

WATER DAMAGE PREVENTION: ROOFS

Water damage to the roof of a building can pose a significant problem, as it can result in increased maintenance costs, structural damage to the building, a decline in indoor air quality, and adversely affect the overall aesthetic. One of the key ways to prevent water damage is to make sure the roof is in good condition. As roofs age and are exposed to the elements over time, or they are damaged by a storm, a leak can develop and cause significant damage. Therefore, it's important to regularly inspect and monitor the condition of your facility's roof. The individual(s) who inspects the roof should be qualified to do so and understand what to look for in terms of damage and condition. The following are a few items to consider when inspecting a roof.

ROOF INSPECTION

To prevent ice dams from forming, take the following precautions:

- Consider the age of the roof, as different roof types generally have specific average life expectancy. Even though a roof may physically look adequate, any roofing materials nearing their life expectancy will eventually fail. Examples include the following:
 - Asphalt – Up to 30 years
 - Slate – Up to 100 years
 - Cedar (shake) – Up to 30 years and should be treated with fire retardant
 - Metal – Up to 50 years
 - Clay tile – Up to 50 years
 - Tar and gravel – Up to 20 years

- Different roof types are susceptible to different types of failure and may require more frequent inspections or areas of focus, including the following, for example:

- Flat roofs are more prone to standing or pooling water.
- Different pitched roofs, or ones with a low slope (a roof angle or pitch that is less than 30 degrees) are more susceptible to wind damage than a roof with a steep slope (a roof where the angle is more than 45 degrees).
- Cracking, blistering, cupping or peeling of asphalt shingles is an indication that the roof's life span is nearing the end and will soon no longer effectively divert water from rain, snow, or melting ice.



These asphalt shingles are missing, cupping, and blistering. The condition of this roof poses an increased potential of water damage to the interior of the building. Adequate repairs should be made by a qualified roofing contractor.

- Vent attics properly, as proper roof and eave ventilation may help extend the life of the roof by reducing the buildup of heat and moisture in the attic.
- Keep flashing or coping around the edge of the roof in good condition.
 - Leaks are more susceptible around items that have been cut into the roof, including attic vents, sewer vents, chimneys, and skylights. Inspect these items to ensure that flashing and caulking are adequate.
- When looking at replacement options, consider materials that can help mitigate future damage. As an example, in hail-prone areas, consider using impact-resistant shingles with Underwriter Laboratories (UL) designations of 2218 Class 3 or 4.
- Keep roof, valleys, gutters, and downspouts free from buildup of leaves, twigs, and other litter, which could prevent proper drainage.
- Keep trees trimmed to prevent them from rubbing against the roof and causing damage.
- Remove snow from roofs to prevent potential collapse.
- Inspect roofs after severe weather, as wind, hail, ice, or heavy rain could all cause damage that could lead to future problems.
- Hire a qualified, licensed roofing contractor to make any necessary roof repairs.



This photo is an example of a tree that should be trimmed back to prevent damage to the roof. Over time, the tree could eventually rub a hole in the roof, allowing water to penetrate the building.

- Inspect the interior of the building for evidence of past water damage, including rotten wood, damaged walls, or stained ceilings.
 - If any of these conditions are found, further investigation should be conducted and any necessary repairs should be made by a qualified roofing contractor.



Ceiling Water Stain Example

This stained ceiling indicates that water damage has occurred.

The source of the water damage should be found and appropriate repairs made as soon as possible.

Summary

Leaking roofs are one of the main reasons for water damage to occur in a building. Therefore, it is important to

- Keep a close eye on your roof; and conduct a full inspection at least once each year.
- Pay attention to any interior or exterior conditions that may indicate the roof is leaking.
 - Even by simply walking around your building once a month and looking for any issues, it could help detect roof problems before they become major catastrophes.

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