

ROOF INSPECTION CHECKLIST

BACKGROUND

Roof systems can deteriorate from: normal wear; severe weather conditions (e.g., wind and snow loads); building movement (e.g., settlement, material contraction/expansion); and improper design, construction and maintenance.

Any roof repairs not dealt with after the first signs of failure can result in increased damage to the building envelope and interior finishes, and loss of occupant productivity, if damage causes interruption in client services and program delivery. Failure of structural integrity can endanger occupant safety.

PURPOSE

Regular inspection of building roof systems will lead to early detection of roof problems, protection of capital assets, and maintenance of safe working environments for building occupants.

OBJECTIVES

- To determine if the roof system is performing according to its intended function.
- To identify signs of weakness, deterioration or hazard.
- To identify needed repairs.

GENERAL APPROACH

- Inspect exterior for: continuity of roof covering; deterioration of fascias, gutters and soffits; and performance of flashings.
- Inspect interior finishes (ceilings and walls) for signs of water penetration, frost buildup and structural distress.
- Record and report inspection findings.
- Initiate maintenance and repair projects.
- Report any unsafe working conditions or potential system failures immediately to the building owner.

PROCESS

Inspector/ maintenance personnel should to:

- Perform annual formal visual roof inspections when roofs are free of snow and materials, and informal inspections after every severe wind or rain condition.
- Review, learn and follow roof safety procedures, including Fall Prevention and Roof Safety; learn about problem roof conditions and terminologies.
- Before performing a roof inspection, review: past inspection reports and photographs; construction documents; particulars of any repair/maintenance/ replacement, and the most current Roof Inspection Checklist.
- Include non-destructive investigation (e.g., infrared thermography) if moisture infiltration is suspected.
- Include photographs and test data in the report, so that changes in roof condition can be verified, and so that a historic record of roof condition is available to future inspectors.
- Keep and maintain records of all: inspections (including this checklist); test investigations (thermographic readings); and roofing repairs and replacements.
- Develop a maintenance workplan to correct deficient conditions in a timely manner.
- Do not perform any destructive investigation or testing work unless you have coordinated with a roofing contractor for roof repair services. **DO NOT** attempt to repair pre-existing damage or damage that you have caused by yourself
- Monitor the snow loading on roofs. When the snow loading on high risk roof exceeds the usual winter accumulation, steps are to be taken to remove the excess snow. Removal of snow must be done in such a manner as to ensure the safety of maintenance personnel and minimize damage to the roof structure and membrane.

BUILDING IDENTIFICATION

Facility Name: _____

Site Code: _____

Building Name: _____

ID: _____

Roof Section: _____

Roof Age (if known) _____

Inspector _____

Date _____

ROOF DESCRIPTION

ROOF TYPE

- Built up
 Metal
 Polyurethane Foam
 APP Mod. Bitumen
 SBS Mod. Bitumen
 Shingle
 PVC/CPVC
 Slate
 Clay Tile
 Other:

SURFACING TYPE

- Acrylic
 Aluminum
 Ceramic Granules
 Gravel
 Modified Asphalt
 Silicone
 Smooth Uncoated
 Urethane
 Other:

ROOF DECK

- Metal
 Lt Weight Concrete
 Structural Concrete
 Wood
 Other:

ROOF COLOR

- Dark
 Light

PRIMARY DRAINAGE

- Internal Gutter
 Over the edge
 Perimeter Gutter
 Roof Drains
 Other:

SECONDARY DRAINAGE

- Over the edge
 Internal Roof Drains
 Scuppers

ROOF CONDITION

	Extensive	Limited	None
1. Membrane Deterioration			
Blistering – approximate number if yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposed felts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alligatoring, cracking, crumbling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leaking – list number of leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of mineral adhesion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Metal Deterioration			
Loose Screws	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rusted Panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bent or Damaged Panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Missing Panels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loose or Missing Accessories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Clay/Slate Tile and/or Shingles			
Cracked or Damaged Tile or Accessories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Missing Tiles or Accessories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loose or Displaced Tile or Accessories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of coating or granules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Flashing Deterioration			
Membrane-Deteriorating (i.e. mesh exposed, laps/seams open)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal - Rust and pitting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loose or failing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Extensive Limited None

5. Maintenance

Diseased or dying trees that could fall &/or damage the Roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tree Limbs that could touch the Roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Missing Equipment or Vent Covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condensate drains anchored to sleepers and to roof drain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clogged Roof Drains/gutters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ponding Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wires laying on the roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noticeable Physical Damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repairs Needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debris/vegetation on the roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Overall Roof Condition

