

**Infrared Inspection Report
Roof Moisture**

for

**Local University
Scholar Drive
Hometown, NJ 11111**

at

**Mess Hall
Food Line
Hometown, NJ 11111**

INTRODUCTION TO THE INFRARED FLAT ROOF MOISTURE SURVEY

Infrared thermography is a form of non-contact, non-destructive testing used to detect and document thermal patterns and associated temperatures across a given surface. For commercial roofing systems, infrared inspections can identify and document latent moisture.

On a sunny day, solar energy is absorbed by the roof surface and is transferred to the insulation layers of the roof. While dry insulation resists heat, wet insulation readily absorbs it. Since wet insulation has a greater thermal capacity, areas of the roof that contain wet insulation cool off slower than those areas of the roof containing dry insulation. By utilizing our infrared imagers, Jersey Infrared Consultants are able to locate these areas of wet insulation.

Our Infrared Surveys are performed by Infraspection Institute Certified Level III Infrared Thermographers® using the appropriate infrared imaging system(s). An infrared imager detects infrared energy emitted from an object or surface and converts it into an image that is displayed on a monitor screen.

Because infrared energy is a direct and proportional function of temperature, the displayed image is designed to depict temperature levels on the monitor. This thermal image looks very similar to a black and white television picture where the various shades of gray represent different temperature levels throughout the chosen temperature range. Black corresponds to a lower temperature, and white indicates a higher temperature. In the color mode, colors that appear closer to white and red hues are higher temperatures; and colors appearing closer to blue hues correspond to lower temperatures.

When an area of the roof with an elevated temperature is located, a moisture probe is used to verify the presence of moisture. If moisture presence is confirmed, the perimeter of the damaged area is then outlined with spray paint on the roof surface.

Once the size and location of the problem area have been noted, the infrared image is recorded. These Thermograms, along with a standard photograph and our problem description, provide you with the necessary information to begin planning the appropriate correct action.

October 1, 2019

Local University
Scholar Drive
Hometown, NJ 11111

THERMOGRAPHER'S COMMENTS
OUR JOB NUMBER: EDU444-11

On October 1, 2019, an Infrared Flat Roof Moisture Survey was performed for Local University at the Mess Hall facility located on Food Line Road in Hometown, NJ.

The Survey covered the lower roof section.

This report contains a scaled map of the roof with the moisture-damaged areas marked in yellow. These yellow areas correspond to the areas of the roofing system that contain moisture. All moisture-damaged areas of the roof are outlined with yellow spray paint on the roof surface. Also included in this report are Thermograms and control photographs of the moisture-damaged areas.

The Survey was performed by a Level III Infrasppection Institute Certified Infrared Thermographer[®] using a FLIR GS309 Thermal Imaging System, Serial # 123456.

FINDINGS: 3 area(s) of moisture damage was found on the night of our Survey. Moisture probe(s) confirmed the presence of moisture in the outlined area(s). The approximate percentage of moisture-damaged roof is as follows:

Section A: 33.9%

An individual breakdown of each roof section appears on the following Roof Data Sheet(s).

DISCUSSION: It is impossible to determine when moisture infiltration occurred. The absence of leaks in some areas may be due to the travel of moisture on the deck to another location where it could leak into the building.

PROGNOSIS: Since this is the first time we have surveyed the roof, it is impossible to predict the rate of deterioration and future performance of the roofing system. While some of the wet areas may not leak for some time, it is likely that they will expand, causing building heat loss and/or solar gain, and adding weight to the roofing system.

Page 2

RECOMMENDATIONS: We recommend that the moisture-damaged area(s) be ripped up and replaced. Should a decision be made to replace only the moisture-damaged area(s), an area at least one foot wider than the painted outlines should be replaced to ensure that all moisture damage is removed. Since some of the area(s) may enlarge by the time repairs are made, the roofer should remove all moisture damage found.

Should a decision be made to install a new roof over the existing roof, all area(s) of moisture damage should be removed prior to installation of the new roof.

This report defines the extent and location of moisture damage detected in the roofing system at the time of our Infrared Survey. No information regarding the structural integrity of the building, the roof deck or the roof membrane is provided or implied in this report.

Invasive test sites for the roof(s) have been temporarily repaired with appropriate materials. Care should be taken not to disturb these areas in any manner that might compromise their watertight integrity. Permanent repairs should be made by a qualified roofer as soon as possible.

Many factors, such as sunlight, precipitation, wind, foot traffic and building movement, can affect the roof over a short period of time. Periodic Infrared Flat Roof Moisture Surveys will help detect beginning problems and can extend the life of the roofing system.

