

We will begin at 2:00 pm



APRIL 23, 2020





Part Two's Goals:

- ✧ Hail Damage "Scope of Work" Repairs
 - ✧ SB-38 Items
- ✧ Code Upgrades
- ✧ Code based Controversy
- ✧ Drone surveys
 - ✧ Pros and Cons

Part Two:

- ✧ Scope of Work:
 - ✧ Everything that has been damaged
- ✧ SB38 Requirements
- ✧ Include:
 - ✧ Underlayment
 - ✧ Roofing
 - ✧ Accessories

Revisit: Exterior Walk-Around

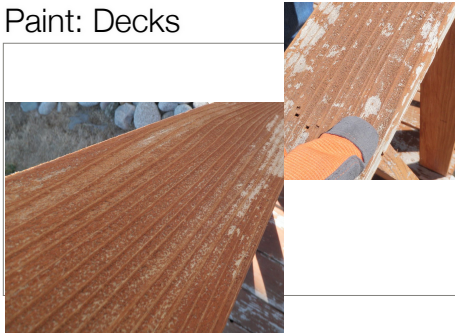
✧ Paint film Information: Hot or Age?



More Information:



Paint: Decks



How about this condition?



Building Paint Damage?

- ✧ No corner chips
- ✧ Glass point break
- ✧ Splash marks



Window needs replacement. The paint is not damaged.

Paint:

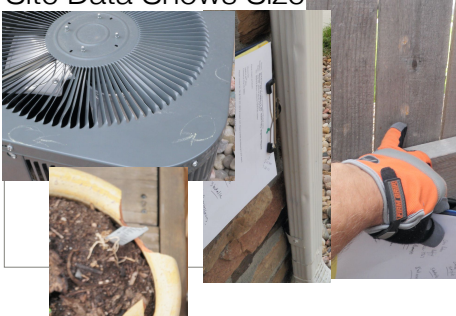
- ✧ Fresh chips on corners
- ✧ Grain crushing associated with paint/stain chipping
- ✧ "Denting" of underlying substrate associated with paint chip

Old paint complicates determining "damage"





Site Data Shows Size



Corner Breaks

- ✧ Note color difference, fresh break.
- ✧ Larger break is old.





Look for differences in counts

- ✧ The hit difference can show storm direction which lends credibility to the count.
- ✧ Corner break counts that follow also lends credibility to the storm caused claim.



Document and Record

- ✧ Satellite photos from Google Earth
- ✧ Draw in where test square located
- ✧ Note North on photo
- ✧ Note storm direction, if applicable
- ✧ Include hit counts by area



What shingle is on the house?



What was Damaged?

- ✧ Shingle Type
 - ✧ Asphalt- Manufacturer style/grade/type/weight
 - ✧ Shakes
 - ✧ Tile- Light Weight more expensive than full weight
 - ✧ Metal
- ✧ Accessories
 - ✧ Skylights
 - ✧ Vents
 - ✧ Flues
- ✧ Flashings

Moving Forward

- ✧ You have information that you believe proves the roof was hit by hail.
- ✧ You have documentation that proves the hail was of sufficient size to damage the building.
- ✧ You have documented damage to the roof/building.
- ✧ Now you need to present a value to return the building to its pre-damaged condition.

SB-38 Residential Roofing Bill of Rights

- ✧ **Scope of work:** Describe what you intend to fix and how.
- ✧ **Cost for damages at the time the contract is signed (if over \$1,000)**
- ✧ **Prohibition of Contractor from acting as a Public Adjuster**

Scope of Work

- ✧ It is a proposal to perform the work required to return the owner to a pre-hail condition
- ✧ It has a fixed cost: NOT INSURANCE PROCEEDS (unless it is less than \$1,000)
- ✧ You are not an advocate you are a roofing contractor that is proposing to repair the damages to the roof caused by hail

Public Adjuster: HB13-1062

- ✧ Must be trained and Licensed
- ✧ May not ask for or accept any payment prior to the settlement of a claim
- ✧ Is limited to 10% for catastrophic disaster (as declared by President or Governor)
- ✧ Cannot have any "interest" in the value of the claim other than the contract fee.

