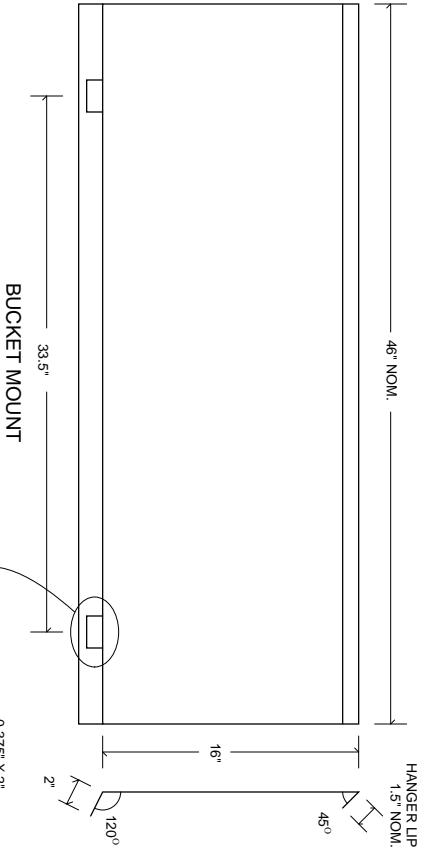
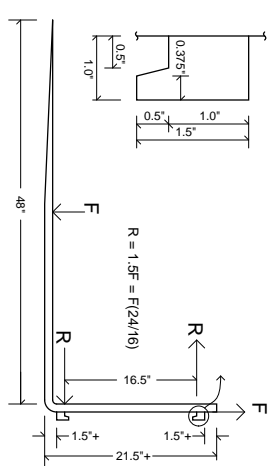


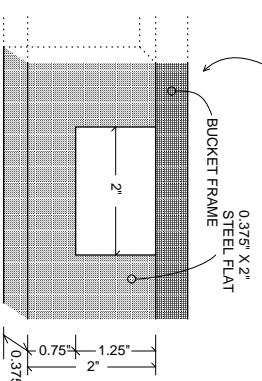
TRACTOR ADAPTER



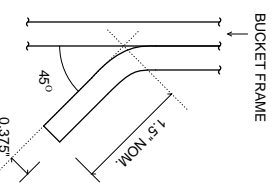
BUCKET MOUNT



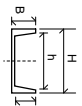
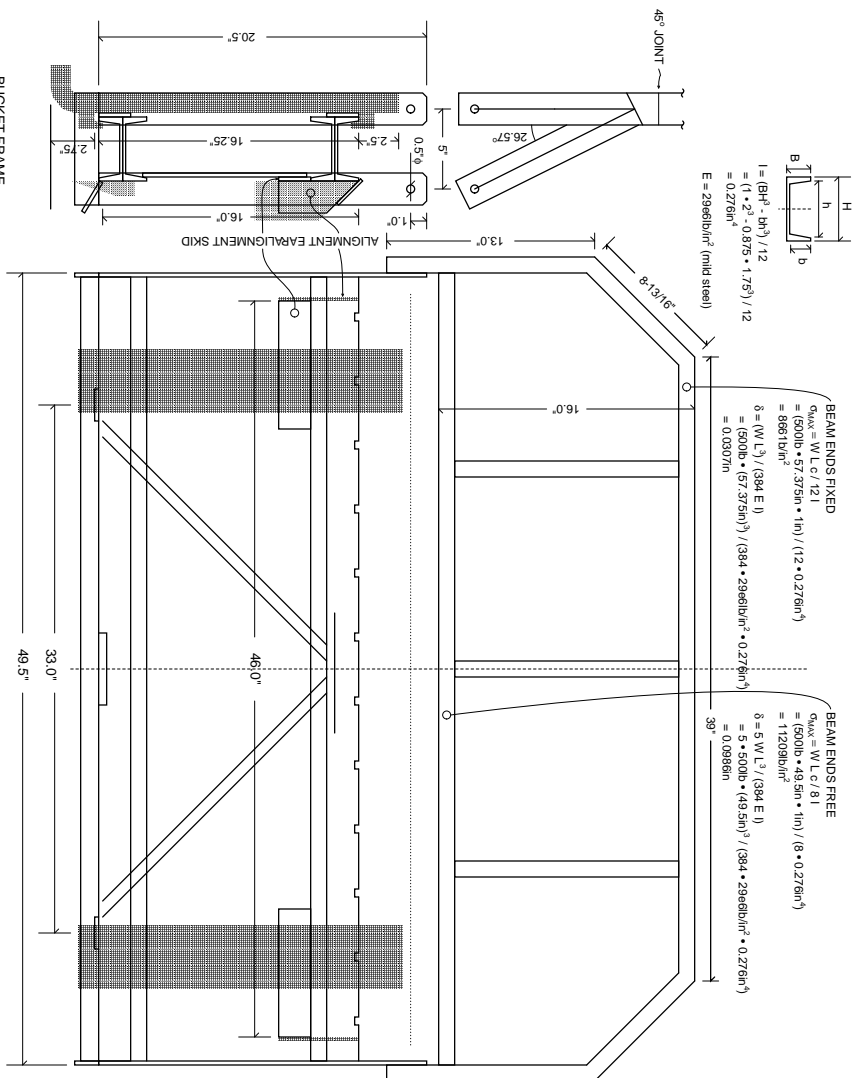
FORK DIMENSIONS AND LOADING



