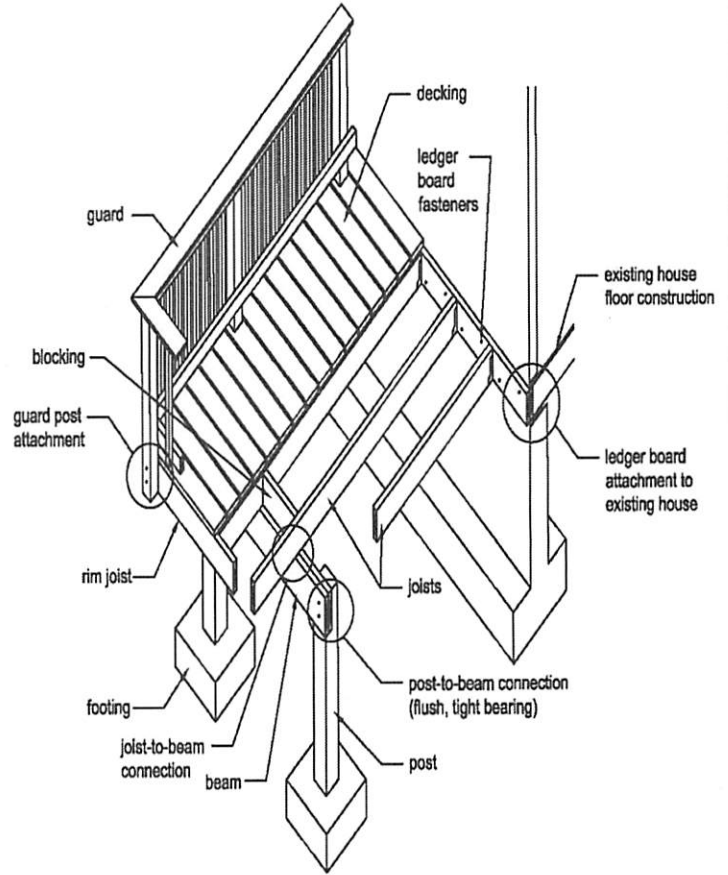




DeWitt
Charter Township
 BUILDING DEPARTMENT
 1401 W. HERBISON ROAD
 DEWITT, MICHIGAN 48820

RESIDENTIAL DECK SPECIFICATIONS
 PHONE: (517) 668-0278 FAX: (517) 669-6496
 EMAIL: building@dewittwp.org

Deck Size: _____ ft. x _____ ft.
 Deck Floor Material: _____
 Floor Joist Size: _____ in. x _____ in.
 Floor Joist Spacing: _____ inches on center
 Floor Joist Clear Span: _____ ft. _____ in.
 Floor Joist Cantilever: _____ ft. x _____ in.
 Double Carrier / Beam Size: _____ in. x _____ in.
 Treated Poles Size: _____ in. x _____ in.
 Post Spacing: _____ ft. _____ in.
 Footings Depth Below Grade: _____ in.
 Footings: Width _____ in. Height _____ in.
 Is the deck attached to the house? YES / NO



Some requirements of the 2015 Michigan Residential Code Chapter 5, Section R507

Guards

- Are required if the floor and stairs measures more than 30 inches above grade.
- Shall have a minimum height of 36 inches for floors and 34 inches for stairs off the nose of the tread.
- Shall be constructed so a 4-inch sphere cannot pass through.

Stairway

- Shall be a minimum of 36 inches in width.
- Shall have a maximum riser height of 8¼ inches and a minimum tread depth of 9 inches.

Handrails

- Are required on 4 or more risers.
- Shall have a minimum height of 34 inches and a maximum height of 38 inches measured vertically off the nose of the tread.
- Shall be continuous for the full length of the stairway and ends shall be returned to wall or post.
- Type I handrails shall be graspable measuring at least 1¼ inches and not greater than 2 inches in diameter unless the perimeter of a noncircular handrail is less than 6¼ inches, then it is allowed to be 2¼ inches in width.
- Type II handrails with a perimeter greater than 6¼ inches shall provide a graspable finger recess area on both sides of the profile that meets code requirements. The width of the handrail shall be no less than 1¼" and not more than 2¾".

Spans

- Joist spacing & spans and beam spans shall meet the requirements of Tables R507.4, R507.5 and R507.6 (*min. 1½" bearing*)

Lateral load connection

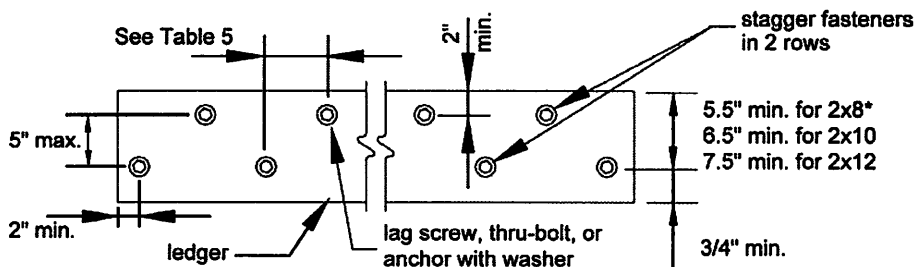
- Two hold down tension devices (1500 pond design load each) shall be installed in not less than two locations per deck.

