



**Inspections Department**

**Mark A. Fleet, Building Code Official**

**540/665-5650**

**Fax 540/678-0682**

**DECK  
BUILDING PERMIT APPLICATION REQUIREMENTS**

1. A completed application that includes:
  - The name of the current owner of the property or lot and the tax map identification number (this may be found on your real estate bill)
  - Directions to the location of the property or lot
  - Setbacks: Actual distance (measured in feet) from the proposed deck to the property line
  - A daytime phone number so that you may be contacted with questions
2. A recorded plat or drawing of the property.
  - Please mark where the deck will be located on the plat. Place the actual distance of the proposed deck on the plat and indicate, in feet, the distance to all property lines
3. One Complete set of structural plans that contain the following information
  - Post size and spacing
  - Footing size and location
  - Floor framing size, spacing, and direction
  - Height, measured from grade to the walking surface of the deck
  - Completed Frederick County Typical Deck Detail

*The use of the Frederick County Deck Detail is encouraged as a supplement to your plans but may not be sufficient to explain your project entirely. If your deck is not a rectangle/square, please provide and framing layout showing the joist direction, beam location, and foundation/ pier locations*

Additional information may be required depending on the specifics of your project

Your permit application and plans will be reviewed by:

- a) the Zoning Department to ensure compliance with setback requirements and
- b) the Inspections Department to ensure compliance with 2018 Virginia Residential Code

You will be contacted when your permit has been approved and is ready to be issued or, if there is any additional information required to complete the review process.

Should you have any questions regarding your plans after the permit has been issued, please call 540-665-5650.

DATE: \_\_\_\_\_

PERMIT # \_\_\_\_\_

**APPLICATION FOR DECK PERMIT**

Owner's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

• Owner's are allowed to act as their own contractor provided DPOR Title 54 Owner Contractor Definition is met.

\*Contractor's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**\*NOTE:** If you have never obtained permits in Frederick County please attach a copy of your state contractor's license. Any jobs over \$25,000 will also need a Frederick County Business License unless you are building in the Town of Middletown or the Town of Stephens City. You would then need that town's business license. All businesses in Frederick County are required to have a Frederick County Business Licenses regardless of the job value.

**LOCATION OF PROPERTY**

Subdivision: \_\_\_\_\_ Lot Number \_\_\_\_\_

Address: \_\_\_\_\_

Tax Map Identification Number of the Property: \_\_\_\_\_

Directions to the job site: \_\_\_\_\_

**SETBACKS (Please indicate the actual distance measured from the structure to the property lines)**

Front \_\_\_\_\_ Rear \_\_\_\_\_ Right \_\_\_\_\_ Left \_\_\_\_\_

**TYPE OF PERMIT APPLYING FOR:**

Building  Electrical Number of Switches \_\_\_\_\_ Lights \_\_\_\_\_ Receptacles \_\_\_\_\_

DECK DIMENSIONS: \_\_\_\_\_ x \_\_\_\_\_ TOTAL SF: \_\_\_\_\_ LOCATION: Front/Rear/Side (circle one)

Covered/Uncovered (circle one) JOB VALUE: \_\_\_\_\_

I hereby agree to comply with all provisions of the Virginia Uniform Statewide Building Code and the Zoning Ordinance as adopted by the County of Frederick.

Applicant (signature): \_\_\_\_\_

(print): \_\_\_\_\_

Applicant is: \_\_\_\_\_ Contractor \_\_\_\_\_ Owner \_\_\_\_\_ Agent\* \_\_\_\_\_ Engineer/Architect

**Permit Representative to be contacted for permit/plan questions or permit status:**

Name \_\_\_\_\_

Phone Number \_\_\_\_\_ EMAIL ADDRESS: \_\_\_\_\_



My Deck Is:

FREE STANDING WITH TWO GIRDERS

SUPPORTED AT THE HOUSE WALL WITH A LEDGER - LATERAL BRACING IS REQUIRED

EXTERIOR GROUND FAULT RECEPTICAL LOCATED ON THE DECK?

