

Repair Detail for a Notch in the Top (Compression) Flange of a TJI® Joist

The information in this technical bulletin provides a contingency design for repair of the top (compression) flange of a TJI® joist. In the event of an inadvertent notch to the flange of a TJI® joist, a Weyerhaeuser engineered wood products (EWP) reinforcement member may be installed with epoxy adhesive to restore the resistive moment capacity.

Repair Materials

Weyerhaeuser EWP Reinforcement Member

- 1½" x 3½" TimberStrand® LSL (plank orientation)
 - 1.3E or 1.5E (wall stud)
- 1¾" x 3½" TimberStrand® LSL (plank orientation)
 - 1.55E (beam/header)
- TJI® joist LVL flange
 - Ripped from matched, undamaged TJI® joist
 - Maintain orientation (i.e., web-side down)

Connection

- West System® Six10® Thickened Epoxy Adhesive
 - Two (2) cartridges (6.46 oz., 190 mL)
 - Purchase/order from specialty wood working stores, marine suppliers, and/or online retailers (e.g., [Amazon](#), [West Marine](#))
- No. 8 Wood Screws
 - Length = 2 in. (reinf. thickness ≤ 1½")
 - Length = 2¼ in. (reinf. thickness = 1¾")

Installation of Weyerhaeuser EWP Reinforcement Member

Step 1: Confirm TJI® joist complies with the conditions and limitations.

- Reinforced flange notch permitted in only the allowable zones of top (compression) flange (see Figure 1).
- One (1) inadvertent flange notch per TJI® joist (single-ply only).
 - Maximum length of notch (parallel to joist span) is 4".
 - Reinforcement member must be installed centered on flange notch.
- Original, undamaged TJI® joist is properly designed.
- Adjacent TJI® joists on both sides remain undamaged.
- Wood at bonding surfaces must be clean, dry, and unweathered.
- Uniformly distributed loads only.
- Floor applications only (i.e., no roof joists).
- Not for use in fire-resistance rated assemblies.

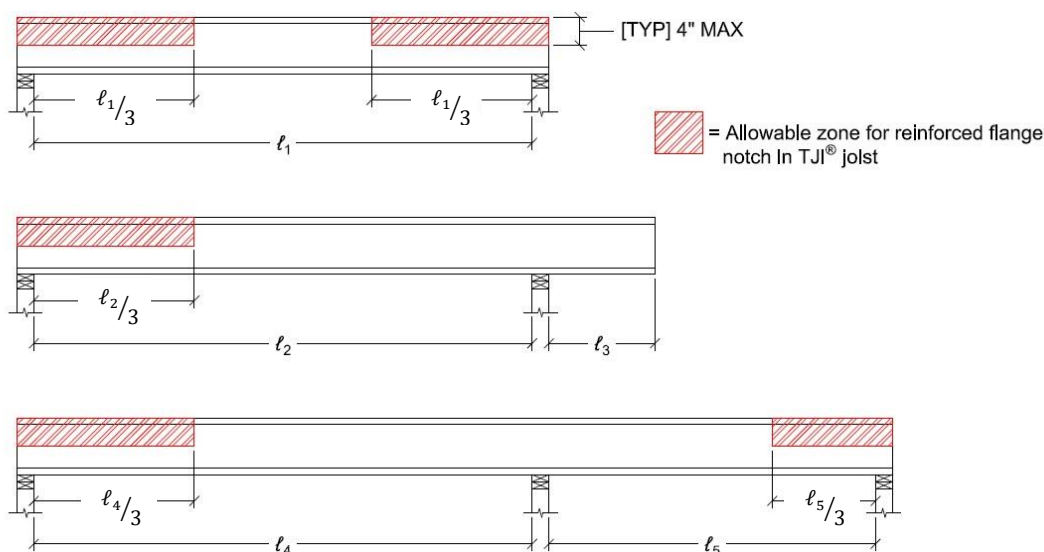


Figure 1: Allowable zones for reinforced flange notch in simple-span, span+cantilever, and continuous-span.

Step 2: Select an appropriate Weyerhaeuser EWP reinforcement member.

- The minimum total length and number of screws is dependent on the TJI® joist, amount of flange section removed (i.e., notch size), and reinforcement member material.
- See Table 1 for additional information.

