

Department of Building Safety & Inspections
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RESIDENTIAL DECK CONSTRUCTION – FAQ's

Joist Spans:

SPECIES ^b	SIZE	ALLOWABLE JOIST SPAN ^c			ALLOWABLE CANTILEVER ^{d,e}		
		Spacing of deck joists (inches)			Spacing of deck joists (inches)		
		12	16	24	12	16	24
Southern pine	2 × 6	9-11	9-0	7-7	1-3	1-4	1-6
	2 × 8	13-1	11-10	9-8	2-1	2-3	2-5
	2 × 10	16-2	14-0	11-5	3-4	3-6	2-10
	2 × 12	18-0	16-6	13-6	4-6	4-2	3-4
Douglas fir-larch ^f , hem-fir ^f , spruce-pine-fir ^f	2 × 6	9-6	8-4	6-10	1-2	1-3	1-5
	2 × 8	12-6	11-1	9-1	1-11	2-1	2-3
	2 × 10	15-8	13-7	11-1	3-1	3-5	2-9
	2 × 12	18-0	15-9	12-10	4-6	3-11	3-3
Redwood, western cedars, ponderosa pine ^g , red pine ^g	2 × 6	8-10	8-0	6-10	1-0	1-1	1-2
	2 × 8	11-8	10-7	8-8	1-8	1-10	2-0
	2×10	14-11	13-0	10-7	2-8	2-10	2-8
	2×12	17-5	15-1	12-4	3-10	3-9	3-1

Bearing Beams or Bands:

SPECIES ^d	SIZE ^e	DECK JOIST SPAN (feet) LESS THAN OR EQUAL TO:						
		6	8	10	12	14	16	18
Southern pine	2-2×6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2-2×8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2-2×10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2-2×12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3-2×6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3-2×8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3-2×10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3-2×12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir-larch ^f , hem-fire, spruce-pine-fire, redwood, western cedars, ponderosa pine ^g , red pine ^g	3×6 or 2-2×6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3×8 or 2-2×8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3×10 or 2-2×10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3×12 or 2-2×12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4×6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4×8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4×10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4×12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3-2×6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3-2×8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3-2×10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3-2×12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

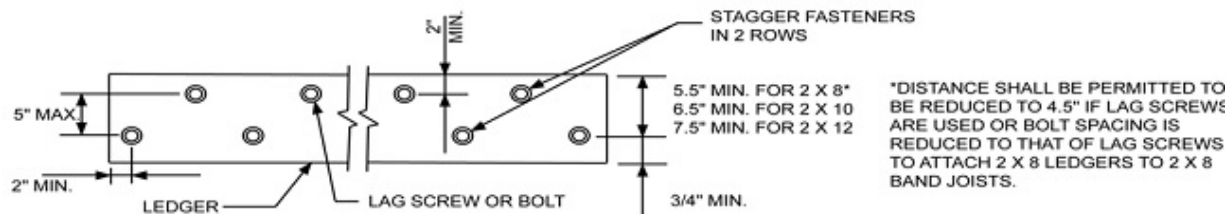
Decking:

MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM JOIST SPACING	
	PERPENDICULAR TO JOIST	DIAGONAL TO JOIST ^a
5/4-inch thick wood	16	12
2-inch thick wood	24	16
Wood/plastic composite	Per R507.3	Per R507.3

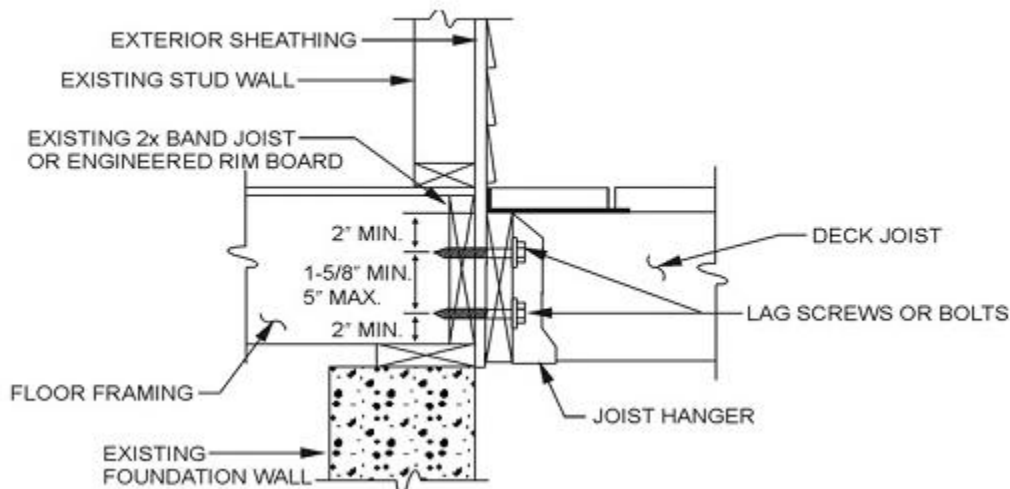
Bolting:

Ledger bands must be bolted through the house band or the deck must be self-supporting.
Manufactured (mobile) home decks must also be self-supporting.

