



## **RESIDENTIAL DECK CHECKLIST**

### **PERMIT APPLICATION & SUBMITTAL REQUIREMENTS**

- Complete a building permit application online by visiting our [Online Permitting Portal](#)
- Contractors must obtain a Village Contractors license prior to the issuance of permits (No bonds or insurance required).
- Provide a photo of the exterior area where the proposed deck will be located.
- Submit a Plat of Survey indicating:
  - Proposed deck location with dimensions and distance from the property lines drawn to scale.
  - No portion of deck shall be located closer than six feet (6') from side and rear property line nor located in any utility or drainage easement.
  - No portion of a pool deck shall be located closer than eight feet (8') from side and rear property line nor located in any utility or drainage easement.
  - Provide ground coverage calculations. The maximum ground coverage shall be 35% or less. This includes all garage area, the house footprint, accessory structures, shed, and decks.
- Submit drawings/sketches that indicate the following (proposed deck must be designed to support a 40 lb. per square foot live load. See additional pages for design requirements):
  - Specify the overall dimensions of the deck.
  - Specify height above grade.
  - Specify species of lumber.
  - Specify nominal lumber sizes of all joists, beams, and posts.
  - Specify pier diameter and depth.
  - Provide joist spans and spacing.
  - Provide beam spans between posts.
  - Provide cantilever span.
  - Provide pier to post connection detail.
  - Provide post to beam connection detail.
  - Provide beam to joist connection detail.
  - Provide ledger board connection detail. Note that attachments to cantilevered floor overhangs, bay windows, or exterior veneers (brick, masonry, stone) are prohibited.
  - Provide stair location and dimensions including riser height and tread depth.
  - Provide guard railing dimensions, including post spacing, height and baluster spacing.
  - A GFCI tamper resistant receptacle is required within the perimeter of the deck not more than six feet six inches (6'-6") above deck surface.

#### **Must comply with the following Codes:**

- 2024 International Residential Code
- 2026 National Electrical Code

#### **INSPECTIONS:**

Inspections must be scheduled online. Login to your account on the online permitting portal to schedule inspections at least 24 hours ahead of time.

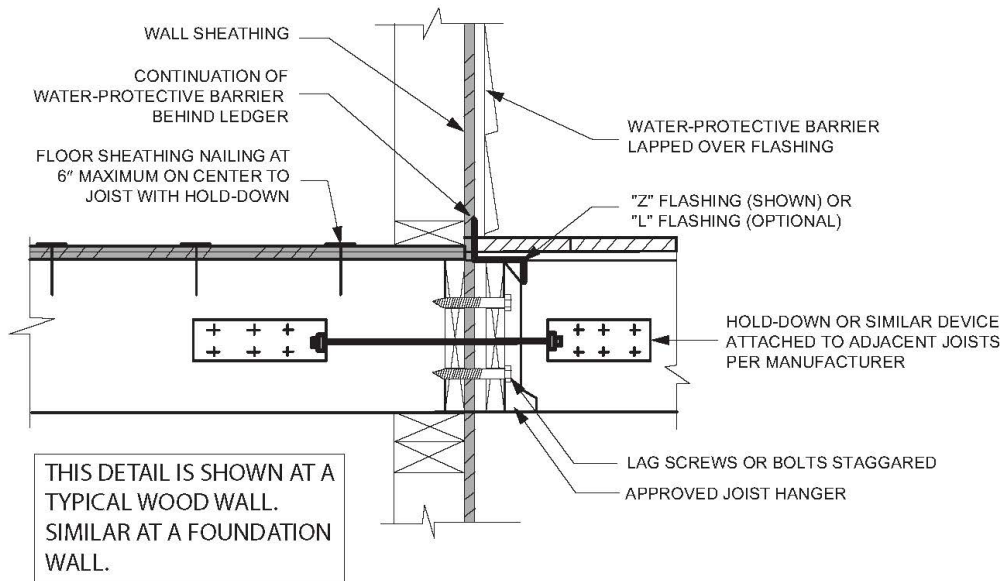
- POST HOLE**
- LEDGER BOARD**
- FRAMING**
- ELECTRICAL (IF REQUIRED)**
- FINAL**



