

# Size Joists and Girders using Trimax- Residential



Tables below are for sizing structural joist and Girder members in a typical deck situation. Please confirm with local building codes regarding design and required design Live Loads. Charts assume 90°F working temperature, 243,580 psi Adjusted Mod. of Elasticity, 2,323 psi Adjusted Mod. of Rupture. Blocking between joists must be installed when joists are spanning an excess of 6'-0". All Deck designs should be reviewed by a Professional Engineer.

Maximum Spans for Deck Joists 40 psf Residential Live Load Simple Span Condition			
	12"	16"	24"
2x6	5'-9"	5'-0"	4'-6"
2x8	7'-6"	6'-9"	6'-0"
2x10	9'-6"	8'-9"	7'-6"
2x12	11'-6"	10'-6"	9'-3"
3x10	11'-3"	10'-3"	9'-0"
4x6	7'-6"	6'-9"	6'-0"
6x6	8'-9"	8'-0"	7'-0"

**NOTE:** When using a joist in a multiple span condition (rather than simple), the uniform allowable load over the multiple span may increase up to 30% OR the allowable span may increase up to 10%.

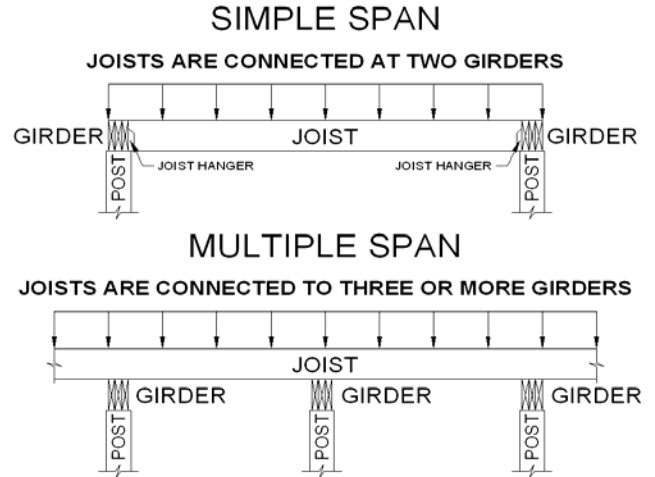
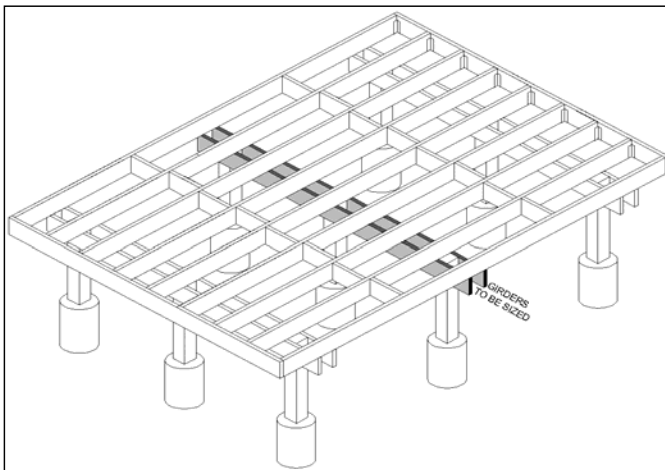
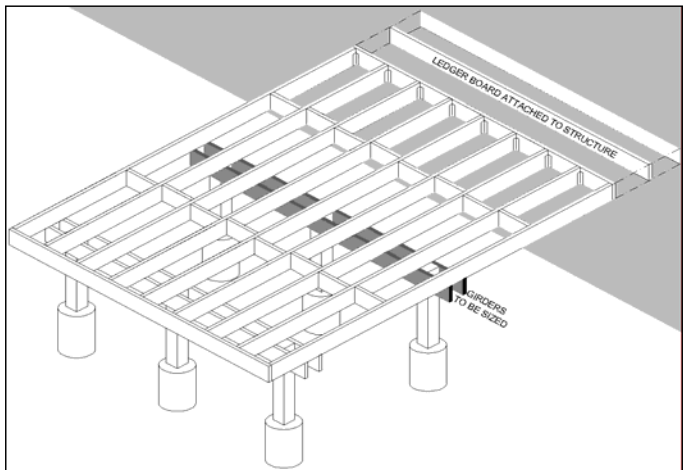


Table to Calculate Girders 40 psf Residential Live Load							
Length of Span (feet)	Spacing between Posts (feet)						
	3	4	5	6	7	8	9
5	(2) 2x6's or (1) 4x6	(2) 2x6's or (1) 4x6	(4) 2x6's or (2) 2x8's	(3) 2x8's or (2) 2x10's	(2) 2x10's	(2) 2x12's	(4) 2x12's
6	(2) 2x6's or (1) 4x6	(3) 2x6's or (1) 4x6	(2) 2x8's	(2) 2x10's	(3) 2x10's or (2) 2x12's	(3) 2x12's	(4) 2x12's
7	(2) 2x6's or (1) 4x6	(3) 2x6's or (2) 2x8's	(3) 2x8's or (2) 2x10's	(2) 2x10's	(3) 2x10's or (2) 2x12's	(3) 2x12's	(4) 2x12's
8	(2) 2x6's or (1) 4x6	(4) 2x6's or (2) 2x8's	(3) 2x8's or (2) 2x10's	(2) 2x10's	(2) 2x12's	(3) 2x12's	(4) 2x12's
9	(2) 2x6's or (1) 4x6	(4) 2x6's or (2) 2x8's	(3) 2x8's or (2) 2x10's	(3) 2x10's or (2) 2x12's	(2) 2x12's	(4) 2x12's	*
10	(2) 2x6's or (1) 4x6	(4) 2x6's or (2) 2x8's	(4) 2x8's or (2) 2x10's	(3) 2x10's or (2) 2x12's	(3) 2x12's	(4) 2x12's	*
11	(2) 2x6's or (1) 4x6	(4) 2x6's or (2) 2x8's	(4) 2x8's or (2) 2x10's	(3) 2x10's or (2) 2x12's	(3) 2x12's	(4) 2x12's	*
12	(2) 2x6's or (1) 4x6	(2) 2x8's	(4) 2x8's or (2) 2x10's	(3) 2x10's or (2) 2x12's	(3) 2x12's	*	*
13	(2) 2x6's or (1) 4x6	(3) 2x8's	(4) 2x8's or (2) 2x10's	(4) 2x10's or (2) 2x12's	(3) 2x12's	*	*
14	(3) 2x6's or (1) 4x6	(3) 2x8's or (2) 2x10's	(2) 2x10's	(4) 2x10's or (2) 2x12's	(4) 2x12's	*	*

\* Beams Larger than 2x12 recommended



Joists in Multiple Span connected to three girders



Joists in Multiple Span, connected to two girders & attached to Structure using Ledger Board