

BOB D. CAMPBELL & CO.

Structural Engineers

Since 1957

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Project DEER BROOK PLAZA LEAS SummitDate 7-6-22 RM Page 1 of 1SUSPENDED AHU

WEIGHT = 225 lb

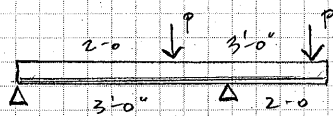
- CHECK THREADED ROD HANGERS

$$P_{max} = 225/4 \times 1.25 = 71 \text{ lb/HANGER}$$

$$3/8 \text{ THREADED ROD CAPACITY} = .11(.6)(36) = 2.37 \text{ k} > .071 \text{ k} \therefore \text{OK}$$

- CHECK SUPPORT ANGLE

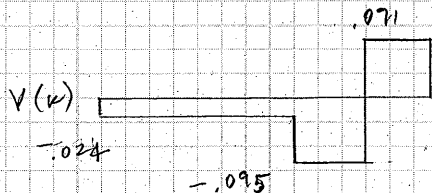
$$4 \times 3 \times 3/8 \quad S_x = 1.46 \text{ in}^3 \quad I_x = 3.96 \text{ in}^4$$



$$P = .071 \text{ k}$$

$$\sum M_L = .071(2+5) = 3 R_R$$

$$R_R = .166 \text{ k}, \quad R_L = -.024 \text{ k}$$



$$M_{max} = .024(4) + .095(1) = .191 \text{ k'}$$

$$f_b = \frac{.191(12)}{1.46} = 1.57 \text{ ksi} \therefore \text{OK}$$

CHECK DEFLECTION:

$$\Delta = \frac{.071(2)^3(1728)}{3(29000)(3.96)} = .0028" @ 4 \times 3 \times 3/8 \therefore \text{OK}$$

CHECK DIAG. BRACE - $2 \times 2 \times 1/4$

$$A = 938 \text{ in}^2$$

$$r = .391 \text{ in}$$

$$KL/r = \frac{2.5(12)(1.2)}{.391} = 92.1$$

$$F_a = 13.95 \text{ ksi}$$

$$f_a = .166/938 = .18 \text{ ksi} < 13.95 \text{ ksi} \therefore \text{OK}$$

