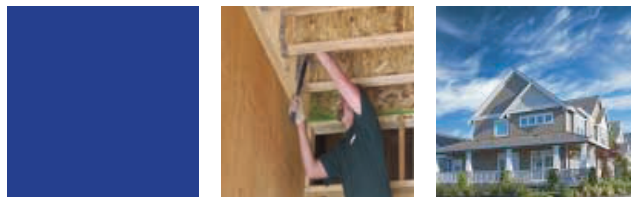
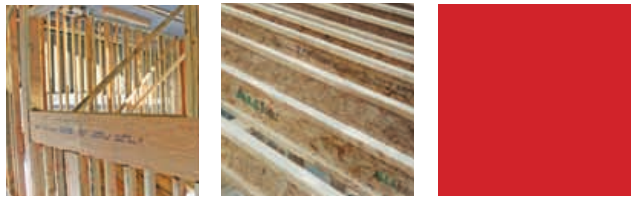




LIMIT STATES DESIGN  
CANADA 



# ALLJoist®



## AJS® 150

CCMC Report Number  
12787-R ALLJOIST®



High Performance  
Floor & Roof Systems

 **Boise Cascade**  
Engineered Wood Products



## Limit States Design (CANADA)

AJS® Joist Series	Joist Depth	Factored Moment Resistance	Factored Shear Resistance	Joist Stiffness EI	Shear Deformation Coefficient, K	Joist Weight	Factored End Bearing Resistance (lbs)		Factored Intermediate Bearing Resistance (lbs)	
							1½" Min. Bearing Length		3½" Min. Bearing Length	
							No Web Stiffeners	WITH Web Stiffeners	No Web Stiffeners	WITH Web Stiffeners
[in]	[lbs-ft]	[lbs]	[x10 <sup>6</sup> lbs-in <sup>2</sup> ]	[x10 <sup>6</sup> lbs]	[lbs/ft]	[lbs]	[lbs]	[lbs]	[lbs]	
AJS® 150	9½	4 705	1 830	194	5.2	2.2	1 500	1 955	3 705	3 865
	11⅞	6 095	2 350	332	6.6	2.5	1 505	2 105	3 770	4 415
	14	7 335	2 825	488	7.8	2.7	1 515	2 240	3 835	4 940
	16	8 505	3 255	667	8.9	3.0	1 530	2 365	3 890	5 420

## NOTES:

- (1) All resistance factors, as per CSA O86 have been applied.
- (2) Minimum end bearing length is 1½".
- (3) The AJS® Joist deflection under uniform load may be calculated with the equation to the right:

$$\Delta = \frac{5wl^4}{384EI} + \frac{wl^2}{K}$$

$\Delta$  = Deflection [in]  
 $w$  = Uniform load [lb/in]  
 $l$  = Centerline to centerline [in]  
 $EI$  = Stiffness value from table [lb-in<sup>2</sup>]  
 $K$  = Shear deflection factor from table [lb]

 BUILDING CODE EVALUATION REPORTS  
 - CCMC Report Number 12787-R

## AJS® 150 Residential Floor Span Tables

Homeowner's expectations and opinions vary greatly due to the subjective nature of rating a new floor. Communication with the ultimate end user to determine their expectation is critical. **Vibration** is usually the cause of most complaints. Installing lateral bridging may help; however, squeaks may occur if not installed properly. Spacing the joists closer together does little to affect the perception of the