Poor Fair Good Excellent

7. Water Tightness

No Leaks Leaks with heavy rain Leaks with every rain Periodic leaks

8. Building Interior

Are there water stains on:

walls deck structural elements
 ceilings floor other:

Do structural elements show any of the following:

cracks alteration physical damage
 splits rotting insect damage
 spalling settlement other:

Does the underside of the deck show any of the following:

rusting spalling sagging
 rotting cracks other:

Comment on changes from previous inspections, and overall roof condition. Indicate recommended action of roof repair and/or further assessment, and estimated remaining life expectancy of roof system. Include any photographs and thermography records in this report.

ROOF PLAN AND DETAILS

USE THIS AREA ONLY IF DEFICIENCIES ARE OBSERVED.

Sketch roof plan and/or list problems identified. Include north arrow, the location of the items listed below, approximate dimensions of building, roofing materials, and other relevant items located on the roof. Show changes in roof elevations in a separate sketch.

Identification Code

A – Access Hatch
B – Base Flashing
C – Cap Flashing
D – Roof Drain

E – Expansion Joint Cover
F – Fascia and Gravel Stop
G – Gutter System
H – Vent / Fan Hood
K – Chimney

R – Roof Vent
U – HVAC Unit
J – Flag Pole
W – Ponded Water
P – Parapet or Fire Wall

V – Vent Pipe
L – Ladder
S – Skylight
T – Walkway

GLOSSARY OF ROOFING TERMS USED IN THIS CHECKLIST

Alligatoring	Shrinkage cracking of the bituminous surface of built-up or smooth surface roofing, producing a pattern of deep cracks resembling an alligator hide.	Fascia	The finish member covering the edge or eaves of a flat or sloping roof or roof overhang.
APP	Atactic polypropylene - added to unblown (unoxidized) asphalt to impart plastic characteristics.	Fishmouth	An opening of the lapped edge of applied felt in built-up roofing due to adhesion failure.
Asphalt	A highly viscous hydrocarbon produced from the residuum left after the distillation of petroleum; used as a waterproofing agent of a built-up roof.	Flashing	Connecting devices that seal membrane joints, drains, gravel stops and other places where membrane is interrupted. Base flashing forms the upturned edges of the watertight membrane. Cap or counter flashing shields the exposed edges and joints of the base flashing.
Ballast	An anchoring material (such as rock, gravel, pavers) used to resist wind uplift forces of roof membrane.	Gravel Stop	Flanged device, normally metallic, designed to prevent loose aggregate from washing off roof. It also provides a finished edge detail for built-up roofing assembly.
Bitumen	A generic term for asphalt or coal tar pitch roofing.	High Risk Roof	A roof which scores 15 or greater out of 20 using the Snow Overload Risk Assessment checklist.
Blister	A spongy raised portion of roofing membrane as a result of pressure of entrapped air or water vapour.	Modified Bitumen	Asphalt with the addition of polymer modifiers to increase cold temperature flexibility and warm temperature flow resistance and stability.
Built-up Roofing (BUR)	A continuous, semi-flexible roof covering consisting of laminations or plies of saturated or coated felts alternated with layers of bitumen.	PVC	A generic term for single ply plastic sheet membrane (poly vinyl chloride); seams are fused by solvent or hot-air welding techniques.
Cant Strip	A continuous strip of triangular cross-section, fitted into the angle formed by a structural deck and a wall or other vertical surface, and used to provide gradual transition for base flashing and horizontal roof membrane.	Parapet	The part of the wall entirely above the roof.
Crack	A break in a roofing membrane as a result of flexing, often occurring at a ridge or wrinkle.	Ponding	The collection of water in shallow pools on the roof surface.
EPDM	A synthetic rubber sheet used in single ply roof membrane (ethylene propylene diene monomer).	SBS	Styrene-butadiene-styrene - added to unblown (unoxidized) asphalt to impart rubber characteristics.
Expansion Joint	A deliberate separation of two roof areas to allow expansion and contraction movements of the parts.	Slope	The ratio between the measures of the rise and the horizontal span.
Eaves	The protective overhang at the lower edge of a sloped roof.	Soffit	The finish on the underside of a roof overhang.

Preventive roof maintenance

Proper roof maintenance will:

- increase the life expectancy of your roof
- save you the high cost of roof replacement
- protect your assets from costly damage

For further information, please contact
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