



Building permit requirements

A. **Signed, completed Building Permit application form.** Be sure to include your daytime phone number.

B. **Submit two copies** of a drawn to scale site plan, based on a Certificate of Survey, indicating the lot dimensions, the location and dimensions of existing structure (s) and the location and dimensions of the proposed structure.

Indicate the setbacks from property lines and wetlands/buffers (if applicable).

C. **Two sets of plans** – Submitted plans must have sufficient detail to build the addition from them. A plan view, and elevation is required, all drawn to scale. Indicate all materials and sizes being used. (See pages four and five.)

D. **Building permit fee** is based on a published fee schedule available at the Building Inspection Division.

Setback requirements

Minimum required setback distances from the front, side and rear lot lines may vary according to location. They are set by the Zoning Ordinance. Contact the Community Development Department for this information. When requesting this information, please provide the legal description of the property.

Setback distances are measured from property lines, not from streets, curbs, sidewalks, fences, hedges, trees or poles. Property irons are located underground and they establish property lines.

NOTE: Locating the property corner irons (legal markers) is the responsibility of the property owner; irons must be visible when the footing inspection is requested. Setbacks are measured from the legal property line, wetlands or buffer (if applicable).

General Code requirements

Frost footings

Required for any deck attached to a dwelling, porch or garage. The minimum depth to the base of the footing is 42 inches.

Live load

All decks shall be designed to support a live load of 40 pounds per square foot.

Guards/guardrails

Required on all decks or stairs more than 30 inches above grade or a lower deck. See page four for illustration.

Exception: On a open stairway, the triangular opening formed by the riser, tread and bottom element of a guardrail must be sized so that a six inch sphere cannot pass through.

Cantilevers: Overhanging joists and beams

Joists should not overhang beams by more than two feet, nor should beams overhang posts by more than one foot unless a special design is approved.

Framing details

Header beams and joists that frame into ledgers or beams shall be supported by approved framing anchors such as joist hangers.

Flashing

All connections between deck and dwelling shall be weatherproof. Cuts in exterior finish shall be flashed.

Nails and screws

Use only stainless steel, high strength aluminum or hot-dipped galvanized.

Wood required

All exposed wood is required to be approved wood with natural resistance to decay (redwood, cedar, etc.) or approved treated wood. This includes posts, beams, joists, decking and railings.

Any composite or plastic decking materials must be approved by the Building Inspection Division prior to installation.

Stairs

Minimum width is 36 inches. Maximum rise is 7-3/4 inches. Minimum run is 10 inches. Largest tread width or riser height shall not exceed the smallest by more than 3/8 inch. Maximum 4 inch opening at risers greater than 30 inches above grade. See *Single-Family Stairways/Guards*.

Handrails

The top shall be placed not less than 34 inches or more than 38 inches above the nosing of the treads. Stairways having four or more risers shall have at least one handrail with handrail ends returned or terminated in posts. Circular hand grips shall be between 1-1/4 inches to 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. See *Single-Family Stairways/Guards*.

Special design note

Some designs may not be appropriate if a screen porch or 3-season porch on the deck platform is a future consideration. Porch and deck setbacks are not the same.

Lateral Load Connection

A lateral load connection is required from deck to the supporting structure at a minimum of 2 locations. Each connection device shall be rated not less than 1,500 lbs.

TABLE R507.3.1 MINIMUM FOOTING SIZE FOR DECKS										
LIVE LOAD ^b (psf)	TRIBUTARY AREA (sq.ft.)	LOAD BEARING VALUE OF SOILS ^{a, c, d} (psf)								
		1500 ^e			2000 ^e			2500 ^e		
		Side of a square footing (in)	Diameter of a round footing (in)	Thickness (in)	Side of a square footing (in)	Diameter of a round footing (in)	Thickness (in)	Side of a square footing (in)	Diameter of a round footing (in)	Thickness (in)
40	20	12	14	6	12	14	6	12	14	6
	40	14	16	6	12	14	6	12	14	6
	60	17	19	6	15	17	6	13	15	6
	80	20	22	7	17	19	6	15	17	6
	100	22	25	8	19	21	6	17	19	6
	120	24	27	9	21	23	7	19	21	6
	140	26	29	10	22	25	8	20	23	7
	160	28	31	11	24	27	9	21	24	8

a. Interpolation permitted, extrapolation not permitted.

b. Live load = 40 psf, dead load = 10 psf.

c. Assume minimum square footing to be 12 inches x 12 inches x 6 inches for 6x6 post.

d. If the support is brick or CMU pier, the footing shall have a minimum 2-inch projection on all sides.

e. Area, in square feet, of deck surface supported by post and footing.

