

## SECTION 4

**Rail Posts** cannot exceed 8' o.c. spacing shall be attached with 2- 3/8" Galv. Bolts with nut & washer to outer band

**Stair Handrail & Guards** Height to be between 34" - 38". Pickets on stairs cannot exceed 4-3/8" spacing. Hand rail must be able to be gripped. 2x6 used as top rail will need additional handrail added. 2x4 is acceptable. No handrail required for 3 or less risers.

**Treads and risers** 8 1/4" Max rise & 9" min. tread depth. Stairways must be minimum 36" wide.

**Lateral Bracing** See section 3. Can use embedment method for 4x4's up to 4' off the ground and 6x6 post up to 6' off the ground.

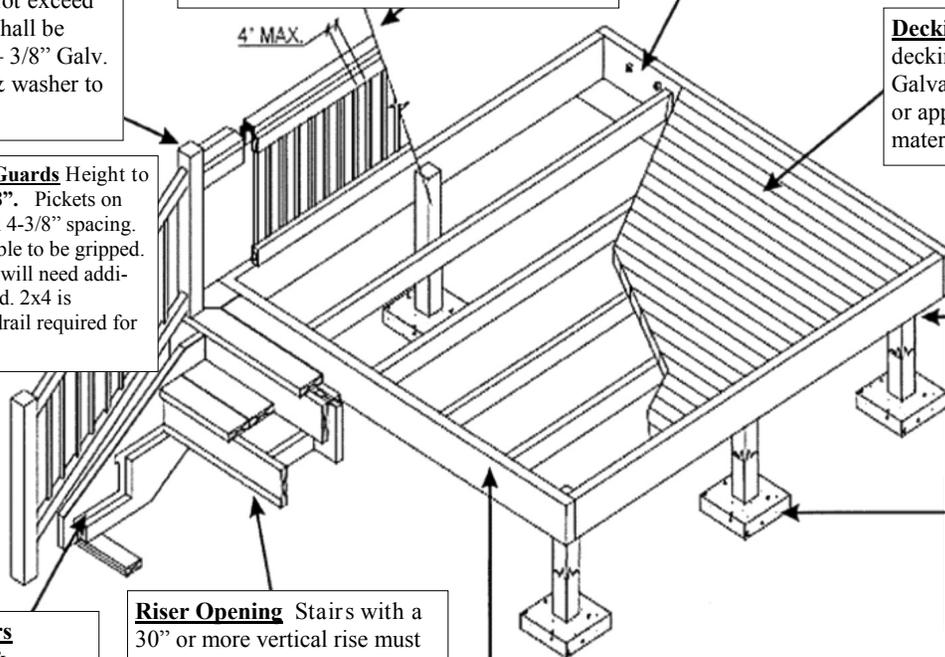
**Guards** Minimum 36" are required where deck surface is 30" or more from ground. Pickets cannot allow 4" object to pass through. Horizontal rail opening limit is 6". Post and top rail to support 200 lb. push

**Attachment** See section 1 For brick or masonry veneer refer to code book

**Decking** #2 SYP 5/4" decking attached with 2- 8d Galvanized nails at each joist or approved screws. Other material per mfg. instructions

**Deck Post** over 48" require secure attachment using brackets or notching post.

**Footers** refer to section 2 for sizing. Bottom of footing must be 12" below grade.



**Riser Opening** Stairs with a 30" or more vertical rise must have solid risers or have openings that prevent a 4" object from passing.

**Floor Joist Cantilever** See table 502.3.3(1&2) in Code Book

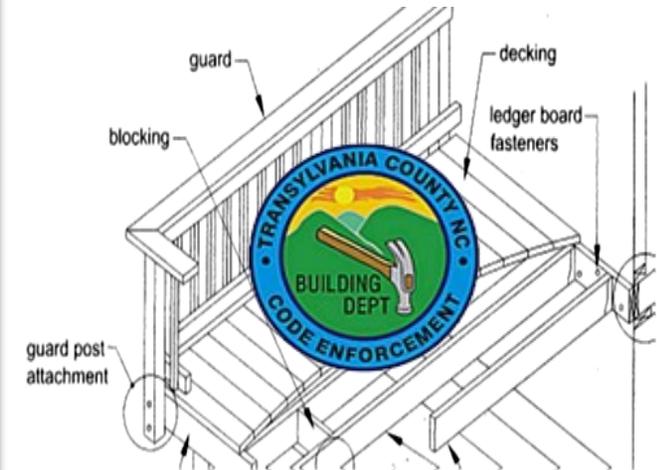
Exterior Girder Clear Spans

Deck Width	Nominal Lumber Size			
	2x6	2x8	2x10	2x12
20' (2ply)	3-11	5-0	6-1	7-1
20' (3ply)	—	6-3	7-7	8-10
20' (4ply)	—	—	8-9	10-2

\*Partial reproduction of Table R502.5(1) at 30 ground snow load and roof ceiling and 1 clear span floor. Deck width is 20' or less measured in the direction of joists span.

