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Interior Structural Items and Outside Areas– You Can Do It Series

Michigan State University Extension Service

Susan Mireley, Human Environment and Design; Don D. Jones, Agricultural Engineering

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Interior Structural Items and Outside Areas

Attics

- ~ Check underside of roof sheathing for water stains, a good indication of roof leaks (fall and spring).
- ~ Inspect joints between roof and chimney and other projections through the sheathing (spring). Re-flash if necessary and seal leaks with caulk or asphalt roofing cement.
- ~ Check to see that insulation is not blocking soffit vents (fall). Reposition misplaced insulation so it extends only over the exterior top plate, and wedge a baffle in the space between the top plate and the underside of the roof sheathing, if necessary, to provide an open passageway. This will insure that air can circulate into the attic and thus prevent moisture from building up in this area (see Figure 1).

- ~ Check to see that insulation remains at least 3 inches away from all recessed ceiling lights (fall). Covering recessed ceiling lights with insulation results in heat build-up which can cause fires (see Figure 2).
- ~ Check to see that attic vents, such as gable, roof, or soffit vents, are open (spring), in good condition, and that protective screens covering the vents are secure and in good condition (fall and spring). Power vents, in particular, should be checked at least twice a year to make sure they are operating.
- ~ Inspect all ducts, such as air conditioning ducts (spring), heating ducts (fall), or exhaust fan ducts,

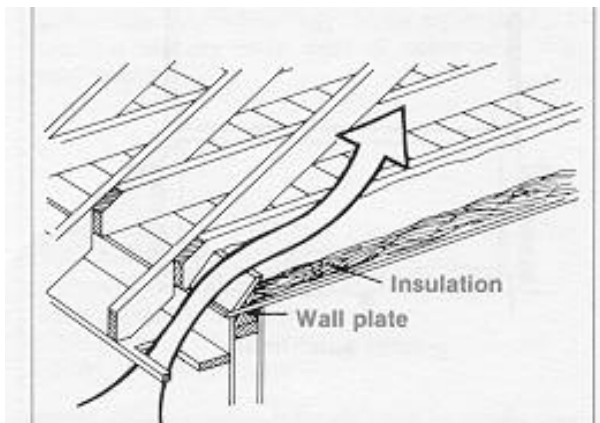


Figure 1. Insulation should cover wall plate but not be jammed against roof boards. Baffles allow air to circulate into the attic from soffit vents, preventing moisture build-up in the attic. Courtesy of Owens-Corning Fiberglas Corporation.

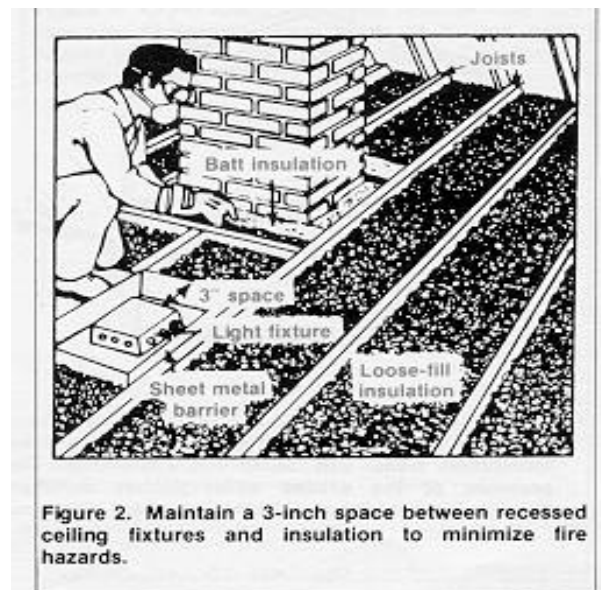


Figure 2. Maintain a 3-inch space between recessed ceiling fixtures and insulation to minimize fire hazards.

to be sure that joints are secure. If leaks are evident, rejoin sections and hold in place with duct tape.

~ Check any exposed electrical wiring to be sure its insulation covering is in good condition (fall). If wear or damage is evident, contact a professional electrician. If fuses blow often, damaged electrical wiring insulation may be the cause.

Note: If attic does not have a finished floor surface, carefully step and move only on the joists; a misplaced foot can easily go through the ceiling.

