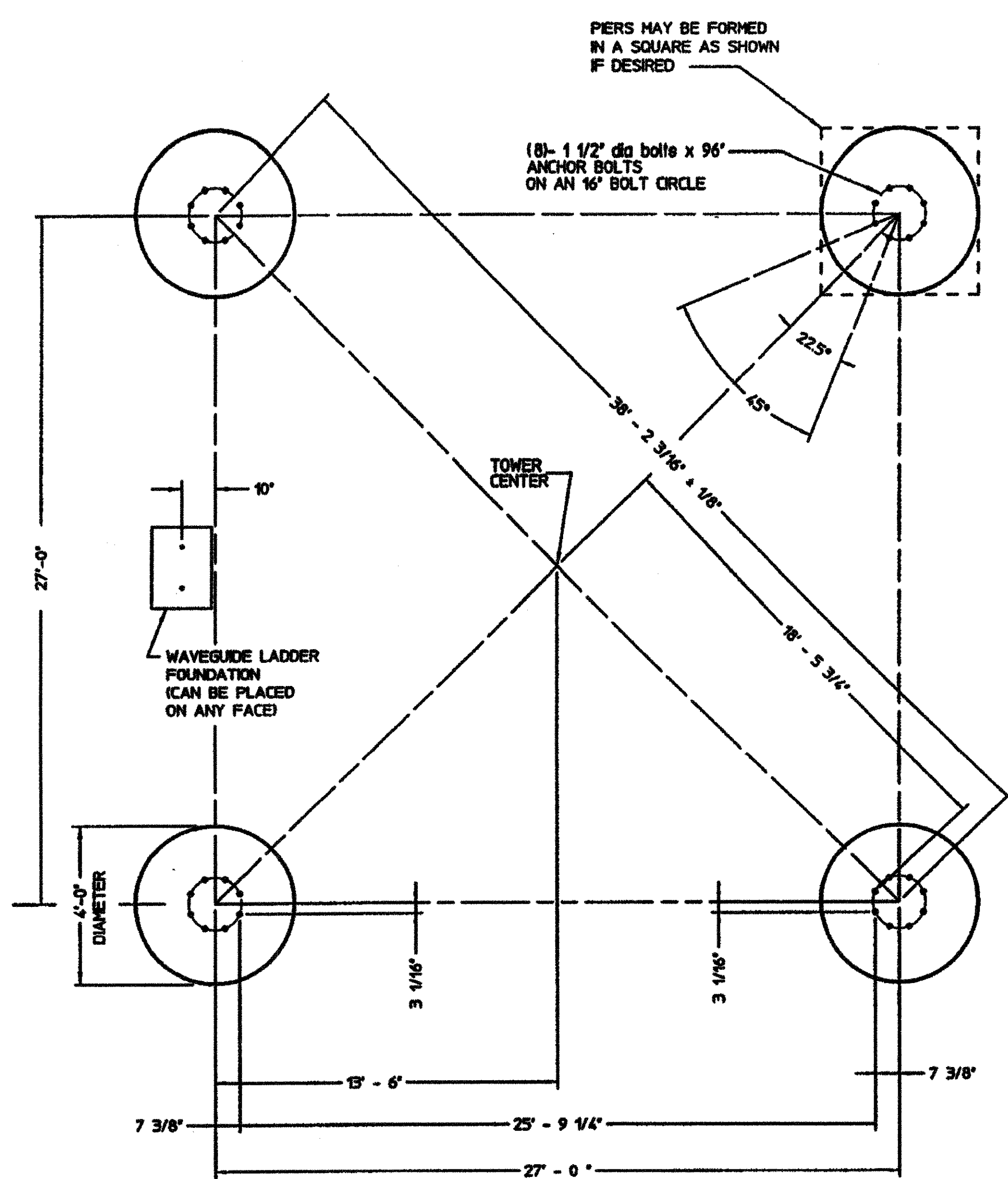
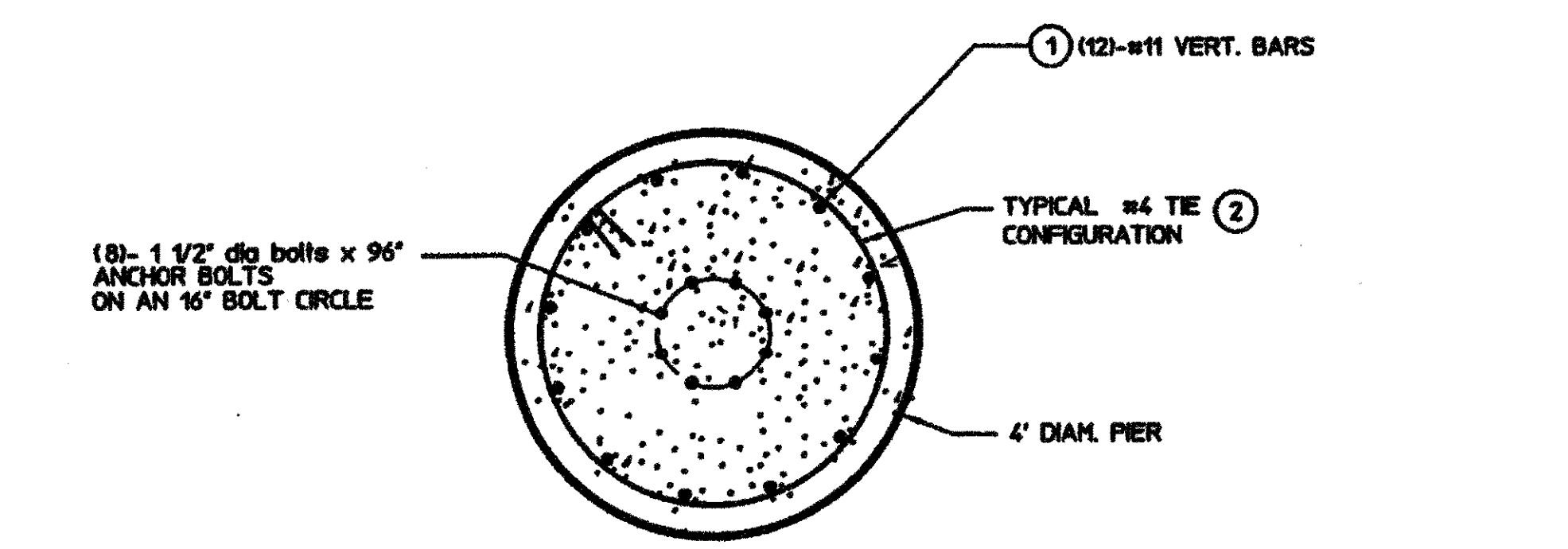


