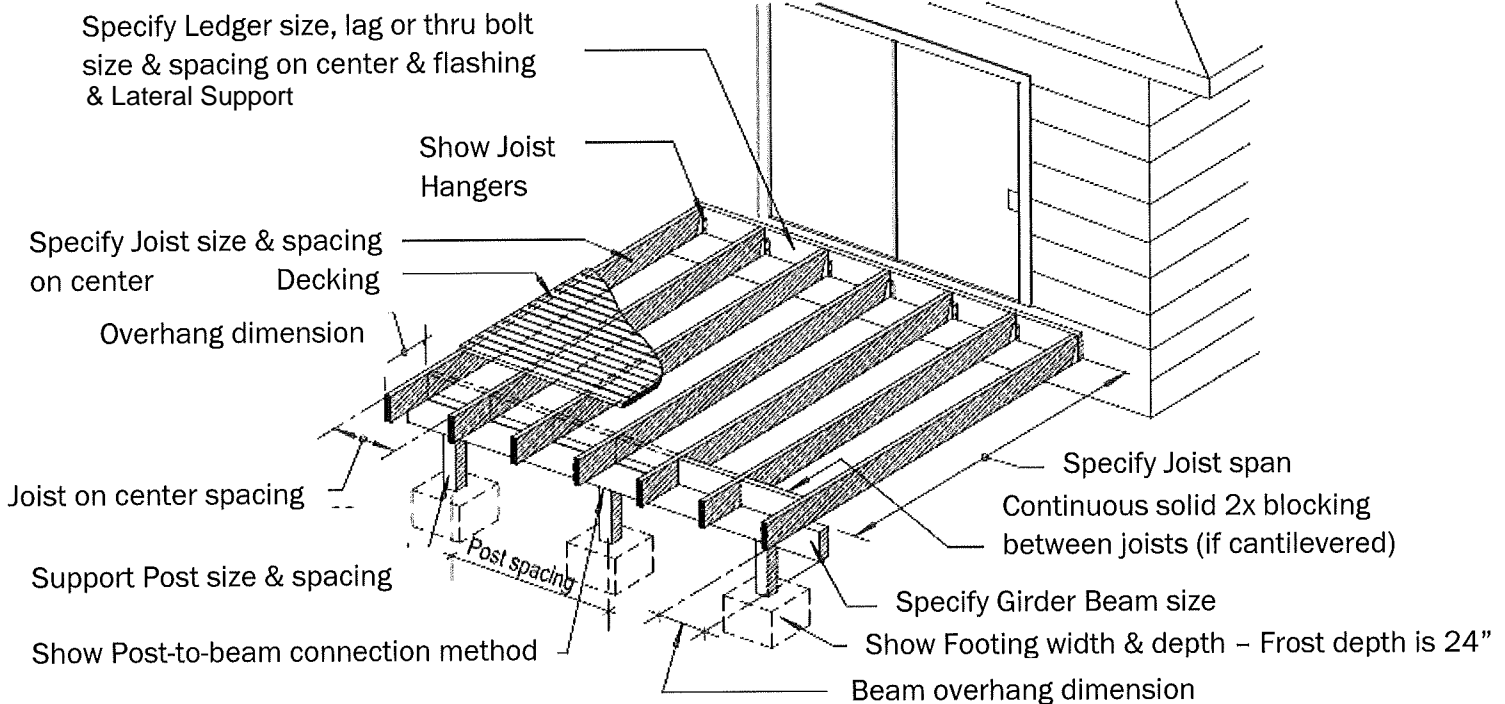


BASIC DECKS

Public Services Department
408 N Spokane St – Post Falls, ID 83854
Phone: (208)773-8708 Fax: (208)773-2505
www.postfallsidaho.org

