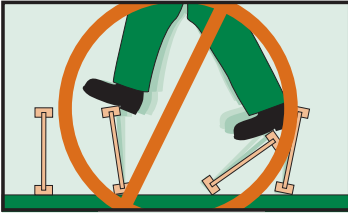

P3 JOIST INSTALLATION GUIDE CANADA

BY  **EACOM**
TIMBER CORPORATION

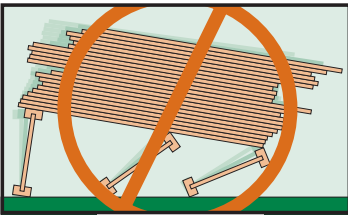
Safety Tips

I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

Do not allow workers to walk on I-joists until joists are fully installed, sheathed and braced, or serious injuries can result.



Never stack building materials over unsheathed I-joists. Stack only over beams or walls.



Avoid accidents by following these important guidelines

- 1** Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging at joist ends. When I-joists are applied continuous over interior supports and a load-bearing wall is planned at that location, blocking will be required at the interior support. See *APA Builder Tips: Blocking for I-Joist Systems*, Form No. A750.
- 2** When the building is completed, the floor sheathing will provide lateral support for the top flanges of the I-joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent I-joist rollover or buckling.
 - Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on center, and must be secured with a minimum of two 8d nails fastened to the top surface of each I-joist. Nail bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.
 - Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the bay.
- 3** For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridging.
- 4** Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
- 5** Never install a damaged I-joist.

Failure to follow applicable building codes and span ratings, failure to follow allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.

Additional Recommendations

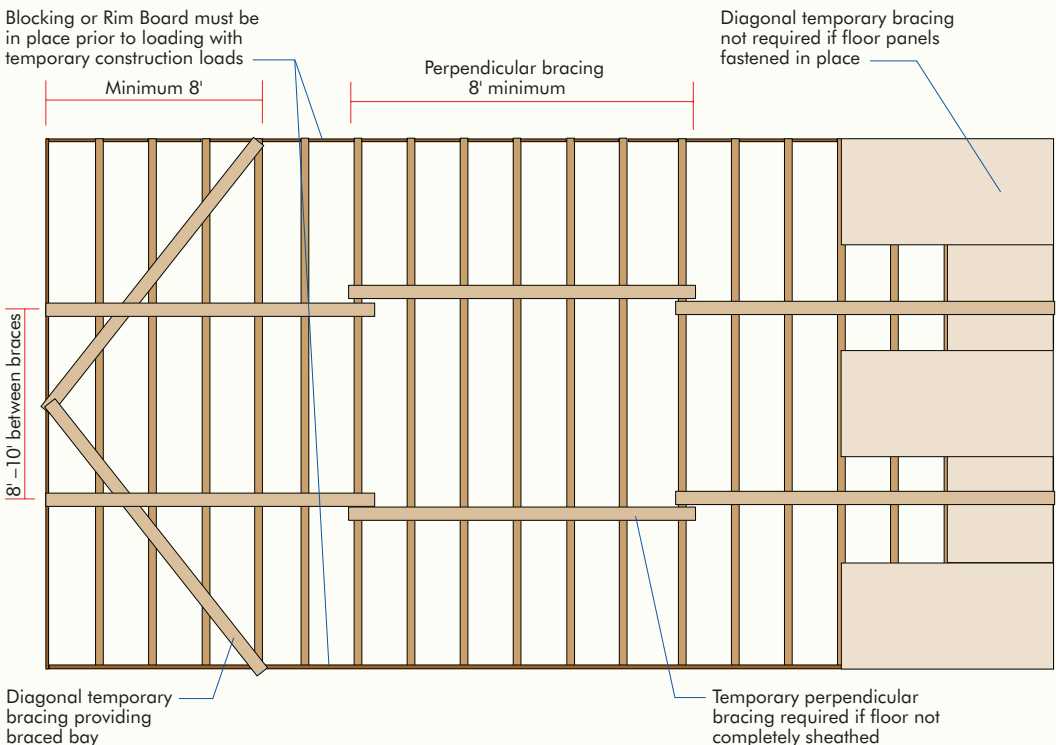
For more information, refer to APA Technical Note: *Proper Storage and Handling of I-Joists and LVL*, Form No. E705.

TEMPORARY CONSTRUCTION BRACING

The following temporary bracing must be completed before placing bundles or walking on floor or roof framing.

1. All end blocking or Rim Boards® must be in place.
2. For temporary perpendicular bracing, use a minimum of 1x4 perpendicular to the floor or roof framing and running full width of the floor. At each joist, attach bracing to framing with two 8d nails. Long lengths are recommended with the ends overlapped at a common joist. Lines of bracing should be placed parallel to each other and spaced at 8 to 10 feet on center.
3. To stabilize the perpendicular bracing described in No. 2 above, brace the corners of the floor or roof, and, in long or wide floors and roofs, at intervals not to exceed 25 feet with a minimum of 8 feet of diagonal or bay bracing. Bay bracing may be provided by diagonal temporary bracing at ends as shown in Figure 1 or by fastening at least 4 feet of floor or roof sheathing at each end. Perpendicular bracing described in No. 2 **will not work** without the diagonal temporary bracing provided at the ends.
4. Remove temporary bracing carefully. Starting with the diagonal bracing at one end, only remove enough bracing to attach sheathing panels one at a time. Once diagonal bracing is replaced by the permanently installed sheathing, the work can progress down the floor or roof, again only removing the perpendicular bracing as necessary immediately before attaching sheathing panels.

FIGURE 1
TEMPORARY CONSTRUCTION BRACING



For more information refer to APA Form No. J735 available for download at www.eacom.ca and www.apawood.org

Installing P3 Joist

1. Before laying out floor system components, verify that P3 Joist flange widths match hanger widths. If not, contact your supplier.

2. Except for cutting to length, never cut, drill, or notch P3 Joist flanges.

3. Install P3 Joists so that top and bottom flanges are within 1/2" of true vertical alignment.

4. P3 Joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple-span joists must be level.

5. Minimum bearing lengths are 1-3/4" for end bearings and 3-1/2" for intermediate bearings.

6. When using hangers, seat P3 Joist firmly in hanger bottoms to minimize settlement.

7. Leave a 1/16" gap between the P3 Joist end and a header.

8. Concentrated loads greater than those that can normally be expected in residential construction should be applied only to the top surface of the top flange. Normal concentrated loads include track lighting fixtures, audio equipment, and security cameras. Never suspend unusual or heavy loads from the P3 Joists bottom flange. Whenever possible, suspend all concentrated loads from the top of the P3 Joist, or attach the load to blocking that has been securely fastened to the P3 Joist webs.

9. Never install P3 Joists where they will be permanently exposed to weather or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use Certified Rim Board, rim joists, or P3 Joist blocking panels.

11. For P3 Joists installed over and beneath bearing walls, use full depth blocking panels, Certified Rim Board, or squash blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.

12. Due to shrinkage, common framing lumber set on edge may never be used as blocking or rim boards. P3 Joist blocking panels or other engineered wood products such as Certified Rim Board must be cut to fit between the P3 Joists, and a P3 Joist-compatible depth must be selected.

13. Provide permanent lateral support of the bottom flange of all P3 Joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered P3 Joists at the end support next to the cantilever extension. In the completed structure, the gypsum wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or struts must be used.