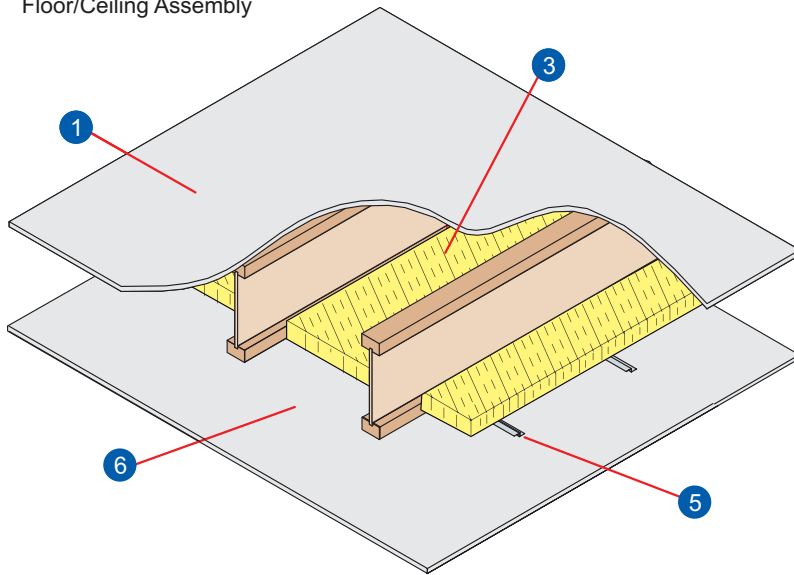
floor's performance. The most common methods used to increase the performance and reduce vibration of wood floor systems is to **increase the joist depth, limit joist deflections, glue and screw a thicker tongue-and-groove subfloor, install the joists vertically plumb with level-bearing supports, and install a direct-attached ceiling to the bottom flange of the joists.**

Subfloor (Glued & Nailed)														
Live Load: 40 psf			Simple Span						Continuous Span					
Dead Load: 15 psf			Bare Joist			Applied ½" Gypsum Ceiling			Bare Joist			Applied ½" Gypsum Ceiling		
Joist Series	Depth [in]	Subfloor Thickness	12"	16"	19.2"	12"	16"	19.2"	12"	16"	19.2"	12"	16"	19.2"
AJS® 150	9½	⅝"	15'-9"	14'-11"	14'-5"	16'-2"	15'-4"	14'-10"	17'-1"	16'-1"	15'-7"	17'-7"	16'-7"	16'-1"
	11⅞	⅝"	17'-8"	16'-8"	16'-2"	18'-2"	17'-2"	16'-7"	19'-5"	18'-1"	17'-6"	20'-2"	18'-9"	18'-0"
	14	⅝"	19'-6"	18'-2"	17'-6"	20'-3"	18'-10"	18'-1"	21'-7"	20'-1"	19'-3"	22'-5"	20'-11"	20'-0"
	16	⅝"	21'-4"	19'-9"	18'-11"	22'-1"	20'-6"	19'-8"	23'-7"	21'-10"	20'-11"	24'-6"	22'-9"	21'-10"
AJS® 150	9½	¾"	16'-9"	15'-9"	15'-3"	17'-2"	16'-2"	15'-7"	18'-1"	17'-1"	16'-6"	18'-8"	17'-7"	16'-11"
	11⅞	¾"	18'-11"	17'-8"	17'-0"	19'-6"	18'-2"	17'-6"	20'-11"	19'-5"	18'-6"	21'-7"	20'-2"	19'-3"
	14	¾"	21'-0"	19'-6"	18'-7"	21'-8"	20'-2"	19'-3"	23'-3"	21'-7"	20'-7"	24'-0"	22'-5"	21'-5"
	16	¾"	22'-11"	21'-3"	20'-3"	23'-8"	22'-0"	21'-0"	25'-4"	23'-6"	22'-5"	26'-2"	24'-5"	23'-0"

