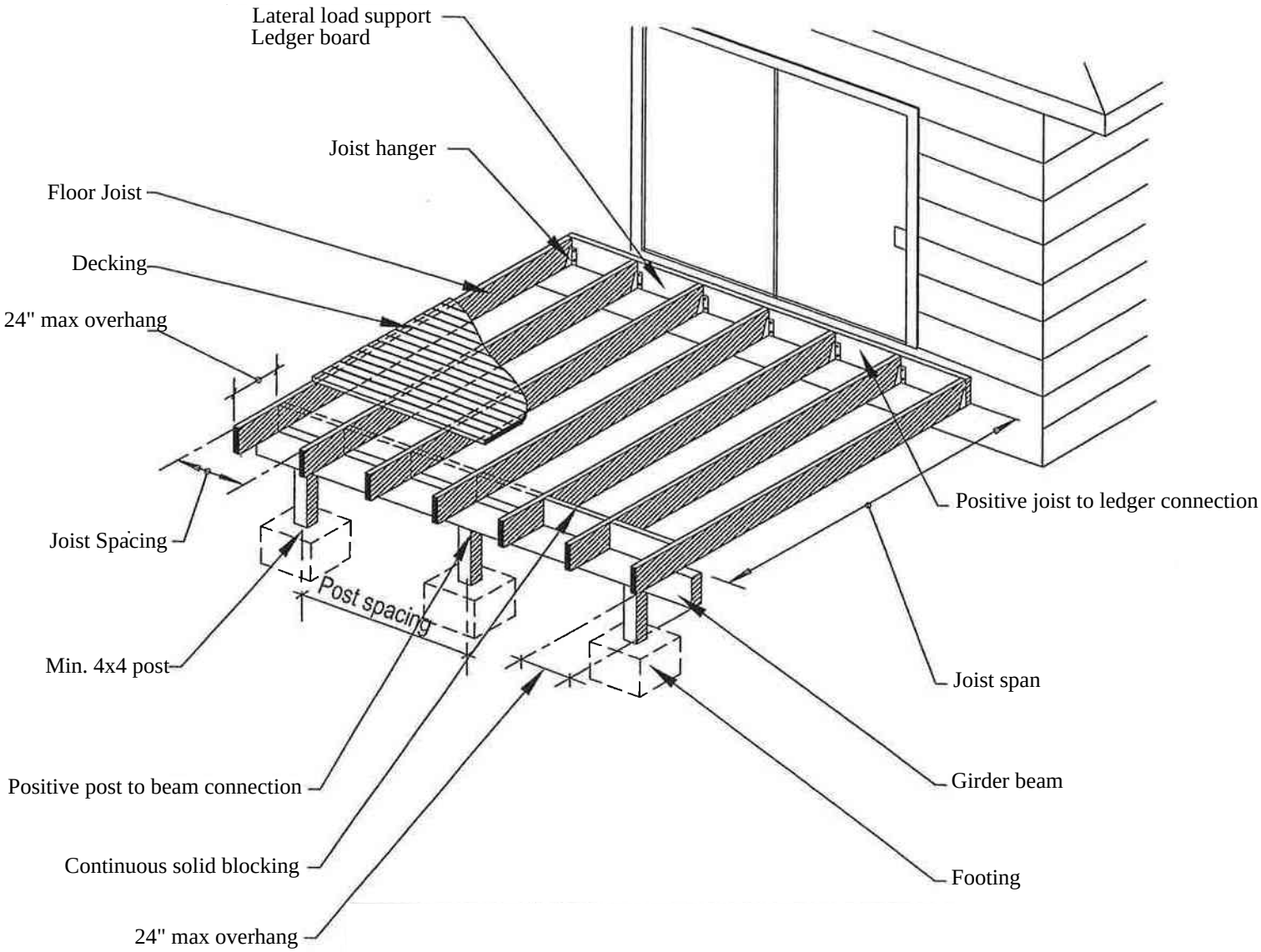
BONNEY Lake

BASIC DECK

Building Division

The following details are examples of the code requirements based on the 2015 International Residential Code for single story decks.
The 2015 International Residential Code Section R507 contains additional information and details specific to deck construction.