PIN HOLE DETAIL



HANGER LIP DETAIL



$$I = (BH^3 - bh^3) / 12$$

$$= (1 \cdot 2^3 - 0.875^3 \cdot 1.75^3) / 12$$

$$= 0.276 \text{ in}^4$$

$$E = 29661 \text{ lb/in}^2 \text{ (mild steel)}$$

BEAM ENDS FIXED

$$\sigma_{max} = W L C / 12 I$$

$$= 5500 \text{ lb} \cdot 57.375 \text{ in} \cdot 1 \text{ in} / (12 \cdot 0.276 \text{ in}^4)$$

$$= 8661 \text{ lb/in}^2$$

$$\delta = (W L^3) / (384 E I)$$

$$= (5500 \text{ lb} \cdot (57.375 \text{ in})^3) / (384 \cdot 29661 \text{ lb/in}^2 \cdot 0.276 \text{ in}^4)$$

$$= 0.0307 \text{ in}$$

BEAM ENDS FREE

$$\sigma_{max} = W L C / 8 I$$

$$= 11209 \text{ lb/in}^2$$

$$\delta = 5 W L^3 / (384 E I)$$

$$= 5 \cdot 5500 \text{ lb} \cdot (49.5 \text{ in})^3 / (384 \cdot 29661 \text{ lb/in}^2 \cdot 0.276 \text{ in}^4)$$

$$= 0.0886 \text{ in}$$

$$\sigma_{max} = P L C / 4 I$$

$$= (6500 \text{ lb} \cdot 30 \text{ in} \cdot 1.5 \text{ in}) / (4 \cdot 1.139 \text{ in}^4)$$

$$= 3467 \text{ lb/in}^2$$

$$\delta = 5 W L^3 / (384 E I)$$

$$= 5 \cdot 3500 \text{ lb} \cdot 30 \text{ in}^3 / (384 \cdot 29661 \text{ lb/in}^2 \cdot 1.139 \text{ in}^4)$$

$$= 0.0373 \text{ in}$$

$$\sigma_{max} = P L C / 4 I$$

$$= (10,000 \text{ lb} \cdot 30 \text{ in} \cdot 2.0 \text{ in}) / (4 \cdot 6.568 \text{ in}^4)$$

$$= 22838 \text{ lb/in}^2$$

$$\delta = 5 W L^3 / (384 E I)$$

$$= 5 \cdot 10,000 \text{ lb} \cdot 30 \text{ in}^3 / (384 \cdot 29661 \text{ lb/in}^2 \cdot 6.568 \text{ in}^4)$$

$$= 0.0185 \text{ in}$$