TABLE R 507.4 DECK POST HEIGHT ^a	
DECK POST SIZE	MAXIMUM HEIGHT ^{a, b} (feet-Inches)
4 x 4	6-9 ^c
4 x 6	8
6 x 6	14
8 x 8	14

a. Measured to the underside of the beam.

b. Based on 40 psf live load.

c. The maximum permitted height is 8 feet for one-ply and two-ply beams. The maximum permitted height for three-ply beams on post caps is 6 feet 9 inches.

TABLE R 507.5 DECK BEAM SPAN LENGTHS^{a, b, g} (feet - inches)

SPECIES ^c	SIZE ^d	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern Pine	1 - 2 x 6	4-11	4-0	3-7	3-3	3-0	2-10	2-8
	1 - 2 x 8	5-11	5-1	4-7	4-2	2-10	3-7	3-5
	1 - 2 x 10	7-0	6-0	5-5	4-11	4-7	4-3	4-0
	1 - 2 x 12	8-3	7-1	6-4	5-10	5-5	5-0	4-9
	2 - 2 x 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 - 2 x 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 - 2 x 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 - 2 x 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 - 2 x 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 - 2 x 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 - 2 x 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 - 2 x 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir - larche, hem-fire, redwood, western cedars, ponderosa pinef, red pinef	3 x 6 or 2 - 2 x 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 x 8 or 2 - 2 x 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 x 10 or 2 - 2 x 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 x 12 or 2 - 2 x 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 x 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 x 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 x 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 x 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3 - 2 x 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3 - 2 x 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3 - 2 x 10	10-0	10-5	9-4	8-6	7-10	7-4	6-11
	3 - 2 x 12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

a. Live load = 40 psf, dead load = 10 psf, L/Δ = 180 at cantilever with a 220-pound load applied at the end.

b. Beams supporting deck joists from one side only.

c. No.2 grade, wet service factor.

d. Beam depth shall be greater than or equal to the depth of joists with a flush beam condition.

e. Includes incising facotr not included.

f. Northern species. Incising factor not included.

g. Beam cantilever are limited to the adjacent beam's span divided by 4.

TABLE R507.6 DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft. - in.)							
SPECIES _a	SIZE	ALLOWABLE JOIST SPAN _b			MAXIMUM CANTILEVER _{c, f}		
		SPACING OF DECK JOISTS			SPACING OF DECK JOISTS WITH CANTILEVERS _c		
		12	16	24	12	16	24
Southern pine	2 x 6	9-11	9-0	7-7	1-3	1-4	1-6
	2 x 8	13-1	11-10	9-8	2-1	2-3	2-5
	2 x 10	16-2	14-0	11-5	3-4	3-6	2-10
	2 x 12	18-0	16-6	13-6	4-6	4-2	3-4
Douglas fir-larch _d , hem-fir _d , spruce-pine-fir _d	2 x 6	9-6	8-8	7-2	1-2	1-3	1-5
	2 x 8	12-6	11-1	9-1	1-11	2-1	2-3
	2 x 10	15-8	13-7	11-1	3-1	3-5	2-9
	2 x 12	18-0	15-9	12-10	4-6	3-11	3-3
Redwood, western cedars, ponderosa pine _e , redpine _e	2 x 6	8-10	8-0	7-0	1-0	1-1	1-2
	2 x 8	11-8	10-7	8-8	1-8	1-10	2-0
	2 x 10	14-11	13-0	10-7	2-8	2-10	2-8
	2 x 12	17-5	15-1	12-4	3-10	3-9	3-1

a. No. 2 grade with wet service factor.

