$\beta_1 = 0.85$

$A_s = 4.00\ in^2$

$d = h - c - \text{stirrups } \phi - \text{bottom bar } \phi - \frac{1}{2} S_r$

$= 30 - 1.5 - 0.5 - 9/8 - \frac{1}{2}(1.5)$

$= 26.125\ in$

$a = \frac{A_s f_y}{0.85 f_c b} = \frac{(4)(60ksi)}{0.85(4\ ksi)(10)} = 7.06\ in$

$c = a/\beta_1 = \frac{7.06}{0.85} = 8.30$

clear cover

$d_{top} = h - c - \text{stirrup} - \frac{1}{2}\text{ bar } \phi$

$= 30 - 1.5 - 4/8 - \left(\frac{9}{8}\right)\left(\frac{1}{2}\right)$

$d_b = 27.72\ in$

$\epsilon_t = \frac{0.003(d_t - c)}{c} = 0.0070 > 0.005 \therefore \phi = 0.90$

$A_s f_y$

$M_n = T\left(d - \frac{a}{2}\right) = (4.00^{in})(60ksi)\left(26.125 - \frac{7.06}{2}\right)$

$M_n = 5,423\ in\text{-}k \text{ or } 451.9\ ft\text{-}k$

$\phi = 0.90$