Typical Deck

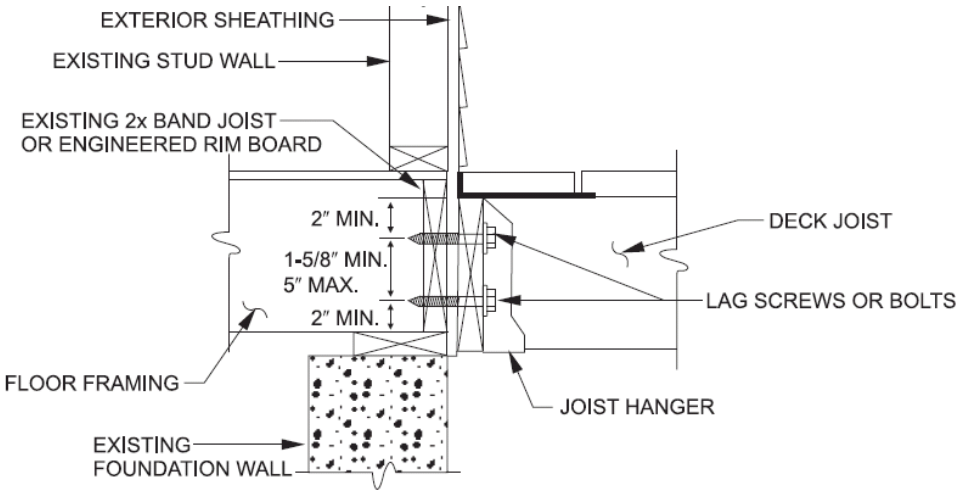
City of Bonney Lake
(253) 862-8602 * Fax (253) 826-1921

9002 Main Street E
Bonney Lake, WA 98391-0944

Basic Deck

ATTACHMENTS:
Example of a deck ledger connection to rim/band joist.

IRC Figure R507.2.1(2)



Example of a lateral load device for a deck attached to a house with a ledger.

IRC Figure R507.2.3.1

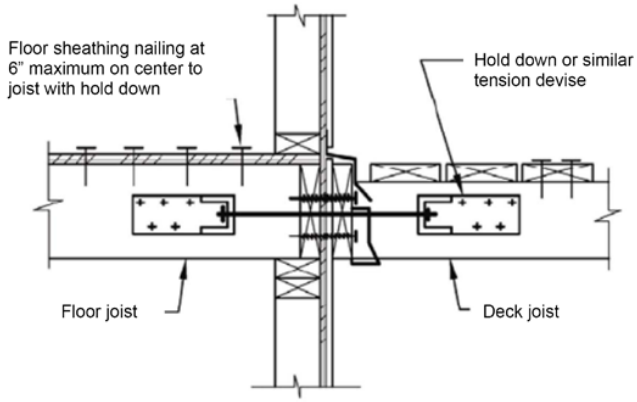


Figure IRC R507.2.3(2) provides alternative lateral connection for new decks to existing houses.

Basic Deck

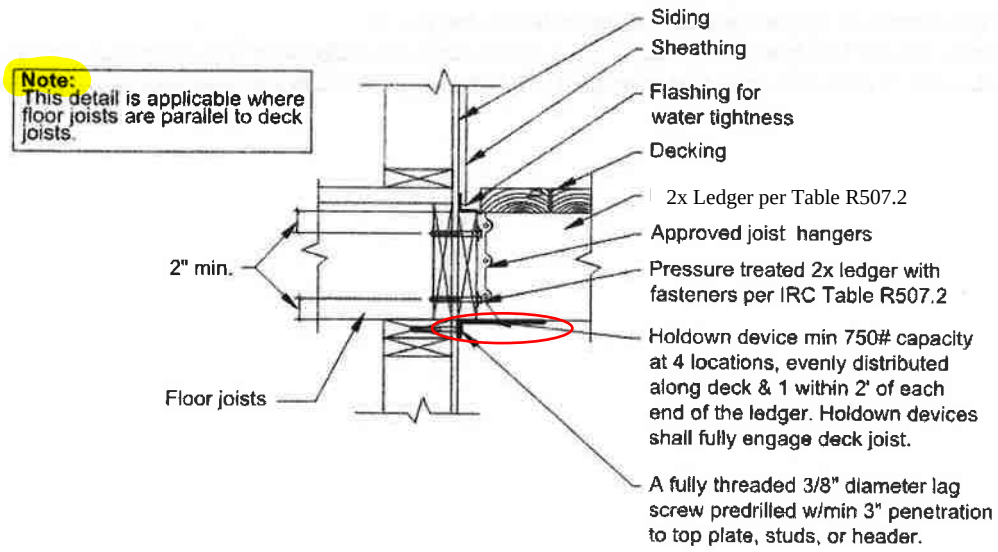


Figure R507.2.3(2)

TABLE R507.2
DECK LEDGER CONNECTION TO BAND JOIST[a, b]
(Deck live load = 40 psf, deck dead load = 10 psf, snow load ≤ 40 psf)

