



HOMER GLEN BUILDING DEPARTMENT

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Deck Building Guide

Single Family Residential Uncovered Decks and Porches

APPLICATION:

- Submit a completed application
- Review Deck Code Requirements
- Complete the Deck Material Worksheet
- Show and submit location on plat of survey
- Submit three (3) sets of detailed plans of sufficient clarity showing all dimensions

CODE REQUIREMENTS:

- Review Accessory Structure Guidelines for Zoning Requirements regarding Size, Height, and Location
- Comply with Deck Code Requirements

INSPECTIONS:

- Post Holes (pre-pour)
- Rough Framing (pre-decking and rails)
- Final Inspection

DECK CODE REQUIREMENTS

Live Load- Based on forty (40 lbs) per square foot

Piers – Minimum depth is 42 inches below grade.
Minimum 10 inches in diameter
Minimum 2 inches above finished grade

Posts- Shall be water resistant material or pressure treated lumber.
Shall be secured on top of concrete piers.
Are not permitted to be installed below grade.
Posts 4 feet in height and under shall be a minimum of 4x4.
Posts greater than 4 feet in height shall be 6x6.

Beams- Splices in beams shall be made over a post or pier; splices in beams mid span are prohibited.
All beams must be fastened together and bear directly on a post.
All post to beam connections must be made with a galvanized metal framing connector, minimum ½ inches diameter.

Ledger Board-Must be at least same dimension as the joist it is supporting.
Ledger board shall be installed using a minimum ½ inch diameter fasteners

Floor Joists- Maximum 16 inches on center joist spacing when using 5/4 nominal lumber or manufactures specifications.
Must be rated at 40 PSF live-load using pressure treated lumber.
Joists may bear directly on beam or hang from beam with an approved framing connector.

Decking- Indicate the size and material being used
Composite materials must meet manufactures installation specifications.
Decking cannot cover basement emergency escape window.

Stairs- 7 ³/₄ inch maximum riser height and 10-inch minimum tread width.

All treads must be the same depth.

Risers may not vary more than 3/8 inch.

Guardrails are required on stairs 30 or more inches above grade.

A handrail which is independent of the guardrail is required at all stairs with 4 or more risers.

Guardrails- Maximum spacing on balusters and intermediate rails is 4 inches.

Guardrails are required around the perimeter of all decks 30 inches or more above grade.

Handrails- Handrails are required at any stair with four (4) or more risers.

Handrails are measured vertically from nosing of stair tread with a minimum height of thirty-four (34) inches and maximum height of thirty-eight (38) inches.

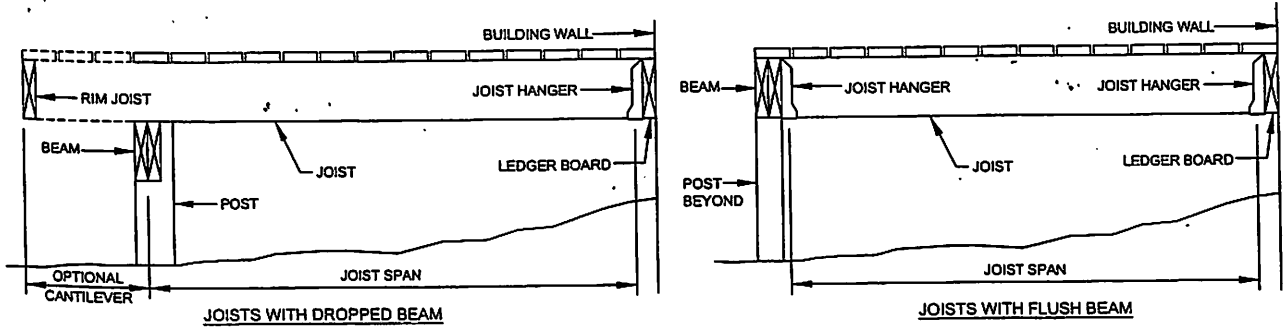
Handrails must be graspable.

Connectors- Hardware and fasteners need to be corrosion resistant.

Joist hangers shall be sized correctly and fastened using approved nails; screws are not permitted.