YES  NO

This requirement is for new house construction. See VEBC, Part II of the USBC, Section 102.2.2 for code requirements to an existing house & deck alteration

IS A HOT TUB TO BE INSTALLED ON DECK?

YES - STOP!  NO

Typical deck details shall not be used for Decks higher than Fourteen (14) foot in height from grade, nor Decks Supporting Hot Tubs. Please submit design with beam locations and supports, as well as, Manufacture information on hot tub. All residential decks surrounding a POOL must comply with the 2015 International Swimming Pool & Spa code for barriers and decks.

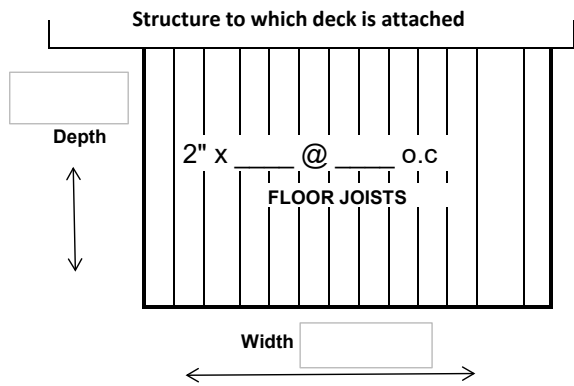
For Ledger Board Attachment, please identify the existing floor system inside the home

Dimensional Lumber (typical 2 x wood)  TJI Engineered Floor  Laminated Veneered Lumber Product (LVL)

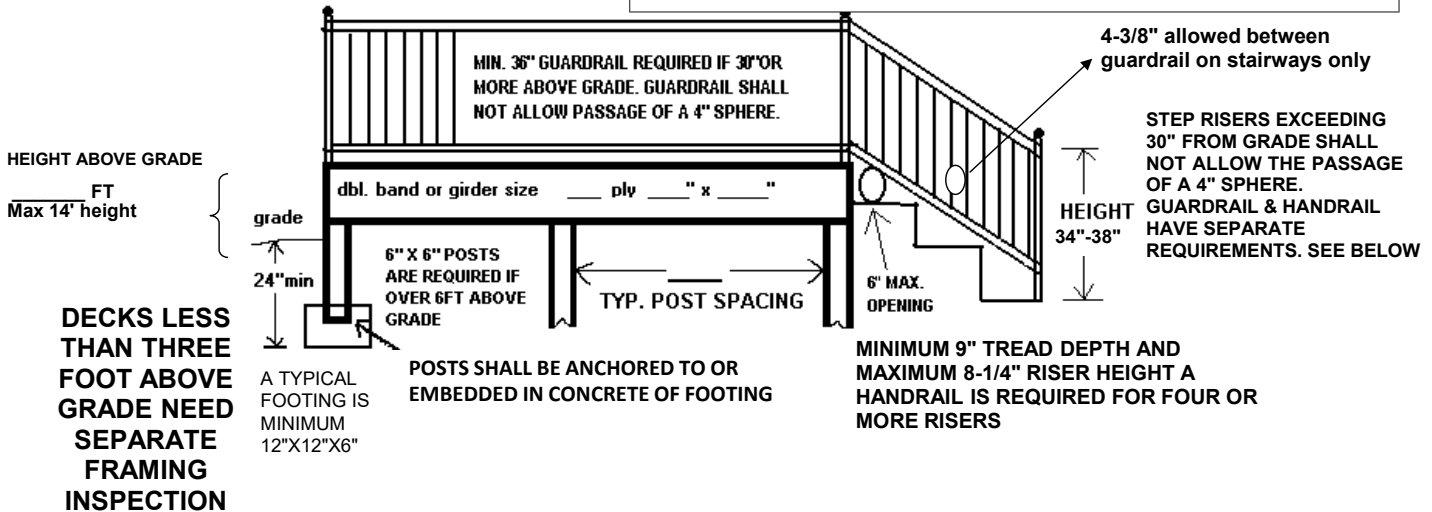
Open Web Trusses  OTHER - \_\_\_\_\_  
Please specify type

Fasteners for pressure preservative and fire-retardant treated wood shall be hot dipped galvanized steel, stainless steel, silicon bronze or copper.

