

Decks



Village of Hoffman Estates

Code Enforcement
1900 Hassell Road
Hoffman Estates, IL 60169
(847) 781-2631

www.hoffmanestates.org/permits

Permit Procedure:

- Complete and sign a *Building Permit Application* listing all contractors.
- All contractors must be registered, licensed and bonded accordingly.
- Submit 2 copies of a plat of survey with the deck location and scaled dimensions. Setbacks from the property lines, principal structure and other structures should also be indicated.
- Submit 2 copies of the framing plan containing:
 - If attached to a house, indicate exterior finish of home (brick, siding, etc.) and method of attaching the deck to house.
 - Specify overall dimensions of the deck, including post and beam locations with dimensions indicating beam spans between posts and clear span of joists. Also, specify the type and direction of decking as well as the nominal lumber sizes of all joists, beams, and posts.
 - Indicate the location of basement window wells, hose bibbs, electric and gas meters. Specify height of deck above grade.
 - Provide a detail of the stair width; tread depth, and riser height. Provide handrail and guardrail details.
 - Computer-generated framing plans from retail outlets that fail to provide required information will not be accepted.
 - Decks associated with swimming pools have special requirements for maintaining the pool barrier.

Deck Specifications:

- Piers
 - Minimum depth is 42 inches below grade.
 - Shall be sized to carry the load imposed (see table 3 for maximum load capacity).
 - Piers placed in the over dig of the foundation (assumed 5 feet from house wall) must be placed at footing depth.
- Posts
 - Shall be water resistant or pressure treated lumber.
 - Shall be secured on top of the concrete piers.
 - Are not permitted to be installed below grade.
- Beams
 - Splices in beams shall be made over a post or pier and splices in beams mid-span are prohibited.
 - All beams must be fastened together and bear directly on a post.
 - Shall be sized per Table 1.
- Floor Joists
 - Maximum 16 inches on center joists spacing when using 5/4 nominal lumber for the decking.
 - Joists may bear directly on beam or joist hangers shall be used to secure joists to beams.
 - Must be rated at 40 PSF live-load using pressure-treated lumber and shall be sized per Table 2.
- Stairs
 - 7 3/4 -inch maximum riser height and 10-inch minimum tread width. All treads must be the same depth.
 - All risers must be the same height.
 - Solid risers are required unless the opening is less than 4 inches.
 - Guardrails are required on stairs 30 or more inches above grade.
 - A grippable handrail is required at all stairs with 4 or more risers and handrails must return (see figure 2).
- Guardrails
 - Must prevent the passage of a 4-inch sphere and maximum spacing between balusters and intermediate rails must be less than 4 inches.
 - Minimum of 36" in height.
- Ledger Board
 - Shall be the same size lumber as the joist it is supporting.
 - Ledger board shall be installed using a minimum of 1/2 inch lag screws (washers required) or 1/2 inch bolts (washers required).
 - Bolts or lag screws with washers shall be placed 2 inches in from the bottom, top or ends of the deck ledgers.
 - Siding at the ledger board location must be removed prior to the installation of the ledger board.

- Ledger board shall be at least the same dimension as the joist attached to it (2x8 joist requires 2x8 ledger board) and shall be attached to the structure with a minimum 1/2 inch lag screw or bolt (washers required) spaced 10 – 30 inches on center, depending on the joist span, placed in a staggered pattern .
- Deck ledgers shall not be supported on stone/masonry veneer or any cantilever of the structure.
- Other Requirements
 - Joist hangers shall be installed by the use of approved nails or screws approved by the hanger manufacturer.
 - Deck must be designed to support a 40-pound per sq. ft. live load.
 - Guardrails greater than 42 inches in height are considered privacy screening and are limited to 40 linear feet.
 - The location of the deck on the property must meet all zoning requirements (contact Code Enforcement for details).
 - Structures must be kept out of area designated as utility, open space, or drainage easement on the Plat of Survey for property.

Inspection:

- A location/pier inspection is required prior to pouring concrete.
- A framing inspection after structure is complete prior to the placing of the decking. Stairs do not need to be installed.
- A final inspection is required.
- Call Code Enforcement at (847) 781-2631 to schedule appointments.

Figure 1

Deck Details

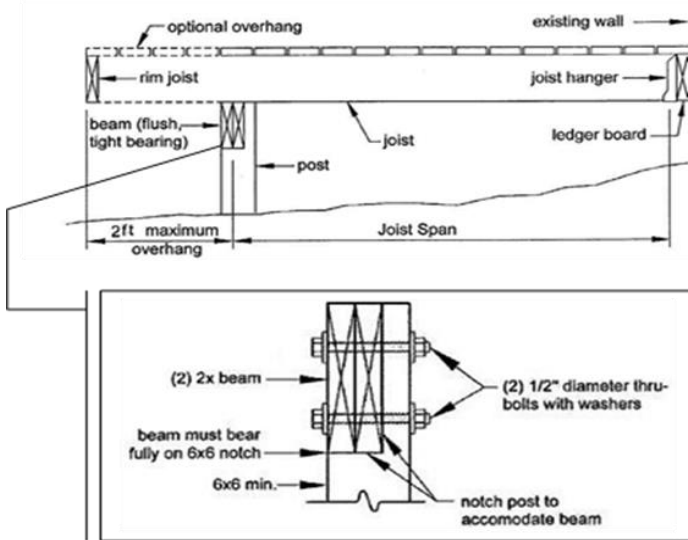


Table 1: Deck Beam Spans (ft. – in.)

SIZE ^a	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
	6	8	10	12	14	16	18
2 – 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
2 – 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
2 – 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
2 – 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
3 – 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
3 – 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
3 – 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
3 – 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10

Table 2: Joist Spans (ft.-in.)

SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER ^a (Inches)			SPACING OF DECK JOISTS WITH CANTILEVERS ^a (Inches)		
	12	16	24	12	16	24
2 × 6	9-11	9-0	7-7	6-8	6-8	6-8
2 × 8	13-1	11-10	9-8	10-1	10-1	9-8
2 × 10	16-2	14-0	11-5	14-6	14-0	11-5
2 × 12	18-0	16-6	13-6	18-0	16-6	13-6

Figure 2

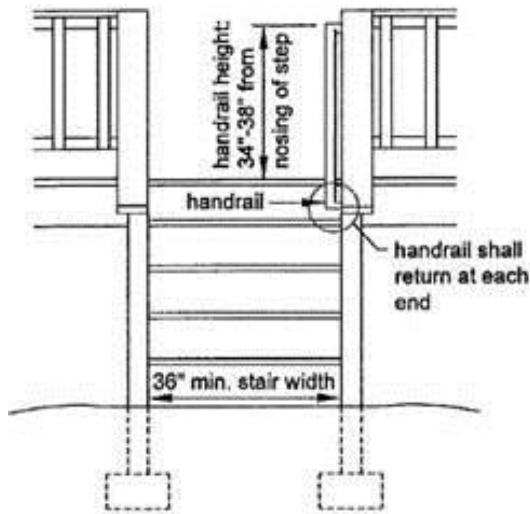


Table 3: Max Load Capacity

Pier diameter	Max Load
6 inches	600 lbs
8 inches	1050 lbs
10 inches	1650 lbs
12 inches	2370 lbs
14 inches	3300 lbs

^aAssumes 3,000 lbs soil capacity and deck weighs 50 lbs/sq. ft.