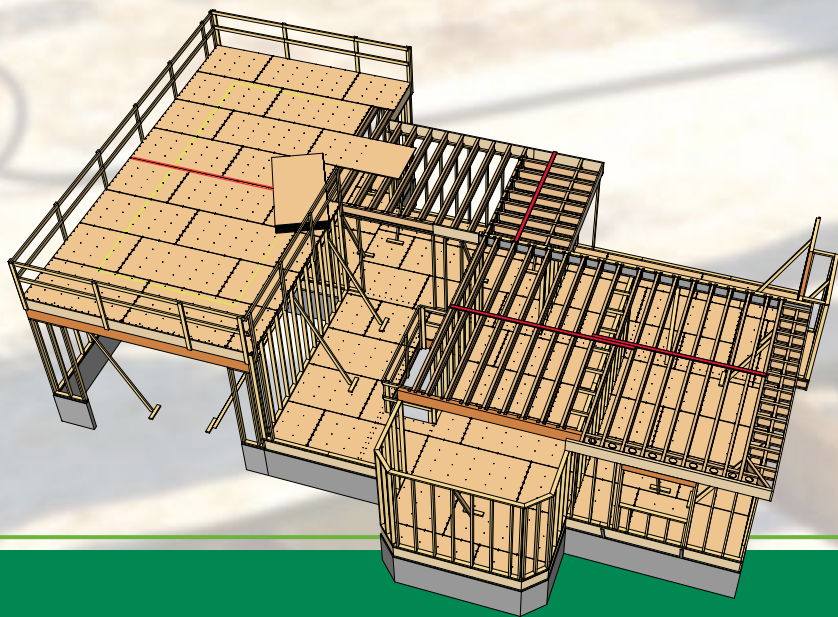


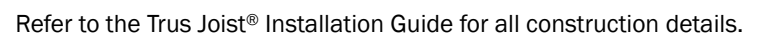


# FLOOR FRAMING STANDARDS

A Framers' Guide to the INSTALLATION PROCESS



Safety and Site Preparation	Step 1
Stage Materials	Step 2
Precut Accessories	Step 3
Square and Snap Line for Sill Plate	Step 4
Joist, Blocking, and Rim Board Layout	Step 5
Install Hangers and Flush Beams	Step 6
Install Starter- and End-Wall Rim Board	Step 7
Install Joists, Accessories, and Safety Bracing	Steps 8–9
Install Subfloor	Steps 10–11
Frame Second Floor	Step 12
Sheath Second Floor	Step 13
Nail Chart	Appendix



Weyerhaeuser Layout Drawing — For Product Reference Only.



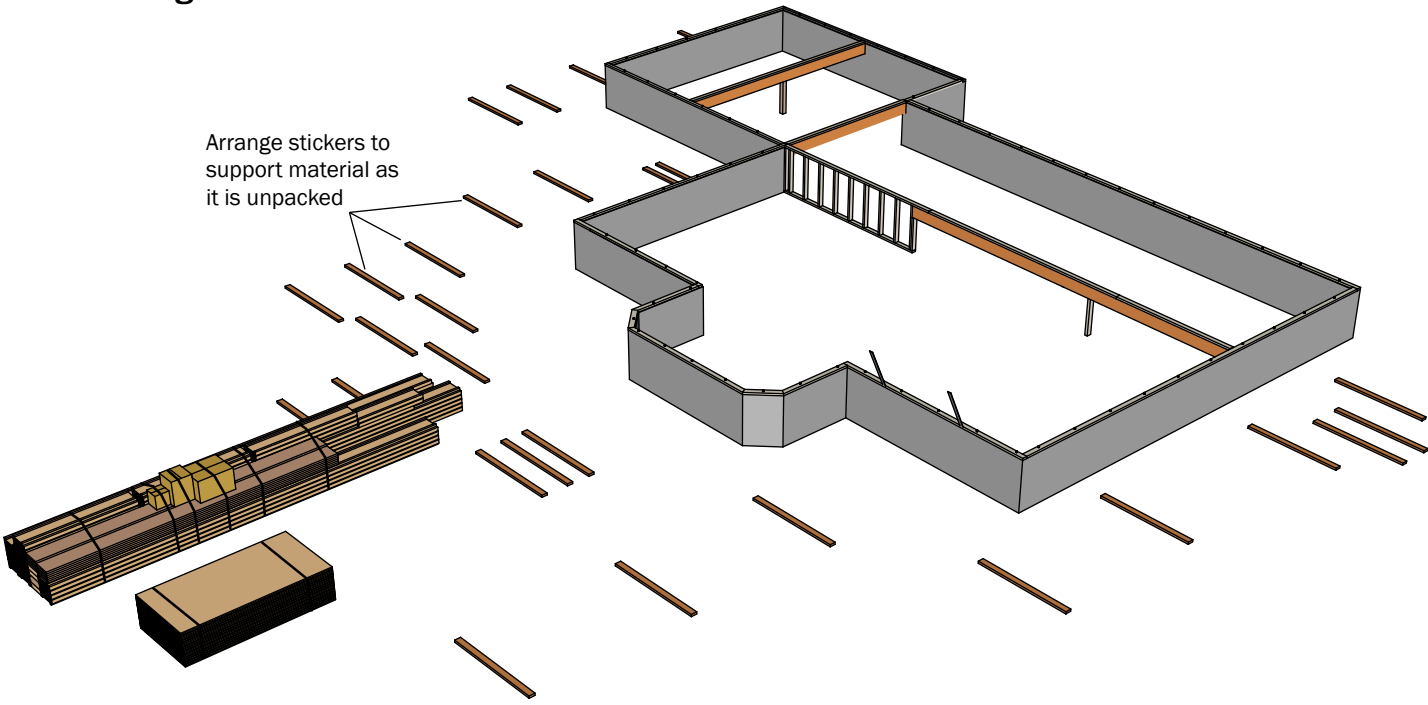
Stay Safe!  
Wear Personal  
Protective Equipment (PPE)



**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 Attentivement

- 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**

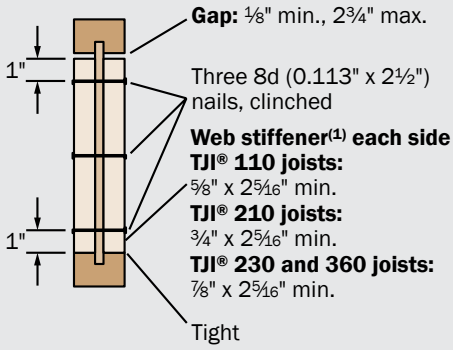
**Sample Residence**  
Job # 658-426  
Good Builders, Inc.  
ABC Lumber  
(800) 555-0000

