

Understanding Your Home's Building Envelope

Think of your home's building envelope as its protective shell—it includes the walls, roof, windows, doors, foundation, and insulation. This shell keeps your indoor environment comfortable and protects against weather, moisture, and energy loss.

A building envelope analysis is a professional assessment that helps determine how well your home's exterior systems are working together. It identifies areas where energy may be lost or moisture may be getting in, which can affect your comfort, health, and utility bills.

Here's what the process typically includes:

- **Air Leakage Testing** - Using a tool called a blower door, we measure how much air is leaking in or out of your home through gaps, cracks, or poorly sealed areas. Reducing air leakage improves energy efficiency and indoor comfort.
- **Thermal Imaging (Infrared Scan)** - We use infrared technology to detect where heat is escaping your home—like having x-ray vision for energy loss. This helps us locate missing insulation or hidden cold spots behind walls and ceilings.
- **Insulation Review** - We inspect your insulation to see if it's the right type, installed correctly, and providing proper coverage. Missing or insufficient insulation is a leading cause of high heating and cooling costs, especially in harsh climates.
- **Moisture Inspection** - Moisture can enter your home through roof leaks, poor drainage, or window failures. We look for signs of water damage, mold, or condensation to identify and address issues before they become expensive repairs.
- **Window and Door Evaluation** - Windows and doors are checked for drafts, loose seals, and inefficient glass that can lead to heat loss in winter or overheating in summer.
- **Roof and Wall System Assessment** - We examine the construction quality of your roof and walls to ensure they can withstand the elements. We also check your vapor and air barriers—the hidden layers that manage moisture and airflow within your walls. If these are damaged or missing, it can reduce your home's overall performance.

By the end of the building envelope analysis, you'll have a detailed understanding of what's working well and where improvements can be made.

Whether you're planning upgrades, want to improve energy efficiency, or simply make your home more comfortable, this assessment is a smart and valuable step.