

7. Maximum Height of Deck Support Posts as follows:

Post Size*	Max. Post Height**
4 x 4	8' - 0
6 x 6	20' - 0
***	over 20' - 0

\* This table is based on No. 2 treated Southern Pine posts. Maximum tributary area is based on 128 total square feet which may be located at different levels.  
 \*\* From top of footing to bottom of girder.  
 \*\*\* Decks with post heights over 20'-0" shall be designed and sealed by a Professional Engineer or Architect.

8. Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability.

A. When the deck floor height is less than 4'-0" and the deck is attached to the structure in accordance with Section (4) above, lateral bracing is not required.

B. 4 x 4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder with one 5/8 inch hot dipped galvanized bolt at each end of the brace.

C. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the posts in accordance with the following:

Post Size	Max. Tributary Area	Max. Post Height	Embedment Depth	Concrete Diameter
4 x 4	48 SF	4'-0"	2'-6"	1'-0"
6 x 6	120 SF	6'-0"	3'-6"	1'-8"

D. 2 x 6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2 x 6s shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt at each end of each bracing member.

9. Floor joists for exterior decks may be cantilevered per table R502.3.3(1) of the IRC.

**For Guard Rails, Stair Rails and Stair Construction see: IRC Sections R311& R312**



## Decks

A Guide to Building Your Dream Deck



Winston-Salem/Forsyth County  
 PLANNING & DEVELOPMENT  
 SERVICES DEPARTMENT

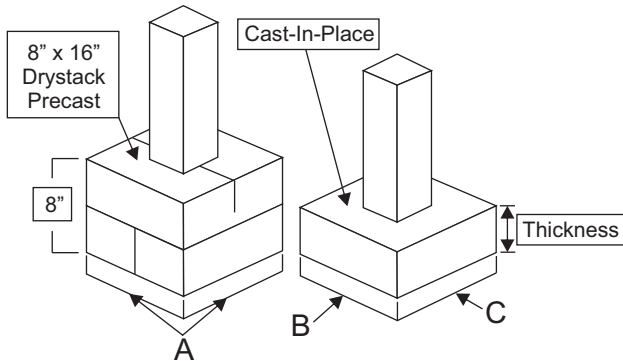
Bryce A. Stuart Municipal Building  
 Suite 328  
 100 E. First Street  
 Winston-Salem, NC 27101  
 P.O. Box 2511  
 Winston-Salem, NC 27102-2511

Phone: (336) 727-2624  
 Fax: (336) 727-2792

# Deck Guidelines

1. A deck is an exposed exterior wood floor structure which may be attached to the structure or freestanding. Roofed porches (open or screened-in) may be constructed using these provisions. Computer deck design program printouts may be accepted by the Code Enforcement Official.

2. Support posts shall be supported by a footing.



FOOTING CHART				
SIZE (inches)		TRIBUTARY AREA (sq. ft.)	THICKNESS (inches)	
AxA	BxC	(square foot)	Precast	Cast in Place
8x16	8x16	36	4	6
12x12	12x12	40	4	6
16x16	16x16	70	8	8
	16x24	100		8
	24x24	150		8

3. When attached to a structure, the structure to which attached shall have a treated wood band for the length of the deck, or corrosion resistant flashing shall be used to prevent moisture from coming in contact with the untreated framing of the structure. Aluminum flashing may not be used in conjunction with deck construction. The deck band and the structure band shall be constructed in contact with each other except on brick veneer structures and where plywood sheathing is

required and properly flashed, (when plywood is required, use pressure treated plywood). Siding shall not be installed between the structure and the deck band. If attached to a brick structure, neither flashing nor a treated band for the brick structure is required. In addition, the treated deck band shall be constructed in contact with the brick veneer.

4. When the deck is supported at the structure by attaching the deck to the structure, the following attachment schedules shall apply for attaching the deck band to the structure.

## A. All Structures Except Brick Veneer Structures:

FASTENERS	8' MAX JOIST SPAN	16' Max JOIST SPAN
5/8" Hot Dipped Galv. Bolts and Washers* -and- 12d Common Hot Dipped Galv. Nails**	1@3'-6" o.c.  -and- 2@8" o.c.	1@1'-8" o.c.  -and- 3@6" o.c.

\*Minimum edge distance for bolts is 2-1/2 inches

\*\*Nails must penetrate the supporting structure band a minimum of 1-1/2 inches

## B. Brick Veneer Structures:

FASTENERS	8' MAX JOIST SPAN	16' Max JOIST SPAN
5/8" Hot Dipped Galv. Bolts*	1@2'-4" o.c.	1@1'-4" o.c.

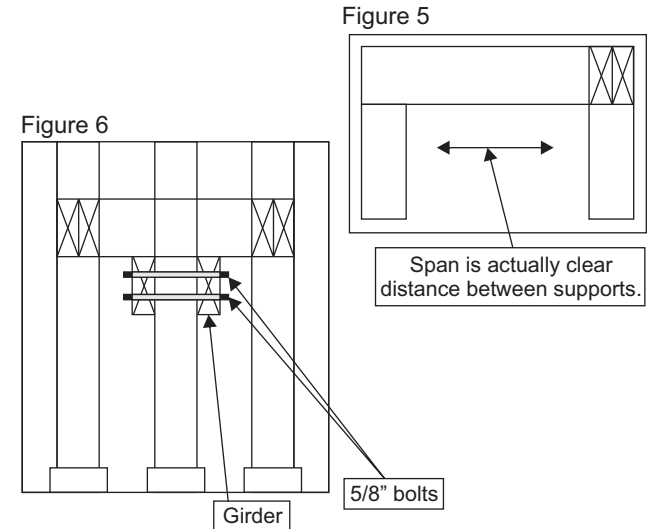
\*Minimum edge distance for bolts is 2-1/2 inches

C. Masonry Ledge Support: If the deck band is supported by a minimum of 1/2 inch masonry ledge along the foundation wall. 5/8 inch hot dipped galvanized bolts with washers spaced at 48 inches o.c. may be used for support.

D. Other means of support such as joist hangers may be connected to treated house band and properly flashed.

5. Girders shall bear directly on posts or be connected to the side of posts with 2-5/8 inch hot dipped galvanized bolts.

Girder Tables from the Building Code for #2 SYP and a 40 LB. Live Load:



NOTE: Two 5/8" bolts at each post

Girder Size	2-2x8	2-2x10	2-2x12
Girder Span	4'	6'	8'
Deck Depth	12'	12'	12'

Span tables from the Building Code for 40 lb. Live Load for #2 SYP:

Joist Size	Spaced@	Will Span	Joist Size	Spaced@	Will Span
2 x 6	12" OC	10'-9"	2 x 10	12" OC	18'
	16" OC	9'-9"		16" OC	16'-1"
	24" OC	8'-6"		24" OC	13'-1"
2 x 8	12" OC	14'-2"	2 x 12	12" OC	21'-9"
	16" OC	12'-10"		16" OC	18'-10"
	24" OC	11'		24" OC	15'-5"

6. Floor decking shall be No. 2 grade treated Southern Pine or equivalent. The minimum floor decking thickness shall be as follows:

Joint Spacing	Decking (Nominal)
12" O.C.	1" S4S
16" O.C.	1" T&G
24" O.C.	1-1/4" S4S
32" O.C.	2" S4S