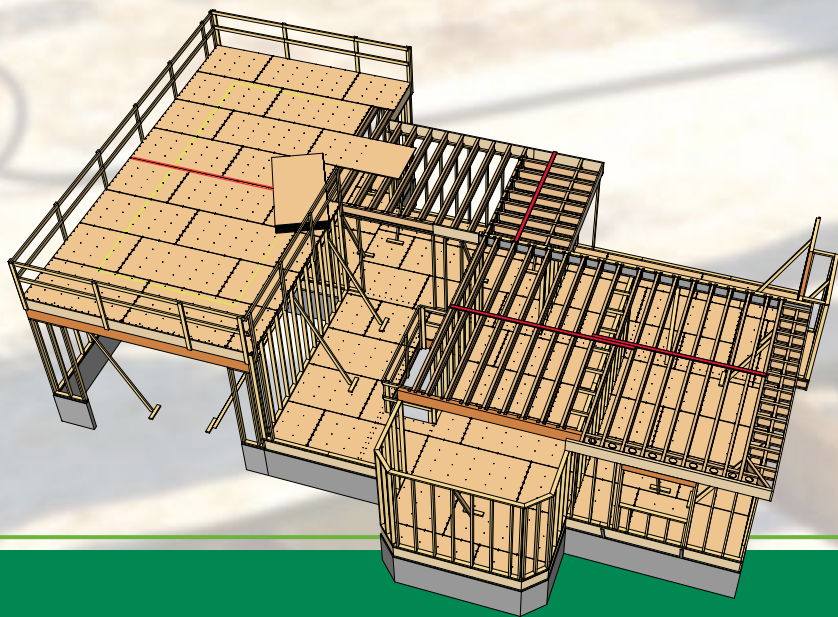




# FLOOR FRAMING STANDARDS

A Framers's Guide to the INSTALLATION PROCESS



# WEYERHAEUSER FLOOR FRAMING STANDARDS

## A Framers's Guide to the INSTALLATION PROCESS

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Trus Joist<sup>™</sup>  
Weyerhaeuser

1.888.453.8358 | [weyerhaeuser.com/woodproducts](http://weyerhaeuser.com/woodproducts)

**TJI® 110**  
**TJI® 210**  
**TJI® 230**  
**TJI® 360**  
**TJI® 560**  
**Joists**

### INSTALLATION GUIDE FOR FLOOR AND ROOF FRAMING

**WARNING:**  
DO NOT walk on joists until braced. **INJURY MAY RESULT.**

**WARNING:**  
DO NOT walk on joists that are lying flat.

**WARNING:**  
DO NOT stack building materials on unsheathed joists. Stack only over beams or walls.

**IMPORTANT: PLEASE READ CAREFULLY!**

Refer to the Trus Joist® Installation Guide for all construction details.

### Weyerhaeuser Layout Drawing — For Product Reference Only.

**JAVELIN<sup>®</sup>**  
software by Weyerhaeuser

Plan Label	Qty	Manuf.	Product	Face/Supporter Nails	Top Nails	Member/Supported Nails	Skew Slope	Supporting Material	Type	Backer Blks.	Supported Product	Web Stiffeners
H1	1	SST	HGUS412	56- 16d common	-	20- 16d double shear	-	-	LSL	No	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	No
H2	8	SST	ITS2.06/11.88	2- 10d x 1-1/2	-	4- 10d x 1-1/2	-	-	LSL	No	11 7/8" TJI 210	No
H3	18	SST	IUS2.06/11.88	10- 10d x 1-1/2	-	-	-	-	LSL	No	11 7/8" TJI 210	No
H4	1	SST	IUS2.06/11.88	10- 10d common	-	1- Simpson SD8x1.25 screw installed thru the seat of the hanger	-	-	LSL	No	11 7/8" TJI 210	No
H5	3	SST	IUS2.06/11.88	10- 10d common	-	-	-	-	LSL	2	11 7/8" TJI 210	No
H6	1	SST	MIU1.81/11	20- 10d x 1-1/2	-	2- 10d x 1-1/2	-	-	LSL	No	1 3/4" x 11 7/8" TimberStrand® LSL Beam (1.55E)	No
H7	1	SST	MIU1.81/11	20- 10d common	-	2- 10d x 1-1/2	-	-	LSL	1	1 3/4" x 11 7/8" TimberStrand® LSL Beam (1.55E)	No

Start Layout  
19.2' o.c.

Start Layout  
16' o.c.

Products			
PlotID	Length	Product	Plies Net Qty
F24	24' 0"	11 7/8" TJI 210	1 13
F22	22' 0"	11 7/8" TJI 210	1 9
F14	14' 0"	11 7/8" TJI 210	1 9
F14-2	14' 0"	11 7/8" TJI 210	2 4
F11	11' 0"	11 7/8" TJI 210	1 10
F6	6' 0"	11 7/8" TJI 210	1 14
F5	5' 0"	11 7/8" TJI 210	1 2
F4	4' 0"	11 7/8" TJI 210	1 3
R11	11' 0"	11 7/8" TJI 360	1 2
TSCa1	16' 0"	1 1/4" x 11 7/8" 1.3E TimberStrand LSL	1 12
TS1	4' 0"	1 3/4" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1 1
TS2	16' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1 1
TS3	14' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1 1
TS4	13' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1 1
TS5	11' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1 1
PPT1	4' 0"	3 1/2" x 3 1/2" 1.8E Parallam PSL	1 1
P1	11' 0"	5 1/4" x 11 7/8" 2.0E Parallam PSL	1 1

Accessories			
PlotID	Length	Product	Plies Net Qty
	1' 8 15/16"	23/32" Backer Blocks	1 2
	1' 0"	23/32" Backer Blocks	1 3
	2' 0"	1 7/8" net Filler Blocks	1 1
		23/32"x48"x96" OSB Weyerhaeuser Edge (0/24) T&G FF	1 41

Blocking			
PlotID	Length	Product	Plies Net Qty
FBk1	2' 0"	11 7/8" TJI 210	1 33
FBk1	1' 0"	11 7/8" TJI 210	1 6
FBk2	1' 0"	11 7/8" TJI 210	1 1
SSBk1	2' 0"	2 X 4 DF Stud	1 5

Rim board - 1x4 (16") max  
2" x 4" in center  
Rim board - 1x4 (16") max  
2" x 4" in center  
Rim board - 1x4 (16") max  
2" x 4" in center

Web stiffeners  
required each  
12" x 20" steel  
blocking panels

TJI blocks attach with 10d SDS/TJI SDS nails, checked. Use for 1x4 (16") rim board from each side with 16d 2x2 post flange nailed, 1x4 16d post flange nailed, 1x4 16d post flange nailed, 1x4 16d post flange nailed.

Backer blocks detail (right to bottom flange) attached with 10d SDS/TJI nails, checked when possible.

Lead bearing or shear wall above (must 2x12 wall wall below).

Sample Residence

Job # 658-426

Good Builders, Inc.

ABC Lumber

(800) 555-0000

See architect or engineer plans for dimensions and special details

Weyerhaeuser

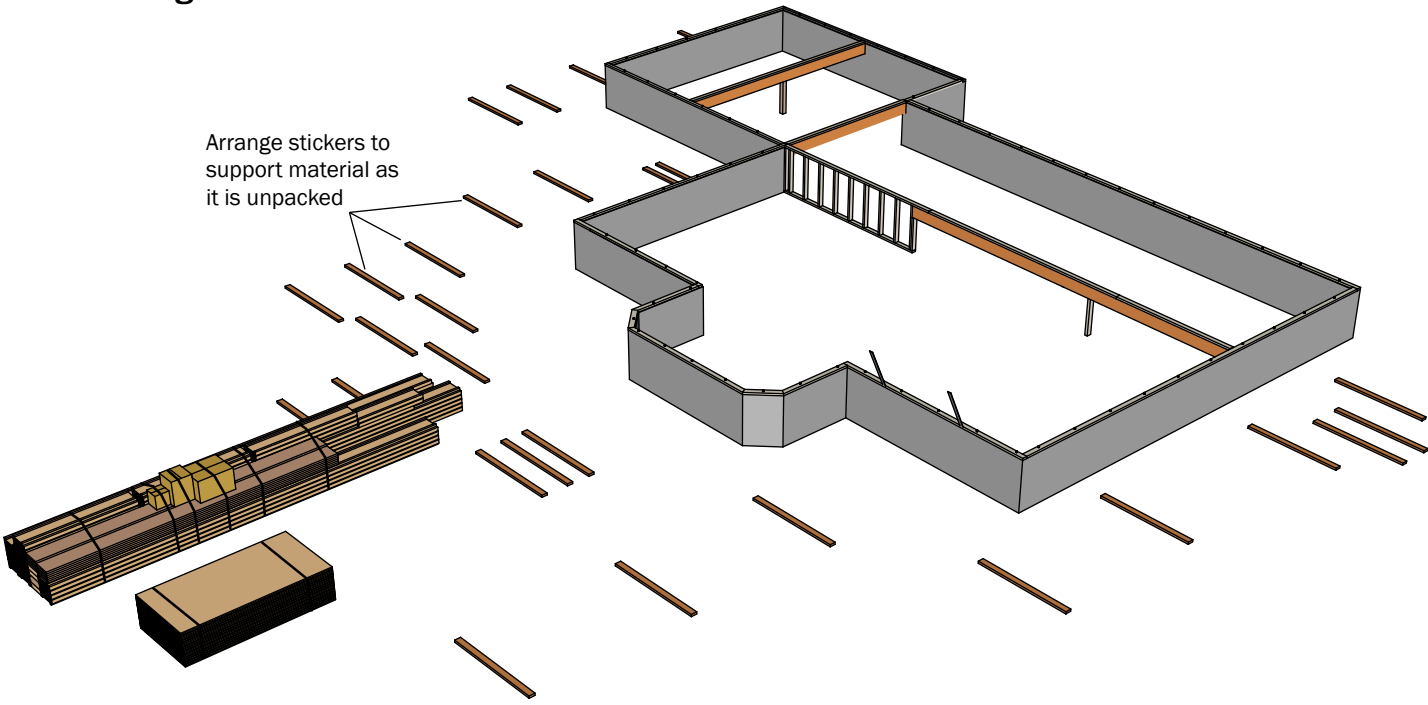
Stay Safe!  
Wear Personal  
Protective Equipment (PPE)



**WARNING:** This product can expose you to chemicals including wood dust which are known to the State of California to cause cancer, and methanol, which are known to the State of California to cause birth defects or other reproductive harm. Drilling, sawing, sanding or machining wood products can expose you to wood dust. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov) and [www.P65Warnings.ca.gov/wood](http://www.P65Warnings.ca.gov/wood).

Wood dust is classified as an irritant.  
Refer to SDS sheets available  
from Weyerhaeuser.

