



Thermal Flat-Roof Mapping

Quality Service

The U.S. Department of Energy asserts that 95% of all rooftop replacements are unnecessary. Roofs are built in sections and fail due to material degradation, construction defects, and weather conditions. Total replacement is typically unwarranted and selective repairs are cost effective.

Extend Life of Roof by 5-10 Years

- Why assume the entire roof is compromised?
- Use the thermal heat signature to map suspected moisture infiltration and other problem areas
- Instead of replacing the entire roof, the life span can be extended by repairing only the sections that are compromised

Consequences of Moisture Infiltration

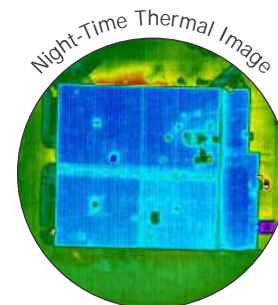
- Wet insulation reduces the thermal efficiency by nearly 50%
- Moisture infiltration is a cause for mold and mildew which affect Indoor Air Quality (IAQ)

Insurance and Warranty Benefits

- Verify proper installation of a new roof before the warranty runs out
- Document roof damage using thermal imagery to map the full extent of damage and receive the real cost of repairs from insurance companies

Savings

- Reduce extent of roof repairs
- Avoid IAQ issues caused by mold and mildew
- Reduce energy costs due to wet insulation
- Acquire aerial thermal imagery on a regular basis to catch problems before they cascade into serious issues



Benefits of Using Cornerstone Mapping

- Unbiased assessment of roof condition because we do not have a vested interest in replacing roofs
- We can survey millions of square feet in a single night
- No roof access required (or associated safety concerns)
- Vertical thermal image of the entire building provides the overall condition of the roof system in a map format
- High-resolution day-time image provides context and aids interpretation of thermal patterns
- Thermal images are acquired with a radiometrically calibrated camera with a temperature sensitivity of 0.1 °C

Thermal and Color Images Integrated with Maps

- Color and thermal images are co-registered
- Spatially georeferenced data includes roof assets and areas of suspected moisture penetration
- Can view data in a GIS, AutoCAD, or Google Earth

