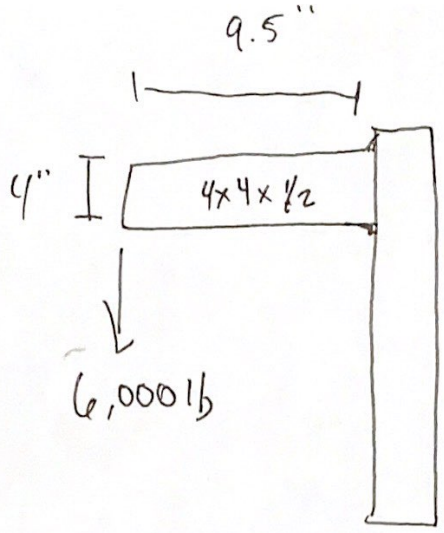

$M = (9.5")(6{,}000\,lb) = 57{,}000\ in\text{-}lb$

$= 4750\ ft\text{-}lb$

$S_w = (4in)(4in) = 16in^2$

$= \left(\frac{4}{12}\right)\left(\frac{4}{12}\right) = .111\ ft^2$

$f = \frac{M}{S_w} = \frac{57{,}000\ in\text{-}lb}{16in^2} = 3562\ \frac{lb}{in}$

$= \frac{4750 ft\text{-}lb}{.111 ft^2} = 3562\ \frac{lb}{in}$

Weld size: (Blodgett)

$\frac{3562\ \frac{lb}{in}}{11{,}200\ \frac{lb}{in}\ (allowable)} = .318\ in$

Weld size:

$\circlearrowleft M = \leftrightarrows$; $M = F \times d$

$F = \frac{M}{d} = \frac{57{,}000\ lb\cdot in}{2in}$??

$F = 28{,}500lb$

$\frac{28{,}500lb}{1000\ lb} = \left(.928\ \frac{kip}{in}\right)(D_1)(4in)$

$D = 7.677$ sixteenths $\approx .479in$