

The Hardine's universal design home, part II

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The Hardine home is a perfect example of building for [long term accessibility](#). From the garage door inward, all facets of this one story English country cottage-style home have been carefully considered.

Richard, who uses a wheelchair because of progressive muscular weakness as a result of polio, gave me a tour of the home he shares with his wife Karen. He rolled to the walk-in garage door, opened it and the resident black Labrador retriever, Sam, galloped out and across the yard. Richard pointed out the absence of a raised threshold. "All five doors are at grade," he said, which means that a wheelchair rolls easily into the garage or in and out of the other doors that are all connected with a level brick walkway. Properly engineered slopes and 18 inches of flashing prevent water problems. Levered handles instead of knobs on the doors make for easy opening. It also means that Sam has mastered door opening and can let himself in and out.

A carpeted path extends from the entry door of the garage to the inner door. This carpet absorbs water and prevents slipping. It eases the transfer from wheelchair to vehicle and vehicle to wheelchair. One end of the garage accommodates Richard's workshop which has a lowered work bench and scaled down tools for easier handling. The home's central vacuum system's canister, as well as the water conditioner, are also in the garage allowing Richard access to them. The washer and dryer are just inside the door as well as a fold-down ironing board, "should Karen ever allow me to iron," laughed Richard.

A roll-in pantry, just off the kitchen, stores staples on open shelves with those Richard is more inclined to use on the lower ones. Both Richard and Karen love to cook. He appreciates the lower part of the dual height counter top and the small prep sink of the room's island when he's slicing and dicing vegetables for Asian dishes the couple enjoy. The buff colored family cat, one of three resident felines, also likes the small sink and positions itself in the cozy basin as the sun tracks across the kitchen. An indented space under the main sink allows Richard to roll up close. A toaster on a pull out shelf and a bread drawer make for quick breakfasts.

Richard preferred an oven with a door on the side rather than the front. Karen insisted on a conventional oven door, all but impossible for Richard to negotiate from his wheelchair. He consoles himself with the fact that he never has to take a turn at oven-cleaning. The black counter tops and knobs on white cabinets are key components in a universally designed home. The color contrast allows for greater visibility.

Lower light switches and higher electric outlets throughout the house make for easier use as do three-foot wide doors, four-foot hallways and additional space to maneuver. Roll out shelves make storage a breeze from kitchen to office.

"The Brazilian cherry floors with a baked on aluminum oxide finish are 2 1/2 times harder than maple," Richard says. The invisible finish makes them resistant to dog paws as well as wheelchairs.

The selection of durable materials is only one consideration of a well thought out design. "All universal design features develop with each client as we establish the needs," says Paul Ringdahl. An Alexandria architect with decades of experience, Paul collaborated with Richard on the design of the Hardine's home. Paul's association with Richard, as well as an upsurge in aging baby boomers building homes they can live in the rest of their lives, inspired both to follow seven principles of universal design. These include

Equitable use

Flexibility

Simple and intuitive

Minimizes hazards

Requires low physical effort

Wheelchair-sized and spaced

"Each design for each person needs to be customized for their strengths and weakness," says Richard.

While offering the utmost in accessibility, the Hardine home hasn't given up character or style in exchange for usability. Nor was it a costly alternative to a

conventional home. Richard says a new custom home is more economical than remodeling and adding adaptive features to an existing home. Paul agrees.

There really is no net add to the cost, just a difference in design. It's much harder to fix later rather than building for accessibility in the first place. You can't make hallways wider. You have to take space from one area to adapt another.

Next time: a few things to consider when building your retirement home.