



## **Your Building's Drainage System Maintenance**

Soon the hot, scorching summer will fade away and transition to cooler temperatures, falling leaves and, rain. As great as that sounds, the combination of leaves and rain can cause quite a bit of damage to your building over time, and it all starts with your gutters on pitched roofs and scuppers for flat roofs. Gutters will jam up with leaves, pine needles, straw, dirt, sand, and other items that can be moved around with the wind. Through the years, gutters and downspouts will rust, fall apart, and begin leaking. However, those are just the surface issues we see. They are the early indication that you have a problem with your gutter system. The deficiencies will eventually lead to water damage and expensive repairs.

Too often, we take gutters for granted. We see them lining the roof and assume they will work as they should. The whole purpose of gutters is to move water away from your building. When the gutter fails to do this, building damage will certainly follow. It may not be immediate, but if the gutter or downspout is not repaired, it will happen. The damage will begin to show on the roof, fascia, soffit, walls, and foundation due to overflow of gutters or leaks in the downspout. Preventative maintenance will help you address drainage issues early. Some damage will be apparent. For example, rust spots, holes, and crinkles in the metal. Other signs will be flaking paint, rotting wood, water stains on brick and foundation, cracks in the wall and foundation, and roof damage.

The worst is when water can "sit" on a roof due to a buildup of vegetation. Even a pile of leaves on the roof can cause this problem. The vegetation is saturated during a rain and can remain wet for days. The moisture is then transferred to the roof materials and can work its way underneath to the roof decking. For this reason, any buildup of vegetation should be removed as soon you see it.

Though we are discussing water in its liquid state, we cannot ignore the damage that can be inflicted during the winter months. As evidenced in 2021, sustained, freezing temperatures can reach down to the furthest depths of Texas. When water ponds or collects on the roofs and gutters or penetrates below the roof's surface you now face the risk of further damage from more than just exposed pipes that burst. The roof cover seams could separate from the expansion of the water as it freezes. As the ice begins to melt, water could penetrate underneath the roof cover onto the roof deck causing rot that will be hard to identify without a thorough inspection. Additionally, the seam separation could be small enough to go undetected but large enough to allow water into the building anytime it rains. This serves as yet another reason to address all water accumulation on the roof and in the gutters when they are observed.

Gutters and downspouts should be checked every few months when leaf fall is heavy and during rain events. Through regular building condition assessments, you can spot the damage and address it before it spreads and becomes a major repair. The following pictures are examples of the early stages of impending building damage.

## PITCHED ROOFS



Flaking paint



Vegetation in gutter



Leaves collecting in valley



Gutter overflow

## FLAT ROOFS



Vegetation around scupper



Water ponding on roof near drain

## DAMAGED/INEFFECTIVE DOWNSPOUTS



Downspout rusting



Water not being drawn away from building



Downspout extensions can help move water further away from the building.

These quick tips can help ensure your gutters are functioning properly:

1. Conduct regular inspections and cleaning of gutters, internal drains, and downspouts, especially after a significant rainstorm or wind event. Look for leaves, branches and other debris around drains and scuppers that can prohibit water flow.
2. Cut trees away from the roof by at least three feet and trim them regularly to avoid excess leaves clogging the gutters and drainage system.
3. Check gutters and downspouts to make sure they are securely fastened to the building, are not leaking and that water moves freely through them. Look for stains, corrosion, loose fittings, separation along the seams and any other damage. Separations can be fixed by resealing, but rust or other corrosion will require replacement.
4. Use hurricane straps to secure gutters and downspouts in high wind areas.
5. Remove any mold or mildew on the gutters by washing with a bleach to water combination of 1:3.
6. Check that water flows away from the building. Over time, sagging gutters can change the pitch and slow down water flow. This will cause gutters to overflow and backflow onto the roof, fascia, and soffit.
7. If your drainage system is falling victim to frequent clogging, consider the installation of commercial gutter guards that act as a barricade against debris and prevents the need for continuous cleaning.<sup>1</sup>

The rain will come. When it does, it is our job to make sure it is drawn away from the building as quickly as possible. Water may seem harmless, but it can slowly break down building materials, if it is allowed to stick around. Through preventative maintenance, we can ensure the building's drainage system is functioning properly. Visual inspections should be in scheduled increments; however, it is important to visually inspect how the gutters perform during a rain event, as well. This will help you identify areas of concern that may have been missed or confirm the effectiveness of repairs that were recently completed. The desired outcome is to have the drainage system work as it was designed and avoid costly repairs in the future.

<sup>1</sup> *7 Tips for Commercial Roof Gutter Maintenance and Repairs*

<https://www.advancedroofing.com/7-tips-for-commercial-roof-gutter-maintenance-and-repairs/>