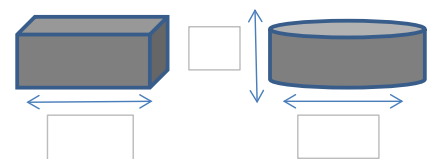
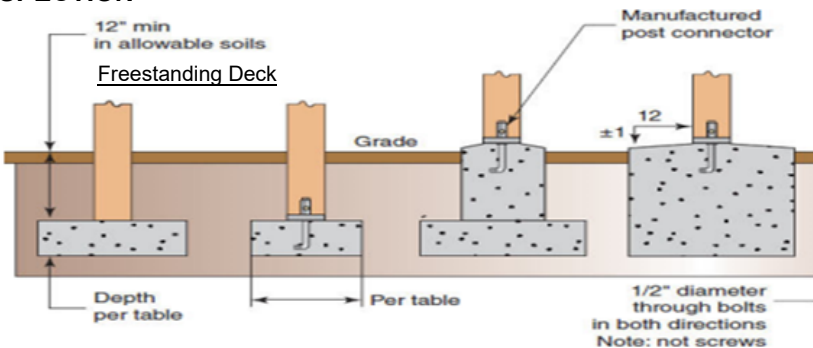
If design of deck is not square or rectangular, submit overhead view showing beam location, beam length, post location, joist size, and joist direction



FOR OFFICE USE ONLY



DECKS LESS THAN THREE FOOT ABOVE GRADE NEED SEPARATE FRAMING INSPECTION



Indicate Size of Footings

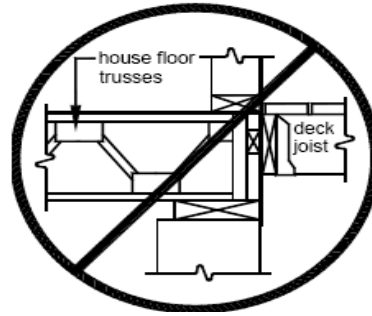
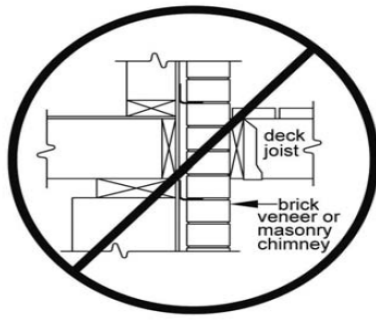


Table R507.2

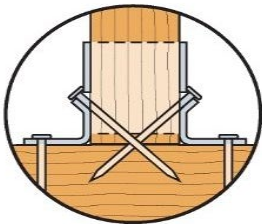
DECK LEDGER CONNECTION TO BAND JOIST<sup>A, B</sup>

(Deck live load = 40 psf, deck dead load = 10 psf, snow load ≤ 40 psf)

JOIST SPAN	6' or Less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
Connection Details	On Center Spacing of fasteners <sup>D, E</sup>						
1/2-inch diameter lag screw w/ 1/2-inch maximum sheathing <sup>c, d</sup>	30	23	18	15	13	11	10
1/2 inch diameter bolt with 1/2-inch maximum sheathing <sup>d</sup>	36	36	34	29	24	21	19
1/2 inch diameter bolt with 1-inch maximum sheathing <sup>e</sup>	36	36	29	24	21	18	16