Proposal under SB-38 shall:

- ✧ Have a fixed number price, if over \$1,000.
- ✧ Describe the work and materials to be used
- ✧ Contractor contact info
- ✧ Dates of service
- ✧ Insurance information
- ✧ Refund policy
- ✧ Funds to be held in trust

Scope of Work

- ✧ What was damaged?
- ✧ What is required to return the roof to its predamage condition?
- ✧ What Code Requirements that may affect the replacement?
 - ✧ Underlayment- Peel and Stick
 - ✧ Wind Rating
- ✧ What logistical issues does the project present?

Scope of Work

Includes: Price

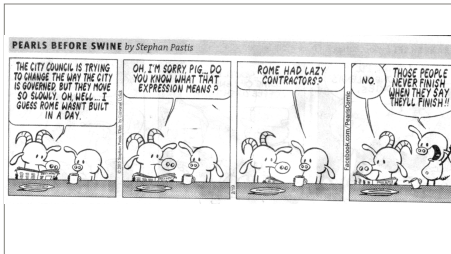
Description of Work
Materials



Scope of Work inclusions:

- ✧ Removal of damaged materials
- ✧ Preparation of roof deck to receive the new roofing system of like kind and quality
- ✧ All code required improvements to the damaged system/ materials
- ✧ Installation of the roofing system that was damaged including all ancillary items

Timetable for work



What Happens Next?

- ✧ If you're lucky the proposal is accepted and you. Are asked to start work.
- ✧ There may be some questions that you can answer because you have collected the information and then you are asked to start.
- ✧ The proposal is rejected.

If the answer is always "YES"

☆ You can sign off now, thanks for participating.

For the Rest of You.....

- ☆ There are several reasons that the proposal is rejected.
 - ☆ The damage is not sufficient. Small stones or not many.
 - ☆ The evidence is not sufficient. You did not collect enough information
 - ☆ They don't believe you. This is where having made a strong case with physical evidence is you

Insufficient Damage

- ☆ You may not have damage, just because there was hail.
- ☆ Don't report damage unless it is real.
- ☆ Don't report on damage that isn't there.

Not enough evidence of a loss

- ☆ This is why you collect all the proof of hail size from non-roofing elements.
- ☆ Once you establish the size in the surrounding area then there is a reasonable expectation of roof and accessory damage.
- ☆ If you rely only on rooftop damage then the evidence from fences, dents, leaves etc works against you.

They don't think the damage is as bad as your presentation shows, SO they call in a:

- ☆ Company Adjustor
 - ☆ May or may not know what they are doing
- ☆ Private Adjustor
 - ☆ "Hail can't damage a roof"
 - ☆ Many only work FOR insurance companies.
 - ☆ Haag, PIE, etc

The excuse used to refuse the claim:

- ✧ "The roof was hit but there is no FUNCTIONAL DAMAGE."
- ✧ This is the phraseology that many of you have been told is the reason for the claim to be denied.

FUNCTIONAL DAMAGE:

- ✧ This is a term that is thrown around a lot in the hail business
- ✧ Generally juxtaposed as "functional" vs. "cosmetic" damage.
- ✧ Origin appears to be from Structural Forensic Engineers.

Forensic Engineers

- ✧ If a roof is damaged but the structure is intact there is no structural damage, the damage is cosmetic.
- ✧ There is still damage, but not of a structural nature.
- ✧ Structural damage invokes a new set of requirements in the code for repairs that are not part of a claim if the damage does not involve the structure of a building.

Term Origin:

- ✧ According to Dr. Neil B. Hall the origin is unclear.
- ✧ Haag Engineering used the term in a paper authored in 2004. They cited a 1969 paper by Greenfield from ARMA.
- ✧ Greenfield never used the term. He listed 2 levels of damage Severe and Superficial.
- ✧ Severe: Leads to the penetration of the structure by the elements
- ✧ Superficial: Affects the appearance but does not materially interfere with the performance of the roofing.

Haag 2004 Paper

- ✧ Mechanically removed granules
- ✧ Exposed the samples to 10 yrs of weather
- ✧ Shingles did not "fail"
- ✧ They concluded, "Therefore, asphalt shingles that lose some granules are not considered damaged as long as the shingles remain covered with granules."
- ✧ "Functional damage to asphalt roof shingles includes punctures, tears, or fractures (bruises) in the shingle mats."

