Storm Damage Inspection Report of Findings

For:
Client Company
Client Name

Re:
Claim No. ####

Policyholder
Street Address
City, ST, ZIP

Inspected: Date
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1. Assessment Summary

- No wind damage was found to the roofing materials.
- Hail damage was found to the roofing materials on the Rear slopes.
- No-wind damage was found to the collateral items (e.g. trim, roof vents, etc.).
- Cosmetic dents were found to some of the collateral items.
- No interior damages were documented at the time of the inspection.
- Water intrusion concerns were documented - refer to the photographic log.

2. Scope and Limitations

The scope of this report of findings includes:

- Storm damage assessment including wind and/or hail damage;
- Exterior building material(s), condition, and deficiencies;
- Installation errors, mechanical damages, other damages;
- Verification of code requirements with respect to the roofing materials;
- Identification of leak sources related to observed interior damages, if any;
- Identification of potential sources of water entry to the structure.

The inspection was limited to non-destructive observation.

No structural analysis or design recommendations are included in the scope of inspection or this report of findings. No portion of this report is to be construed as design advice, construction administration, or other direction for remedy of issues noted or otherwise. Please consult a separate licensed professional for advice regarding remedies to any items noted in this report.

3. Inspection Information

On September 6, 2016, an inspection was made of this brick and vinyl-sided residence with 25-year 3-tab roofing found in generally fair condition.

The policyholder’s representative was present for the inspection.

Ryan Vahue with Weatherguard Roofing & Restoration attended on behalf of the policyholder and remained for the duration of the inspection.

No explanation of findings has been provided to the policyholder or their representatives as of the date of this report.

4. Wind Damages Assessment

4.1 Roofing Materials

A total of (0) wind-damaged shingles were found on the Front slope(s).
A total of (0) wind-damaged shingles were found on the Rear slope(s).
A total of (0) wind-damaged shingles were found on the Left slope(s).
A total of (0) wind-damaged shingles were found on the Right slope(s).

4.2 Collateral Items

No wind damage was found to the secondary and collateral items (trim, roof vents, etc.).
5. Hail Damages Assessment

5.1 Roofing Materials

Asphalt Composition Shingles

For a minimum determination of hail damage, areas of hail caused punctures and/or ruptures to the asphalt composition shingles must be consistently found in a random distribution throughout the slope. Furthermore, similar damages should be found on each of the slopes facing the same direction (e.g. multiple West-facing slopes should appear to be similarly damaged throughout each of the separate slopes). Each directional face (i.e. Front, Rear, Left, and Right) is considered independently to account for potential storm directionality. A 10ft x 10ft test-square sample area is used as a statistical representation of the number of hail damaged shingles throughout each direction. The number of hail-damaged shingles, if any, within each 100ft² (“1-square”) is reported for each directional face present. Furthermore, secondary indicators such as soft metals, organic growths, oxidation, and collateral items are also used to corroborate the findings present on the roofing materials.

(0) hail-damaged shingles were found in the Front-facing test square.
(20+) hail-damaged shingles were found in the Rear-facing test square.
(0) hail-damaged shingles were found in the Left-facing test square.
(0) hail-damaged shingles were found in the Right-facing test square.

5.2 Secondary Indicators

Secondary Indicators

Spatter marks were found in the oxidation, debris, and/or organic growths on the ground and/or roof-level items. Dents were found in the ground and/or roof-level collateral items.