\*All ply's of girders must break over post

# DECK GUIDE



- Section 1- Attachment
- Section 2- Size your Footings
- Section 3- Bracing and Posts
- Section 4- Diagram
- Section 5- Floor Joist Spans

Span charts for southern yellow pine lumber have been revised. For girder and #1 lumber spans refer to new span charts available on our website: <http://www.transylvaniacounty.org/permitting.htm>

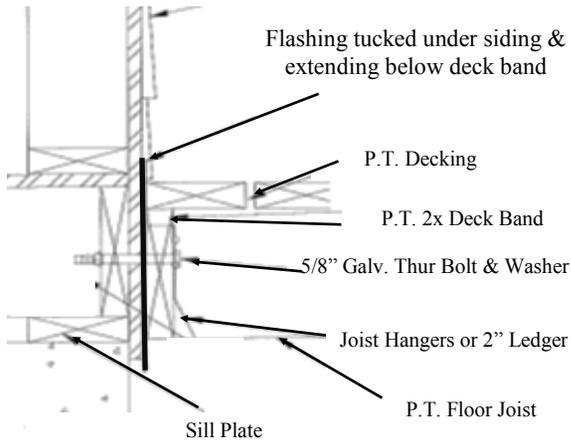
## SECTION: 5

### FLOOR JOIST SPANS FOR #2 SYP TREATED

Spacing	2 x 6	2 x 8	2 x 10	2 x 12
12" o.c.	10'3"	13'6"	16'2"	19'1"
16" o.c.	9'4"	11'10"	14'	16'6"
24" o.c.	8'6"	10'10"	12'10"	15'1"

**Transylvania County  
Building Permitting and Enforcement**  
98 East Morgan Street  
Brevard, NC 28712  
(828) 884-3209  
8am – 4:30pm

## SECTION 1 ATTACHMENT



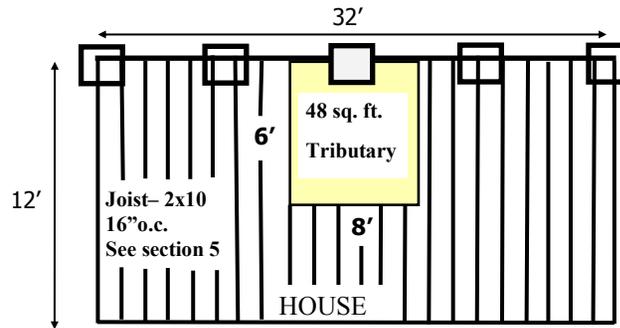
FASTNERS	Joist Span	
	8' - 16'	16' - 24'
5/8" Thru Bolt w/ washers	1 @ 3'6" o.c.	1 @ 1'8" o.c.
Nails 16 or 12d	2 @ 8" o.c.	3 @ 6" o.c.

**Flashing:** Corrosion resistant flashing shall be used to prevent moisture from coming in contact with the untreated framing of the structure. Aluminum flashing shall not be used.

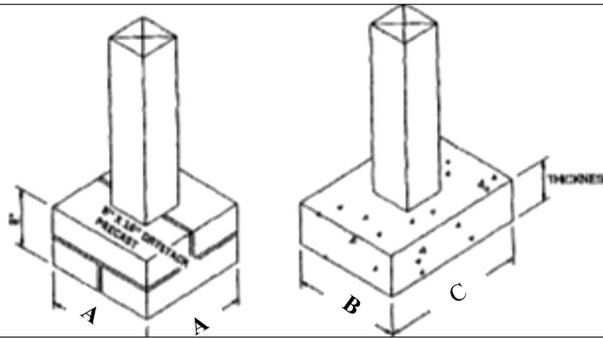
**Note:** This brochure only highlights information that can be found in Appendix M of the NC Residential Building Code.

## SECTION 2 FOOTINGS

Step 1: Figure your Tributary Area



The pier in this example shares half of the 12' Joist load = (6') and 4' of each adjacent girder = (8' total)

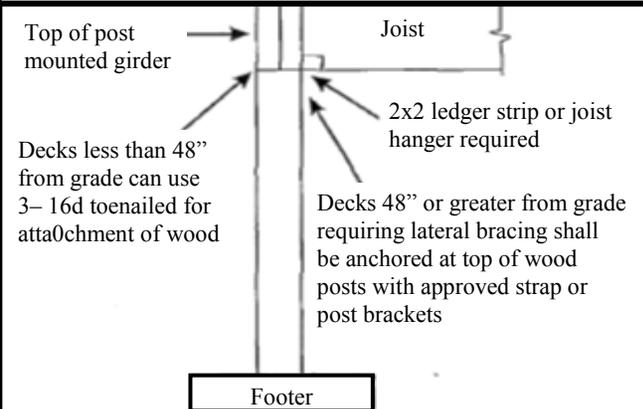


Step 2: Match footing size to tributary area. In the above example 6' x 8' = 48 sq. ft. Code requires a min. of a 16" x 16" x 8" pier

Size		Tributary	Thickness	
A X A	B X C	Max SQ. FT.	Precast	Cast in Place
8 X 16	8 X 16	36	4	6
12 X 12	12 X 12	40	4	6
16 X 16	16 X 16	70	8	8
	16 X 24	100		8
	24 X 24	150		8

(Frost Line: Bottom of footing ≥ 12" below grade)

## SECTION 3 BRACING & POST



### Post Height

Post Size	Max. Post Height
4 x 4	8'
6 x 6	20'

A) Table based on No. 2 Southern Pine Posts.  
B) Measured from top of footing to bottom of girder.  
C) Post heights exceeding the above shall be designed.

**Freestanding** decks requiring bracing shall be installed in both directions off each post

**Decks attached** to structure require diagonal bracing only at outside girder line parallel with structure

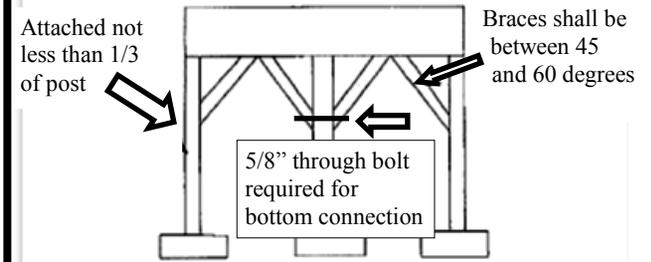


FIGURE AM109.1