We recommend another Infrared Flat Roof Moisture Survey of the entire roof once the necessary repairs have been completed. Infrared Surveys are then recommended once a year as part of a preventive maintenance program.

If you have any questions or if we can be of further assistance, please feel free to contact us.

Very truly yours,

R. James Seffrin

R. James Seffrin
Level III
Infraspection Institute Certified Infrared Thermographer # 1131

RJS:mm

Local University
Mess Hall
Food Line
Hometown, NJ 11111

Job Number: EDU444-11

Report Summary

Report Date: 10/01/2019
Job Number: EDU444-11
Type of Inspection: Roof Moisture
Purpose of Inspection: Condition Assessment
Date of Inspection: 10/01/2019
End User: John Doe
Project Location: Mess Hall
Food Line
Hometown, NJ 11111

Thermographer: Hott, Rhedd S.
Certification Number: 9876
Certification Level: III
Qualified Assistant(s): AI Probe



Equipment Used: Any Manufacturer Any Model S/N 1234

Weather Data:

10/01/2019	Day Skies:	Mostly Sunny	Night Skies:	Clear
	Day Highs:	upper 80's	Night Lows:	mid 60's
	Last Precipitation: 09/29/2019			

of Thermograms: 3

Comments: Information in this report is for "Sample" purposes and is intended only to demonstrate the features and options of TI Reporter™ Software. Please contact us if you have any specific questions or want to discuss how this software will help your company. 609-239-4788

Local University
Mess Hall
Food Line
Hometown, NJ 11111

Job Number: EDU444-11

Roof Data Sheet

Location:	Lower Roof
Roof Construction:	Reported
Deck:	Concrete
Vapor Retarder:	Yes
Insulation:	Polyisocyanurate
Membrane:	TPO
Flood Coat:	N/A
Aggregate:	No
General Roof Data:	
Age:	Unknown
Condition of Membrane:	Fair
Patched Areas:	Couple varying in size
Blistered Areas:	None observed
Drainage Condition:	Good
Roof Surface Condition:	Dry except for some HVAC ponding
Debris Present:	None observed
Roof Size:	9000 sq ft.
Number of Wet Areas:	3
Total Area Moisture Damage:	3054 sq ft.
Percentage Moisture Damage:	33.9%
Reported Leaks:	Unknown
When do Leaks Occur:	Unknown
How Long do Leaks Last:	Unknown