Floor Package Arrives



**WARNING: JOISTS ARE UNSTABLE UNTIL BRACED Laterally**  
BRACING INCLUDES: Blocking, Hangers, Rim Board, Sheathing, Rim Joist, Strut Lines

- Lack of proper bracing during construction can result in serious accidents. Observe the following guidelines:
1. Properly install all blocking, hangers, rim boards, and rim joists at TJI® joist end supports.
  2. Establish a permanent deck (sheathing), fastened to the first 4 feet of joists at the end of the bay or braced end wall.
  3. Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area and to each joist.
  4. Sheathing must be completely attached to each TJI® joist before additional loads can be placed on the system.
  5. Ends of cantilevers require safety bracing on both the top and bottom flanges.
  6. The flanges must remain straight within 1/2" from true alignment.

This guide is intended for the products shown in dry-use conditions.

La Sécurité Avant Tout  
**AVERTISSEMENT**  
Lire l'Attentionnement

- Les solives non contreventées latéralement sont instables. Voir le guide d'installation avant la pose des solives TJI®.
- Ne pas circuler sur les solives TJI® avant qu'elles ne soient adéquatement contreventées. Risque de blessure.
- Ne pas empiler des matériaux sur des solives avant d'avoir installé les sous-plancher. Les entreposer temporairement au-dessus des poutres et murs.

La Seguridad Ante Todo  
**ADVERTENCIA**  
Por Favor Lea Cuidadosamente

- Las viguetas son inestables hasta que sean reforzadas lateralmente. Vea la guía de instalaciones antes de instalar las viguetas TJI®.
- No camine sobre las viguetas hasta que sean apuntaladas.
- No ponga materiales de construcción sobre las viguetas TJI® antes de instalar el triplay. Ponga materiales únicamente sobre vigas o muros.

STAGE MATERIALS

**Joist Identification**

**Top Mount** **Face Mount**

**Staging Materials Saves Time**

**NOTE:** Blocking may be shipped as short lengths

**Products**

ProductID	Length	Product	Pieces	Net Qty
F24	24' 0"	11 7/8" TJI 210	1	13
F22	22' 0"	11 7/8" TJI 210	1	9
F14	14' 0"	11 7/8" TJI 210	1	9
F14-2	14' 0"	11 7/8" TJI 210	2	4
F11	11' 0"	11 7/8" TJI 210	1	10
F6	6' 0"	11 7/8" TJI 210	1	14
F5	5' 0"	11 7/8" TJI 210	1	2
F4	4' 0"	11 7/8" TJI 210	1	3
R11	11' 0"	11 7/8" TJI 360	1	2
TSCa1	16' 0"	1 1/4" x 11 7/8" 1.3E TimberStrand LSL	1	12
TS1	4' 0"	1 3/4" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1	1
TS2	16' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1	1
TS3	14' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1	1
TS4	13' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1	1
TS5	11' 0"	3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E)	1	1
PP1	4' 0"	3 1/2" x 3 1/2" 1.8E Parallam PSL	1	1
P1	11' 0"	5 1/4" x 11 7/8" 2.0E Parallam PSL	1	1

**Accessories**

ProductID	Length	Product	Pieces	Net Qty
1' 8 15/16"	23/32"	Backer Blocks	1	2
1' 0"	23/32"	Backer Blocks	1	3
2' 0"	1 7/8"	net Filler Blocks	1	1
	23/32"x48"x96"	OSB Weyerhaeuser Edge (0/24) T&G FF	1	41

**Blocking**

ProductID	Length	Product	Pieces	Net Qty
FBK1	2' 0"	11 7/8" TJI 210	1	33
FBK1	1' 0"	11 7/8" TJI 210	1	6
FBK2	1' 0"	11 7/8" TJI 210	1	1
SSBK1	2' 0"	2 X 4 DF Stud	1	5

**Microllam® LVL**

**TimberStrand® LSL**

**Parallam® PSL**

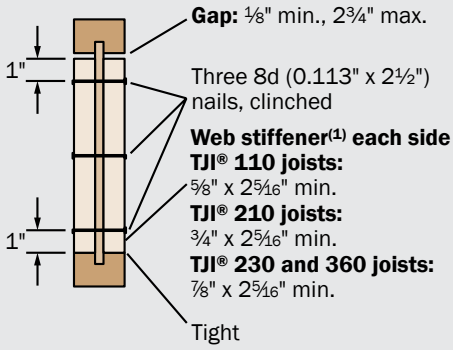
**Sample Residence**  
Job # 658-426  
Good Builders, Inc.  
ABC Lumber  
(800) 555-0000