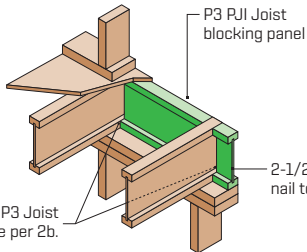
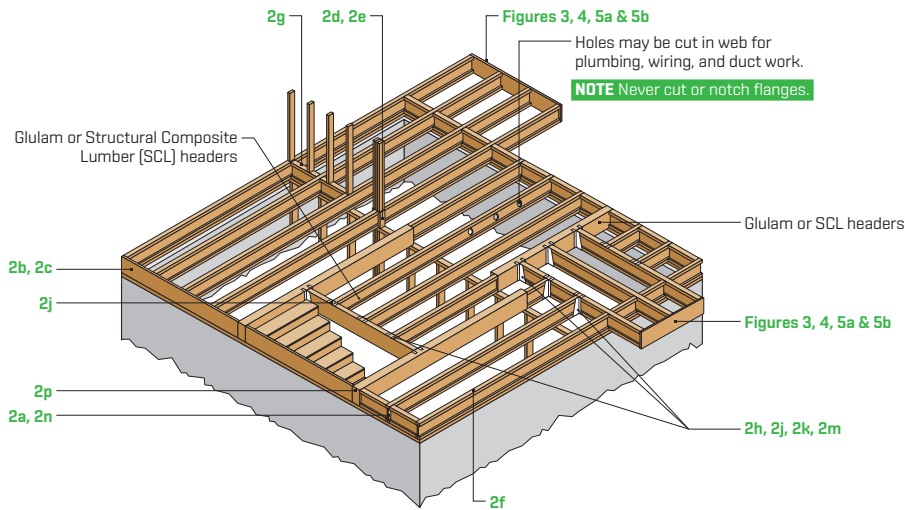
14. If square-edge panels are used, edges must be supported between P3 Joists with 2 x 4 blocking. Glue panels to blocking to minimize squeaks. Blocking is not required under structural finish flooring such as wood strip flooring or if a separate underlayment layer is installed.

15. Nail spacing
Space the nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

Floor Framing and Construction Details

FIGURE 2
Typical P3 Floor Joist Framing and Construction Details

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.

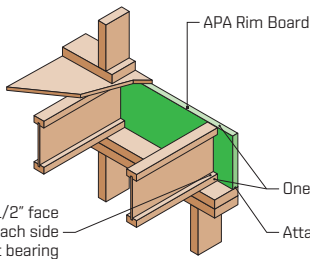


Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* [plf]
P3 PJI Joist [9-1/2" - 18"]	2900

*The uniform vertical load capacity is limited to a joist depth of 18" or less and is based on the standard term load duration. It shall not be used in the design of a bending member such as joist, header, or rafter. For concentrated vertical load transfer capacity, see 2d.

2-1/2" nails @ 6" o.c. to top plate [When used for lateral shear transfer, nail to bearing plate with same nailing as required for decking.]

2a **BLOCKING PANEL AT END SUPPORT DETAIL**



Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* [plf]
1-1/8" APA Rim Board Plus	7033
1-1/8" APA Rim Board	7033
1" APA Rim Board	4785

*The uniform vertical load capacity is limited to a rim board depth of 16" or less and is based on standard term load duration. It shall not be used in the design of a bending member such as joist, header, or rafter. For concentrated vertical load transfer capacity, see 2d.

To avoid splitting flange, start nails at least 1-1/2" from end of P3 Joist. Nails may be driven at an angle to avoid splitting of bearing plate.

2b **RIM BOARD DETAIL**

FIGURE 2 [CONTINUED]
Typical P3 Floor Joist Framing and Construction Details

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.

2c

P3 JOIST AS RIM JOIST DETAIL

Pair of Squash Blocks	Maximum Factored Vertical Load per Pair of Squash Blocks (lb)	
	3-1/2" wide	5-1/2" wide
2x lumber	5800	9500
1-1/8" APA Rim Board, Rim Board Plus, or Rated Sturd-I-Floor 48 oc	4500	5800
1" APA Rim Board or Rated Sturd-I-Floor 32 oc	4000	5800

2d

SQUASH BLOCK DETAIL

Provide lateral bracing per 2a, 2b, or 2c.

2e

LOAD TRANSFER WITH PASS THRU BLOCKING DETAIL

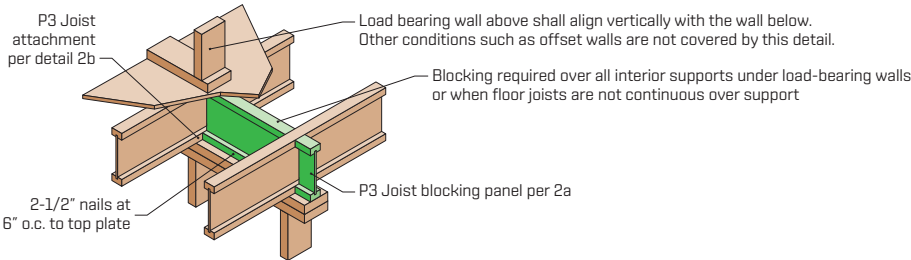
2f

PARALLEL END P3 JOIST DETAIL

APA Rim Board may be used in lieu of P3 Joist. Backer is not required when APA Rim Board is used.

FIGURE 2 (CONTINUED)
Typical P3 Floor Joist Framing and Construction Details

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.



2g

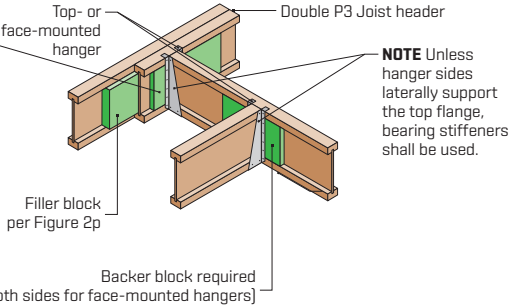
BLOCKING PANEL AT INTERIOR SUPPORT DETAIL

BACKER BLOCK Use if factored hanger load exceeds **360 lbs.** Before installing a backer block to a double P3 Joist, drive 3 additional 3" nails through the webs and filler block where the backer block will fit. Clinch. Install backer tightly to top flange. Use twelve 3" nails, clinched when possible. Maximum factored resistance for hanger for this detail is 1620 lbs.

BACKER BLOCKS Blocks must be long enough to permit required nailing without splitting.

Flange Width	Material Thickness Required*	Minimum Depth
2-1/2"	1"	5-1/2"
3-1/2"	1-1/2"	7-1/4"

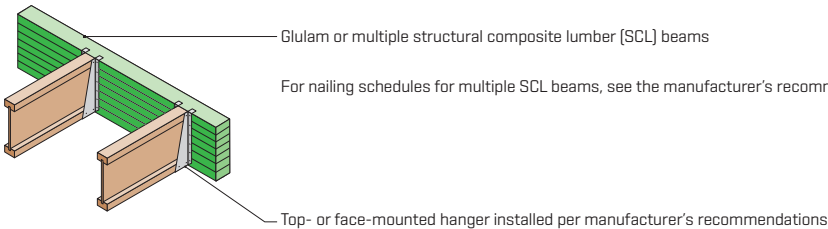
* Minimum grade for backer block material shall be Utility grade SPF (south) or better for solid sawn lumber and shall be Rated Sheathing grade for wood structural panels.
For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges.