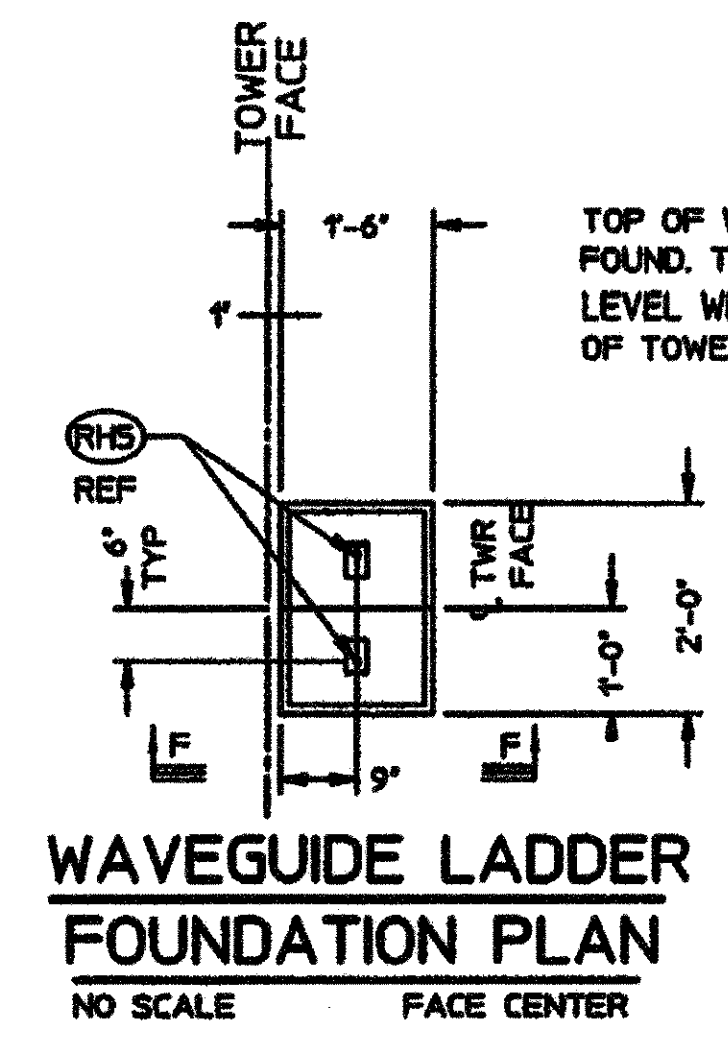
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	REVISED GROUT NOTE AND ADDED W/G LADDER FOUNDATION DETAILS	9/18/10	



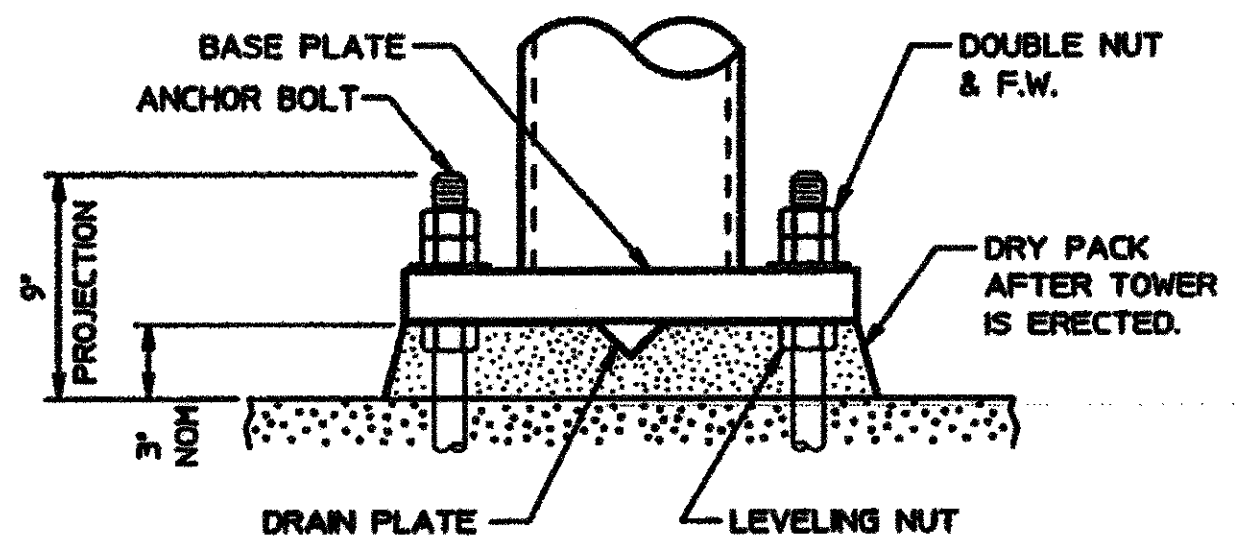
FOUNDATION PLAN
NO SCALE



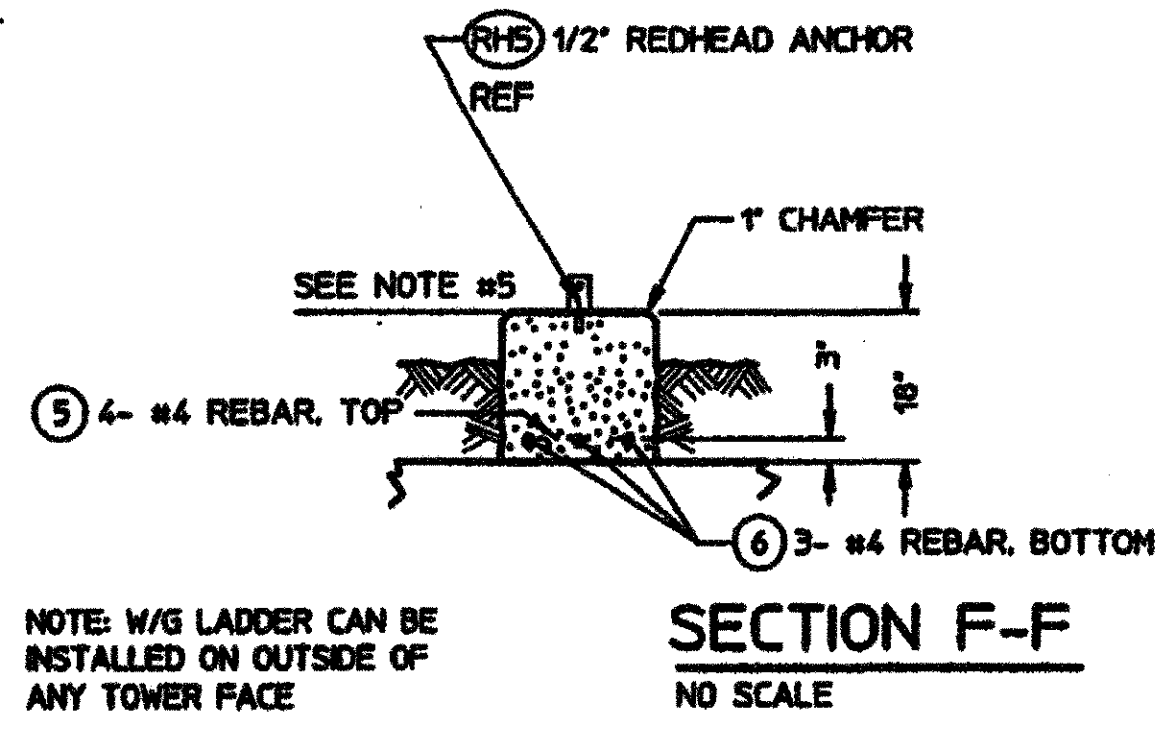
SECTION A-A
NO SCALE



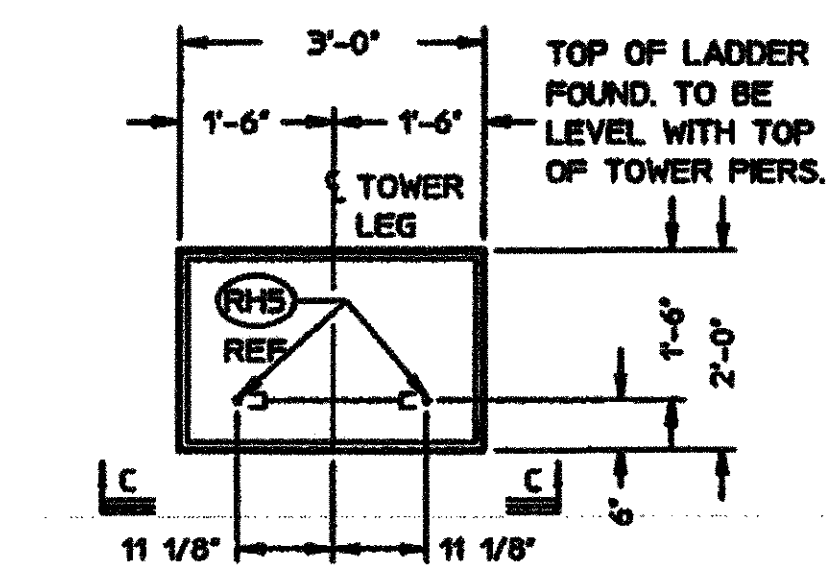
WAVEGUIDE LADDER FOUNDATION PLAN
NO SCALE



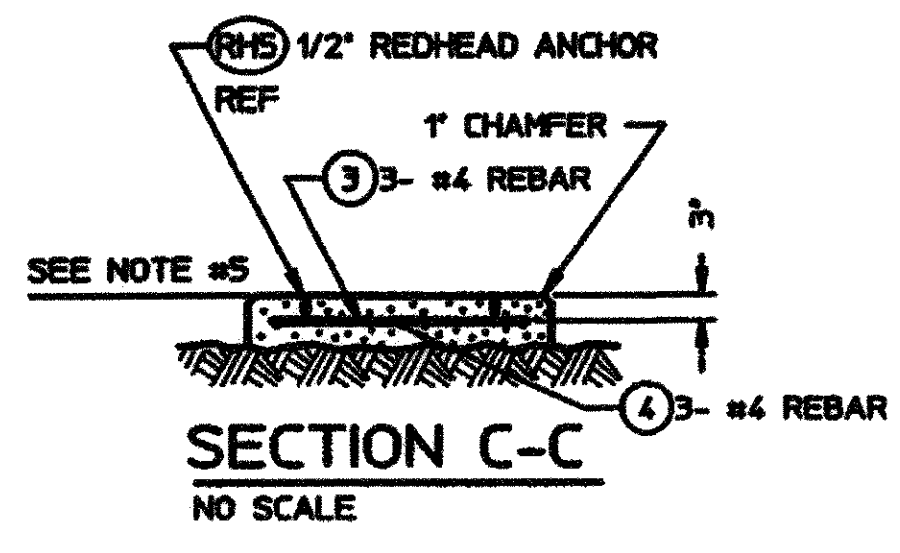
DRAIN PLATE INSTALLATION
NO SCALE
EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE TOWER.



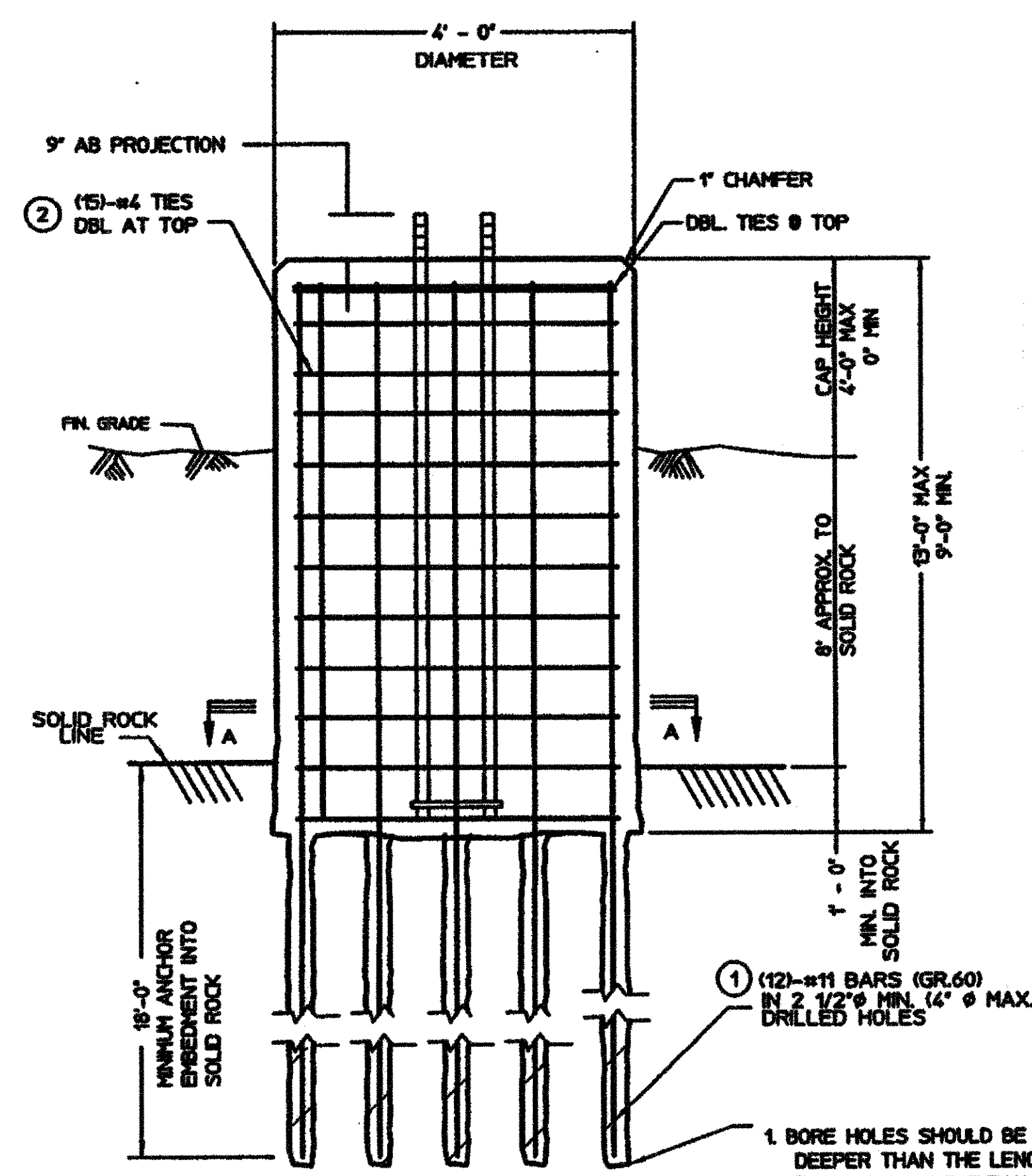
SECTION F-F
NO SCALE



CLIMBING LADDER FOUNDATION PLAN
NO SCALE



SECTION C-C
NO SCALE



ROCK ANCHOR FOUNDATION
NO SCALE

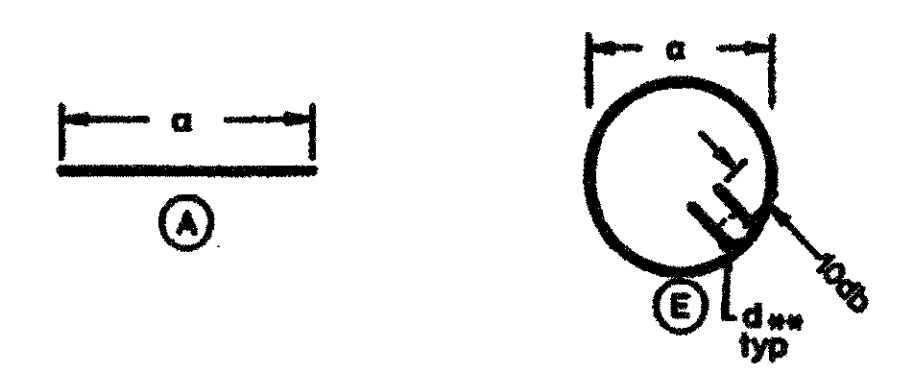
GENERAL NOTES: ROCK ANCHOR

- Prior to excavation, check the area for underground facilities.
- All reinforcing shall be deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
- All concrete shall have a minimum compressive strength of 3,000 psi @ 28 days. Cement content shall be min. 4 1/2 sacks per cubic yard of concrete. Slump of concrete shall not exceed 4".
- Concrete shall be placed against undisturbed soil to the depth indicated on the foundation drawing. The portion above grade shall be formed. If an area is excavated beyond the limits shown, this volume shall be filled with concrete or formed. After the forms are removed, the excess excavation shall be replaced and compacted. Backfill shall be compacted to 90% or better per the standard Proctor test (ASTM D698).
- The tops of pedestals at the same elevation shall be level with each other within 1/4 inch. Trowel tops of pedestals smooth.
- In uplift it is assumed that the bottom of the anchors engages the frustrum of an inverted cone of earth whose sides form an angle of 30 degrees with the vertical (Solid Rock).
- The rock is considered to weigh 150 pcf. Ground water table is assumed to be below the zone of influence of this loading.
- Concrete is assumed to weigh 150 pcf.
- Dry Packing Procedures: Mix 2 parts sand, one part cement, and add just enough water to allow molding a shape by hand. Restrict the water content to a minimum. (This minimizes the possibility of shrinkage when the mortar, dry-mixed for maximum density and strength, is packed in place.) The packing shall be done by hand, ramming with bars or caulking tools, or a combination thereof.
- Estimated concrete volume = 4.2 cu. yards per pier (min).
- Design based on the following loads:
Uplift = 226 kips per pier
Download = 264 kips per pier
Shear = 29.5 kips per pier
- Rock parameters are based on Geotechnical report by Western Technologies, Inc. Job No. 2120/F029 dated 8/17/10.
A typical rock dowel/pier shall be proof loaded to 60 kips prior to placement of concrete.

