March 15, 2016

TO:

REF: CONDITION OF PROPERTY SURVEY - Roof Inspection.

Dear Mr. and Mrs.:

At your request, I made a visual survey of the roof of the house located at

Transmitted herewith is the inspection report stating my subjective, professional opinion on whether the items of construction included in the survey are performing their intended functional, or are in need of repair.

Thank you for asking HEDDERMAN ENGINEERING, INC. to perform this important inspection work for you. If you have any questions after reviewing this report, please feel free to call me at my office.

Sincerely,

HEDDERMAN ENGINEERING, INC. Tim Hedderman, President



INTRODUCTION

<u>PURPOSE</u>

The purpose of the inspection was to view the roof of the house and give our professional opinion on whether or not it was performing their intended function at the time of the survey, or was in need of repair. This report is provided for the use of the person to whom this report is addressed, and is in no way intended to be used by a third party, who may have different requirements. It is our purpose to provide information on the condition of the property on the day of the inspection, and not to provide discussions or recommendations concerning the future maintenance of any part of the property, or to verify the adequacy and/or design of any component of the house.

The components inspected included the shingles, flashings, roof jacks, and vents.

SCOPE

The scope of the inspection included limited, visual observations from the surface of the roof. Only those items readily visible and accessible at the time of the inspection were viewed and are included in this report. Any items causing visual obstruction were not moved.

The basis of our opinions will be the apparent performance of that portion of the property actually visible at the time of the inspection. Disassembly or removal of any portion of the roof is beyond the scope of this inspection. There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, merchantability, insurability, workmanship, and/or need for repair of any item inspected.

We make no representation regarding the condition of this property other than as contained in this written report. Any verbal discussions concerning this property that were made at the time of the inspection, and not contained in this written report, are not to be relied upon.

Although this report may include observations of some code violations, total compliance with building codes, specifications, and/or legal requirements are specifically excluded. Although this inspection was made by a Registered Professional Engineer, it cannot be considered to be a formal engineering study since no calculations, structural analysis, or physical material testing were performed.

<u>ROOF</u>

Life expectancy

The roof surface was constructed of composition shingles. The life expectancy of a composition shingle roof has been observed to vary from 10 to 20 years, with most requiring replacement at about 15-18 years.





<u>Observations</u>

The composition roof has obviously been struck by hail, as evidenced by the numerous locations where the black discoloration on the surface of the shingles has been removed. Most of the damage from hail is principally an impact damage effect and takes place on the bottom side of the shingle, where the force of the hail strike causes microcracks in the base shingle material while loosening the aggregate where the hailstone strikes. These small cracks are not visible without plying and lifting the shingles to see the bottom side. Since this process can damage the shingles, we do not attempt to lift any shingles to see the bottom side.

It was very apparent when viewing the roof from its surface that the entire roof showed evidence of having been struck by hail.

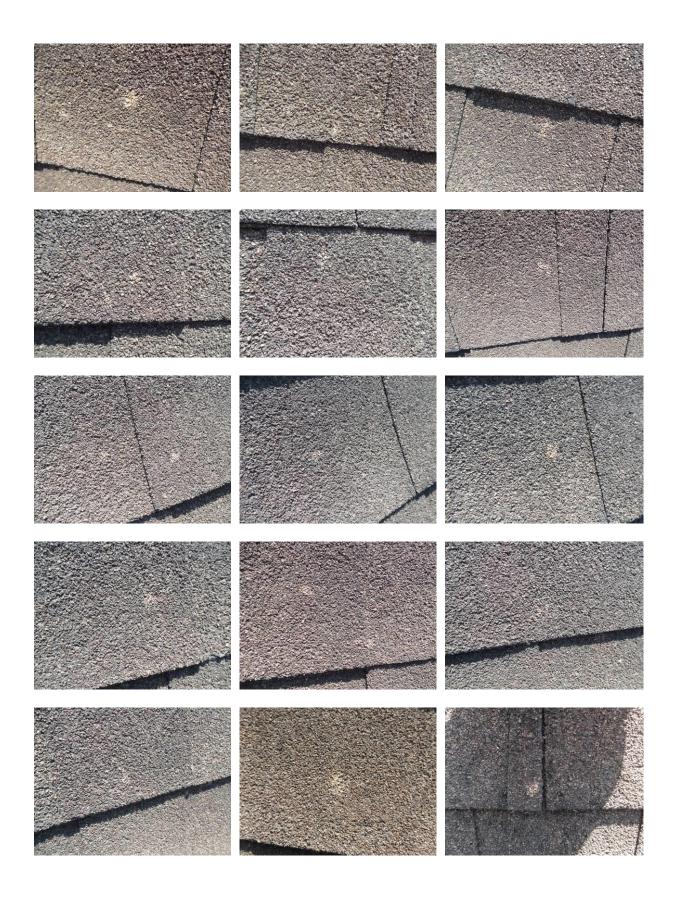




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The roofs on the garage were also damaged by hail, as evidenced by the many strike points observed on the shingles and also on the modified bitumen low sloped surface at

