FRANKLIN COUNTY BUILDING DEPARTMENT
150 South Front Street
FSL Suite 10
Columbus, OH 43215-7104
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Guide to Deck Permits

Application Requirements

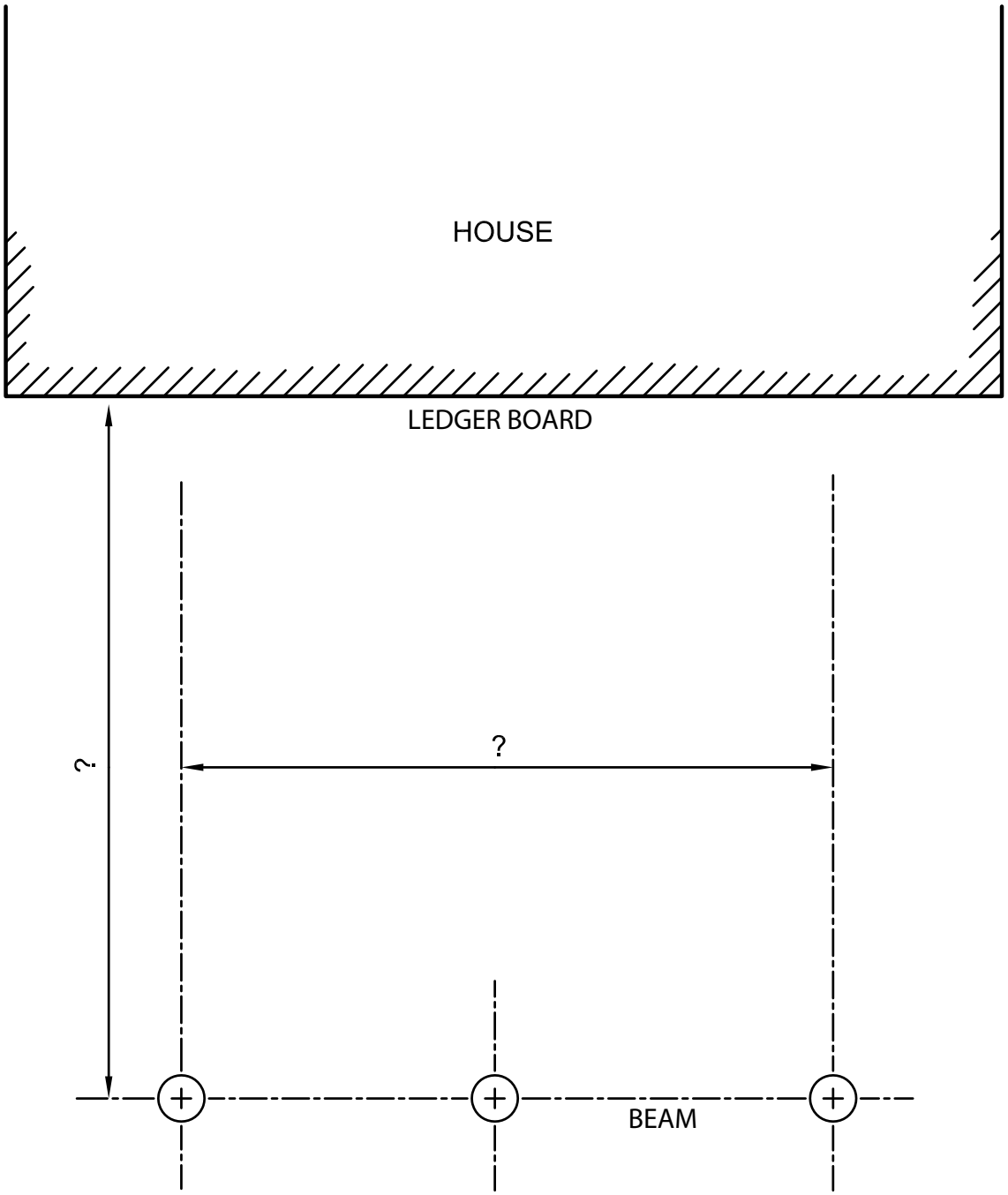
- Completion of an application form furnished by the building department.
- Two (2) sets of plans of sufficient clarity to indicate how the proposed deck will be constructed (see plan requirements).

