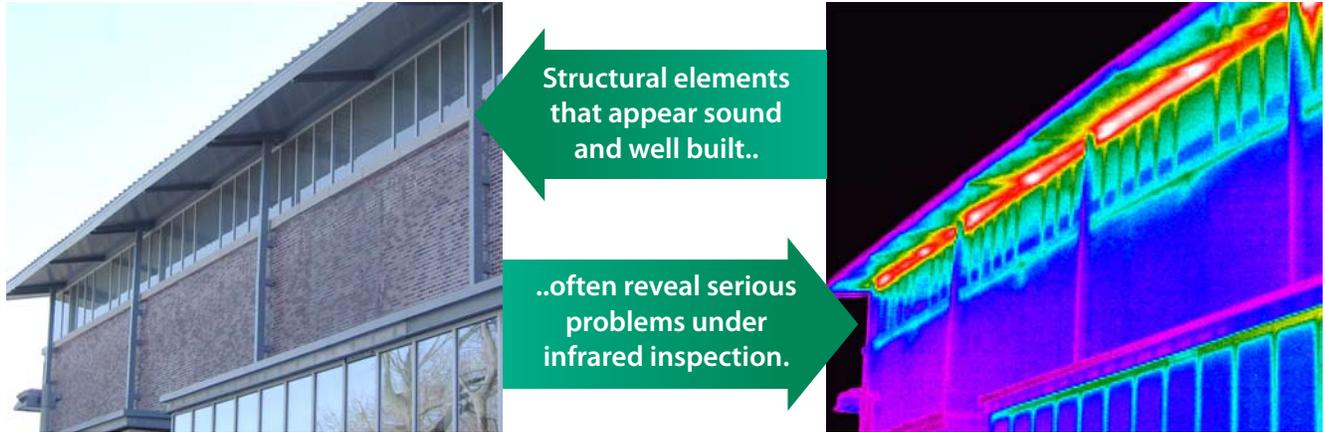


BUILDING ENVELOPE

Infrared Detection & Analysis Pinpoint Air Leaks, Energy Loss & Moisture

Infrared building envelope analysis is the only proven, nondestructive and complete method for troubleshooting building heat loss and moisture problems. Building owners use envelope testing to save hundreds of millions of dollars every year by reducing energy and repair costs, evaluating construction quality and building performance, enhancing occupant comfort, health, and productivity, and improving the marketability of their properties.

Professional Thermography: Fast, accurate detection



Infrared Testing Guides Green Building Projects: The critical first step in any successful plan to reduce costs and improve business efficiency is an accurate assessment of the building's current energy performance. We use cutting-edge thermographic technology to develop an accurate and detailed "big picture" of the facility's thermal performance, so you can select the most appropriate and cost-effective strategies for repair and renovation. In addition, thermographic documentation of a building's problems can help decision makers secure the finances and resources necessary to execute an effective plan. An Infra-red Analyzers building envelope analysis can help you:

- Improve energy efficiency and cut costs
- Achieve LEED® certification
- Identify sources of air and water infiltration
- Plan cost-effective energy-saving retrofits
- Prevent mold and structural damage
- Pinpoint missing, damaged or wet insulation
- Identify causes of frozen pipes and ice dams
- Correct drafts, cold spots, and comfort issues
- Verify construction materials & workmanship
- Resolve post-construction disputes

Heat Patterns Reveal Hidden Losses: Heat losses from buildings are exacerbated by structural problems, poor construction practices, missing or inadequate insulation, moisture infiltration and air leakage. Escaping heat creates a thermal signature that can be detected with infrared thermography. Our Certified Thermographers can complete data collection without disrupting your operations. From this data we produce a comprehensive report, providing the building owner with a wealth of detailed information about the locations, causes and extent of problems in the building envelope.



