

DUE TO LIVE LOAD, SELF WT OF SLAB & FINISH LOAD

LIVE LOAD - 2 KN/m
 FINISH LOAD - 2.75 KN/m
 SELF WEIGHT - SLAB THICKNESS IN "x 25 KN/m³

FOR SLAB THICKNESS - 150 mm	FOR SLAB THICKNESS - 150 mm	FOR SLAB THICKNESS - 150 mm
LIVE LOAD - 2.00 KN/m FINISH LOAD - 2.75 KN/m SW - 0.15 x 25 KN/m ³ - 3.75 KN/m ²	LIVE LOAD - 2.00 KN/m FINISH LOAD - 2.75 KN/m SW - 0.15 x 25 KN/m ³ - 3.75 KN/m ²	LIVE LOAD - 2.00 KN/m FINISH LOAD - 2.75 KN/m SW - 0.15 x 25 KN/m ³ - 3.75 KN/m ²
Total - 9.50 KN/m ²	Total - 9.50 KN/m ² = 6.00 KN/m	Total - 7.25 KN/m ²

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{5.11}{5.11} = 1.06 = m$
 $1 - \frac{1}{3m^2} = 0.708$
 Load on shorter span = $8.50 \times \frac{5.11}{3} = 14.50 \text{ KN/m} \approx 15.00 \text{ KN/m}$
 Load on long span = $8.50 \times 5.11 \times \frac{0.708}{2} = 15.27 \approx 15.00 \text{ KN/m}$

RATIO = $\frac{5.11}{5.11} = 1.00 = m$
 Load on longer span = $7.25 \times \frac{5.11}{3} = 14.50 \text{ KN/m} \approx 15.00 \text{ KN/m}$

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{5.11}{2.48} = 2.06 > 2.0$
 Load on long span = $7.25 \times 2.48 = 8.99 \approx 8.99 \text{ KN/m}$
 Load on shorter span = $7.25 \times 2.48 = 2.99 \text{ KN/m} \approx 3.0 \text{ KN/m}$

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{7.734}{5.11} = 2.06 = m$
 $1 - \frac{1}{3m^2} = 0.854$
 Load on long span = $8.50 \times 5.11 \times 0.854 = 18.55 \approx 19.00 \text{ KN/m}$
 Load on shorter span = $8.50 \times \frac{5.11}{3} = 14.47 \text{ KN/m} \approx 14.50 \text{ KN/m}$

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{3.35}{2.06} = 1.63 = m$
 $1 - \frac{1}{3m^2} = 0.87$
 Load on long span = $7.25 \times 2.06 \times 0.87 = 6.496 \approx 6.50 \text{ KN/m}$
 Load on shorter span = $7.25 \times \frac{2.06}{3} = 4.98 \text{ KN/m} \approx 5.00 \text{ KN/m}$

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{2.86}{1.76} = 1.17 = m$
 $1 - \frac{1}{3m^2} = 0.76$
 Load on long span = $7.25 \times 0.76 \times 1.76 = 4.85 \approx 5.00 \text{ KN/m}$
 Load on shorter span = $7.25 \times 1.76 = 4.25 \text{ KN/m} \approx 4.50 \text{ KN/m}$

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{3.85}{1.80} = 1.894$
 $1 - \frac{1}{3m^2} = 0.88$
 Load on long span = $7.25 \times 1.80 \times 0.88 = 5.74 \approx 6.00 \text{ KN/m}$
 Load on shorter span = $7.25 \times 1.80 = 4.25 \text{ KN/m} \approx 4.50 \text{ KN/m}$

SLAB THICKNESS - 150 mm (4) ϕ

RATIO = $\frac{5.11}{3.28} = 1.55$
 $1 - \frac{1}{3m^2} = 0.88$
 Load on long span = $7.25 \times 0.88 \times 3.28 = 10.46 \approx 10.50 \text{ KN/m}$
 Load on shorter span = $7.25 \times 3.28 = 7.99 \text{ KN/m} \approx 8.0 \text{ KN/m}$