Note: See the last page for information on decks that do not require a permit

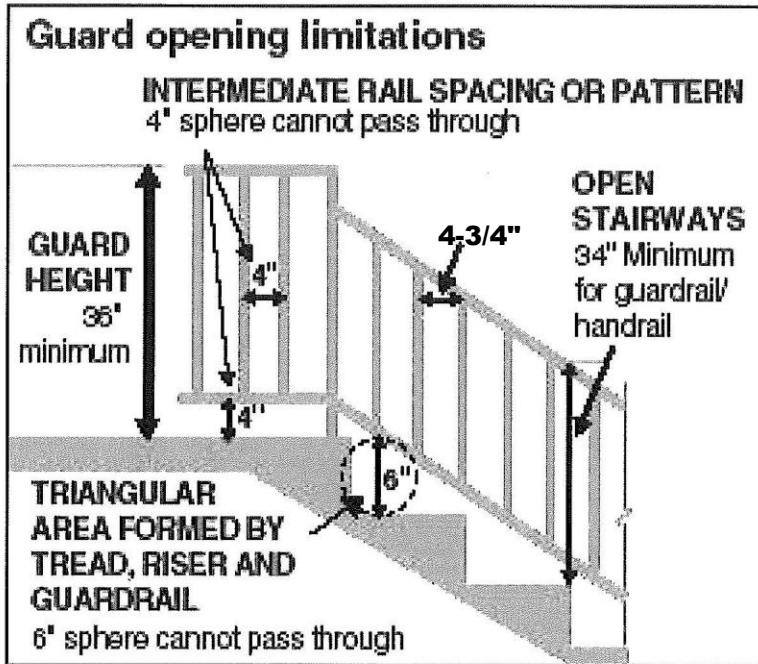


Typical Deck

Deck Drawings

Several items should be included on your drawings to build, replace, or extend a deck. Show/ describe, as a minimum, the following items (see examples)

- Site Plan (example on a separate handout)
- Overall deck dimensions: length, width and height above ground from grade
- Cross section of footings, showing width and depth
- Ledger size, flashing, and ledger attachment size and spacing
- Joist size and spacing on center
- Joist span length
- Joist cantilever or overhang (if any)
- Joist hangers
- Size of posts and post spacing
- Beam size supporting joists
- Beam cantilever (if any)
- Post to beam connection method
- Decking material
- Location of stairs (if any)
- Stair details: width, rise and run
- Guard rail and hand rail details
- Lateral support per 507:2.3



Guardrails are required on all decks that are more than 30 inches above grade. They must be a minimum of 36 inches in height.

Guardrails are also required on any open sides of stairs that have a total rise of more than 30 inches in height. They must be a minimum of 34 inches in height.

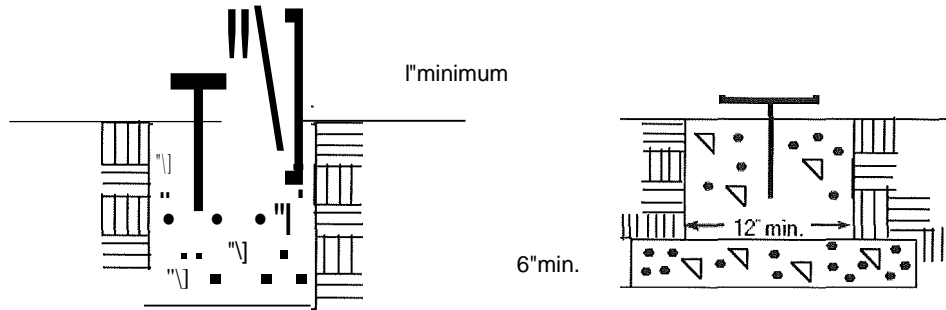
A handrail is required on at least one side of stairs with four or more risers. The handrail height is 34 inches minimum and 38 inches maximum

The maximum stair riser height is 7¾ inches. The minimum tread depth is 10 inches. The rise and run must be uniform and cannot vary more than 3/8 of an inch in width or height.

Span Table for Deck Joists

FLOOR JOISTS		40# LIVE LOAD				10# DEAD LOAD				L/360				Table F.			
Design Criteria		Strength - 40 lbs. per sq. ft. live load, plus 10 lbs. per sq. ft. dead load															
		Deflection - Limited in span in inches divided by 360 live load only.															
		Span (feet and inches)															
		2 x 6				2 x 8				2 x 10				2 x 12			
		Spacing On Center															
Species or Group	Grade	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2'	24"	12"	16"	19.2"	
Douglas Fir	Sel. Struc	11-4	10-4	9-8	9-0	15-0	13-7	12-10	11-11	19-1	17-4	16-4	15-2	23-3	21-1	19-10	
Larch	No.1 & Btr	11-2	10-2	9-6	8-10	14-8	13-4	12-7	11-8	18-9	17-0	16-0	14-9	22-10	20-9	19-1	
	No.1	10-11	9-11	9-4	8-8	14-5	13-1	12-4	11-0	18-5	16-5	15-0	13-5	22-0	19-1	17-5	
	No.2	10-9	9-9	9-2	8-3	14-2	12-9	11-8	10-5	18-0	15-7	14-3	12-9	20-11	18-1	16-6	
Hem-Fir	Sel. Struc	10-9	9-9	9-2	8-6	14-2	12-10	12-1	11-3	18-0	16-5	15-5	14-4	21-11	19-11	18-9	
	No.1 & Btr	10-6	9-6	9-0	8-4	13-10	12-7	11-10	11-0	17-8	16-0	15-1	14-0	21-6	19-6	18-3	
	No.1	10-6	9-6	9-0	8-4	13-10	12-7	11-10	10-10	17-8	16-0	14-10	13-3	21-6	18-10	17-2	
	No.2	10-0	9-1	8-7	7-11	13-2	12-0	11-3	10-2	16-10	15-2	13-10	12-5	20-4	17-7	16-1	

FOOTING DETAILS



Footings may be a solid block of concrete, or a poured footing with a 12" diameter pier above footing. A solid block footing is typically 12" x 12" x 24" deep. Large decks may require more width or a larger footing underneath the pier. The bottom of the footing needs to be 24" below grade. Pressure treated posts may also be embedded into the concrete block.