**Lateral Connection:**

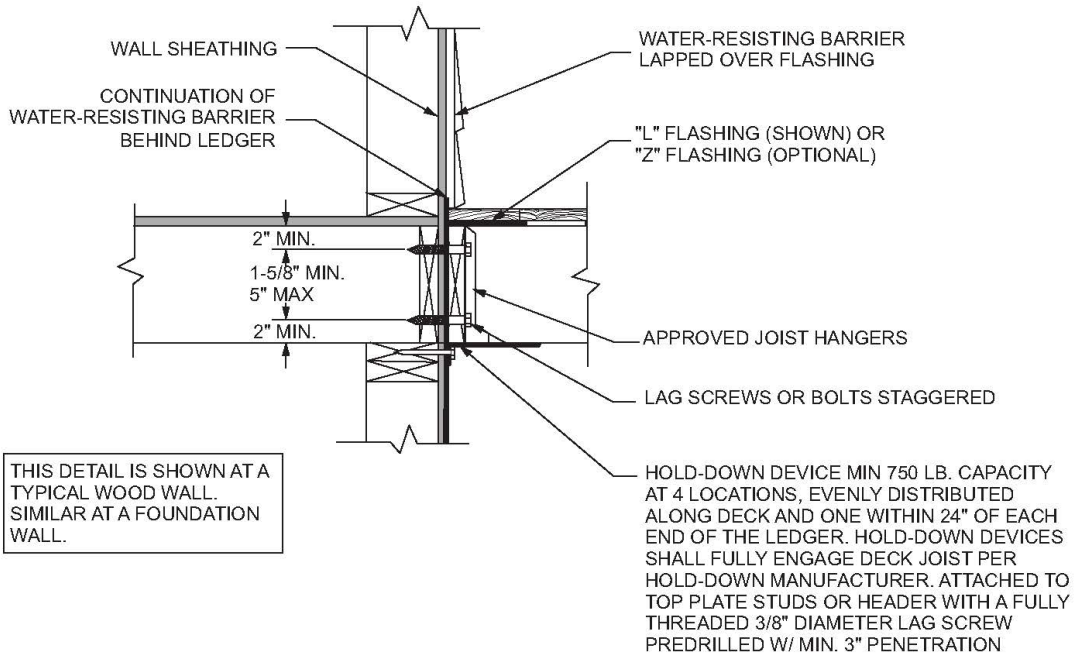
- Lateral loads shall be transferred to the ground or to a structure capable of transmitting them to the ground.
- Where the lateral load connection is provided in accordance with Figure R507.9.2(1), hold-down tension devices shall be installed in not less than two (2) locations per deck, within twenty-four inches (24") of each end of the deck. Each device shall have an allowable stress design capacity of not less than 1,500 pounds.
- Where the lateral load connections are provided in accordance with Figure R507.9.2(2), the hold-down tension devices shall be installed in not less than four (4) locations per deck, and each device shall have an allowable stress design capacity of not less than 750 pounds.

**FIGURE R507.9.2(1)—DECK ATTACHMENT FOR LATERAL LOADS**



For SI: 1 inch = 25.4 mm.

**FIGURE R507.9.2(2)—DECK ATTACHMENT FOR LATERAL LOADS**

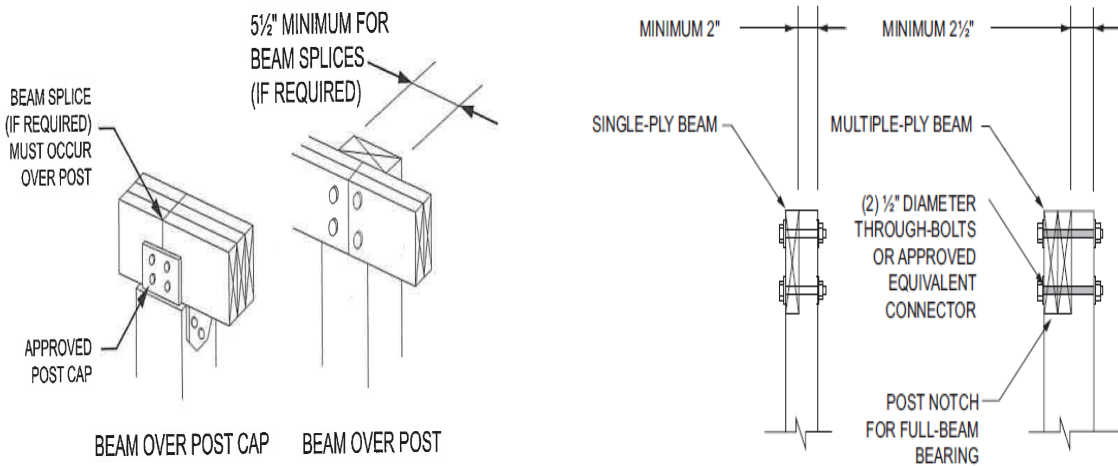


**Joist:**

- Maximum sixteen inches (16") on center when using one inch and a quarter (1-1/4") nominal decking perpendicular to joist.
- Maximum twenty-four inches (24") on center when using two-inch (2") nominal decking perpendicular to joist.