2h

P3 JOIST WITH BACKER BLOCKS FOR HANGER DETAIL

For hanger capacity see hanger manufacturer's recommendations. Verify double P3 Joist capacity to support concentrated loads.



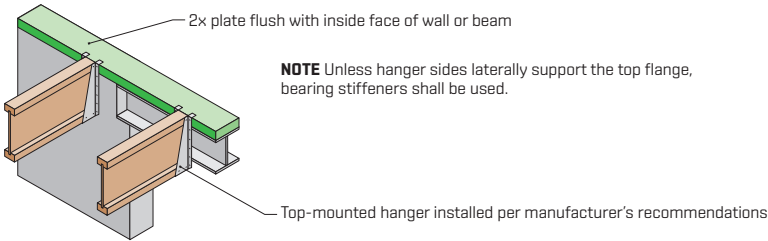
2j

P3 JOIST TO FLUSH BEAM DETAIL

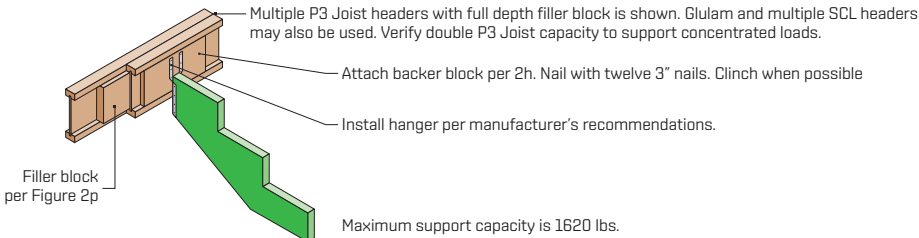
NOTE Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

FIGURE 2 (CONTINUED)
Typical P3 Floor Joist Framing and Construction Details

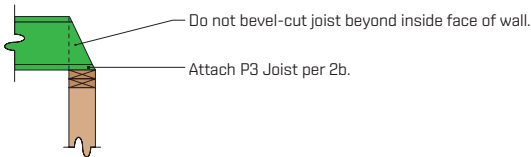
All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.



2k P3 JOIST WITH TOP MOUNT HANGER DETAIL



2m STAIR STRINGER TO P3 JOIST DETAIL



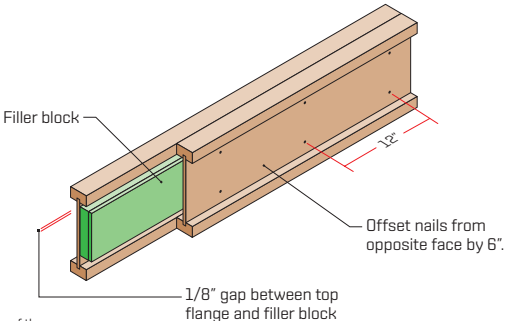
2n BEVEL-CUT P3 JOIST DETAIL

NOTE Blocking is required at bearing for lateral support. Not shown for clarity

Flange Width	Net Depth	Filler Block Size
2-1/2"	9-1/2"	2-1/8" x 6"
	11-7/8"	2-1/8" x 8"
	14"	2-1/8" x 10"
	16"	2-1/8" x 12"
3-1/2"	11-7/8"	3" x 8"
	14"	3" x 10"
	16"	3" x 12"
3-1/2"	18"	3" x 14"
	20"	3" x 16"
	24"	3" x 20"

NOTES

1. Support back of I-Joist web during nailing to prevent damage to web/flange connection.
2. Leave a 1/8" gap between top of filler block and bottom of top P3 Joist flange.
3. Filler block is required between joists for full length of span.
4. Nail joists together with two rows of 3" nails at 12" o.c. (clinched when possible) on each side of the double P3 Joist. Total of 4 nails per foot required. If nails can be clinched, only 2 nails per foot are required.
5. The maximum load that may be applied to one side of the double joist using this detail is 860 lbs./ft.



2p DOUBLE P3 JOIST CONSTRUCTION DETAIL

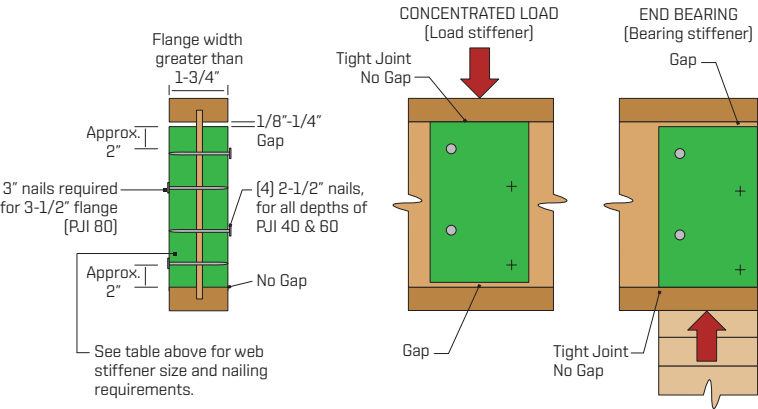
Minimum Nailing Requirements for Web Stiffeners

Stiffener Size and Nailing Requirement

Joist Dept	2-1/2" Wide Flange 8d [2-1/2"] nails	3-1/2" Wide Flange 10d [3"] nails
9-1/2"	4	-
11-7/8"	4	4
14"	4	4
16"	4	4
18"	-	6
20"	-	6
24"	-	8
Minimum Stiffener	1" x 2-5/16" (width)	1-1/2" x 2-5/16" (width)

Web Stiffener Installation Details

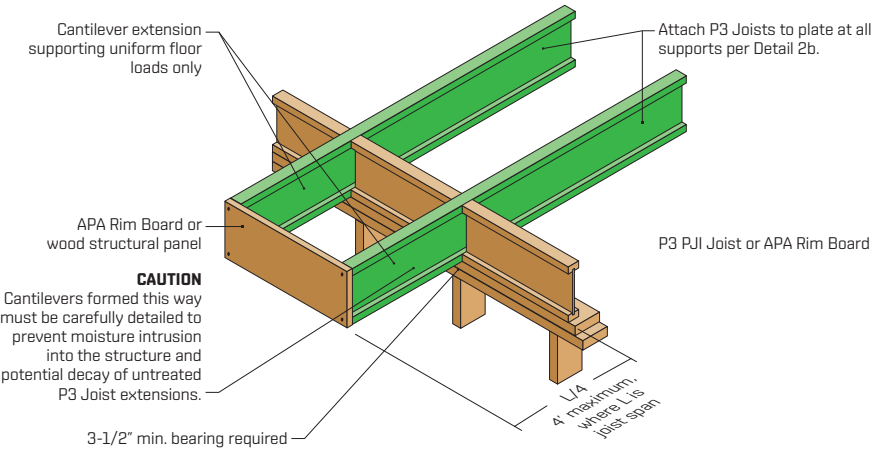
FIGURE 2W



1. Web stiffeners are required:
 - When sides of the hangers do not laterally brace the top flange of each P3 Joist;
 - When P3 Joists are designed to support concentrated loads greater than 1500 lbs. that are applied to the P3 Joist's top flange between supports. In these applications only, the gap between the web stiffener and the flange shall be at the bottom flange;
 - For all engineered applications with end-reactions greater than 1500 lbs.
A design analysis must be performed for all engineered applications with end-reactions greater than 1500 lbs.
2. When used at end bearings, install web stiffeners tightly against the bottom flange of the P3 Joist. Leave a minimum 1/8" gap between the top of the stiffener and the bottom of the top flange. See Figure 2W.
3. Web stiffeners may be supplied by the distributor for field installation or may be cut in the field as required.