Joist Spacing (O.C.)

Species	Size	Allowable Span		
		12"	16"	24"
Southern Pine	2x6	9'-11"	9'-0"	7'-7"
	2x8	13'-1"	11'-10"	9'-8"
	2x10	16'-2"	14'-0"	11'-5"
	2x12	18'-0" ⁷	16'-6"	13'-6"
Douglas Fir-Larch, Hem-Fir, Spruce- Pine-fire	2x6	9'-6"	8'-4"	6'-10"
	2x8	12'-6"	11'-1"	9'-1"
	2x10	15'-8"	13'-7"	11'-1"
	2x12	18'-0"	15'-9"	12'-10"
Redwood, Western Cedars, Ponderosa Pine, Red Pine	2x6	8'-10"	8'-0"	6'-10"
	2x8	11'-8"	10'-7"	8'-8"
	2x10	14'-11"	13'-0"	10'-7"
	2x12	17'-5"	15'-1"	12'-4"

Post Size	Maximum Height
4x4	8'-0"
4x6	8'-0"
6x6	14'-0"

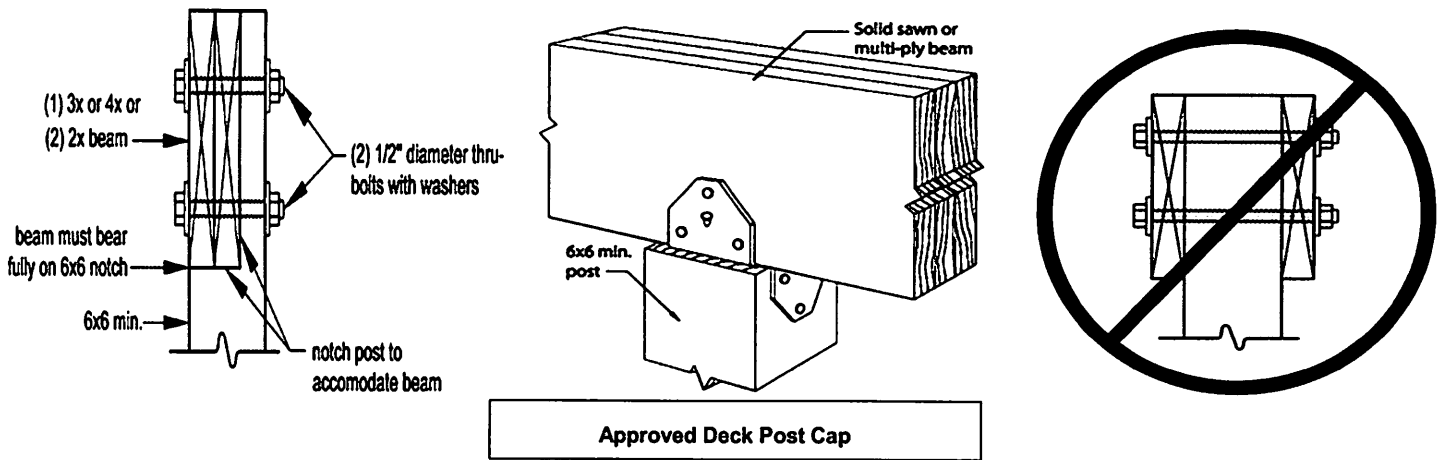
Ledger Fastener Spacing and Clearances



See Table 5.

*Distance can be reduced to 4.5" if lag screws are used or bolt spacing is reduced to that of lag screws to attach 2x8 ledgers to 2x8 band joists (1/2" stacked washers not permitted)

