



# TYPICAL DECK SUPPORT ELEVATION VIEW

## STEPS/HANDRAILS:

STEPS: 8" MAX RISE, 11" MIN. TREADS, ALL STEPS MUST HAVE EQUAL RISE  
 HANDRAIL 2 1/4" MAX WIDTH, NEEDED WITH 4 OR MORE RISERS

## RAILING:

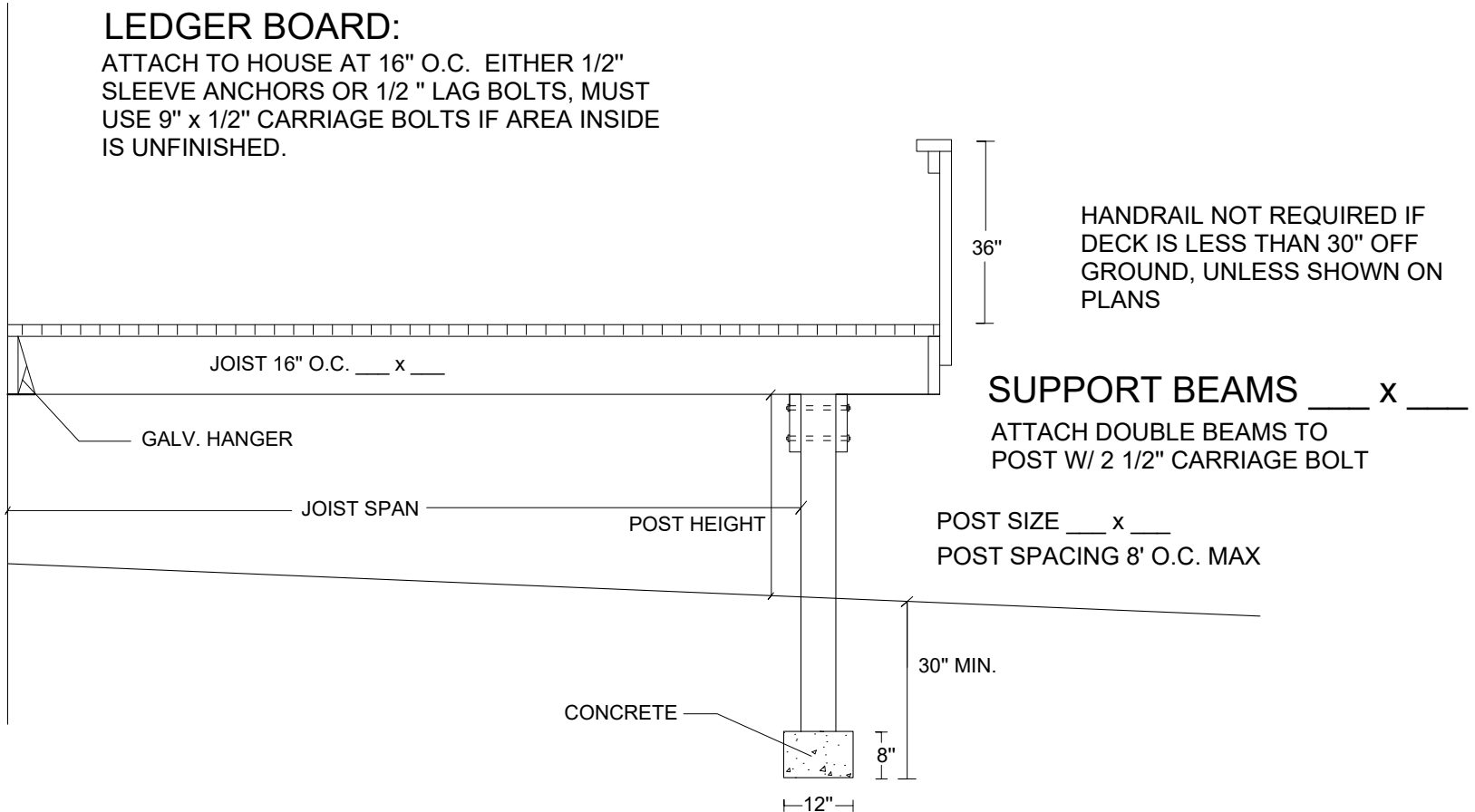
SPINDLES 4" MAX SPACING  
 42" HIGH COMMERCIAL  
 36" HIGH RESIDENTIAL  
 DESIGNED FOR 200LB CONCENTRATED  
 LOAD IN ANY DIRECTION