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Summary of Images

Picture	Location	Priority
1	Lower Roof	
2	Lower Roof	
3	Lower Roof	

Area/Image No. 1 **Job No.** EDU444-11

Date 10/01/2019 **Time** 08:00

Location Lower Roof

Damage Type Moisture **Ambient Temp** 65 °F **Subj. Priority**

Wind Speed 5 - 10 mph **From** N **Sky** Clear **Distance** 5 - 10 ft

Area Description

Overall Size: 24 sf

Blisters Present: No

Previously Patched: Yes

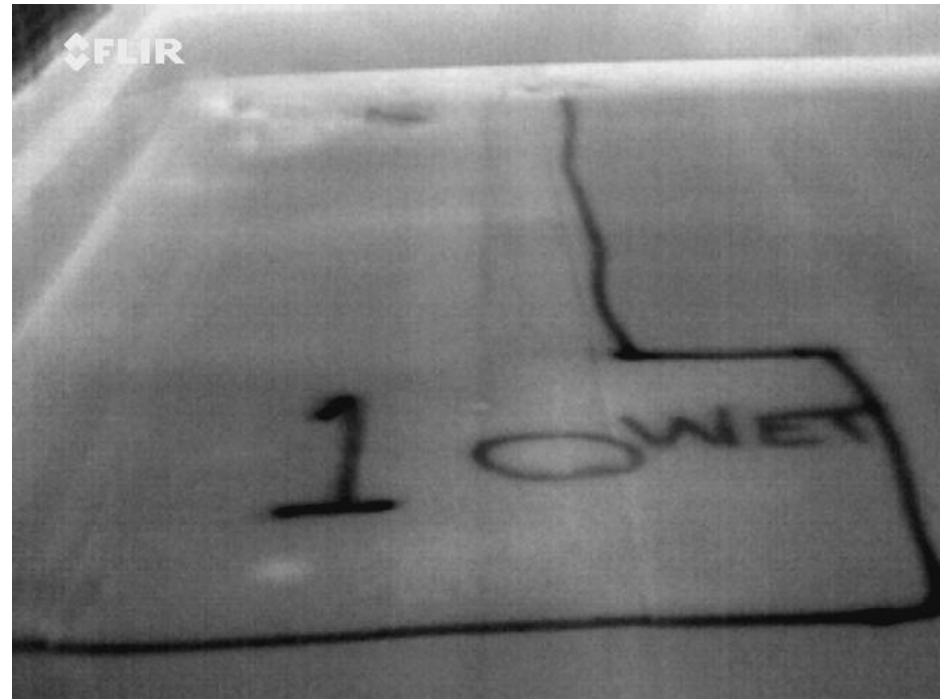
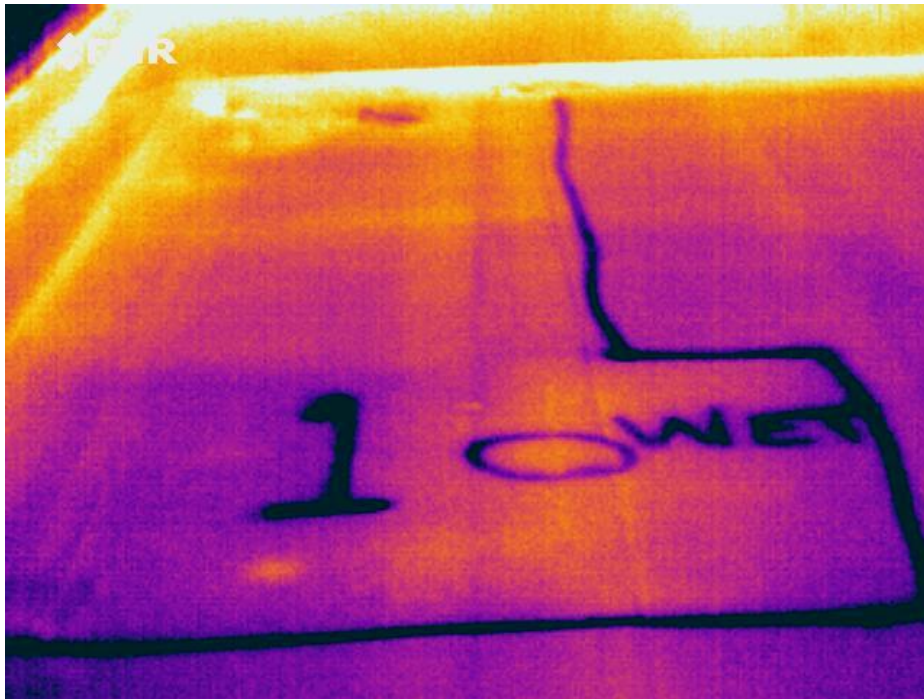
Moisture Test Results

Moisture Probe: Positive

Core Sample: N/A

Other: N/A

Comments Areas contains pockets of moisture damaged insulation.



