

Owner's Roof Maintenance Guide

Protecting Your Investment in an IB Roof System

Congratulations on your choice of installing an IB Roof Systems Membrane for your application. IB Roof Systems is the best solution for many flat or low-pitched residential and commercial roofing projects and is backed by a leader and veteran in the roofing industry.

With all of our roofing systems, low maintenance was very high on our priority list. Properly installed, IB PVC roofing requires very little in the way of maintenance other than industry-recommended seasonal inspection and general housekeeping / preventative owner care. While this is a key performance benefit of IB membranes versus other types of roofing products, it is important to recognize that modern roof assemblies are made up of many other components and products beyond the roof membrane material. Roofs are only one part of the building envelope and are affected by the performance of other materials, fixtures and equipment present on the roof. Your roof is a major investment in your property and there are simple, inexpensive routine care and maintenance items that, when performed, will allow you to enjoy all of its benefits and have that investment perform to its potential.

Roof installations covered by IB Roof Systems Limited Material and Total System warranties include coverage for the life of the warranty against leaks or loss of water-tightness resulting from defects per their terms and conditions. IB Lifetime Residential Limited, Commercial Limited, and Warranty Plus Limited Material warranties provide coverage against leaks resulting from manufacturing defects in the IB roof membrane. IB Total System warranties cover both material and installation defects in the IB materials as the IB Authorized Applicator is responsible for workmanship and installation defects for the first two years of the warranty period. Upon expiration of this contractor warranty term, the IB Roof Systems Total System warranty covers both material defects and leaks that result from installation deficiencies in the application of the IB roof membrane material for the remaining warranty period.

It will be of benefit for you as the owner to develop a routine roof observation and maintenance program, which can help you avoid problems that could result in costly repairs to your building. The IB Roof Systems membrane installed on your roof is designed to give you excellent performance for years to come. Other building components such as gutters and drains, exterior cladding, roof-mounted equipment, metal work and overburden materials do need routine inspection and maintenance to ensure best performance and protect your roofing investment.

If a leak appears, contact your IB Authorized Applicator and notify IB Roof Systems immediately at 800-426-1626. The terms of your IB Roof Systems warranty requires you to call or report a leak to IB Technical Services at the number above within 5 calendar days of discovering a leak, and to provide written notice within 14 days of the leak occurrence. Notification to the contractor does not constitute notification to IB Roof Systems.

NOTE: IB recommends that a building owner first investigates or has inspected any reported or observed leak by an IB Authorized Applicator or trained building maintenance personnel. Leak investigations are the owner's responsibility and could result in an inspection, repair or service call invoice from IB Roof Systems or the IB Authorized Applicator should leaks be determined as not attributed to the IB single-ply membrane or a condition covered by the IB warranty. An examination of the roof area and associated building components / equipment near the area may be helpful in avoiding unnecessary charges for non roof membrane-related moisture entry such as leaks resulting from maintenance items, rooftop equipment, drain lines, plumbing or HVAC leaks.

In some circumstances, emergency repairs may be needed to prevent accelerated building damage until a full inspection and investigation of a leak can be conducted. Should this occur, a building owner may make reasonable temporary repairs at their sole expense and notify IB Roof Systems the next business day. Emergency repairs must be reasonably controlled and completed with methods and materials compatible with the IB roof membrane so as, in the sole judgement of IB Roof Systems, not to significantly increase the scope or cost of authorized warranty repairs.

A Maintenance Program

Safety Measures

It is the responsibility of the building owner and contractor to protect persons on the roof. OSHA and local safety agencies should be consulted for guidelines on how this should be accomplished. Roof repair can be dangerous, and every precaution should be taken to protect these persons.

Elements of a good Owner's Maintenance Program will vary according to many factors including the size, location, occupancy, use and design of an installed roof assembly. The complexity of any given roof application and variety of other building components integrated into it must be considered in developing an effective approach to maintenance activities. Typical maintenance programs include inspection and preventative care in the following general areas:

- a schedule of periodic / seasonal roof maintenance inspections;
- roof access and repair logs;
- inspection of sealants and caulks;
- drainage;
- parapet walls, copings and metal work;
- building envelope (cladding, fenestration, interior/exterior walls, ceilings, rooftop structures)
- roof tie-ins and expansion joints;
- HVAC units and rooftop equipment;
- general appearance; and
- emergency repair plan and materials.