Plan Requirements

Post Hole Layout – The post layout shall include dimensions between each post hole and the distance between post holes and the existing dwelling.
Post Hole Section – see sheet #2 for a typical post hole detail. The post hole shall be 32 inches deep and be sized according to Table 507.3.1 of the 2019 Residential Code of Ohio. The post shall bear on top of a minimum of 6 inches of concrete; the remaining portion of the post hole may be filled with gravel or dirt. If the applicant desires, they may fill the entire post hole with concrete, however the post shall bear on top of the concrete in an approved anchoring device/bracket. *See figure 507.3.*
Framing Plan – the framing plan shall include: ledger size; bolting type and method; floor joist size; span; spacing; beam(s) size and attachment method to posts; and overall deck dimensions.
Framing Sections – The framing sections shall include connections of the beam(s) to the posts. Sheet #2 shows a typical beam connection to a post. If the applicant intends on supporting one end of the floor joists using the existing dwelling, then refer to sheet #3 showing a typical ledger board section with anchorage requirements.
Deck Elevation – The deck elevation shall show the height of the deck floor surface from the adjacent grade. If the deck is 30 inches or greater from the adjacent grade, a guardrail system shall be shown on the plans. Guardrails shall be 36 inches high and shall have balusters, a cable system, or horizontal rails that will not allow the passage of a 4 inch sphere.
Stair Details – see sheet #4 for a typical stair detail. Stair risers shall have riser heights that do not exceed 8 ¼ inches. Additionally, riser heights on stairs shall not vary more than 3/8 of an inch in a stair run. Stair treads shall be a minimum of 9 inches. Note: four or more risers will require a continuous graspable handrail with the ends returned to the posts, and mounted between 34 & 38 inches above the stair nosing, and a graspable width of 1 1/4 inch minimum to 2 3/4 inch maximum (2019 Residential Code of Ohio Sections 311.7.8). Plans shall show the stair stringer attachment and support at the deck, and support at grade level; also, must list stringer lumber size.

Inspections

Footing – After post holes are at frost depth. Prior to placement of concrete and the start of the framing.
Framing – After the installation of all structural framing (Post, beams, ledger, floor joists).
Final Inspection – After the completion of the project. (stairs, handrails, guardrails, decking boards, etc..)



NOTE:
THESE DRAWINGS ARE FOR ILLUSTRATION PURPOSES ONLY AND ARE NOT TO BE COPIED AND USED FOR PLAN SUBMITTALS.

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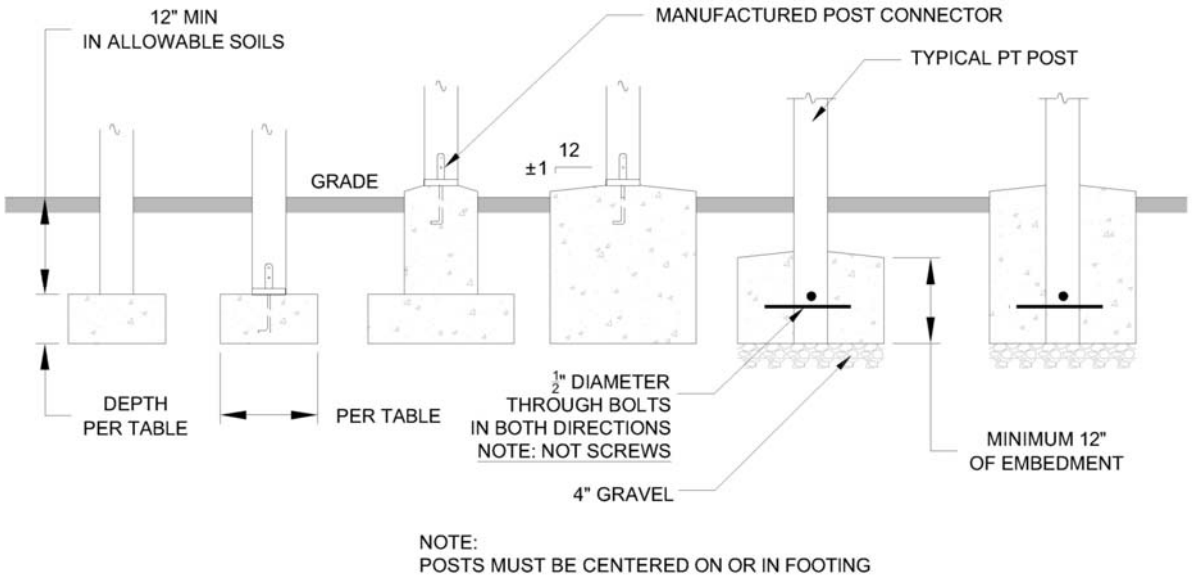
PLAN VIEW
(LAYOUT)



For SI: 1 inch = 25.4 mm.