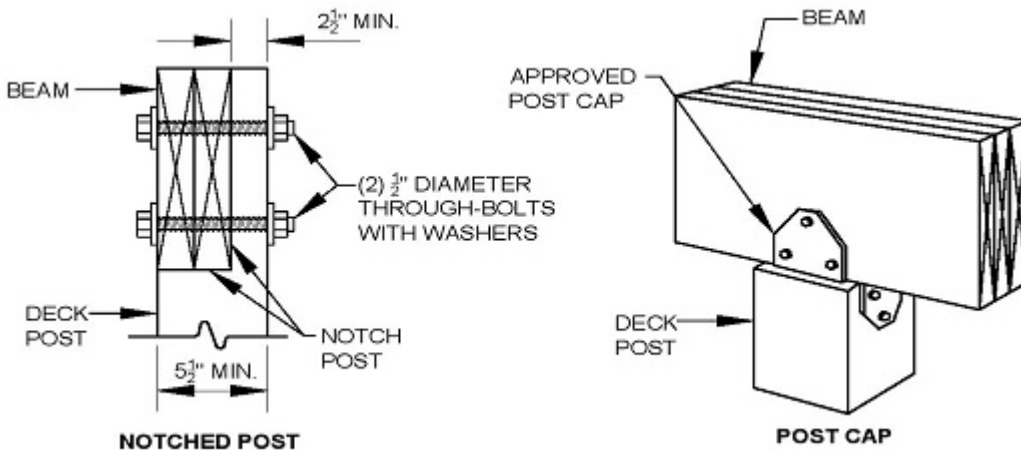
MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS				
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING
Ledger ^a	2 inches ^d	3/4 inch	2 inches ^b	1 5/8 inches ^b
Band Joist ^c	3/4 inch	2 inches	2 inches ^b	1 5/8 inches ^b



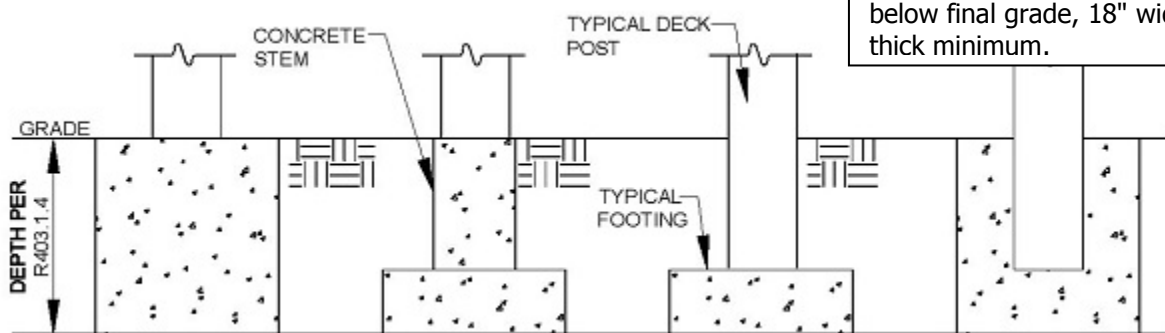
PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS



Post:



Deck Footing Options:



Stairs & Rails:

- A minimum 36" deck or landing is required outside each exterior door.
- Deck or landing must be within 8 1/4" of the top of threshold unless the door swings out.
- Guardrails are required if the deck is over 30" above grade anywhere within 36".
- Guardrails are required to be a minimum of 36" high.
- Guardrails may have no opening greater than 4".
- Guardrails for stairs must be a minimum of 34" above the front edge (nosing) of the treads.
- Guardrails for stairs may have no opening greater than 4 3/8" including the riser.
- A handrail is required on one side of stairs if there are 4 or more risers.
- Handrails must be between 34" and 38" from the front edge of the treads.
- Stairs must have a minimum 9" tread and maximum 8 1/4" rise.

THE GENERAL INFORMATION PROVIDED IS BASED ON THE 2012 VIRGINIA RESIDENTIAL CODE SUBJECT TO FIELD INSPECTIONS FOR CODE COMPLIANCE

**FOR SPECIFIC CODE QUESTIONS PLEASE CONTACT THE BUILDING OFFICE AT
(434) 946-9302**

Signature _____ Date _____