

FINEGAN INSPECTION SERVICES, INC.
TERRY FINEGAN
27 LAURELWOOD DRIVE
MILFORD, OHIO 45150
683-0733-PHONE



CLIENT

2017

RESIDENCE



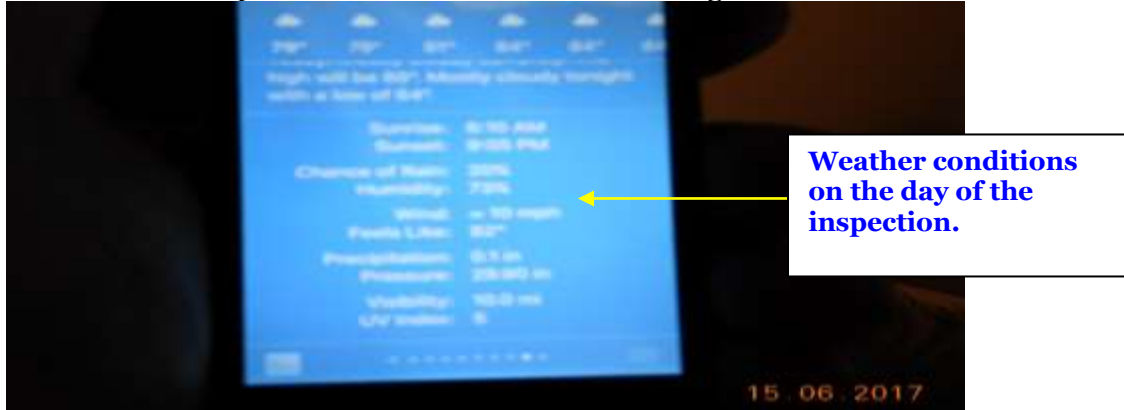
GENERAL:

This report is based on visual observations of the residence. The inspection was made without removing any existing covering surfaces or materials. There is no warranty implied as to the value, life expectancy, fitness for particular function, usefulness, or merchantability, and therefore, ***FINEGAN INSPECTION SERVICES, INC.*** assumes no liability for these items.

This report will review the wall areas in the basement for moisture.

All observations are made as the inspector faces the front of the property for a point of mutual orientation. The location of right and left will be noted as one faces the front door with their back to the street.

The basement was inspected for active moisture intrusion at the above address. The house was open and there was no conditioning of the interior air.



The drywall was tested with a Tramex impedance meter, a Delmhorst Probe meter and Flir thermal image meter.

In all tested locations with all three meters there were **no elevated moisture readings on any wall surface**. The accessible studs in this same area were also inspected and have normal moisture readings. There is one area on the basement ceiling that has a stain in the front left area of the basement, near the closet. This stain is believed to be from water that had gotten through the floor above from a plant that was located in the area. When the plant was watered, some moisture accessed through the hardwood and OSB and created a small stain on the ceiling. There also is a HVAC supply vent that is in the floor joist cavity in the area above the stain. It is possible that at some point in the past there was slight condensation that could have created the stain. In either scenario, there is no source of a chronic or active moisture intrusion.

Moisture meters have different measurement scales depending on the model and manufacturer. The calibrations of these meters can also vary so two meters inserted in the same location can provide slightly different readings. This is because many moisture meters have differences in the sensitivity and consequently the accuracy within a point or two can vary. I say this having performed thousands exterior and interior inspection for moisture related issues on the building envelope of buildings having MSV, fiber cement board and EIFS over the past 25 years.

The EIFS (Exterior Insulated Finish Systems) industry has developed a protocol for moisture measurement. When probing meters into wood substrate. This scale is what the "pin type" meters are based. The scale is set at;

1-14 ...is considered normal levels of moisture in a wood stud or substrate.

15 to 20 ...are considered a slight elevation in the wood and may indicate some elevated humidity or elevated moisture vapor conditions.

20 to 30 ...is moisture present and damp.