See architect or engineer plans for dimensions and special details

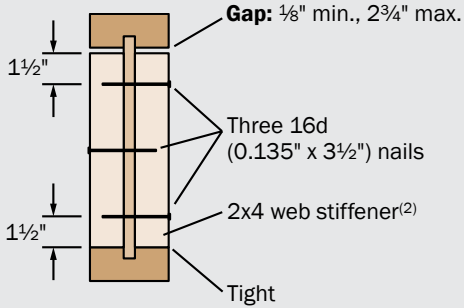


Web Stiffeners

TJI® 110, 210, 230, 360 Joists

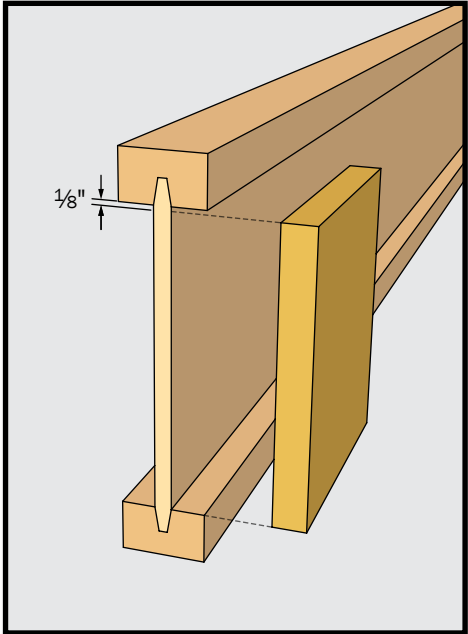


TJI® 560 Joists

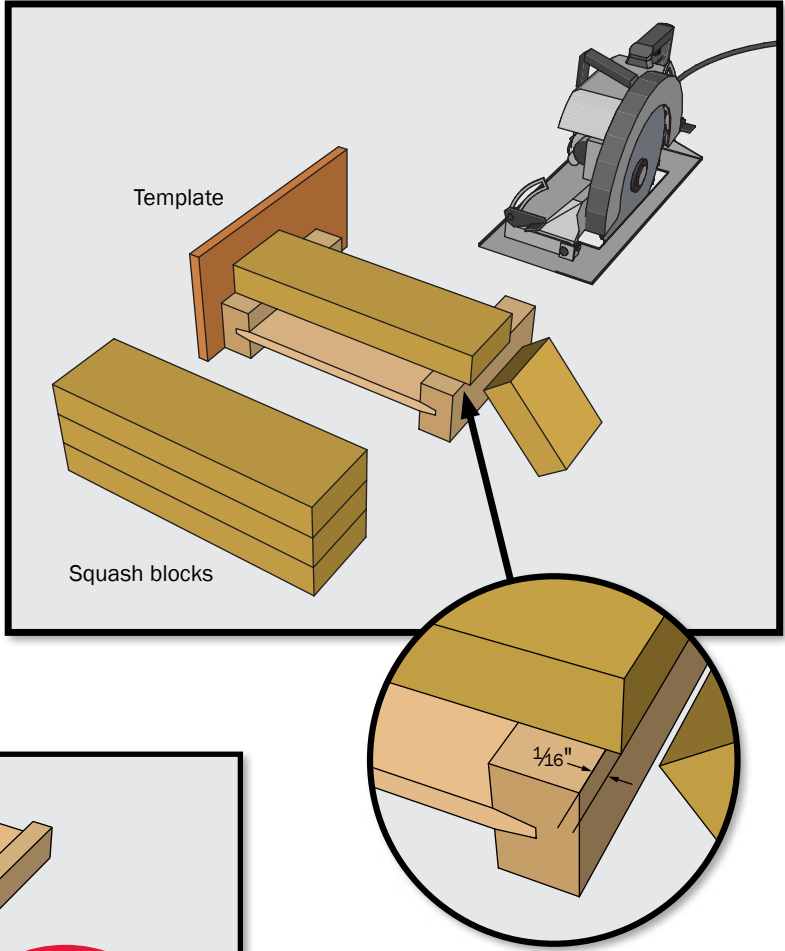


(1) PS1 or PS2 sheathing, face grain vertical  
(2) Construction grade or better

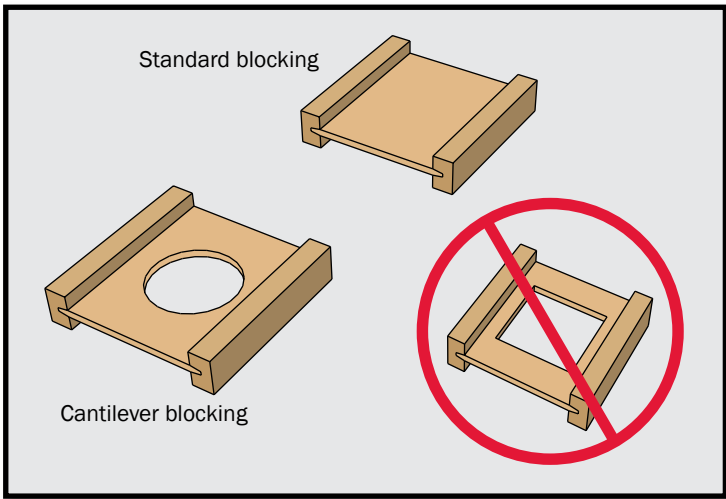
Cutting Web Stiffeners



Cutting Squash Blocks



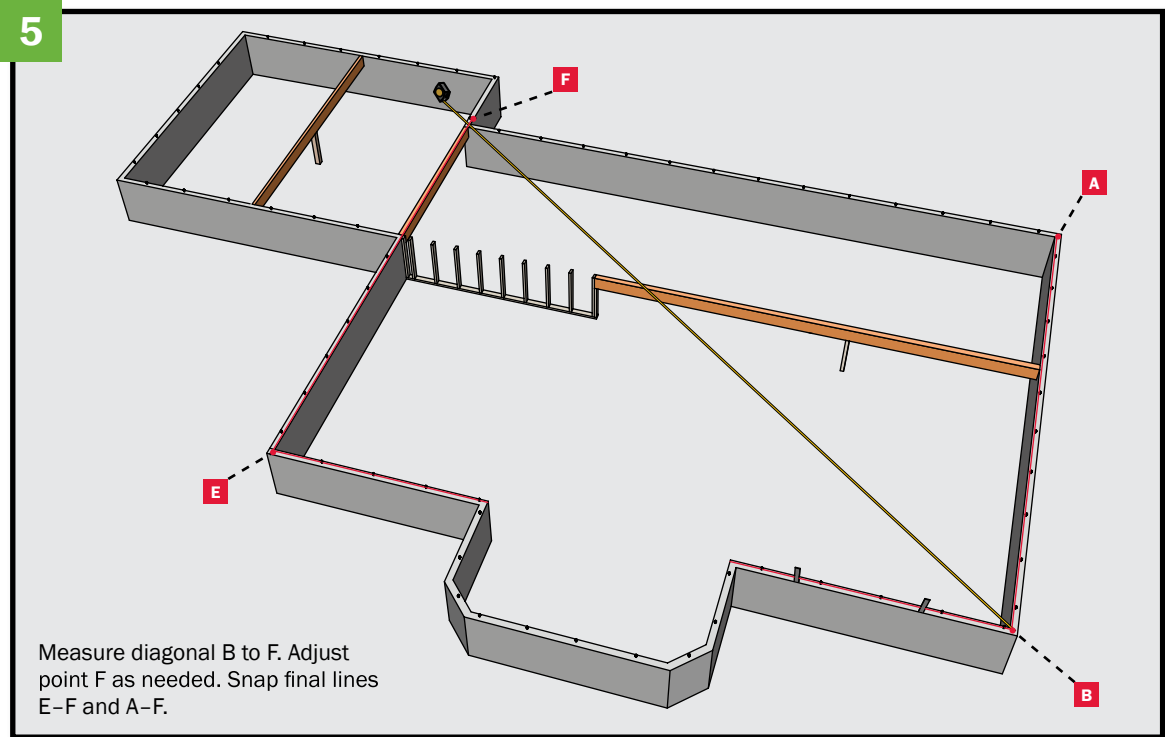
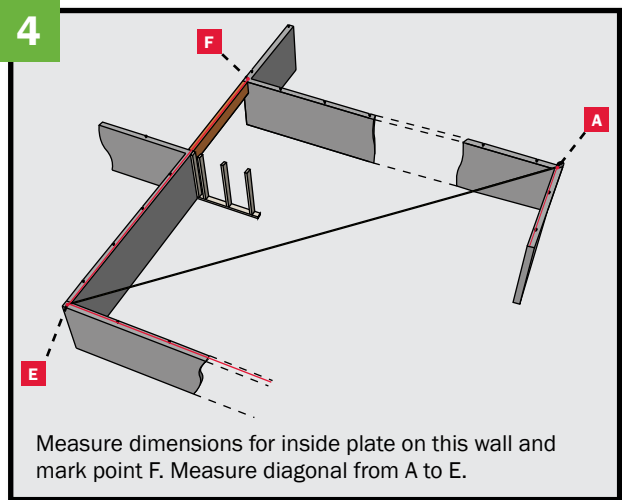
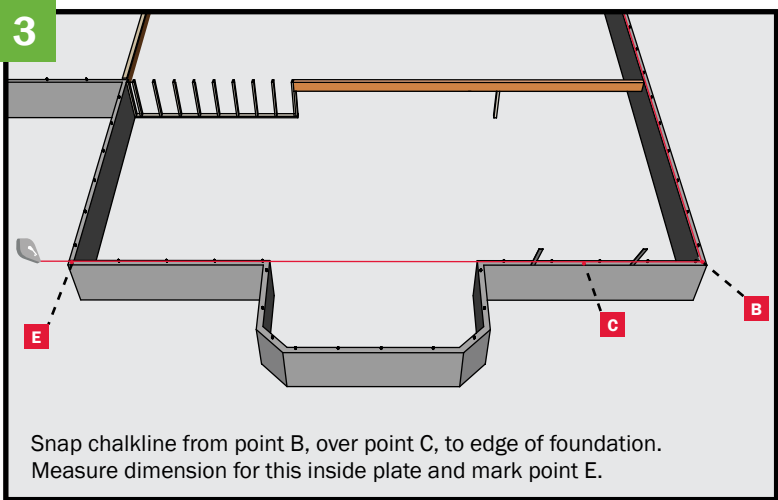
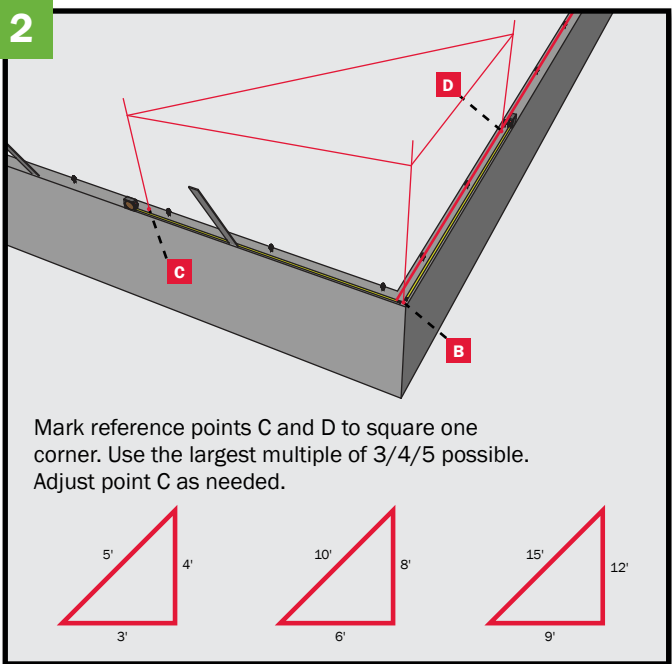
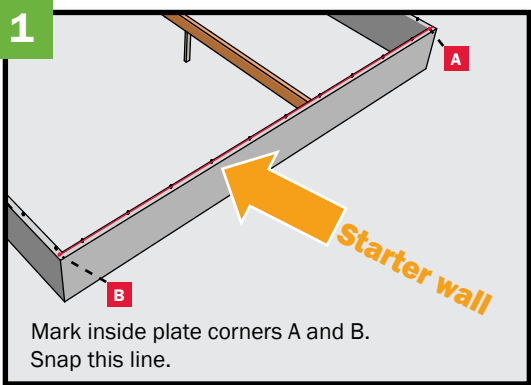
Cutting Blocking Panels