## NOTES:

- Tables are based on a uniform 40 psf live load and 15 psf dead load (Standard Term Load Duration).
- Floor tile will increase dead load and may require specific deflection limits.
- Minimum end bearing length is 1½".
- Maximum spans are measured in between the supports (clearspan) and are based on uniformly loaded joists.
- Live load deflection is limited to L/360 and Total load deflection to L/240. Deflections are based on the bare joist stiffness.
- Spans shown are in accordance with NBCC2005: Part 9, and standard CAN-CSA O86-01.
- When using continuous spans over an intermediate bearing, the shortest span shall not be less than 50% of the longest adjacent span. For other conditions, please contact your distributor or Boise Cascade EWP, for assistance.
- It may be possible to exceed the limitations of these tables by analyzing a specific application with the Boise's BC CALC® software and Boise WoodSizer software.
- The subfloor shall be CSA rated Oriented Strand Board (OSB), Canadian Softwood Plywood (CSP), or Douglas Fir Plywood (DFP).
- Subfloor adhesive shall comply with CGSB standard CAN-CGSB 71.26-M88 "Adhesives for Field-gluing Plywood to Lumber Framing for Floor Systems" or APA Performance Specification AFG-01.

## 45 Minute Fire Rating Floor/Ceiling Assembly

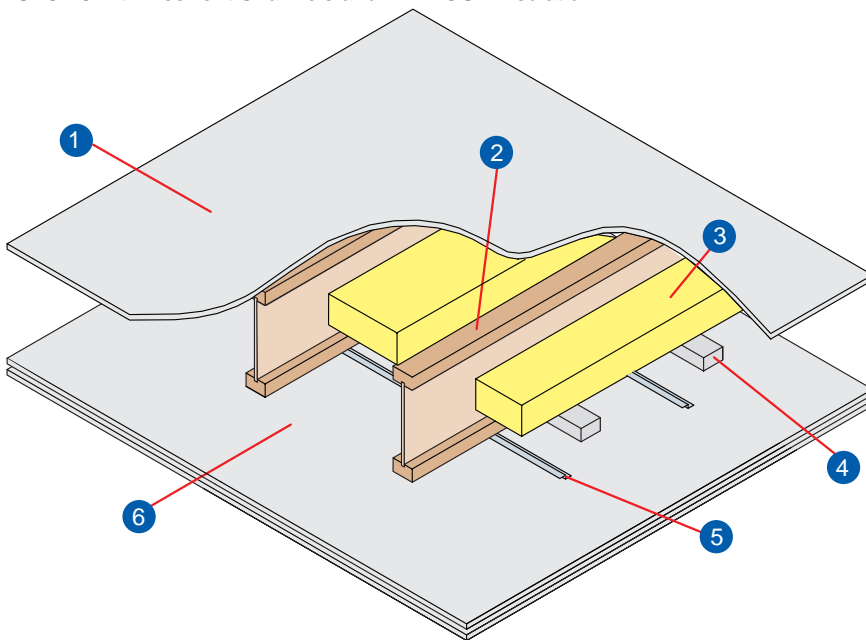


**3** Insulation  
3½" thick, minimum 2.5 pcf, mineral wool insulation batts.

**6** Gypsum Wallboard  
One layer of ½" Type C gypsum wallboard installed perpendicular to channels with end joints staggered 48". Boards to be fastened to channels with minimum 1⅛" Type S drywall screws located 12" on center. Gypsum wallboard joints shall be covered with tape and coated with gypsum joint compound.

**REFERENCE:**  
NBCC 2005, table A 9.10.3.1B.  
Assembly F5g

## 1 Hour Fire Rating Floor/Ceiling Assembly STC 55 with Resilient Channels and Insulation STC 48 with Resilient Channels and WITHOUT Insulation



**3** Insulation (optional)  
3½" fiberglass batt insulation.

**6** Gypsum Wallboard  
Two layers of ½" Type C or ⅝" Type X gypsum wallboard. Base layer installed perpendicular to joists or channels and fastened with 1¾" screws located at 12" on center. Face layer installed parallel to base layer with end and edge joints staggered 16" minimum and fastened with 2¼" screws located at 12" on center on intermediate joists, and 8" on center at end joints. Gypsum wallboard joints shall be covered with tape and coated with gypsum joint compound.