TABLE 507.3.1
MINIMUM FOOTING SIZE FOR DECKS

LIVE OR GROUND SNOW LOAD [b] (psf)	TRIBUTARY AREA (sq. ft.)	LOAD BEARING VALUE OF SOILS [a, c, d] (psf)											
		1500 [a]			2000 [a]			2500 [a]			≥3000 [a]		
		Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)
40	20	12	14	6	12	14	6	12	14	6	12	14	6
	40	14	16	6	12	14	6	12	14	6	12	14	6
	60	17	19	6	15	17	6	13	15	6	12	14	6
	80	20	22	7	17	19	6	15	17	6	14	16	6
	100	22	25	8	19	21	6	17	19	6	15	17	6
	120	24	27	9	21	23	7	19	21	6	17	19	6
	140	26	29	10	22	25	8	20	23	7	18	21	6
	160	28	31	11	24	27	9	21	24	8	20	22	7

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2, 1 pound per square foot = 0.0479 kPa.

a. Interpolation permitted, extrapolation not permitted.
b. Based on highest load case: Dead + Live or Dead + Snow.
c. Assumes minimum square footing to be 12 inches x 12 inches x 6 inches for 6 x 6 post.
d. If the support is a 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 footings.

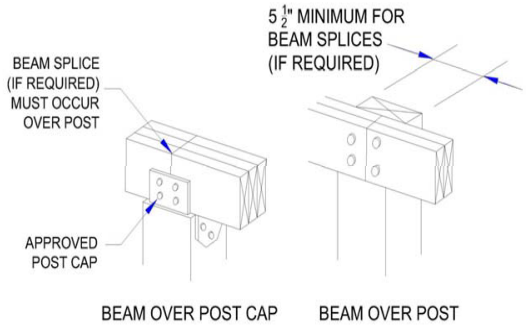


FIGURE 507.5.1(1)
DECK BEAM TO DECK POST

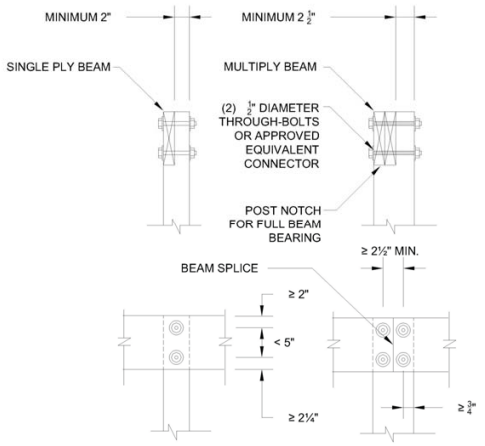


FIGURE 507.5.1(2)
NOTCHED POST-TO-BEAM CONNECTION

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POST AND FOOTING DETAIL

SHEET 2 OF 4

TABLE 507.9.1.3(1)
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.

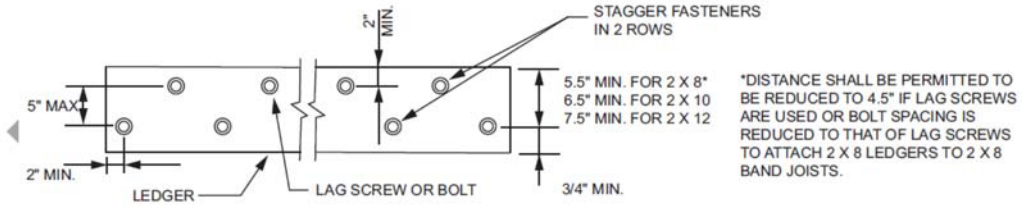
a. Ledgers shall be flashed in accordance with Section 703.4 to prevent water from contacting the house band joist.
b. Snow load shall not be assumed to act concurrently with live load.
c. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
d. Sheathing shall be wood 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 507.9.1.3(2)
PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS

	MINIMUM END AND EDGE DISTANCES AND SPACING			
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING
Ledger [a]	2 inches	3/4 -inch	2 inches	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 507.9.1.3(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 507.9.1.3(1).