TABLE R507.6—MAXIMUM DECK JOIST SPANS													
LOAD <sup>a</sup> (psf)	JOIST SPECIES <sup>b</sup>	JOIST SIZE	ALLOWABLE JOIST SPAN <sup>b,c</sup> (feet-inches)			MAXIMUM CANTILEVER <sup>d,f</sup> (feet-inches)							
			Joist spacing (inches)			Joist back span <sup>g</sup> (feet)							
			12	16	24	4	6	8	10	12	14	16	18
40 live load	Southern pine	2 × 6	9-11	9-0	7-7	1-0	1-6	1-5	NP	NP	NP	NP	NP
		2 × 8	13-1	11-10	9-8	1-0	1-6	2-0	2-6	2-3	NP	NP	NP
		2 × 10	16-2	14-0	11-5	1-0	1-6	2-0	2-6	3-0	3-4	3-4	NP
		2 × 12	18-0	16-6	13-6	1-0	1-6	2-0	2-6	3-0	3-6	4-0	4-1
	Douglas fir-larch <sup>e</sup> Hem-fir <sup>e</sup> Spruce-pine-fir <sup>e</sup>	2 × 6	9-6	8-4	6-10	1-0	1-6	1-4	NP	NP	NP	NP	NP
		2 × 8	12-6	11-1	9-1	1-0	1-6	2-0	2-3	2-0	NP	NP	NP
		2 × 10	15-8	13-7	11-1	1-0	1-6	2-0	2-6	3-0	3-3	NP	NP
		2 × 12	18-0	15-9	12-10	1-0	1-6	2-0	2-6	3-0	3-6	3-11	3-11
	Redwood <sup>f</sup> Western cedars <sup>f</sup> Ponderosa pine <sup>f</sup> Red pine <sup>f</sup>	2 × 6	8-10	8-0	6-10	1-0	1-4	1-1	NP	NP	NP	NP	NP
		2 × 8	11-8	10-7	8-8	1-0	1-6	2-0	1-11	NP	NP	NP	NP
		2 × 10	14-11	13-0	10-7	1-0	1-6	2-0	2-6	3-0	2-9	NP	NP
		2 × 12	17-5	15-1	12-4	1-0	1-6	2-0	2-6	3-0	3-6	3-8	NP

**Beam to Post Connection:**



**Beams:**

- Beams shall be secured to supports by a minimum of two (2) - half inch (½”) diameter through bolts.
- Manufactured post-to-beam connectors shall be sized for the post and beam sizes. Bolts shall have washers under the head and nut.