See architect or engineer plans for dimensions and special details

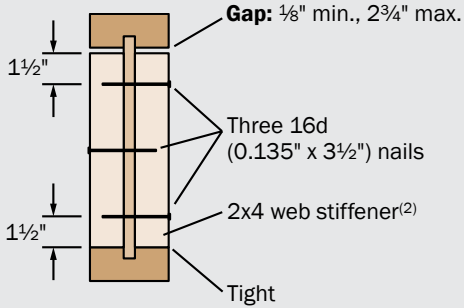


Web Stiffeners

TJI® 110, 210, 230, 360 Joists

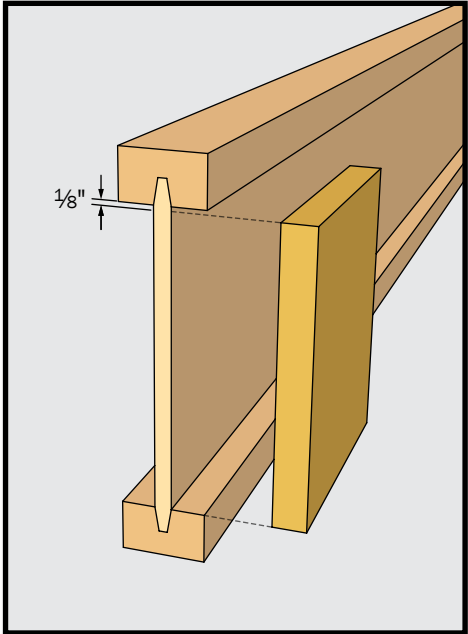


TJI® 560 Joists

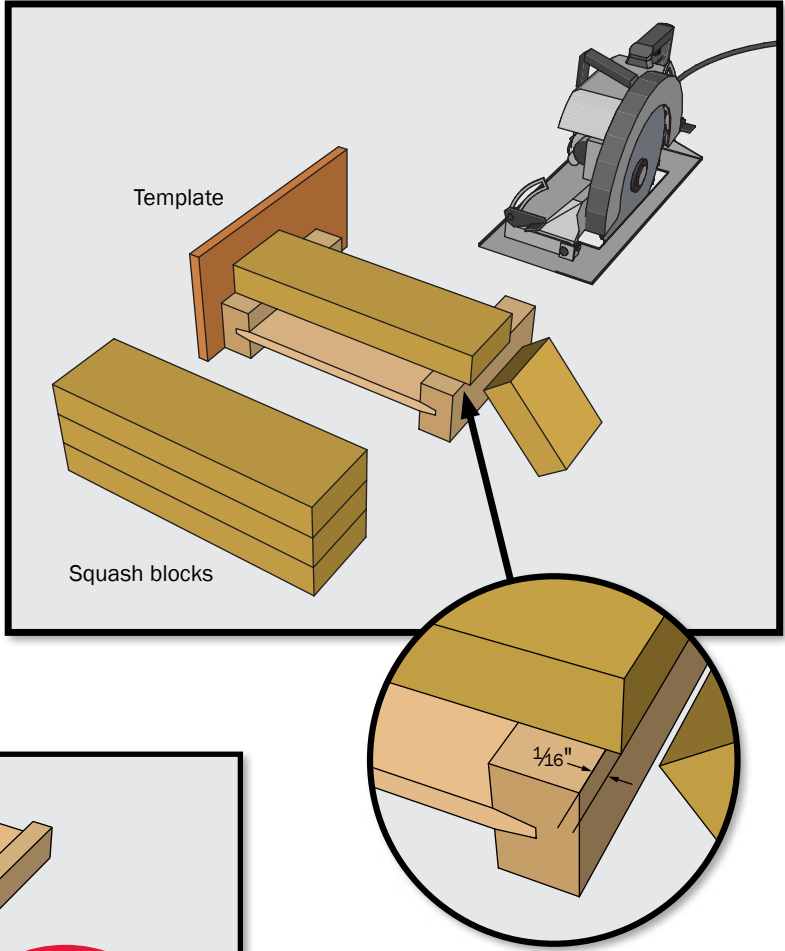


(1) PS1 or PS2 sheathing, face grain vertical  
(2) Construction grade or better

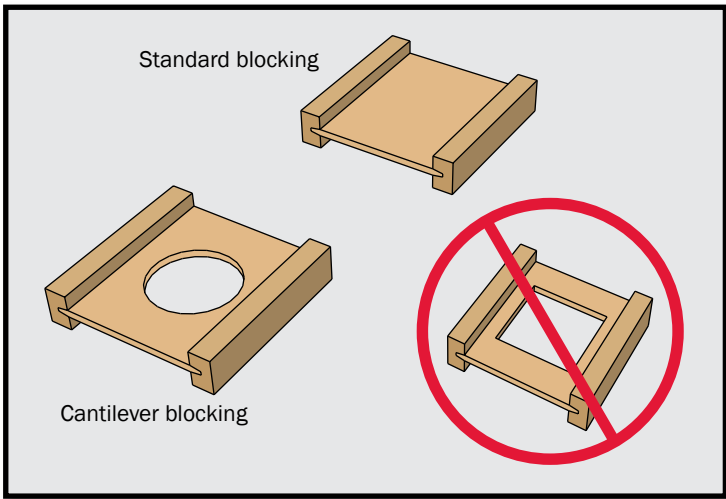
Cutting Web Stiffeners



Cutting Squash Blocks



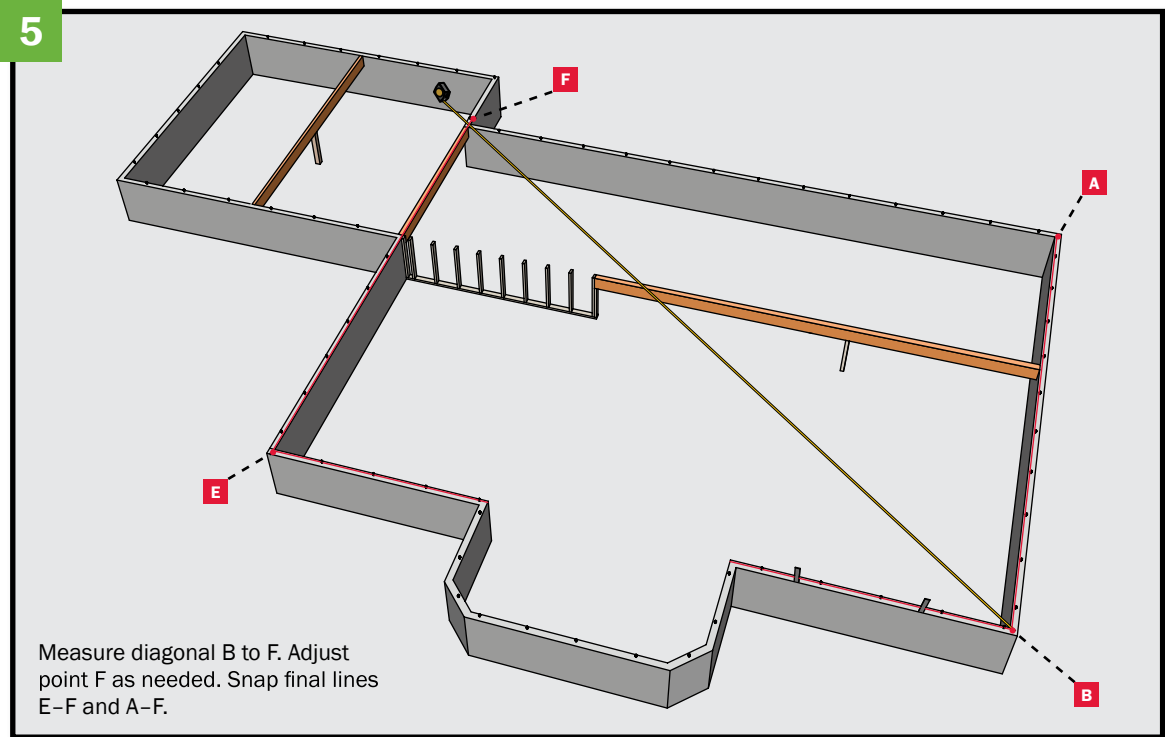
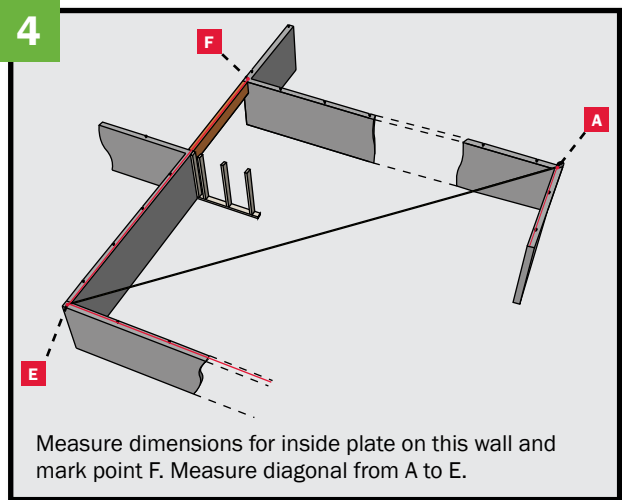
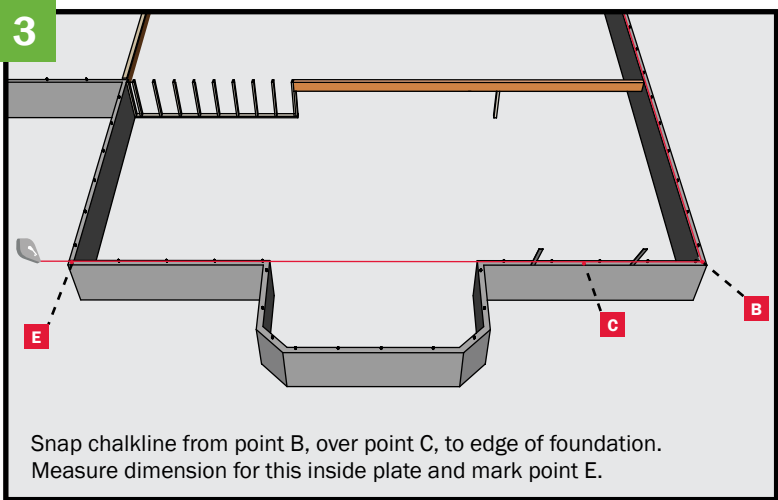
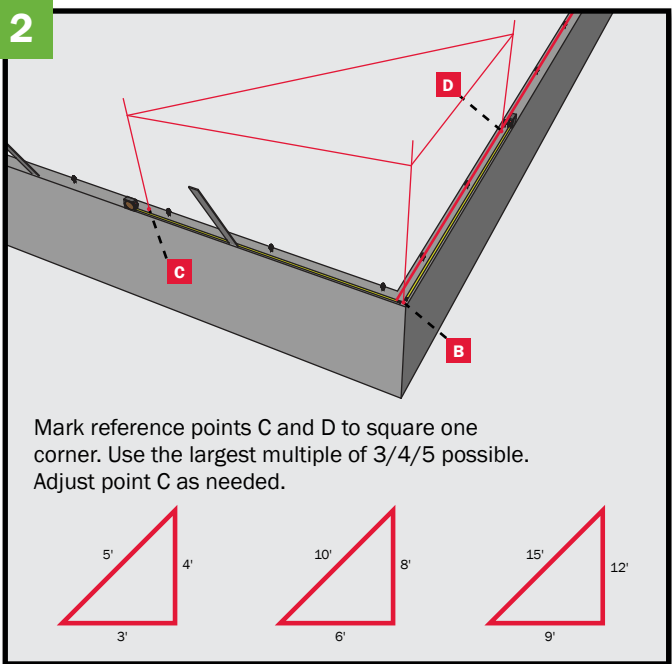
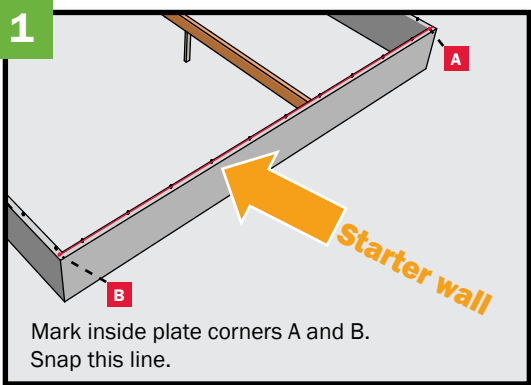
Cutting Blocking Panels



SQUARE AND SNAP LINE FOR SILL PLATE

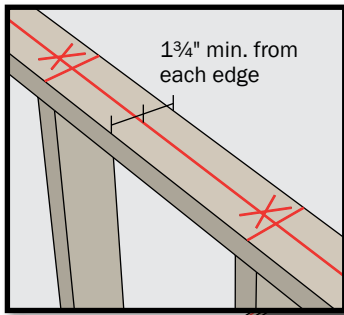


Architect/Engineer Plan

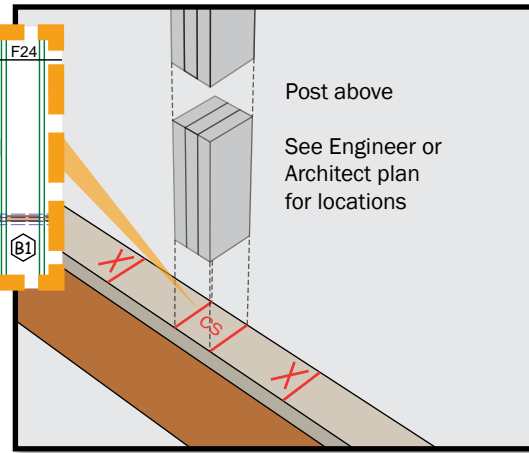
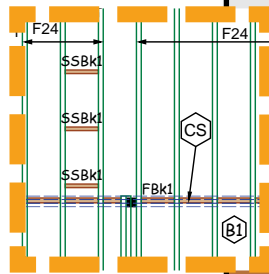


See architect or engineer plans for dimensions and special details

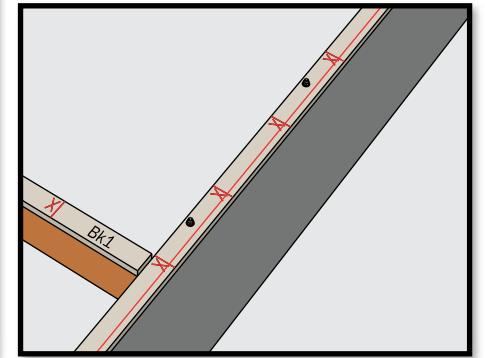
## Snap Line at Butted Joist



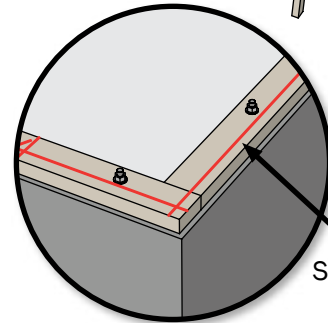
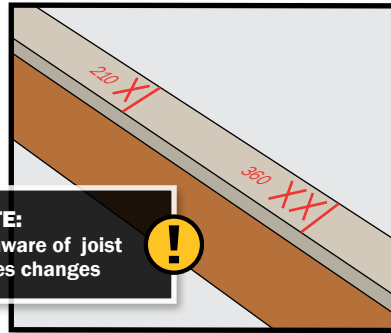
## Layout Squash Blocks