IRANALYZERS  **Vector Mapping**

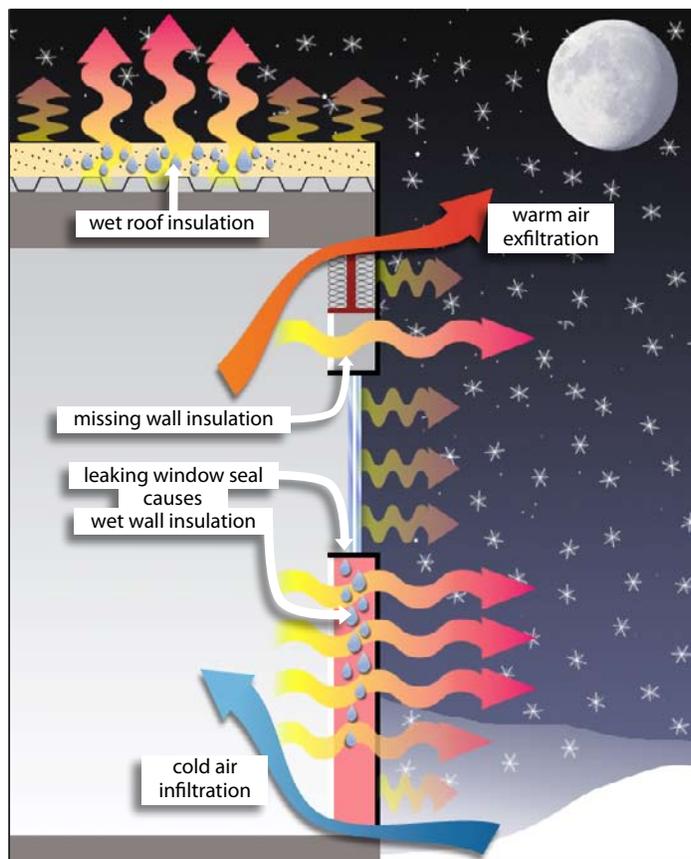
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Heat escapes from buildings primarily through conduction and air leakage. Conduction losses can be caused by wet, missing, compressed, settled, or improperly installed insulation, thermal bridging, failure of window and door seals, and water leaks. Excessive air leakage can cause condensation build-up inside walls, roofs, and on building surfaces, leading to insulation damage and reduced R-values, wood rot, metal corrosion, and staining of bricks and concrete. Left unattended, such problems can lead to mold growth and failure of critical structural components.



LEFT: Large amounts of expensive heat energy are lost to conduction and air leakage, problems that can be pinpointed with infrared thermography.

Forensics:

Locating Causes of Building Heat Loss

- Drafts, cold/hot spots, occupant discomfort
- Condensation in walls, roofs, on surfaces
- Ice dams, water leaks, frozen pipes
- Missing, wet, or disturbed insulation
- High heating and cooling costs
- Moisture damage and mold infestation
- Insulation damage and reduced R-values
- Wood rot, metal corrosion, staining of bricks and concrete

Energy Efficiency:

Identifying Opportunities

- Integrates with LEED certification
- Complements quantitative calculations
- Reveals issues and opportunities not detectable by traditional means
- Focuses on actual energy losses and cost-effective solutions
- Reveals practical, low-cost ways to reduce carbon footprint
- The first step in a comprehensive and cost-effective energy efficiency plan

Dispute Resolution:

Objective Documentation Resolves Conflicts

- Isolates problem areas and root causes
- Unbiased information & documentation
- Pinpoints & documents actual problems
- Provides clear and convincing evidence
- Cuts through rhetoric, focuses on solutions
- Creates action

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Pre-Construction Assessments:

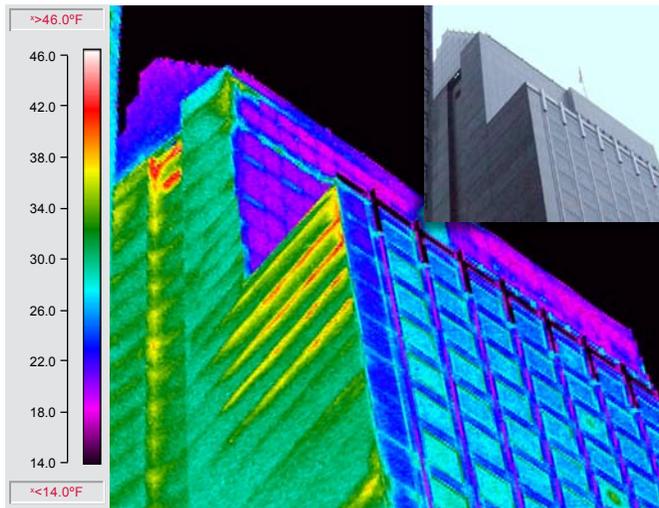
Improving Rehabs & Renovations

- Evaluates existing conditions
- Reveals actual insulation performance
- Pinpoints moisture, helps avoid mold, water damage costs
- Focuses on the most cost-effective retrofits
- Reveals actual building performance:
 - What needs attention?
 - What already works?

