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Inspect façade penetrations & sleeve sealing before closure

Inspect façade penetrations and sleeve sealing before closure with interactive checklist; commentable, export as PDF/Excel, ensure seals and continuity.

Project:
Date:
Filled by:

Pre-Closure Documentation

1	Open approved façade/shop drawings and the penetration register on a tablet; cross-check count, sizes, and coordinates for the inspected zone. Acceptance: 100% match. Evidence: dated screenshots or marked drawings with inspector initials.
2	Verify current manufacturer data sheets and approvals for sleeves, tapes, membranes, sealants, and firestopping. Method: confirm latest revision dates. Acceptance: documents match approved submittals. Evidence: file names, revisions, and label photos with batch numbers.
3	Confirm required tested solutions align with wall assembly thickness and substrate, per approved project specifications and authority requirements. Method: side-by-side comparison to details. Evidence: recorded system reference, detail ID, and photo of identification labels.
4	Verify hold-point access is planned and substrates are clean and dry. Tools: moisture meter and thermo-hygrometer. Acceptance: substrate moisture per product data ($\leq 5\%$ if unspecified) and ambient 5–40 °C. Evidence: logged readings with time/location.

Sleeve Installation

5	Measure service outside diameter and sleeve internal diameter with calipers/feeler gauges. Target annular gap: 6–12 mm uniform. Acceptance: gap allows sealant/backer installation without voids. Evidence: measurement photos with scale.
6	Check sleeve projection beyond finished exterior: 10–20 mm, sloped outward $\geq 2\%$ to shed water. Tools: ruler and digital level. Evidence: side-profile photo showing projection and slope reading.
7	Verify sleeve material and protection: stainless steel or coated steel/PVC as specified; cut edges de-burred and treated. Acceptance: no sharp edges or corrosion. Evidence: close-up photos and material tag.
8	Confirm sleeve is centered and plumb/level; location within ± 5 mm of layout coordinates. Method: laser measure and spirit level. Evidence: measurement log and alignment photo.

Penetration Sealing

9	Install backer rod sized 25–50% larger than joint width to achieve 2-sided adhesion. Tool: depth gauge. Acceptance: uniform compression without tears. Evidence: in-progress photo showing rod size and depth.
10	Apply primer where required. Record substrate dryness and ambient conditions. Tools: moisture meter and infrared thermometer. Acceptance: within product limits; no visible contaminants. Evidence: primer application photos and logged readings.
11	Gun continuous sealant bead and tool a smooth concave profile. Target sealant depth: approximately half joint width up to 12 mm. Acceptance: no voids, pinholes, or discontinuities. Evidence: close-up photos after tooling.
12	Perform a field adhesion probe after initial cure. Method: gently lift a tab to check adhesive vs. cohesive failure. Acceptance: cohesive failure predominates. Evidence: photos of probe and recorded batch number/time.

Air/Water Barrier Continuity

13	Inspect WRB/air barrier patches or tapes around sleeves. Laps ≥ 100 mm in all directions; no fishmouths. Tool: seam roller for firm adhesion. Evidence: photos showing lap dimensions and rolled seams.
14	Seal fastener penetrations and terminations with compatible products. Method: verify compatibility on data sheets. Acceptance: continuous seal without holidays. Evidence: product/lot records and detailed photos.
15	Conduct localized smoke-pencil check at sleeve junctions under -25 to -50 Pa building pressure (if feasible). Acceptance: no visible smoke movement through joints. Evidence: short video or photo sequence.
16	Verify rainscreen cavity drainage/venting remains unobstructed; weep/vent openings ≥ 6 mm clear. Acceptance: no blocked paths or trapped membranes. Evidence: cavity and weep photos with scale.

Fire/Smoke/Acoustic Separation

17	Pack mineral wool to specified depth and density around penetrations, recessed to allow sealant thickness. Tool: depth gauge. Acceptance: continuous contact with no voids. Evidence: pre-seal photo and measurements.
18	Install required firestop collars/wraps; banding tight, anchors fixed at specified spacing. Tools: torque wrench and drill. Evidence: torque values recorded and installation photos.
19	Apply smoke/acoustic sealant as specified at interior/exterior interfaces. Target thickness: 5–10 mm continuous. Acceptance: no gaps or air paths. Evidence: bead continuity photos and product batch record.
20	Verify compatibility between firestopping, WRB, and sealants. Method: cross-check manufacturer guidance; resolve conflicts before cure. Evidence: saved compatibility confirmations or TDS excerpts.

Quality Evidence & Sign-Off	
21	Photograph each penetration from interior and exterior sides before closure, including a scale and label. Acceptance: images clear and geo/time-stamped. Evidence: uploaded photos linked to register ID.
22	Record batch/lot numbers for sleeves, membranes, tapes, primers, sealants, and firestopping. Acceptance: 100% traceability. Evidence: entries in material log with photos of labels.
23	Update as-built penetration register with measured coordinates and sizes. Tools: laser distance meter. Acceptance: within ± 10 mm of installed location. Evidence: updated register snapshot.
24	Obtain digital sign-offs from façade, MEP, and QA representatives prior to closure. Evidence: e-signatures captured in app and QR-authenticated export stored in project archive.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
<p>Inspect façade penetrations and sleeve sealing before closure is a critical pre-closure quality step that protects the building envelope. This checklist guides penetration sealing verification and façade sleeve inspection across rainscreen, curtain wall, EIFS, and masonry systems. It focuses on sleeve placement, annular gap control, backer rods, sealant profiles, air/water barrier continuity, and required firestopping or acoustic seals per approved project specifications and authority requirements. By confirming correct materials, compatibility, and workmanship before lining or cladding hides the work, teams reduce risks of water intrusion, air leakage, thermal bypass, corrosion, and uncontrolled fire or smoke spread. Outcomes include durable seals, verified drainage/venting in cavities, traceable products, and clear evidence to proceed with closure. Use this interactive checklist to coordinate façade, MEP, and firestop trades, capture readings, label photos, and resolve comments in real time. Tick items, add notes, and export PDF/Excel with a secure QR for sign-off and archiving.</p>	<p>1. Preparation: Review approved drawings, details, and submittals. Gather tools—calipers, feeler gauges, depth probe, laser measure, spirit level, digital level, moisture meter, thermo-hygrometer, smoke pencil, seam roller, torque wrench, and camera/tablet. Arrange safe access (MEWPs/scaffolds), PPE, lighting, and confirm weather and substrate conditions. 2. Access and safety: Establish exclusion zones, check tie-offs, and verify platforms are inspected. Protect adjacent membranes from damage. Stage materials and cleaning supplies to avoid contaminating sealant bonds. Ensure services are stable and supported before manipulating sleeves or seals. 3. Using the Interactive Checklist: Start interactive mode, select elevation/zone, and tick items as verified. Add comments, assign actions, and attach labelled photos and readings. Link materials and batch numbers to each penetration. On completion, export to PDF/Excel and share via QR-secured link. 4. Sign-Off and Archiving: Capture digital signatures from façade, MEP, and QA representatives. Confirm all actions closed and hold points released. Archive the QR-authenticated export in the project CDE with date/time, location references, and drawing IDs.</p>