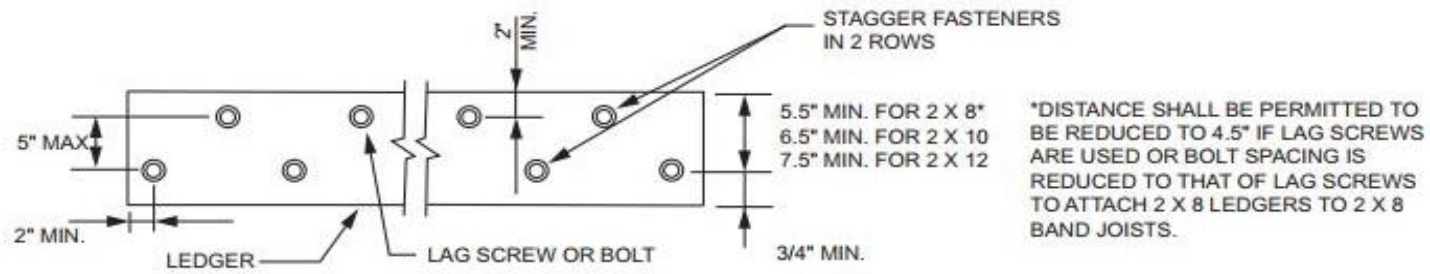
b. Live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$.

c. Live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$ at main span, $L/\Delta = 180$ at cantilevel with a 220-pound load applied to end.

d. Includes incising factor

e. Northern species with no incising factor

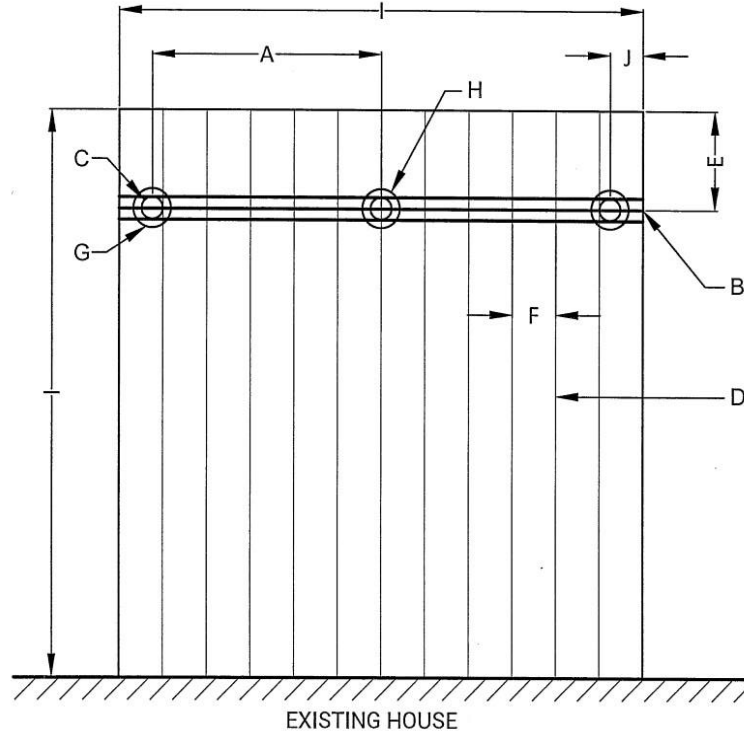
f. Cantilever span not exceeding the nominal depth of the joist are permitted.



For SI: 1 inch = 25.4 mm.

FIGURE R507.9.1.3(1) PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS

SIMPLE DECK PLAN



FILL IN THE BLANKS

A. SPACING IN BETWEEN POSTS:

B. BEAM SIZE (2 - 2x10, ETC.):

C. POST SIZE (6x6, ETC.):

D. JOIST LENGTH AND SIZE:

E. JOIST OVERHANG (2' MAX):

F. SPACING BETWEEN JOISTS (16", 24" O.C.): G.

G. CORNER FOOTING SIZE:

H. INTERMEDIATE FOOTING SIZE:

I. OVERALL DECK SIZE:

J. BEAM OVERHANG:

TYPE OF RAILING OR GUARD

MATERIAL (CEDAR, TREATED, ETC.):

