

JP Diagnostics *Leak Detection Report*



Inspection prepared for:

Date of Inspection: 3/22/2022 Time: 1400 Size: Brick Commercial

Weather: Clear - Cold/48dF

Full Building Infrared Audit (FB.IR.AUD)

Inspector: Jarrod Parslow

Analysis Completed By: Nia P. / Jarrod P. / Greg W.

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JP DIAGNOSTICS

Inspection Disclaimer

This report is the exclusive property of JP Diagnostics and the client whose name appears herewith, and its use by any unauthorized persons is strictly prohibited.

The observations and opinions expressed within this report are those of JP Diagnostics and supersede any alleged verbal comments made on-site during time of original water leak detection/inspection. We inspect all of the structural systems, components and conditions related and only related to the current water leak situation within the property.

An infrared water leak detection analysis is intended to assist in providing a proper and exact source & origin for the cause of the current water leak damage found within the property inspected. The report is not intended to be utilized as a tool to discredit any previous contractor(s) work during the original build of the structure and all of its internal components. Further, this infrared water leak detection analysis will not reveal every condition that exists or ever could exist within the property, but only those material defects that were observed during time of inspection.

In accordance with the original infrared water leak detection analysis, the overall investigation and service recommendations that we make in this leak detection report should be completed within the allotted warranty period described in the associated warranty documentation, by qualified, licensed specialists who may well identify additional defects or recommend some upgrades in addition to our original recommendations for repair to mitigate/eliminate the current water leak situations.

By relying on this inspection report, you have agreed to be bound by the terms, conditions and limitations as set forth in the original water leak detection agreement, contained within the invoice and warranty documentation, which was presented to you during time of original on-site infrared analysis of the current water leak situation. If you do not have a copy of these documents please contact JP Diagnostics and a copy will be provided to you electronically via email. If you do not agree to be bound by the original water leak detection agreement in its entirety, you must contact JP Diagnostics immediately upon receipt of this completed report. In addition, all electronic and paper copies of the infrared water leak detection analysis report must be deleted and destroyed, and may not be used in whole or in part for any future warranty requests.

JP Diagnostics' Warranty

JP Diagnostics Water Leak Detection Service guarantees its findings with a standard warranty process as described in the original documentation provided during time of on-site infrared water leak analysis. The warranty is to protect against any and all errors in JP Diagnostics' recommendations for repairs of any structural components which are believed to be defective and allowing the current water entry causing damage within your property.

Any and all warranties provided within the original warranty documentation cannot be changed, modified or upgraded in any way unless otherwise indicated by representatives of JP Diagnostics. Further, it is strongly recommended that all repairs outlined within this report be completed in a timely manner so as to allow for a period of time to pass where structural repairs can be water tested organically during rain storms and to insure there are no further water leaks in the original area identified as the problematic source and origin of water entry into the structure.

If structural area(s) outlined in this report are repaired properly and water leak returns outside of the original warranty termination date, and customer requests an "infrared rescan" of the area, it will be treated as a new leak detection and warranty from original infrared water leak detection analysis will be voided.

For further warranty information, please see associated JP Diagnostics Warranty Terms and Conditions documentation provided to you, the client, issued to you during original infrared water leak detection inspection.

Understanding Your Report

Your report includes many infrared and regular photographs as well as possible video taken on site during time of infrared water leak detection inspection. All pictures contained within are of ONLY problem areas where water intrusion has been located via infrared imaging analysis as well as visual inspection of affected area. However, pictures issued within this report does not necessarily mean that the water leak situation was limited to the area(s) indicated only, but may be a representation of a condition that is in multiple internal areas which cannot be identified unless area is excavated in its entirety.

JP Diagnostics' Process

We are a non-invasive infrared water leak detection analysis company and do not excavate structural components of your property "in search of" a water leak source. Through our proprietary analytical platform designed by representatives of JP Diagnostics, we are able to determine source & origin by compiling all data recorded on site such as but not limited to; (1) Infrared imaging of affected area; (2) Staining patterns within affected area; (3) Overall Structural Layout of affected area; (4) Symptoms of current water leak issue described by customer.

The final determinations based on the compilation of all data on site during time of original inspection has resulted in the findings contained within this report. All findings and repair recommendations are carefully reviewed by our team and are not taken lightly. Our purpose of inspection is to mitigate overall cost to the customer by "pin pointing" exact water leak entry points within the building's structure and providing the absolute minimum level of repairs necessary to stem the flow of water and stop the current water leak.