Inspections

Scheduling regular inspections and assigning them to the right personnel are the first things needed to organize an Owner's Maintenance Program. Visual roof inspections and minor preventative roof maintenance are recommended twice yearly; in the fall before winter weather arrives and inclement weather prevents roof access or correction of minor problems, and again in early spring to assess any damage incurred during winter and before arrival of rainy seasons and increased storm activity. To correct minor problems and damage to the roof before they become a costly repair, additional inspections should occur after every extreme or unusual storm, fires, building damage or additions to the building, significant maintenance work or repairs involving access to or traffic on the roof.

Roof Access and Repair Logs

A roof access log should be maintained to record and manage the activities of other trades and service personnel working on the roof. Any work being conducted such as window washing, equipment or exterior building maintenance, routine service calls, additions or other construction activities involving access to the roof should be logged consistently. Roof traffic and damage from other trades is a common source of roof leaks. These individuals or companies are liable for any damages to your roofing system.

It will also benefit commercial and multi-tenant facilities to have maintenance personnel maintain a repair log with both a roof plan and floorplan pinpointing the locations of observed roof leaks, date of occurrence, general weather conditions, record of notification and inspection dates. This information should be reviewed prior to regular seasonal inspections and will be helpful during investigations of any leak reports or problems.

Sealants

On almost every roof, there is a need to periodically maintain and reseal joints, flashings and protrusions with caulking or sealants. Caulking and sealants are considered owner maintenance items and will not last the life of the roofing system without periodic care. These areas need to be inspected and resealed if necessary with an IB-approved sealant. Review metal work, membrane and flashing terminations, penetrations and other areas where sealants and caulks are present to ensure there are no open cracks or separations allowing water penetration to occur. Deteriorated or

questionable areas should be proactively resealed to avoid the potential for moisture entry.

Drainage

Unrestricted, properly operating drainage outlets and adequate roof drainage on any roof are critical. Your IB roof membrane is designed to resist small puddles and areas of ponded water. However, the weight of retained water can adversely affect your building's health and can, in severe cases, result in loads on the roof exceeding a building's structural design capacity. Ponded areas can also act as a reservoir and significantly worsen moisture infiltration and damage from leaks should they occur; can collect contaminants and support biologic growth; and can significantly reduce roof membrane reflectivity, potentially costing energy savings. Leaks can occur when water levels reach heights above a roof assembly's terminations and flashing heights such as at curbs, walls, equipment penetrations and vents.

Routine inspection and cleaning of drains, scuppers, outlets and gutter systems are essential to maintaining adequate roof drainage and unobstructed pathways for water to be removed from the roof. Inspect drains and outlets frequently as part of regularly scheduled maintenance inspections and during seasonal changes when leaves, ice or snow loads, or other debris may be present.

Parapet Walls, Copings and Metal Work

Parapet walls need to be checked for condition of exposed cladding, deterioration of masonry or concrete surfaces, and water-tightness of installed coping materials. Inspect and reseat all sealant joints and surfacing as needed to maintain a watertight condition. Parapets and other walls extending above the roofline should be inspected for signs of moisture entry, integrity and general condition. Leaks from condensation, moisture and air entry into or through walls can adversely affect your roofing assembly and building structure.

Counterflashings, reglets, storm collars, vent hoods and similar metal work should be reviewed for securement and water-tightness. Sheet metal work, copings, roof edge metal and miscellaneous metal flashing materials should be inspected for signs of wind damage, loss of securement, movement, damage to membrane flashings, corrosion and deteriorated caulking or sealants, as these are considered owner maintenance items. Particular attention should be paid to end joints, laps and corners where metal condition and movement may affect sealants, caulks or membrane terminations.