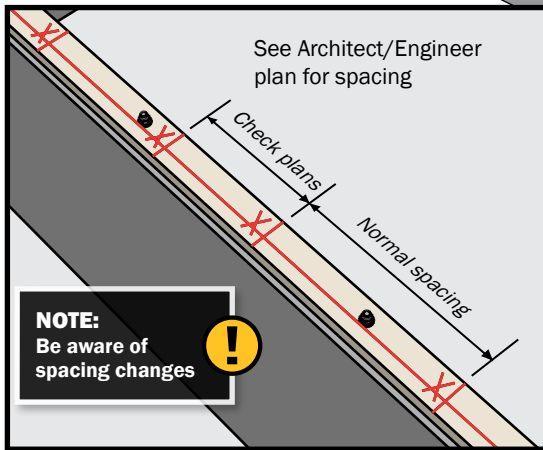
## Layout Blocking Panels



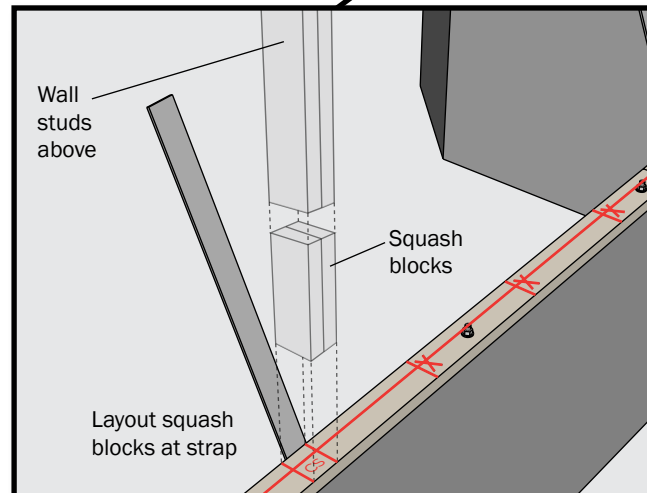
## Layout Joists



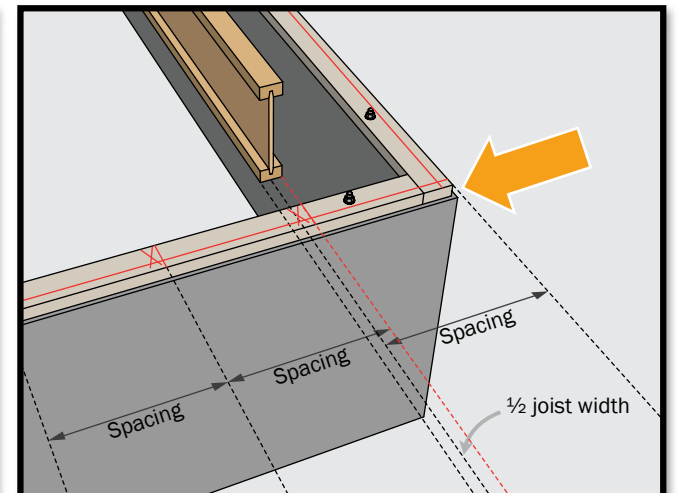
## Plumbing/Mechanical Offsets



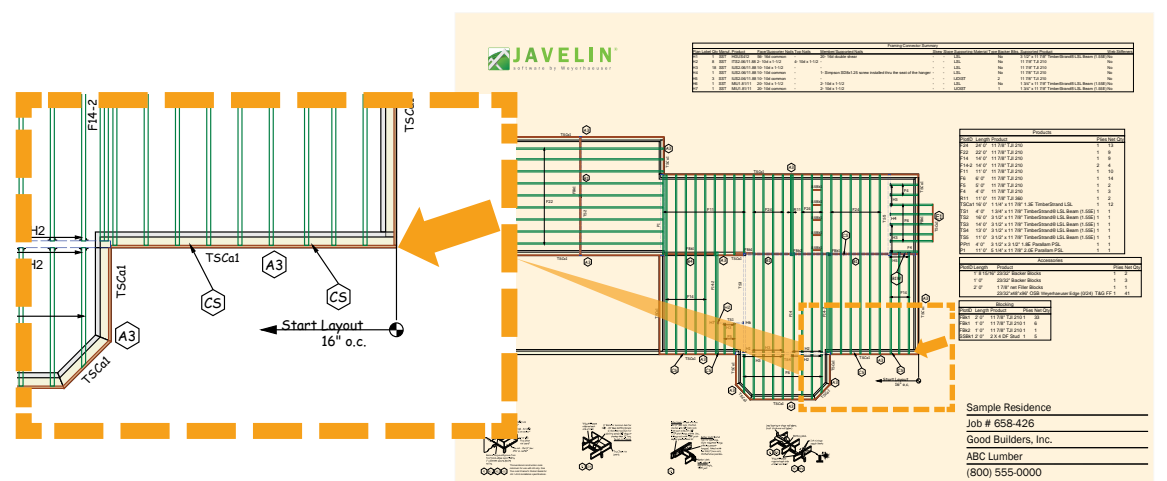
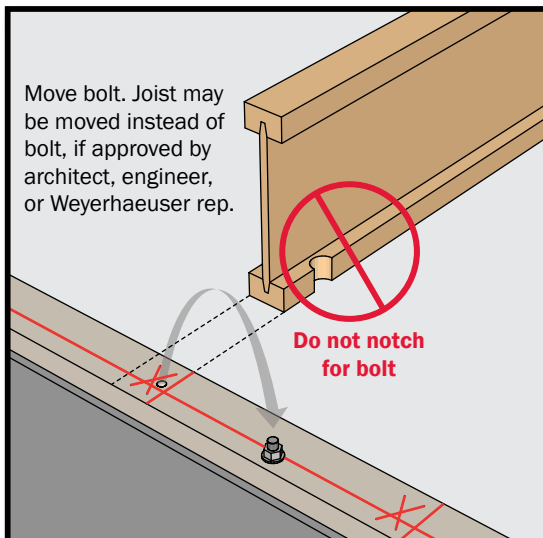
## Squash Blocks at Strap



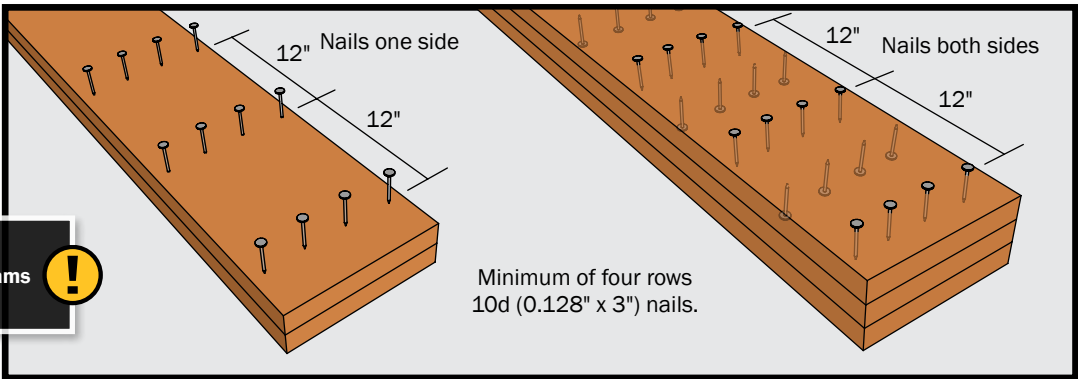
## Normal Joist Spacing



## Bolt at Joist Location



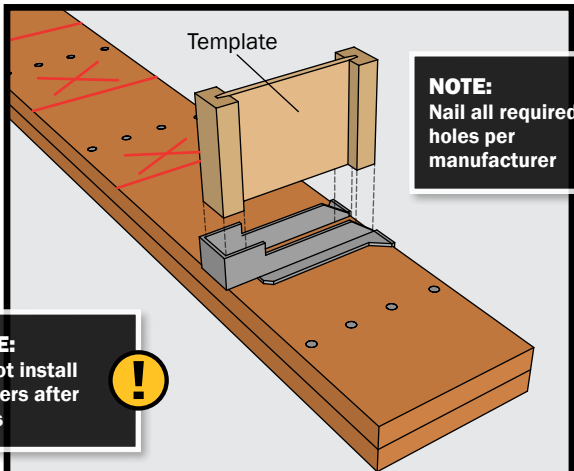
Fastening Per Engineer's Specifications (Top Loaded Beams ONLY)



**NOTE:**  
Assemble beams  
on ground

Minimum of four rows  
10d (0.128" x 3") nails.

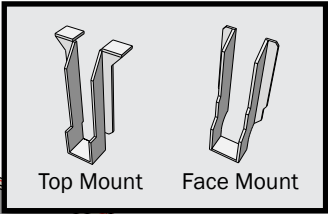
Hanger Installation



**NOTE:**  
Nail all required  
holes per  
manufacturer

**NOTE:**  
Do not install  
hangers after  
joists

Plan Label	Qty	Manuf.	Product	Face/Supporter Nails	Top Nails
H2	27	SST	HU2.1/9	14- 10d common	-
H3	2	SST	HU2.1/9	14- 10d common	-

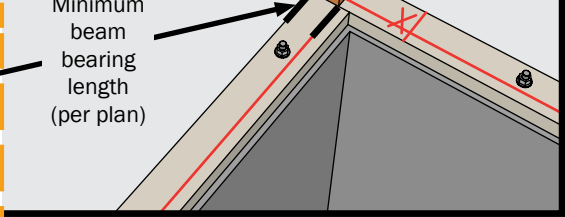
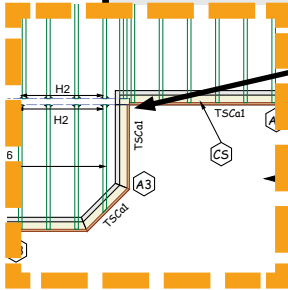
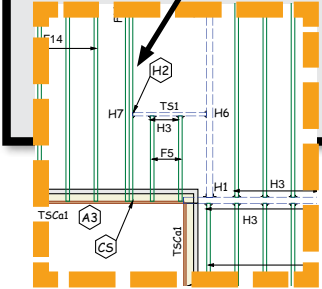
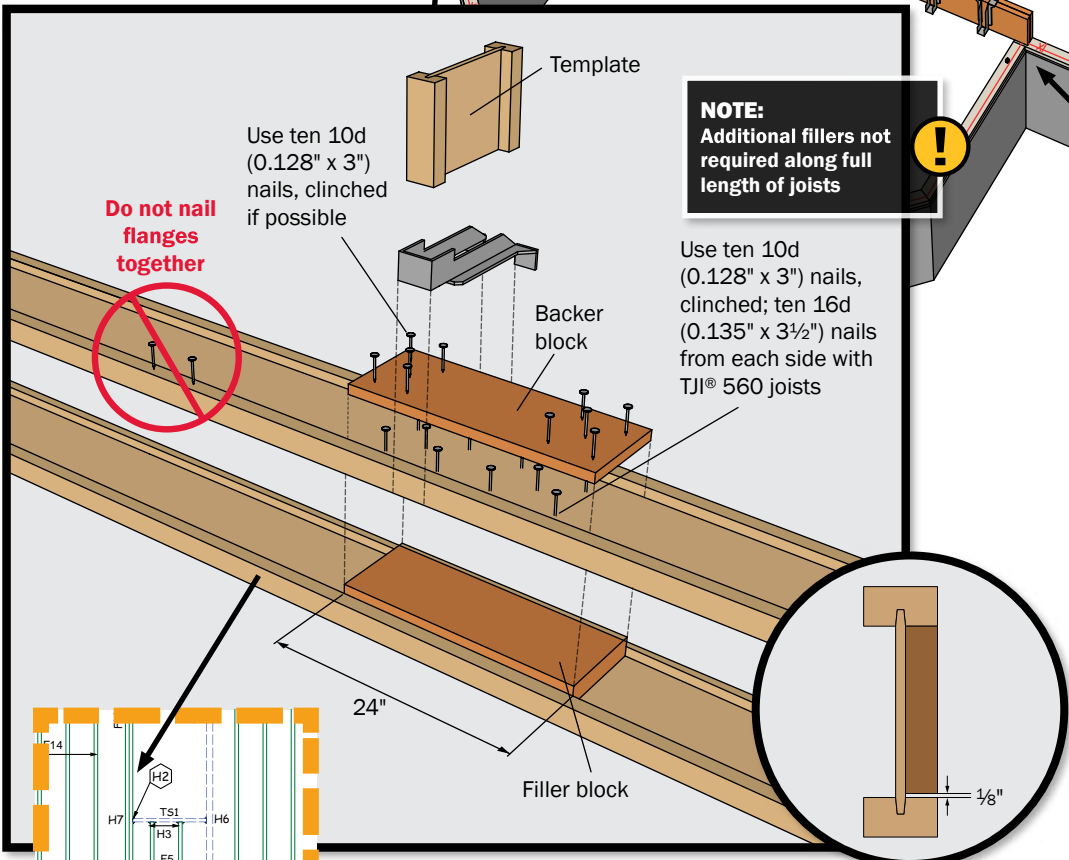


**NOTE:**  
See Engineer's plans  
or layout plans for  
special fastening of  
side-loaded beams!

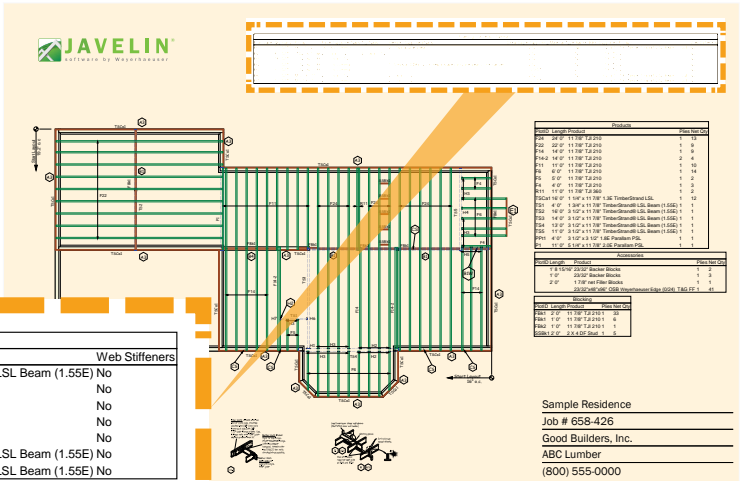
**NOTE:**  
Use galvanized nails to  
connect products to treated  
lumber sill plates. Not  
required with StrandGuard®  
TimberStrand® LSL sill plates.

