

NATOMAS MARKETPLACE

BY RWM DATE 5/98
 CHKD. BY DATE

SUBJECT PEDESTRIAN DIRECTIONALS
 TRUXELL RD @ HWY I 80

SHEET NO. 1 OF 1
 JOB NO. 98-143B
 ELLIS & ELLIS
 P.O. # 7940

DESIGN CRITERIA

CODE - 1994 UBC
 WIND - 75 M.P.H. EXP. C

WIND ON SIGN

$$P = C_e C_g q_z I = (1.06)(1.4)(14.5)1 = 21.5 \text{ P.S.F.}$$

$$\textcircled{A} (6.5 \times 1.25/2) 21.5^{3/4} = 87 \times 11.83 = 1029$$

$$\textcircled{B} (4' \times 1.5) 6 < 21.5 = 258 \times 9.07 = 2340$$

$$\textcircled{C} (4.5/12 \times 8) 21.5 = 65 \times 7.0 = 455$$

$$\textcircled{D} (1.0 \times 3) 21.5 = 63 \times 1.5 = 98$$

$$\Sigma P = 475 \# \quad \Sigma M = 3922$$

FOOTING EMBEDMENT NON-CONSTRAINED
 H.P. CALCULATOR PROGRAM 03C360

$$D_2 = \left(\frac{7.02P}{2WB_0} \right) \left[1 + \left(1 + \frac{0.621WB_0H}{P} \right)^{1/2} \right]^{1/2} \text{ UBC 1806.7.2.1}$$

TRY 2'-0" ϕ CONC PIER = D

$$H = \frac{3922}{475} = 8.26'; \quad P = 475 \#$$

$$W = 150(2)(1.33) = 400 \text{ P.S.F. / FT}^2 \text{ ALLOW.}$$

$$D = 3.76'$$

USE 2'-0" ϕ x 3'-9" CONC PIER
 NO REINF. REQD $f'_c = 2000 \text{ PSI}$

* ALTERNATE: 2'-0" x 2'-0" x 3'-4" CONC. PIER

BASE WIND COLUMN

TRY 4" ϕ PIPE O.D. = 4 1/2"

$$f_b = \frac{3922 \times 12}{3.211^3} = 14,662 \text{ PSI}$$

$$F_b = .6(36000)1.33 = 28,728 \text{ PSI}$$

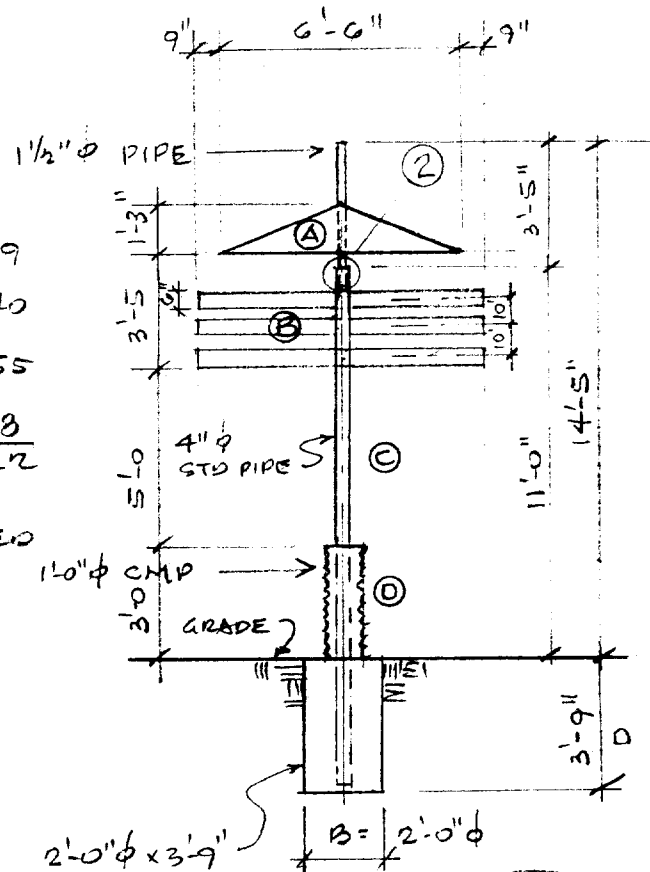
USE 4" ϕ STD. PIPE ASTM A53 Gr B
 $t = .237$ WT. = 10.79 #/1'

COLUMN TRANSITION @ 11'-0" ABV. GR.

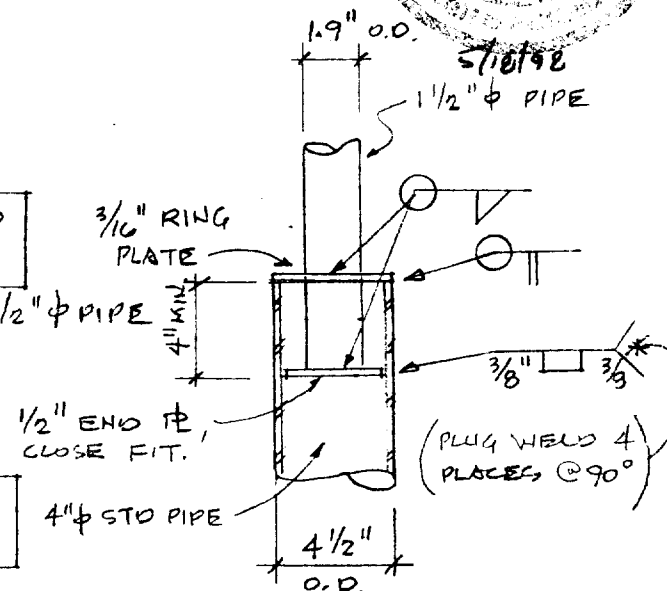
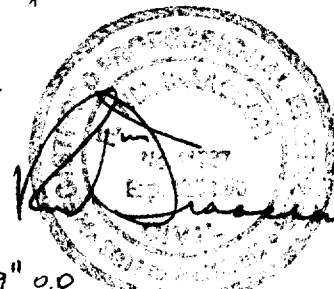
$$M_u = 87 \times 83' = 72 \#$$

$$f_b = \frac{72 \times 12}{.326^3} = 2658 \text{ PSI}$$

USE 1 1/2" ϕ STD. PIPE ASTM A53 Gr B
 $t = .145$ WT. = 2.72 #/1'



2'-0" ϕ x 3'-9" NON-REINF CONC. PIER
 OR 2'-0" x 2'-0" x 3'-4" *



DETAIL (2)

08-I

032 Sign Type Location

Handwritten notes in the upper left quadrant of the site plan.

Handwritten notes in the lower left quadrant of the site plan.

Roxel Rd.

2-2

