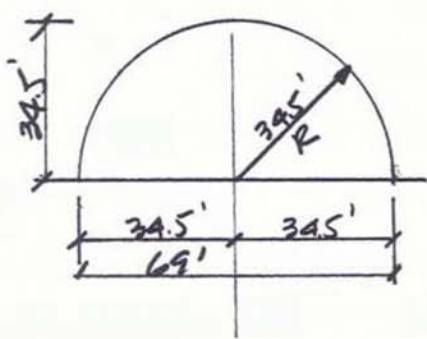


DOME 69' W x 34.5' H



WIND SPEED 80 MPH
 MAX INTERNAL PRESSURE 1.5' H₂O

WIND FORCE - 80 MPH (2007 CAL 6)
 $q = .0026V^2 = .0026 \times 80^2 = 16.38 \text{ psf}$

INTERNAL PRESSURE
 $1.5 \times \frac{62.4}{12} = 7.8 \text{ psf}$
 $.25 = 1.9 \text{ psf FOR INFLOW}$

AERODYNAMIC FORCE

$L_A = q R N S$
 SHAPE FACTOR = $\frac{34.5}{69} = 0.50$
 $L_A = 16.38 \times 34.5 \times 1 \times 1 = 565 \text{ #/LF}$ $S_{max} = 1.0$

FABRIC STRESS

$S = 417 \text{ #/LF} = 35 \text{ #/IN}$
 ALLOW TENSILE STRESS 300 #
 $F_s = \frac{300}{35} = 8.57 > 4.0 \text{ OK}$

INTERNAL FORCE

$L_p = P R N = 1 \times 7.8 \times 34.5 = 269 \text{ #/LF}$
 $L_T = L_A + L_p = 565 + 269 = 834 \text{ #/LF}$

ANCHOR FORCE = $\frac{834 \times 12}{2} = 417 \text{ #/ANCHOR}$

3/8" DROP-IN ANCHOR REDHEAD @ 12" OC
 2000 psi CONC $T_c = 2980 \text{ #}$

$F_s = \frac{2980}{417} = 7.15 \text{ OK}$

ALT CONN - $\angle 1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{4}$ w/ 3/8" MS A
 DROP-IN @ 24" OC

$S = .13 \text{ IN}^2$ ASTM 6061-T6
 $M = 417 \times \frac{24}{4} = 2502 \text{ #"} \quad V = 2 \times 417 = 834 \text{ #}$
 $f_b = \frac{2502}{.13} = 19,231 \text{ psi VS } 16 \times 1.33 = 21,300 \text{ psi OK}$

USE $\angle 1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{4}$ 6061-T6 ANGLE
 w/ 3/8" ANCHOR @ 24" OC @
 CONN TO DOME @ 12" OC "