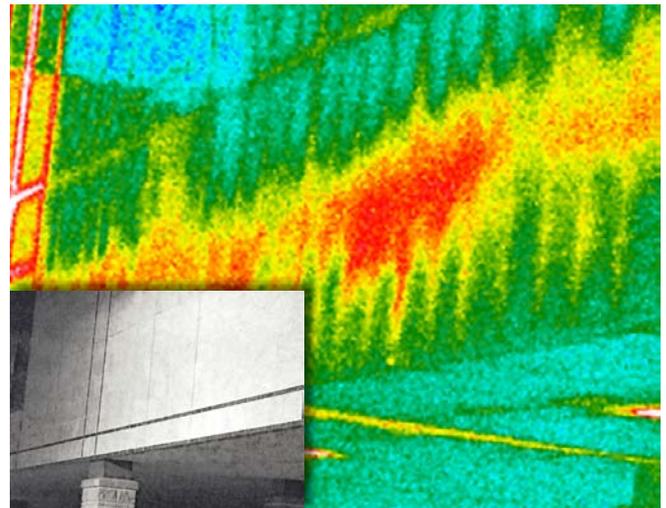
Post-construction:

Verifying design, materials, and workmanship

- Acceptance Testing
- Building Commissioning
- Integrates with LEED Certification
- Evaluates windows, doors, wall systems, and foundation
- Verifies and documents actual performance
- Ensures clients get the quality and performance they paid for



Infrared inspection reveals envelope breaches that create substantial air leakage losses through the wall.



Infrared inspection detects extensive moisture within wall insulation. Your report includes a control photo (inset) for each thermogram.

Committed to Energy Efficiency and Green Buildings: Professional infrared testing is an invaluable tool in the effort to 'green up' America's building stock. Infra-red Analyzers is proud to be a full member of the U.S. Green Building Council®.

USGBC is a non-profit composed of building industry leaders who promote buildings and communities that are environmentally responsible, profitable and healthy places to live and work. It is committed to a prosperous and sustainable future through cost-efficient and energy-saving green buildings. The USGBC's community of leaders is working to make green buildings available to everyone within a generation.



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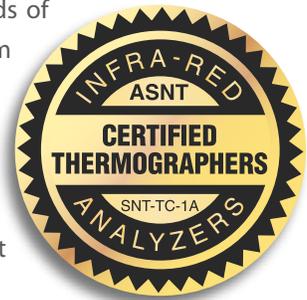
What You Get..

Our professional reports lead the industry in quality, accuracy and detail. Infra-red Analyzers' comprehensive building envelope inspection services include:

- **Building Envelope Sidewall Analysis:** Thorough inspection of all building envelope components, including foundation, windows, doors, side walls, and insulation cap. We use the most sophisticated and sensitive high-resolution digital video radiometers to document your building's thermal performance with unsurpassed accuracy and detail.
- **Thorough In-depth Report:** Pinpoints, documents and prioritizes air leaks and conduction losses in all building envelope components. Your full-color bound report includes an in-depth written analysis of all findings from our visual and thermographic inspection, with color thermograms and control photographs of problem areas. A digital copy of the report will also be emailed to you for quick review and easy retrieval.
- **Priorities and Recommendations:** To help you get the most out of your inspection report, we establish repair priorities, note probable causes, and provide recommendations for corrective action.
- **Recommended Option:** Many people experiencing building envelope problems will also benefit from knowing about moisture damage in their low-slope roofing systems. Our roof moisture inspections reveal the hidden condition of your roofing system to help locate pesky leaks and plan smart, cost-effective repairs.



Certified Thermography: Infra-red Analyzers is committed to the highest standards of professional thermography. Founded in 1984, we are an independent consulting firm serving thousands of commercial and institutional clients, including Fortune 500 companies such as GE, IBM, General Dynamics, UPS, International Paper, Coca-Cola, Weyerhaeuser, Nextel, Wyeth, and Anheuser-Busch. Our Certified Thermographers have completed courses of study and passed examinations as specified by the American Society for Nondestructive Testing (ASNT). We also provide ongoing training and support to our staff in all applications of thermographic testing.



We also perform roof moisture surveys, vector mapping leak detection, and other testing services:

INFRARED ROOF

NUCLEAR ROOF

VECTOR MAPPING

ELECTRICAL

MECHANICAL

STEAM

IRANALYZERS Vector Mapping

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