

Shored Wood Joist Replacement JHA

Worked instructional example

Work and worksite

A repair crew will replace one damaged solid-sawn floor joist in an unoccupied building bay after the structural survey, engineered temporary support, load isolation and removal plan are released. The crew uses a protected working platform below the floor. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The specific joist, damage extent, utilities and suspect-material status are established before disturbance.
- Installed temporary supports carry the identified loads through a verified load path and remain under the engineer's release plan.
- This excludes shoring design, hazardous-material abatement, occupied-area work, engineered I-joist repair and unplanned removal of adjacent framing.

Questions before work

- What records release the temporary support and load-isolated bay for this exact removal?
- How will the damaged joist be supported and controlled as its attachments are removed?
- Who accepts the new member and authorizes any later temporary-support removal?

Task Hazard Control

1 Confirm the removal release

Hazard: A hidden load, unsupported structure or live service can create collapse or contact hazards.

Control: Repair lead checks the structural survey, engineered repair and removal plan, installed support release and utility isolation. Confirm material-clearance records and the unoccupied boundary; do not start from an assumption that the damaged joist carries no load.

Verification: Lead verifies the current records apply to this joist and bay before disturbance.

Reasoning: This analysis starts after support design and installation, not instead of them.

2 Protect access and surrounding framing

Hazard: A worker can fall through an opened floor or disturb a shore while setting up access.

Control: Provide the specified protected work platform and barriers above and below. Keep shore bases, braces and access paths clear of carts and debris; maintain floor-opening protection as removal advances and prevent adjacent loads from entering the bay.

Verification: Lead checks the support boundary and work platform before tools are staged.

Reasoning: Temporary supports need protection from ordinary movement as well as load control.

3 Support the damaged member

Hazard: A partly detached joist or attached ceiling material can fall unexpectedly.

Control: Use the removal plan's independent member support and debris containment. Identify attached components and the controlled lower route, keep workers outside the fall path and agree one removal leader; do not use a required structural shore as an improvised debris support.

Verification: Removal lead verifies member control before the first attachment is released.

Reasoning: Supporting the floor does not by itself control the piece being removed.

Complete the work and hand over

4 Remove in the released sequence

Hazard: Cutting or prying the wrong attachment can release stored force or damage retained framing.

Control: Use the plan's limited removal method and inspected tools, with required dust and contact controls. Maintain member support through final detachment; stop for unexpected binding, movement or concealed connections. Do not extend cuts or remove adjacent members to force progress.

Verification: Removal lead compares each release with the plan and monitors retained framing.

Reasoning: Unexpected resistance is information about the load path, not a cue for greater force.

5 Install the identified replacement

Hazard: Wrong grade, bearing or connections can leave the floor unsafe despite a new-looking joist.

Control: Place the drawing-specified replacement using controlled handling. Complete its bearings, connectors and restraint under the repair detail without unapproved notches or holes. Keep temporary support and load isolation until the designated inspection and acceptance are complete.

Verification: Repair lead records member identity and actual connection findings for acceptance.

Reasoning: A replacement's appearance does not establish its structural equivalence.

6 Close out without removing shores

Hazard: Premature loading or support removal can cause failure after the crew leaves.

Control: Collect contained debris, restore specified protection and transfer repair status and unresolved items. Leave shores and loading restrictions in place until the engineer's separate removal and reload release; this example ends before that operation.

Verification: Receiving lead confirms written restrictions and the person controlling the later release.

Reasoning: Repair acceptance and temporary-support removal require their own evidence.

Pause and reassess

- A service, suspect material, hidden connection or additional damage is uncovered.
- A shore shifts, framing moves or the member responds unexpectedly during removal.
- The replacement detail, acceptance record or loading restriction is unresolved.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Use the removal plan's independent member support and debris containment. Identify attached components and the controlled lower route, keep workers outside the fall path and agree one removal leader; do not use a required structural shore as an improvised debris support.

Needs improvement: Check that everything is ready.

More useful: Repair lead checks the structural survey, engineered repair and removal plan, installed support release and utility isolation. Confirm material-clearance records and the unoccupied boundary; do not start from an assumption that the damaged joist carries no load.

Decisions that change the analysis

Can the temporary supports come out when the new joist is fastened?

No. Obtain the designated engineer's release for the actual repaired load path and follow the separately planned support-removal sequence. This teaching example records no inspection and authorizes neither shore removal nor occupancy.

What must the crew record for actual use?

Identify the actual equipment and work boundaries, responsible people, applicable criteria, inspection findings and open actions. Resolve changes with affected crews and obtain required project authorization before work.

Training needs

- The released joist-specific removal and repair sequence, support monitoring and authority to pause for unexpected conditions.
- Applicable tool, dust, hazardous-material awareness and utility-isolation instruction for the actual materials and services.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

OSHA 1926.850 Preparatory operations

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.850>

Simpson Strong-Tie Product installer guide

<https://www.strongtie.com/resources/product-installers-guide/landing>

OSHA 1926.300 Hand and power tools

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.300>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This instructional example supplies no actual inspection results, signatures or work approval.