Area/Image No. 2 **Job No.** EDU444-11

Date 10/01/2019 **Time** 08:37

Location Lower Roof

Damage Type Moisture **Ambient Temp** 63 °F **Subj. Priority**

Wind Speed > 5 mph mph **From** E **Sky** Partly Cloudy

Distance 5 - 10 ft

Area Description

Overall Size: 2400 sf

Blisters Present: No

Previously Patched: Yes

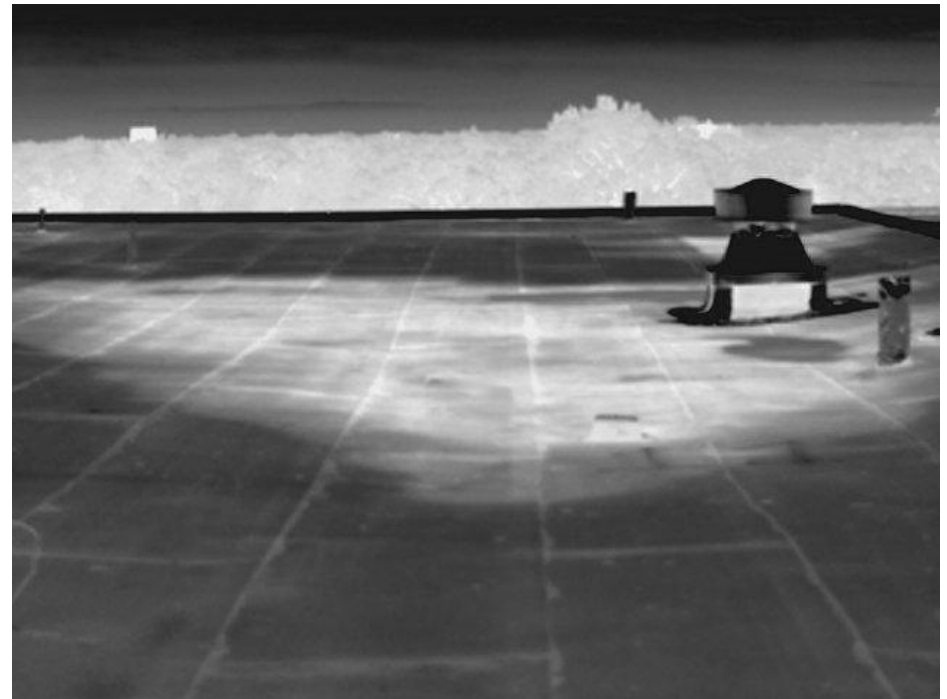
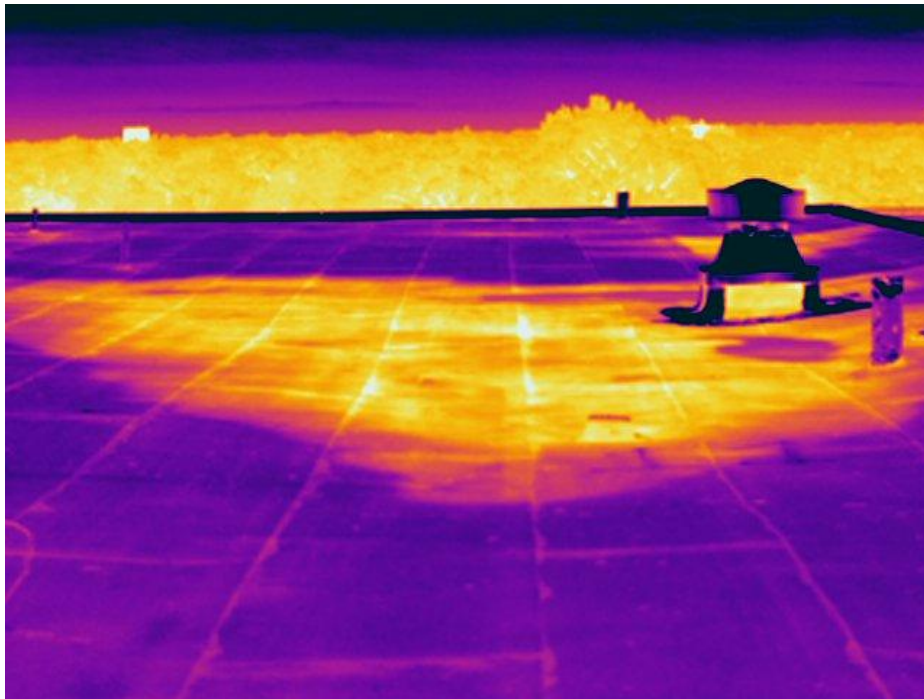
Moisture Test Results