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

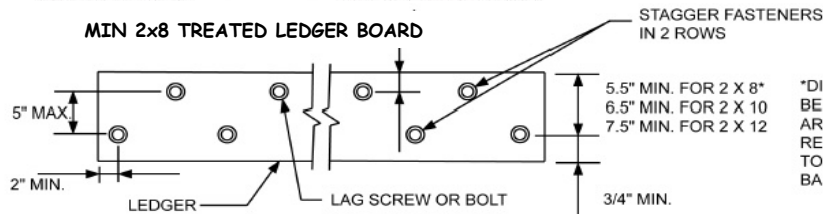
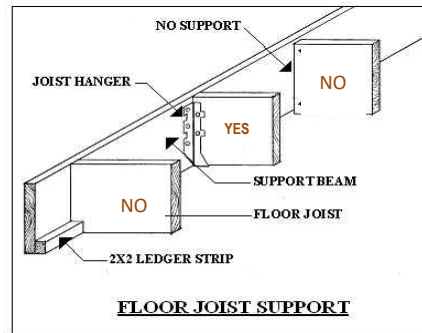
- a. Ledgers shall be flashed in accordance with Section R703.8 to prevent water from contacting house band joist
- b. Snow load shall not be assumed to act concurrently with live load
- c. The tip of the lag screw shall fully extend beyond the inside face of the band joist
- d. Sheathing shall be wood structural panel or solid sawn lumber
- e. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber or foam sheathing. Up to 1/2-inch thickness of stacked washers shall be permitted to substitute for up to 1/2 inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing



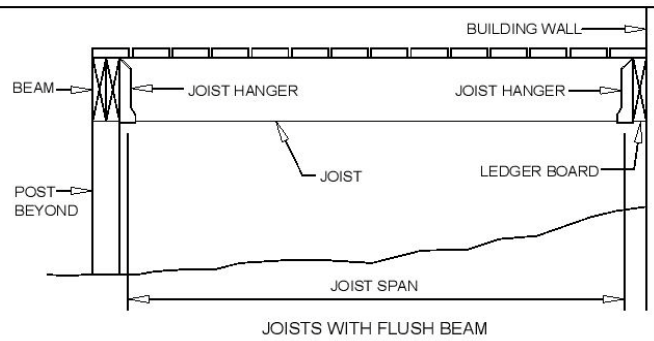
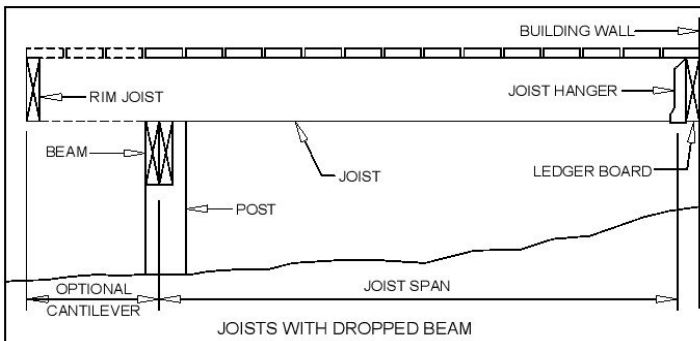
**Double-shear nailing should use full length common nails**



**Shorter nails may not be used as double shear nails**



\*DISTANCE SHALL BE PERMITTED TO BE REDUCED TO 4.5" IF LAG SCREWS ARE USED OR BOLT SPACING IS REDUCED TO THAT OF LAG SCREWS TO ATTACH 2 X 8 LEDGERS TO 2 X 8 BAND JOISTS.



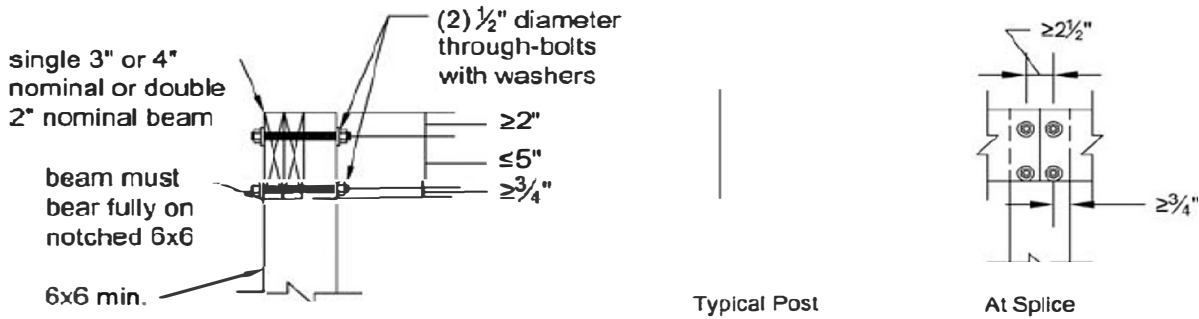


TABLE R507.4  
MAXIMUM JOIST SPACING (inches)

MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM JOIST SPACING	
	PERPENDICULAR TO JOIST	DIAGONAL TO JOIST <sup>a</sup>
5/4-inch thick wood	16	12
2-inch thick wood	24	16
Wood/plastic composite	Per R507.3	Per R507.3

For SI: 1 inch = 25.4 mm

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

TABLE R507.6 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>c</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/Δ = 360.

c. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 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 R507.6  
DECK BEAM SPAN LENGTHS<sup>a, b</sup> (ft. - in.)

SPECIES <sup>a</sup>	SIZE <sup>d</sup>	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18
Southern pine	2 - 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 - 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 - 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 - 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 - 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 - 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 - 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 - 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10

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. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 180 at cantilever with a 220-pound point load applied at the end.

b. Beams supporting deck joists from one side only.

c. No. 2 grade, wet service factor.

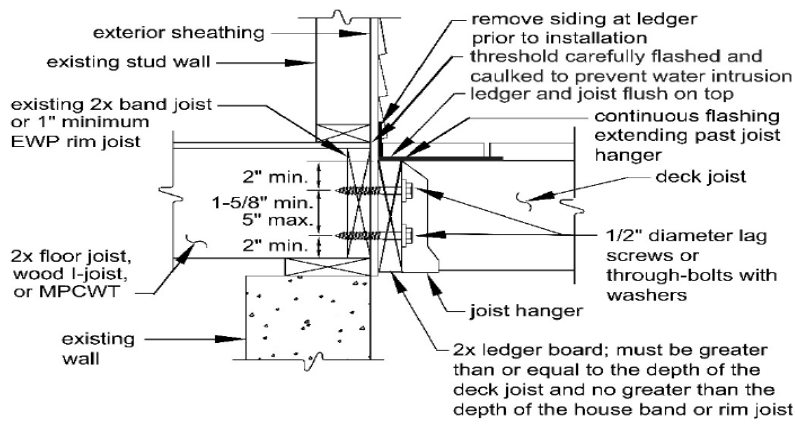
d. Beam depth shall be greater than or equal to depth of joists with a flush beam condition.

e. Includes incising factor.

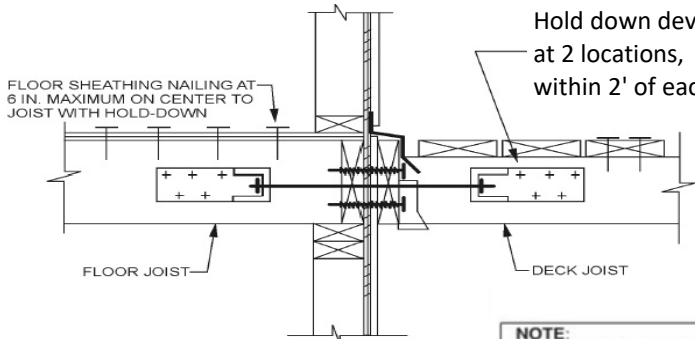
f. Northern species. Incising factor not included.

g. Beam cantilevers are limited to the adjacent beam's span divided by 4.