## LEDGER BOARD:

ATTACH TO HOUSE AT 16" O.C. EITHER 1/2" SLEEVE ANCHORS OR 1/2" LAG BOLTS, MUST USE 9" x 1/2" CARRIAGE BOLTS IF AREA INSIDE IS UNFINISHED.

CANNOT BE SUPPORTED BY BRICK VENEER

HOUSE



SUPPORT BEAMS \_\_\_ x \_\_\_

ATTACH DOUBLE BEAMS TO POST W/ 2 1/2" CARRIAGE BOLT

POST SIZE \_\_\_ x \_\_\_  
 POST SPACING 8' O.C. MAX

HANDRAIL NOT REQUIRED IF DECK IS LESS THAN 30" OFF GROUND, UNLESS SHOWN ON PLANS

# TYPICAL DECK OVERHEAD VIEW

HOUSE

## DECK INFO

POST SIZE = \_\_\_" x \_\_\_" @ \_\_\_' O.C.

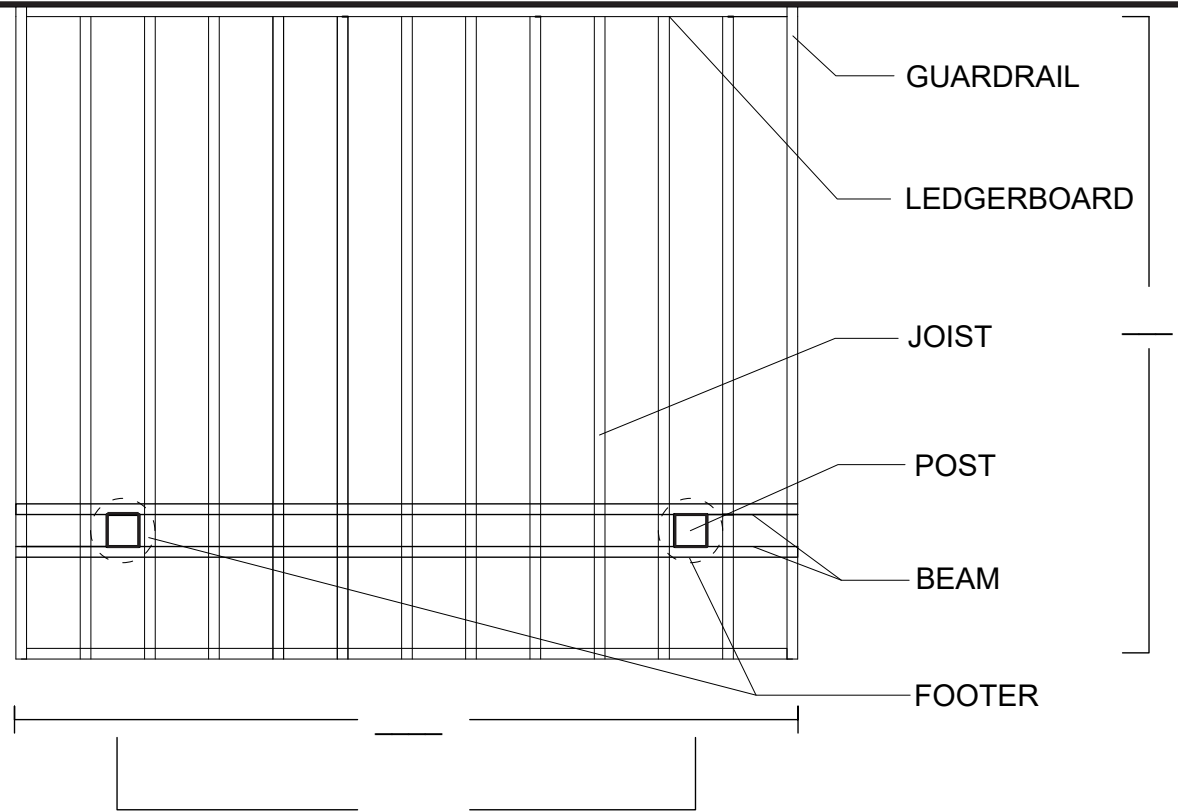
BEAM SIZE = 2 @ 2" x \_\_\_

JOIST SIZE = 2" x \_\_\_ @ \_\_\_" O.C.

FOOTER DIAMETER = \_\_\_"

FOOTER DEPTH = 30" MIN.

\*\*THESE ARE EXAMPLE DRAWINGS  
PLEASE CONSULT THE 2013 RESIDENTIAL  
CODE OF OHIO FOR A FULL LIST OF CODES.



# WARREN COUNTY BUILDING DEPARTMENT

406 Justice Drive, Room 167, Lebanon Ohio 45036

