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ROOF INSPECTION REPORT  
PREPARED EXCLUSIVELY  
FOR





**Prepared For:** [Redacted]

**Property Address:** [Redacted]

**Property Type:** Commercial

**Description:** Restaurant Bar & Grill

**Date/s of Inspection:** 01/24/2015

**Inspected By:** [Redacted]

**Date of Report:** January 28, 2015

**Prepared By:** [Redacted]

**Submitted To:** [Redacted]

**Submitted by:** Know-Fault Ltd.  
[Redacted]  
(224) 678-8316

## Introduction

### Inspection Authorization And Scope

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This report represents an opinion based upon our observations in conducting a **Roof Inspection** for the property located at [REDACTED] for and in behalf of [REDACTED] Inc. per the request of [REDACTED] president, with said **Roof Inspection** conducted according to our Letter of Engagement dated January 22, 2015. Be it further known that the **Roof Inspection** specifically excludes assessment/evaluation of the roof structure beneath.

The **Roof Inspection Report** as presented herein outlines the inspector's observations and opinions regarding the apparent physical condition of the visible roof covering as observed from on the roof and specifically excludes invasive testing or thermal imaging of any kind. The report also includes digital photos taken at the time of inspection considered to be an integral part of this report.

The **Roof Inspection Report** is not intended as a warranty or guarantee of any kind with regard to the physical condition or performance of the existing roof system.

The **Roof Inspection Report** is prepared exclusively for the party named herein in which event Know-Fault Ltd. nor its agents shall bear any responsibility for use of information contained in this report by other than the party for whom it is intended.

The **Roof Inspection** was conducted by [REDACTED] of Know-Fault Ltd on the day of January 24, 2015. Access to the roof was provided using an 'A' frame ladder placed underneath a 2<sup>nd</sup> floor roof hatch opening by the building owner at the time of inspection. Weather conditions on this day were as follows: 36 degrees, sunny and windy. With the exception of some light snow covering present at the corners of the roof, the roof surface was open to view for most part at the time of inspection.

Description



Building street elevation



Field of MB roof above the restaurant

**Design Build**

Flat/low slope

**Roof Surface**

What appears to be a Flintlastic SA (self-adhering) SBS modified bitumen roof system with a mineral surface cap sheet as manufactured by CertainTeed Corporation. Based upon feedback and supporting documentation provided by the restaurant owner, the Flintlastic roof system constitutes a tear-off and replacement begun some time during the 2<sup>nd</sup> to last week in October, 2014 and completed the first week in November, 2014.

**Roof Drainage**

Contingent upon the design slope of the roof to divert surface water run-off toward one interior roof drain opening for the entire roof area.

**Flashing**

Same as roofing including what appears to be preform neoprene rubber boot flashing at smaller vent pipe and electrical line penetrations.

**Parapet Walls**

Brick masonry with sheet metal coping.

**Roof Accessories**

One roof hatch along with several rooftop ventilators/fans.



Open/unsealed sidelap



Standing water present outside the elevator shaft

### Summary

The Flintlastic SA modified bitumen roof system is not considered to be in serviceable condition at this time given an amateur and improper installation that repeatedly fails to conform to the requirements as set forth in the CertainTeed Flintlastic Application Handbook.

### Observations/Comments

- ◆ Open/unsealed sidelap in modified bitumen roofing in close proximity to/just north of package rooftop unit #5 due to plastic selvage edge release strip left in-place that prevents bonding.
- ◆ No indications of a cant strip provided along the base of the parapet wall as normally required to ensure a smooth transition between the plane of the roof and roof membrane wall flashing.
- ◆ Raised/lifted edges present in sidelap joints that can allow for water intrusion and eventual roof leaks.
- ◆ End laps not staggered a minimum of 3-foot apart as required between adjacent rolls of modified bitumen cap sheet.
- ◆ Improper application/detail at inside corners, vent pipe roof penetrations, roof drain opening, parapet wall membrane flashing, and sheet metal coping.
- ◆ Significant standing water present in/around the vicinity of the roof drain opening, elevator shaft roof penetration, and elsewhere on the roof that have already resulted in roof leaks.
- ◆ Gray sealant applied along sidelap joints and small roof penetrations in what appears to be an after thought to compensate for poor bonding at these areas when installing the roof system.
- ◆ No overflow roof scuppers as normally required per present day standards for flat/low slope roofs surrounded by parapet walls on all sides.
- ◆ Existing drainage provision may prove inadequate given one interior roof drain for the entire roof and an elevator shaft (not original to the building) that serves to impede drainage flow.



Bucket w/ice water from condensate drain line above



Sealant applied to lap joints and roof penetration

### Observations/Comments

- ◆ Condensate drain lines (serving package rooftop units) that allow for condensate to drain directly onto the roof as opposed to a gutter or open drain per roof manufacturer's recommendation.
- ◆ Water stains present running down the outside of the elevator shaft, rear stairwell and elsewhere inside the building.
- ◆ No rooftop relief vents as may be required depending upon the applied roof system.
- ◆ Based upon feedback provided by the owner, it appears that little, if any, consideration was given to proper storage and handling of the roofing material prior to installation.
- ◆ Based upon feedback provided by the owner, installation of the Flintlastic SA roof system was begun a week or two following the date of the proposal submitted by Pro-Line Contractors and completed by November 7, 2014.
- ◆ According to the 2012 IECC (International Energy Conservation Code) all new construction including roof tear-offs and recovers require R-25 roof insulation without exception (Mentioned since the roofing proposal as submitted by Pro-Line Contractors, Inc., dated October 10, 2014, stipulates 2-inch ISO foam board insulation, an amount that falls 2-inches shy of that needed to achieve an R-25 rating as required by law)
- ◆ The average max, mean and minimum recorded outdoor ambient air temperatures for the town of DeKalb during the time frame in which the roof was allegedly installed excluding rain/snow days are as follows: 51.75, 41.83, and 31.83 degrees Fahrenheit (Note: According to the CertainTeed Flintlastic Application Handbook, rolls may be installed in cold weather provided that the rolls are stored in heated areas until just before use that allegedly was never done).

### Limitations/Exclusions

- ◆ Test the watertight integrity of the roof covering by running a hose on the roof.
- ◆ Perform invasive testing of any kind such as cutting, coring or drilling holes in the roof.





Amateur/improper flashing detail at 'P' vent



Amateur/improper wall flashing detail at inside corner

**Limitations/Exclusions**

- ◆ Inspection/evaluation of interior roof drains.
- ◆ Perform any kind of thermal imaging to determine/verify the presence or amount of water intrusion beneath the roof surface.
- ◆ List/identify all active reoccurring roof leaks inside the building.
- ◆ Perform load, roof drainage or any other related roof calculations.
- ◆ Inspect/evaluate the integrity of roof system components beneath the roof surface.
- ◆ Determine/verify type and thickness of roof insulation present beneath the roof covering.
- ◆ List and identify all existing roof deficiencies present at the time of inspection.

**Recommendations/Cost to Remedy Deficiencies**

Recommendation	Budget Cost
Complete tear-off and replacement based upon 54-2/3 square @ \$600/SQ †	\$32,800 and up

† **Note:** Excludes cost to provide for an additional interior roof drain as may be required along with overflow scuppers to ensure positive drainage and alleviate standing water on the roof.

References:

- 1) IECC (2012) International Energy Conservation Code
- 2) CertainTeed Flintlastic Application Handbook (05/09)
- 3) CertainTeed Flintlastic SA Self-Adhering SBS Modified Bitumen Roof Systems Brochure (02/13)
- 4) Weather Underground (i.wund.com) - History for DeKalb