

Qualitative Infrared Moisture Survey Report



The Sample Residence

Prepared by

Peter W. Bennett, CIT#7406

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530 Prospect Avenue – Little Silver, NJ 07739

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732-758-9887

Friday, May 20, 2011

Mr. Sample
1234 Mt Pleasant Road
Red Bank, NJ 07701

Dear Mr. Sample:

Thank you again for retaining me. Enclosed please find the Qualitative Infrared Thermographic Survey of Moisture Report which I conducted on May 3, 2011 at your residence.

The report is designed to be clear, easy to understand and useful. Please take the time to review it carefully and contact me with any questions, comments or concerns. I am available to answer any questions.

Sincerely,

Peter W. Bennett



Peter W. Bennett, Owner

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Residential & Commercial Building Inspections

Infrared Thermal Imaging Services

Cell 732-245-9817

NJ Home Inspector Lic#GI371 - NJ DEP Radon MET11140 - Certified Infrared Thermographer No.7406

Certified Energy Inspector No. 1364 - Certified ASHI Member #205748 - Certified Member of INACHI

[Aerial Infrared Roof Scan of Moisture](http://www.AerialInfraredRoofScan.com) ~ www.EnergyScanIR.com ~ www.BlockWallScanIR.com



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QUALITATIVE INFRARED THERMOGRAPHIC REPORT

General Information

The subject residence, as noted above, was inspected and surveyed for moisture at the second floor front window only.

Reader Orientation

The reader of this report is standing at the standing at the street facing the residence. Directional references are left, right, front, back, upper and lower.

This report includes:

- Digital image files of thermographs and photographs
- Comments concerning the observations and findings

A Full House Inspection Co. LLC was retained for an infrared survey of the residence in an effort to identify areas of potential and active moisture leaks for further review. When infrared thermal anomalies were identified, a secondary method of non-destructive moisture detection was used to confirm the moisture content, i.e. various moisture meters with limitations. The inspector took an average reading in a known dry area and noted areas of probable and possible elevated moisture content. We can make no representations, warranty, implied nor explicit, regarding conditions that may be present but were concealed or inaccessible during the survey. Also, the report is based on information obtained at the site at the given date and time. Over time, conditions change and the information contained in this report may no longer be accurate. Should additional information and conditions become available at a later date, we reserve the right to determine the impact, if any, the new information may have on our discovery and recommendations and to revise our opinions and conclusions if necessary and warranted. Any revisit and survey of the residence will require an additional fee.

Understanding IR Imagery

Infrared imagery is often a picture where scales (or shades/colors) represent the differences in temperature and emissivity of objects in the image. As a general rule, objects in the image that are lighter in color are warmer, and darker objects are cooler. No object in the images is detected via visible light wavelengths (400-700 nanometers) rather, only from infrared wavelengths in the 3000-5000 nanometers or 8000-14000 micrometers range. Lights and other relatively hot objects are very evident, but as a result of their heat...not light emissions. When an image is taken with the infrared camera, it is digitally saved to an on-board media card. The image may be then modified in a number of ways to enhance its value to the end user. The building images were digitized, colorized, and then adjusted for color, contrast and brightness before being scaled and placed in this file.

Disclaimer and Recommendations

The client conducted destructive methods at the time of the inspection and survey to provide additional access to the inspector/thermographer who is not responsible for any damage and repairs at anytime. Destructive testing is beyond the scope of our services. Failure to conduct repairs and any additional testing, which maybe recommended in this report, can, and in some cases, will lead to further deterioration of residence.

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Thermography Report – Site Details

Client: Mr. Sample, homeowner

Present at the inspection: Inspector, homeowner, and family

Building location: 1234 Mt. Pleasant Rd, Red Bank, NJ

Certified Infrared Thermographer, CIT#: Peter Bennett, #7406

Beginning Survey date: May 3, 2011

Survey start time: 11:00 am

Interior ambient temperature: +/- 70 F

Ambient temperature (exterior) at the survey start time: +/- 68 deg. F

Last recordable rainfall: April 28, 2011 **Amount: .85"**

Weather conditions at survey start time: light winds, scattered high clouds

Wind speed/direction at survey start time: 3-5 miles per hour/E/S-E

Relative Humidity – Indoor: 53 % - Outdoor: Ave. 65%

Imager used: FLIR Systems T-400

Moisture meter equipment – Protimeter Survey Master, FLIR/Extech - MO297

Subject Areas – Front exterior and exterior wall and window above front bedroom only.

Surveyed Areas

Exterior



Bedroom



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Qualitative Infrared Inspection Report



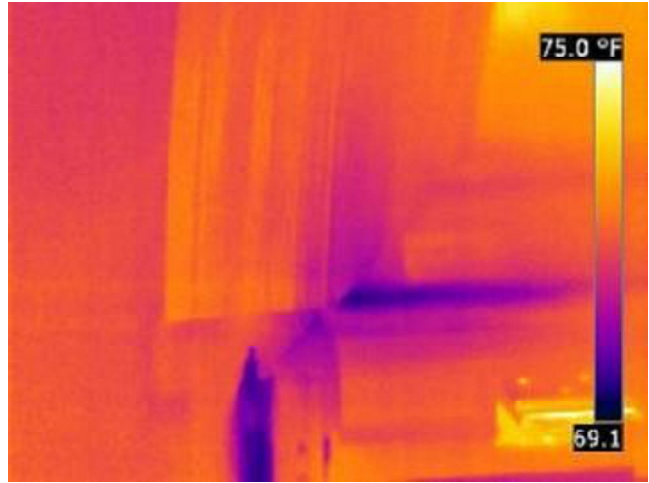
Location Floor: Second
Location Room: Bedroom
Location Direction: Right Front Corner of Window

Observations:
Images and photos taken before use of garden hose. No indication of leakage.



Observations:
Images and photos taken before use of garden hose. No indication of leakage.

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Observations:
Images and photos taken before use of garden hose. No indication of leakage.



Observations:
Images and photos taken before use of garden hose. Moisture level of 21.9% noted.

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Observations:
Images and photos taken after use of garden hose. No indication of leakage.



Observations:
Images and photos taken after use of garden hose. Moisture level of 90.2% noted. Arrow indicates water drips.

Analysis and Recommendations

Moisture meter readings and infrared images were taken at the interior before the application of water with a garden using normal house pressure. Meter readings, as noted in the images and photos, showed that no other location of moisture was entering the residence. To provide additional access to the inspector/thermographer, the client removed molding and provided holes for the inspector to insert moisture probes after the active leak was present. This was done to rule out if the moisture was entry above the window. None was noted.

A significant leak and moisture entry was noted at the right front corner where the half moon window joins the double hung window on top of, below and under the metal bracket which appears to fasten the half moon window to the lower double window. Moisture levels of approximately 21.5 % were noted above the metal bracket before the use of the garden hose. After soaking the exterior area, the moisture levels were the same, but the leak was only below the bracket area. Moisture levels of 90% were noted below and inside the bracket. This area strongly indicates leakage at the window and not the exterior wall assembly. The infrared thermal imaging scan did not detect cold patterns associated with leaks at any other location, except where the active leak was visibly noted. Note: the leaks occurred with and without the blower door fan in operation.

Conclusion

It is the inspector's opinion that the moisture entry is at the aforementioned area of the window. The window manufacturer should be retained for further evaluation and all necessary repairs to determine and eliminate all sources of moisture entry to provide a weathertight seal against leaks.