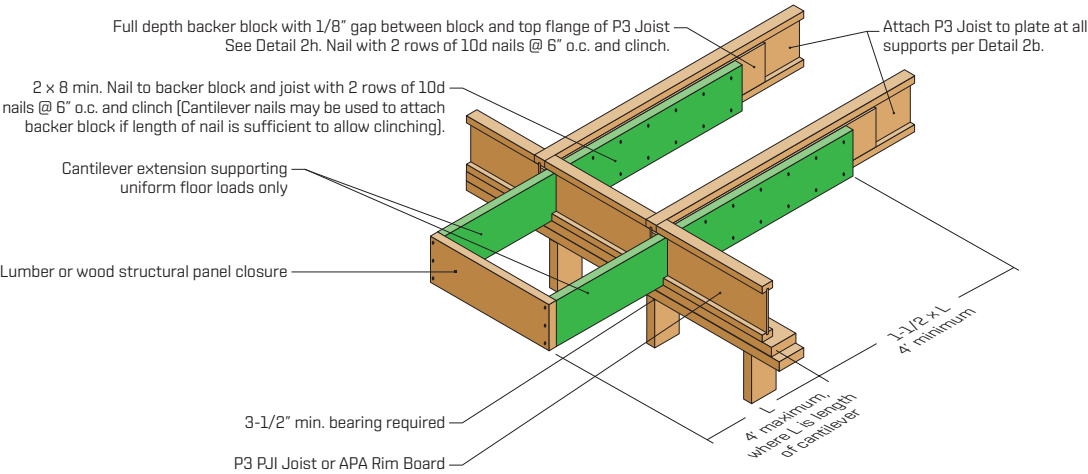
Cantilever Details for Interior Balconies (No Wall Load)

FIGURE 3



Lumber Cantilever Details For Balconies (No Wall Load)

FIGURE 4



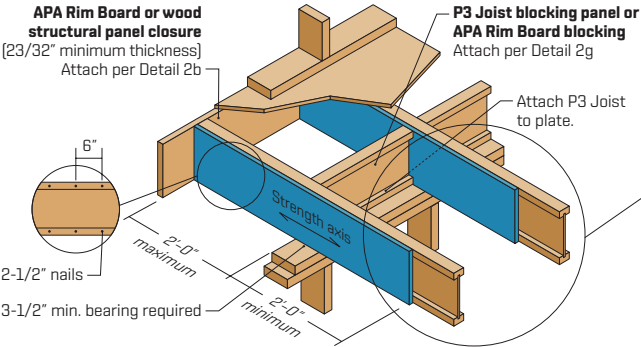
NOTES All nails shown in the details above are assumed to be common nails unless otherwise noted. Individual components are not shown to scale for clarity.

Cantilever Detail for Vertical Building Offset [Concentrated Wall Load]

FIGURE 5A

Method 1

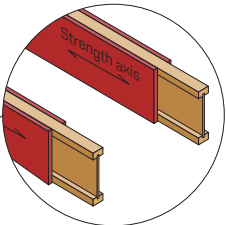
Sheathing Reinforcement One Side



Method 2

Sheathing Reinforcement Two Sides

Use same installation as Method 1, but reinforce both sides of the P3 Joist with sheathing or APA Rim Board.

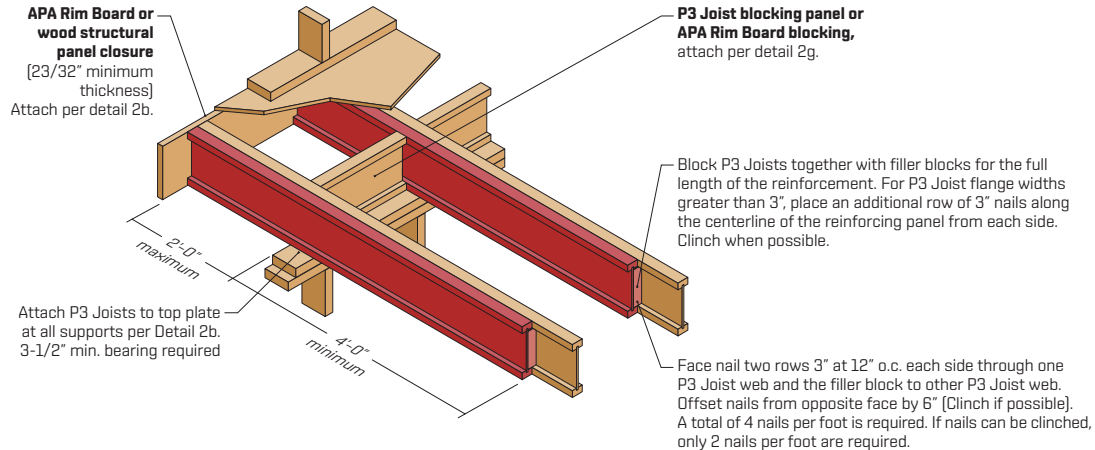


Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

NOTE APA RATED SHEATHING 48/24 [minimum thickness 23/32"] required on sides of joist. Depth shall match the full height of the joist. Nail top and bottom flange with 2-1/2" nails at 6" o.c. Install with face grain running horizontally. Attach P3 Joist to plate at all supports per Detail 2b.

FIGURE 5B

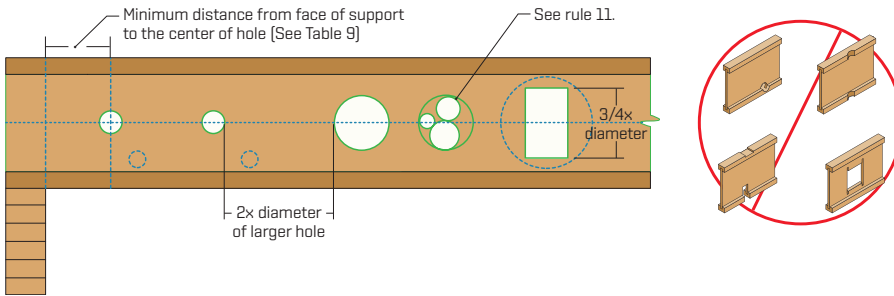
Double P3 Joists



NOTES All nails shown in the details above are assumed to be common nails unless otherwise noted. Individual components are not shown to scale for clarity.

P3 Joist Typical Holes

FIGURE 6



Cutting the Holes

- **Never** drill, cut, or notch the flange. **Never** over-cut the web.
- Holes in webs should be cut with a sharp saw.
- For rectangular holes avoid over cutting the corners as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1" diameter hole in each of the 4 corners and then making the cuts between the holes is another good method to minimize damage to I-Joist.

