

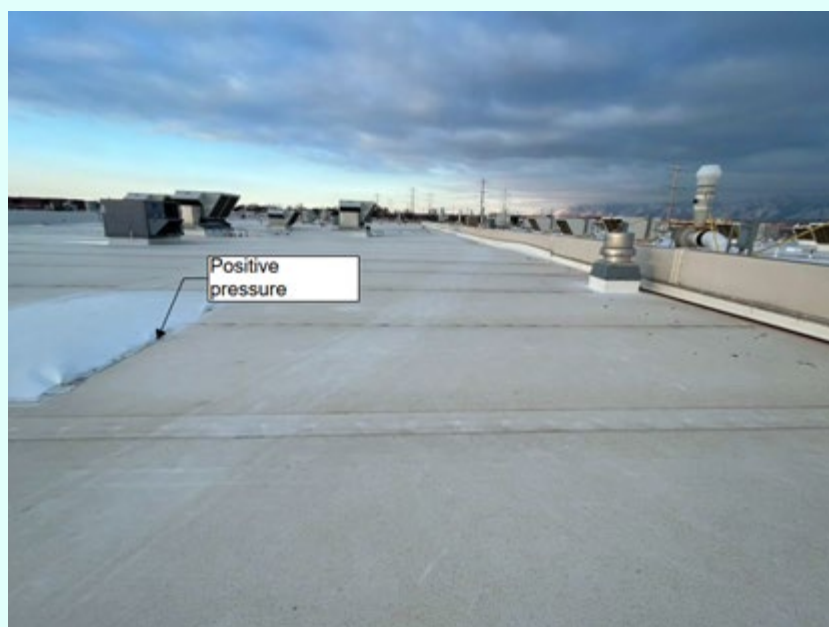
## BILLOWING ROOFS | FEB. 2024

### Bald Spots and Pillows

Have you ever looked at your roof and observed what looks like a giant pillow or maybe even a bouncy castle (without the castle)? You might have a loose-laid EPDM roof that is experiencing billowing.

When addressing a billowing roof membrane, the challenge lies in understanding the causes and mitigating them for restoration. Billowing is primarily attributed to interior air pressure forced through gaps, cracks, and openings near the roof-to-wall (RTW) intersection and roof penetrations. Higher internal building pressure, driven by external wind, interior stack effects, and HVAC mechanical fan pressures, exacerbates airflow and leakage issues.

During the winter, warm-conditioned air entering under the roof membrane could lead to moisture condensation issues. The proposed solution includes sealing gaps, cracks, and openings, followed by roof restoration. The extent of “cragage” is estimated using satellite imagery, performed by on-site assessments of building envelope solution experts for precise documentation and pricing.



## *Billowing Roofs – Cont'd*

Building envelope solutions specialists can identify the source of the issue and propose an air-sealing solution. This solution reduces energy consumption by sealing air leaks and lowering internal building pressures due to HVAC fan operations. These energy savings can be combined with the protection and cost-avoidance benefits of elite roof restoration solutions to enhance overall ROI.

In contrast, a code-compliant roof replacement with a fully adhered roof membrane might be recommended to address the billowing. However, if air leakage and excessive HVAC fan pressures are not corrected, the roof replacement(s) could also experience billowing or condensation issues.

Gaps, cracks, and holes in your building envelope cause uncontrollable air movement, creating indoor air quality problems and wasting energy. Buildings that leak energy due to age or poor building envelope construction could cost owners up to 40% more in heating and 15% in cooling costs due to unintentional air filtration.

### **Common Air Leakage Issues:**

- Rooms are too hot or cold
- Complaints of dry, irritated, sore throats
- Pest issue despite exterminator efforts
- Mystery odours
- Discoloured HVAC vents that might have mould

### **Benefits of Air Leakage Services:**

- Improve indoor air quality and comfort.
- Reduce pest infiltration.
- Optimize building envelope performance.
- Realize fast and affordable energy conservation measures.

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Article by [Tremco Roofing and Building Maintenance](#).

For more information about Roof or Building Envelope assessments, please contact:

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