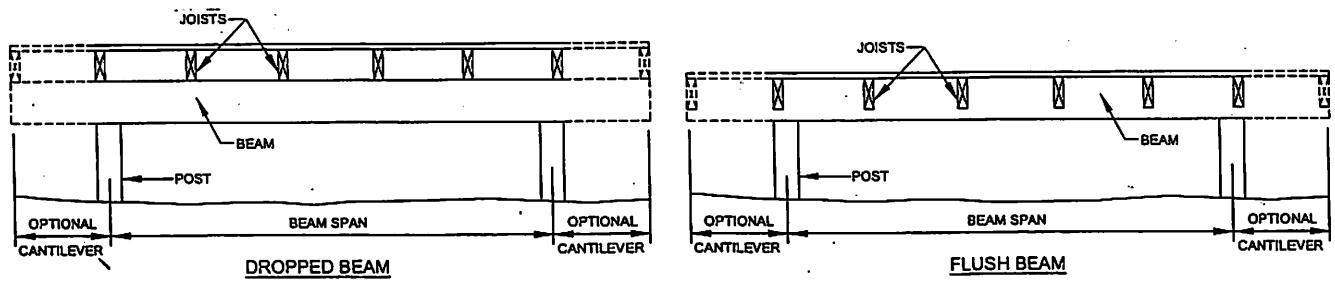
**TABLE R507.5
DECK JOIST SPANS FOR COMMON LUMBER SPECIES¹ (ft. - in.)**

| SPECIES ^a | SIZE | SPACING OF DECK JOISTS WITH NO CANTILEVER ^b (inches) | | | SPACING OF DECK JOISTS WITH CANTILEVERS ^c (inches) | | |
|--|--------|--|-------|-------|--|------|-------|
| | | 12 | 16 | 24 | 12 | 16 | 24 |
| Southern pine | 2 x 6 | 9-11 | 9-0 | 7-7 | 6-8 | 6-8 | 6-8 |
| | 2 x 8 | 13-1 | 11-10 | 9-8 | 10-1 | 10-1 | 9-8 |
| | 2 x 10 | 16-2 | 14-0 | 11-5 | 14-6 | 14-0 | 11-5 |
| | 2 x 12 | 18-0 | 16-6 | 13-6 | 18-0 | 16-6 | 13-6 |
| Douglas fir-larch ^d , hem-fir ^d spruce-pine-fir ^d | 2 x 6 | 9-6 | 8-8 | 7-2 | 6-3 | 6-3 | 6-3 |
| | 2 x 8 | 12-6 | 11-1 | 9-1 | 9-5 | 9-5 | 9-1 |
| | 2 x 10 | 15-8 | 13-7 | 11-1 | 13-7 | 13-7 | 11-1 |
| | 2 x 12 | 18-0 | 15-9 | 12-10 | 18-0 | 15-9 | 12-10 |



**TABLE R507.6
DECK BEAM SPAN LENGTHS^{a, b} (ft. - in.)**

| SPECIES ^c | SIZE ^d | DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet) | | | | | | |
|----------------------|-------------------|--|------|-------|------|------|------|------|
| | | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
| Southern pine | 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 |



**TABLE R507.8
DECK POST HEIGHT^a**

| DECK POST SIZE | MAXIMUM HEIGHT ^a |
|----------------|-----------------------------|
| 4 x 4 | 8' |
| 4 x 6 | 8' |
| 6 x 6 | 14' |

For SI: 1 foot = 304.8 mm.

a. Measured to the underside of the beam.

Deck Material Worksheet

(Please have worksheet completed)

- Indicate the deck size _____
- Indicate if the deck is ATTACHED or UNATTACHED
(Circle one)
- Indicate type of framing and decking materials being used. Cedar, Treated, Composite, other
- Indicate the size and type of the decking material
_____ x _____.
- Indicate the size of the ledger board 2 x _____, fastened with ½" bolts spaced _____ on center staggered
- Indicate the size of floor joists 2 x _____ @ 12" or 16" on center.
- Indicate the span of the floor joists _____, see Table 1, attached.
- Indicate the size of the beams 2 x _____. Two (2) carriage bolts are required at every beam/post intersection if not carried directly onto post.
- Indicate the span between post holes _____, see Table 2 attached.
- Indicate size of posts 4x4 or 6x6, as well as height from grade to deck _____.
- Indicate size of post holes. The minimum diameter is ten (10) inches with a minimum depth of 42" inches for a frost protected pier.
- Indicate the size of the guard rail _____. A minimum of 36" inches is required if deck is 30" or more above finished grade.
- Indicate the height of the hand rail _____. A minimum of 34" inches and maximum of 38" inches.
- Indicate the stair rise _____. Maximum rise is 7 ¾" inches.
- Indicate the stair tread _____. Minimum tread is 10 inches.
- Indicate the size and number of the stair stringers 2 x _____.