The infrared water leak detection process is completed in two separate but equal, sections. The first section is the gathering of all data on site which, depending on the leak scenario, may take anywhere from (30) minutes to (2) hours. The second section is processing all infrared images taken on site by analyzing specific temperature gradients and infrared imaging graphical signature contours in order to trace back the path of water taken through the structure from its damage point seen by the customer to its exact structural entry point. The second section of the process takes approximately (1) to (3) business days depending on current call volume and scope of water leak situation inspected for the customer.

Report Nomenclature and Graphical Representation

All images contained within this report, infrared or otherwise, will have a very specific graphical representation of water concentration points and flow patterns.

Yellow and **Black** arrows represent path of water flow through the surrounding structure. **Yellow** and **Black** circles represent water concentration points with a temperature differential of at least 5dF indicating definite water entry into the overall area. The difference in color between **yellow** and **black** within our final images is only for contrast purposes within the images so as to provide an easy to read graphical representation of our overall findings.

Red arrows and **Red** squares/rectangles indicate specific repair points necessary to stop water entry from continuing into the building's structure causing water damage within as observed by the customer.

If draft flow issues were requested for analysis within the structure, they will be represented by **purple** arrows.

Infrared Water Leak Detection Summary

The summary below consists of potentially significant findings. These findings can be a safety hazard, a deficiency requiring a major expense to correct or items we would like to draw extra attention to. Please review all pages of the report as the summary alone does not explain all of the issues. All repairs should be done by a licensed tradesman or qualified professional. We recommend obtaining a copy of all receipts, warranties and permits for the work done. Please contact JP Diagnostics should you need one of our network contractors for repairs.

Water Leak Source and Origin Findings / Recommended Repairs

1. **Basement Wall/Window Leak#1 Source and Origin: Sidewalk/Facade Connection Point - Window Bay.** Heavy wind-driven rain water is entering through the sidewalk connection point to the facade as well as the open window port within the facade. Water is cascading down and depositing into the internal wall/window frame area below. Based on all data available, we believe there are also water leaks emanating from the window bay area below the grate, however, the metal grate interferes with the infrared imaging and cannot discern if water is, in fact entering. We recommend removal of the grate system and conducting followup scans within the window bay area.

Repairs / Scope of Work

- a. Install new window where plywood is installed.
- b. If window is not to be installed, close masonry structural opening as necessary.
- c. Waterproof sidewalk/facade connection point.
- d. Remove window bay grate.
- e. Conduct followup scans to confirm if window bay area is a secondary water entry point.

2. **Basement Wall/Window Leak#2 Source and Origin: Utility Connection Point to Brick Facade - Window Bay.** Heavy wind-driven rain water is entering through the utility connection points to the brick facade and cascading down into the internal wall/window frame area below. Based on all data available, we believe there are also water leaks emanating from the window bay area below the grate, however, the metal grate interferes with the infrared imaging and cannot discern if water is, in fact entering. We recommend removal of the grate system and conducting followup scans within the window bay area.

Repairs / Scope of Work

- a. Seal around utility connection points to brick facade.
- b. Seal brick facade with Silane Siloxane sx5000.
- c. Remove window bay grate.
- d. Conduct followup scans to confirm if window bay area is a secondary water entry point.

3. Basement Wall/Window Frame Leak#2 Source and Origin: Sidewalk/Facade Connection Point - Window Bay. Heavy rain water is entering through the sidewalk connection point to the facade and cascading down into the wall/window frame area below. Based on all data available, we believe there are also water leaks emanating from the window bay area below the grate, however, the metal grate interferes with the infrared imaging and cannot discern if water is, in fact entering. We recommend removal of the grate system and conducting followup scans within the window bay area.

Repairs / Scope of Work

- a. Excavate sidewalk area, as outlined.
- b. Waterproof area accordingly.
- c. Remove window bay grate.
- d. Conduct followup scans to confirm if window bay area is a secondary water entry point.

4. Basement Wall/Window Frame Leak#4 Source and Origin: Brick Facade - Window Bay. Heavy wind-driven rain water is entering through the brick facade, cascading down and depositing into the wall/window frame area below. Based on all data available, we believe there are also water leaks emanating from the window bay area below the grate, however, the metal grate interferes with the infrared imaging and cannot discern if water is, in fact entering. We recommend removal of the grate system and conducting followup scans within the window bay area.

Repairs / Scope of Work

- a. Seal brick facade with Silane Siloxane sx5000.
- b. Remove window bay grate.
- c. Conduct followup scans to confirm if window bay area is a secondary water entry point.

5. Basement Wall Leak#5 Source and Origin: Brick Facade. Heavy wind-driven rain water is entering through the upper brick facade, cascading down and depositing into the internal wall area below. Water entry is minor and, at this time, the area is not actively dripping. It appears the water entering is seeping into the masonry wall and not yet causing damage to the surrounding area. It is unclear whether the subterranean foundation wall area is a concern as the moisture signature tracked to the upper facade. However, after the brick system is sealed, we recommend monitoring the internal area for possible foundation leaks.

