

ASTM A500 GRADE A 3"x3"x14 GAGE (THICKNESS, t=0.083") TUBE @ 4'-0" O.C. MAX.—FINISH SHALL BE POWDER COATED.

L4x2x14 GA. LLH—FINISH SHALL BE POWDER COATED.

HYDROSTATIC LOAD OF FLUID W/ DENSITY EQUAL TO 64 lb/FT³

ASTM A792 GRADE 80, 26 GAGE M—PANEL [SPlice SHEETS AT COLUMNS] — ATTACH NARROW FLG OF PANEL TO FLUID SIDE OF TUBE. FINISH SHALL BE GALV. WITH PAINT BY MANUF.

COMPACTED NATIVE BACKFILL

#12x3/4" SDS T-3 SCREWS @ 6" O.C. EACH TUBE (TYP.) & @ TOP ANGLE

NATIVE BACKFILL

2'-6" MAX.

5'-0"

6" 9" MAX.

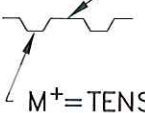
1'-9" MIN.

3"

9"

MINIMUM ENGINEERING PROPERTIES FOR ENTIRE PANEL WIDTH		
	I(in ⁴)	M _{ALLOW} (k-in)
M ⁻	0.064	4.272
M ⁺	0.043	3.670

M⁻=TENSION



M⁺=TENSION

9"Ø CONCRETE f'_c ≥ 3,000 PSI

APPROX. 1'-6"

SOIL NOTES:

- BOTTOM OF CONCRETE PIER MUST BE ABOVE GROUND WATER TABLE
- DRY UNIT DENSITY OF SOIL SHALL BE ≥ 90lb/ft³
- NATIVE SOIL SHALL NOT BE SAND OR GRAVEL.
- COHESION (c) OF NATIVE SOIL MUST BE GREATER THAN VALUE SHOWN IN TABLE BELOW.

NATIVE SOIL Ø(DEGREES)*	0	10	20	30	90
MIN. c(lb/ft ²)**	2100	1950	1450	1150	900

* Ø = ANGLE OF INTERNAL FRICTION
** c = COHESION

NOTE:

1. TYPE OF FLUID RETAINING PRODUCT APPLIED TO THIS STRUCTURE IS NOT WITHIN THE SCOPE OF THIS DOCUMENT.
2. STRUCTURE DESIGNED TO FACTORS—OF—SAFETY SPECIFIED BY ACI, AISI & AISC.

SECONDARY CONTAINMENT STRUCTURE (4' MAX POST SPACING)

SCALE: 1"=1'-0"



ZAHL-FORD, inc.
Structural Engineering Consultants

zahlford.com | Cert. Of Auth. #CA994 - Exp. 06/30/13
8411 S. Walker · Oklahoma City, OK 73139 · Ph: 405.634.3393