AESG

Why Every Client Should Demand Final As-Built Drawings and O&M Manuals from Their Façade Subcontractor

Introduction

The building façade is a critical interface between the internal environment and external conditions. As one of the most technically demanding elements of modern architecture, it plays a central role in ensuring building performance, occupant safety, energy efficiency, and aesthetic quality. Yet, despite its complexity and importance, essential handover documentation, specifically the final As-Built Drawings and the Operations & Maintenance (O&M) Manual, is often overlooked or underdelivered at project closeout.

This article outlines why these documents are not optional deliverables but essential assets. It also explores the risks of neglecting them and highlights how requiring complete and accurate documentation is a strategic move toward safeguarding building performance, compliance, and lifecycle value.

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The Role of As-Built Drawings in Façade Management

As-built drawings represent the final, verified configuration of the façade system, incorporating all modifications, deviations, and field adjustments made during the construction process. These documents serve as a factual record of the completed façade, as opposed to the design-intent drawings issued earlier in the project lifecycle.

Key Functions of As-Built Drawings

Accurate System Representation
As-built drawings reflect the real-world installation, not theoretical or intended layouts. They capture late-stage engineering changes, substituted materials, dimensional deviations, and construction tolerances.

Support for Maintenance and Repairs
For future glass replacements, sealant renewals, or component access, precise knowledge of the façade's configuration is essential. As-built details prevent unnecessary disassembly, minimize invasive interventions, and reduce repair costs.

Facilitation of Retrofit or Expansion Projects
Should the building undergo modification, retrofitting, or vertical/horizontal expansion, as-built documentation becomes indispensable. It enables accurate planning, structural assessments, and interface coordination with minimal disruption.

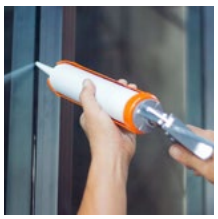
Legal and Compliance Recordkeeping
As-built records often serve as part of the building’s regulatory documentation. In the event of warranty claims, insurance investigations, or legal disputes, they provide a verifiable reference for what was actually built.

The Criticality of the Façade O&M Manual

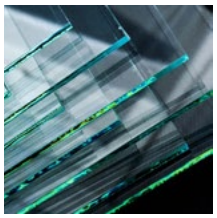
The O&M Manual is the operational guidebook for maintaining and managing the façade system throughout its lifecycle. It equips facilities management teams with the necessary knowledge to ensure performance, longevity, and compliance.

Key Inclusions in a Complete O&M Manual

Cleaning and Inspection Protocols
Façade materials often have specific maintenance requirements. Incorrect cleaning methods can damage coatings, seals, or glazing, leading to premature degradation.



Sealants and Gaskets Information
Documentation should detail the type, brand, and properties of all sealants and gaskets used, along with their expected service life and replacement intervals.



Glass and Finishes Specifications
Includes technical data on glass types (e.g., laminated, insulated, low-E), thicknesses, coatings, frit patterns, associated fixings critical for safe replacements.

Replacement and Maintenance Schedule
A lifecycle-based schedule outlining inspection frequencies, expected component lifespan, and recommended replacement timelines for consumables or moving parts.

Supplier and Warranty Contacts
Includes names, contact details, and warranty terms from original suppliers or installers, ensuring that any future replacements or claims can be addressed promptly.

Common Issues and Risks from Incomplete Documentation

When final as-built drawings and O&M manuals are delayed, incomplete, or entirely missing, the implications for the building owner and management team are significant:

Increased Maintenance Costs
Without technical documentation, facilities staff may use trial-and-error approaches to maintenance or repairs, often leading to inefficiencies and additional damage.

Risk to Occupant Safety
Façade systems involve structural glazing, anchorage components, and weather barriers. Uninformed intervention or neglect due to missing documentation can create safety hazards.

Warranty Voids
Improper maintenance practices, driven by lack of guidance, may void manufacturer or installer warranties, leaving building owners liable for premature failures.