TABLE 1: WEYERHAEUSER EWP REINFORCEMENT MEMBER^[1]

TJI®	1½" x 3½" TimberStrand® LSL ^[2]				1¾" x 3½" TimberStrand® LSL ^[2]		TJI® Joist LVL Flange	
	1.3E		1.5E		1.55E			
	Minimum Total Length	Number of Screws ^[3]	Minimum Total Length	Number of Screws ^[3]	Minimum Total Length	Number of Screws ^[3]	Minimum Total Length	Number of Screws ^[3]
Up to Half of Flange Section Removed ^[4]								
TJI® 110	24"	12	30"	12	30"	12	24"	8
TJI® 210	30"	12	30"	12	30"	12	30"	8
TJI® 230	30"	12	30"	12	36"	18	30"	8
TJI® 360	36"	18	36"	18	42"	18	36"	12
More than Half to All of Flange Section Removed ^[4]								
TJI® 110	30"	12	36"	18	36"	18	36"	12
TJI® 210	36"	18	36"	18	36"	18	42"	12
TJI® 230	42"	18	42"	18	42"	18	42"	12
TJI® 360	-	-	48"	24	48"	24	48"	16

[1] Reinforcement member may be installed on either side of TJI® joist.

[2] Reinforcement member shall be installed in plank orientation; 3½" width may be achieved by re-sawing a larger depth member as per TB-305.

[3] See details SR1 and SR2 for location of pre-drill holes and additional information.

[4] Maximum length of notch (parallel to joist span) = 4"; maximum vertical depth of notch = 4".

Step 3: Pre-drill all holes (Ø = 3/16") for wood screws in the reinforcement member.

- Angled screws must be installed for all reinforcement members. Pre-drill holes from the center of the narrow edge of the reinforcement member (i.e., flange contact surface) and continue through at a 45° angle.
- Two (2) rows of vertical screws if 1½" or 1¾" x 3½" TimberStrand® LSL.
- One (1) row of vertical screws if TJI® joist LVL flange.
- See Figure 2 for additional information.

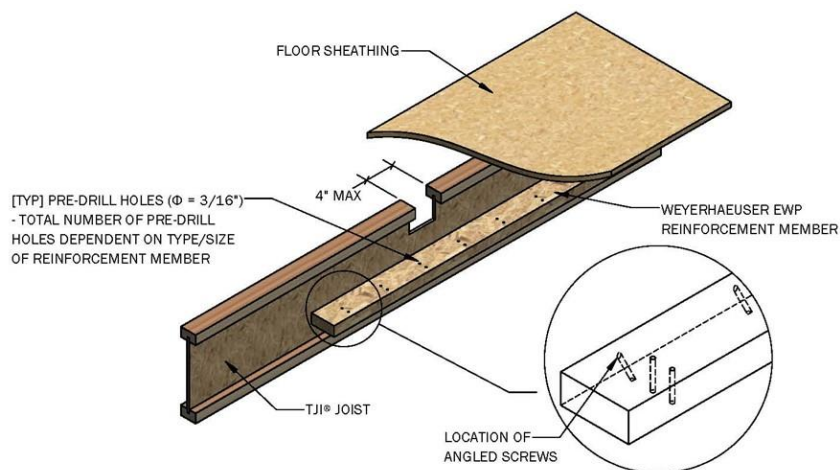


Figure 2: Pre-drill all holes in the reinforcement member.

Step 4: Generously apply West System® Six10® Thickened Epoxy Adhesive to all contact surfaces.

- Substitution with other adhesives not permitted.
- Apply epoxy adhesive per the [WEST SYSTEM User Manual & Product Guide](#).
- Upon screw installation, epoxy adhesive should exhibit sufficient “squeeze-out” behavior along the bondlines.
- See Figures 3 and 4 for additional information.