The largest diameters of these impact marks were measured to be approximately 1 inch in diameter. The corresponding diameter of hail is not typically large enough to cause damage to roofing materials of the type, age, and condition present on the roof.
### 5.3 Collateral Items

<table>
<thead>
<tr>
<th>Collateral Item Description</th>
<th>Hail Damaged</th>
<th>Wind Damaged</th>
<th>Units</th>
<th>Not Storm Damaged</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROUND LEVEL COLLATERAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gutters</td>
<td>145</td>
<td>ft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downspouts</td>
<td>10</td>
<td>ft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gutter-guards</td>
<td>ft</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Screens</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Siding</td>
<td>sf</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Decking</td>
<td>sf</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>A/C Units</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>ROOF LEVEL COLLATERAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fascia</td>
<td></td>
<td>ft</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Trim</td>
<td></td>
<td>ft</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rake/Drip Edge</td>
<td></td>
<td>ft</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Chimneys</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Skylights</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sun Tunnels</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Satellites</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>ROOF VENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat Vents</td>
<td>1</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Vents</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Square Vents</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Turbine Vents</td>
<td>ea</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Ridge Vent (Shingle-Over)</td>
<td>45</td>
<td>ft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridge Vent (Aluminum)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
<td></td>
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</tbody>
</table>

### 6. Other Findings

#### Blistering

Blistering was found to the roofing shingles. Blistering occurs when moisture, gases, and other volatile impurities are entrapped in the top layer of asphalt during installation. These volatiles erupt from the top layer of asphalt, revealing the fiberglass mat. A clearly defined ridge is typically present in the case of blistering, which is not generally found in the case of hail impacts to an asphalt composition shingle. Blistering is not hail damage. Blisters typically do not develop into water intrusion concerns because the bottom layer of asphalt is unaffected and the fiberglass reinforcing mat is undamaged.

#### Protruding Fasteners

Protruding fasteners were found. The protruding fasteners referenced in this section are not a result of storm damage. Instead, they are the result of installation error and/or expansion and contraction. Examples of installation error include not installing the fastener flush with the roofing material surface and installing the fasteners at an angle instead of perpendicular to the roofing.

Expansion and contraction can cause protrusions because fasteners have a different thermal expansion and contraction rate from the substrate (e.g. roof decking, walls, framing, etc.). Fluctuating temperature can force the fasteners to extrude from the substrate. Fluctuating humidity can also result in fastener extrusion in the case of wood substrates. Fastener type, number, size, and substrate material and thickness can also influence
the extent of fastener extrusions.

The granule loss that typically occurs above a protruding fastener is sometimes mistaken for hail damage, but is not hail damage.

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**Unintentional Mechanical Damage - Shingles**

There were a number of mechanical scuffs and worn edges found, especially in walkable areas commonly damaged by foot traffic. These damages typically occur during installation or maintenance of the shingles, ridge cap, or protrusions and are not a water intrusion concern.

**7. Code Requirements**

State building code (Code) states that design is governed by the International Building Code. Reference is made to current code requirements for information only. Inspection relative to the code in effect at the time of installation is beyond the scope of this report.

The following violations of code-required items relating to the roofing materials were noted at the time of inspection.

**Asphalt Shingles Used on Low Slope**

The shingles on the rear-most slope have been installed on a pitch less than 2:12. These shingles were not installed in accordance with code requirements for roof slope.

The International Residential Building Code states the following:

R905 REQUIREMENTS FOR ROOF COVERINGS
R905.2 Asphalt shingles.
R905.2.2 Slope.

Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) up to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.2.7.
Limited Liability Agreement

All findings in this report are based on evidence found at the subject property at the date and time of inspection. Use of this report of findings shall constitute agreement by all parties involved that the inspection and report is provided on a “Limited Liability” basis, the maximum liability for which the inspector/engineer and/or Trinity Engineering, PLLC and its affiliates may be held liable for errors and omissions, negligence, or from damage of surrounding roofing products that may cause any issues, shall be limited to the amount of the fee paid for this inspection.
Overview of Risk
Collateral - No Wind or Hail Damage
Spatter in algae growth
Rear slope - hail impacts consistently distributed across slope

Rear slope - hail impacts consistently distributed across slope
Directionality of spatter visible - elongated rear to front
Directionality of spatter visible - elongated rear to front
Contractor Opinion of Hail Damage

(1) Total blemish on slope

(6) Blemishes in test square - not distributed across slope
Small blemish, no mat fracture

Small blemish, no mat fracture

Small blemish, no mat fracture

Small blemish, no mat fracture