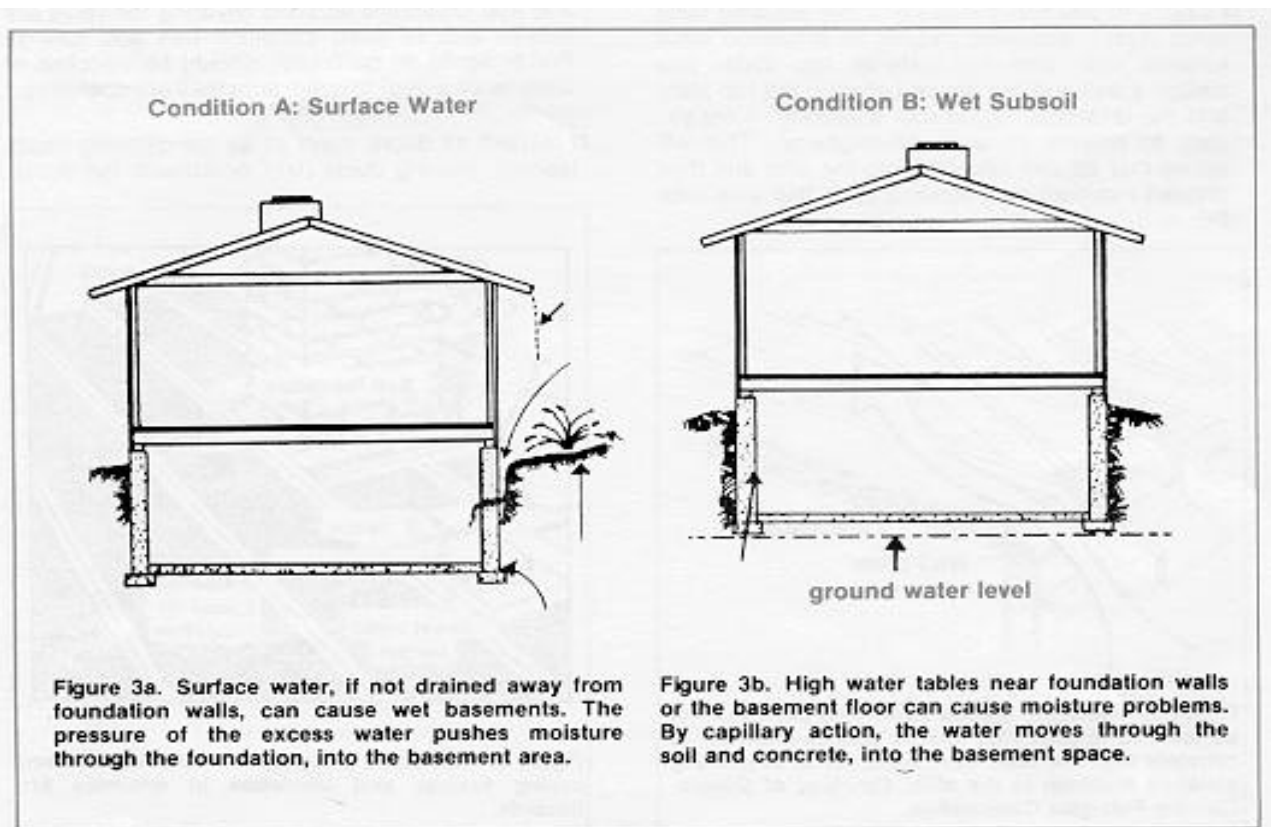
Foundations

~ Check exterior and interior sides of foundation walls and the basement floor for cracks (spring and fall). If located, determine the source of the problem and repair to prevent water seepage. Cracks can be caused by exterior water placing pressure on the walls or floors, by soil settlement under the foundation footing, by expansion or contraction due to weather changes, or by the use of poor quality mortar in the mortar joints. Repairs should probably be done by a professional.

~ Inspect basement and crawl space walls and floors for signs of dampness or water stains (spring). Determine the source of the problem. Moisture problems can be caused by

condensation, by exterior water pressure forcing moisture through walls/floors, or by high water tables. Condensation can be controlled by lowering humidity levels in the basement/crawl space. Use an electric dehumidifier or vent the basement at night when outside air is cool and dry. Water pressure and water table problems may require help from a professional. They can be minimized, however, by controlling the amount of water collecting around the foundation. Proper gutter and downspout construction and grading the area around the house so it slopes gently away in all directions should help (see Figures 3a and 3b).