**REFERENCE:**  
PFS AJS®, Assembly 1

**1** Subfloor  
Minimum ⅝" plywood or OSB sheathing fastened to joists in accordance with Code specifications. Construction adhesive is optional.

**2** Structural Members  
AJS® Joists having a minimum depth of 9½" and spaced at 24" o.c. maximum.

**4** Insulation Supports  
Nominal 2x3 strapping located 16" o.c. or equivalent method to retain insulation above joist flanges.

**5** Resilient Channels  
Minimum 25 gauge ½" offset RC-1 galvanized steel channels installed perpendicular to joists spaced at 16" o.c. maximum and fastened with 1½" screws at each joist intersection.

**For framing details, hole charts and Framing Connectors, please refer to our Alljoist Specifier Guide.**



Great products are only the beginning.™



IT JUST DOESN'T GET ANY BETTER THAN  
BOISE CASCADE AND CANWEL.

Boise Engineered Wood Products are manufactured by Boise Cascade  
Distributed across Canada by CanWel Building Materials Division  
Sold by your better local building materials retailer



CanWel®

Building Materials Division

[www.canwel.com/ewp.htm](http://www.canwel.com/ewp.htm)

**Langley**

19645 – 92A Avenue  
Langley, BC V1M 3B3  
Phone: 604 888-8044  
1 888 628-6280

**Kelowna**

205 Campion Street  
Kelowna, BC V1X 7S9  
Phone: 250 765-2036  
1 877 488-8899

**Calgary**

4510 – 76th Ave S.E.  
Calgary, AB T2C 2V2  
Phone: 403 279-7108  
1 877 656-6166

**Edmonton**

16011 – 128th Avenue  
Edmonton, AB T5V 1K4  
Phone: 780 447-1961  
1 877 447-2566

**Saskatoon**

11 Capital Circle  
Corman Park, SK S7R 0H4  
Phone: 306 933-2500  
1 877 954-4448

**Winnipeg**

350 De Baets Street  
Winnipeg, MB R2J 0H4  
Phone: 204 633-4890  
1 800 665-1923

**Brampton**

15 West Drive  
Brampton, ON L6T 3T5  
Phone: 905 457-8500  
1 800 268-0814

**Quebec City**

170, Liverpool  
Saint-Augustin-de-Desmaures, QC  
G3A 2M5  
Phone: 450 435-6911  
1 800 361-5345

**Blainville**

651, boulevard Industriel  
Blainville, QC J7C 3V3  
Phone: 450 435-6911  
1 800 361-5345

**Deer Lake**

10 Spilway Road  
Deer lake, NF A8A 3E7  
Phone: 709 635-3772

**Dartmouth**

120 Ilsley Avenue  
Dartmouth, NS B3B 1S7  
Phone: 902 468-8585  
1 800 747-9922

Your local retailer

*The information provided herein was up-to-date at the time of printing. This document may be superseded by a updated version. Please confirm that this specifier guide is the most current version at [www.bc.com/ewp](http://www.bc.com/ewp).*

CCMC Report Number 12787-R  
ALLJOIST®

The information in this document pertains to use in CANADA ONLY, Limit States Design. Refer to the ALLJOIST Specifier Guide for use in the United States.

455, boulevard Fénelon, suite 102  
Dorval (Québec) QC H9S 5T8  
[www.BC.com/ewp](http://www.BC.com/ewp)

For information about Boise Cascade's engineered wood products, including sales terms and conditions, warranties and disclaimers, visit our website at [www.BC.com/ewp](http://www.BC.com/ewp)

**Lifetime Guaranteed Quality and Performance**

Boise Cascade warrants its BCI® Joist, VERSA-LAM®, and ALLJOIST® products to comply with our specifications, to be free from defects in material and workmanship, and to meet or exceed our performance specifications for the normal and expected life of the structure when correctly stored, installed and used according to our Installation Guide.



Boise Cascade  
Engineered Wood Products