

To The Point Roof Inspection

Do you know if your roof is leaking? Roofs tend to be ignored until they begin to leak and expensive repairs are required. The key to maintaining a roofing system is through routine inspection and maintenance procedures. A roof should be considered a capital piece of equipment which must be kept functioning properly. A well planned and executed program of inspection and maintenance can anticipate possible problem areas and have them fixed before the intrusion of water causes a serious problem.

Roof Maintenance

A service agreement with the roof installer is the building owner's best choice for routine maintenance procedures. However, building owners can have their own employees conduct the inspection and perform minor maintenance procedures.

It is best to negotiate a robust roof warranty that includes labor costs. Oftentimes, green roofs and solar arrays can negate the warranty. Due diligence must be performed up front before contracts are signed and the work begins.

Roof Inspection Program Basics

To maintain the integrity and longevity of your roof, regular inspections are essential. Here are some key recommendations to ensure thorough and effective evaluations:

- Roof inspections should be conducted semi-annually.
- Spring and fall are preferable so that damage is repaired prior to and following the winter months.
- Inspections should begin inside the building.
- High-risk areas should be examined last.

A complete inspection of a roof should address:

- Building interior
- Building exterior
- Roof membrane
- Roof flashings

Roof inspections should begin with the building interior. Interior water spots on ceiling panels may be caused by actual roof leaks. Lift ceiling tiles and examine the underside of the deck for signs of water intrusion. Water marks on interior surfaces and walls should also be noted.

Inspect the building exterior for signs of settlement of the foundation and walls. Is the top line of the roof level from all angles? Downspouts and conductor heads should be visually examined to ensure that they are clear of debris and not physically damaged. Water stains on exterior walls may be a sign of a clogged gutter or downspout.

The next step in the roof inspection process is to examine the roof membrane. It is helpful to create a roof plan on which you can mark any problem areas for later repair or monitoring. Note the general appearance of the roof. Signs of blisters, alligating, or bare spots on ballasted or gravel roof surfaces should be repaired immediately. Include all roof mounted equipment such as HVAC equipment, ventilation fans, smoke vents, antenna, piping, and cables on your sketch.

Has hail caused signs of impact-related damage that could jeopardize roof covering integrity? A qualified roofing contractor or engineer can verify potential damage.

Is there any evidence of standing water? Look for any debris that has accumulated on the roof such as ladders, paint cans, vegetation, tools, and equipment parts. Inspect the roof drains for obstructions to drainage. Address whether any physical damage has occurred to roof mounted equipment, or roof drainage components.

On all types of roofs unadhered laps and "fishmouths" should be addressed. Any split, tears or punctures in the membrane need to be documented. Note if the membrane is properly adhered to perimeters and flashings. If mechanical fastening is provided make sure the fasteners have not backed out on any spots.

The most attention during the inspection should be spent on roof flashings, where many roof leaks originate. Start with an inspection of the perimeter flashings, being wary of whether the flashing material is appropriately attached at parapet walls. While at the roof perimeter, check the counter flashing for adequate attachment, noting the condition of the parapet wall itself.

Learn More & Connect

For more information on protecting your business, contact your local risk engineer, visit the [Chubb Risk Consulting Library](#), or check out www.chubb.com/engineering.

The last roof area for inspection should be the penetrations in the roof field. This includes roof-mounted equipment, pipes, wiring, and expansion joints. Careful attention to damage caused by dropped tools, worker traffic, and vented liquids or vapors should be applied in these areas.

Be aware of whether new equipment has recently been installed, as it is common for no flashing to be installed when a new AC unit, ventilation fan, or antenna is placed on the roof.

Piping should be supported off of the roof with special supports which allow the piping to expand and contract without causing abrasion to the roof surface. Blocks of wood are not adequate piping supports.

Once the inspection is complete, you should make a list of the conditions noted as suggested in the checklist below, and begin creating a list of repairs to correct any deficiencies.

Resources

ASCE 7-10, www.asce.org/

National Roofing Contractors Association, www.nrca.net/

Insurance Institute for Business and Home Safety, www.disastersafety.org/

Roof Inspection Checklist

Building Address: _____

Inspector: _____ Date: _____

General Observations	Yes	No	N/A
Is the roof in good condition?			
Have any leaks been reported?			
Is there any material that can become airborne during a high-wind event?			
Is there any vegetation on the roof?			
Are roof drains clogged? If yes, describe:			
Is there ponding of water? If yes, describe:			
Are there wires laying on the roof? If yes, where and how many?			
Is there any noticeable physical damage? If yes, where?			
Comments:			

Roof Perimeter	Yes	No	N/A
Are the parapets in good condition?			
Is flashing pulling away from the roof? If yes, where?			
Is gravel evenly distributed across the roof's surface? If no, describe:			
Comments:			

Roof Cover	Yes	No	N/A
Has the roof cover deteriorated? If yes, describe:			
Are there any soft areas? If yes, where?			
Comments:			

Roof Penetrations	Yes	No	N/A
Are there kitchen vent hoods on the roof? If yes, how many? Are they in good condition?			
Is there any grease on the roof?			
Are there skylights on the roof? If yes, are any cracked, broken, or in need of repair?			
Are there roof hatches/smoke vents? If yes, are any cracked, broken, or in need of repair?			
Are there any chimney/flue stacks? If yes, are any cracked, broken, or in need of repair?			
Are there expansion joints? If yes, are any cracked, broken, or in need of repair?			
Comments:			

Rooftop Equipment	Yes	No	N/A
Is there HVAC Equipment on the roof?			
Is equipment secured in a place with no missing screws?			
Are there walkway pads? If yes, are there any missing or need to be added?			
Are there Antennas and lightning rods? If yes, are the wires in good condition and secured in place?			
Are there Satellite dishes? If yes, are they secured adequately in place?			
Are there pipe/conduit supports? If yes, are they in good condition and secured in place?			
Are there chimney/flue stacks? If yes, are they in good condition and secured in place?			

Comments:

Drainage	Yes	No	N/A
Are there internal gutter roof drains? If yes, are they unobstructed and in good condition?			
Are there perimeter gutter roof drains? If yes, are they secured to the building and free of debris?			
Are there scuppers? If yes, are they unobstructed and in good condition?			
Are there gutters? If yes, are they unobstructed and in good condition?			

Comments:

Inside	Yes	No	N/A
Are there active leaks? If yes, how many and where?			
Are there water stains? If yes, how many and where?			
Are there signs of structural distress? If yes, how many and where?			

Comments: