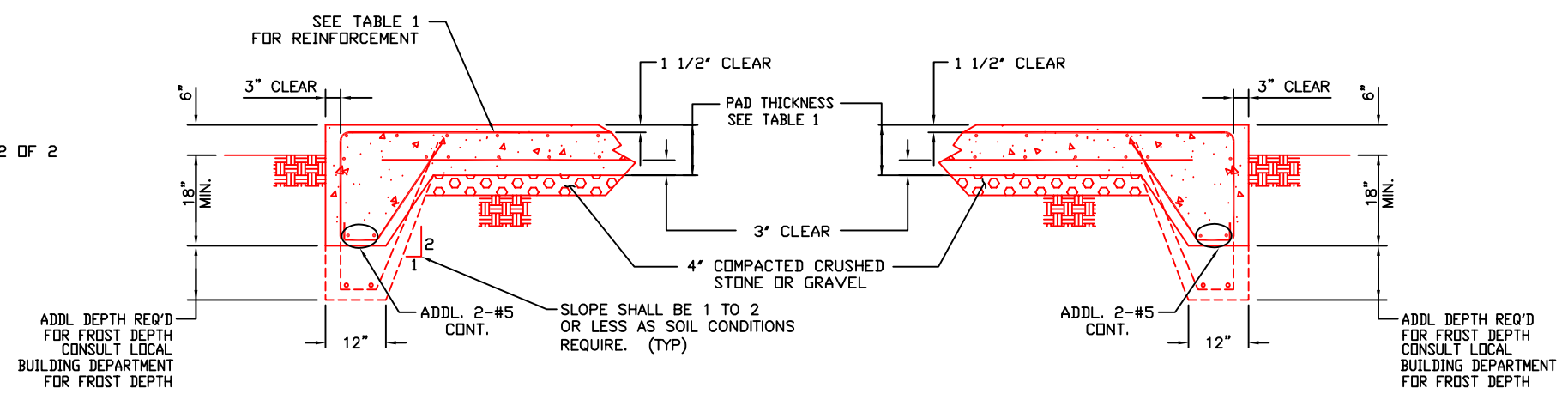


**FOUNDATION PLAN**  
SCALE: 3/8"=1'-0"



**SECTION 'A-A'**  
SCALE: 3/4"=1'-0"

- NOTES:**
- FOR SPECIFIC REQUIREMENTS, CONSTRUCTION, AND INSTALLATION NOTES SEE CESCQM-SP-0009-00.
  - SEE SPILL PAD DRAWING # B269093 SH 1 OF 1, FOR SPILL PAD SPECIFICATION.
  - DESIGN OF FOUNDATION AND ANCHORING IS SUITABLE FOR WIND SPEEDS UP TO 140 MPH WITH EXPOSURE C AND SEISMIC LOADS AS STATED ON THE DRAWINGS. SEISMIC DESIGN IS BASED ON SOIL CLASS D, REDUNDANCY FACTOR OF 1.0, OCCUPANCY CATEGORY III, OVERSTRENGTH FACTOR OF 2.0 FOR ANCHORS AND FOR THREE DIFFERENT  $S_s$  VALUES RANGING FROM 0% TO 15%, 15% TO 30% AND 30% TO 50%. SOIL BEARING SHALL NOT BE LESS THAN 2000 PSF MINIMUM. CONSULT A LOCAL PROFESSIONAL ENGINEER IF SOIL BEARING IS LESS THAN 2000 PSF MINIMUM. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH  $f'_c=4000$  PSI. REINFORCING BARS SHALL CONFORM TO ASTM 615 GRADE 60.
  - SEE BOLLARD DRAWING # CESCQM-D0013 FOR BOLLARD SPECIFICATION.
  - CONSTRUCTOR MUST MARK THE OUTLINE OF THE THICKER MAT AFTER CONCRETE IS POURED.
  - CONTRACTOR IS ALLOWED TO POUR ONE UNIFORM MAT THICKNESS ONLY IF THE THICKER MAT IS USED.

TITLE	STANDARD FOUNDATION FOR VERTICAL 3K & 6K WITH 2 10A FOR LIN LOX AND LAP
Scale	NONE

WIND/SEISMIC CRITERIA	PAD THK. (IN.)	REINFORCEMENT	
		TOP EW	BOT EW
WIND < 120 MPH SEISMIC 0<Ss<15%g	14" THK	#5@10	#5@10
120 < WIND < 140 MPH SEISMIC 0<Ss<15%g	14" THK	#5@10	#5@10
WIND < 140 MPH SEISMIC 15%g<Ss<30%g	14" THK	#5@10	#5@10
WIND < 140 MPH SEISMIC 30%g<Ss<50%g	14" THK	#6@10	#6@10

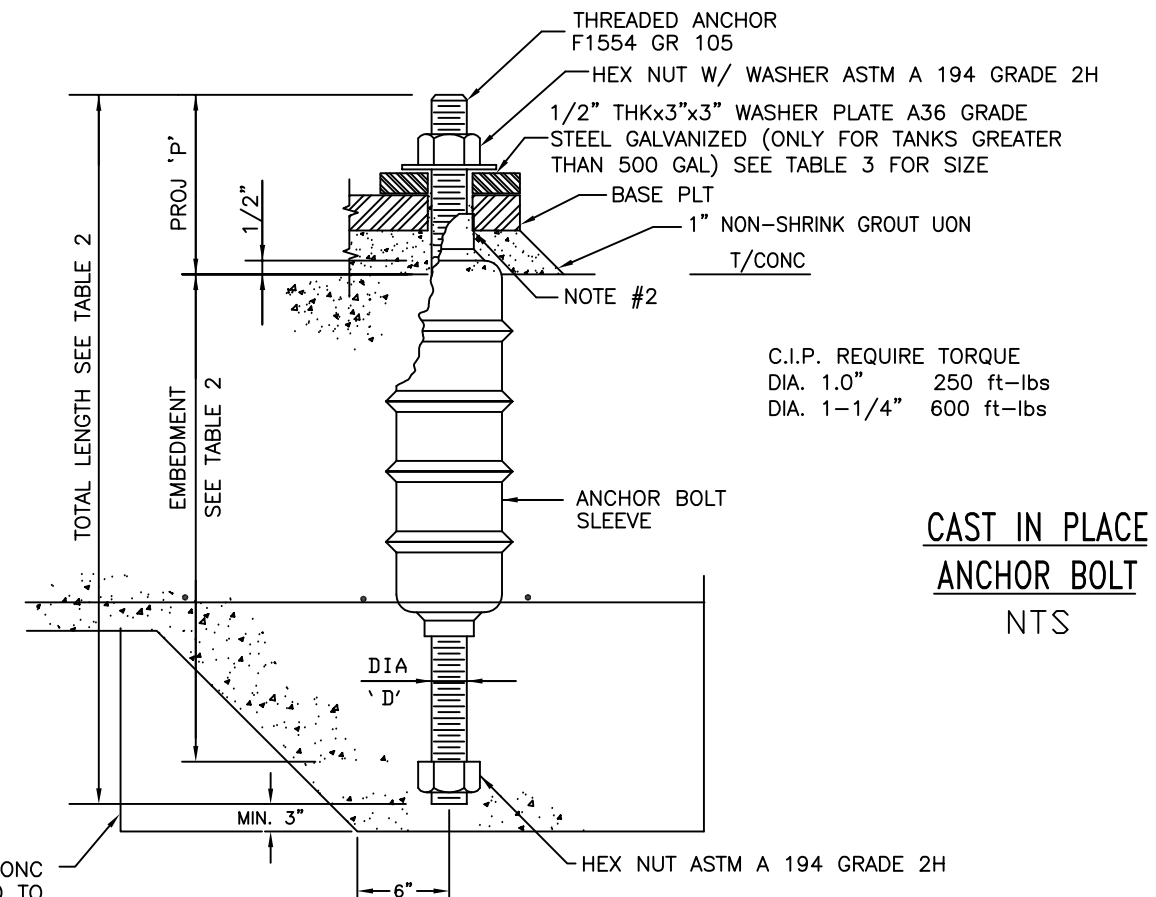
**NOTES:**

- PROJ 'P' = 7" MAXIMUM PROJ. CAN BE CALCULATED USING THIS FORMULA  
= 1 1/2" + EQUIPMENT BASE PLATE THICKNESS + 1.5xANCHOR BOLT DIAMETER.
- SLEEVE SHALL BE CUT FLUSH WITH T/CONC JUST BEFORE GROUTING & FILLED WITH GROUT.
- DESIGN OF FOUNDATION AND ANCHORING IS SUITABLE FOR WIND SPEEDS UP TO 140 MPH WITH EXPOSURE C AND SEISMIC LOADS AS STATED ON THE DRAWINGS. SEISMIC DESIGN IS BASED ON SOIL CLASS D, REDUNDANCY FACTOR OF 1.0, OCCUPANCY CATEGORY III, OVERSTRENGTH FACTOR OF 2.0 FOR ANCHORS AND FOR THREE DIFFERENT S<sub>s</sub> VALUES RANGING FROM 0 TO 15%g, 15%g TO 30%g AND 30% TO 50%g. SOIL BEARING SHALL NOT BE LESS THAN 2000 PSF MINIMUM. CONSULT A LOCAL PROFESSIONAL ENGINEER IF SOIL BEARING IS LESS THAN 2000 PSF MINIMUM. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH f'<sub>c</sub>=4000 PSI. REINFORCING BARS SHALL CONFORM TO ASTM 615 GRADE 60.
- FOR CAST IN PLACE ANCHORS PROVIDED CONCRETE CONTRACTOR WITH TANK/VAPORIZER DETAIL DRAWING TO ENABLE LOCATION OF ANCHORS.
- TOP AND BOTTOM REBARS SHALL BE ALLIGNED IN THE SAME PLANE. ALSO, CONTRACTORS SHALL MARKED WHERE THE REBARS ARE LOCATED.

TANK	WIND < 120 MPH SEISMIC 0<Ss<15%g				120 < WIND < 140 MPH SEISMIC 0<Ss<15%g				WIND < 140 MPH SEISMIC 15%g<Ss<30%g				WIND < 140 MPH SEISMIC 30%g<Ss<50%g			
	ANCHOR BOLT TYPE	ANCHOR QUANTITY	ANCHOR DIAMETER	EMBEDMN	TOTAL LENGTH	ANCHOR QUANTITY	ANCHOR DIAMETER	EMBEDMN	TOTAL LENGTH	ANCHOR QUANTITY	ANCHOR DIAMETER	EMBEDMN	TOTAL LENGTH	ANCHOR QUANTITY	ANCHOR DIAMETER	EMBEDMN
PEI 3000	3	3/4	6-5/8	14.0	3	3/4	6-5/8	14.0	3	3/4	6-5/8	14.0	3	1.0	12.0	21.0
PEI 6000	3	3/4	6-5/8	14.0	3	3/4	9.0	14.0	3	1-1/4*	23.0▲	29.0	3	1-1/4*	23.0▲	29.0
CHART VS 3000	6	3/4	6-5/8	14.0	6	3/4	6-5/8	14.0	6	3/4	6-5/8	14.0	6	1.0	12.0	21.0
CHART VS 6000	6	3/4	6-5/8	14.0	6	3/4	9.0	14.0	12	1.0	12.0	21.0	12	1.0 *	17.0▲	23.0
MVE VCS 3000	6	3/4	6-5/8	14.0	6	3/4	6-5/8	14.0	6	3/4	6-5/8	14.0	6	1.0	8.0	14.0
MVE VCS 6000	6	3/4	6-5/8	14.0	6	3/4	6-5/8	14.0	6	1.0	12.0	21.0	12	1.0 *	17.0▲	23.0
CRYO QUIP VAI 1208-FBL-15 VAPORIZER # 10A	4	3/4	9.0	14.0	4	3/4	9.0	14.0	4	3/4	9.0	14.0	4	3/4	9.0	14.0

\* CAST-IN-PLACE ANCHOR BOLTS.

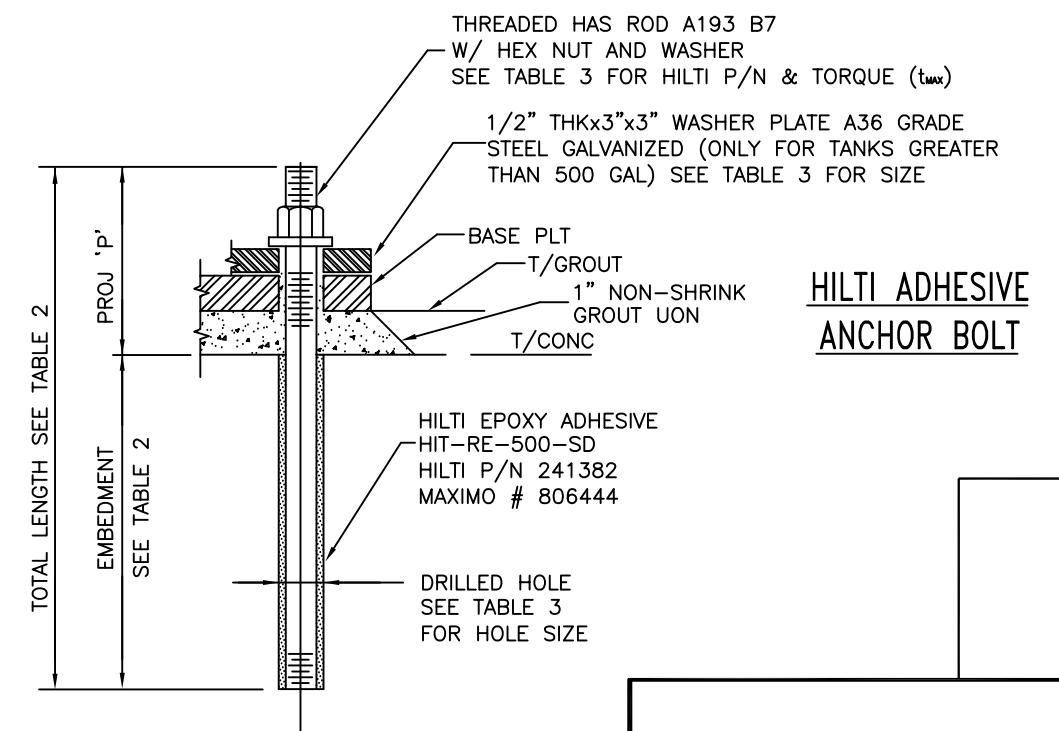
ANCHOR DIA. INC	3/4	1.0	1.0
LENGTH INCH	14.0	14.0	21.0
HOLE DIA. INCH	7/8	1-1/8	1-1/8
HILTI P/N	3006083	3006079	3006081
MAXIMO #	805834	805835	805836
WASHER PLATE 1/2x3x3 INCH	7/8 HOLE DIAM.	1-1/8 HOLE DIAM.	1-1/8 HOLE DIAM.
MAXIMO #	806367	806368	806368
t <sub>max</sub> (ft-lbs)	150	235	235



C.I.P. REQUIRE TORQUE  
DIA. 1.0" 250 ft-lbs  
DIA. 1-1/4" 600 ft-lbs

**CAST IN PLACE  
ANCHOR BOLT**  
NTS

▲ EXTEND CONC AS REQUIRED TO ACCOMMODATE LONGER ANCHOR BOLTS



**HILTI ADHESIVE  
ANCHOR BOLT**

NO	DATE	BY	CHKD	APPD	REVISION
00	05-09-08	JW	RE	FH	TJS
					GENERAL REVISION TO MEET IBC 2006
					RFVISION NOTFS

TITLE  
STANDARD FOUNDATION FOR  
VERTICAL 3K & 6K WITH 2 10A FOR  
LIN, LOX, AND LAR

Scale  
NONE