## RESIDENTIAL DECK BEAM TABLE

How to use this table: Pick longest load span (may include cantilever) follow across to beam span (distance between posts) and read number and size of beam.

### NUMBER AND 2" x SIZE OF BEAM\*

#### BEAM SPAN

LOAD SPAN	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'
6'	2- 6"	2- 6"	2- 6"	2- 8"	2- 8"	2- 10"	2- 10"	2- 12"	2- 12"	3- 12"	3- 12"
7'	2- 6"	2- 6"	2- 8"	2- 8"	2- 8"	2- 10"	2- 12"	2- 12"	2- 12"	3- 12"	3- 12"
8'	2- 6"	2- 6"	2- 8"	2- 8"	2- 10"	2- 12"	2- 12"	2- 12"	3- 12"	3- 12"	3- 12"
9'	2- 6"	2- 6"	2- 8"	2- 8"	2- 10"	2- 12"	2- 12"	3- 12"	3- 12"	3- 12"	**
10'	2- 6"	2- 6"	2- 8"	2- 10"	2- 10"	2- 12"	2- 12"	3- 12"	3- 12"	**	**
11'	2- 6"	2- 8"	2- 8"	2- 10"	2- 10"	2- 12"	3- 12"	3- 12"	3- 12"	**	**
12'	2- 6"	2- 8"	2- 8"	2- 10"	2- 12"	2- 12"	3- 12"	3- 12"	3- 12"	**	**
13'	2- 6"	2- 8"	2- 10"	2- 10"	2- 12"	3- 12"	3- 12"	3- 12"	**	**	**
14'	2- 6"	2- 8"	2- 10"	2- 10"	2- 12"	3- 12"	3- 12"	3- 12"	**	**	**

\* = Based on 40psf live load and 10psf dead load per RCO Table 301.5, & Table 502.3.1.(2), Southern Pine