Deck Beam & Floor Joist Spans, Ledger Fastener Spacing and Handrail Detail

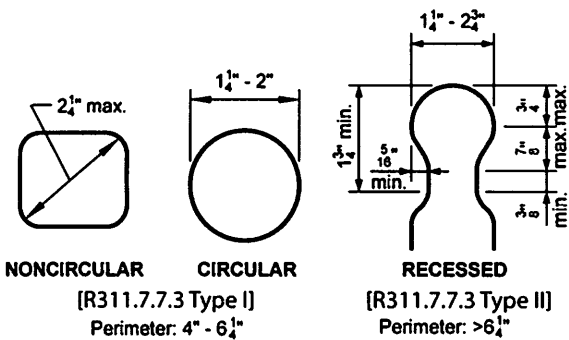


Deck Beam Span Length

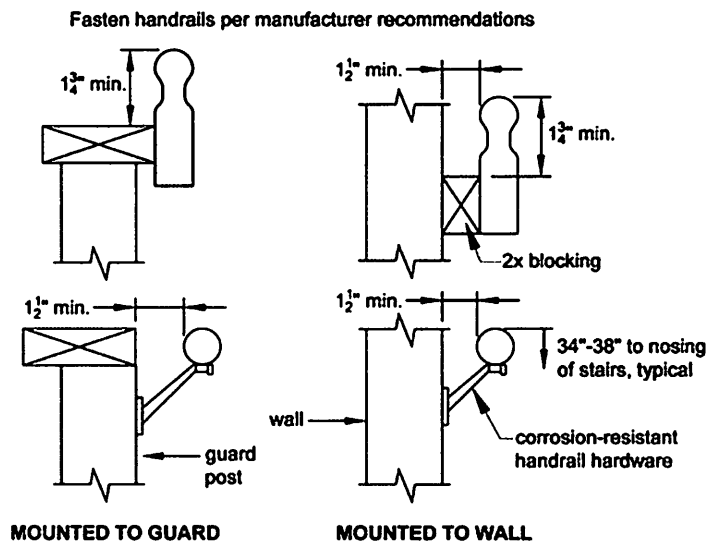
Species	Size	Deck Joist Span less than or equal to						
		6'	8'	10'	12'	14'	16'	18'
Southern Pine	2-2x6	6'-11"	5'-11"	5'-4"	4'-10"	4'-6"	4'-3"	4'-0"
	2-2x8	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-0"
	2-2x10	10'-4"	9'-0"	8'-0"	7'-4"	6'-9"	6'-4"	6'-0"
	2-2x12	12'-2"	10'-7"	9'-5"	8'-7"	8'-0"	7'-6"	7'-0"
	3-2x6	8'-2"	7'-5"	6'-8"	6'-1"	5'-8"	5'-3"	5'-0"
	3-2x8	10'-10"	9'-6"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"
	3-2x10	13'-0"	11'-3"	10'-0"	9'-2"	8'-6"	7'-11"	7'-6"
	3-2x12	15'-3"	13'-3"	11'-10"	10'-9"	10'-0"	9'-4"	8'-10"
Douglas Fir- Larch, Hem-Fir, Spruce-Pine-Fir, Redwood, Western Cedars, Ponderosa Pine, Red Pine	3x6 or 2-2x6	5'-5"	4'-8"	4'-2"	3'-10"	3'-6"	3'-1"	2'-9"
	3x8 or 2-2x8	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-1"	3'-8"
	3x10 or 2-2x10	8'-4"	7'-3"	6'-6"	5'-11"	5'-6"	5'-1"	4'-8"
	3x12 or 2-2x12	9'-8"	8'-5"	7'-6"	6'-10"	6'-4"	5'-11"	5'-7"
	4x6	6'-5"	5'-6"	4'-11"	4'-6"	4'-2"	3'-11"	3'-8"
	4x8	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	5'-2"	4'-10"
	4x10	9'-11"	8'-7"	7'-8"	7'-0"	6'-6"	6'-1"	5'-8"
	4x12	11'-5"	9'-11"	8'-10"	8'-1"	7'-6"	7'-0"	6'-7"
	3-2x6	7'-4"	6'-8"	6'-0"	5'-6"	5'-1"	4'-9"	4'-6"
	3-2x8	9'-8"	8'-6"	7'-7"	6'-11"	6'-5"	6'-0"	5'-8"
	3-2x10	12'-0"	10'-5"	9'-4"	8'-6"	7'-10"	7'-4"	6'-11"
	3-2x12	13'-11"	12'-1"	10'-9"	9'-10"	9'-1"	8'-6"	8'-1"

Table 5

	Rim Board or Band Joist	Joist Span						
		6'-0" and less	6'-1" to 8'-0"	8'-1" to 10'-0"	10'-1" to 12'-0"	12'-1" to 14'-0"	14'-1" to 16'-0"	16'-1" to 18'-0"
Connection Details		On-Center Spacing of Fasteners						
1/2" diameter lag screw¹ with 15/32" maximum sheathing	1" EWP	24"	18"	14"	12"	10"	9"	8"
	1-1/8" EWP	28"	21"	16"	14"	12"	10"	9"
	1-1/2" Lumber	30"	23"	18"	15"	13"	11"	10"
1/2" diameter bolt with 15/32" maximum sheathing	1" EWP	24"	18"	14"	12"	10"	9"	8"
	1-1/8" EWP	28"	21"	16"	14"	12"	10"	9"
	1-1/2" Lumber	36"	36"	34"	29"	24"	21"	19"
1/2" diameter bolt with 15/32" maximum sheathing and 1/2" stacked washers^{2,7}	1-1/2" Lumber	36"	36"	29"	24"	21"	18"	16"



Handrail Grip Size



Handrail Mounting Examples