CONNECTION DETAILS	JOIST SPAN						
	6′ and less	6′1″ to 8′	8′1″ to 10′	10′1″ to 12′	12′1″ to 14′	14′1″ to 16′	16′1″ to 18′
	On-center spacing of fasteners						
1/2-inch diameter lag screw with 1/2-inch maximum sheathing[c, d]	30	23	18	15	13	11	10
1/2-inch diameter bolt with 1/2-inch maximum sheathing[d]	36	36	34	29	24	21	19
1/2-inch diameter bolt with 1-inch maximum sheathing[e]	36	36	29	24	21	18	16

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

a. Ledgers shall be flashed in accordance with Section R703.8 to prevent water from contacting the house band joist.
b. Snow load shall not be assumed to act concurrently with live load.
c. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
d. Sheathing shall be wood structural panel or solid sawn lumber.
e. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber or foam sheathing. Up to 1/2-inch thickness of stacked washers shall be permitted to substitute for up to 1/2 inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.

TABLE 507.2.1
PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS

	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]

For SI: 1 inch = 25.4 mm.

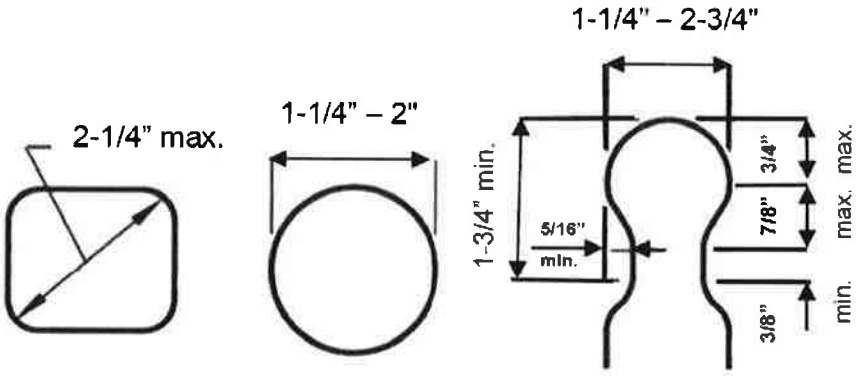
a. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with Figure R507.2.1(1).
b. Maximum 5 inches.
c. For engineered rim joists, the manufacturer's recommendations shall govern.
d. The minimum distance from bottom row of lag screws or bolts to the top edge of the ledger shall be in accordance with Figure R507.2.1(1).

Basic Deck

STAIR HANDRAIL REQUIREMENTS:

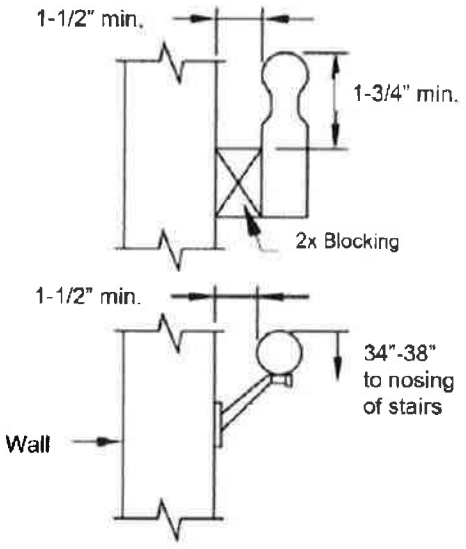
All stairs with 4 or more risers shall have a handrail on at least one side. The handrail height measured vertically from the sloped plane adjoining the nosing shall not be less than 34 inches or more than 38inches. Handrails shall run continuously from a point directly over the lowest riser to a point directly over the highest riser and shall return to the guard at each end. Handrails may be interrupted by guard posts at a turn in the stair

Handrails shall be graspable and shall be composed of decay-resistant and corrosion resistant material handrail shall be Type I, Type II, or provide equivalent graspability.

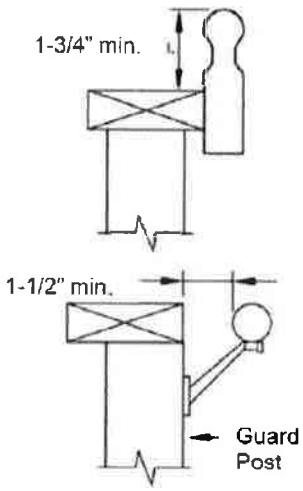


NONCIRCULAR **CIRCULAR** **RECESSED**

Type I (perimeter dimensions 4"-6 ¼") **Type II** (perimeter dimensions <6 ¼")