Haag Paper on Hail Damage to Asphalt Roof Shingles

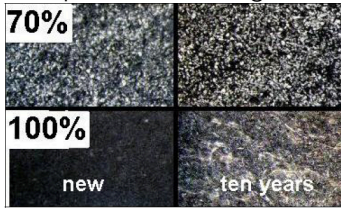


Figure 4. Close up views of new shingle and ten-year weathering with both 70 percent of the granules removed and no granules, respectively.

This paper is the basis for most insurance company denial of coverage

- ✧ Many of them do not know that this is the basis
- ✧ There have not been any published papers that I have found that dispute the Haag paper.
- ✧ The final line of the paper:
 - ✧ "A methodology was presented to better document intentional damage to a roof."

Read the Haag Paper

- ✧ The link to it is in the resources at the end of the talk.

Functional Damage:

- ✧ I don't think the authors were thinking that this paper would have as much influence on hail damage claims as it does.
- ✧ The claims side of the industry needs to do some research independently to refute the claims.
- ✧ I am going to show some photos that I believe are proof that the methodology used in the paper was not the "end all" for "proof".

If the appearance of the roof changes:

- ✧ One "function" of a roof is to provide an aesthetic appearance from the street.
 - ✧ A bad appearance diminishes the value of the home and that is a reason to purchase insurance.
- ✧ To date I am only aware of the one paper by Haag that looked at shingles that had been struck by hammers and had the granules removed mechanically.
 - ✧ I have seen white glass after 3 years so the real world is different than the method used to simulate granule removal.

Other issues that affect the value:

- ✧ The value of the work to be done is dependent on a number of factors. Contractors are good at pricing, materials, labor, overhead, and profit.
- ✧ Other factors:
 - ✧ Insurance premium changes based on what is used to replace the original.
 - ✧ Local Covenants
 - ✧ Code Changes since the project was built.

Insurance Premiums:

- ✧ Extra Charge for Wood Shakes
- ✧ Reductions for Hail Resistant shingles

Covenants:

- ✧ Check for any special restrictions.
- ✧ Architectural Committee Approvals
- ✧ Color restrictions.
- ✧ Special Contractor requirements such as Insurance, licensing, etc.

Code Changes

- ✧ Check Local Codes
- ✧ "Adopted Building Codes for XXXXXXXXX"
- ✧ "Table 301.2 for XXXXXXXXX"
- ✧ Many municipalities on the front range added peel and stick perimeters after the 2003 Blizzard

Structural Compliance is only required to be checked:

- ✧ When there is damage to structural elements.
- ✧ When the damage is related to snow damage.
- ✧ Things then need to comply
- ✧ BUT the Code does not require bringing the structure into compliance.

Roof Damage that does NOT include Structural Elements

- ✧ 2018 IEBC Chapter 4
- ✧ Sec. 405.2.1 Repairs for less than substantial structural damage.
- ✧ Unless otherwise required by this section, for damage less than substantial structural damage, the damaged elements shall be permitted to be restored to their predamage condition.

Repairs, Alterations, and Additions

- ✧ Alteration: Any construction or renovation to an existing structure other than a repair or addition
- ✧ Addition: An extension or increase in the floor area, number of stories, or height of a building or structure.
- ✧ Repair: The reconstruction, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.

Controversy:

- ✧ Can you replace damaged concrete tiles with similar tiles salvaged from another project?

Public Adjustors:

- ✧ NO!
- ✧ If even one tile is hail damaged and the tiles are no longer made then the entire roof has to be replaced.
- ✧ This is a crime against the environment.*

* Editorial opinion of the speaker not necessarily that of the CRA

Reasonableness test:

- ✧ Can the roof be returned to its pre-hail condition in a manner that will retain the aesthetics and function of the roof just prior to the hail strike?
- ✧ Possibly, this is where things get gray.

Code Controversy?

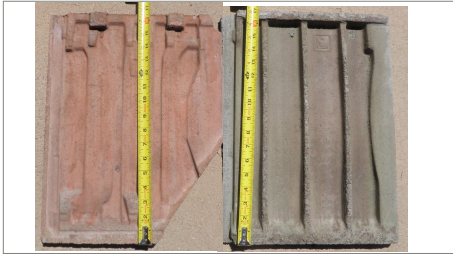
- ✧ Old tiles being used to repair roofs.
- ✧ Chapter 15 IBC Section 1511 Reroofing
 - ✧ 1511.5 Reinstallation of Materials
 - ✧ Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled.



What brand and dimensions of tile?