TABLE 9

Location Of Circular Holes In P3 Joist Webs

Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf^{1,2,3,4}

Joist Depth	Joist	Minimum Distance from Inside Face of Any Support to Center of Hole (ft.-in.)															
		Round Hole Diameter [in.]															
		SAF ⁽⁵⁾	2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12	12-3/4
9-1/2"	PJI-40	14-1"	0'-7"	0'-8"	1'-3"	2'-10"	4'-6"	5'-0"	-	-	-	-	-	-	-	-	-
	PJI-60	14-9"	0'-7"	0'-8"	1'-8"	3'-3"	5'-0"	5'-5"	-	-	-	-	-	-	-	-	-
	PJI-80	15-5"	0'-7"	0'-8"	2'-2"	3'-9"	5'-6"	6'-0"	-	-	-	-	-	-	-	-	-
11-7/8"	PJI-40	16-1"	0'-7"	0'-8"	0'-8"	1'-3"	2'-9"	3'-1"	4'-3"	5'-10"	6'-11"	-	-	-	-	-	-
	PJI-60	16-6"	0'-7"	0'-8"	0'-8"	1'-7"	3'-0"	3'-5"	4'-7"	6'-2"	7'-3"	-	-	-	-	-	-
	PJI-65	16-10"	0'-7"	0'-8"	0'-8"	1'-9"	3'-3"	3'-8"	4'-10"	6'-5"	7'-6"	-	-	-	-	-	-
	PJI-80	17-4"	0'-7"	0'-8"	0'-8"	2'-0"	3'-6"	3'-10"	5'-0"	6'-9"	7'-10"	-	-	-	-	-	-
14"	PJI-90	17-7"	0'-7"	0'-8"	0'-9"	2'-2"	3'-8"	4'-1"	5'-3"	7'-0"	8'-1"	-	-	-	-	-	-
	PJI-40	17-5"	0'-7"	0'-8"	0'-8"	0'-9"	1'-3"	1'-7"	2'-7"	4'-0"	4'-11"	5'-6"	7'-1"	8'-5"	-	-	-
	PJI-60	17-11"	0'-7"	0'-8"	0'-8"	0'-9"	1'-8"	2'-0"	3'-0"	4'-5"	5'-5"	5'-11"	7'-7"	8'-11"	-	-	-
	PJI-65	18-4"	0'-7"	0'-8"	0'-8"	0'-9"	1'-11"	2'-3"	3'-4"	4'-9"	5'-8"	6'-3"	7'-11"	-	-	-	-
	PJI-80	19-0"	0'-7"	0'-8"	0'-8"	0'-9"	2'-1"	2'-5"	3'-6"	5'-0"	6'-0"	6'-7"	8'-3"	-	-	-	-
16"	PJI-90	19-5"	0'-7"	0'-8"	0'-8"	1'-0"	2'-4"	2'-8"	3'-9"	5'-3"	6'-3"	6'-10"	8'-6"	-	-	-	-
	PJI-40	18-10"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	1'-4"	2'-8"	3'-6"	4'-0"	5'-5"	6'-6"	6'-11"	8'-6"	-
	PJI-60	19-6"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	1'-10"	3'-1"	4'-0"	4'-6"	5'-11"	7'-1"	7'-5"	9'-1"	-
	PJI-65	20-0"	0'-7"	0'-8"	0'-8"	0'-9"	0'-10"	1'-2"	2'-1"	3'-5"	4'-4"	4'-10"	6'-3"	7'-5"	7'-10"	9'-5"	-
	PJI-80	20-9"	0'-7"	0'-8"	0'-8"	0'-9"	0'-11"	1'-3"	2'-3"	3'-7"	4'-6"	5'-0"	6'-6"	7'-9"	8'-1"	9'-10"	-
18"	PJI-90	21-1"	0'-7"	0'-8"	0'-8"	0'-9"	1'-2"	1'-6"	2'-6"	3'-10"	4'-9"	5'-4"	6'-10"	8'-0"	8'-5"	10'-1"	-
	PJI-80	22-3"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	0'-10"	1'-3"	2'-1"	2'-8"	3'-6"	4'-6"	5'-8"	7'-3"	8'-6"
	PJI-90	22-8"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	0'-10"	1'-6"	2'-5"	2'-11"	4'-5"	5'-6"	5'-11"	7'-6"	8'-9"
20"	PJI-80	23-9"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	0'-10"	0'-10"	1'-4"	1'-10"	3'-2"	4'-2"	4'-6"	6'-0"	7'-1"
	PJI-90	24-2"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	0'-10"	0'-10"	1'-8"	2'-2"	3'-6"	4'-6"	4'-10"	6'-3"	7'-5"
24"	PJI-80	26-7"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	0'-10"	0'-10"	0'-11"	0'-11"	1'-8"	2'-7"	2'-10"	4'-1"	5'-0"
	PJI-90	27-1"	0'-7"	0'-8"	0'-8"	0'-9"	0'-9"	0'-10"	0'-10"	0'-10"	0'-11"	0'-11"	2'-0"	2'-11"	3'-2"	4'-5"	5'-4"

NOTES

1. Above tables may be used for P3 Joist spacing of 24" on center or less.
2. Hole location distance is measured from inside face of supports to center of hole.
3. Distances in this chart are based on uniformly loaded joists.
4. Hole sizes and/or locations that fall outside of the scope of this table may be acceptable based on analysis of actual hole size, span, spacing, and loading conditions.
5. SAF stands for Span Adjustment Factor. SAF is used as defined below.

OPTIONAL

Table 9 is based on the P3 Joist being used at their maximum span. If the P3 Joist are placed at less than their full allowable span, the maximum distance from the centerline of the hole to the face of any support [D] as given above may be reduced as follows.

$$D_{\text{reduced}} = \frac{L_{\text{actual}}}{\text{SAF}} \times D$$

Where: D_{reduced} = Distance from the inside face of any support to center of hole is reduced for less-than-maximum span applications [ft]. The reduced distance shall not be less than 6" from the face of support to edge of the hole.

L_{actual} = The actual measured span distance between the inside faces of supports [ft]

SAF = Span Adjustment Factor is given in the table above.

D = The minimum distance from the inside face of any support to center of hole from Table 9 above

If $\frac{L_{\text{actual}}}{\text{SAF}}$ is greater than 1, use 1 in the above calculation

Typical Floor Framing Installation Notes

1. Installation of P3 Joist shall be in accordance with Figure 2.
2. Except for cutting joist to length, P3 Joist flanges should **NEVER** be cut, drilled, or notched.
3. Concentrated loads should be applied only to the top surface of the top flange. At no time should concentrated loads be suspended from the bottom flange with the exception of light loads such as ceiling fans, light fixtures, etc.
4. P3 Joists must be protected from the weather prior to installation.
5. P3 Joists must not be used in applications where they will be permanently exposed to weather or will reach a moisture content greater than 16% such as in swimming pool or hot tub areas. They must not be installed where they will remain in direct contact with concrete or masonry.
6. End-bearing length must be at least 1-3/4". For multiple span joists, intermediate bearing length must be at least 3-1/2".
7. Ends of floor joists shall be restrained to prevent rollover. Use Certified Rim Board or P3 Joist blocking panels.
8. P3 Joists installed beneath bearing walls perpendicular to the joists require full depth blocking panels, Certified Rim Board, or squash blocks [cripple blocks] in order to transfer gravity loads from above the floor system to the wall or foundation below. See note 2g page 7.
9. For P3 Joists up to 18" deep installed as rim board directly beneath bearing walls parallel to the joists, the maximum factored vertical load using a single P3 Joist is 2900 plf and is 5800 plf if double P3 Joists are used. Full bearing is required under P3 Joist used as rim board.
10. Continuous lateral support of the P3 Joist's compression flange is required to prevent rotation and buckling. In simple span uses, lateral support of the top flange is normally supplied by the floor sheathing. In multiple span or cantilever applications, bracing of the P3 Joist's bottom flange is also required at interior supports of multiple-span joists and at the end support next to the cantilever extension. The ends of all cantilever extensions must be laterally braced as shown in Figure 3 or 4.
11. Nails installed perpendicular to the wide face of the flange shall be spaced in accordance with the applicable building code requirements or approved building plans but should not be closer than 2" o.c. per row.
12. Figure 2 details show only P3 Joist-specific fastener requirements. For other fastener requirements, see the applicable building code.
13. For Fire-Resistance ratings, typical Sound Transmission Class (STC), and typical Impact Insulation Class (IIC), refer to National Building Code of Canada 2015 Table A-9.10.3.1.B. assembly numbers F3 to F21.