REINFORCEMENT STEEL SCHEDULE

Sym	Type	Rebar Size	Rebar Spacing	Dimensions				Weight (lbs)	Qty	
				a	b	c	d			
1	A	#11	EQUAL	29'-9"				7587	48	
2	E	#4	EQUAL	3'-0"			2'	5'	419	60
3	A	#4	1'-3"	1'-6"					3	3
4	A	#4	9"	2'-6"					5	3
5	A	#4	9"	1'-0"					3	4
6	A	#4	6"	1'-6"					3	3

TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION = 8020



Rebar Lap Splice ACI 318-95

Rebar Size	Rebar Grade	Specified Concrete Strength	Overlap (inches)		
			Vert	Bottom Horiz	Top Horiz
#3	60	3000 psi	13	13	17
#4	60	3000 psi	17	17	22
#5	60	3000 psi	22	22	28
#6	60	3000 psi	26	26	33
#7	60	3000 psi	38	38	49
#8	60	3000 psi	43	43	56
#9	60	3000 psi	48	48	63
#10	60	3000 psi	57	57	75
#11	60	3000 psi	71	71	92

Grade 60 Rebar

Size	ASK #	Wt/lft	10db	d _w	d _{min}
#3	11-97203	0.38		2 1/4"	1 1/2"
#4	11-97204	0.67	5"	3"	2"
#5	11-97205	1.04		3 3/4"	2 1/2"
#6	11-97206	1.50		4 1/2"	4 1/2"
#7	11-97207	2.04		5 1/4"	5 1/4"
#8	11-97208	2.67		6"	6"
#9	11-97209	3.40		9 1/2"	
#10	11-97210	4.30		10 3/4"	
#11	11-97211	5.31		12"	

* Refers to ACI standard hook detail chart
** Refers to ACI stirrup hook detail chart



Splicing is an alternative to specified material listed in rebar schedule.

UNLESS OTHERWISE STATED DIMENSIONS ARE IN INCHES		CONTRACT NO.			
TOLERANCES ON FRACTIONS: DENOMINALS: ANGLES: 1/16" 3/16" 3/32" 1/8" 1/4" 3/8" 1/2" 5/8" 3/4" 1" 1 1/8" 1 1/4" 1 1/2" 1 3/4" 2" 2 1/4" 2 1/2" 3" 3 1/4" 3 1/2" 4" 4 1/4" 4 1/2" 5" 5 1/4" 5 1/2" 6" 6 1/4" 6 1/2" 7" 7 1/4" 7 1/2" 8" 8 1/4" 8 1/2" 9" 9 1/4" 9 1/2" 10" 10 1/4" 10 1/2" 11" 11 1/4" 11 1/2" 12" 12 1/4" 12 1/2" 13" 13 1/4" 13 1/2" 14" 14 1/4" 14 1/2" 15" 15 1/4" 15 1/2" 16" 16 1/4" 16 1/2" 17" 17 1/4" 17 1/2" 18" 18 1/4" 18 1/2" 19" 19 1/4" 19 1/2" 20"		MICROPILE SALES ORDER 11841-60			
DRAWN BY: J.L.		DATE: 22.JUL.10		ROCK ANCHOR FOUNDATION LAYOUT TELESPAN NETWORK SERVICES SITE: THOMPSON PEAK, AZ	
CHECKED BY: M.F.		DATE: 22.JUL.10		SHEET NO. D 29189 DRAWING NO. D-129997 REV A	
SCALE		SHEET		1 OF 1	