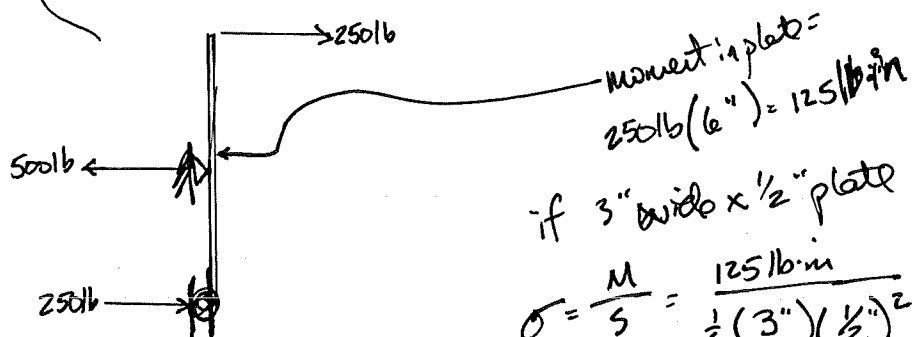
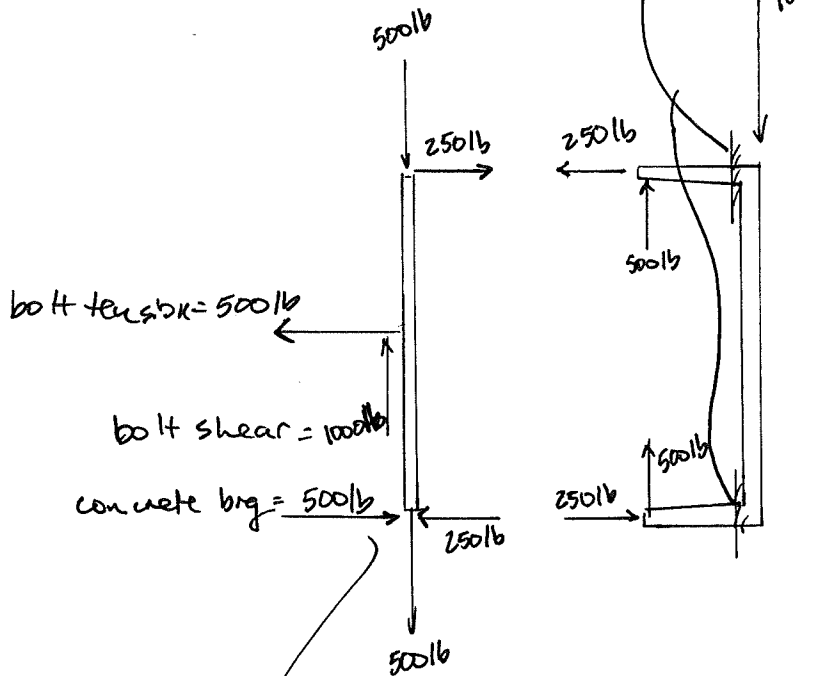


$$\text{moment} = 500\text{lb}(3'') = 1500\text{lb}\cdot\text{in}$$

$$\sigma = \frac{M}{S} = \frac{1500\text{lb}\cdot\text{in}}{\frac{1}{6}(3'')(\frac{1}{2}'')^2} = 12\text{ksi}$$

$\uparrow$   
 allowable =  $\frac{36\text{ksi}}{1.67} = 21.6\text{ksi}$  ✓ OK

Assume 3" wide  
segment of  
channel (conservative)



$$\text{moment in plate} = 250\text{lb}(6'') = 125\text{lb}\cdot\text{in}$$

if 3" wide x 1/2" plate

$$\sigma = \frac{M}{S} = \frac{125\text{lb}\cdot\text{in}}{\frac{1}{6}(3'')(\frac{1}{2}'')^2} = 1000\text{psi} = 1\text{ksi} \checkmark \text{OK}$$