20 to 40 ...are wet and **40** is the highest possible level of moisture and the wood is at saturation level.

The reason for the 40% being the highest level is because a piece of wood can only hold 40% moisture. At that point, it is saturated with water.

Drywall is a different material than wood and the use of a pin meter designed for wood in drywall can give readings that are inconsistent. Moisture content in drywall is not at a 40% scale and with a pin meter the moisture readings can vary. This is not to say that the moisture readings are grossly out of phase with the empirical conditions in the area being probed, it is saying that the readings can and do vary by several points on the scale to which the meter is calibrated.

The following readings were taken by the various meters at the above address on the day of the inspection:

1). **Tramex Moisture Encounter meter**

Impedance meter calibrated for Drywall



Ceiling readings



Wall readings



2). Delmhorst Probe Meter

Probe meter designed for direct contact with material.



Ceiling area that was probed



Typical moisture reading the drywall along the front wall near the floor



3). Flir Thermal Image Meter E5

The thermal image camera is a survey type that will read the temperature of the surface of the area being tested. An area that is cold will show up as a blue surface in the meter. A cold spot could be wet. The meter shows no blue area on the ceiling area. Only a slight blue area at the floor of the front basement wall and there was no moisture as seen in the photos of the Delmhorst and Tramex meters.

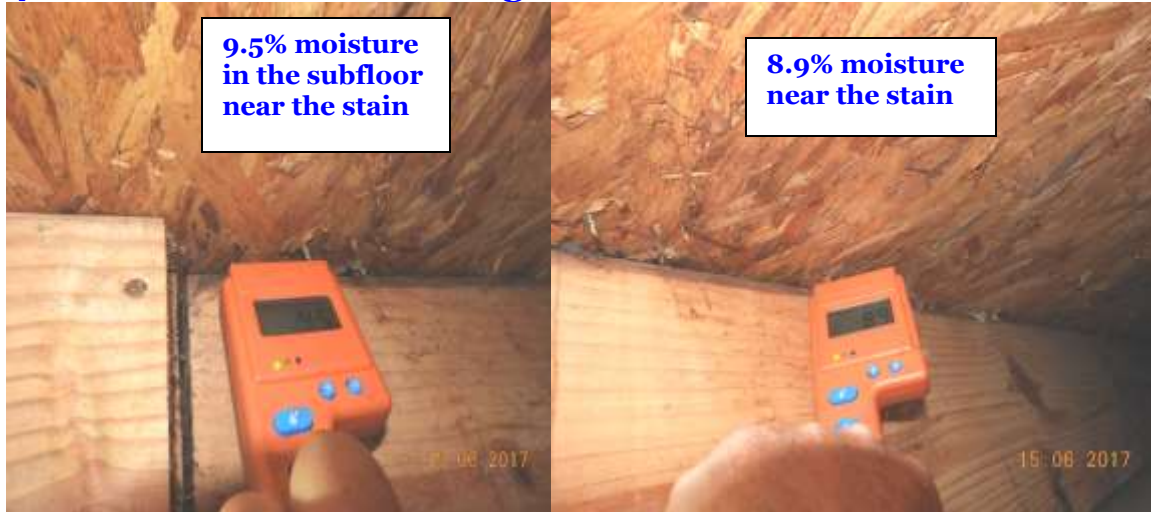
Ceiling readings



Wall readings



4). Wood sub floor readings above the stained areas



Conclusion

Whatever had caused a stain on the ceiling is no longer active and it appears to be a onetime occurrence or seldom occurrence. The levels of moisture in all drywall and all wood are negligible and well within the ranges of the industry standards. Humidity conditions may have been contributory to the 14% moisture readings discovered by others or a modest calibration variation of the meter used to take the readings.

Exterior Design Institute OH17 18 years

Flir Level 1 certified inspector 2 years

Home Inspector 25 years ASHI Certified 20 years

FINEGAN INSPECTION SERVICES INC.

by Terrence P. Finegan