Web Hole Rules and Specifications

One of the benefits of using P3 Joists in residential floor construction is that holes may be cut in the joist webs to accommodate electrical wiring, plumbing lines, and other mechanical systems, thereby minimizing the depth of the floor system.

Rules for Cutting Holes in P3 Joist

1. The distance between the inside edge of the support and the center line of any hole shall be in compliance with the requirements of Table 9.
2. P3 Joist top and bottom flanges must **NEVER** be cut, notched, or otherwise modified.
3. Whenever possible field-cut holes should be centered on the middle of the web.
4. The maximum size hole that can be cut into a P3 Joist web shall equal the clear distance between the flanges of the P3 Joist minus 1/4". A minimum of 1/8" should always be maintained between the top or bottom of the hole and the adjacent P3 Joist flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed three-fourths of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole **(or twice the length of the longest side of the longest rectangular hole)** and each hole must be sized and located in compliance with the requirements of Table 9.
7. Holes measuring 1-1/2" shall be permitted anywhere in a cantilevered section of a P3 Joist. Holes of greater size may be permitted subject to verification.
8. A 1-1/2" hole can be placed anywhere in the web provided that it meets the requirements of rule 6 above.
9. All holes shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 6.
10. Limit of 3 maximum size holes per span.
11. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

Typical P3 Joist Roof Framing and Construction Details

FIGURE 7

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.

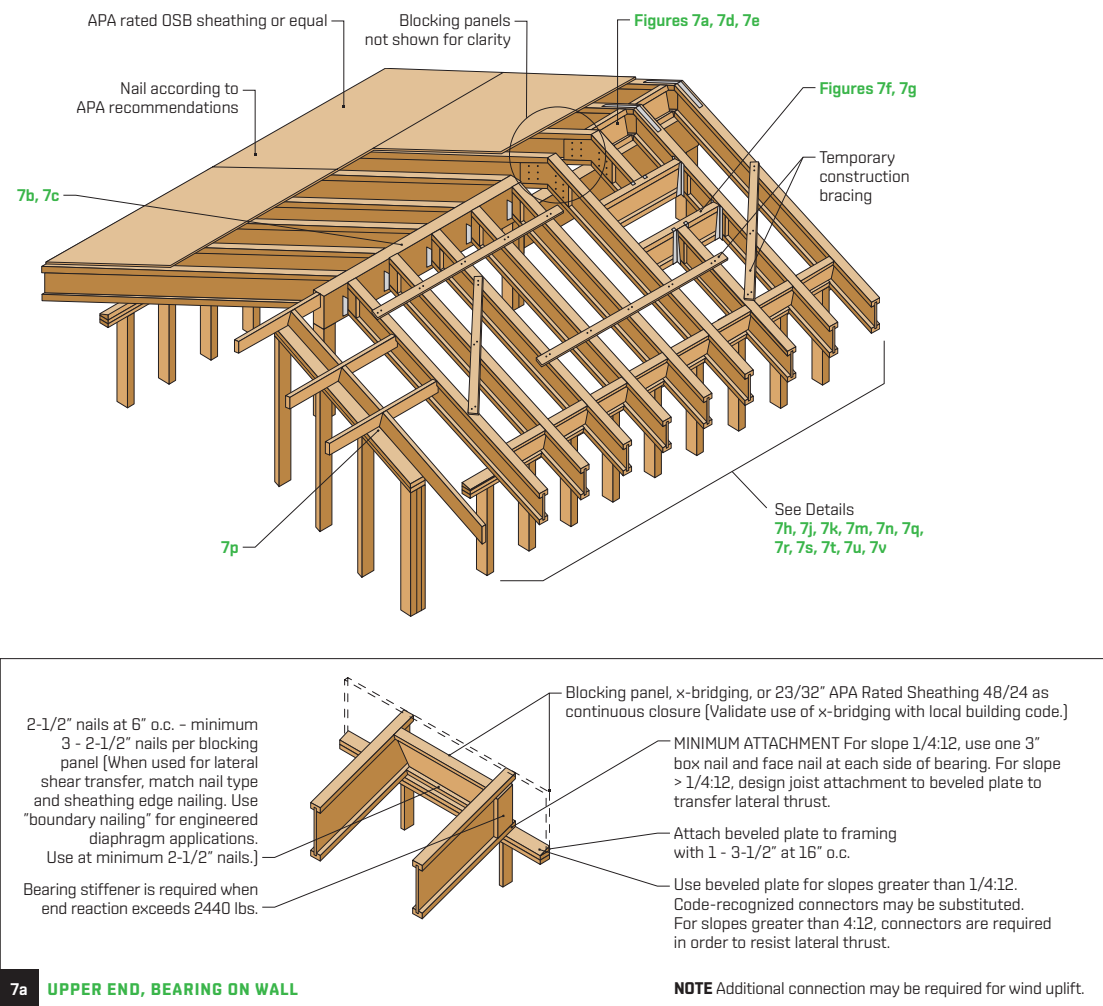


FIGURE 7 (CONTINUED)
Typical P3 Joist Roof Framing and Construction Details

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.

Beveled bearing stiffener required each side

For roof slopes between 1/4:12 and 12:12, provide a strap tie nailed at a minimum of 3" spacing or in accordance with the recommendation of the strap manufacturer.

Ridge beam (Glulam or LVL)

Adjustable Slope Hanger with a minimum factored uplift resistance of 450 lbs.

7b

PEAK CONNECTION

NOTE Additional connection may be required for wind uplift.

Adjustable Slope Hanger with a minimum uplift resistance of 450 lbs.

Beveled bearing stiffener required each side

For roof slopes between 1/4:12 and 12:12, provide a strap nailed at a minimum of 3" spacing on each side of roof slope or in accordance with the recommendation of the strap manufacturer.

Ridge beam (Glulam or LVL)

7c

P3 JOIST TO RIDGE BEAM CONNECTION

NOTE Additional connection may be required for wind uplift.

24"

23/32" x 2'-0" wood structural panel (front and back sides) with 12 - 2-1/2" nails into each joist with nails clinched (When roof live load exceeds 40 psf, horizontal orientation of gusset strong axis is required. Include a gap of 1/8" at top.)

Attach per 7a

Attach beveled plate to framing with 1 - 3-1/2" at 16" o.c.

Blocking panel or x-briding Attach per 7a

Support beam or wall

7d

P3 JOIST CONNECTION WITH WOOD STRUCTURAL PANEL GUSSETS

NOTE Additional connection may be required for wind uplift.

Tie strap nailed at a minimum of 3" spacing or in accordance with manufacturer's recommendations

STRAP NAILS Leave 2-3/8" minimum end distance

Beveled bearing plate

7e

P3 JOIST CONNECTION WITH TIE STRAP

NOTE Additional connection may be required for wind uplift.