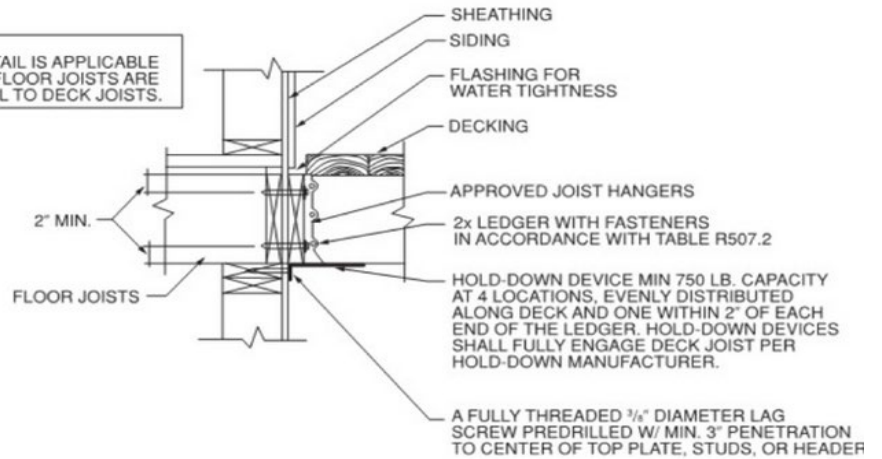




**Lateral Bracing applies to all decks that are not designed as freestanding/self supported**

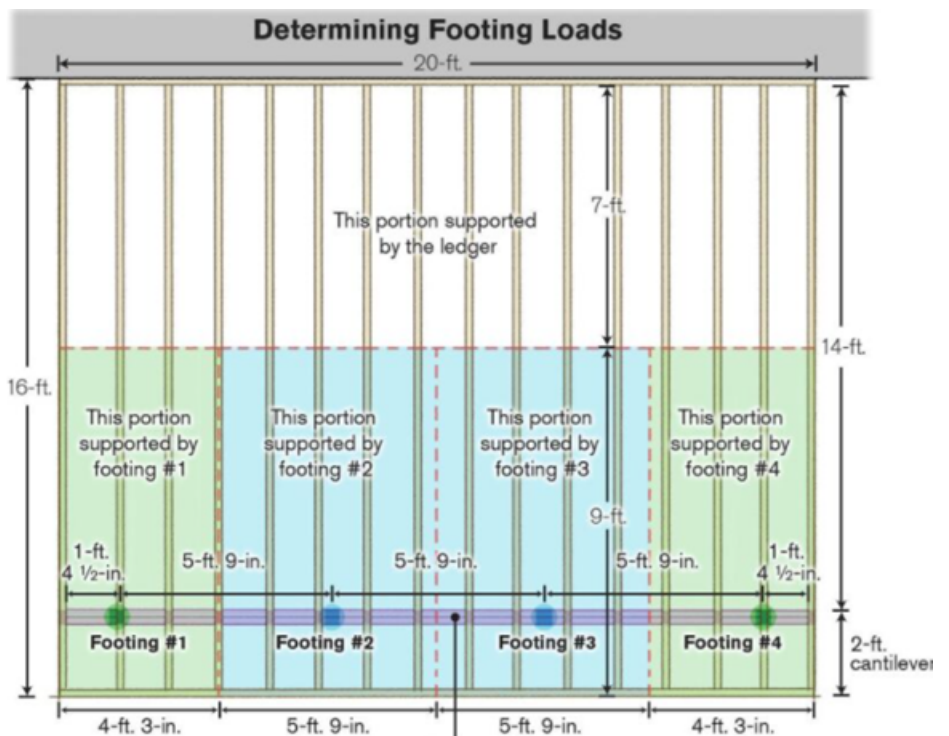


**NOTE:**  
THIS DETAIL IS APPLICABLE WHERE FLOOR JOISTS ARE PARALLEL TO DECK JOISTS.

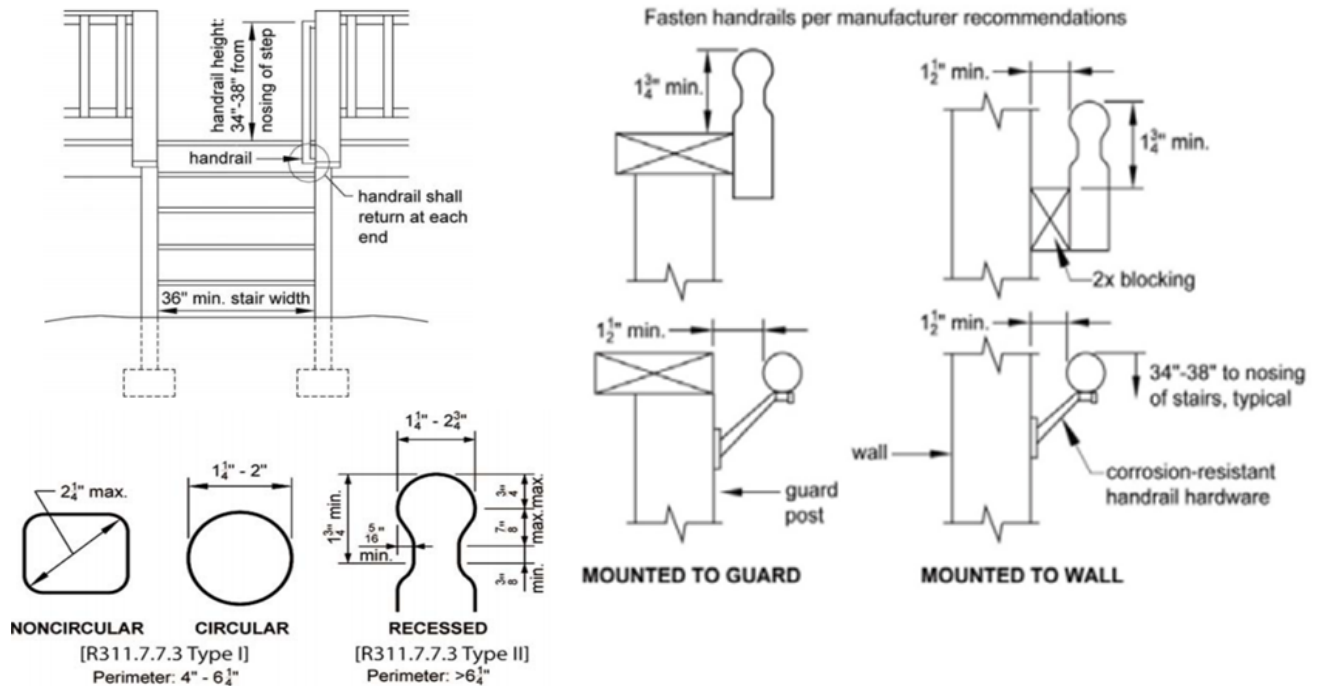


**Table R507.3.1 MINIMUM FOOTING SIZE FOR DECK**

Tributary Area (sq. ft)	2000 psi Soil		
	Square	Diameter	Thickness
20	12	14	6
40	12	14	6
60	15	17	6
80	17	19	6
100	19	21	6
120	21	23	7
140	22	25	8
160	24	27	9



## HANDRAIL AND GUARDRAIL SEPARATE REQUIREMENTS



### CONSUMER INFORMATION SHEET FOR ACQ PRESERVED WOOD

ACQ PRESERVED WOOD ALSO KNOWN AS ALKALINE COPPER QUATERNARY COMPOUNDS IS A PRODUCT BEING OFFERED AS AN ALTERNATIVE TO TRADITIONAL PRESSURE TREATED WOOD. THE PRESERVATIVE TECHNOLOGY IN ACQ PRODUCTS HAVE BEEN USED COMMERCIALY SINCE 1991 THROUGH EUROPE, ASIA, AND THE UNITED STATES. FOR MANY BACKYARD AND COMMERCIAL PROJECTS, ACQ PRODUCTS ARE AN IDEAL ALTERNATIVE TO TRADITIONAL PRESSURE TREATED WOOD.