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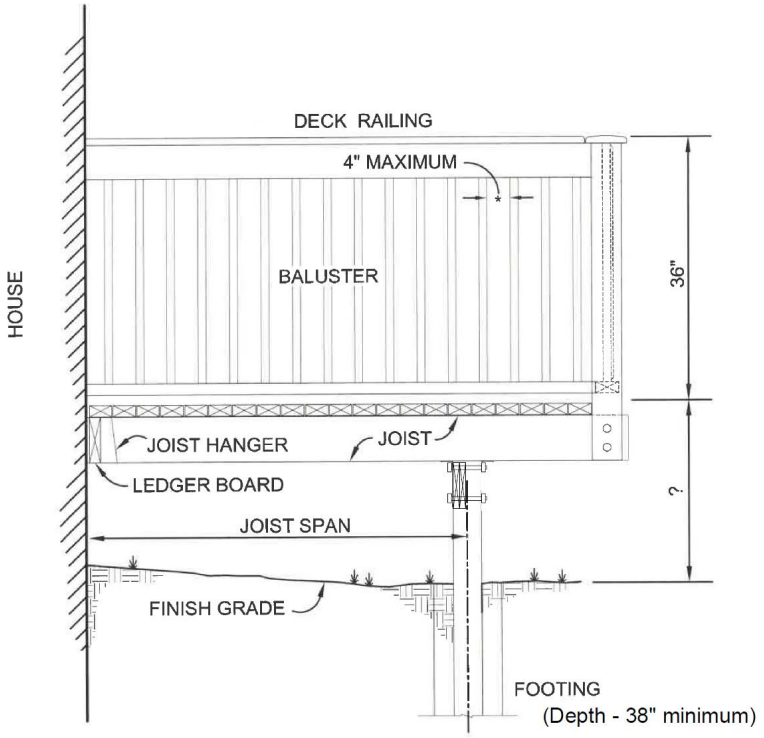

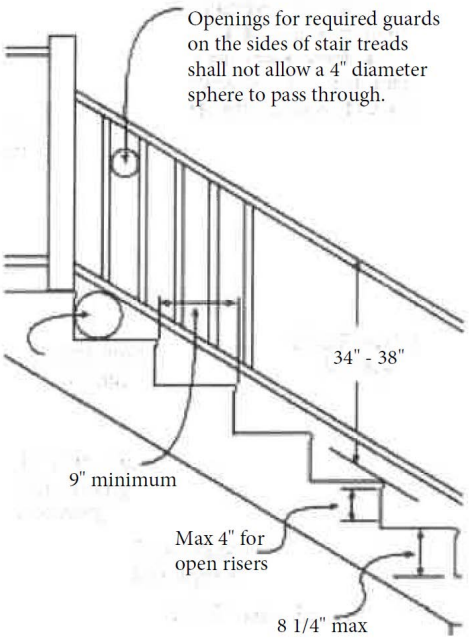

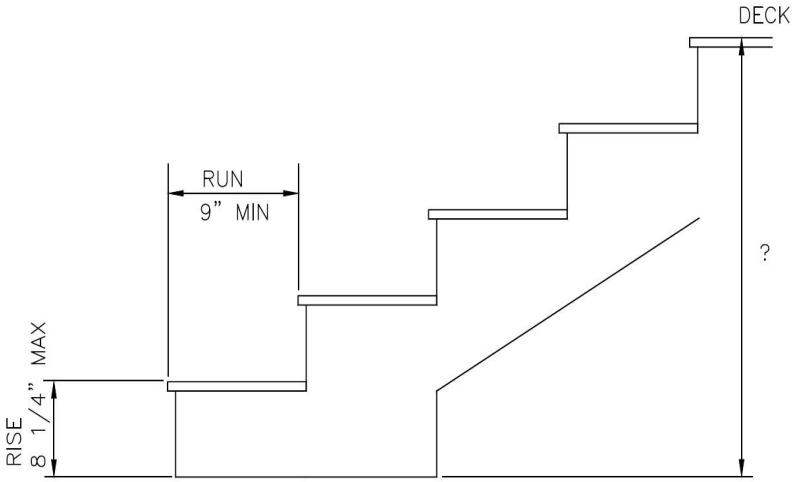

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Section View & Stair Detail

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