

Five Fenestration Issues That Affect Facade Performance

Fenestration problems do not always begin with major design failures. In many cases, they start with smaller issues that are easy to miss during design review or construction. A misplaced sealant line, an incomplete flashing detail, blocked weeps, poor gasket continuity, or an overlooked joint termination can create pathways for water and air to enter the building enclosure.

In a fenestration facade made up of multiple integrated products, each detail contributes to overall enclosure performance. Here are five areas that can affect performance when details are missed.

1. Drawings and System Coordination

Early drawing review helps identify problems before they reach the field. Architectural and shop drawing details should be reviewed and discussed before installation begins so teams can catch conditions that may not function as designed or align with surrounding substrates and systems.

This step can reveal incompatible materials, incomplete transitions, or details that may be difficult to execute in the field. It can also help reduce the risk of leaks, failures, and costly change orders later in the project.

“Early review of fenestration details can help reduce the risk of leaks, failures, and costly change orders.”

2. Seals, Seams, and Separation Lines

Seals, seams, and separation lines affect how a fenestration system manages water, air, and thermal transfer, especially at the primary seal. If sealant is placed in the wrong location, the system may not perform as intended.

Across curtain wall, window wall, storefront, ribbon window, and other glazing systems, a misplaced or interrupted primary seal can affect drainage and long-term enclosure performance.

3. Transitions and Drainage Paths

Problems often develop at transitions where multiple materials and systems come together. Stacked



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glazing systems, operable windows, flashing, wood bucks, fasteners, and multiple sealant conditions all create opportunities for errors if the details are not reviewed carefully.

Field observation is also part of this review. Once a system is installed, teams need to understand where water will go if it enters the assembly or moves across the facade. Drainage provisions, sloped members, fabrication joints, and perimeter conditions all need to be checked to confirm that the system directs water out as intended.

Blocked weeps, missing end dams, unsealed exposed fasteners, and flashing or sub-sill conditions that interrupt drainage are recurring sources of water infiltration in the field.

4. Weeps, Gaskets, and Flashing Details

Drainage openings are one of the most overlooked parts of a glazing system. Weep holes that are too small or misshapen may not release water effectively because of surface tension. Instead of draining, water can remain trapped inside the system.

The same is true for incomplete glazing gaskets, missing sealant, unfinished metal fabrication joints, and flashing that is not properly sealed to adjacent construction. These may look like isolated defects, but together they can create persistent water management problems over time.

5. Movement and Installation Quality

Fenestration systems need to accommodate expansion, contraction, and differential movement. Frames, joints, flashing conditions, and sealant applications all need to be designed and installed with movement in mind. If they are not, water can bypass the intended protection and reach vulnerable parts of the assembly.

Even systems with good gaskets can leak if perimeter

sealant, flashing terminations, splice joints, or adjacent materials are not properly coordinated and installed. Installation quality remains just as important as the design itself.

Long-term fenestration performance depends on close attention to detailing. Reviewing drawings early, checking transitions carefully, understanding drainage, and observing field conditions can help teams identify avoidable problems before they affect the building envelope.

How Intertek Supports Project Teams

Intertek supports project teams through fenestration reviews, field observations, and evaluations of glazing and façade systems. This work helps identify compatibility issues, installation concerns, and detailing problems before they affect overall enclosure performance.

Click here to learn more about Intertek's fenestration and glazing consulting services.

Intertek also offers an **The American Institute of Architects (AIA)**-approved on-demand continuing education course titled *The Devil Is in the Details*. This course focuses on fenestration facade anatomy through reviews of architectural drawings, shop drawings, and field observations, helping participants better understand the materials, installation procedures, and details that affect performance. It provides one learning unit with Health, Safety, and Welfare credit. **Click here** to take the course.

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