THE MAIN ACTIVE INGREDIENT IN ACQ IS COPPER. COPPER HAS LONG BEEN KNOWN AS AN EFFECTIVE WOOD PRESERVATIVE. IN ACQ IT IS COUPLED WITH A QUATERNARY COMPOUND OR "QUAT" FOR ENHANCED PERFORMANCE AGAINST COPPER TOLERANT FUNGI AND TERMITES. QUATS ARE COMMONLY USED IN HOUSEHOLD DISINFECTANTS AND CLEANERS.

HANDLING, CONSTRUCTION TECHNIQUES AND THEN GENERAL CHARACTERISTICS OF ACQ WOOD PRODUCTS ARE SIMILAR TO THOSE OF TRADITIONAL TREATED WOOD. MOST IMPORTANT, ACQ PRODUCTS HAVE PROVEN AROUND THE WORLD TO REDUCE DEMANDS ON FOREST RESOURCES BY GREATLY EXTENDING THE LIFE OF WOOD.

### IMPORTANT APPLICATION INFORMATION

USE AN END CUT PRESERVATIVE – WHEN BUILDING YOUR OUTDOOR PROJECT WITH ACQ PRESERVED WOOD, IT IS IMPORTANT TO PROTECT THE CUT ENDS OF BOARDS FROM FUNGAL DECAY. ALL CUTS AND HOLES THAT EXPOSED UNTREATED WOOD SHOULD BE LIBERALLY BRUSH-COATED WITH AN END-CUT PRESERVATIVE (COPPER NAPHTHATE IN GROUND CONTACT OR ZINC NAPHTHATE ABOVE GROUND) BEFORE THE WOOD IS INSTALLED. ALSO APPLY ON AREAS WHERE MOISTURE CAN COLLECT. ALWAYS FOLLOW THE MANUFACTURE'S RECOMMENDATIONS.

USE CORROSION-RESISTANT FASTENERS – ACQ PRESERVED WOOD PRODUCTS ARE DESIGNED FOR LONG-TERM PERFORMANCE IN OUTDOOR APPLICATIONS AND THEREFORE, REQUIRE HIGH QUALITY, CORROSION-RESISTANT NAILS, SCREWS AND OTHER FASTENERS. FOR BEST RESULTS, FASTENERS SHOULD BE STAINLESS STEEL, HOT-DIP GALVANIZED OR OTHER FASTENERS THAT HAVE PERFORMED WELL IN APPROPRIATE TESTING WITH COPPER-BASED PRESERVATIVE TREATED WOOD

DIRECT CONTACT OF ACQ PRESERVED WOOD WITH ALUMINIUM IS NOT RECOMMENDED AND SHOULD BE AVOIDED – WHEN USING ACQ PRESERVED WOOD IN CLOSE PROXIMITY TO ALUMINUM PRODUCTS, SUCH AS ALUMINUM SIDING, FLASHING AND DOOR AND WINDOW FRAMES, A 1/4" MINIMUM SPACE MUST BE ALLOWED FOR BETWEEN THE ACQ AND THE ALUMINUM PRODUCTS. POLYETHYLENE OR NYLON SPACERS CAN BE USED TO MAINTAIN THE 1/4" SPACING. ANOTHER OPTION IS TO USE A POLYETHYLENE BARRIER, WITH A MINIMUM THICKNESS OF 10 MILS, BETWEEN THE ACQ PRESERVED WOOD AND THE ALUMINUM PRODUCT TO PREVENT DIRECT CONTACT OF THE WOOD AND THE ALUMINUM.

ACQ PRESERVED WOOD IS TREATED UNDER PRESSURE FOR AN ASSIGNED PERIOD OF TIME THUS PROVIDING A PERCENTAGE OF ABSORPTION. THIS PERCENTAGE IS NOTED ON THE MANUFACTURES LABEL. PRESSURE TREATED WOOD LABELED IN THE 0-.33 RANGE IS FOR ABOVE GROUND CONTACT. PRESSURE TREATED WOOD LABELED ABOVE .33 IS FOR USE IN GROUND CONTACT APPLICATIONS.