irwin siegel agency
INSURANCE PROGRAMS & RISK MANAGEMENT

Roof Top Snow Load Safety

Severe pressure can be created with heavy snowfalls and the presence of snow drifting or uneven snow distribution. Excess snow accumulation can act as an insulator which prevents melting; simultaneously increased snow precipitation adds additional weight to the roof. Because of this, it is very important to understand how much snow your roof can support and make sure a plan is in place for proper snow removal.

Some roof structures and materials are more susceptible to snow collapse than others. The geometric characteristics of certain roof types give way to higher snow accumulation and drifting which creates unbalanced loading conditions while other roof types can influence the inclination of snow sliding. Items to consider:

Elevation Differences – Lower roofs accumulate wind blown snow drifts, adding weight.

Metal Panel Roofs – Standing Seam metal panel roofs, when constructed without proper bracing, can lead to collapse as well as Lap Seam metal panel roofs which have been built without proper consideration to the effects of snow drifting.

Poor Drainage – Wood roofs, flat or low sloped steel roofs that have poor drainage do not allow for melted snow to drain, creating added weight due to freezing.Recurring freezing creates an additional burden as the added weight becomes harder to remove.

Ice Dams – An ice dam is ice that has formed at the edge of the roof, inevitably delaying or preventing the snow from draining. Ice dams are formed when melting snow starts to run off but then refreezes at the perimeter, typically at the lowest part of the roof. If the condition continues, the ice can get under the roof shingles, melt, and leak into the interior of the home causing damage to the walls or attic, effecting the insulation. Ice dams can cause mold or cause the paint on the walls to peel or blister. It is very important to remove all possible heat sources from the attic space, including:

- Improperly installed bathroom vent fans
- Heating ducts
- Furnace/water heating equipment in the attic
- Un-insulated recessed lights or un-insulated folding attic stair openings

Along with removing possible heat sources, it is important to ensure that gutters are kept clean, the attic floor insulation is adequate, and that the roof and attic are properly ventilated. Heat tape should be installed where needed. If you do get ice dams, act quickly; if possible, use a roof rake to remove the lowest 4 feet of snow from the roof or place calcium chloride or another ice melt product on the ice. However, if you do not have the proper equipment or personnel to perform either of these actions, it is recommended that you contact a professional to remove the ice dams.

irwin siegel agency
INSURANCE PROGRAMS & RISK MANAGEMENT

Roof Top Snow Load Safety

There are common warning signs to be aware of with wood, metal, and steel constructed buildings that can be detected before collapse which include:

- Increased accumulation of water at non-drainage locations on low slope roofs
- Cracked or split wood
- Cracks in walls/masonry
- Popping or creaking noises
- Severe roof leaks
- Doors and/or windows that can no longer be opened or closed
- Sagging ceiling tiles or boards

It is recommended that a snow removal plan be developed for your site. Make sure to include the following components regarding the roofs:

All roof drains should be fully cleared out, regardless of the type of roof. This will allow melted snow to flow into the drainage system which will in turn reduce the overall weight of snow. Drains should be cleared out by manual removal of snow within the localized area of the drains. This will additionally help to avoid ice accumulation as well which is a contributor to roof collapse.

The most vulnerable roofs should be noted and arrangements for snow removal should be made. This is often done be enlisting the help of a roofing company as they will be able to provide the resources necessary to safely remove the snow. **If hiring a contractor for snow removal, make sure to obtain the appropriate contract and certificate of insurance.**

Roof collapse is a real threat and regular business operations will not be possible if the building becomes severely compromised. By acting now and properly preparing you can greatly reduce the potential of a much bigger disaster.