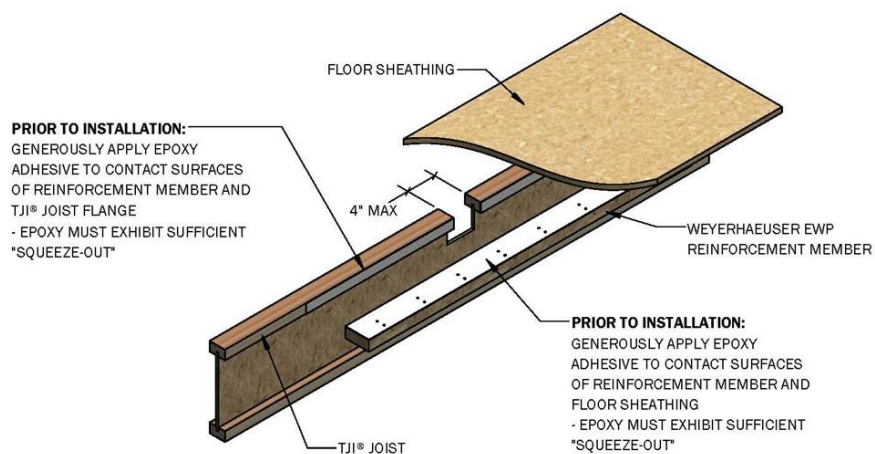


Figure 3: Apply epoxy adhesive to all contact surfaces.



Figure 4: Example of sufficient “squeeze-out” behavior (left); West System® Six10® Thickened Epoxy Adhesive (right).

Step 5: Install the reinforcement member.

- Install the angled screws first to engage all contact surfaces.
- Allow 24 hours for epoxy adhesive to cure.
- Avoid loading TJI® joist during the curing process.
- See Figure 5 and details SR1 and SR2 for additional information.

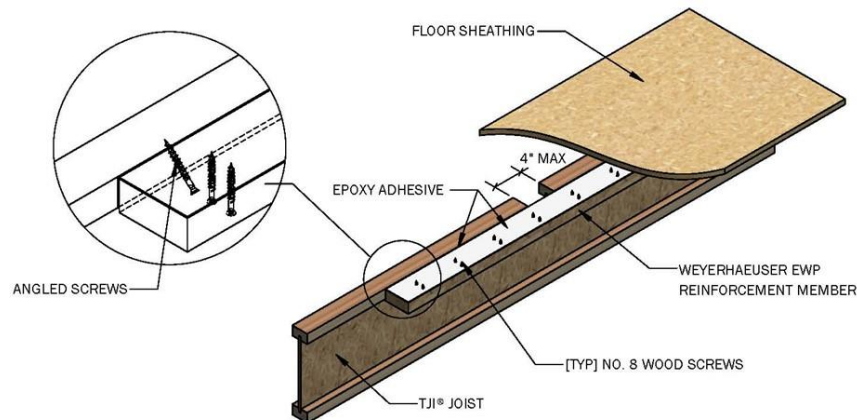
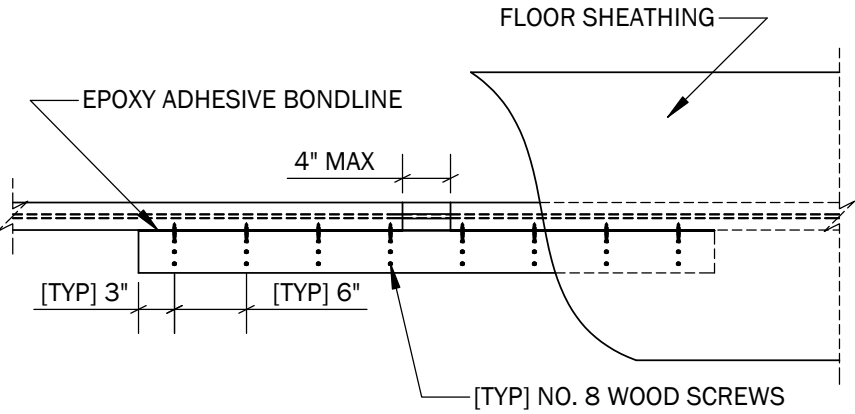


Figure 5: Completed repair assembly; allow 24 hours for epoxy adhesive to cure.

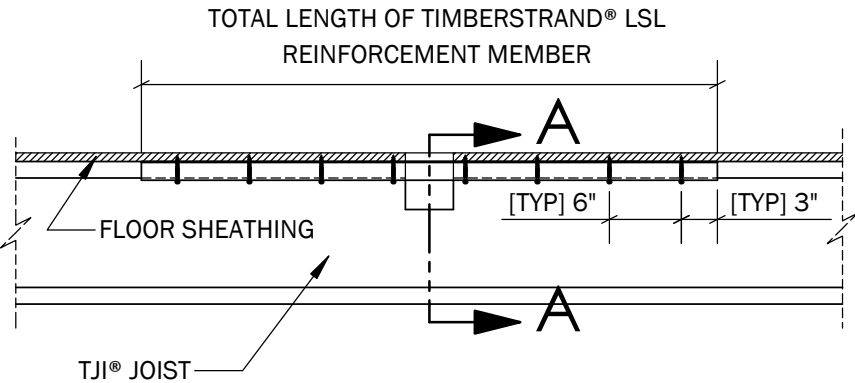
***If you have any questions, please contact
your Weyerhaeuser representative.***