Moisture Probe: Positive

Core Sample: N/A

Other: N/A

Comments



Area/Image No. 3 **Job No.** EDU444-11

Date 10/01/2019 **Time** 09:05

Location Lower Roof

Damage Type Moisture **Ambient Temp** 62 °F **Subj. Priority**

Wind Speed 5 - 10 mph **From** N **Sky** Partly Cloudy **Distance** < 5 ft

Area Description

Overall Size: 30 x 21 ft

Blisters Present: No

Previously Patched: Yes

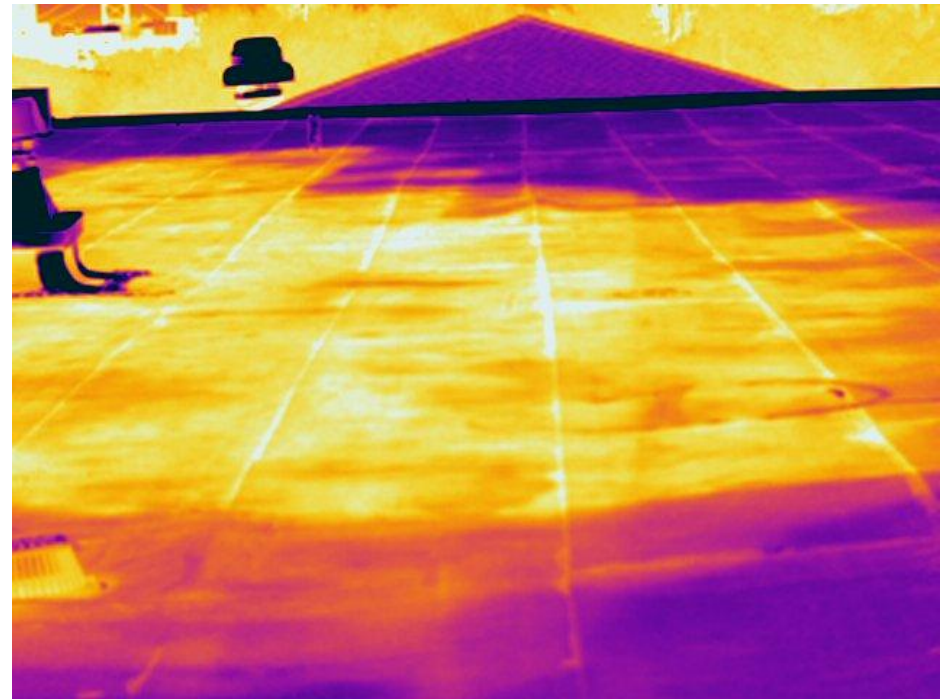
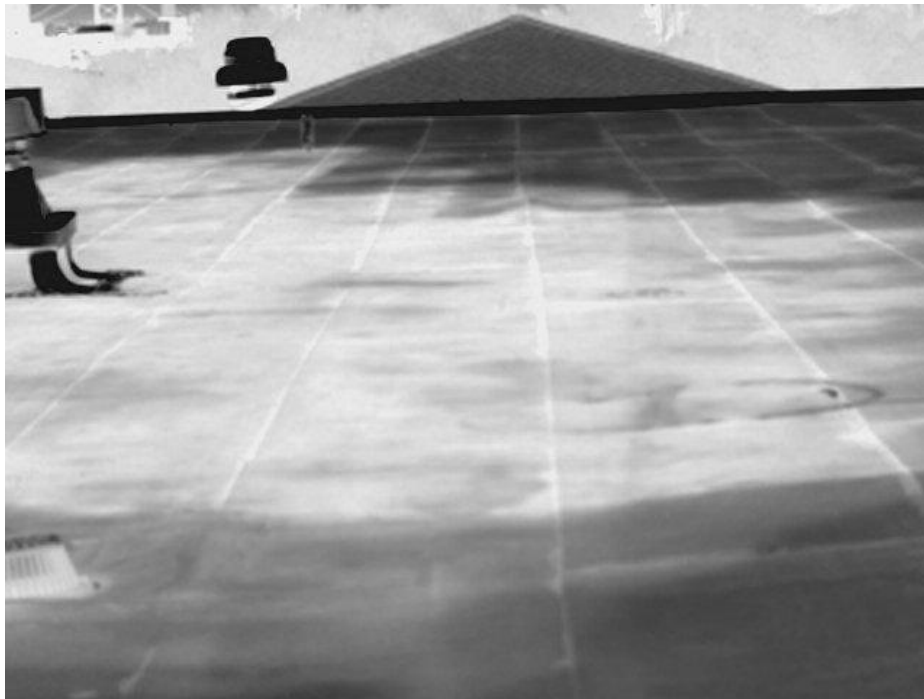
Moisture Test Results

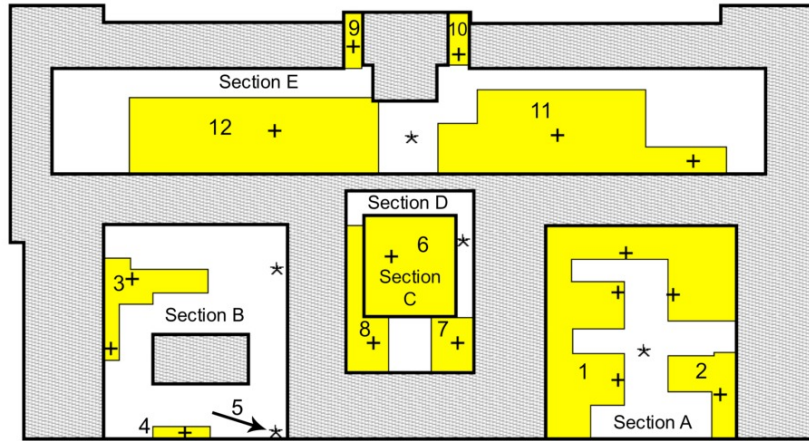
Moisture Probe: Positive

Core Sample: N/A

Other: N/A

Comments





Key

* = Moisture Probe, Dry

+ = Moisture Probe, Wet

■ = Area of Moisture Damage

Scale 1 = 40