Repairs / Scope of Work

- a. Seal brick facade with Silane Siloxane sx5000 to prevent further water entry.
- b. Monitor internal area for further water entry.

6. Basement Wall/Window Leak#6 Source and Origin: Sidewalk/Facade Connection Point - Window Bay. Heavy rain water is entering through the sidewalk connection point to the facade and cascading down into the wall/window frame area below. Based on all data available, we believe there are also water leaks emanating from the window bay area below the grate, however, the metal

grate interferes with the infrared imaging and cannot discern if water is, in fact entering. We recommend removal of the grate system and conducting followup scans within the window bay area.

Repairs / Scope of Work

- a. Excavate sidewalk area, as outlined.
- b. Waterproof area accordingly.
- c. Remove window bay grate.
- d. Conduct followup scans to confirm if window bay area is a secondary water entry point.

7. Basement Wall/Ceiling Leak#7 Source and Origin: Front Access Stairs/Stoop. Heavy rain water is entering through the front stairs/stoop area, specifically through the degraded tile grout joints, cascading down and depositing into the ceiling/wall area below. Water entry is widespread and severe, entering throughout the entire stoop structure all the way to its connection point to the front access door baseplate. All tile covering the stoop must be removed and the structure properly waterproofed.

Repairs / Scope of Work

- a. Excavate all tile from front stairs/stoop structure.
- b. Waterproof area accordingly.
- c. Replace tile as necessary.

NOTE: Pay special attention to properly waterproofing/flashing stoop surface to front access door baseplate. Door frame may need to be removed entirely in order for this to be done properly.

8. First Floor Upper Wall Leak Source and Origin: Upper Brick Facade Behind Front Pillar - Further Testing Required. Heavy wind-driven rain water is entering through the front brick facade, cascading down and depositing into the internal wall area below. Water entry is minor and is not yet causing active dripping within the area.

Repairs / Scope of Work

- a. Conduct followup scans to confirm findings.
- b. Waterproof brick facade with Silane Siloxane sx5000.
- c. Monitor internal area for further water entry.

9. Attic Ceiling Leak#1 Source and Origin: Roof Shingle System. Heavy rain water is entering through the roof shingles at roof peak, cascading down and depositing into the roof substrate/attic ceiling area. The exact cause of water entry is not well understood. Accordingly to high definition drone photography there does not appear to be defects within the roof shingles, however, infrared analysis indicates water entry within the area. We recommend inspecting the roof shingles, especially at roof peak area, and repairing/replacing accordingly.

Repairs / Scope of Work

- a. Inspect roof shingles especially at roof peak.
- b. Repair/replace accordingly.

10. Attic Ceiling Leak#2 Source and Origin: Roof Shingle System. Heavy rain water is entering through the roof shingle system, specifically around two displaced roof shingles, as shown in the following images. Water is entering through the roof shingle system, cascading down and depositing into the roof substrate around the vent system entry point.

Repairs / Scope of Work

- a. Inspect roof shingle system.
- b. Replace displaced roof shingles.
- c. Inspect around vent line entry point into shingle system and waterproof area as necessary.

MOLD PROBABILITY RATING (MPR): Given the length of time the current water leaks have occurred within the areas scanned as well as the medium level of moisture within the structure observed via infrared imaging and analysis, based on JP Diagnostics' Models the **Mold Probability Rating (MPR)** has been set at **N/A - Masonry System Only**. Any rating at or higher than 30% we suggest hiring a mold remediation team to test for airborne and internal wall spores within the area to detect if mold is, in fact, growing within the structure. If below 30% mold testing is not warranted except as a precautionary measure. A 5% rating is the minimum we provide as our scale is from 5% -100%.

DISCLAIMER: JP Diagnostics is, in no way, an expert in mold growth, remediation or definitive determination of mold presence. All mentioning of mold and its probability of its presence are based off of infrared analysis through our own analytical platform examining temperature differentials, level of water concentration and details provided by the customer on site as to how long the problem has occurred. For more detailed information concerning mold growth, please contact a mold remediation specialist who can further assist in helping you identify different breeds of mold growth, identifying its definitive possibility of growth within your structure as well as overall remediation, if necessary.

NOTE: Any infrared and regular pictures without directional flow patters is an indication of either wide spread water leak entry through the entire structure scanned or no moisture presence at all and is not a representation of a mistake in any way.

Basement Wall/Window Leak#1

1. Water Leak Source / Origin: Sidewalk Connection to Facade/Window Bay



Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.



Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.



Water entering through sidewalk connection point to facade and cascading down into the wall area below.



Infrared imaging of water entering through sidewalk connection point to facade and cascading down into the wall area below.

2. Repairs / Scope of Work



Repair Point: Install new window or close structural opening completely. Seal sidewalk/facade connection point. Conduct followup scans of window bay area below grate.



Repair Point: Install new window or close structural opening completely. Seal sidewalk/facade connection point. Conduct followup scans of window bay area below grate.



Repair Point: Install new window or close structural opening completely. Seal sidewalk/facade connection point. Conduct followup scans of window bay area below grate.

Basement Wall/Window Leak#2

1. Water Leak Source / Origin: Brick Facade/Utility Connection Point/Window Bay



Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.



Water entering through utility connection point to brick facade and cascading down into the upper wall/window frame area below.



Infrared imaging of water entering through utility connection point to brick facade and cascading down into the upper wall/window frame area below.

2. Repairs / Scope of Work



Repair Point: Conduct followup scans around utility connection points to brick facade as well as the window bay area below the grate.

Basement Wall/Window Leak#3

1. Water Leak Source / Origin: Facade/Sidewalk Connection Point



Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.

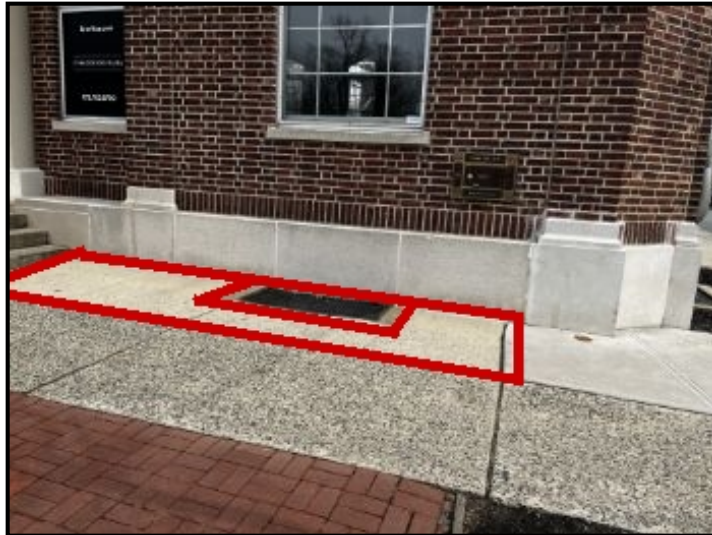


Water entering through sidewalk connection point to brick facade and cascading down into the wall/window frame area below.



Infrared imaging of water entering through sidewalk connection point to brick facade and cascading down into the wall/window frame area below.

2. Repairs / Scope of Work



Repair Point: Excavate sidewalk area as outlined. waterproof area accordingly. Remove grate and scan window bay area.

Basement Wall/Window Leak#4

1. Water Leak Source / Origin: Brick Facade



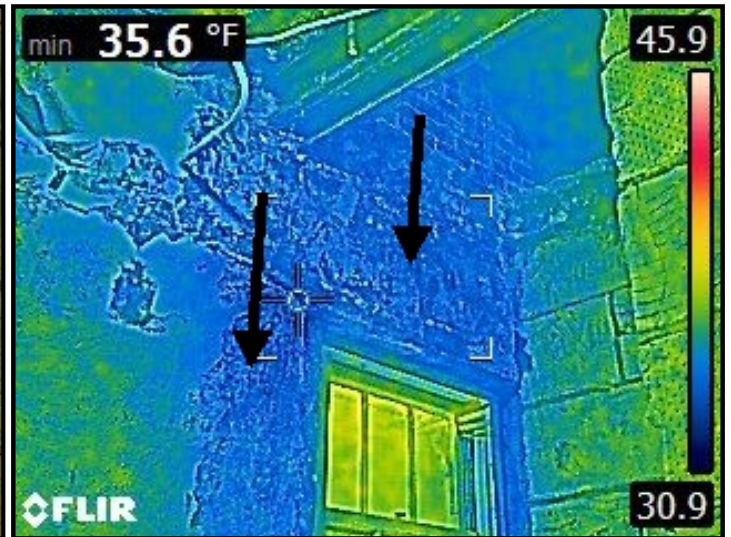
Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.