SQUARE AND SNAP LINE FOR SILL PLATE

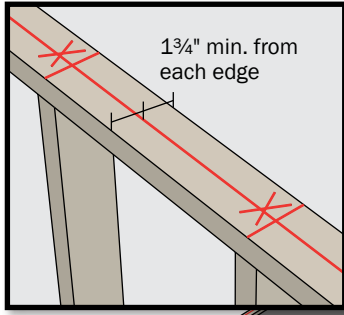


Architect/Engineer Plan

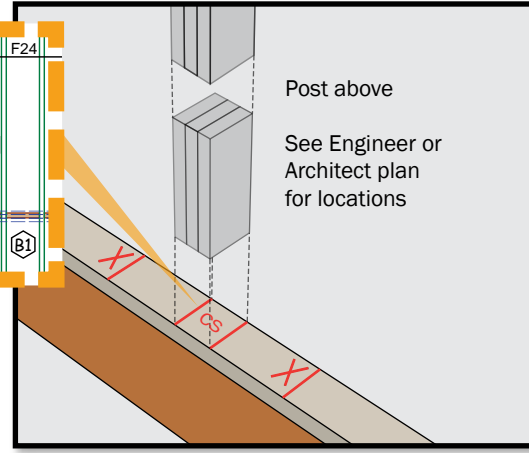
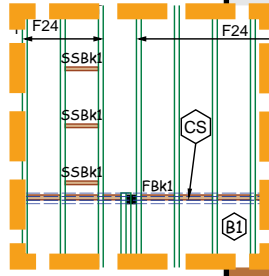


See architect or engineer plans for dimensions and special details

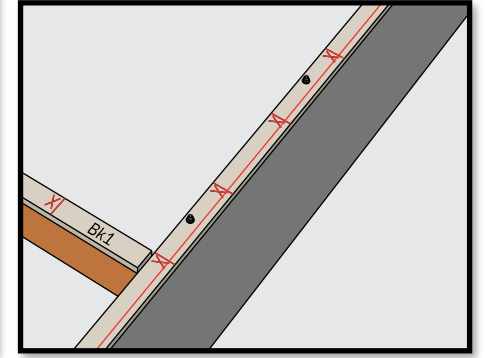
## Snap Line at Butted Joist



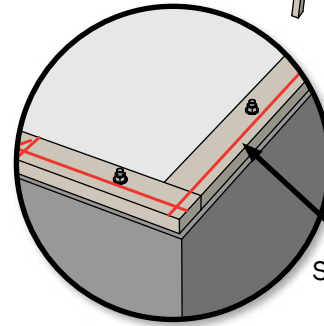
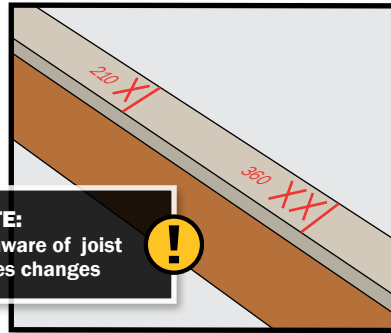
## Layout Squash Blocks



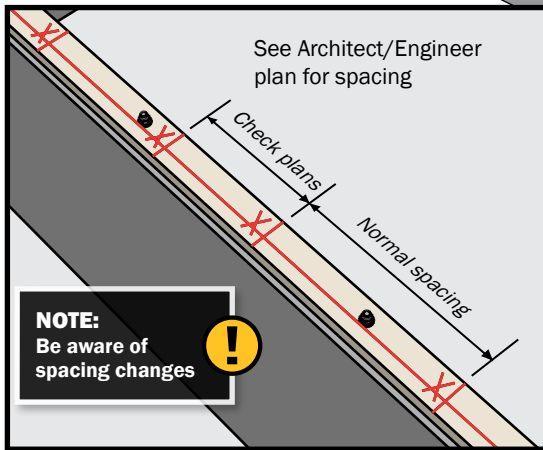
## Layout Blocking Panels



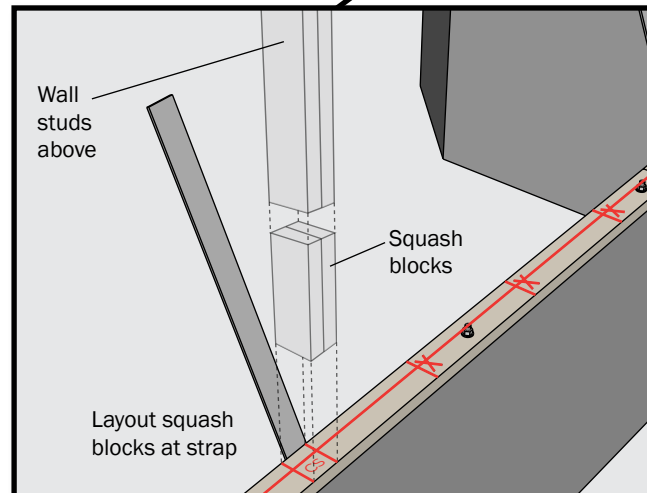
## Layout Joists



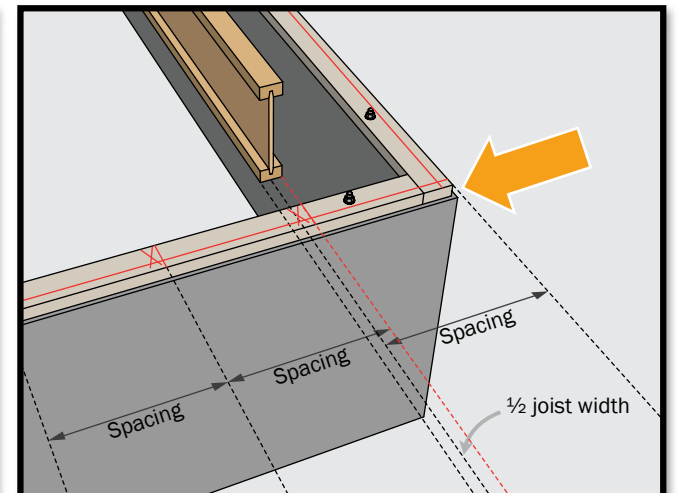
## Plumbing/Mechanical Offsets



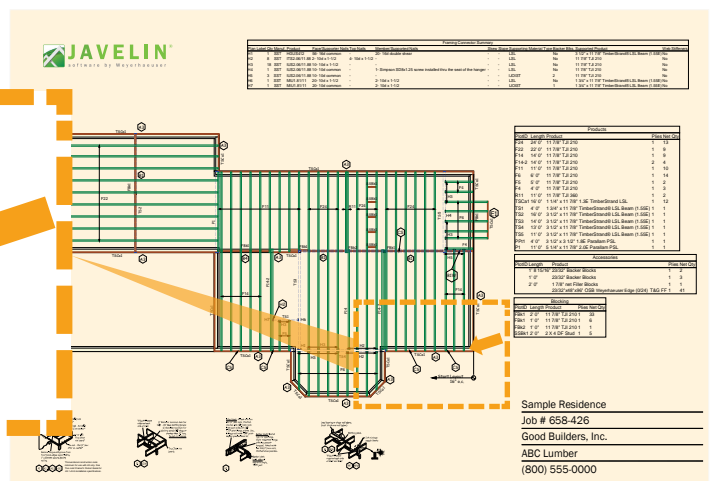
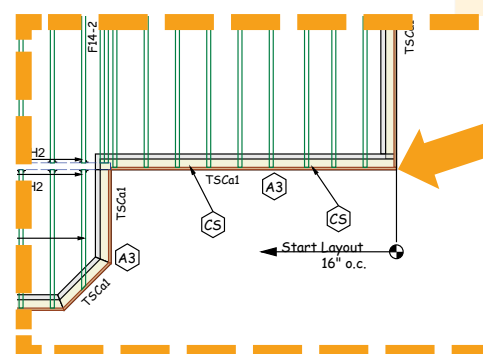
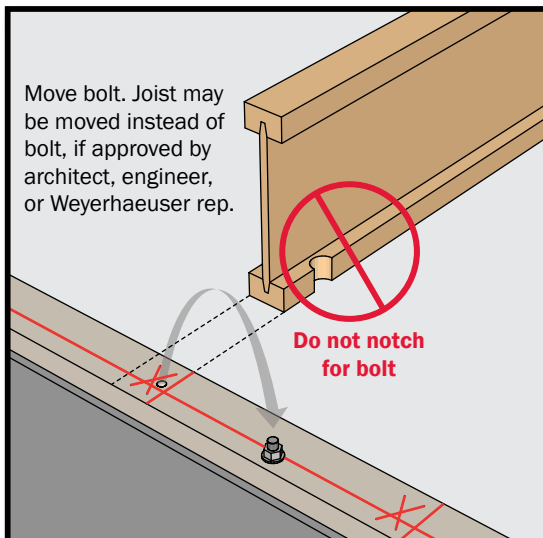
## Squash Blocks at Strap



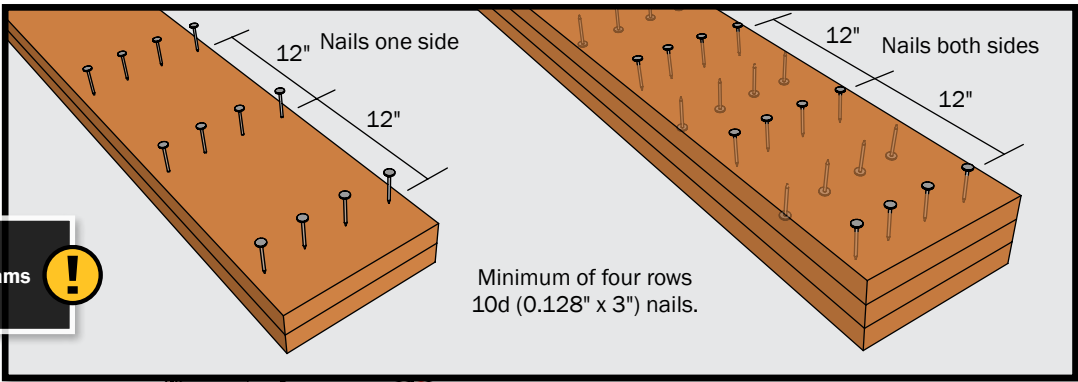
## Normal Joist Spacing



## Bolt at Joist Location



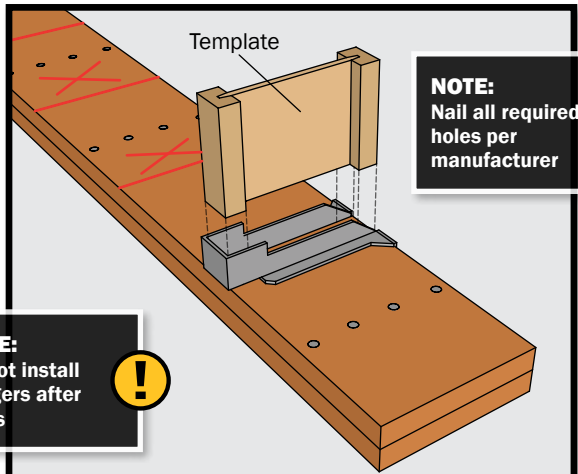
Fastening Per Engineer's Specifications (Top Loaded Beams ONLY)