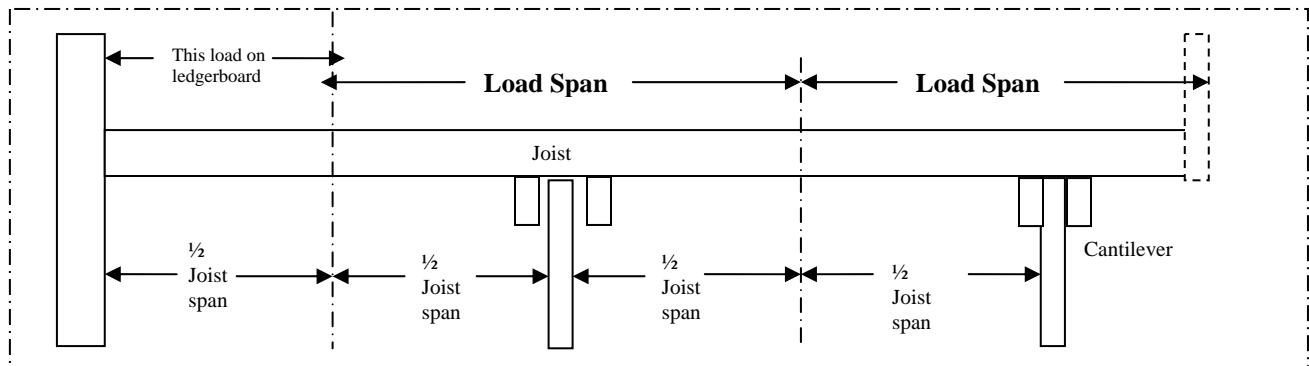
\*\* = Engineering required

#### NOTES:

1. All beams must be pressure treated (RCO 319.1)
2. All hardware must be Galvanized or Stainless Steel (RCO 319.3)
3. Pick longest of load spans, see below.

#### EXAMPLE:

A 12' wide deck includes a 2' cantilever and 16' long (using posts 8' on-center), load span is 7' (1/2 of the 10' joist span + 2 cantilever). Go across at the 7' load span and down from the desired 8' beam span (posts 8' on-center) intersects at 2 of 2" x 8" MINIMUM.



**TABLE 507.6  
DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft. - in.)**

SPECIES <sup>a</sup>	SIZE	ALLOWABLE JOIST SPAN <sup>b</sup>			MAXIMUM CANTILEVER <sup>c,f</sup>		
		SPACING OF DECK JOISTS (Inches)			SPACING OF DECK JOISTS WITH CANTILEVERS <sup>e</sup> (Inches)		
		12	16	24	12	16	24
Southern pine	2 × 6	9-11	9-0	7-7	1-3	1-4	1-6
	2 × 8	13-1	11-10	9-8	2-1	2-3	2-5
	2 × 10	16-2	14-0	11-5	3-4	3-6	2-10
	2 × 12	18-0	16-6	13-6	4-6	4-2	3-4
Douglas fir-larch <sup>d</sup> , hem-fir <sup>d</sup> , spruce-pine-fir <sup>d</sup> ,	2 × 6	9-6	8-8	7-2	1-2	1-3	1-5
	2 × 8	12-6	11-1	9-1	1-11	2-1	2-3
	2 × 10	15-8	13-7	11-1	3-1	3-5	2-9
	2 × 12	18-0	15-9	12-10	4-6	3-11	3-3
Redwood, western cedars, ponderosa pine <sup>e</sup> , red pine <sup>e</sup>	2 × 6	8-10	8-0	7-0	1-0	1-1	1-2
	2 × 8	11-8	10-7	8-8	1-8	1-10	2-0
	2 × 10	14-11	13-0	10-7	2-8	2-10	2-8
	2 × 12	17-5	15-1	12-4	3-10	3-9	3-1

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

- a. No. 2 grade with wet service factor.
- b. Ground snow load, live load = 40 psf, dead load = 10 psf,  $L/\Delta = 360$ .
- c. Ground snow load, live load = 40 psf, dead load = 10 psf,  $L/\Delta = 360$  at main span,  $L/\Delta = 180$  at cantilever with a 220-pound point load applied to end.
- d. Includes incising factor.
- e. Northern species with no incising factor.
- f. Cantilevered spans not exceeding the nominal depth of the joist are permitted.

**TABLE 507.7  
MAXIMUM JOIST SPACING FOR DECKING**

DECKING MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM ON-CENTER JOIST SPACING	
	Decking perpendicular to joist	Decking diagonal to joist <sup>a</sup>
1½ -inch-thick wood	16 inches	12 inches
2-inch-thick wood	24 inches	16 inches
Plastic composite	In accordance with Section 507.2	In accordance with Section 507.2

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.01745 rad.

- a. Maximum angle of 45 degrees from perpendicular for wood deck boards