FIGURE 7 (CONTINUED)

Typical P3 Joist Roof Framing and Construction Details

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.

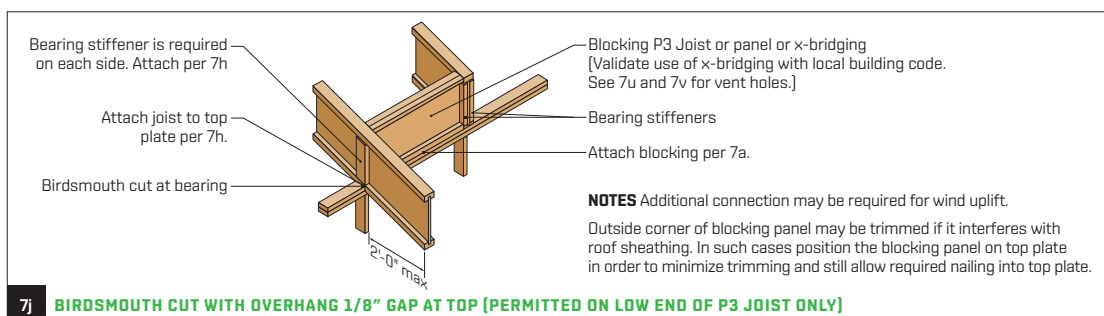
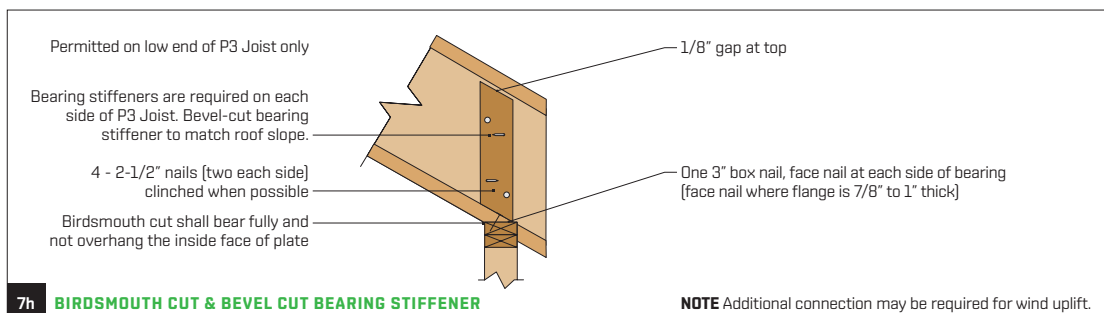
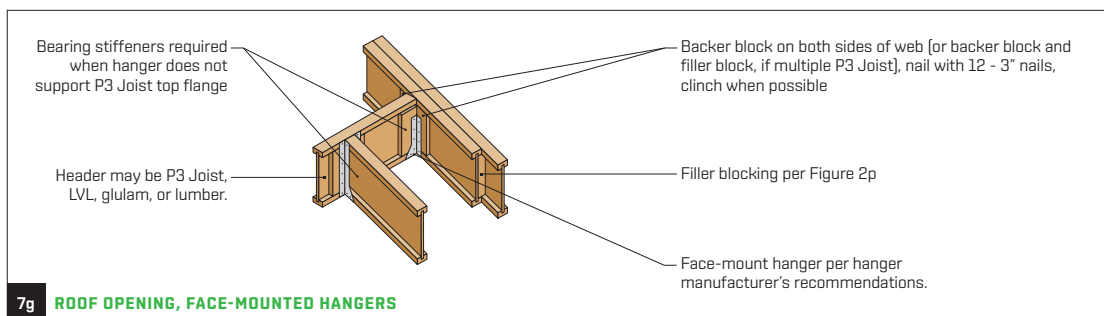
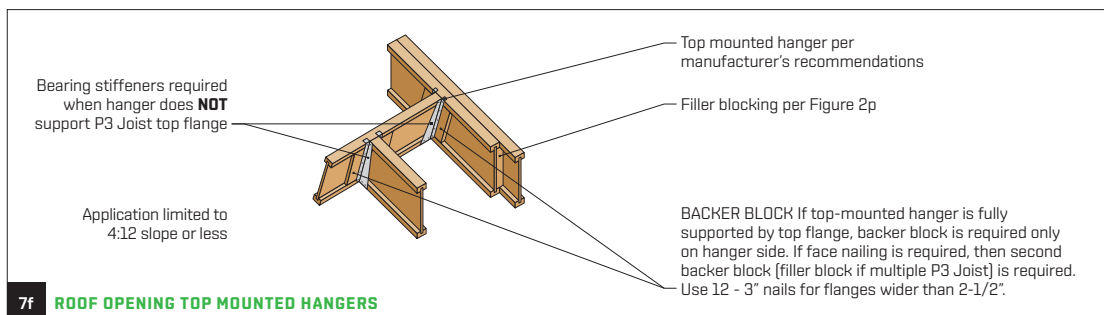
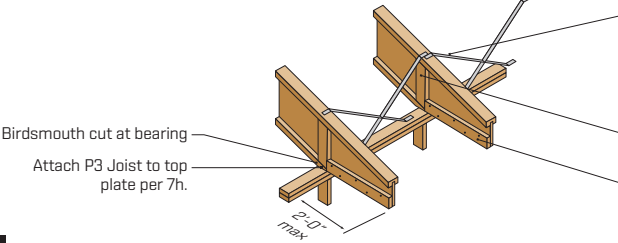


FIGURE 7 (CONTINUED)
Typical P3 Joist Roof Framing and Construction Details

All nails shown in the details below are assumed to be common nails unless otherwise noted. Framing lumber is assumed to be Spruce-Pine-Fir. Individual components are not shown to scale for clarity.



Birdsmouth cut at bearing

Attach P3 Joist to top plate per 7h.

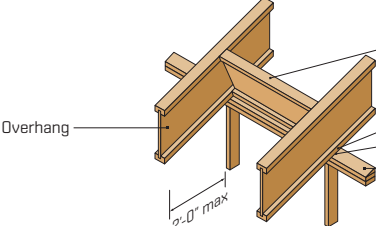
2'-0" max

X-briding or blocking panel
Validate use of X-briding with local building code.

Web stiffener required each side

2x block for fascia support

7k **P3 JOIST OVERHANG FOR FASCIA SUPPORT WITH BIRDSMOUTH CUT**



Overhang

2'-0" max

Blocking Panel Attach per 7a
(See 7u and 7v for vent holes.)

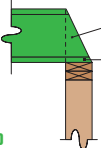
Attach P3 Joist to beveled plate per 7a.

Attach P3 Joist per 7a.

Beveled plate

7m **BLOCKING PANEL AT BEVELED PLATE**

NOTE Additional connection may be required for wind uplift.

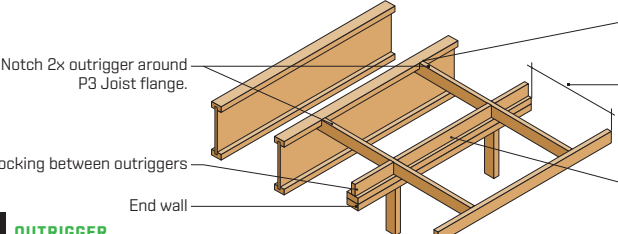


Do not bevel-cut joist beyond inside face of wall.

Attach P3 Joist per 7a.