GENERAL NOTES:

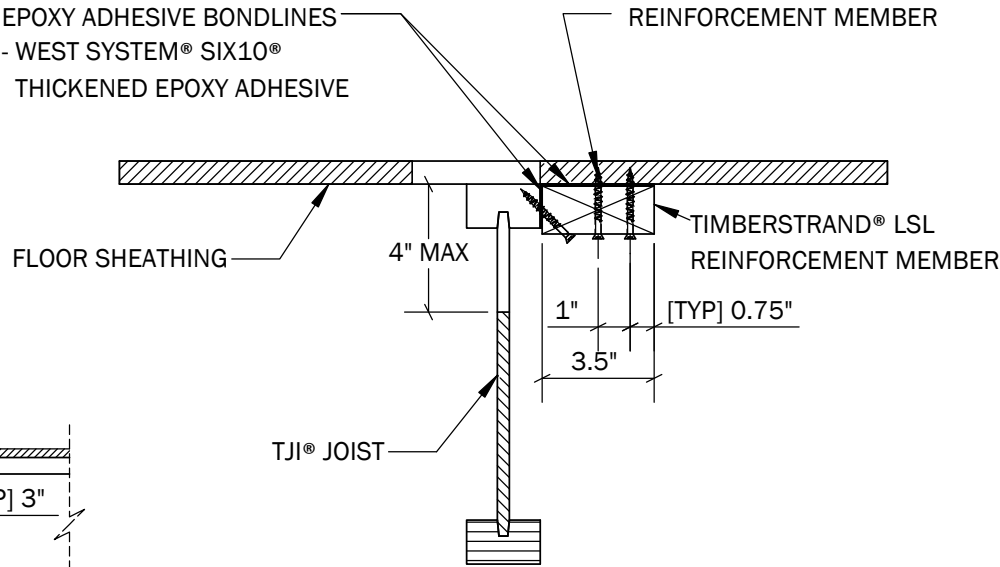
- REINFORCEMENT MEMBER MAY BE INSTALLED ON EITHER SIDE OF TJI® JOIST.
- ALLOW 24 HOURS FOR EPOXY ADHESIVE TO CURE.
- SEE **TB-832** FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION.



TOP VIEW



ELEVATION VIEW



SECTION A-A

- [TYP] NO. 8 WOOD SCREWS
- LENGTH = 2"
 - (REINF. THICKNESS $\leq 1\frac{1}{2}$ ")
 - LENGTH = 2 $\frac{1}{4}$ "
 - (REINF. THICKNESS = 1 $\frac{3}{4}$ ")
 - PRE-DRILL HOLES ($\Phi = \frac{3}{16}$ ") IN REINFORCEMENT MEMBER



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REPAIR DETAIL FOR NOTCH IN TOP (COMPRESSION)
FLANGE OF TJI® JOISTS
TIMBERSTRAND® LSL REINFORCEMENT MEMBER