**NOTE:**  
Assemble beams  
on ground

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

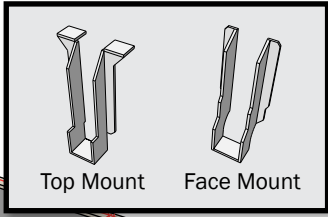
Hanger Installation



**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	-

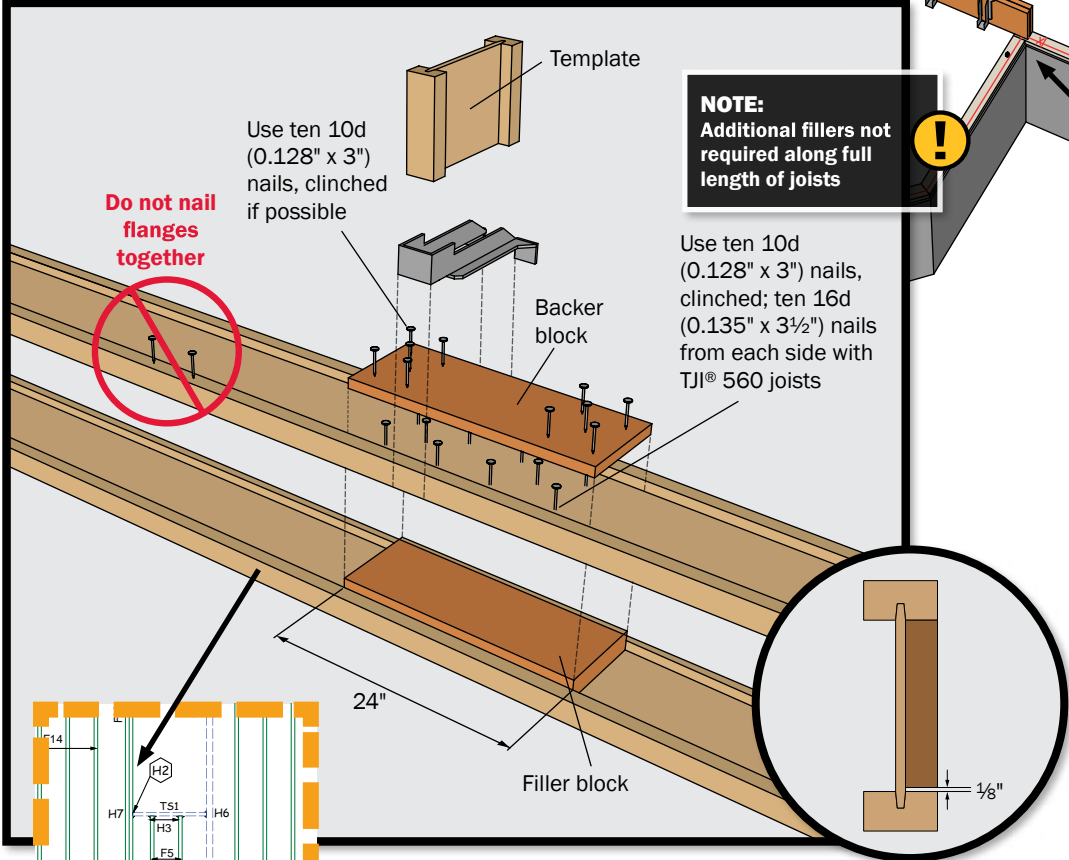


**NOTE:**  
See Engineer's plans  
or layout plans for  
special fastening of  
side-loaded beams!

**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)

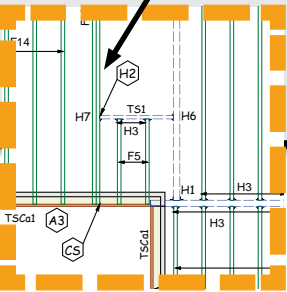


**NOTE:**  
Additional fillers not  
required along full  
length of joists

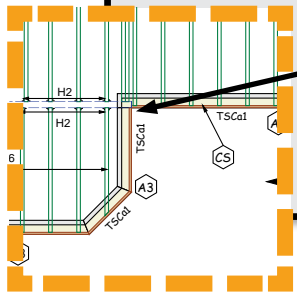
Use ten 10d  
(0.128" x 3")  
nails, clinched  
if possible

Use ten 10d  
(0.128" x 3") nails,  
clinched; ten 16d  
(0.135" x 3 1/2") nails  
from each side with  
TJI® 560 joists

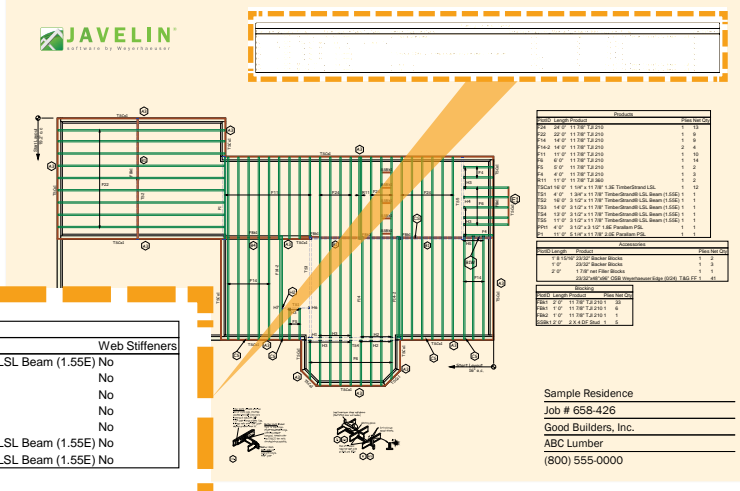
Do not nail  
flanges  
together



Install backer blocks tight to top  
flange (tight to bottom flange  
with face mount hangers) with  
1/8" min. gap



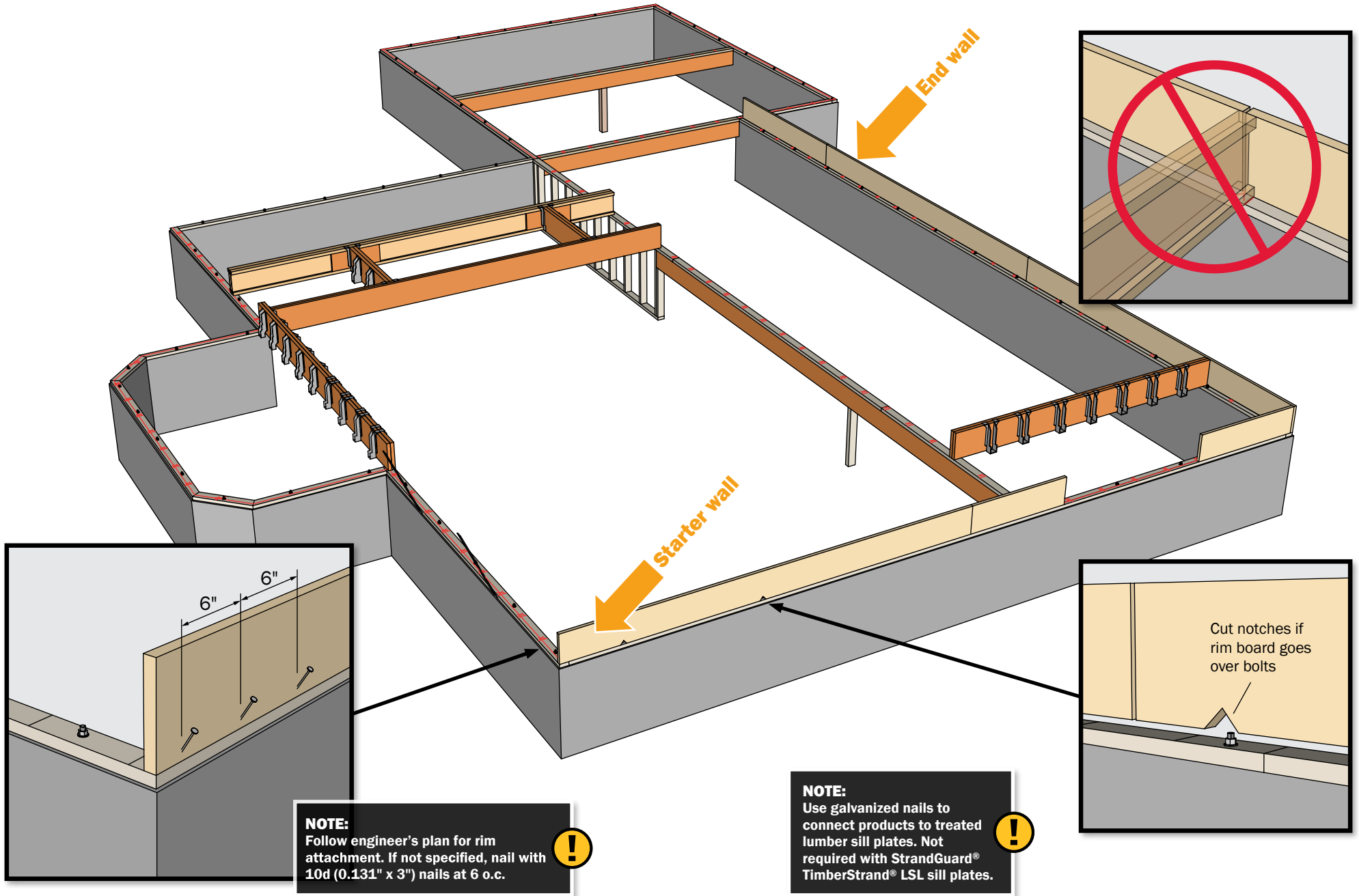
Minimum  
beam  
bearing  
length  
(per plan)



