TYPICAL SELF SUPPORTING DECK ELEVATION VIEW
(NOT ATTACHED TO HOUSE)

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
SPINDLES 4” MAX SPACING
42” HIGH COMMERCIAL
36” HIGH RESIDENTIAL
DESIGNED FOR 200LB CONCENTRATED LOAD IN ANY DIRECTION
HANDRAIL NOT REQUIRED IF DECK IS LESS THAN 30” OFF GROUND, UNLESS SHOWN ON PLANS

RAILING:
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.

SUPPORT BEAMS ___ x ___
ATTACH DOUBLE BEAMS TO POST W/ 2 1/2” CARRIAGE BOLT
POST SIZE ___ x ___
POST SPACING 8” O.C. MAX

BASEMENT
CONCRETE
30” MIN.
T 8”
12”
WIDTH UNKNOWN
**LOOSE BACKFILL MATERIAL
**SELF SUPPORTING DECKS ARE NOT PERMITTED ON HOUSES LESS THAN 10 YEARS OLD WITH B BASEMENTS.
**DECK FOOTER CANNOT BE IN LOOSE BACKFILL MATERIAL

CANNOT BE SUPPORTED BY BRICK VENEER

HOUSE
JOIST 16” O.C. ___ x ___
JOIST SPAN

36”

**LOOSE BACKFILL MATERIAL

TYPICAL SELF SUPPORTING DECK ELEVATION VIEW
(NOT ATTACHED TO HOUSE)
**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.

**HOUSE**
- CANNOT BE SUPPORTED BY BRICK VENEER

**SUPPORT BEAMS ___ x ___**
- ATTACH DOUBLE BEAMS TO POST W/ 2 1/2" CARRIAGE BOLT

**POST SIZE ___ x ___**
- POST SPACING 8' O.C. MAX

**CONCRETE**
- 12"

**POST HEIGHT**
- 30" MIN.

**JOIST SPAN**
- 12"

**JOIST 16" O.C. ___ x ___**

**GALV. HANGER**

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

**36"**
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***

<table>
<thead>
<tr>
<th>LOAD SPAN</th>
<th>BEAM SPAN 4’</th>
<th>5’</th>
<th>6’</th>
<th>7’</th>
<th>8’</th>
<th>9’</th>
<th>10’</th>
<th>11’</th>
<th>12’</th>
<th>13’</th>
<th>14’</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’</td>
<td>2- 6”</td>
<td>2- 6”</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
</tr>
<tr>
<td>7’</td>
<td>2- 6”</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 8”</td>
<td>2- 8”</td>
<td>2- 10”</td>
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<td>2- 12”</td>
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<tr>
<td>8’</td>
<td>2- 6”</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
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<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
</tr>
<tr>
<td>9’</td>
<td>2- 6”</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12” **</td>
</tr>
<tr>
<td>10’</td>
<td>2- 6”</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12” ** **</td>
<td></td>
</tr>
<tr>
<td>11’</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12” ** **</td>
<td></td>
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<td>12’</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12” ** **</td>
<td></td>
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</tr>
<tr>
<td>13’</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12” ** ** **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14’</td>
<td>2- 6”</td>
<td>2- 8”</td>
<td>2- 10”</td>
<td>2- 12”</td>
<td>3- 12”</td>
<td>3- 12”</td>
<td>3- 12” ** ** ** **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* = 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’ (½ 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.

---

This load on ledgerboard

Load Span

Joist

½ Joist span

½ Joist span

½ Joist span

½ Joist span

½ Joist span

Cantilever

---

{Building Dept.} {Decks} {Print} {Joist Table} {Post & Footer Table} {Stairway Info}
WARREN COUNTY
BUILDING DEPARTMENT
406 Justice Drive, Room 167, Lebanon Ohio 45036

RESIDENTIAL DECK JOIST TABLE

How to use this table: Pick joist spacing (see note #4) and grade of wood (# 2 is typical, Southern Pine) go across spacing until desired span is found and look up to minimum size joist. See notes below and example.

MAXIMUM SPAN IN FEET AND INCHES*

<table>
<thead>
<tr>
<th>SPACING</th>
<th>GRADE</th>
<th>2” x 6”</th>
<th>2” x 8”</th>
<th>2” x 10”</th>
<th>2” x 12”</th>
</tr>
</thead>
<tbody>
<tr>
<td>12”</td>
<td>2</td>
<td>10’ 9”</td>
<td>14’ 2”</td>
<td>18’ 0”</td>
<td>21’ 9”</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>10’ 11”</td>
<td>14’ 5”</td>
<td>18’ 5”</td>
<td>22’ 5”</td>
</tr>
<tr>
<td>16”</td>
<td>2</td>
<td>9’ 9”</td>
<td>12’ 10”</td>
<td>16’ 1”</td>
<td>18’ 10”</td>
</tr>
<tr>
<td>TYPICAL</td>
<td>1</td>
<td>9’ 11”</td>
<td>13’ 1”</td>
<td>16’ 9”</td>
<td>20’ 4”</td>
</tr>
<tr>
<td>19.2”</td>
<td>2</td>
<td>9’ 2”</td>
<td>12’ 1”</td>
<td>14’ 8”</td>
<td>17’ 2”</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>9’ 4”</td>
<td>12’ 4”</td>
<td>15’ 9”</td>
<td>19’ 2”</td>
</tr>
<tr>
<td>24”</td>
<td>2</td>
<td>8’ 6”</td>
<td>11’ 0”</td>
<td>13’ 1”</td>
<td>15’ 5”</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>8’ 8”</td>
<td>11’ 5”</td>
<td>14’ 7”</td>
<td>17’ 5”</td>
</tr>
</tbody>
</table>

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

NOTES:
1. All joists must be pressure treated (RCO 319.1)
2. All hardware must be Galvanized or Stainless Steel (RCO 319.3)
3. All joists must be attached to ledgerboard and beam with an approved bracket
4. Joist spacing depends on decking type; 5/4” x 6” = 19.2” max, 2” x 6” = 24” max. Check with manufacturer of deck planking for recommended joist spacing.
5. SPANS ARE MAXIMUM PERMITTED AND MAY FEEL SPRINGY WHEN WALKED ACROSS. RECOMMEND UPSIZING OR SHORTEN SPAN/SPACING.

EXAMPLE:
A 12’ wide deck with a 2’ cantilever (a 10’ span), Grade # 2 Southern Pine and a 16” spacing of Joists. Drop down to 16” spacing and across Grade 2 lumber until you meet a least a 10’ span (9’ 9” is to short and 12’ 10” is OK) now move straight up to size of joist and this is 2” x 8”. Recommend upsizing to 2” x 10”.