

Mechanically Anchored Stone Cladding JHA

Worked instructional example

Work and worksite

A specialist stone crew will install identified exterior granite cladding panels on a released ground-floor facade using specified mechanical anchors and a rated panel-handling device. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- Panel condition, anchor substrate, bearing and temporary support come from the engineered cladding details.
- Drilling occurs only at released anchor locations with the applicable dust controls.
- Adhered veneer, on-site stone fabrication, upper-story facade work and substituting adhesives for anchors are excluded.

Questions before work

- Which anchors and substrate checks establish this panel's load path?
- What lifting device is approved for the stone surface and panel weight?
- Which temporary supports remain until the connection checks are complete?

Task Hazard Control

1 Release the cladding detail

Hazard: An incompatible anchor or weak substrate can allow a panel to fall.

Control: Stone lead verifies current engineered panel, bearing and anchor details and the substrate release. Refer uncertain edge distances, substrate damage or panel changes before drilling.

Verification: Lead compares panel schedule and anchor locations with released documents.

Reasoning: A finish-panel location does not establish its support capacity.

2 Inspect and stage stone

Hazard: Cracked panels or unstable storage can fail during pickup.

Control: Check panel identity, condition and specified handling points; segregate damaged stone for technical review. Stage on suitable restrained supports and maintain a clear transfer route.

Verification: Handling lead inspects condition and support before attachment.

Reasoning: Natural stone condition affects both handling and anchorage.

3 Prepare anchor points

Hazard: Drilling can strike services or expose workers to dust.

Control: Investigate and release the drilling locations and depths. Use the specified anchor installation process and applicable dust controls; obtain required substrate/anchor checks without inventing acceptance values.

Verification: Assigned installer records actual hole and anchor checks against the approved system.

Reasoning: Anchor preparation is part of the permanent load path.

Complete the work and hand over

4 Lift and position the panel

Hazard: Stone can drop, rotate or trap workers against the facade.

Control: Use the rated stone-compatible handling system with inspected attachments and agreed signals. Keep people outside the drop and pinch paths; place the panel on its specified temporary bearing/support.

Verification: Handling lead verifies support before the crew approaches connection work.

Reasoning: A glass handling device is not automatically suitable for stone.

5 Complete mechanical restraint

Hazard: An incompletely connected panel can move when lifting support is released.

Control: Install the specified anchors, bearings and required tolerances without forcing the stone. Retain handling/temporary support until designated connection checks and release are complete.

Verification: Stone lead verifies each required support and restraint before disconnecting the device.

Reasoning: Apparent alignment does not prove the panel is safely restrained.

6 Hand over the facade

Hazard: Unfinished anchors or removed temporary supports can expose other trades.

Control: Identify incomplete panels, remaining supports and loading/access restrictions. Clear the work zone and transfer inspection findings and open actions to the facade lead.

Verification: Receiving lead confirms each panel's release status.

Reasoning: The handover must follow individual connection status, not visual finish.

Pause and reassess

- Stone damage, unknown weight or incompatible handling device.
- Anchor substrate, drilling release or support differs from the design.
- Connection checks are unresolved or a temporary support change is proposed.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Investigate and release the drilling locations and depths. Use the specified anchor installation process and applicable dust controls; obtain required substrate/anchor checks without inventing acceptance values.

Needs improvement: Check that everything is ready.

More useful: Stone lead verifies current engineered panel, bearing and anchor details and the substrate release. Refer uncertain edge distances, substrate damage or panel changes before drilling.

Decisions that change the analysis

Can the adhered veneer mortar method replace an anchor?

No. Mechanically anchored dimension stone has an engineered load path. Any change in panel, anchor, bearing or attachment needs the responsible designer's review; adhesive veneer instructions are not a substitute.

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

- Stone-specific handling-device and anchorage installation instruction.
- Applicable rigging/handling qualifications and silica controls for actual anchor drilling.

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

References and adaptation

Natural Stone Institute Anchorage technical bulletins
<https://www.naturalstoneinstitute.org/stoneprofessionals/technical-bulletins/>

OSHA 1926.1153 Respirable crystalline silica
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1153>

OSHA 1926.21 Safety training and education
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.21>

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.