**CAUTION:**  
Beams are heavy. Use  
appropriate equipment  
when lifting/placing beams  
to avoid injury.

Building Double TJI® Joist to  
Support Header (Detail H2)

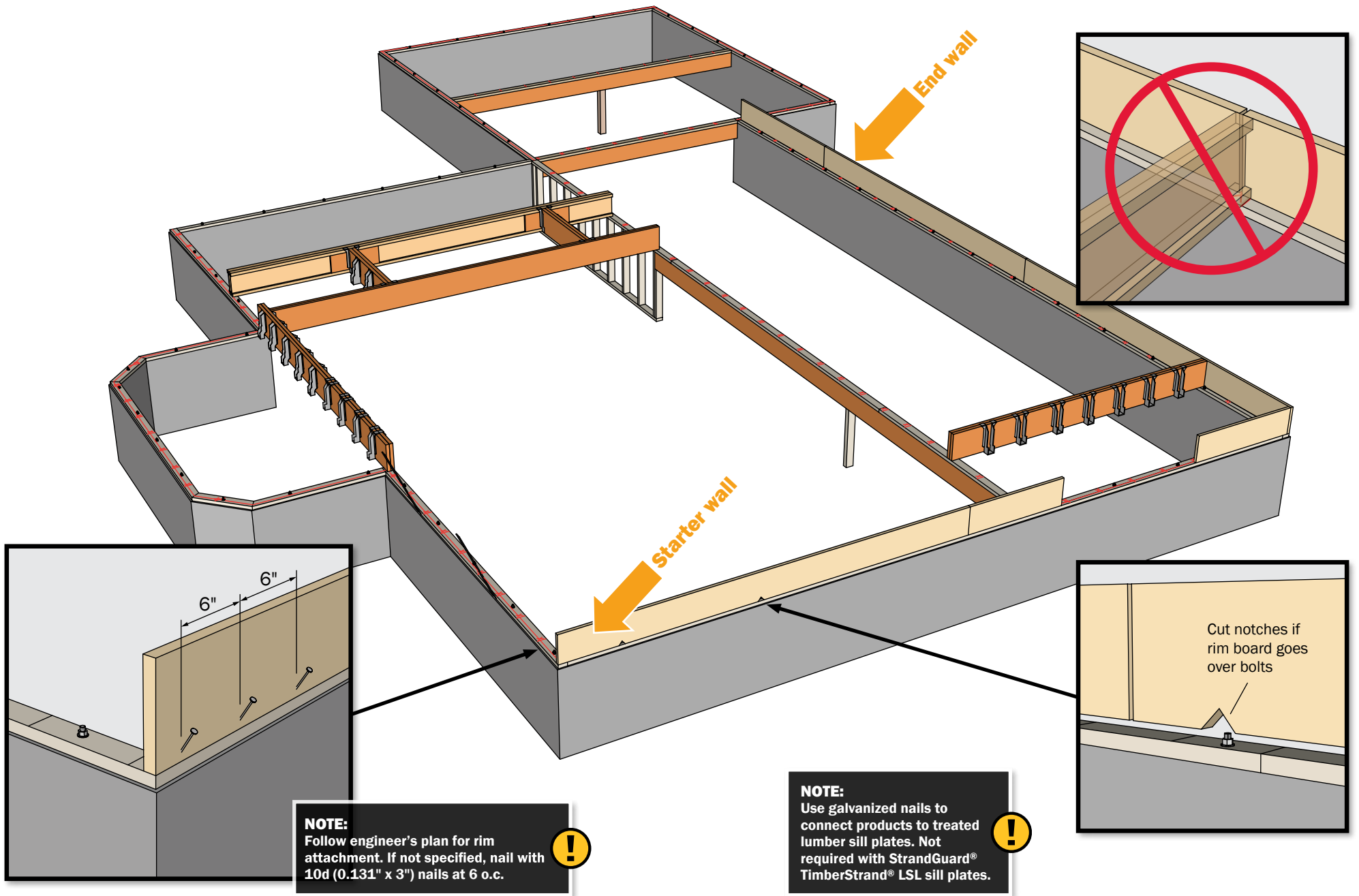


Framing Connector Summary									
Plan Label	Qty	Manuf.	Product	Face/Supporter Nails	Top Nails	Member/Supported Nails	Skew Slope	Supporting Material	Type Backer Blks. Supported Product
H1	1	SST	HGUS412	56- 16d common	-	20- 16d double shear	-	LSL	No 3 1/2" x 11 7/8" TimberStrand® LSL Beam (1.55E) No
H2	8	SST	ITS2.06/11.88	2- 10d x 1-1/2	-	-	-	LSL	No 11 7/8" TJI 210
H3	18	SST	IUS2.06/11.88	10- 10d x 1-1/2	-	-	-	LSL	No 11 7/8" TJI 210
H4	1	SST	IUS2.06/11.88	10- 10d common	-	1- Simpson SD8x1.25 screw installed thru the seat of the hanger	-	LSL	No 11 7/8" TJI 210
H5	3	SST	IUS2.06/11.88	10- 10d common	-	-	-	IJOIST	2 11 7/8" TJI 210
H6	1	SST	MIU1.81/11	20- 10d x 1-1/2	-	2- 10d x 1-1/2	-	LSL	No 1 3/4" x 11 7/8" TimberStrand® LSL Beam (1.55E) No
H7	1	SST	MIU1.81/11	20- 10d common	-	2- 10d x 1-1/2	-	IJOIST	1 1 3/4" x 11 7/8" TimberStrand® LSL Beam (1.55E) No

