

Building Guide Colorado Chapter of the International Code Council

# Single Family Residential Uncovered Decks and Porches

# How to Use this Guide

Check with your jurisdiction regarding type of submittal (paper or electronic) and for additional requirements. Draw to scale and complete the following (hint: use graph paper with  $\frac{1}{4}$ " squares. Example:  $\frac{1}{4}$ " = 1').

**1.Complete this Building Guide** by filling in the blanks on page three, and indicating which construction details will be used.

2.**Provide Plot Plan**(site plan) showing dimensions of your project or addition and its relationship to existing buildings or structures on the property and the distance to existing property lines drawn to scale. See page 2.

# 3. Fill out a building permit application.

The majority of permit applications are processed with little delay. The submitted documents will help determine if the project is in compliance with building safety codes, zoning ordinances and other applicable laws.

The Colorado Chapter of the International Code Council is a professional organization seeking to promote the public health, safety and welfare to building construction. We appreciate your feedback and suggestions. please write to the Colorado chapter of the Internationa code Council, P.O.Box 961, Arvada, CO 80001. This building guide can be found on Colorado Chapter of the International Code Council website at: http://www.coloradochaptericc.org

This handout was developed by the Colorado Chapter of the International Code Council as a basic plan submittal under the 2018 International Residential Code. It is not intended to cover all circumstances. Check with your Department of Building Safety for additional requirements.





Building Inspection 1100 10th Street Greeley, CO 80631 (970) 350-9830

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**Note:** A plot plan (plan view) showing the dimensions of your project or additions and its relationships to existing buildings or structures on the property must be included. In addition to project dimensions, your plot plan must also show other details such as post locations and spacing, joist and beam spans, and any other pertinent information not shown on the section drawing.



# **Single Family Residential Uncovered Decks and Porches**

### Directions

**1.** Fill in the blanks. Please print legibly.

of Building Safety for additional requirements.

**2.** Indicate in the check box which detail from page 6 will be used.



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## Single Family Residential Uncovered Decks and Porches

### **Table 1 Ledger connection**

		Ledger C	onnection to	rim joist			
Deck live load =40psf; Snowload =40psf; Dead	load=10 p	sf		JOIST SPA	AN		
CONNECTION DETAILS	6' and 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'
	On-center spacing of fasteners						
1/2 -inch diameter lag screw with 1/2 -inch maximum sheathing	30	23	18	15	13	11	10
1/2 -jnch diameter bolt with 1/2 maximum sheathing	36	36	34	29	24 '	21	19
1/2-inch diameter bolt with 1-inch maximum sheathing	36	36	29	24	21	18	16













### LAGSREWS AND BOLTS LOCATION IN DECK LEDGERS AND RIM JOISTS

MINIM	UM END AND EDO	E DISTANCES AND SPA	CING BETW	EEN ROWS	
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING	
Ledger 2 inches	2 inches	3/4 inch	2 inches	l -5/8 inches	
Band Joist	3/4 inch	2 inches	2 inches	l -5/8 inches	

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Table 2 - Woo	d Joist sim	ple span	Maximum Liv deflection L	ve Load or Ground / /360 Main span: L/1	Snow Load 40psf, 80 cantilever	Maximum Dead Lo	ad 10psf	
	JOIST SIZE	MAXI	MUM JOIST	SPAN	MAXIMUM CANTILEVER			
WOOD		SPACE	NG OF DECK J	OISTS	SPACING			
SPECIES			(inches)		OF DECK JOISTS WITH CANTILEVERS			
grade # 2 or						(inches)		
better	Simple Span	12	16	24	12	16	24	
		on center	on center	on center	on center	on center	on center	
7	2x6	9-11	9-0	7-7	1-3	1-4	1-6	
Couthorn nine	2x8	13-1	11-10	9-8	2-1	2-3	2-5	
Southern pine	2x10	16-2	14-0	11-5	3-4	3-6	2-10	
2 20 10 10 10 10 10 10 10 10 10 10 10 10 10	2x12	18-0	16-6	13-6	4-6	4-2	3-4	
Douglas fir-	2x6	9-6	8-8	7-2	1-2	1-3	1-5	
lorch hom fir	2x8	12-6	11-1	9-1	1-11	2-1	2-3	
iarch, nem- iir,	2x10	15-8	13-7	11-1	3-1	3-5	2-9	
spruce-pine-fir	2x12	18-0	15-9	12-10	4-6	3-11	3-3	

Table ? Wood P	com simple spon	Maximu	m Live Load	a or Ground	Show Load	40pst, Max	mum Dead	Load Lupst
Table 5 - Wood B	eam simple span	deflecti	on L/360 M	ain span; L/.	180 cantilev	/er		
WOOD SPECIES	CIZE	DECK .	JOIST S	SPAN (ft-	-in)LESS	THAN (	DR EQU	AL TO:
grade #2 or better	SIZE	6	8	10	12	14	16	18
	(2)-2x8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	(2)-2x10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
Southorn pino	(2)-2x12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
Southern pine	(3)-2x8	10-10	9-8	8-6	7-9	7-2	6-8	6-4
	(3)-2x10	13-0	11-3	10-0	9-2	8-6	7-11	11 7-6
	(3)-2x12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
	3 x 8 or (2)- 2 x 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 x 10 or (2)- 2 x 10	8-4	7-5	6-6	5-11	5-6	5-1	4-8
	3 x 12 or (2)- 2 x 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4x6	6-5	5-6	4-11	4-6	4-2	3-11	3-5
Douglas fir-larch,	4x8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
hem-fir,	4x10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
spruce-pine-fir,	4 x12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	(3)-2x8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	(3)-2x10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	(3)-2x12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

### Table 4 - Wood Post

De	ck Wood Po	ost Liv	ve Load 40	psf
Deck post size	4x4	4x6	6x6	8x8
Maximum height	6'-9"	8'	14'	14'

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#### Single Family Residential Uncovered Decks and Porches Existing building Beam splices to occur over posts Approved flashing required behind existing exterior wall covering Secure posts to with 1 <sup>1</sup>/2" bearing beam with Attach to joists with non-corrosive fasteners through bolts Attach ledger to existing bldg. with non-corrosive fasteners. Locate fasteners to penetrate rim joist or wall studs. Non-corrosive metal joist hanger Non-corrosive Non-corrosive

Approved flashing

Conditions such as attachment to cantilevers or veneers may require Engineer's approval

#### Non-corrosive metal joist hanger Non-corrosive metal joist hanger Non-corrosive metal post/beam connector Secure posts to beam with through bolts Secure of joist depth Mon-corrosive metal joist Secure posts to beam with through bolts

Beam splices to

occur over posts with 1 1/2" bearing 1/4 of joist span

Non-corrosive metal

post/beam connector

Beam splices to occur over posts with 1 1/2" bearing Non-corrosive metal post/beam connector

 

1/2" (min.) diameter anchor bolt embedded 7" min. into concrete pier or the equivalent
Non-corrosive metal post anchor

6" min. If less than 6", post must be decay resistive

1/2" (min.) diameter pier

8" (min.) diameter pier

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# **Single Family Residential Uncovered Decks and Porches**



### Handrail Notes:

- Handrails shall be continuous on at least one side of stairs with 4 or more risers. 1.
- Top of the handrails shall be placed not less than 34 inches nor more than 38 inches above stair nosings. 2.
- The handgrip portion of handrails shall be not less than 1-1/4 inches nor more than 2 1/4 inches in cross section for non circular handrails. 3. 4. Handrails shall be placed not less than 1-1/2 inches from any wall or other surface.

