

Precast Hollow Core Floor Erection JHA

Worked instructional example

Work and worksite

A specialist precast erection crew will crane-set identified prestressed hollow-core floor planks on released bearing lines in a new building. Permanent joint work and subsequent construction loading are later activities. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- The producer's erection documents establish member identity, handling attachments, bearing, temporary support and sequence.
- Open edges and incomplete floor bays have a planned fall-protection and rescue arrangement.
- This excludes double tees, wall panels, field cutting of strands, core drilling and unplanned stockpiling on placed planks.

Questions before work

- How are plank identity, lift attachments and bearing requirements verified?
- What temporary supports and permitted walk-on conditions apply at each stage?
- Who releases the installed floor for later trades and loading?

Task Hazard Control

1 Release bearings and sequence

Hazard: An incomplete bearing or missing shore can lead to plank collapse.

Control: Erection lead verifies receiving supports, specified bearing details and temporary shoring against the producer's current erection documents. Keep the lift on hold for unresolved support geometry.

Verification: Lead records receiving conditions before the first plank lift.

Reasoning: Member delivery does not establish the bearing's readiness.

2 Inspect and rig the plank

Hazard: Damaged prestressed concrete or an incompatible clamp can fail during lifting.

Control: Qualified rigging personnel verify member marks, damage status and the producer's specified lifting system. Use its required safety devices and attachments; refer damage or uncertain handling points for technical disposition.

Verification: Rigger compares plank and gear identification with the handling instructions.

Reasoning: A wall-panel insert method is not automatically a hollow-core method.

3 Clear and lift

Hazard: A long plank can rotate or strike the erection crew.

Control: Control the travel path and access below, use agreed crane signals and manage orientation from planned safe positions. Keep personnel clear of the suspended member and do not improvise riding or guidance from beneath it.

Verification: Lift lead confirms the path before each pickup.

Reasoning: Plank length creates a swing exposure beyond the hook position.

Complete the work and hand over

4 Seat the plank

Hazard: Misaligned bearing or a trapped hand can cause crushing or loss of support.

Control: Land in the documented sequence onto the specified bearing and supports. Use positioning tools and protected receiving positions; verify full required seating and stability before releasing lifting equipment.

Verification: Erection lead checks both bearing ends against the current criteria.

Reasoning: A plank touching one support is not a verified landing.

5 Protect the developing floor

Hazard: Open joints, edges or a partly supported plank can cause falls or overload.

Control: Maintain the stage-specific fall protection, opening protection and access limits. Permit walking or material placement only under the producer/design release for that erection stage; keep unapproved loads off the floor.

Verification: Lead checks protection and load restrictions after each completed section.

Reasoning: A visually continuous floor can still have incomplete structural work.

6 Hand over for joint work

Hazard: Later crews may assume the planks are fully accepted or cut prestressing steel.

Control: Identify unfinished connections, keyway grouting, topping and support restrictions. Mark any planned openings and require producer/engineer approval for alterations; transfer the actual stage release to the next crew.

Verification: Receiving lead confirms restrictions before joint work or loading.

Reasoning: Prestressed members require a controlled alteration process.

Pause and reassess

- Damaged member, unsuitable lifting gear or bearing mismatch.
- Temporary support or fall protection cannot be maintained.
- An unplanned opening, stockpile or altered erection sequence is requested.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Control the travel path and access below, use agreed crane signals and manage orientation from planned safe positions. Keep personnel clear of the suspended member and do not improvise riding or guidance from beneath it.

Needs improvement: Check that everything is ready.

More useful: Erection lead verifies receiving supports, specified bearing details and temporary shoring against the producer's current erection documents. Keep the lift on hold for unresolved support geometry.

Decisions that change the analysis

Can a service opening be cut wherever a core looks clear?

No. Hollow-core openings and strand effects need the producer's and project engineer's approved details. This erection analysis authorizes no drilling, cutting or prestressing alteration.

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

- Member-specific handling, bearing checks and erection-stage access instruction.
- Applicable crane/rigger/signal roles and fall-protection training for the actual operation.

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 1926.704 Precast concrete

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.704>

OSHA 1926.501 Duty to have fall protection

<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.501>

PCI Hollowcore technical questions

https://www.pci.org/GCPCI/Technical_Resources/FAQs/Hollowcore.aspx

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.