



Your Flashing Authority

Industry Article The Big Disconnect: Roof-to-Wall Connections



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A common misconception in the construction industry is that a watertight roof automatically functions as an airtight roof assembly. While roofing systems are typically designed to prevent water intrusion, they often contain gaps at penetrations, curbs, parapets, and terminations that allow significant air leakage. A roof becomes an effective air barrier only when all transitions and penetrations connect properly to the building's continuous air barrier system. Among all enclosure interfaces, the roof-to-wall transition, more accurately described as the roof membrane-to-air barrier connection, is one of the most critical. When properly designed and installed, this connection helps control air movement, moisture migration, and energy loss. When executed poorly, it can lead to excessive air infiltration and exfiltration, condensation, mold growth, reduced energy efficiency, and premature building deterioration. The challenge is compounded by the wide variety of roofing membranes, wall air barrier materials, insulation systems, and attachment methods available today. Successful roof-to-wall transitions require careful consideration of material compatibility, installation sequencing, and responsibilities among the trades involved. This paper explains the building science behind these connections and outlines practical approaches to creating durable, continuous air barrier systems.

The Building Science Behind Air Leakage

The primary function of an air barrier is moisture management. While air barriers also improve energy efficiency and provide resistance to allergens, pollutants, and noise transmission, controlling moisture movement is their most important role.

Research consistently demonstrates that air leakage transports significantly more moisture through a building enclosure than vapor diffusion through most construction materials. Even small openings can move large quantities of moisture-laden air into wall and roof assemblies, particularly in hot, humid climates.

When moisture-laden air reaches a surface below its dew point temperature, condensation occurs. This condensation can lead to:

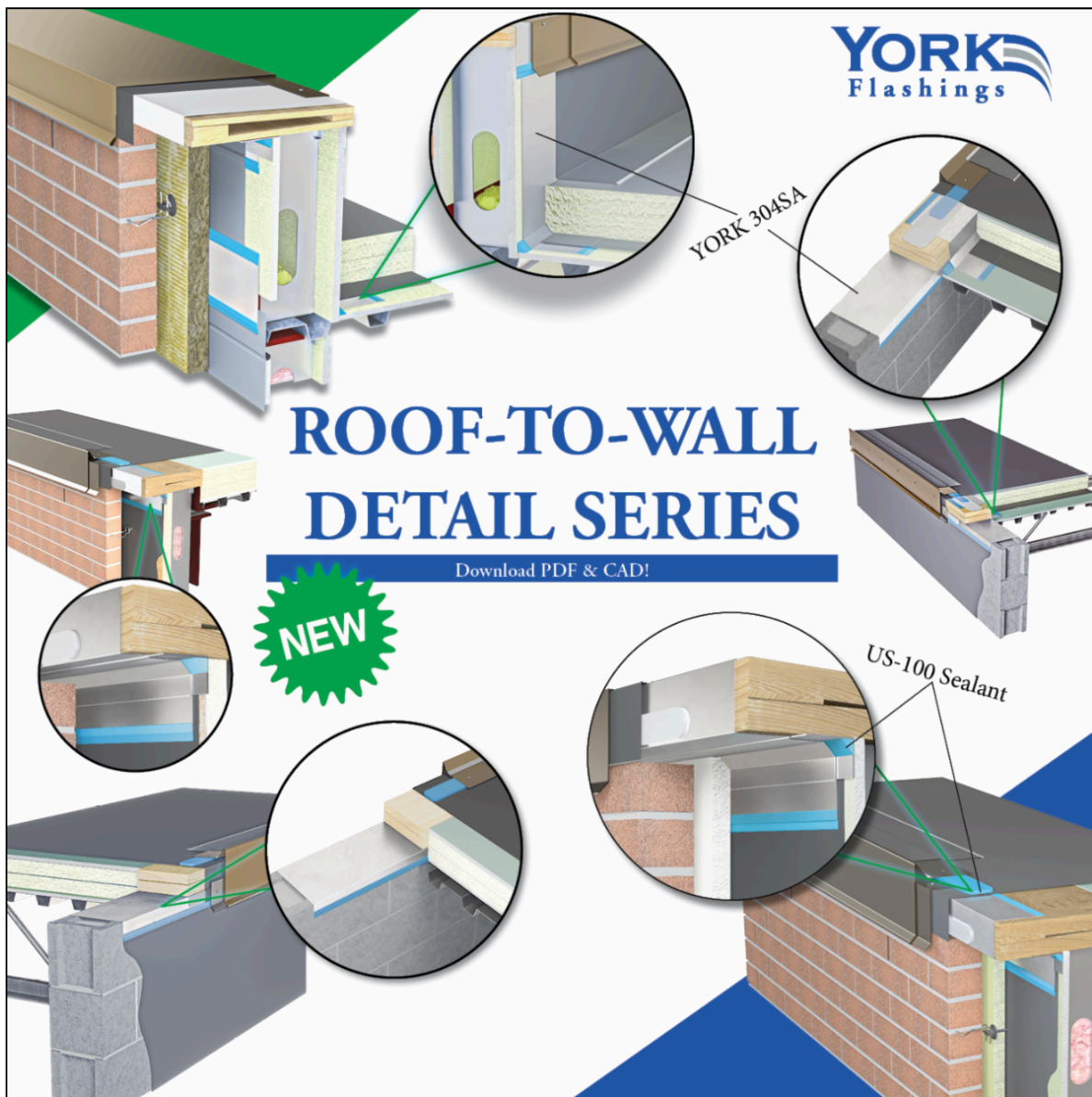
- Mold and mildew growth
- Material deterioration

Most building failures start where materials, systems, and responsibilities meet. This article, [The Big Disconnect](#) by [Roy Schauffele](#), reveals often-overlooked truths about roof-to-wall transitions that can make or break enclosure performance.

[Read the Full Article Here](#)

NEW Roof-to-Wall Detail Series

Designed for real-world application, York Flashings' new collection of roof-to-wall details help designers and contractors solve critical transition challenges while improving water management and long term building performance. Don't let critical transitions become costly problems, equip your project team with resources to build with confidence.



[Learn More](#)

Upcoming Industry Engagements



October 1st
Flashing Demo Day:
Terra Cotta



October 28th
Full Day Symposium

October 29th
**Resolving Design and
Construction Details**

November 3rd
**BEC Indiana
Symposium 2026**

[Learn More and Register Here](#)

International Flashing Awareness Day 2026

International Flashing Awareness Day 2026 was a fantastic success, and we couldn't have done it without you. Thank you to everyone who attended, presented, and helped spread the word about the importance of proper flashing.



Featured Presentation: Building Better Roof-to-Wall Transitions



Discover why roof-to-wall transitions are among the most critical areas of the building enclosure. This AIA-approved educational program explores building science, control layer continuity, material compatibility, and long-term performance strategies that help improve durability, resiliency, and lifecycle value.



Melissa Payne
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Specializing in transition membranes and through-wall flashing, York has been inventing and producing flashings since 1935. As the leader in commercial and residential flashing industry, York has led the charge to create flashings that are compatible with the air barriers and insulations that populate the cavity wall.