~ Inspect exposed wooden support members and floor framing for rot/decay, termites, and other damage from wood-destroying pests (fall). Check bases and areas where wooden members contact the foundation. If rot or decay is in the early stages, the area should be kept dry to prevent further damage. If members are weakened by rot, they should be replaced by materials treated with a wood preservative after the source of the problem is eliminated. This is a job for a professional. If structural members have been damaged by termites/pests, contact a professional to have the area chemically treated with an insecticide. (Note: Michigan code now requires that treated wood be used in areas where wood and concrete are in contact.)



~ Check vents in the crawl space to make sure that the screen or wire mesh covering is secure and in good repair (see Figure 4). Close vents in winter and stuff extra insulation into the vent opening area; remove the insulation and open the vents in early spring (fall and spring). (Note: Opening the vents in the spring is absolutely necessary to provide needed ventilation to the crawl space).

~ Inspect plastic vapor barrier on crawl space floor to be sure that overlapped seams are sealed and that no holes are apparent. If necessary, repair with duct tape.

Driveways, Walks, Steps, and Other Exterior Areas

~ Check to see that the ground slopes away from the foundation on all sides (spring). A slope of 6 inches in 10 feet should be adequate (see Figures 3a and 3b). Fill low places or pockets where water could collect. When adding fill, maintain a distance of 8 inches between the exterior grade level and the bottom course of wood or metal siding.

~ Clean basement window wells of leaves and other debris to help rain water filter rapidly into the soil, preventing it from backing up and entering the basement (spring).

~ Inspect concrete areas for cracks (spring). To prevent water from soaking through the cracks, freezing, and causing greater damage, repair small cracks with grout or concrete-based ready mix (color change will probably be noticeable); repair larger cracks with patching mortar.

~ Inspect asphalt surfaces for cracks or holes (spring). Fill cracks with asphalt crack filler and seal the surface with water and chemical resistant sealer (this procedure may cause steep drives to become slippery when wet); fill holes with "cold mix" asphalt.

~ Check wooden or concrete steps for cracked, chipped, broken, or uneven sections, especially dimensional variations in concrete step risers (spring). New wooden sections or concrete repairs may be necessary.

~ During winter months, if thin layers of ice cannot be removed, use "kitty litter" or sand for traction. Avoid salt as it tends to pit and damage concrete (winter).

~ Check the slope of paved or asphalted areas (spring). If uneven settlement has occurred and the area slopes toward the house, water running off these surfaces can collect near the foundation and cause basement/crawl space moisture problems. The area may need to be completely rehabilitated, preferably by a professional.

Checklist prepared by Susan Mireley, Extension Housing Specialist, Dept. of Human Environment and Design, Michigan State University, and Don D. Jones, Extension Agricultural Engineer, Dept. of Agricultural Engineering, Purdue University.

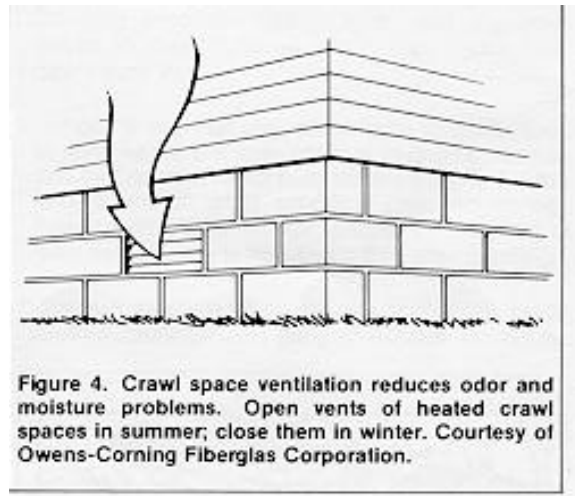


Figure 4. Crawl space ventilation reduces odor and moisture problems. Open vents of heated crawl spaces in summer; close them in winter. Courtesy of Owens-Corning Fiberglas Corporation.

Other Publications in the "You Can Do It, Too" Home Maintenance Checklist Series:

- E-2090 Structural Components of a Home
- E-2091 Exterior Structural Items
- E-2093 Space Conditioning Systems
- E-2094 Plumbing Systems



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