

Moisture-Proofing

When it comes to aggravation and pure psychic pain, water leaks into the home are almost unmatched by any other problem—even foundation movement. Preventing leaks before they occur is inexpensive; stopping them afterwards can be difficult and costly.

As in so many aspects of the well-built home, good design is the key to water-tightness, and the cost is small when compared to the benefit. Design concepts and construction elements to consider for a worry-free, water-free home include:

- Windows protected by wide roof overhangs wherever possible. Windows and doors should be the last line of defense in keeping water out—after all other means have been taken to direct flow away from those openings.
- Double-glazed (or even triple-glazed in some areas) windows, with thermal breaks at frames and sashes, to prevent condensation.
- Simple rooflines, with as few valley gutters as possible. The best design is almost always a single slope, 4:12 or greater pitch. Next is a simple gabled roof, peaked at the ridge. Dormers, valley gutters and skylights are asking for trouble.
- A moisture barrier, such as Tyvek, installed over exterior wall sheathing with as few penetrations as possible. Laps and penetrations should be flashed or taped with the barrier manufacturer's recommended product.
- Properly designed and installed flashings around windows and doors and at roof abutments (chimneys, vertical walls, etc).
- Regularly spaced weep holes in all masonry wall systems, properly flashed and free to drain.
- Avoidance of below-grade living spaces. Where this is not possible, use of a properly designed French drain system and positive side waterproofing to prevent moisture migration through the walls and floors.
- Proper site drainage conducting both surface water and downspout runoff away from the foundation of the home.
- Maintenance of positive pressure conditioned air inside the home. This helps prevent the migration of water through random small openings in flashings and other barriers.
- Proper caulking, including the use of backer rod, at all exterior walls where changes in materials occur (between window frames and masonry for example) and at expansion joints. Regular re-caulking of these joints.

Prospective buyers of custom-designed and -built homes should consider retaining the services of a qualified consultant to review plans and monitor construction to insure the best possible waterproofing results in their new home. The old adage "A pound of prevention is worth a pound of cure" was never more true than when applied to protecting a home from unwanted moisture.



Waterproofing should be the last thing cut in your construction budget.