DRAWING DATE: 2025-05-27

DRAWN BY: Weyerhaeuser Product Engineering

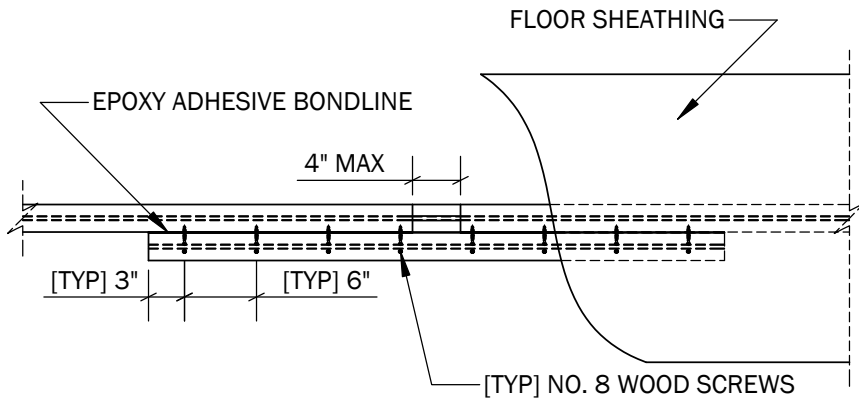
SHEET: SR1

DWG SCALE: -

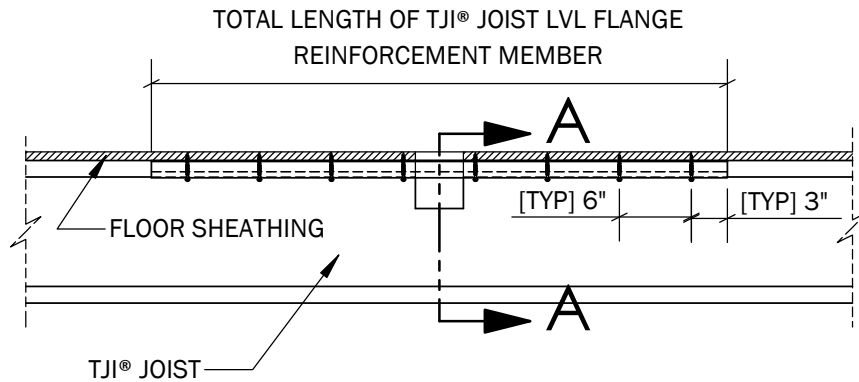
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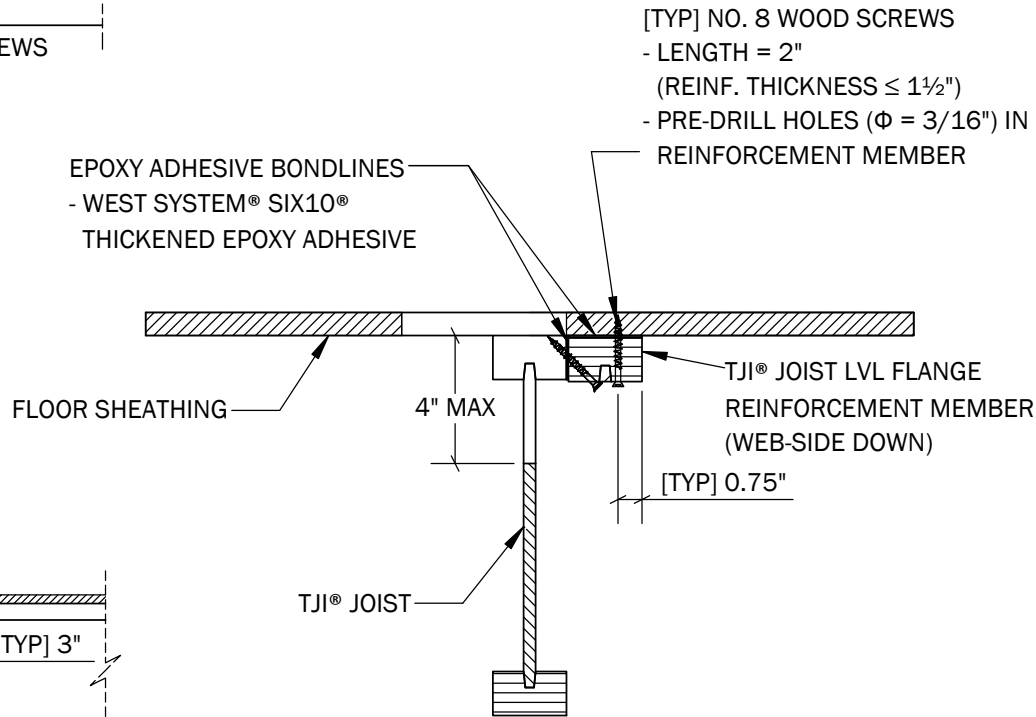
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TOP VIEW



ELEVATION VIEW



SECTION A-A



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REPAIR DETAIL FOR NOTCH IN TOP (COMPRESSION)
FLANGE OF TJI® JOISTS
TJI® JOIST LVL FLANGE REINFORCEMENT MEMBER

DRAWING DATE: 2025-05-27

DRAWN BY: Weyerhaeuser Product Engineering

SHEET: SR2

DWG SCALE:

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