

PROJECT EM 1110-2-2502: EXAMPLE N-3

ITEM CALCULATION FOR  $\bar{x} = 7.79'$ 

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ SHEETS

DATE \_\_\_\_\_, 20\_\_\_\_

FILE \_\_\_\_\_

COMPUTED BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_ REF. DRWG. \_\_\_\_\_

LOCATION OF RESULTANT

$$x_R = \left( \frac{M_R - M_o}{\sum V} \right)$$

$$\sum V = 25.37^k + 3.99^k - 15.48^k = 13.88^k$$

$$M_o = (10.13^k)(2.00 \text{ FT}) + (15.48^k)(11.51 \text{ FT}) + (4.15^k)(1.29 \text{ FT}) = 203.79 \text{ FT-K}$$

$$M_R = (25.37^k)(11.12 \text{ FT}) + (3.99^k)(12.15 \text{ FT}) = 330.59 \text{ FT-K}$$

$$x_R = \left( \frac{330.59 - 203.79}{13.88} \right)$$

$$x_R = 9.14 \text{ FT}$$