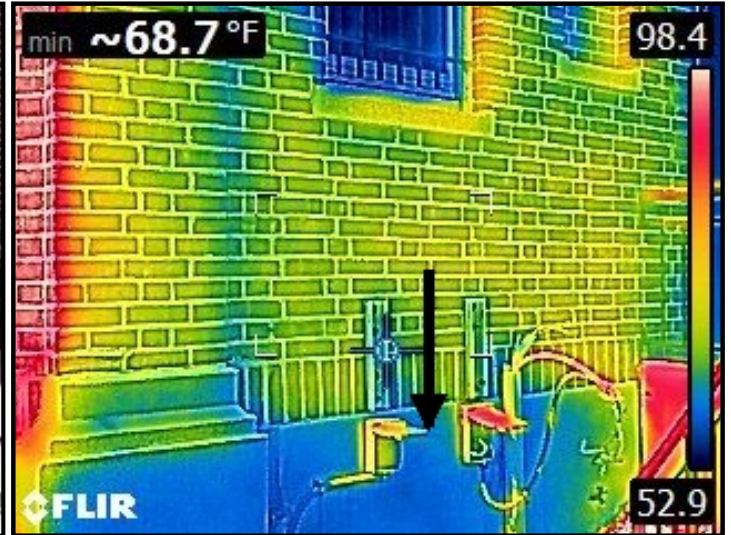
Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.



Water entering through brick facade and cascading down into wall/window frame area below.



Infrared imaging of water entering through brick facade and cascading down into wall/window frame area below.

2. Repairs / Scope of Work



Repair Point: Seal around utility connection points to facade. Remove window bay grate and conduct followup scans of the area.

Basement Wall Leak#5

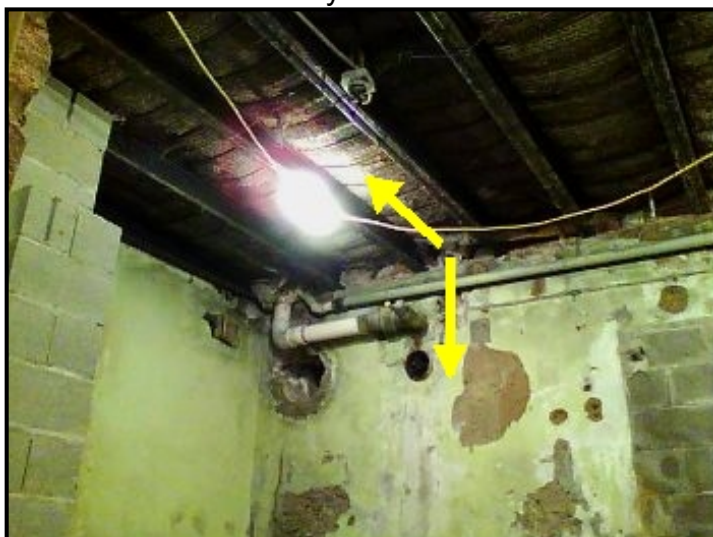
1. Water Leak Source / Origin: Brick Facade



Water entry into wall area.



Infrared imaging of water entry into wall area.



Water entry into wall area.



Infrared imaging of water entry into wall area.



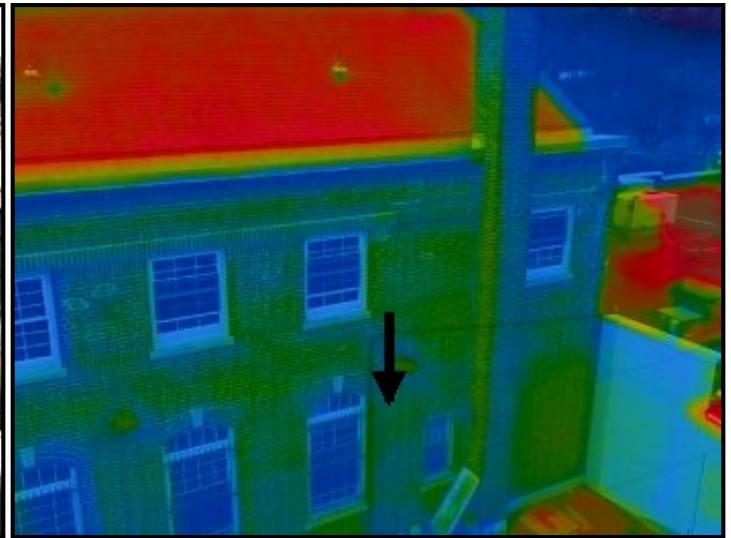
Water entering through brick facade and cascading down into the wall area below.



Infrared imaging of water entering through brick facade and cascading down into the wall area below.



Water entering through brick facade and cascading down into the wall area below.



Infrared imaging of water entering through brick facade and cascading down into the wall area below.

2. Repairs / Scope of Work



Repair Point: Seal brick facade with Silane Siloxane sx5000.