TABLE R507.5(1)—MAXIMUM DECK BEAM SPAN—40 PSF LIVE LOAD <sup>c</sup>											
	JOIST SPAN	JOIST SPAN LENGTH AND JOIST CANTILEVER LENGTH <sup>a, i</sup> (feet & feet)									
	6	6 & 0	6 & 1.5	—	—	—	—	—	—	—	—
	8	—	8 & 0	8 & 1	8 & 2	—	—	—	—	—	—
	10	—	—	10 & 0	10 & 1	10 & 2.5	—	—	—	—	—
	12	—	—	—	12 & 0	12 & 1	12 & 2	12 & 3	—	—	—
	14	—	—	—	—	14 & 0	14 & 1	14 & 2	14 & 3.5	—	—
	16	—	—	—	—	—	16 & 0	16 & 1	16 & 2.5	16 & 4	—
	18	—	—	—	—	—	—	18 & 0	18 & 1.5	18 & 3	18 & 4.5
BEAM SPECIES <sup>d</sup>	BEAM SIZE <sup>e</sup>	MAXIMUM DECK BEAM SPAN LENGTH <sup>a, b, f</sup> (feet-inches)									
Southern pine	1-2 x 6	4-10	4-7	4-3	4-0	3-7	3-5	3-3	3-0	2-10	2-8
	1-2 x 8	6-4	5-11	5-6	5-1	4-7	4-4	4-2	3-10	3-7	3-5
	1-2 x 10	7-6	7-0	6-6	6-0	5-5	5-2	4-11	4-7	4-3	4-0
	1-2 x 12	8-8	8-3	7-8	7-1	6-4	6-1	5-10	5-5	5-0	4-9
	2-2 x 6	7-4	6-11	6-5	5-11	5-4	5-1	4-10	4-6	4-3	4-0
	2-2 x 8	9-4	8-9	8-2	7-7	6-9	6-5	6-2	5-9	5-4	5-0
	2-2 x 10	11-0	10-4	9-8	9-0	8-0	7-8	7-4	6-9	6-4	6-0
	2-2 x 12	13-0	12-2	11-4	10-7	9-5	9-0	8-7	8-0	7-5	7-0
	3-2 x 6	9-0	8-6	7-11	7-5	6-8	6-4	6-1	5-8	5-3	4-11
3-2 x 8	11-7	10-11	10-3	9-6	8-6	8-1	7-9	7-2	6-8	6-4	
3-2 x 10	13-11	13-0	12-1	11-2	10-0	9-7	9-2	8-6	7-11	7-6	
3-2 x 12	16-3	15-3	14-3	13-3	11-10	11-3	10-9	10-0	9-4	8-10	
Douglas fir-larch <sup>g</sup> Hem-fir <sup>g</sup> Spruce-pine-fir	1-2 x 6	4-5	4-1	3-9	3-6	3-0	2-10	2-8	2-5	2-3	2-1
	1-2 x 8	5-11	5-6	5-1	4-8	4-0	3-9	3-6	3-2	2-11	2-9
	1-2 x 10	7-1	6-8	6-3	5-10	5-1	4-9	4-6	4-1	3-9	3-6
	1-2 x 12	8-3	7-9	7-3	6-9	6-0	5-9	5-6	5-0	3-9	3-6
	2-2 x 6	6-6	6-1	5-8	5-3	4-9	4-6	4-4	3-11	3-7	3-3
	2-2 x 8	8-8	8-2	7-7	7-1	6-4	6-0	5-9	5-2	4-8	4-4
	2-2 x 10	10-8	10-0	9-3	8-7	7-9	7-4	7-0	6-6	6-0	5-6
	2-2 x 12	12-4	11-7	10-9	10-0	8-11	8-6	8-2	7-7	7-1	6-8
	3-2 x 6	8-2	7-8	7-2	6-8	6-0	5-9	5-6	5-1	4-9	4-6
3-2 x 8	10-11	10-3	9-6	8-10	7-11	7-7	7-3	6-8	6-3	5-11	
3-2 x 10	13-4	12-6	11-8	10-10	9-8	9-3	8-10	8-2	7-8	7-2	
3-2 x 12	15-6	14-6	13-6	12-7	11-3	10-9	10-3	9-6	8-11	8-5	
Redwood <sup>h</sup> Western cedars <sup>h</sup> Ponderosa pine <sup>h</sup> Red pine <sup>h</sup>	1-2 x 6	4-5	4-2	3-10	3-7	3-1	2-11	2-9	2-6	2-3	2-2
	1-2 x 8	5-8	5-4	4-11	4-7	4-1	3-10	3-7	3-3	3-0	2-10
	1-2 x 10	6-11	6-6	6-0	5-7	5-0	4-9	4-7	4-2	3-10	3-7
	1-2 x 12	8-0	7-6	7-0	6-6	5-10	5-7	5-4	4-11	4-7	4-4
	2-2 x 6	6-7	6-2	5-9	5-4	4-10	4-7	4-5	4-0	3-8	3-4
	2-2 x 8	8-4	7-10	7-4	6-10	6-1	5-10	5-7	5-2	4-10	4-5
	2-2 x 10	12-2	9-7	8-11	8-4	7-5	7-1	6-9	6-3	5-10	5-6
	2-2 x 12	11-9	11-1	10-4	9-8	8-7	8-2	7-10	7-3	6-10	6-5
	3-2 x 6	8-1	7-8	7-2	6-9	6-0	5-9	5-6	5-1	4-9	4-6
	3-2 x 8	10-6	9-10	9-2	8-6	7-7	7-3	6-11	6-5	6-0	5-8
3-2 x 10	12-9	12-0	11-2	10-5	9-4	8-11	8-6	7-10	7-4	6-11	
3-2 x 12	14-10	13-11	13-0	12-1	10-9	10-3	9-10	9-1	8-6	8-1	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

a. Interpolation permitted for conditions with zero joist cantilever length. Extrapolation not permitted.

b. Beams supporting a single span of joists with or without cantilever.

c. Dead load = 10 psf,  $L/\Delta = 360$  at main span,  $L/\Delta = 180$  at cantilever. Snow load is not assumed to be concurrent with live load.

d. No. 2 grade, wet service factor included.

e. Beam depth shall be equal to or greater than the depth of intersecting joist for a flush beam connection.

f. Beam cantilevers are limited to the adjacent beam's span divided by 4.

