

### 3.4.2 Base Plate Yielding Limit at Bearing Interface

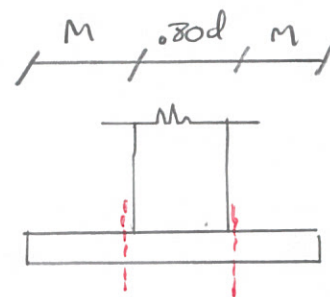
For the case of large moments, the bearing stress is at its limiting value, i.e.,  $f_p = f_{p(max)}$ . The required plate thickness

may be determined from either Equations 3.3.14a-2 and 3.3.14b-2 or 3.3.15a-2 and 3.3.15b-2.

If  $Y \geq m$

$$t_{p(req)} = 1.49m \sqrt{\frac{f_{p(max)}}{F_y}} \quad \text{(LRFD) (from 3.3.14a-2)}$$

$m$  = critical bending distance  
 $f_{p(max)} = \phi_{.85} F_c'$



For 3000psi concrete and  $m = 5''$

$$t_p = 1.49(5'') \sqrt{\frac{.65 \cdot .85 \cdot 3000 \text{ psi}}{36,000 \text{ psi}}}$$

$$t_p = 1.60''$$