIL CONDITIONS. A GEOTECHNICAL REPORT IS REQUIRED FOR EACH TANK SITE AND SHALL CONTAIN A RING BEAM, CENTER COLUMN, AND TANK BOTTOM PLATE SETTLEMENT ANALYSIS. THE ANALYSIS SHALL USE THE LOADS GIVEN, OR AS MODIFIED FOR SITE SPECIFIC LOADING CONDITIONS, ON THIS DRAWING SHEET. THE SETTLEMENTS DETERMINED BY THE ANALYSIS SHALL BE WITHIN THE MAXIMUM PERMISSIBLE SETTLEMENTS GIVEN BELOW.

ITEM	ABSOLUTE MAXIMUM SETTLEMENT (IN)	MAXIMUM DIFFERENTIAL SETTLEMENT (IN)
RING BEAMS FOR 27', 31', 43.5, AND 63' DIA TANKS	3/4	5/8
RING BEAMS FOR 93', 112' AND 127' DIA. TANKS	1	5/8
CENTER COLUMN FOOTING	1	1
BOTTOM PLATE	1	—

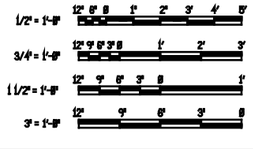








GRAPHIC SCALES



Symbol	Description	Date	Approved
	Revisions		

U.S. ARMY ENGINEER DIVISION, HUNTSVILLE
CORPS OF ENGINEERS
HUNTSVILLE, ALABAMA

Site adapt A/E:

STANDARD FUELING SYSTEMS ABOVEGROUND VERTICAL STEEL TANKS WITH FLOATING PANS & FIXED ROOFS

TANK FOUNDATIONS

Dwn. by: CWL	Ckd. by: SLW		
Reviewed by:	Date: FEB 93	Sheet reference number: 18	Design file no.:
Approved by:	Drawing code: AW 78-24-27		Rev.
			Sheet 18 of 24