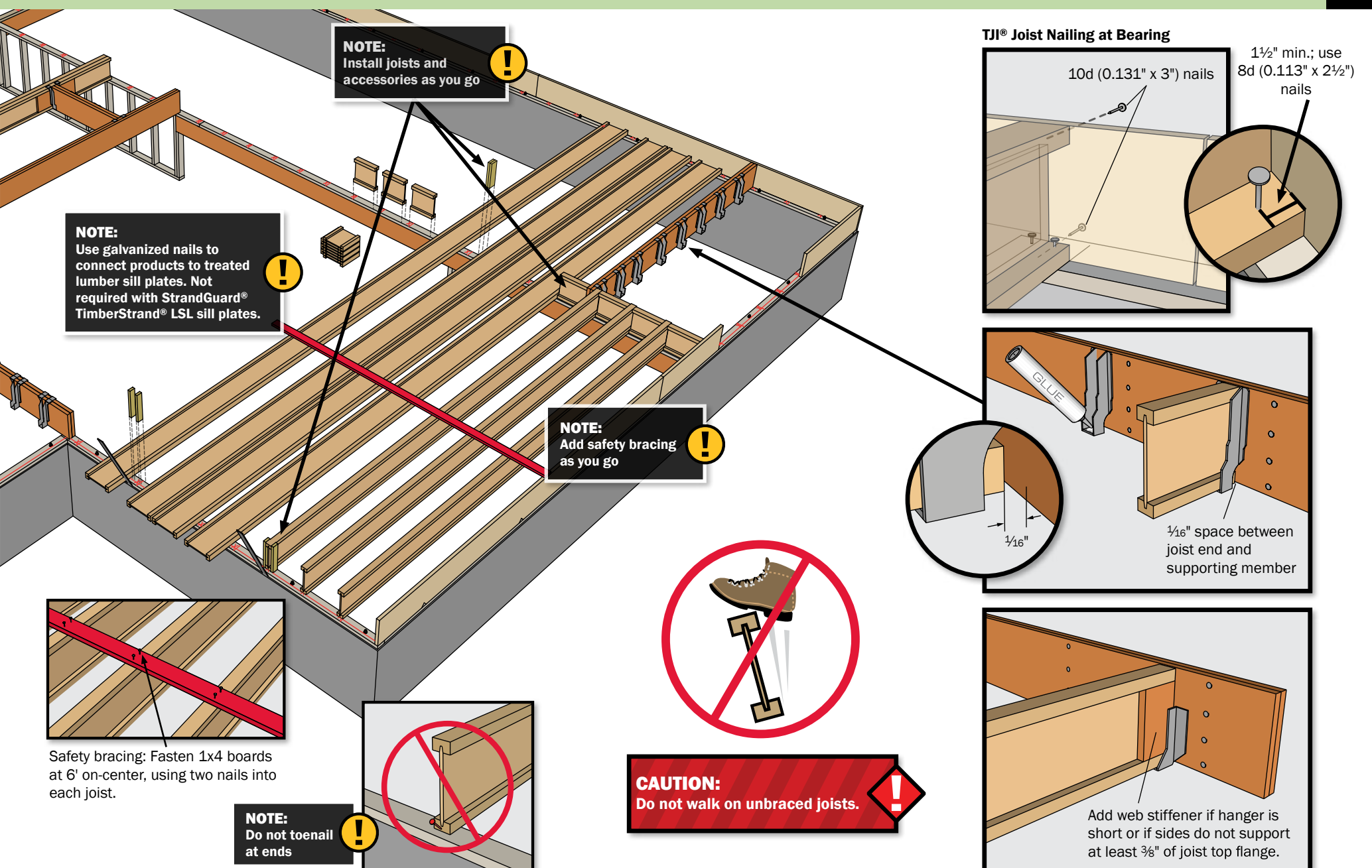


See architect or engineer plans for dimensions and special details



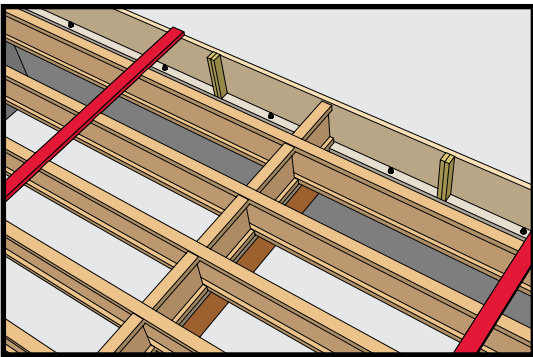


## INSTALL JOISTS, ACCESSORIES, AND SAFETY BRACING

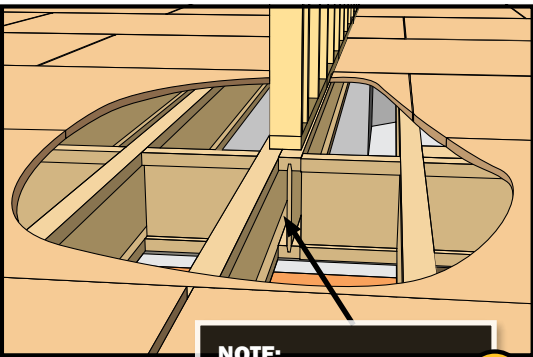




**Squash Blocks at Multiple Studs from Above**

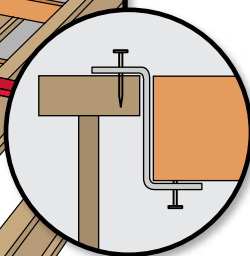
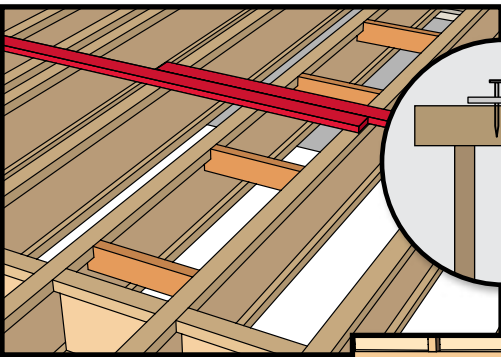


**Double Joist Under Shear or Braced Wall**



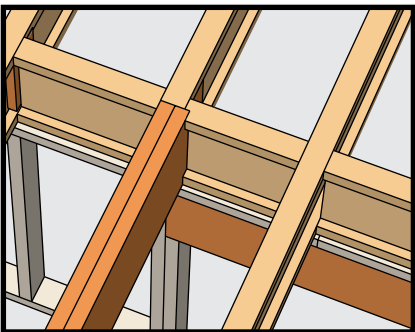
**NOTE:**  
No filler unless specified  
by engineer or architect

**Joists Under Non-Bearing Wall**

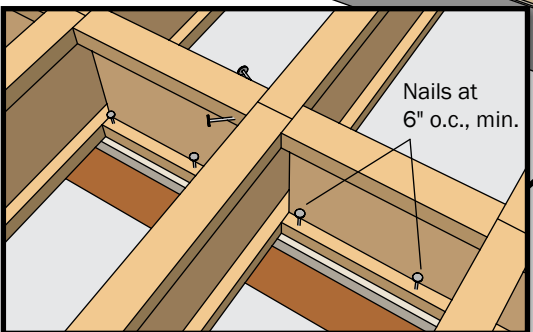


Alternative attachment  
of block between joists  
at non-bearing walls

**Blocking at End of Beam**

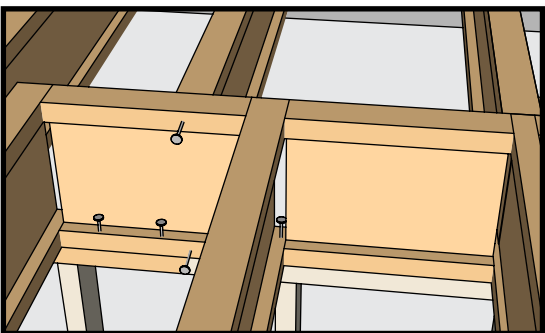


**Blocking at Ends of Joists**

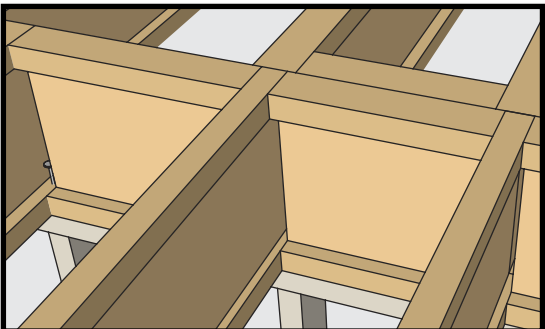


Nails at  
6" o.c., min.

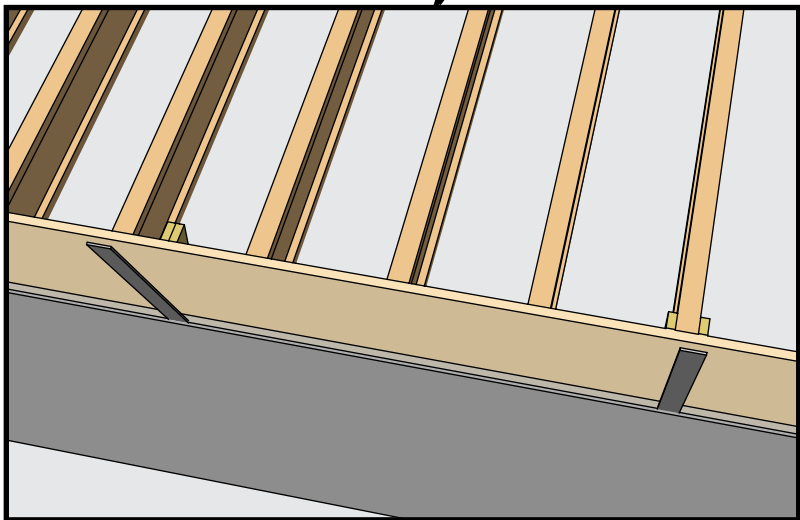
**Blocking for Same Joist Series, Different Spacing**



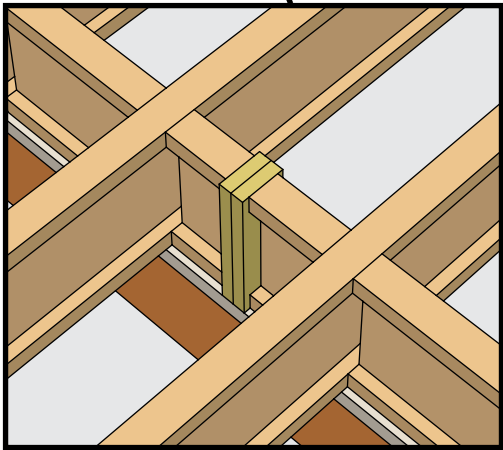
**Blocking for Different Joist Series, Same Spacing**



**Squash Blocks at Foundation Straps**



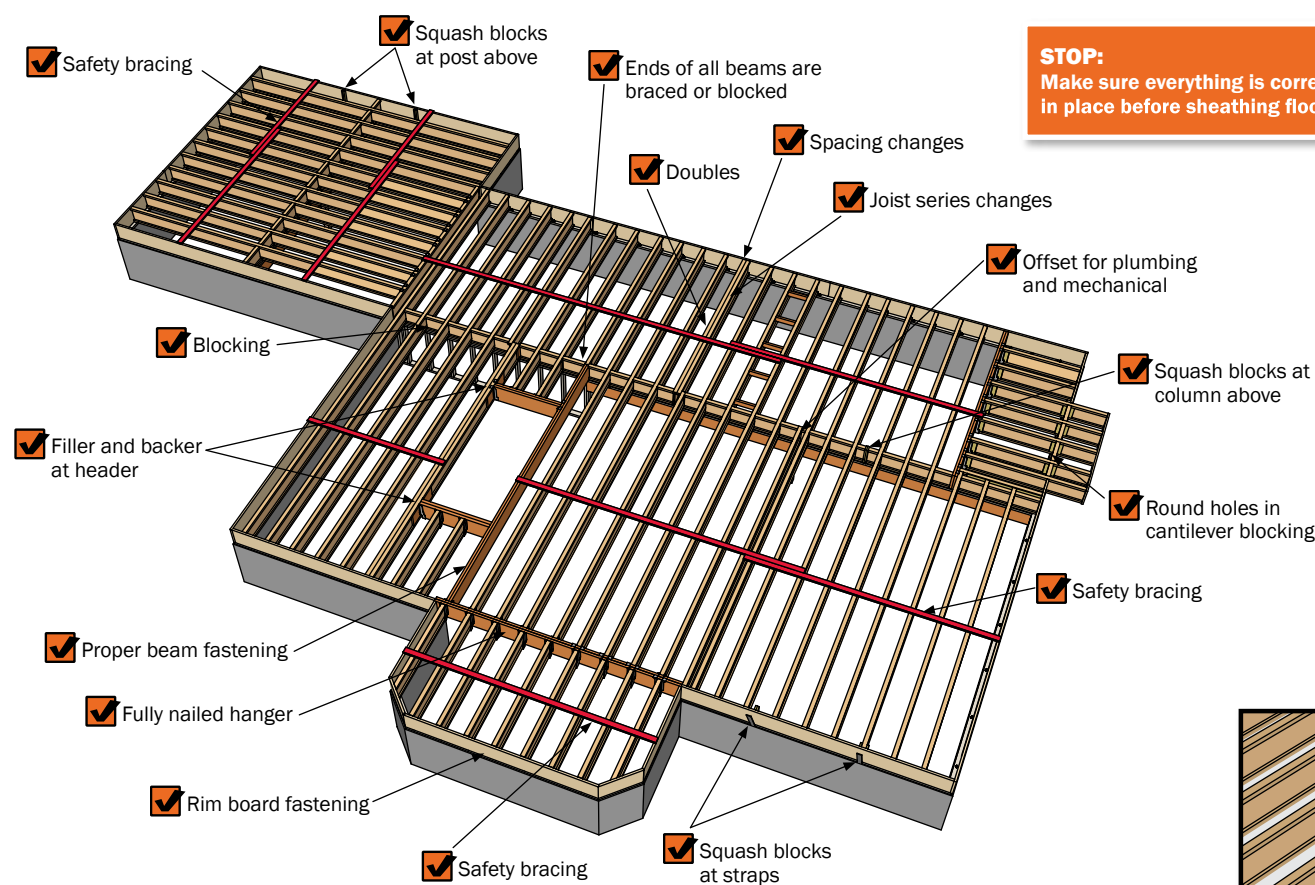
**Squash Block at Column**



**NOTE:**  
Use galvanized nails to  
connect products to treated  
lumber sill plates. Not  
required with StrandGuard®  
TimberStrand® LSL sill plates.