Structural Design

All decks must be designed to support a live load of 40 pounds per square foot minimum. Additional loads from hot tubs or other heavy items may require more. Guardrails must be designed and constructed to withstand 200 pounds per square foot load applied in any direction. Decks must also be designed for lateral stability.

Handrails

Handrail ends must be returned or terminate in newel posts or safety terminals. (The handrail is permitted to be interrupted by a newel post at the turn). Handrails must be continuous for the full length of the stairs from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight.

Ledger Board

The ledger must be pressure treated, at least the same size as the floor joists and a minimum 2" x 8". The minimum size lag screw or lag bolt and washer is 3/8". They must be hot-dipped galvanized or stainless steel. See attached Table R507.2 for on-center spacing of ledger fasteners. The lags must be placed 2 inches in from the bottom or top of the deck ledgers and between 2 and 5 inches in from the ends. The screws or bolts must be staggered from the top to the bottom along the horizontal length of the deck ledger.

Flashing

All connections between the deck and dwelling must be flashed with an approved material. Any cuts or penetrations into the existing structure must be flashed and caulked in an approved manner. Be sure that your flashing material is appropriate for the type of preservative treated wood that you are using. For example: Aluminum must not be used in contact with ACQ pressure preservative treated wood.

Inspections

An inspection may be requested by calling the automated inspection line at (208)457-3334 by 5:00 p.m. the business day prior to the inspection. Be prepared to give the type of inspection being requested, the permit number, and the address. Inspections requested the previous business day must be ready for inspection the next business day by 9:00 a.m.

The city approved permit packet with the approved plans must be available at the job site for the inspection. Access must be provided to the structure (ex. – gates unlocked) and dogs must be restrained.

The first inspection will be a "footing". The hole must be excavated and any reinforcement, if applicable, in place. This inspection must be held prior to pouring any concrete.

Subsequent inspections will be a "framing" and then a "final inspection" to clear the permit record. In many cases the framing and final inspection can be accomplished at the same time.

TABLE R507.2 FASTENER SPACING FOR A SOUTHERN PINE OR HEM-FIR DECK LEDGER AND A 2-INCH-NOMINAL SOLID-SAWN SPRUCE-PINE-FIR BAND JOIST^{c, f, 9} (Deck live load = 40 psf, deck dead load = 10 psf)

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'
Connection details	On-center spacing of fasteners ^{d, •}						
1/2 inch diameter lag screw with ¹⁵ / ₃₂ inch maximum sheathing ^a	30	23	18	15	13	11	10
1/2 inch diameter bolt with ¹⁵ / ₃₂ inch maximum sheathing	36	36	34	29	24	21	19
1/2 inch diameter bolt with ¹⁵ / ₃₂ inch maximum sheathing and 1/2 inch stacked washers ^{b, h}	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. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- b. The maximum gap between the face of the ledger board and face of the wall sheathing shall be 1/2 inch.
- c. Ledgers shall be flashed to prevent water from contacting the house band joist.
- d. Lag screws and bolts shall be staggered in accordance with Section R507.2.1.
- e. Deck ledger shall be minimum 2 x 8 pressure-preservative-treated No. 2 grade lumber, or other approved materials as established by standard engineering practice.
- f. When solid-sawn pressure-preservative-treated deck ledgers are attached to a minimum 1-inch-thick engineered wood product (structural composite lumber, laminated veneer lumber or wood structural panel band joist), the ledger attachment shall be designed in accordance with accepted engineering practice.
- g. A minimum 1 x 9 1/2 Douglas Fir laminated veneer lumber rimboard shall be permitted in lieu of the 2-inch nominal band joist.
- h. Wood structural panel sheathing, gypsum board sheathing or foam sheathing not exceeding 1 inch in thickness shall be permitted. The maximum distance between the face of the ledger board and the face of the band joist shall be 1 inch.

Decks that do not require a permit

In order to not require a building permit the deck must not exceed 200 square feet in area, be not more than 30 inches above grade at any point, not be attached to the dwelling (be free-standing or self-supported) and must not serve the required exit door. All decks that do not fit into this criteria are required to have a building permit.