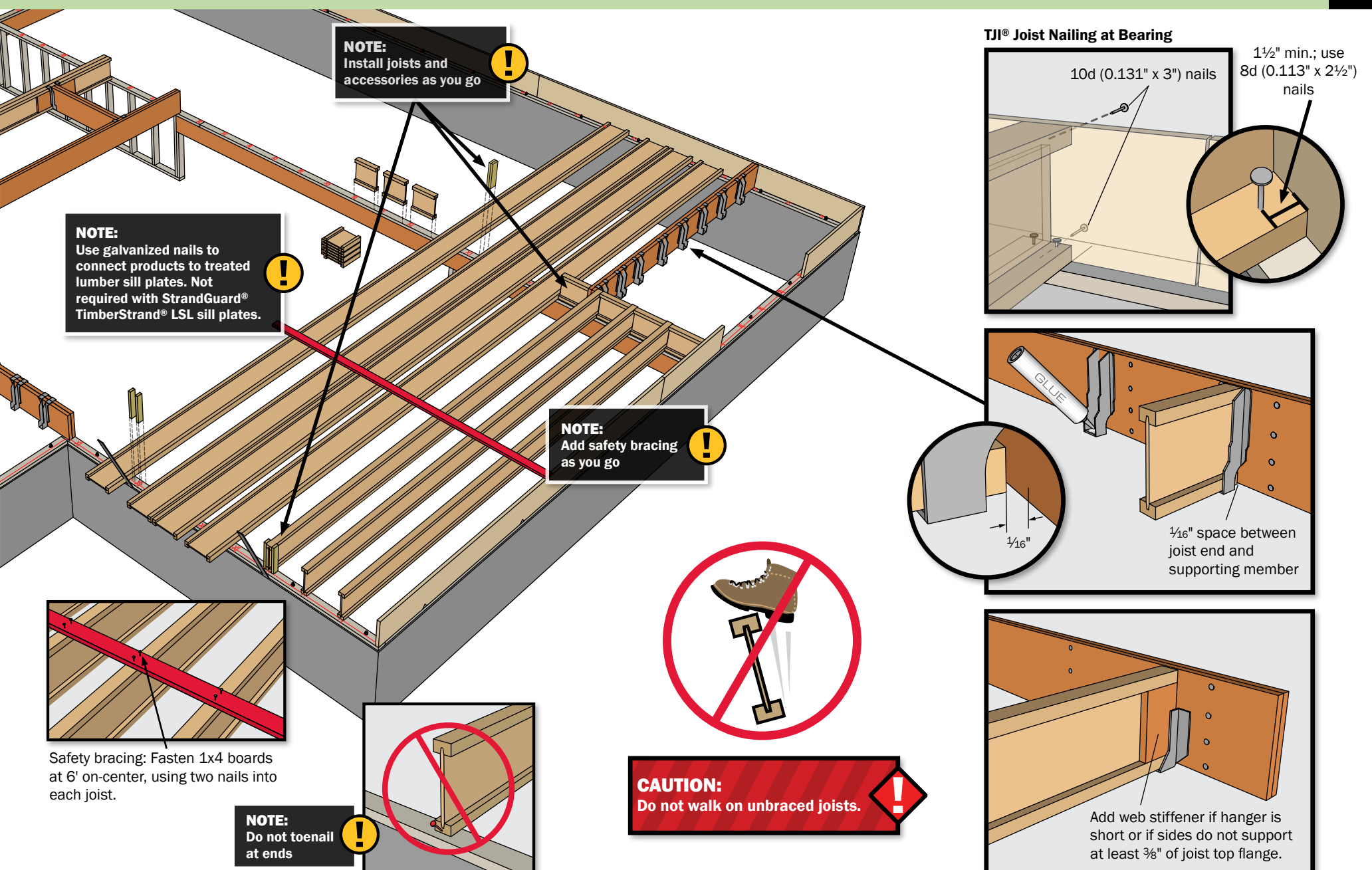
Framing Connector Summary									
Plan Label	Qty	Manuf.	Product	Face/Supporter Nails	Top Nails	Member/Supported Nails	Skew Slope Supporting Material	Type Backer Blks.	Supported Product
H1	1	SST	HGUS412	56- 16d common	-	20- 16d double shear	-	LSL	No
H2	8	SST	ITS2.06/11.88	2- 10d x 1-1/2	-	4- 10d x 1-1/2	-	LSL	No
H3	18	SST	IUS2.06/11.88	10- 10d x 1-1/2	-	-	-	LSL	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
H5	3	SST	IUS2.06/11.88	10- 10d common	-	-	-	IJOIST	2
H6	1	SST	MIU1.81/11	20- 10d x 1-1/2	-	2- 10d x 1-1/2	-	LSL	No
H7	1	SST	MIU1.81/11	20- 10d common	-	2- 10d x 1-1/2	-	IJOIST	1

See architect or engineer plans for dimensions and special details





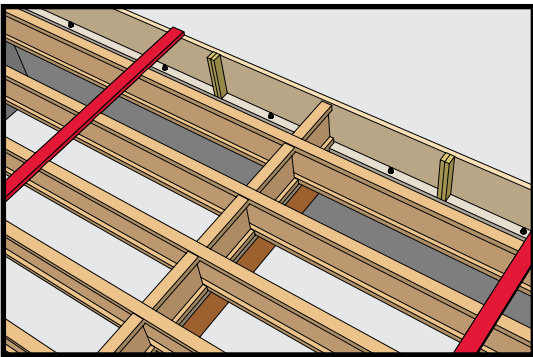
## INSTALL JOISTS, ACCESSORIES, AND SAFETY BRACING



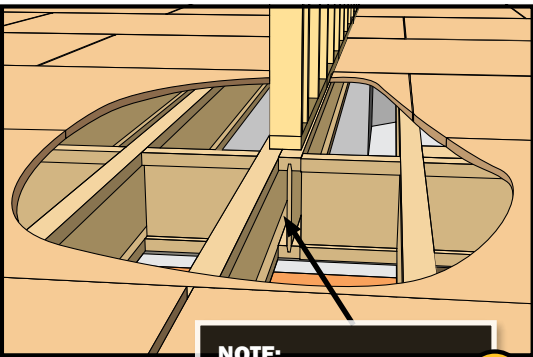
See architect or engineer plans for dimensions and special details



**Squash Blocks at Multiple Studs from Above**

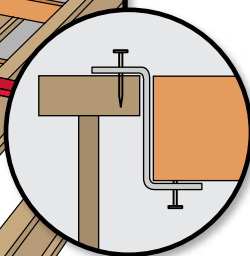
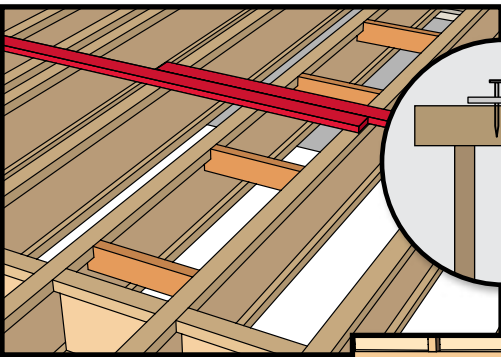


**Double Joist Under Shear or Braced Wall**



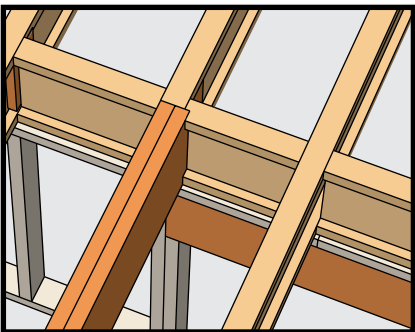
**NOTE:**  
No filler unless specified  
by engineer or architect

**Joists Under Non-Bearing Wall**

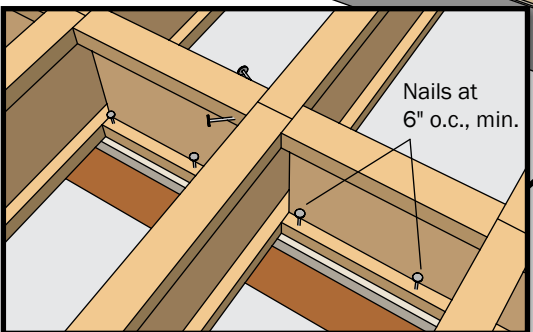


Alternative attachment  
of block between joists  
at non-bearing walls

**Blocking at End of Beam**

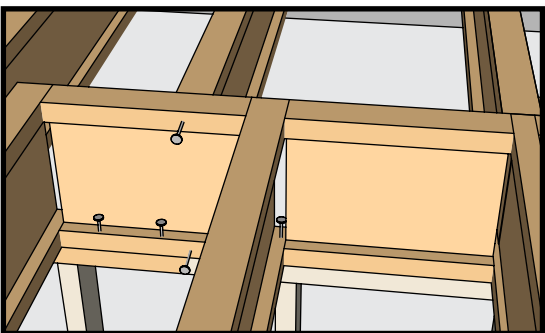


**Blocking at Ends of Joists**

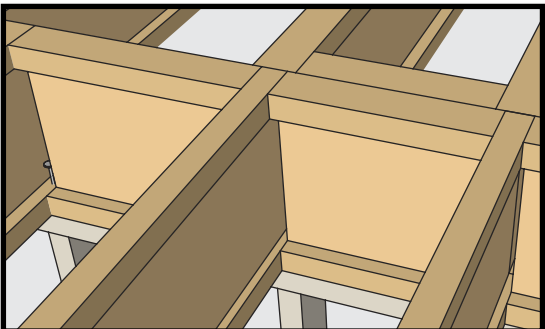


Nails at  
6" o.c., min.

