

PROJECT _____ MADE BY BCH DATE 4/17/13
FILE NO. 2017-056 CHKD BY _____ DATE _____

Control Station

$snow = 45 \times 1.7 = 77 \text{ psf} \checkmark$

$roof slab = \frac{113 \text{ psf} \times 1.4}{2.36} = \frac{159}{2.36}$

$M_w = .24 \left(\frac{9.5^2}{8} \right) = 2.71 \text{ K}'$

$F_y = 60 \quad f'_c = 4000 \text{ psi} \quad b = 12 \quad d = 7.25$

$A_s = .2 \quad \phi M_w = \overset{OK}{6.39} \text{ K}'$



ASSUME WIND ON WALLS = $40 \text{ psf} \checkmark$

$w_w = 40 \times 1.7 = 68$
↑ conservative
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$M_w = .068 \left(\frac{9.5^2}{8} \right) = .76 \text{ K}'$

$F_y = 60 \quad f'_c = 4000 \quad b = 12 \quad d = 2 \quad A_s = .2 \quad \phi M_w = 1.67 \text{ K}'$

load per ft of wall = $\frac{.24 (10.33)^2}{4 (8.5')} = .75 \text{ K}'$

$\frac{P}{A} = \frac{.75}{6 (12)} = .01 \text{ ksi}$ negligible

bm @ top of wall $\frac{E_c (.068)}{8} = .273 \text{ K}'$

$M_w = .273 \left(\frac{9.5^2}{8} \right) = 3.08 \text{ K}'$

$F_y = 60 \quad f'_c = 4 \text{ ksi} \quad b = 12 \quad d = 2 \quad A_s = .62 \quad \phi M_w = \overset{OK}{4.31} \text{ K}'$