



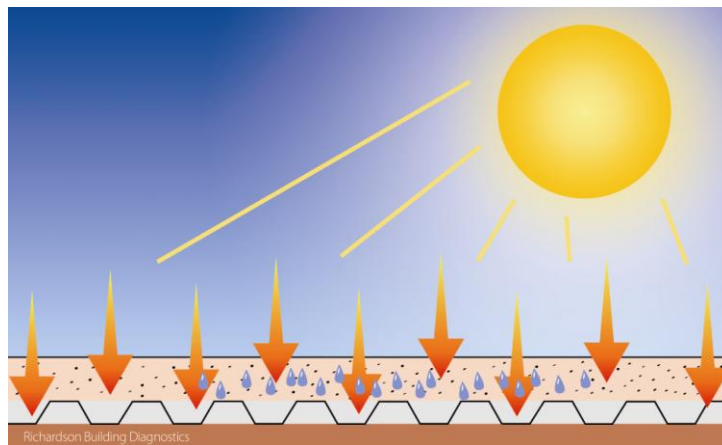
ITI ROOF

Most commercial, industrial, and institutional buildings in the United States constructed today are flat roof structures. Millions of square feet of roofs are installed every year, and studies have revealed that an estimated 40% of these structures will develop problems within the first year of installation. When correctly installed and maintained, a roof can last as long as twenty years; however, the average life span of these roofs is often closer to only seven years due to installation and maintenance problem.

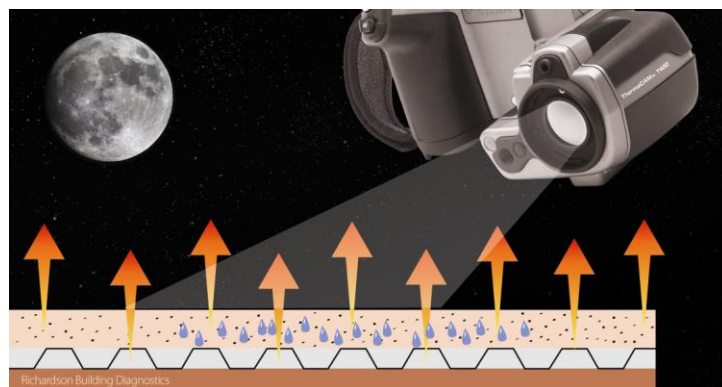
Replacing a roof can cost \$8-10 per square foot, including disposal costs. Premature failure of roofs costs billions of dollars every year. Preventative maintenance can save bundles of money, by prolonging the life of a roof. The best method available today for testing a building's structural integrity and revealing problems is infrared testing, or Thermography.

A flat roof is constructed with a deck, insulation, and a membrane. The membrane is typically constructed of layers of roofing felt bonded together, or a rubber or plastic sheet anchored by stone ballast. The membrane is in place to keep water and moisture away from the roof deck and insulation

How Thermography Works - Solar Driven



Wet insulation absorbs more solar energy during the day...



...and releases more stored solar heat during the night.

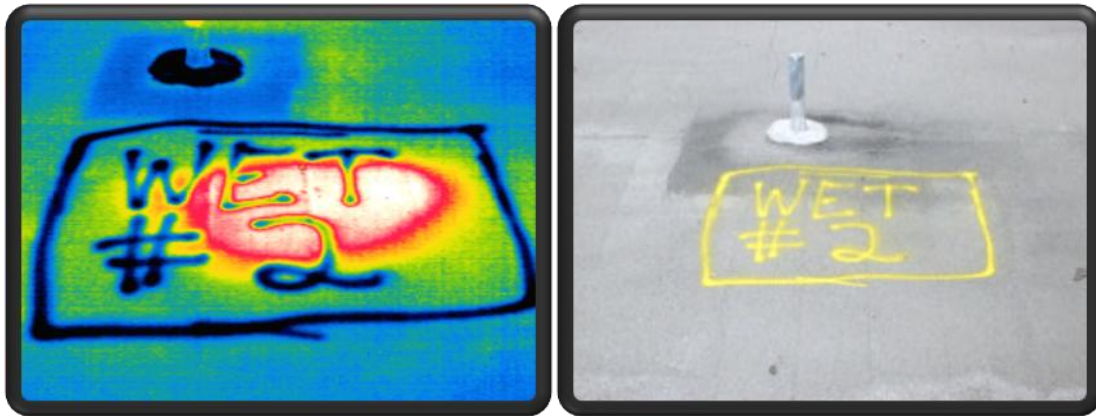


RICHARDSON

BUILDING DIAGNOSTICS

COMPREHENSIVE ENERGY SOLUTIONS

Infrared testing, or Thermography, reveals the “thermal signature” of a roof’s heat loss. A roof is heated by the sun during the day. A dry roof and dry insulation will resist heat; however, if the membrane has been compromised, the insulation becomes wet and then absorbs and stores the heat. Dry insulation cools quickly after sunset, while wet insulation remains warm after storing heat all day. This stored heat is released as radiant heat, which is detected by thermal imaging cameras. Moisture damage can be quickly pinpointed and can precisely determine any damaged areas of the roof’s surface. Necessary repairs can be identified quickly, often resulting in a great cost savings because further damage can be prevented.



THE BOTTOM LINE

Find and Fix Problems Before It's Too Late: Saving big money on roof repairs, retro-fits and replacements is just one of the many ways building owners and facility managers use our ITI Roof Survey to improve the return on their investment.

Save Money on Roof Repair and Maintenance: Infrared roof surveys find small problems before they become bigger and more costly. By targeting the problem areas, infrared technology helps you make the most cost-effective use of limited funds.

Acceptance Testing and Quality Control: For quality control purposes, many consultants, facility managers and owners are using post-construction infrared inspections to confirm the quality of materials and workmanship.