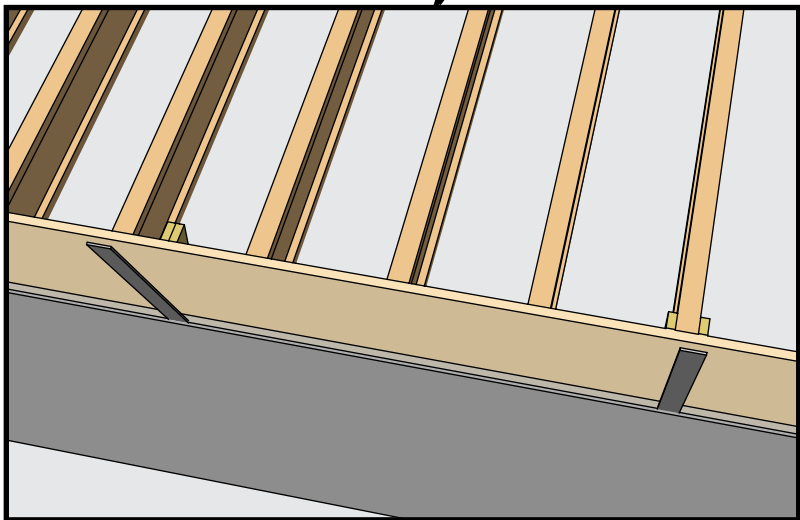
**Blocking for Same Joist Series, Different Spacing**



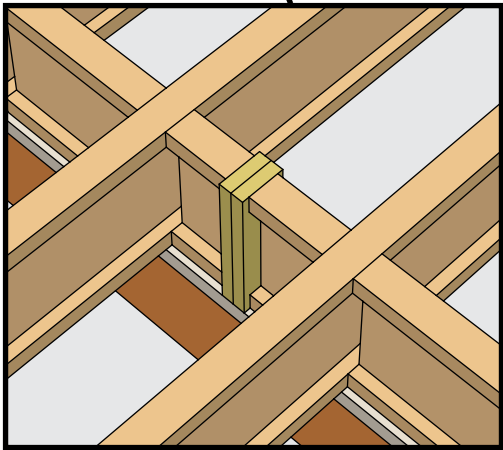
**Blocking for Different Joist Series, Same Spacing**



**Squash Blocks at Foundation Straps**



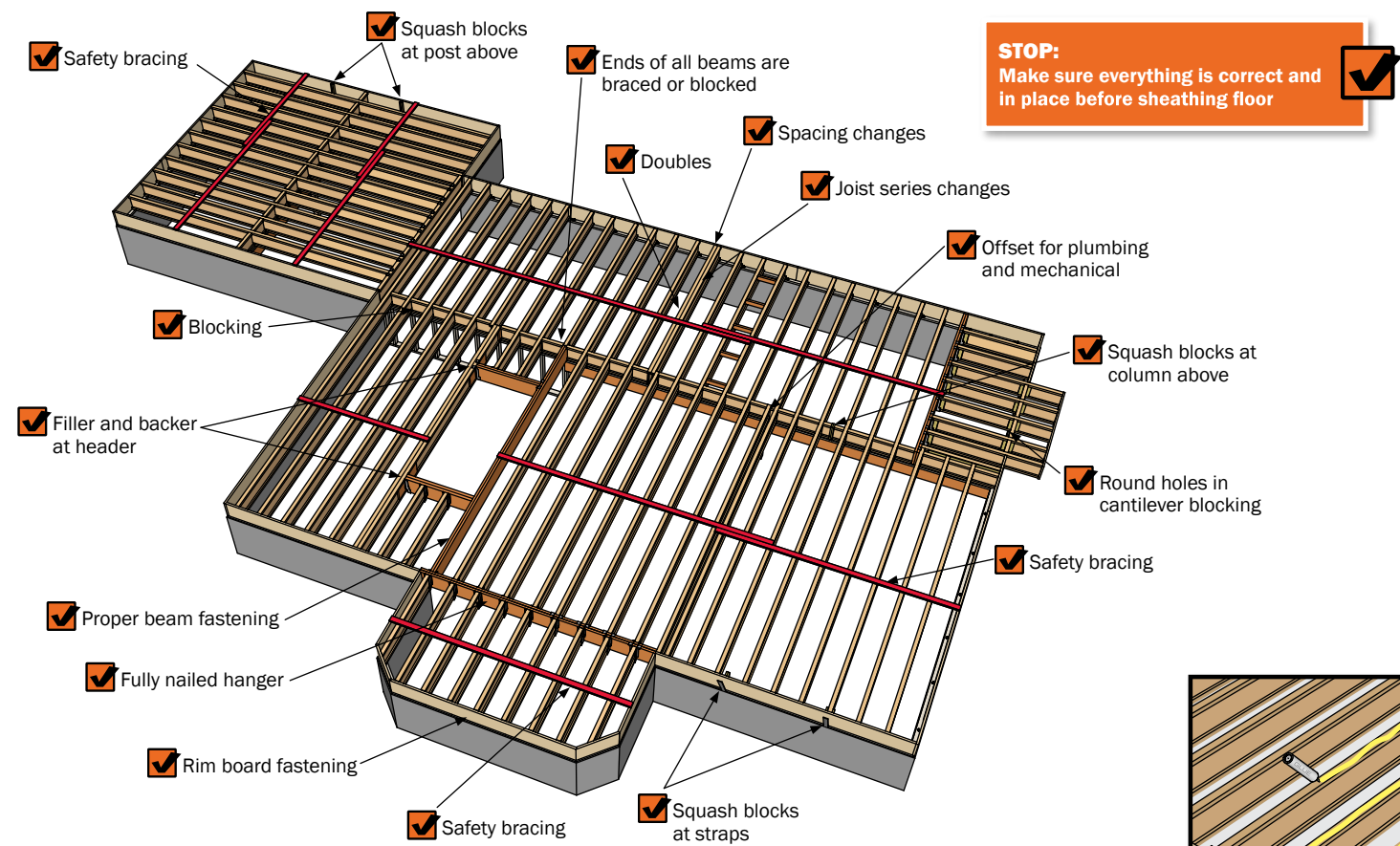
**Squash Block at Column**



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

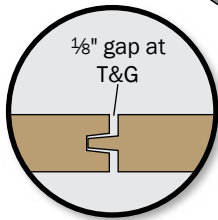
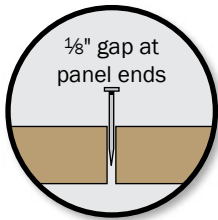
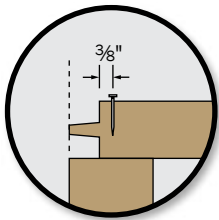
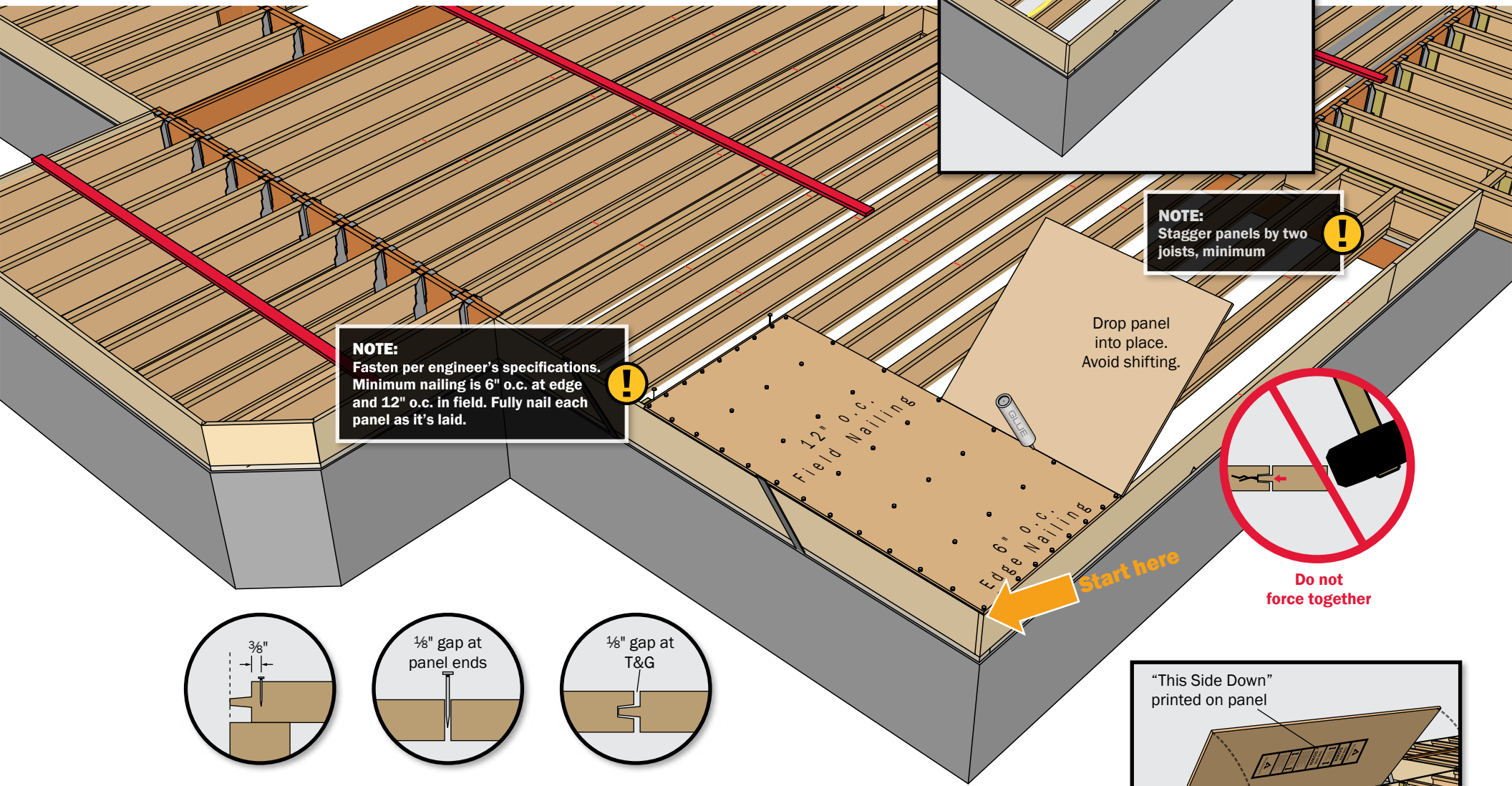