16-1/2" vs 17"



2018 IRC

- ✧ Section 904.4 Product Identification
 - ✧ Roof Covering Materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels required.

IEBC: Old Tile On Repairs

- ✧ Section 302.4 IEBC: Existing materials
 - ✧ Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by a Building Official to be unsafe.

Old Tile On Repairs

- ✧ Sect. 302.5 New and Replacement Materials
 - ✧ Like materials shall be permitted for repairs and alterations, provide no unsafe condition is created.

No Final Answer

- ✧ Gray areas is where lawyers like to live.
- ✧ Reasonableness test should be used.

Future of Hail Assessment

- ✧ More of the same
- ✧ Drones

Drone Advantages:

- ✧ No Ladder climbing
- ✧ Much faster
- ✧ Great for over views of large properties

Drones Can't:

- ✧ Let you touch the roof
- ✧ Lift shingles to check for wind damage
- ✧ Lift shingles to check for step flashings, positions of pipe flashings, nail position and count
- ✧ Take the place of the hands and knees examination that is sometimes needed

Drones: Camera tripods in the sky

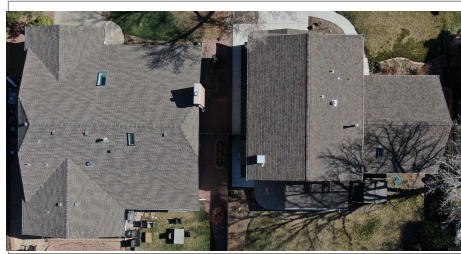
- ☆ How many tile are broken?
- ☆ Notice, I am removing tile to do checking that the drone can't do.



My Recommended Procedure

- ☆ High altitude shot that shows adjacent houses.
- ☆ General establishing shot of the house looking straight down
- ☆ Close-up of roof sections with enough of the edges to help locate the section after you are off site
- ☆ Close-ups within the section
- ☆ Move to the next section and establish that section with its close-ups.
- ☆ Repeat as needed

Show the houses



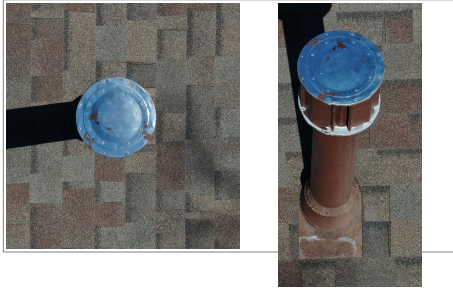
Isolate the one in question



Go section by section with close-ups



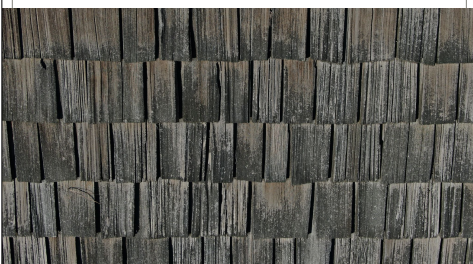
Side angles for flashings



Can you see the shakes?



How about now?



How about now?



Shot from a drone

Drone Camera: My recommendations

- ✧ 10+Meg pixel image size
 - ✧ After zoom, optical vs digital
- ✧ Hail talent as part of flight team
 - ✧ Review of photos without real time input slows the process
 - ✧ Creates massive files that can be difficult to use due to time
- ✧ Stability in flight
 - ✧ Winds on roofs are strong and fickle

Drones: The end all future for assessment?

- ✧ No: They are a tool that all of us will be using in the future
- ✧ They will let you look at a lot of roof area quickly so that you can safely decide which roofs to examine up close.
- ✧ They provide a safe fast way to do what you should know how to do before you start flying.
 - ✧ It does not do any good to send a novice into the field with a fancy toy and expect anything of value back.

Sources:

- ✧ Functional Damage: <https://www.propertyinsurancecoveragelaw.com/files/file/COSMETIC%20FUNCTIONAL%20PART%20ONE%20final.pdf>
- ✧ Haag 2004: <https://haagglobal.com/am-site/media/hail-damage-to-asphalt-shingles.pdf>
- ✧ howtolookatahouse.com
- ✧ Haag Engineering: Ball Peen Hammer Test
- ✧ [nachi.org/asphalt-comp-shingles-part 48-102.htm](http://nachi.org/asphalt-comp-shingles-part-48-102.htm)

The End