Building Envelope and Structure

The overall building envelope and structure should be examined to determine if there have been any major visual changes. Inspect exterior surfaces for signs of deterioration, rust, moisture entry, damage from freeze/thaw or thermal exposure, exposure to contaminants and similar evidence of potential problems. These changes, changes in building occupancy or use, may affect the way your roof and building interact with each other. Cracks, open joints, deteriorated cladding or siding, unsealed laps, deteriorated sealant joints/materials at windows and fenestration units; all of these conditions can allow significant moisture and/or moisture-laden air into the building envelope.

The underside of the roof deck, attic spaces, plenums and building interior should be checked for evidence of moisture, deterioration and structural movement including settling or stress on structural and roof deck supports and components. Water stains on beams or interior walls may indicate ongoing moisture entry and should be investigated. Concrete surfaces need to be inspected for spalling and cracking. Structural defects and changes can affect the performance of your roofing system. If present, IB recommends examination by a competent party such as a structural engineer or architect to determine what corrective action may be needed.

Roof Tie-Ins and Expansion Joints

Tie-ins on the roof between dissimilar roofing materials or assemblies must be inspected regularly and maintained in a watertight condition. These areas are outside the scope of coverage of an IB warranty and are the owner's responsibility to maintain. Inspect flashings, metal work, wood curbs or blocking, sealants and caulks used in these areas for evidence of stress, moisture entry or loose materials. Expansion joints should be inspected for physical damage, excessive joint movement and general condition of laps and seams. Counterflashing and metal work should be inspected and repaired if needed.

HVAC Units and Rooftop Equipment

Great care is required for maintenance on rooftop air conditioning units and other equipment where sharp tools, oils, lubricants, caustic chemicals or heavy components are handled or used. Make sure that maintenance personnel avoid placing sharp and/or hazardous objects and incompatible chemicals on the roof. Metal service doors must be properly secured and not left open or loose. Remove old compressors, motors, and other debris or service materials immediately from the roof. Punctures may result from fasteners and screws left on the roof surface.

Where service work involves potential damage to the roof membrane, require service personnel to protect the roof with tarps, plywood and other compatible materials to prevent damage. Ensure air ducts are in good condition with joints and connections properly sealed against moisture. Condensate lines should be maintained in good working order to avoid leaks and back-up. Drainage pans should be inspected for signs of rust and deterioration at seams. Clean all HVAC unit drains, and make sure all panels are secure so as not to allow water penetration.

General Appearance

Inspect the roof surface for signs of unusual deterioration, evidence of contaminants or excessive build-up of dirt and environmental deposits. Keeping the roof free from debris and periodic cleaning as necessary will not only help the general appearance of the roof but avoid future problems. Grease traps, vents and containment systems must be routinely maintained to avoid overflow and contaminant deposit on the roof. Avoid use of incompatible cleaning compounds and high-pressure washers. Contact IB Roof Systems for additional information on cleaning recommendations.

The field of the IB roof membrane and flashings should be checked for signs of physical damage or premature wear. Inspect all overburden materials such as solar racks, walkways and walking decks for flashing condition or signs of damage where bearing on the roof surface. Where snow removal operations have been utilized during winter months, inspect all areas for evidence of damage. Areas of previous roof repairs should be periodically re-inspected to ensure they are in good condition and remain watertight.

Emergency Repairs

The building owner should keep general roof system information, warranty records, and key contact numbers handy for use when leaks occur or emergency repairs are needed. Contact information for the installing IB Authorized Applicator and IB Roof Systems should be kept available when warranty service is needed or questions arise regarding roof system maintenance. Safety during inspection and repair of a roof is critical and must be observed at all times, following all OSHA and applicable safety regulations. Extreme care must be exercised anytime access to the roof is needed or attempted. Particular care must be given to fall protection and avoidance of electrical hazards when setting ladders or working around the roof. Roof surfaces and materials can be slippery even when they appear dry. Particular care should be taken when the roof is wet or frozen.

For additional information and recommendations on implementing your own Owner Maintenance Program, refer to the IB Roof Systems Maintenance brochure available online at www.ibroof.com or contact IB Roof Systems.