FocusOnFACILITIES

Winterizing Your Building

By Howard McKew, P.E., C.P.E.

We are in mid-autumn and know winter will be coming soon, so we have put together a reminder of "things-to-do" in preparing for this coming season. You will find resources mentioned at the end of this column to also help prepare the building for winter.

To begin this pre-winter, walk-around, one should have a checklist developed that he or she can continuously improve upon with routine use. This checklist document can be sorted into the following categories:

- Roof
- Building Foundation
- Exterior Windows and Walls
- Mechanical Systems
- Exterior Lighting
- Walkways

Refer to *FOCUS on FACILITIES* November 2020 Facility Management column titled, Embracing Checklists for Your Job Responsibilities to guide one in getting started with generating a checklist. With this document in-hand one should also bring along a blank preventive maintenance (PM) work order to complete if it is determined further action is needed beyond completing the walk-around checklist. Refer to the Facility Management column titled *What a Preventive Maintenance Work Order Includes?*

Next, in order of inspection priorities, is to visually review the roof. For flat roofs, one can complete the walk-around but if the roof is pitched, consideration should be given to contracting the services of a company experienced with roof inspections, including being able to assess the remaining "useful service life" of the roof.

Roof

- Review flashing at all points on the roof and, in particular, pipe vents penetrating the roof, chimney (both brick and metal) where sheet metal ductwork penetrates the roof, and where the roof abuts another building.
- Inspect skylights that are located in the roof, looking at the condition of the glazing, e.g., double glass thermal seal broken, flashing of skylight with the roof, and caulking around windows.
- Review membrane roofs and shingled roofs for deficiencies.
- Clean gutters or flat roof drains. This is recommended twice per year (end of summer and late fall before snow).

- Clean roof drains on rubber roofs and pebble stone roofs to ensure the primary drain(s) is clear. This is recommended at least twice per year (spring and fall). Secondary drain pipes may exist or a through-wall scupper and this should be checked too.

- Clean downspouts, gutters and underground to ensure clear and functioning.

Exterior Foundation

The next priority should be a review of the building foundation to confirm and document known water leaks into the basement, as well as check for potential future water leaks. Tasks to be looked at are:

- Review masonry conditions for cracks in joints, block, stone, or brick.

- Do roof drain downspouts extend away from the building perimeter approximately 3 feet or more to drain the water away?

- Review mulch and exterior grade and to confirm soil pitches away from the building versus pitching towards the building that can result in water draining towards the perimeter foundation.

- Review that there is a minimum of 8" height, from grade up to the exterior siding, around the perimeter to ensure the siding is not located right on grade to avoid easy access for bugs.

- Inspect the condition of caulking that could result in a potential water leak in the near future. Note: life expectancy of caulking is said to be 7-10 years.

Exterior Windows and Walls

The building exterior windows and walls should be inspected. Tasks to be looked at are:

- Inspect flashing over windows and doors and caulking to prevent water leakage.

- Check that operable windows function as originally intended, e.g., close tight to avoid winter cold outdoor air and/or water infiltration.

- Review siding is not missing or areas where it needs re-secured to avoid water penetrating into the building.

Mechanical Systems

The plumbing and heating systems should be reviewed, including the following tasks:

- Winterize exterior plumbing water spigot by draining the line and leaving the valve partially open to prevent freezing.

- Shut off water to outdoor lawn sprinkler system and, using compressed air, blow out underground pipe distribution lawn system.

- Inspect central air-handling units with outdoor air intake louvers to make sure the associated damper closes when the unit is off.

- Test the freeze-stat upstream of pre-heat/heating coil with an ice cube to observe the unit shutting down when sensing the cold on its capillary tubing to protect the coil from freezing.

Exterior Lighting

Winterizing the building should also include checking the exterior lights, particularly if there are parking lot lights. As we all know, it gets dark earlier in the winter and lights should be checked to make sure they function for safety reasons. If the fixtures have light sensors, then this will require someone verifying the light fixture lights up automatically with darkness arriving.

Walkways

De-icing granular and/or sand should be located for ease of distribution adjacent to walkways and steps. In addition, 6-foot high, sidewalk and driveway snow stakes with orange reflective fiberglass stakes should be in place before the first snow fall.

Other winterizing tips can be found in past FOCUS on FACILITIES columns in preparing for the winter at your building:

Facility Management:

Getting The Heating System Ready For The Cold Weather

What Goes on Behind Making Building Entrances Safe

Air-Handling Units With Freeze-Stat Protection Problems

Fall Cleanup In Your Equipment Room

Completing An Infrared Building Exterior Survey

Surveying the Parking Lots

Surveying Exterior Structure

Preventive Maintenance of Roofs

Preventive Maintenance of Parking Lots

Asset Management:

Repairing Parking Lots and Sidewalks Before Winter

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