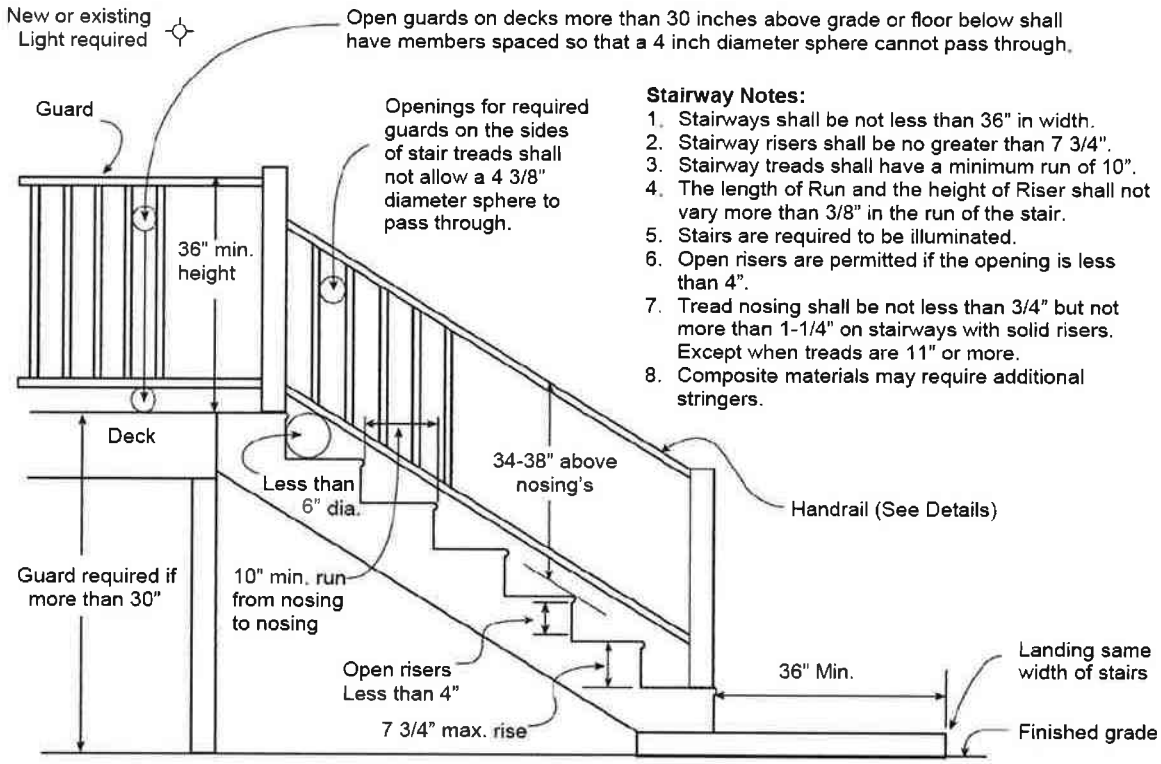
MOUNTED TO WALL



MOUNTED TO GUARD

Basic Deck

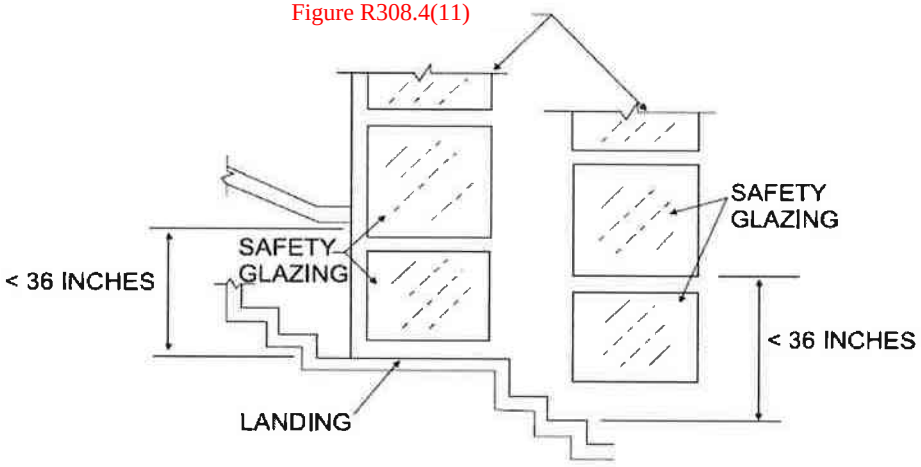
The Following Details Are Examples of the 2015 International Residential Code



SAFETY GLAZING:

Glazing where the bottom exposed edge of the glazing is less than 36 inches above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered a hazardous location. [IRC R308.4.6]

Safety Glazing Not Required
Figure R308.4(11)



Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within 60 inches horizontally of the bottom tread shall be considered a hazardous location. [IRC R308.4.7]