Final Check Before Subfloor



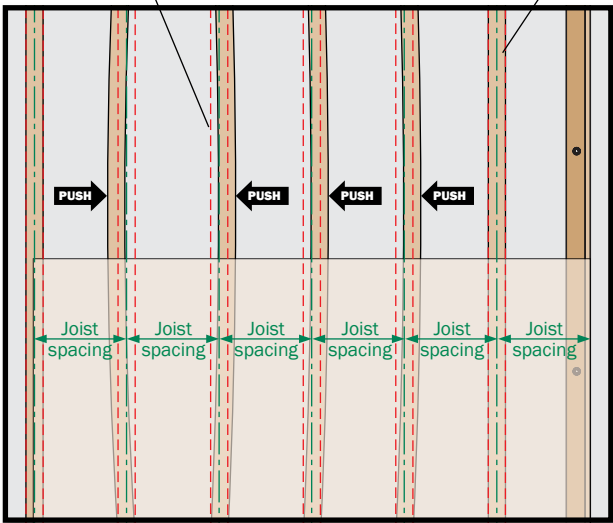
**CAUTION:**  
Do not walk on unbraced joists.

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



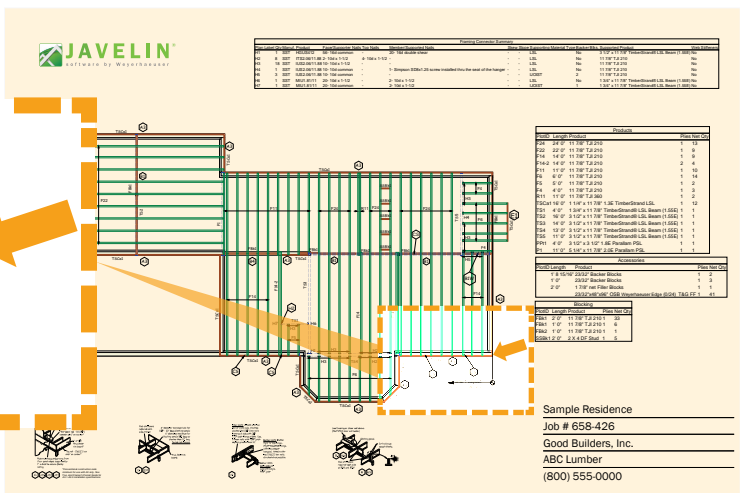
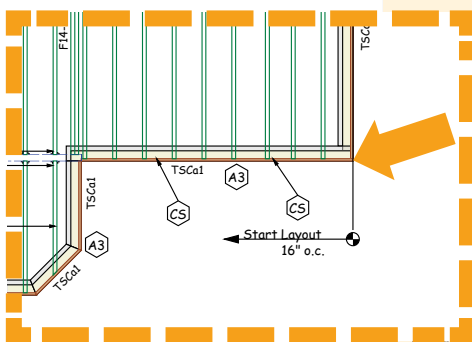
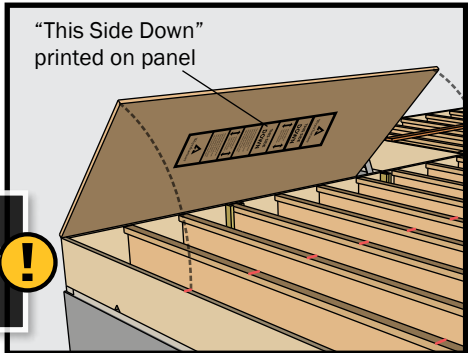
Push or pull joists into line before nailing off

Good alignment

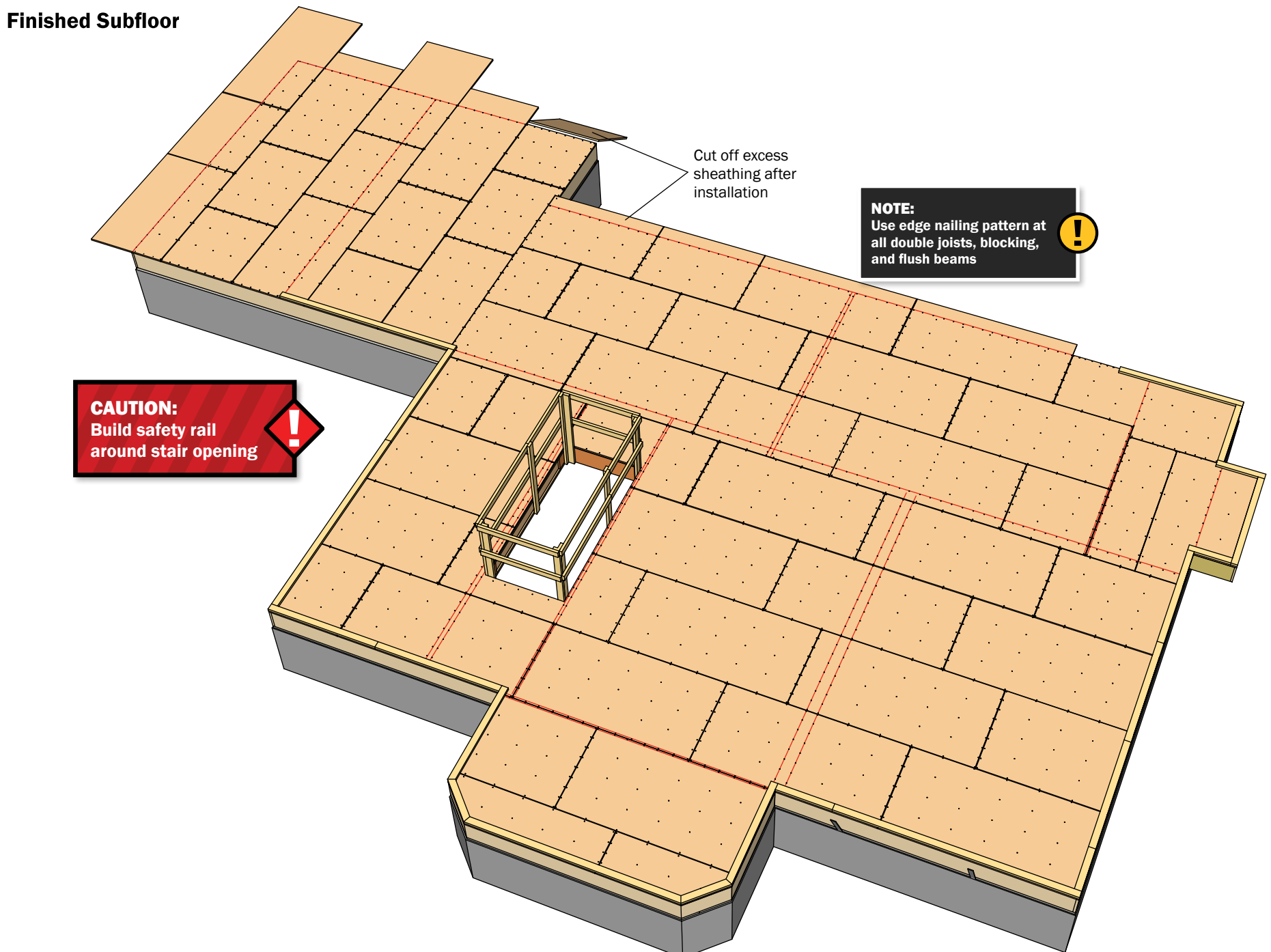
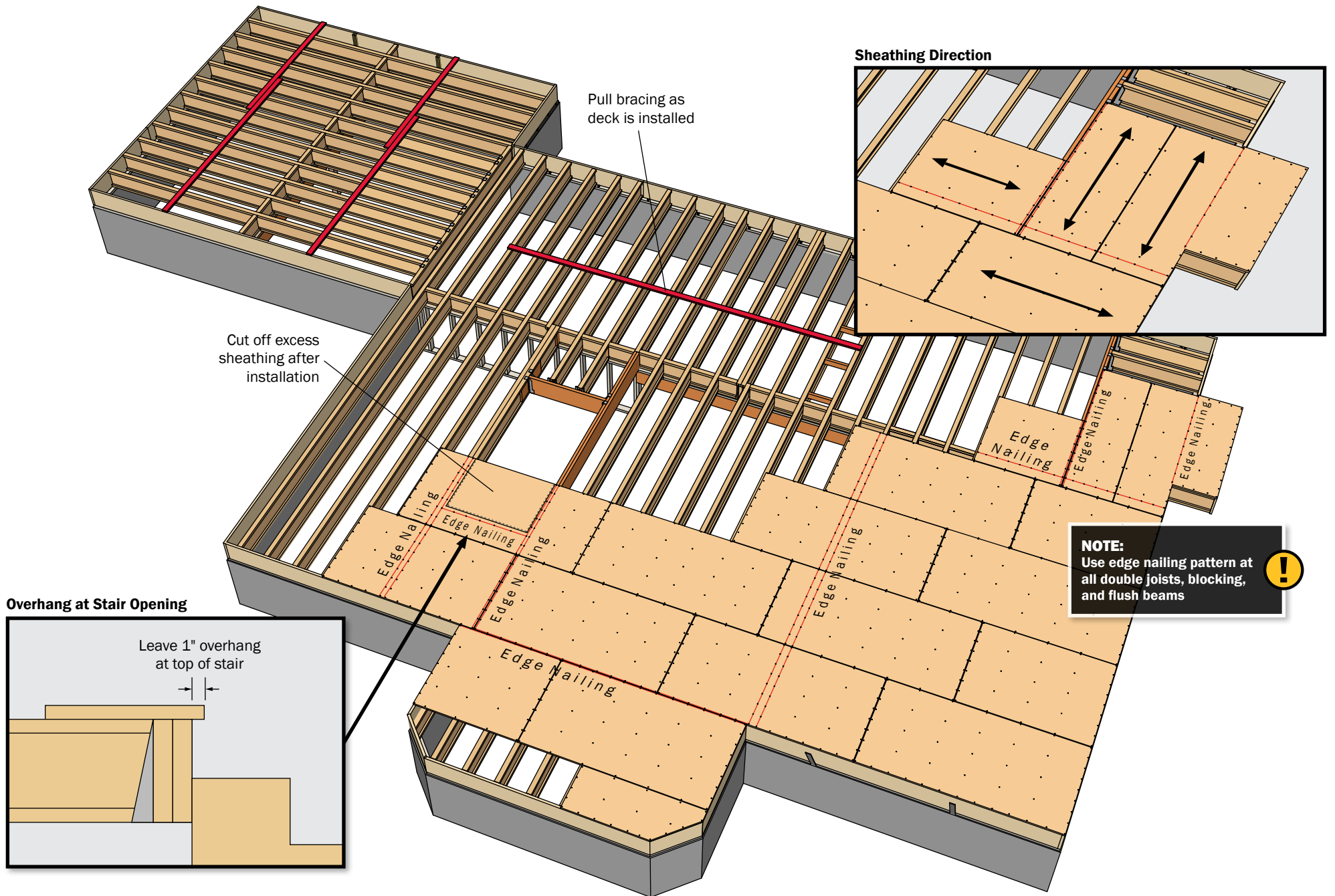