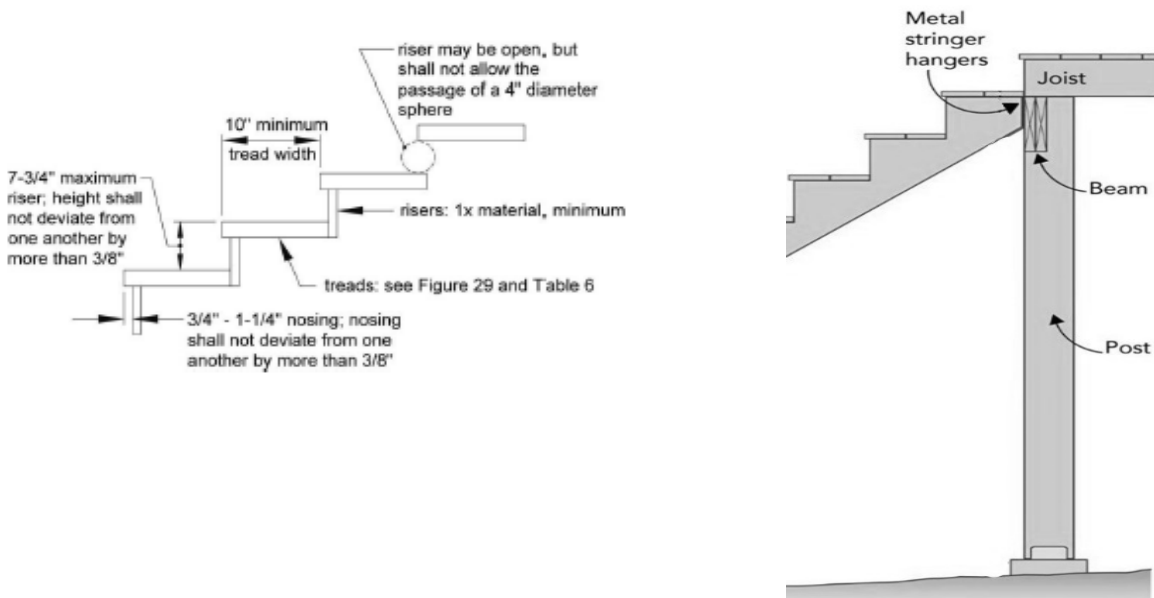
g. Includes incising factor.

h. Incising factor not included.

i. Deck joist span as shown in Figure R507.5.

**Stairs:**

- Stairs attached to the rim joist or cantilever shall have additional support and posts at the top of the stairs (see photo below).
- Stairs shall have a minimum width of thirty-six inches (36”).
- Maximum riser height shall not exceed seven- and three-quarter inch (7-3/4”). The riser height shall be measured vertically between leading edges of the adjacent treads.
- Minimum tread depth is ten inches (10”). The tread depth shall be measured horizontally between the leading edge of nosing.
- Riser heights and tread depths shall not vary by more than three eighths of an inch (3/8”).
- If the stair stringers land on an existing concrete pad or patio, field inspector shall verify whether the concrete pad is in good condition to support the stairs. If the existing slab is not deteriorated or visibly sinking into ground, the stairs are permitted to land on the existing slab with no additional provisions for piers regardless of deck height.
- Decks which **do not** exceed a height of five feet (5') above grade, will be allowed to have their stair stringers land on four inches (4”) thick concrete pad with two inches (2”) aggregate base of compacted CA-6 **or** concrete piers under each stringer which extend forty-two inches (42”) below grade. Landings are required for four (4) or more risers. The width of the concrete landing shall not be less than the width of the stairway served and shall have a minimum of thirty-six inches (36”) measured in the direction of travel.
- Decks which **do** exceed a height of five feet (5') above grade, must have their outer stair stringers bear on concrete piers under the stringers which extend forty-two inches (42”) below grade **and** on a minimum four inch (4”) thick concrete pad. The concrete piers and pad shall be a monolithic (one) pour. The width of the concrete landing shall not be less than the width of the stairway served and shall have a minimum of thirty-six inches (36”) measured in the direction of travel.



## Guards and Handrails:

- All stairs with four (4) or more risers shall have a handrail on at least one side. The handrail height measured vertically for the sloped plane adjoining the tread nosing shall not be less than thirty-four (34") inches and not more than thirty-eight (38") inches from the top of stair to bottom.
- Handrails shall be graspable and shall be composed of decay-resistant and/or corrosion resistant material.
- Triangular opening on stair guard shall not permit the passage of a six-inch (6") diameter sphere.
- Spacing between the four by four (4"x4") railing post shall not exceed six feet (6').
- Spacing between balusters and bottom of the deck rail shall not allow the passage of a four-inch (4") diameter sphere.

