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Volume 4 Issue 2 May/June 2017

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## Keep Each Other Safe

**NATIONAL  
SAFETY  
MONTH** 2017

June is National Safety Month, organized by the National Safety Council to educate and influence behaviors around leading causes of preventable injuries and deaths. The success of a safety program is directly related to each employee's sense of responsibility for him/herself and others. While leadership and commitment of management is important, the National Safety Council's concept "Keep Each Other Safe" is imperative.

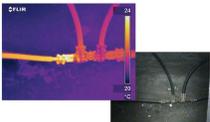
Jersey Infrared Consultants' safety compliance, background check, and drug screening programs are a part of our commitment to providing an unequalled level of client care and quality service. The dedication, responsibility and sense of ownership by each member of our staff are the reasons we are A LEADER IN THE INFRARED INDUSTRY!

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## Case Studies from the Field Infrared Thermography Goes Underground

Moving more than 5 million people over almost 850 miles of track each day is a challenging proposition for one of America's largest subway systems. Reliability and safety are top priorities for this system, which operates 24/7/365. Following an electrical incident that resulted in equipment failure and a fire, the subway system's engineers sought a means to rapidly inspect all of their electrical equipment—most of which was located in cramped, underground tunnels and restricted areas. After weighing several options, they determined that infrared thermography best met the subway's needs:

- Thermal imaging could be performed without shutdowns.
- Collected data could be documented to allow further investigation and repairs of problems, and serve as a baseline for future infrared inspections.
- Electrical equipment could be inspected without walking or standing in the tunnels or on the tracks.



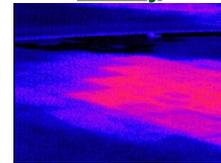
Working with the system engineers, Jersey Infrared Consultants developed a procedure that would allow accurate infrared inspections of electrical equipment including cables, connections and splices located in manholes and within tunnels.



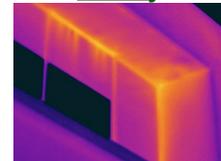
### Infrared Electrical System Survey



### Infrared Flat Roof Moisture Survey



### Infrared Building Envelope Survey



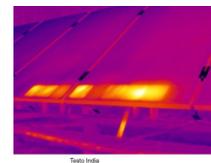
### InfraSonic™ Steam System Survey



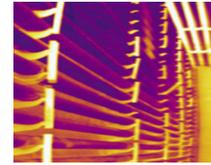
### Infrared Photovoltaic System Survey

The final report included a comprehensive list of all electrical equipment inspected as well as detailed descriptions of problems located during the survey. To assist with a baseline and help with future studies, high and low cable temperatures were recorded at each manhole. Most importantly, the infrared survey identified many problems that, left unaddressed, could have resulted in equipment failure or safety issues.

The full article on this project can be found on our [website](#).



### [Infrared Mechanical Survey](#)



### [Infrared Maritime Surveys](#)



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## **Required Site Conditions for Infrared Flat Roof Surveys**

Infrared Thermography has been used to locate moisture in roofing systems in the Mid Atlantic area since the mid 1980's. During the day, solar energy heats the surface of a roof system uniformly. As the roof surface begins to cool at the end of the day, areas of the roof that contain moisture retain the built up heat for a longer period of time. These areas will show up as thermal anomalies.

When an area with an unusual temperature pattern is located, a moisture probe is performed to confirm the presence of moisture. If moisture is present, the surface of the affected area of the roof is outlined and the thermal image recorded. The thermogram, control photograph, roof drawing and area information are compiled into a report that is available in hardcopy and digital formats.



The success of an Infrared Flat Roof Moisture Survey is dependent on many site conditions. The Required Site Conditions have been developed to comply with current industry procedures and standards including ASTM and Infrasppection Institute.

- Dry Roof Membrane – roof membrane must be dry at Sunrise
- Solar Loading – day of the Survey should be a mostly sunny day, providing good solar loading
- Minimum Daytime Temperature – daytime high temperatures should be at least 40° F
- Winds less than 15 mph – daytime and evening winds should be <15 mph
- No precipitation on the day of the Survey – roof membrane must not get wet

For a full copy of the Required Site Conditions or to discuss how an Infrared Flat Roof Moisture Survey may provide information about your roof, please contact us.

[More Info](#)

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### [Jersey Infrared Brochure](#)

### [Contact Us](#)