7n **P3 JOIST WITH BEVEL-CUT END**

NOTE Blocking or x-briding is required at bearing for lateral support. Not shown for clarity. Additional connection may be required for wind uplift.



Notch 2x outrigger around P3 Joist flange.

Blocking between outriggers

End wall

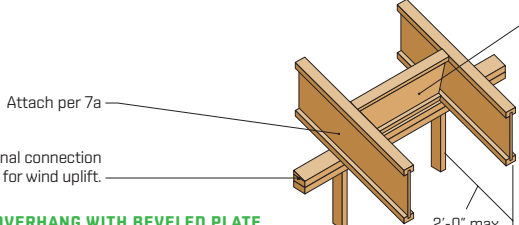
Do not notch P3 Joist flange.

Maximum overhang same as rafter spacing (not to exceed 2'-0")

Toe nail blocking to end wall for roof sheathing 5/8". Match nail type and spacing with roof sheathing edge nailing. ("Boundary nailing" for engineered diaphragm applications) Use minimum 2-1/2" nails.

7p **OUTRIGGER**

NOTE Additional connection may be required for wind uplift.



Attach per 7a

NOTE Additional connection may be required for wind uplift.

Blocking panels are attached per 7a or x-briding. Validate use of x-briding with local building code.

2'-0" max

7q **P3 JOIST OVERHANG WITH BEVELED PLATE**

Typical P3 Joist Roof Framing and Construction Details

2-1/2" nails at 6" o.c.

2x filler

2x4 min. beveled bearing block cut to fit

4'-0" min

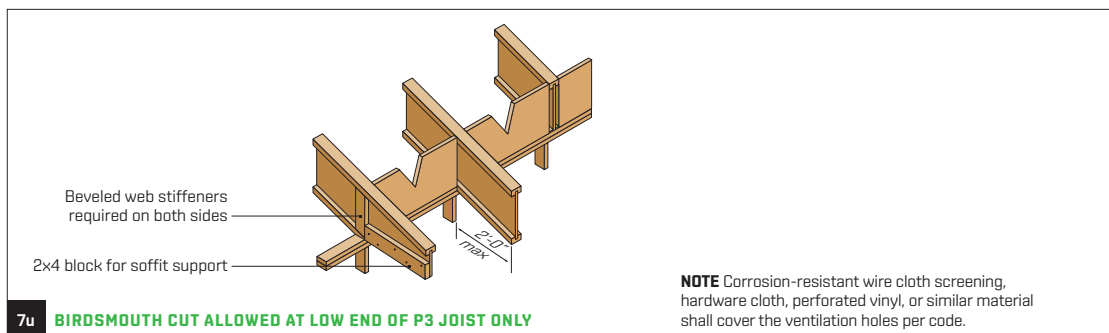
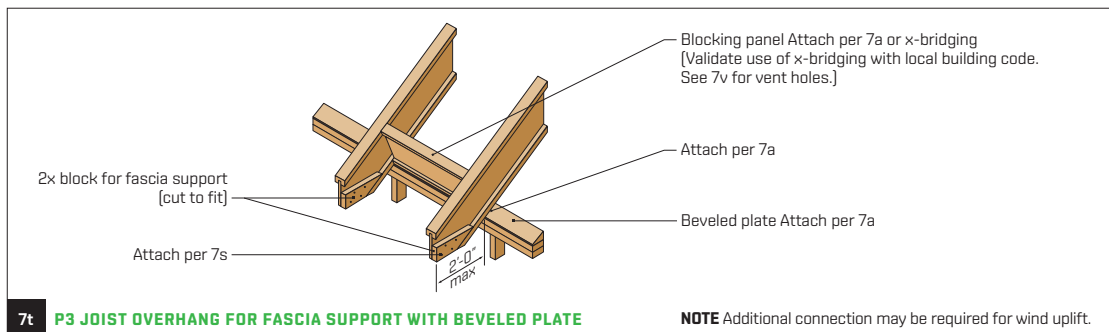
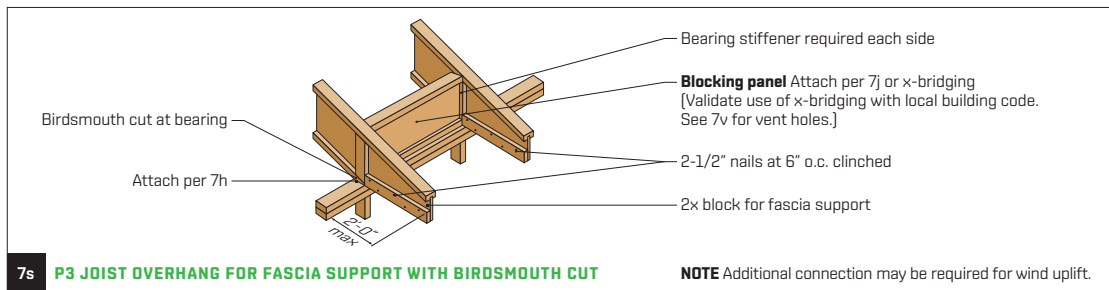
2'-0" max

2'-0" max

2x4 overhang attached to web of P3 Joist with 1 row of 2-1/2" nails at 8" o.c. clinched

Attach per 7a

NOTE Additional connection may be required for wind uplift. Lumber overhang shall be 2x4 Spruce-Pine-Fir #2 or better or a stronger species.



Notes



P3 Products Warranty

Limited Lifetime Warranty

EACOM Timber Corporation warrants that its line of P3 Products are free from defects in design, materials and workmanship. When installed and finished according to our published installation instructions and accepted engineering standards, our P3 Products will perform in accordance with our current published specifications for the lifetime of your home or building.

Warranty Limitations

EACOM Timber Corporation must be given a reasonable opportunity to inspect the product before it will honor any claims under this warranty. If after inspection and verification of the problem, we determine that there is a structural failure covered by the warranty, we will pay to the owner of the structure an amount of money equal to the reasonable cost of the defective product, or, at our option, replace any defective product. This warranty does not cover the cost of installation, removal of the defective product, or reinstallation of replacement product. Checks, cracks or splits of P3 Products resulting from the natural physical properties of wood are not covered — unless the condition causes a structural weakness.

Please protect your investment! P3 Products must be protected from exposure to moisture from whatever source by proper building standards. Exposure to moisture beyond incidental exposure during normal construction periods may cause product failure and will void this limited warranty.

This warranty shall apply only if the P3 Product is subjected to normal use and exposure. The products must be stored, handled, and installed in a manner generally accepted in the industry, and in accordance with our current published installation instructions and in compliance with our product design specifications relating to spans and loading. Failure to follow such instructions will void this warranty.

Disclaimer

EXCEPT FOR THE EXPRESS WARRANTY AND REMEDY SET FORTH ABOVE, EACOM TIMBER CORPORATION DISCLAIMS ALL OTHER WARRANTIES AND GUARANTEES, EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No other warranty or guarantee will be made by or on behalf of the manufacturer or the seller or by operation of law with respect to the product or its installation, storage, handling, maintenance, use, replacement, or repair. Neither EACOM Timber Corporation nor the seller shall be liable by virtue of any warranty or guarantee, or otherwise, for any special or incidental or consequential loss or damage resulting from the use of the product. EACOM Timber Corporation makes no warranty or guarantee with respect to installation of the product by the builder or the builder's contractor or by any other installer.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

For information on our P3 Products or our warranty, contact us at:

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