## Final Check Before Subfloor

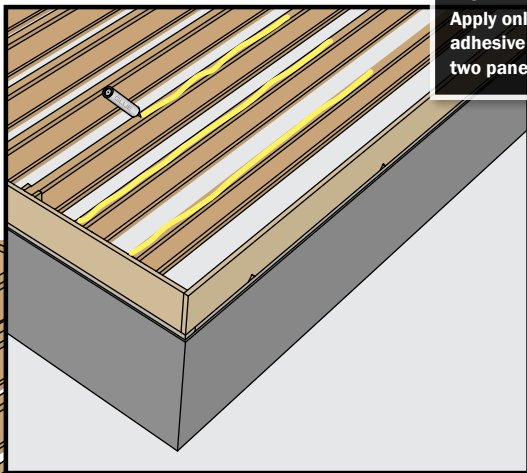


**STOP:**  
Make sure everything is correct and in place before sheathing floor



**CAUTION:**  
Do not walk on unbraced joists.

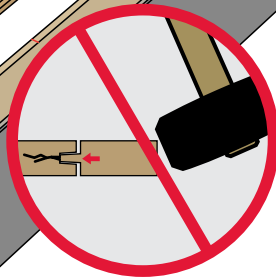
**NOTE:**  
Apply only enough adhesive to set one or two panels at a time



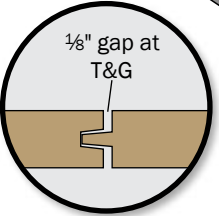
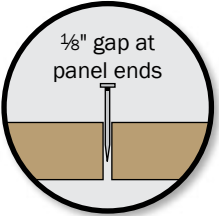
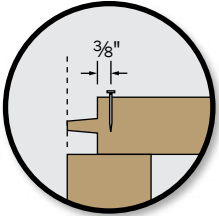
**NOTE:**  
Stagger panels by two joists, minimum

Drop panel into place. Avoid shifting.

**NOTE:**  
Fasten per engineer's specifications. Minimum nailing is 6" o.c. at edge and 12" o.c. in field. Fully nail each panel as it's laid.

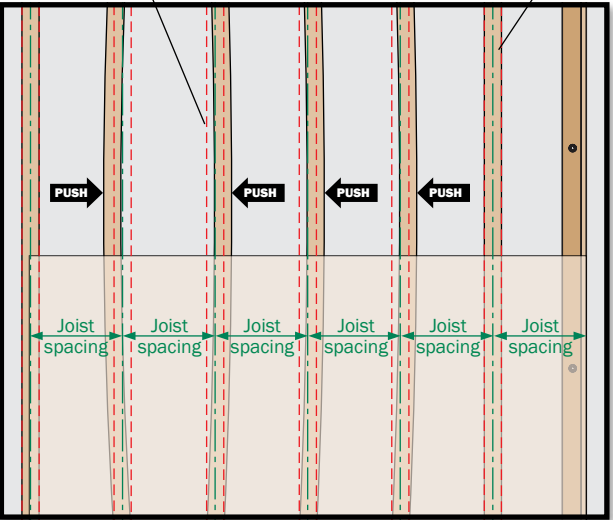


Do not force together



Push or pull joists into line before nailing off

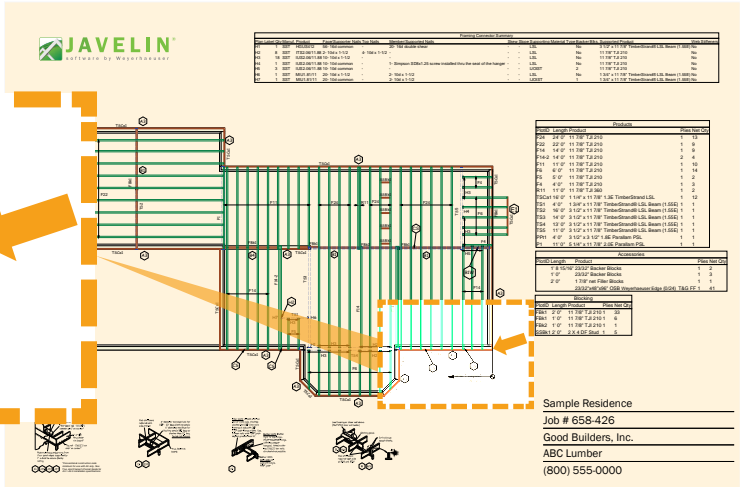
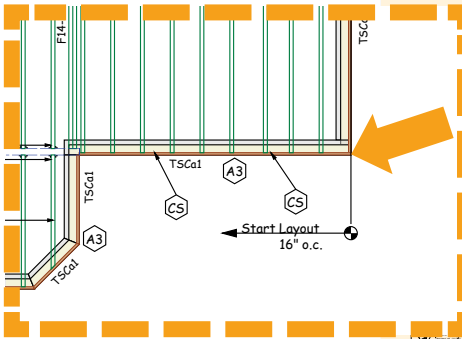
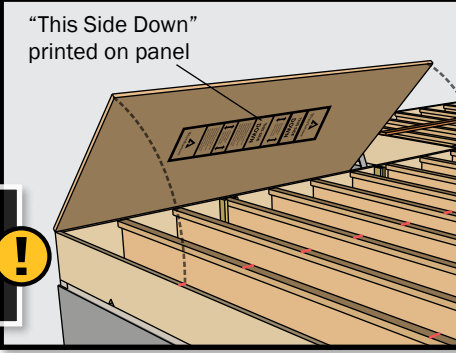
Good alignment



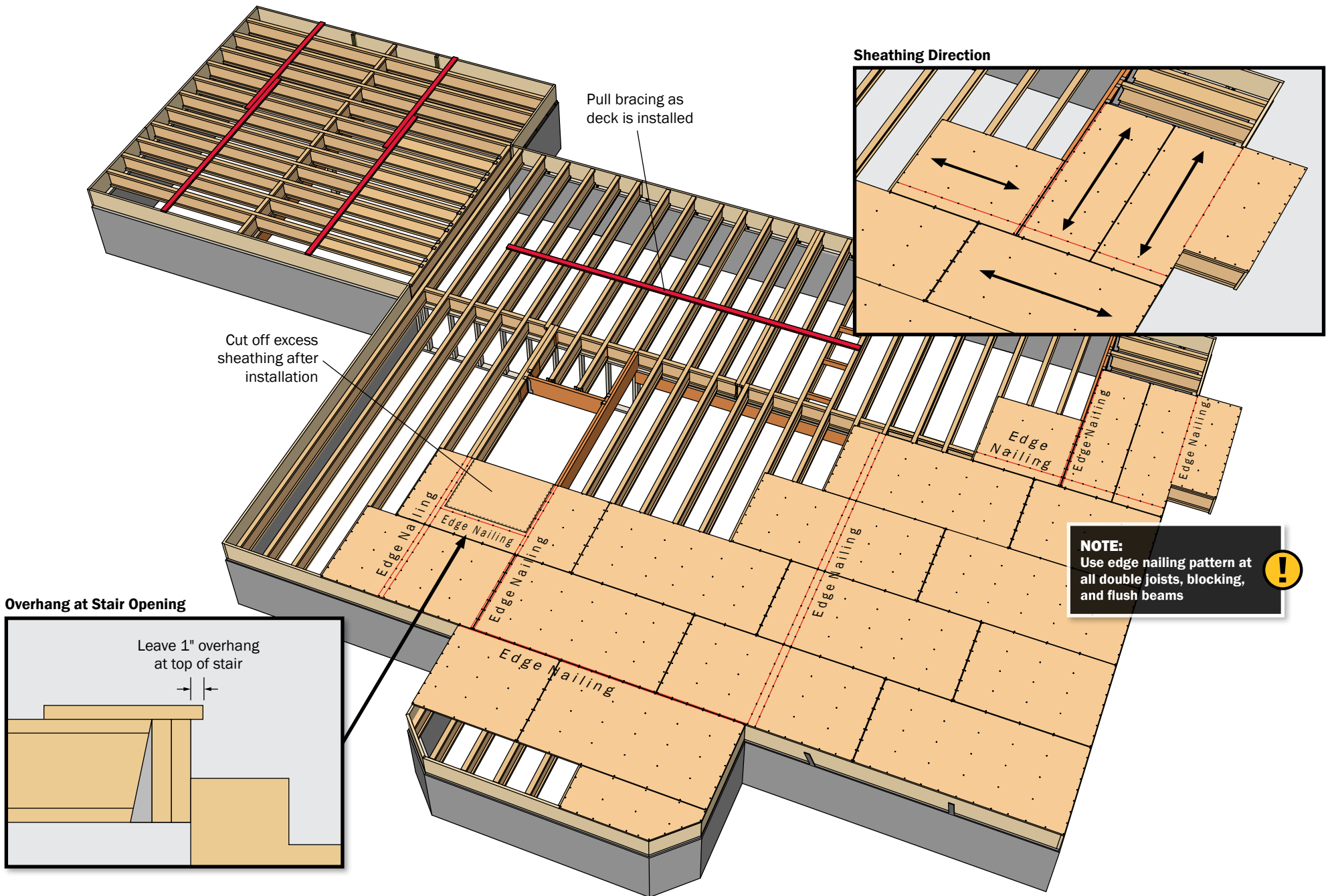
**NOTE:**  
Check nailing criteria (see Appendix)



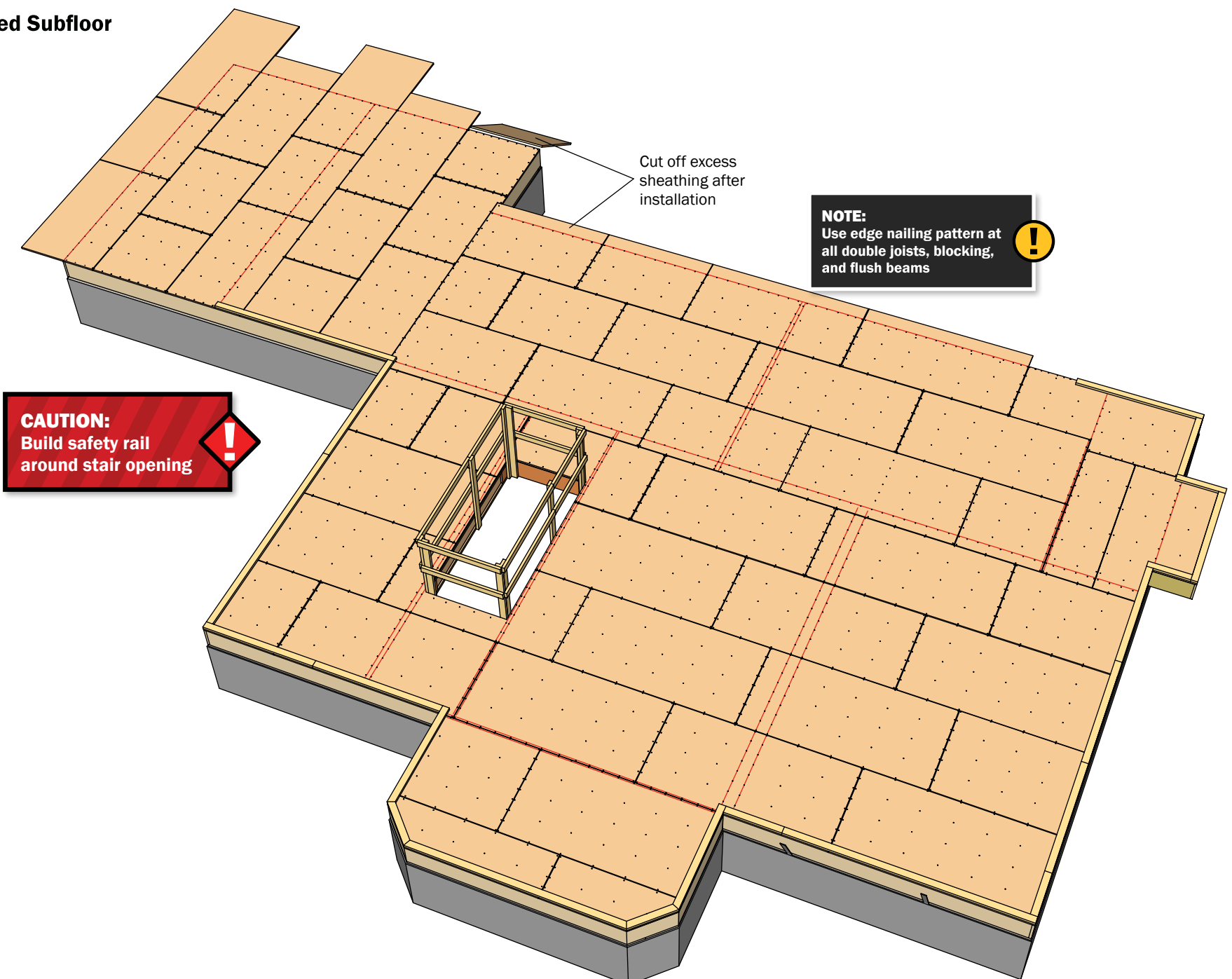
**NOTE:**  
Make sure the first sheet is perfectly square at edges