Basement Wall/Window Leak#6

1. Water Leak Source / Origin: Sidewalk/Brick Facade Connection Point



Water entry into wall/window frame area.



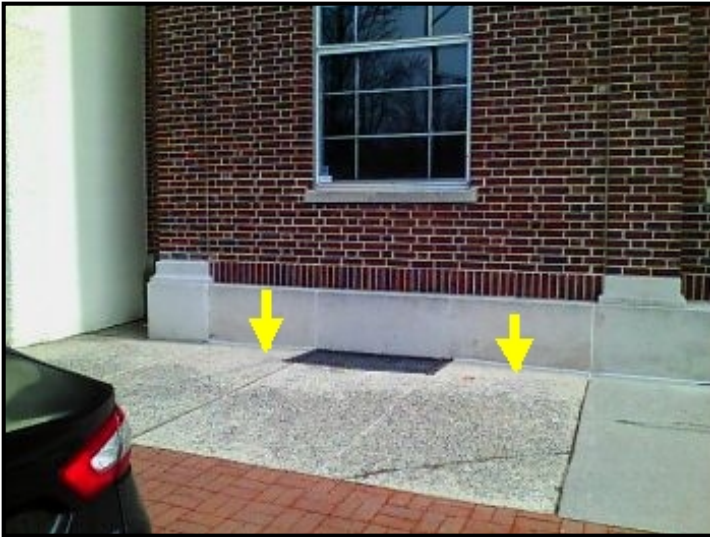
Infrared imaging of water entry into wall/window frame area.



Water entry into wall/window frame area.



Infrared imaging of water entry into wall/window frame area.

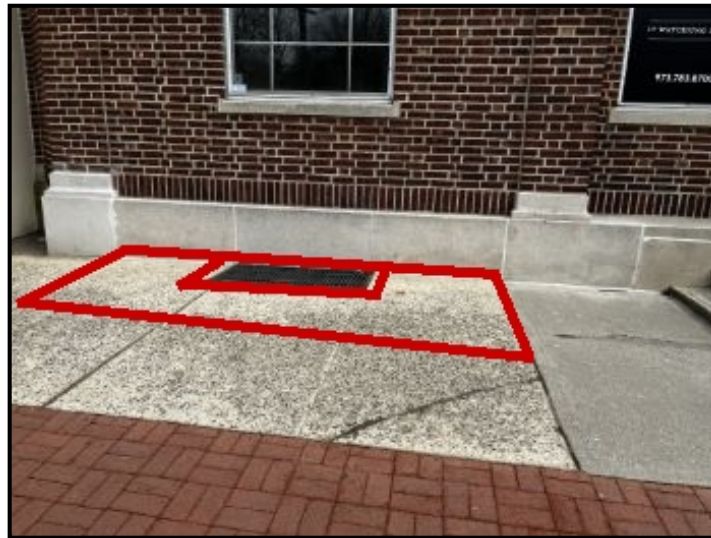


Water entering through sidewalk/brick facade connection point and cascading down into the wall/window frame area below.



Infrared imaging of water entering through sidewalk/brick facade connection point and cascading down into the wall/window frame area below.

2. Repairs / Scope of Work



Repair Point: Remove window bay grate. Conduct followup scans of window bay area. Excavate sidewalk area, as outlined. Waterproof area accordingly.

Basement Wall/Ceiling Leak#7

1. Water Leak Source / Origin: Front Access Stoop/Stairs



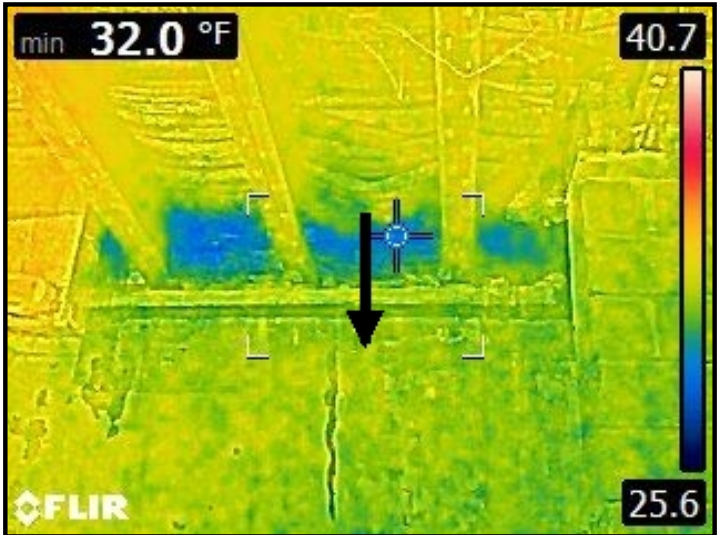
Water entry into wall/ceiling area.



