

## BEAM SIZING TABLE

SUPPORTED JOIST LENGTH (mm)	LIVE LOAD 1.9 kPa			LIVE LOAD 2.5 kPa			LIVE LOAD 3.0 kPa		
	PIER SPACING (mm)			PIER SPACING (mm)			PIER SPACING (mm)		
	2000	3000	4000	2000	3000	4000	2000	3000	4000
1500	2/38x140	2/38x184	3/38x235	2/38x140	3/38x184	3/38x235	3/38x140	2/38x235	2/38x286
2000	2/38x140	3/38x184	3/38x235	2/38x184	2/38x235	3/38x286	2/38x184	2/38x235	3/38x286
2500	2/38x184	2/38x235	3/38x286	2/38x184	3/38x235	3/38x286	2/38x184	3/38x235	4/38x286
3000	2/38x184	2/38x235	3/38x286	2/38x184	3/38x235	4/38x286	2/38x184	3/38x235	4/38x286
3500	2/38x184	3/38x235	3/38x286	2/38x184	3/38x235	4/38x286	3/38x184	3/38x286	N/A
4000	2/38x184	3/38x235	4/38x286	2/38x184	3/38x286	N/A	3/38x184	3/38x286	N/A

## JOIST SIZING TABLE

JOIST SPAN (mm)	LIVE LOAD 1.9 kPa			LIVE LOAD 2.5 kPa			LIVE LOAD 3.0 kPa		
	JOIST SPACING (mm)			JOIST SPACING (mm)			JOIST SPACING (mm)		
	300	400	600	300	400	600	300	400	600
2000	38x140	38x140	38x140	38x140	38x140	38x140	38x140	38x140	38x140
2500	38x140	38x140	38x184	38x140	38x140	38x184	38x140	38x184	38x184
3000	38x140	38x184	38x184	38x184	38x184	38x235	38x184	38x184	38x235
3500	38x184	38x184	38x235	38x184	38x235	38x235	38x235	38x235	38x235
4000	38x235	38x235	38x286	38x235	38x235	38x286	38x235	38x235	38x286

### FOOTING SIZES

SOIL BEARING CAPACITIES (kPa)	
SOIL TYPE	BEARING PRESSURE (kPa)
SOFT CLAY	40
LOOSE SAND OR GRAVEL	50
FIRM CLAY	75
DENSE OR COMPACT SILT	100
STIFF CLAY	150
DENSE COMPACT SAND OR GRAVEL	150
TILL	200
CLAY SHALE	300
SOUND ROCK	500

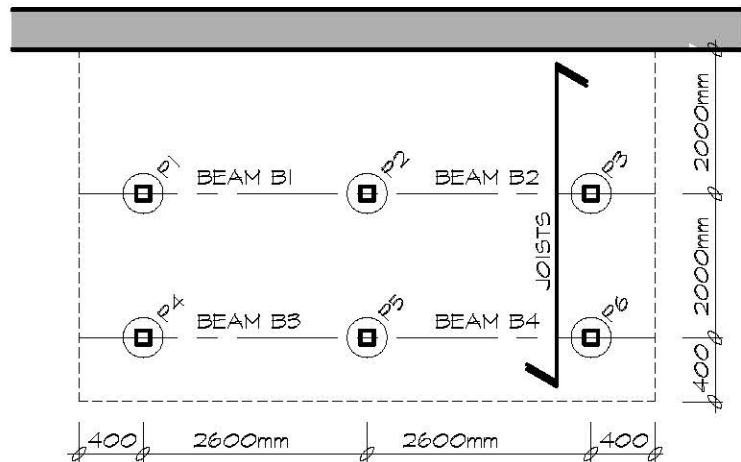
### PIER SIZES

DIAMETER (mm)	M <sup>2</sup>
200	0.03
250	0.05
300	0.08
350	0.10
400	0.13
500	0.20
600	0.30

