LEWIS HOME INSPECTION

LHI

WET BASEMENTS
AND
CRAWL AREAS

Reference Guide

AMERICAN SOCIETY OF HOME INSPECTORS

ASHI®

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BASEMENT MAINTENANCE

BASEMENT WALLS

Basement walls are constructed out of several materials such as poured concrete, cinder block, stone, and occasionally wood. One common problem associated with basement walls is moisture penetration.

WATER PENETRATION

According to the American Society of Home Inspectors (ASHI) approximately 60 percent of all basements in this country suffer from some form of below ground wetness. Block foundations are especially vulnerable, with an 80 to 90 percent chance of leakage within the first 20 years". It is estimated that ***98 percent of all basements will leak at some point*** during their life. It is rare that water penetration will cause structural damage, but a wet basement can be a major inconvenience causing damage to interior finishes or personal items.

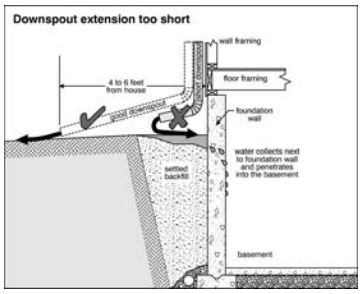
Moisture problems in a home can be intermittent - leaking after every rain or, occurring only after heavy rain. Still, some homes may only leak during wind driven rains or during a spring thaw. In most cases, the damage that is caused gives no indication of frequency.

It is estimated that 90 percent of all wet basement problems are caused by surface water (rain or snow) collecting around the building. Before investing thousands of dollars on a waterproofing system, it makes sense to get the water flowing away from the home first.

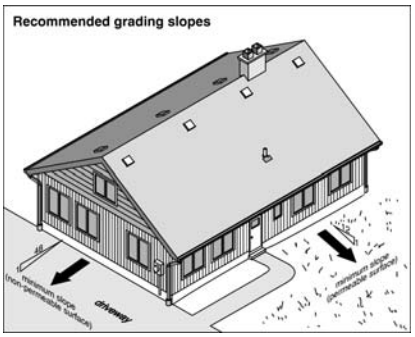
KEEP YOUR BASEMENT OR CRAWL AREA DRY!

Gutters and downspouts play an important role in diverting water away from the building.

- Clean the gutters and downspouts in the spring and fall (or as needed).
- Make sure that the gutters drain and are sloped towards the downspouts.



- Be sure the downspouts are extended well away from the foundation (4 to 6 feet is usually adequate).



Improper grading around a home can be another factor in a wet basement. Re-grading the exterior landscaping to direct water away from the building rather than towards it, can be another effective solution to moisture problems. Ideally, the ground should slope down and away from the home at a rate of one inch per foot for the first six feet of soil.

CRAWL SPACES

Any area under a home with less than full headroom is called a crawl space. According to many codes, there must be at least eighteen inches of clearance between the bottom of the floor joists and the ground and twelve inches under beams.

Crawl spaces should be dry. The crawl space floor should be protected against moisture entry with a vapor barrier. Plastic sheeting, felt paper, or concrete are common materials used. Proper steps should be taken to allow ventilation within the crawl space.

Typically, one square foot of ventilation per 1500 square feet of crawl floor is adequate, provided a vapor barrier has been installed. If a vapor barrier is not present, one square foot of ventilation per 500 square feet of crawl is suggested. Good ventilation and a vapor barrier will significantly reduce the moisture levels in the crawl space. It also reduces the likelihood of structural damage, pest infestations, and a musty odor in your home.

- Periodically inspect the crawl space for signs of moisture.
- Open the crawl vents in the warmer months.
- Close the crawl vents in the winter months.

BEAMS & COLUMNS

The purpose of a support beam is to carry the weight of the floor and walls horizontally to the foundation or columns. Typical materials for support beams are steel, wood, or laminated plywood. Steel beams can be much stronger than wood and are much more resistant to rot and insect and mechanical damage. Steel beams should rest on steel or masonry columns. The newer, laminated plywood beams can be stronger than the solid wood type. These beams are lighter and less expensive than steel beams. Wood beams can rest on wood columns.

The purpose of a support column is to carry the weight of a beam down to a footing. Typical materials for support columns are steel, brick, concrete block or wood. Every support column should have a concrete footing underneath that compacts well causes water to run across its surface. This is the preferred material to use.

- Periodically inspect the soil around the perimeter of your home making sure that water is sloped away from the foundation.
- Any abnormal slanting, sloping or leaning of your floors, walls, or ceilings should be promptly investigated.
- Periodically inspect wood beams or columns for moisture damage, pest infestation or warping (especially in crawl spaces).