Loss of Institutional Knowledge
In the absence of well-prepared documentation, knowledge about façade materials, suppliers, and installation practices is lost with project turnover or staff attrition.

Non-Compliance
In regulated jurisdictions, the absence of verified as-built records may impede sign-offs, energy certifications, or fire safety approvals.

Establishing Documentation as a Project Requirement

To ensure that façade documentation is delivered in full and to a high standard, clients should take a proactive approach, beginning at the contract and tendering stages.

Recommended Best Practices

1

Specify Documentation in the Subcontract Scope
Clearly outline the requirement for final, verified As-Built Drawings and a complete O&M Manual within the façade subcontractor's deliverables. Reference industry standards and formats if applicable.

2

Tie Documentation to Milestone Payments
Link final payment retention or closeout approvals to the submission and acceptance of complete documentation. This creates a tangible incentive for timely delivery.

3

Appoint a Third-Party Reviewer
Consider engaging a façade consultant or quality assurance specialist to review the submitted documents for completeness, accuracy, and technical sufficiency.

4

Ensure Coordination Between Design and Site Teams
Accurate as-builts rely on input from both the design and construction teams. Encourage collaboration and establish a documentation tracking system throughout the project lifecycle.

5

Digital Handover Platforms
Where possible, require delivery in digital formats compatible with Building Information Modeling (BIM), Computer-Aided Facility Management (CAFM), or Digital Twin platforms. This supports efficient long-term asset management.

The Return on Investment

While comprehensive documentation may appear to be an administrative task, the long-term value it provides is considerable. Building owners and operators gain:

Improved Operational Readiness
Facilities teams can maintain, inspect, and service the façade confidently and efficiently.

Extended Façade Lifespan
Properly maintained systems experience fewer failures and remain in serviceable condition for longer.

Reduced Total Cost of Ownership
Predictive and preventive maintenance, guided by proper documentation, minimises unplanned repairs and emergency interventions.

Support for Certifications and ESG Goals
Detailed product and maintenance records support sustainability certifications, material traceability, and environmental audits.

Risk Mitigation
Legal disputes, compliance failures, and occupant safety risks are significantly reduced when documentation is clear and complete.

Conclusion

The building façade is too important, and too complex to be managed without precise, final documentation. Clients must treat the As-Built Drawings and O&M Manual not as optional extras, but as core deliverables that are essential for safe, sustainable, and cost-effective building operation.

By making comprehensive documentation a non-negotiable requirement from the outset, clients are not merely improving handover outcomes but they are investing in the long-term resilience and performance of their asset.

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How AESG can help

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AESG is an international Consultancy, Engineering and Advisory firm committed to driving sustainability in the built environment and beyond. With the highest calibre leadership team in our field, we pair technical knowledge with practical experience to provide hands-on, bespoke strategic solutions to our clients.

We have one of the largest dedicated specialist consultancy teams working on projects within the building, urban planning, infrastructure and strategic advisory sectors. With decades of cumulative experience, our team offers specialist expertise in sustainable design, sustainable engineering, MEPF, fire and life safety, façade engineering, commissioning, digital delivery, waste management, environmental consultancy, strategy and advisory, security consultancy, cost management and acoustics. Our prestigious portfolio demonstrates our extensive capabilities and our ability to consistently deliver best in class solutions to some of the industry's most complex technical challenges.

How AESG can help

Gennaro De Marco

Senior Associate Façade Consultant, AESG

Gennaro is a Senior Associate Façade Consultant with over 20 years of experience in curtain wall, stick system, doors & windows, structural point fix glass system.

Prior to joining AESG in 2021, Gennaro has worked as a Project Design Manager for one of the worldwide leading contractors in the engineering, project management, manufacturing and installation of architectural envelopes and high-end interior fit-out.

With half of his career spent in the UAE, he followed several iconic projects located in different countries like UAE, Saudi Arabia, Azerbaijan and Malaysia. In his role he was fully involved in managing the relations with clients, architects, and main contractors from the technical and economical point of view.

For further information relating to specialist consultancy engineering services, feel free to contact us directly via info@aesg.com