Infrared imaging of water entry into wall/ceiling area.



Water entry into wall/ceiling area.



Infrared imaging of water entry into wall/ceiling area.



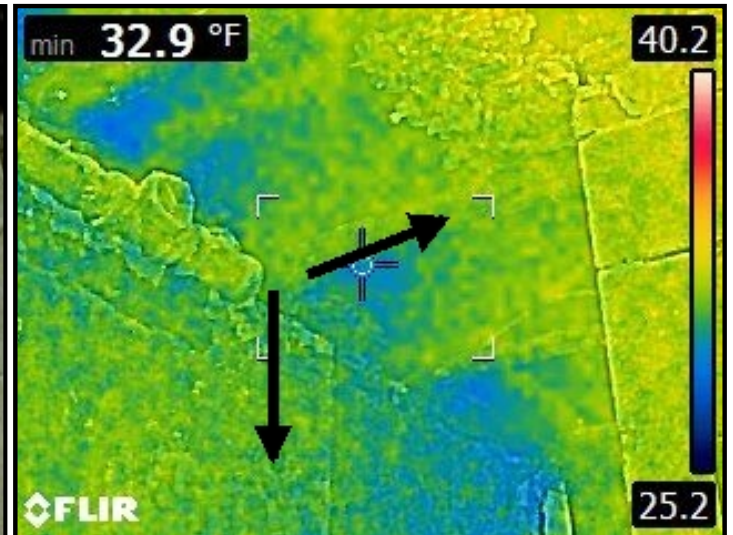
Water entry into wall/ceiling area.



Infrared imaging of water entry into wall/ceiling area.



Water entry into wall/ceiling area.



Infrared imaging of water entry into wall/ceiling area.



Widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



Infrared imaging of widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



Widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



Infrared imaging of widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



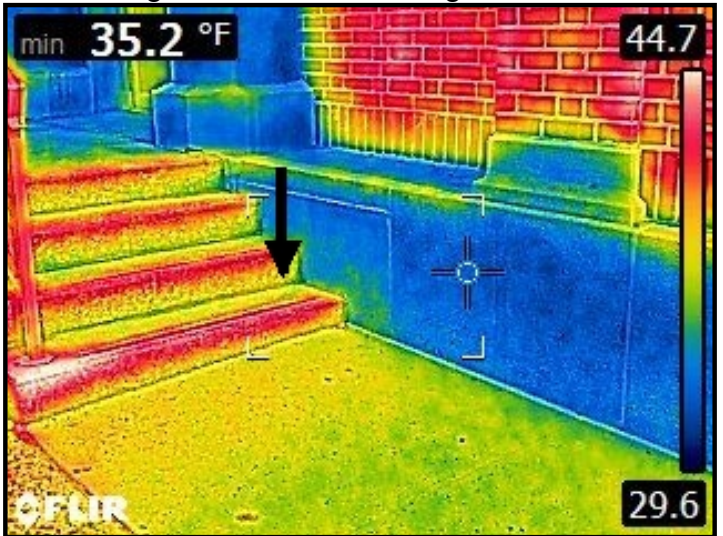
Widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



Infrared imaging of widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



Widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.



Infrared imaging of widespread and severe water entry through the front access stairs/stoop and cascading down into the ceiling/wall area below.

2. Repairs / Scope of Work



Repair Point: Remove all tile from stairs/stoop.
Waterproof area accordingly.



Repair Point: Remove all tile from stairs/stoop.
Waterproof area accordingly.



Repair Point: Remove all tile from stairs/stoop.
Waterproof area accordingly.



Repair Point: Remove all tile from stairs/stoop.
Waterproof area accordingly.

First Floor Upper Wall Leak

1. Water Leak Source / Origin: Brick Facade - Further Testing Required



Water entry into upper wall area.



Infrared imaging of water entry into upper wall area.



Water entering through upper brick facade behind pillar and cascading down into the internal wall area below.



Infrared imaging of water entering through upper brick facade behind pillar and cascading down into the internal wall area below.