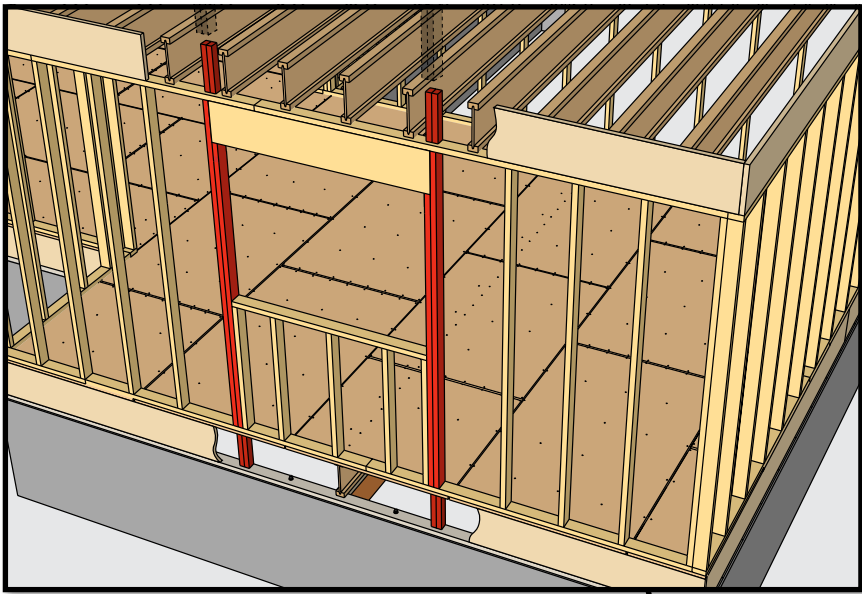


## Finished Subfloor

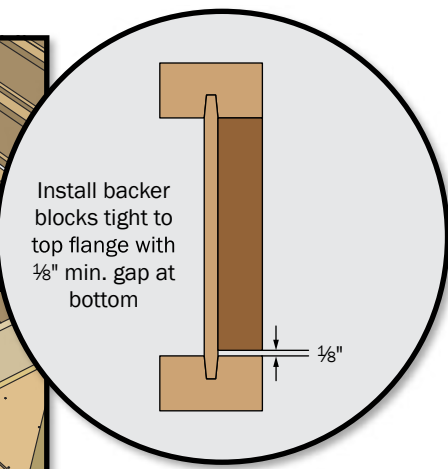
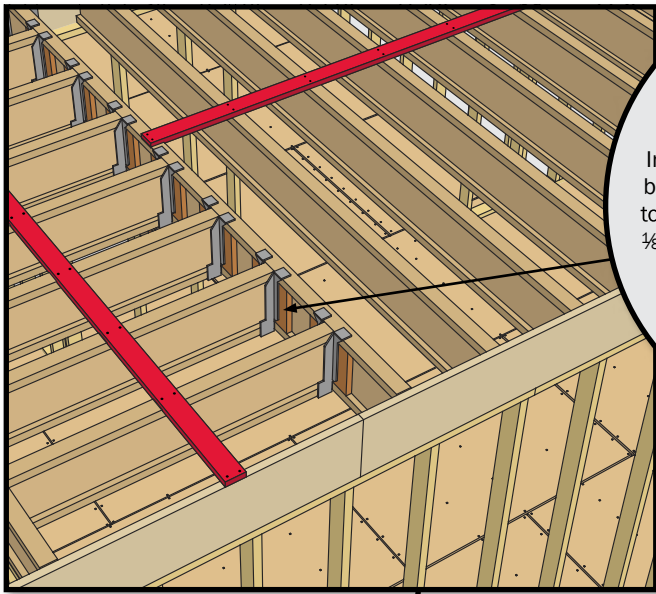




Transfer Continuous Loads to Foundation



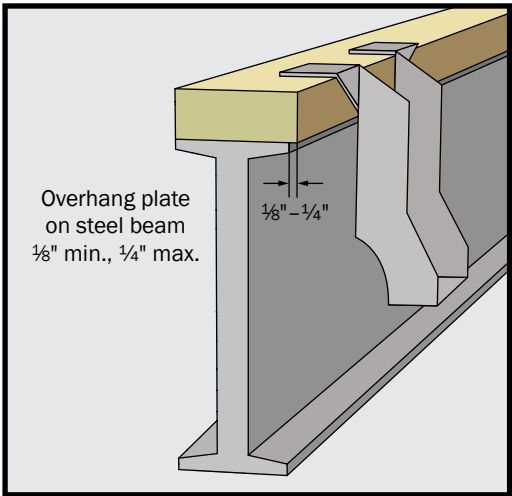
Top Flange Hangers



**CAUTION:**  
Stack sheathing over wall directly supported by foundation



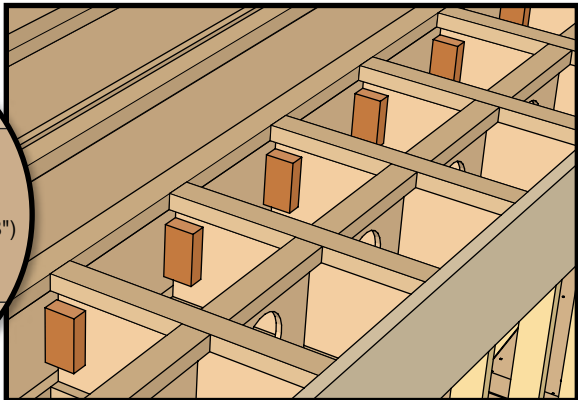
Draft-stop blocking between garage wall and living space



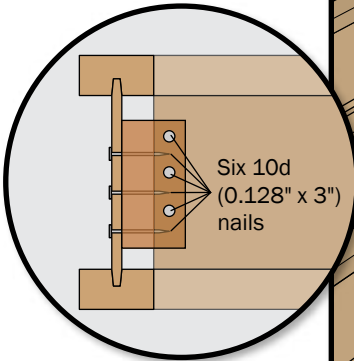
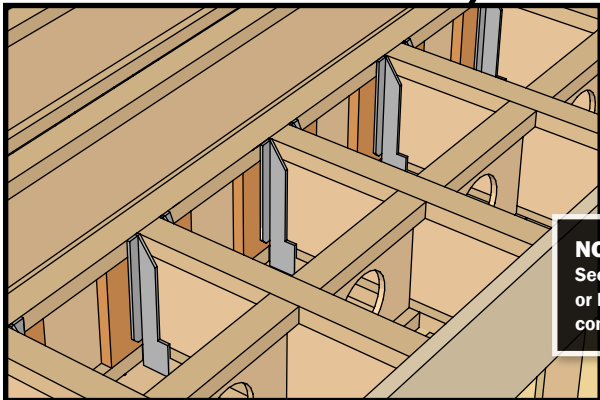
Tall walls not shown (for clarity)

Tall walls not shown (for clarity)

Brick Ledge Cantilever with Blocks (when specified on plans)



Brick Ledge Cantilever with Face Mount Hangers



**NOTE:**  
See engineer's plans or layout plans for connection type



See architect or engineer plans for dimensions and special details



**CAUTION:**  
Spray paint line,  
6' from edge

**NOTE:**  
Have monitor  
present



Tall walls not shown  
(for clarity)

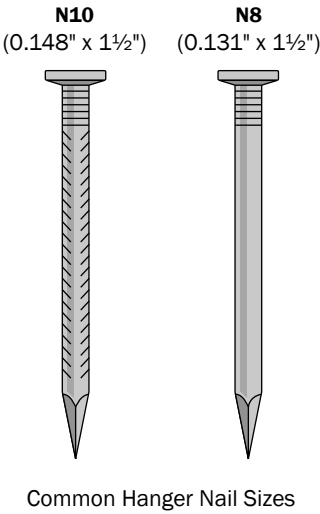
**CAUTION:**  
Build safety rails around  
all edges and openings

Tall walls not shown  
(for clarity)

APPENDIX: NAIL CHART

Please refer to the following chart for all nail sizes and applications in this guide

Application	Nail Direction	Nail Quantity and Specifications
Joist to plate	Face nail	(1) 8d (0.113" x 2½") each side
1½" to 1¾" rim to TJI® joist	Face/end nail	(1) 10d (0.131" x 3") per flange
Backer blocks	Face nail	(10) 10d (0.128" x 3")
Filler blocks for TJI® 110–360 joists	Face nail	(10) 10d (0.128" x 3")
Filler blocks for TJI® 560 joist	Face nail	(10) 16d (0.135" x 3½") each side
Rim to plate (minimum)	Toe nail	(1) 10d (0.131" x 3") at 6" o.c.
Weyerhaeuser Edge Gold™ panels 23⁄32"	Face nail	8d (0.131" x 2½") nail
Weyerhaeuser Edge Gold™ panels 7⁄8"	Face nail	8d (0.131" x 2½") nail or 8d (0.120" x 2½") deformed nail







#### Have a damaged joist or beam?

File a damage report online for prompt service from your regional technical office. Scan the QR code with your smartphone or go to **[weyerhaeuser.com/woodproducts/support](http://weyerhaeuser.com/woodproducts/support)**.