**NOTE:**  
Check nailing criteria (see Appendix)

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

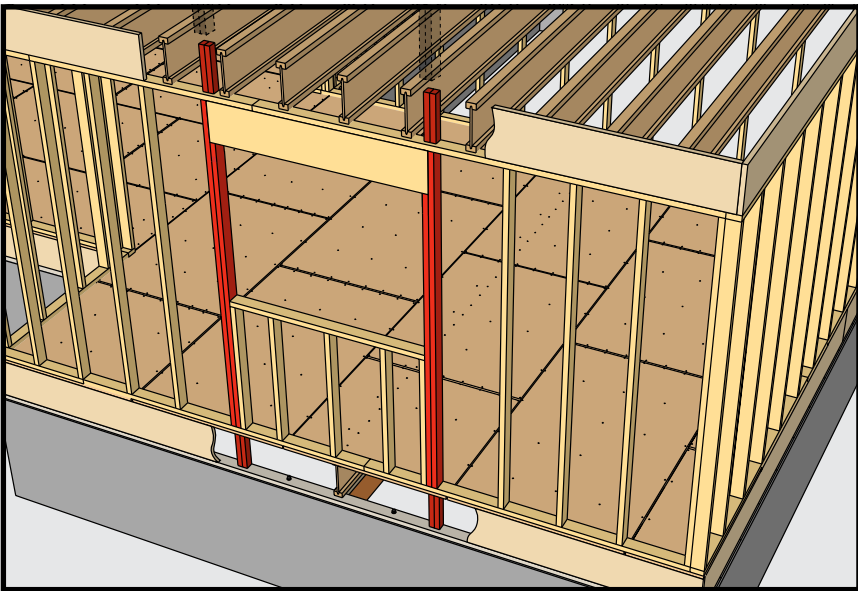




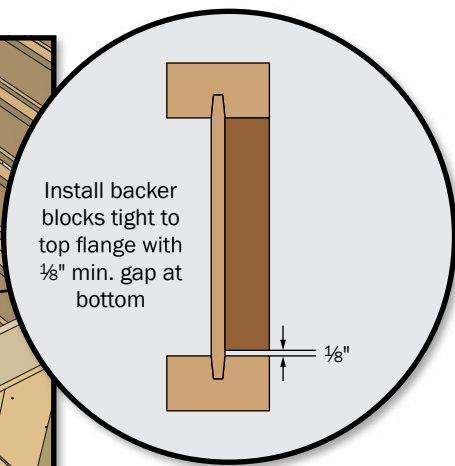
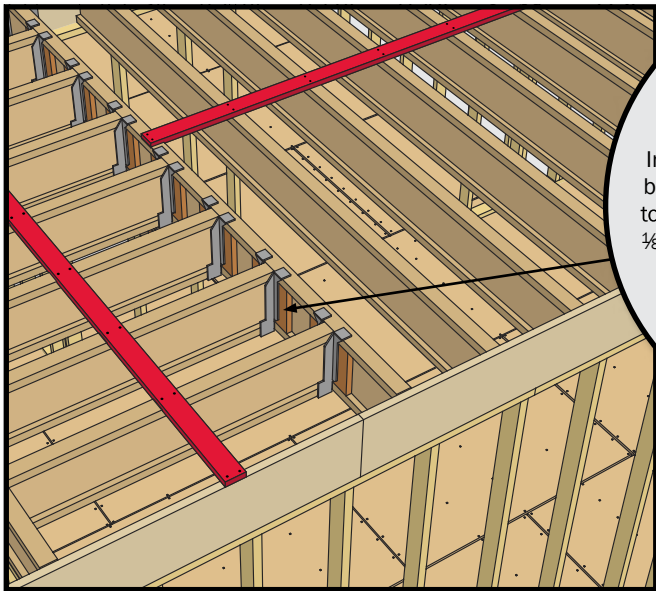




Transfer Continuous Loads to Foundation



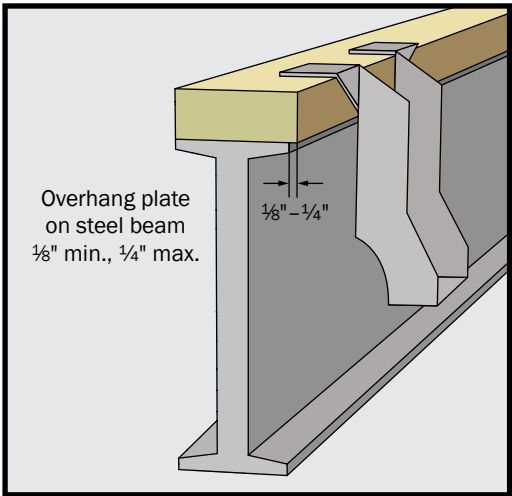
Top Flange Hangers



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



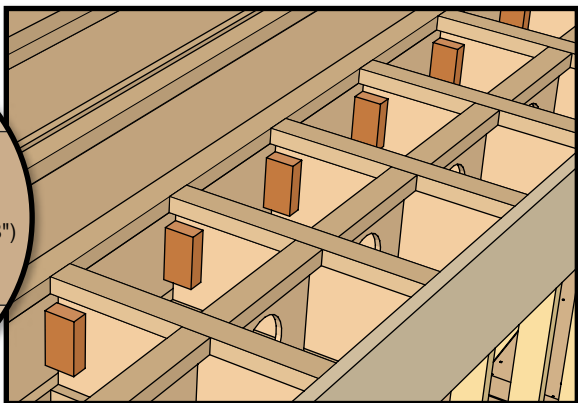
Draft-stop blocking between garage wall and living space



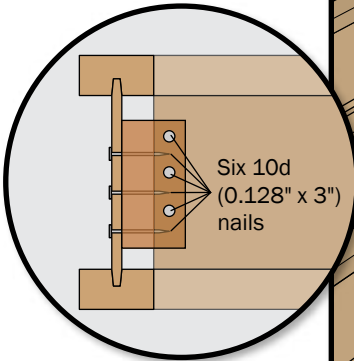
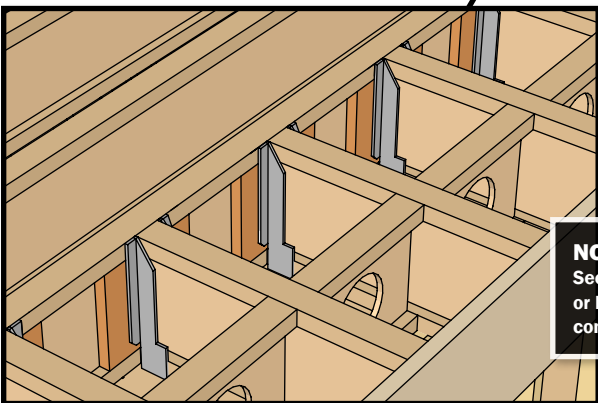
Tall walls not shown (for clarity)

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)

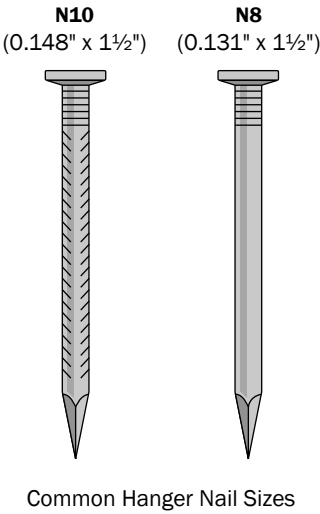
**CAUTION:**  
Build safety rails around  
all edges and openings

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)**.

