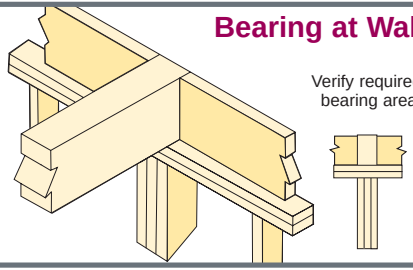
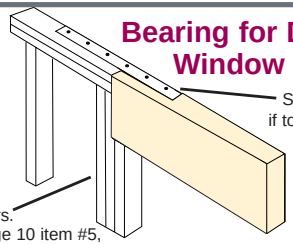
Bearing Information for One Piece 3-1/2" Member

1 Bearing at Wall



Verify required bearing area.

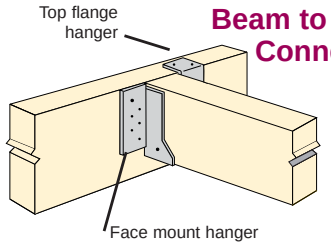
2 Bearing for Door or Window Header



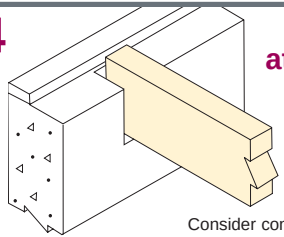
Strap per code if top plate is not continuous over header.

Trimmers. See page 10 item #5, and following tables for minimum number of trimmers.

3 Beam to Beam Connection



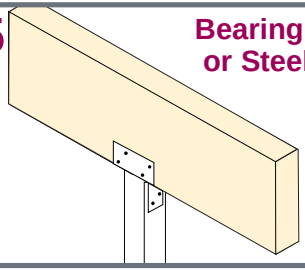
4 Bearing at Concrete Wall



Protect wood from direct contact with concrete per code requirements.

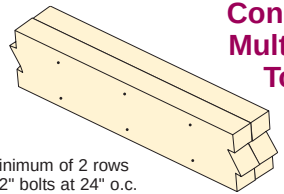
Consider concrete and masonry connectors for this type of application.

5 Bearing at Wood or Steel Column



Verify required bearing area.

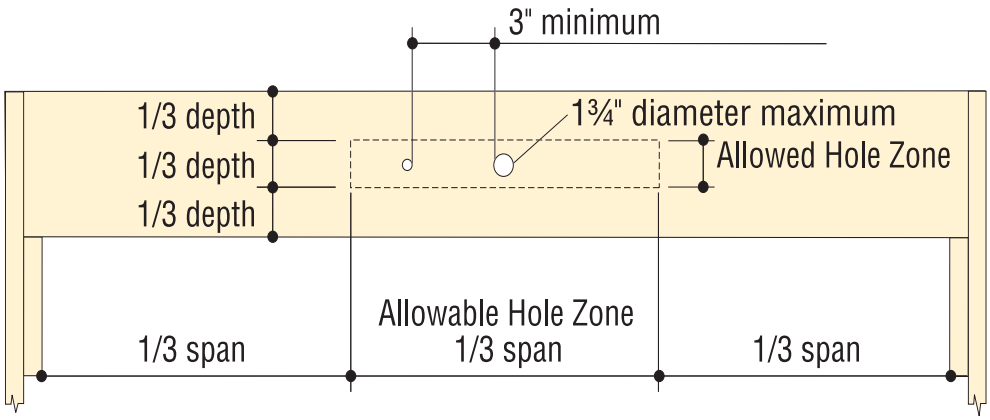
6 Connection of Multiple Piece Top-Loaded Beams

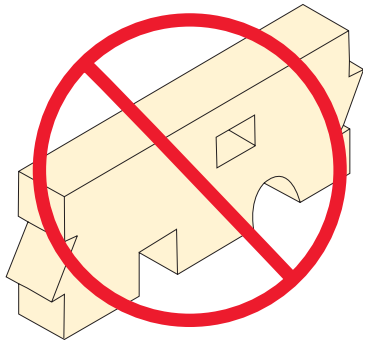


* Minimum of 2 rows 1/2" bolts at 24" o.c.
* See Simpson SDS screws for alternatives to 1/2" bolts.

For side-loaded multiple member beams, see table on page 3.

Allowable Holes for Uniformly Loaded Beams





Cutting, notching or drilling holes are NOT allowed, except as noted.

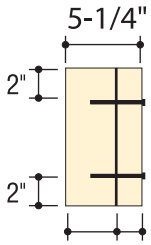
1. This hole chart is for typical beam applications only, and covers uniform loads and span conditions provided in this brochure.
2. **NO** square holes are allowed.
3. For other hole configurations, contact your design professional or supplier for assistance.

Multiple Member Connections for Side-Loaded Beams

MULTIPLE ASSEMBLY (See diagram)	MAXIMUM UNIFORM LOAD APPLIED TO EITHER OUTSIDE MEMBER (LBS. PER LINEAL FT.)					
	2-rows 16-d (3-1/2") Common Wire @ 12" o.c. or equivalent screws	3-rows 16-d (3-1/2") Common Wire @ 12" o.c. or equivalent screws	2-rows gun nails .131 dia. x 3-1/4" @ 12" o.c.	3-rows gun nails .131 dia. x 3-1/4" @ 12" o.c.	2-rows 1/2" bolts @ 24" o.c. or equivalent screws	2-rows 1/2" bolts @ 12" o.c. or equivalent screws
A	360	540	285	425	436	872
B	360	540	285	425	436	872
C					436	872

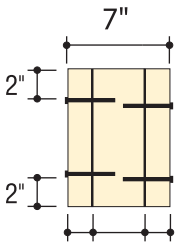
A

1 Pc. 3-1/2" + 1 Pc. 1-3/4"



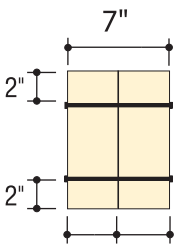
B

1 Pc. 3-1/2" + 2 Pc. 1-3/4"



C

2 Pc. 3-1/2" (Bolt only)



1. Specific gravity for nail and bolt design is 0.44.
2. For 2 rows - 16-d nails @ 8" o.c. use 540 plf, 6" o.c. use 720 plf and 4" o.c. use 1080 plf. For 3 rows - 16-d nails @ 8" o.c. use 810 plf, 6" o.c. use 1080 plf and 4" o.c. use 1620 plf.
3. For 2 rows - .131" dia. gun nails @ 8" o.c. use 428 plf, 6" o.c. use 570 plf and 4" o.c. use 855 plf. For 3-rows .131" dia. gun nails @ 8" o.c. use 638 plf, 6" o.c. use 850 plf and 4" o.c. use 1275 plf.
4. For 1/2" bolts spaced 8" o.c. use 1308 plf, 6" o.c. use 1744 plf and for 4" o.c. use 2616 plf.
5. The beam must be sized to carry the applied load, the connection can then be checked for adequacy.
6. For 3 piece members, nailing is specified for both sides.
7. Values listed are for 100% duration. Increase 15% for snow loaded roof conditions and 25% for non-snow loaded roof conditions.
8. Bolt design assumes a worst case mode I single or double shear failure. Nail design assumes a worst case mode III failure. All nail and bolting requirements use the 2001 NDS® as a guide in their design. These design values have general application. For a specific loading connection or when greater capacities are needed see a design professional.
9. For beams greater than 7" wide see a design professional for the bolting and loading requirements.
10. Screws can be used in place of bolts as long as the screw capacity is identical or greater than the 1/2" bolt capacity. See screw manufactuer literature.