### POST SIZING TABLE

POST SIZE (mm)	MAXIMUM HEIGHT (M)	MAX. SUPPORTED DECK AREA (M <sup>2</sup> )		
		LIVE LOAD (kPa)		
		1.9	2.5	3.0
89x89	1.0	10.86	8.71	7.48
	1.5	5.93	4.76	4.09
	2.0	3.15	2.53	2.17
140x140	2.0	13.67	10.98	9.43
	2.5	9.32	7.48	6.43
	3.0	6.35	5.10	4.38
	3.5	4.41	3.54	3.04

EXAMPLE PLAN	PIERS	SUPPORTED DECK AREA
	P1	2 x 1.7 = 3.4m <sup>2</sup>
	P2	2 x 2.6 = 5.2m <sup>2</sup>
	P3	2 x 1.7 = 3.4m <sup>2</sup>
	P4	1.4 x 1.7 = 2.4m <sup>2</sup>
	P5	1.4 x 2.6 = 3.6m <sup>2</sup>
	P6	1.4 x 1.7 = 2.4m <sup>2</sup>
	BEAMS	SUPPORTED JOIST LENGTH
	B1	2000mm
	B2	2000mm
B3	1400mm	
B4	1400mm	
BEAM SPAN = 2600mm		
JOIST SPAN = 2000mm		



PIER SIZE (M<sup>2</sup>) =  $\frac{\text{SUPPORTED DECK AREA (M}^2\text{)} \times \text{MIN. 1.9 (kPa) LIVE LOAD}}{\text{SOIL BEARING CAPACITY (kPa)}}$

### GENERAL NOTES

1. A MINIMUM LIVE LOAD OF 1.9 (kPa) SHALL BE APPLIED IN ALL LOCATIONS.
2. THE PRESCRIBED SNOW LOAD FOR 225 SELECTED ONTARIO LOCATIONS IS INDICATED IN COLUMN 12 OF TABLE 1.2 IN SUPPLEMENTARY GUIDELINE SB-1 OF THE ONTARIO BUILDING CODE. THE SNOW LOAD SHALL BE APPLIED AS THE MINIMUM LIVE LOAD WHERE IT IS GREATER THAN 1.9 (kPa)
3. A SITE PLAN OR SURVEY IS REQUIRED SHOWING ALL LOT LINES & DIMENSIONS, SIZE & LOCATION OF ALL EXISTING BUILDINGS & DECKS.
4. LUMBER NO. 2 SPF OR BETTER WOOD POSTS MIN. 89x89 (SOLID). USE CORROSION RESISTANT SPIRAL NAILS OR SCREWS.
5. A DECK IS NOT PERMITTED TO BE SUPPORTED ON BRICK VENEER.
6. CANTILEVERED JOISTS AND BEAMS ARE LIMITED TO 1/6 THE MEMBERS LENGTH.
7. CONCRETE PIERS SHALL BEAR ON UNDISTURBED SOIL. THE BEARING CAPACITY OF THE SOIL SHALL BE DETERMINED PRIOR TO CONSTRUCTION.
8. MAXIMUM HEIGHT REFERS TO THE HEIGHT OF THE POST FROM THE TOP OF THE PIER TO THE DECK SURFACE.
9. BEAMS WITH MORE THAN 2 MEMBERS MUST BE SUPPORTED BY 140x140 POSTS.
10. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE REDUCED BY 50% WHILE THE WATER IS AT OR NEAR THE BOTTOM OF THE FOOTING EXCAVATION.
11. CONTACT YOUR LOCAL BUILDING DEPARTMENT FOR FURTHER INFORMATION ABOUT LOCAL SOIL BEARING CAPACITIES.
12. JOISTS SPANNING MORE THAN 2100mm ARE TO HAVE BRIDGING AT LEAST EVERY 2100mm O.C..

**TACBOC**  
STANDARD DETAIL

TITLE  
**WOOD DECK**  
STRUCTURAL SIZING TABLES

DWG. NO.

**Dold**

2007