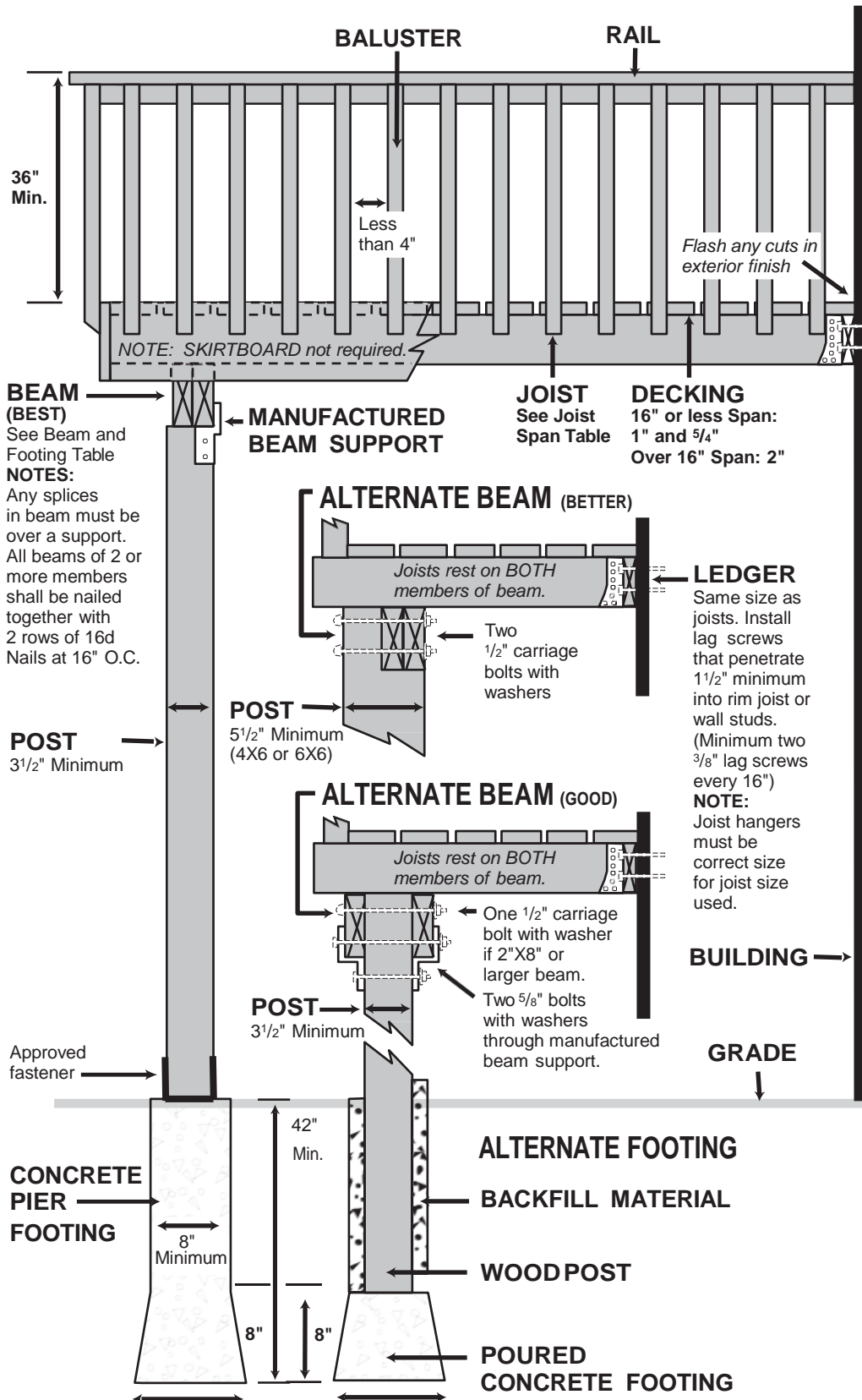
HEIGHT ABOVE GROUND:

TYPE OF DECKING:

SPECIAL NOTE:
A COMPLETE AND DETAILED DECK
PLAN WILL RESULT IN A COMPLETE
AN DETAILED PLAN REVIEW.

NOT TO SCALE

ELEVATION



Inspections Needed

- **Footing:** When footings are dug, but **prior** to the placement of any concrete.
- **Framing:** When height of deck is less than 30 inches from grade, and prior to the installation of any flooring materials.
- **Final:** When required work is completed.

When calling for an inspection have permit number (s) available.

**Questions?
Need an Inspection?**
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