

## BASE EQRN (C6-22a [ASCE 7-05])

$$\frac{0.56}{h^2} \sqrt{\frac{EI}{m}}$$

$$E = 29 \text{ EL6 PSI} = 4.176 \text{ E9 lb}_f/\text{ft}^2$$

$$I = 12.6 \text{ in}^4 = 6.076 \text{ E-4 ft}^4$$

$$m = \frac{11.96 \text{ lb}_f/\text{ft}}{32.174 \text{ ft/sec}^2} = 0.372 \frac{\text{lb}_f\text{-sec}^2}{\text{ft}^2}$$

### NUMBER RESOLUTION

$$\frac{0.56}{13^2} \sqrt{\frac{4.176 \text{ E9} (6.076 \text{ E-4})}{0.372}}$$

$$h = 13 \text{ ft.}$$

$$\frac{0.56}{13^2} (2611.7) = \boxed{8.654}$$

### UNIT RESOLUTION

$$\frac{1}{\text{ft}^2} \sqrt{\frac{\frac{\text{lb}_f/\text{ft}^2 \times \text{ft}^4}{\text{lb}_f\text{-sec}^2/\text{ft}^2}}{\text{ft}^2}} = \frac{1}{\text{ft}^2} \sqrt{\frac{\text{ft}^4}{\text{sec}^2}}$$

$$= \frac{1}{\text{ft}^2} \cdot \frac{\text{ft}^2}{\text{sec}^2} = \boxed{\frac{1}{\text{sec}}}$$