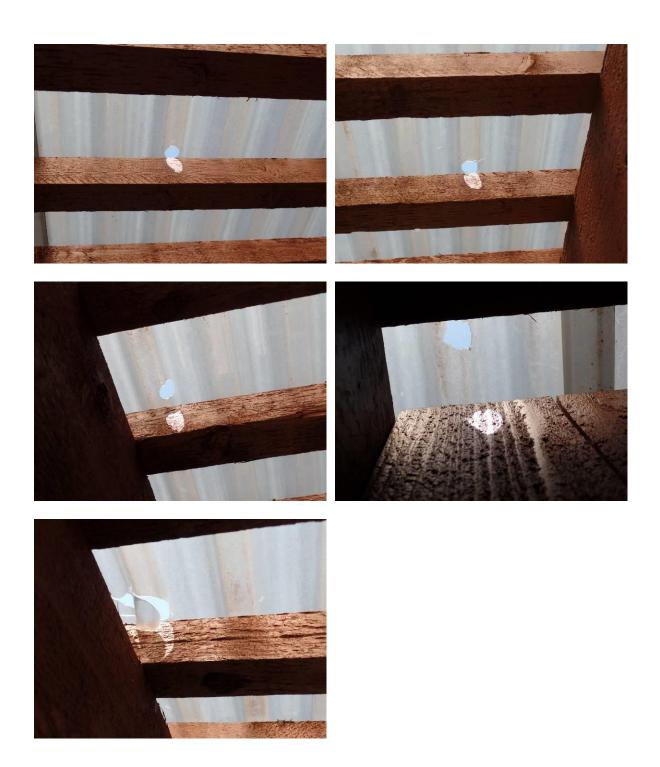
the rear of the garage.





We also observed hail damage to the plastic roof covering over the patio area at the rear of the house where hail stones broke through the thin plastic roof covering.



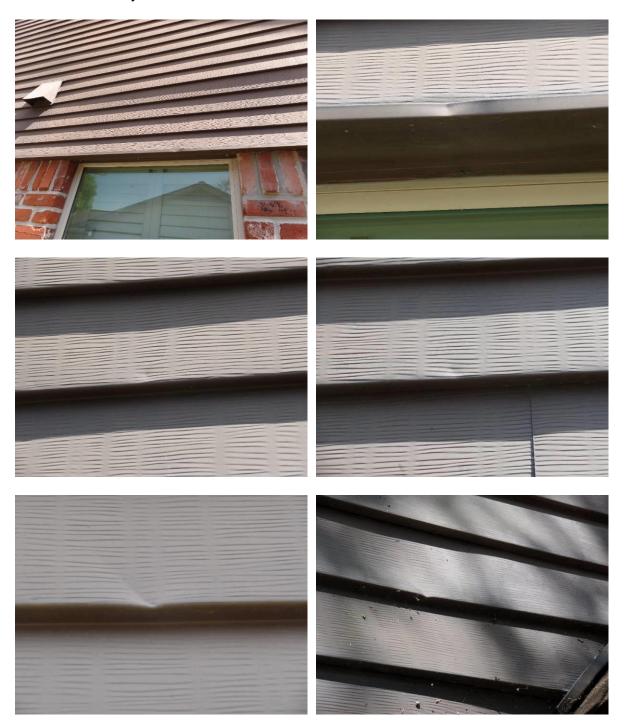


Conclusions

This roof has clearly been struck and damaged by hail, and it is our opinion that the roofs on both the house and garage are in need of replacement, as well as the patio cover over the rear patio area.

Other Observations

We also observed several dents in the siding material at the front and sides of the house which may be related to the hail storm.



CLOSE

Opinions and comments stated in this report are based on the apparent performance of the structure. Performance standards are based on the knowledge gained through the experience and professional studies of the inspector. There is no warranty or guarantee, either expressed or implied, regarding the habitability, workmanship, future performance, life, merchantability, and/or need for repair of any item inspected.

At your service,

Tim Hedderman

Registered Professional Engineer #51501

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Texas Firm Number: 7942