2. Repairs / Scope of Work



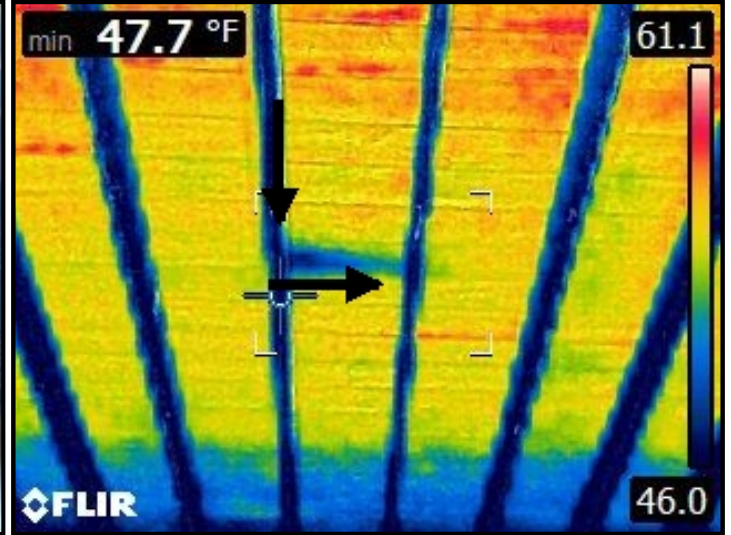
Repair Point: Conduct followup scans to confirm. Seal brick facade with Silane Siloxane sx5000.

Attic Ceiling Leak#1

1. Water Leak Source / Origin: Roof Peak/Shingle System



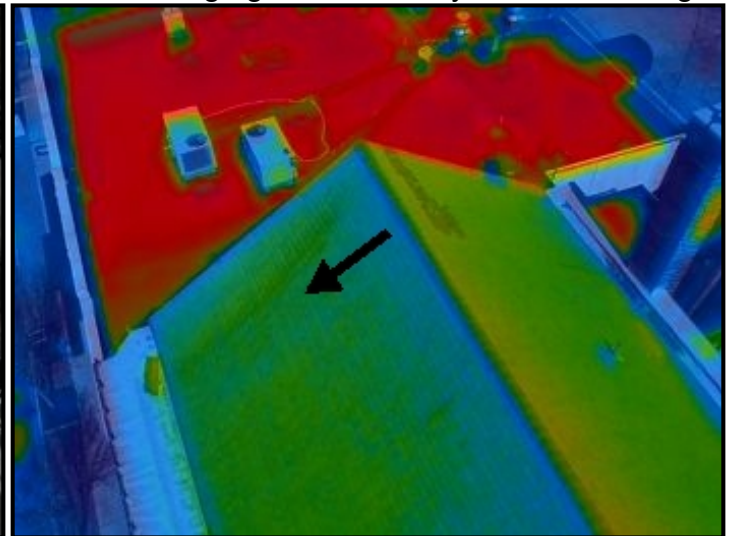
Water entry into attic ceiling.



Infrared imaging of water entry into attic ceiling.



Water entering through roof peak shingles and cascading down into the attic ceiling area below.



Infrared imaging of water entering through roof peak shingles and cascading down into the attic ceiling area below.

2. Repairs / Scope of Work



Repair Point: Inspect roof shingles, especially at roof peak. Replace accordingly.

Attic Ceiling Leak#2

1. Water Leak Source / Origin: Roof Shingles



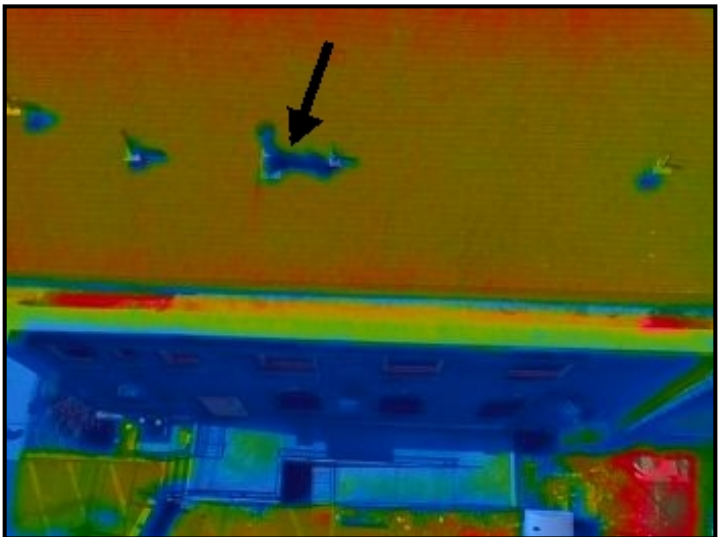
Water entry into attic ceiling around vent line.



Infrared imaging of water entry into attic ceiling around vent line.



Water entering through shingle roof system, cascading down and depositing around the roof vent/internal ceiling area below.



Infrared imaging of water entering through shingle roof system, cascading down and depositing around the roof vent/internal ceiling area below. (Limited Infrared Data)

2. Repairs / Scope of Work



Repair Point: Replace shingles. Inspect area around roof vent and waterproof as needed.



Repair Point: Replace shingles. Inspect area around roof vent and waterproof as needed.