

**Concrete Walls****East Wall**

$$Mux := 25.6 \quad MUY := 9.53$$

**Vertical Reinforcing**

$$d := 8 \quad A := .44 \quad Spac := 6 \quad As := A \cdot \frac{12}{Spac}$$

$$a := \frac{As \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 2.071$$

$$PhiMc := As \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad PhiMc = 27.58 \quad \text{OK}$$

Use: #6v @ 6" ext &  
#4v @ 12" int

**Horizontal Reinforcing**

$$d := 7.5 \quad A := .31 \quad Spac := 12 \quad As := A \cdot \frac{12}{Spac}$$

$$a := \frac{As \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 0.729$$

$$PhiMc := As \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad PhiMc = 9.954 \quad \text{OK}$$

Use: #5h @ 12" ea face

**South Wall**

$$Mux := 9.3 \quad MUY := 13.52$$

**Vertical Reinforcing**

$$d := 6 \quad A := .44 \quad Spac := 12 \quad As := A \cdot \frac{12}{Spac}$$

$$a := \frac{As \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 1.035$$

$$PhiMc := As \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad PhiMc = 10.855 \quad \text{OK}$$

Use: #5v @ 12" ea face

**Horizontal Reinforcing**

$$d := 5 \quad A := .44 \quad Spac := 8 \quad As := A \cdot \frac{12}{Spac}$$

$$a := \frac{As \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 1.553$$

$$PhiMc := As \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad PhiMc = 12.544 \quad \text{OK}$$

Use: #6h @ 8" ea face

**Mat Footing****First 6 feet from West wall**

$$\text{Muns} := 21.5 \quad \text{Muew} := 6$$

**E-W Reinforcing**

$$d := 12 \quad A := .44 \quad \text{Spac} := 12 \quad \text{As} := A \cdot \frac{12}{\text{Spac}}$$

$$a := \frac{\text{As} \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 1.035$$

$$\text{PhiMc} := \text{As} \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad \text{PhiMc} = 22.735 \quad \text{OK}$$

Use: #6h @ 12" t&amp;b EW

**N-S Reinforcing**

$$d := 12 \quad A := .2 \quad \text{Spac} := 12 \quad \text{As} := A \cdot \frac{12}{\text{Spac}}$$

$$a := \frac{\text{As} \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 0.471$$

$$\text{PhiMc} := \text{As} \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad \text{PhiMc} = 10.588 \quad \text{OK}$$

Use: #4h @ 12" t&amp;b NS

**Beyond first 6 feet from West wall**

$$\text{Muns} := 11.5 \quad \text{Muew} := 6$$

**E-W Reinforcing**

$$d := 12 \quad A := .31 \quad \text{Spac} := 12 \quad \text{As} := A \cdot \frac{12}{\text{Spac}}$$

$$a := \frac{\text{As} \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 0.729$$

$$\text{PhiMc} := \text{As} \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad \text{PhiMc} = 16.231 \quad \text{OK}$$

Use: #5h @ 12" t&amp;b EW

**N-S Reinforcing**

$$d := 12 \quad A := .2 \quad \text{Spac} := 12 \quad \text{As} := A \cdot \frac{12}{\text{Spac}}$$

$$a := \frac{\text{As} \cdot 60}{12 \cdot .85 \cdot 2.5} \quad a = 0.471$$

$$\text{PhiMc} := \text{As} \cdot 60 \cdot 9 \cdot \frac{\left(d - \frac{a}{2}\right)}{12} \quad \text{PhiMc} = 10.588 \quad \text{OK}$$

Use: #4h @ 12" t&amp;b NS