

GREEN TECH THE SERIES COLUMN FOR NOVEMBER 16, 2016  
HEADLINE: BLENDING GREEN BENEFITS WITH AGING IN PLACE

Some years ago, about eight if memory serves, I was involved in the design and construction of a senior, low income townhouse project that, once completed, was awarded a green-house certification. As it was my first involvement with building a residence where the occupants were both aging and experiencing some related disabilities, I took a course on this subject and came away with an appreciation as to what helps make living at home for seniors and the disabled both respectable and functional. The course was offered by CMHC and was well worth the money.

With the aging portion of our population becoming a huge factor, I am not surprised that a number of readers have requested a “check list of sorts” to help with, not only new homes, but renovating for parents who are now going to be living with them due to aging or disabilities. One of the benefits of our modern internet/I-phone technology, is that it allows us to integrate a lot of the available features into an existing home.

Start with recommendations for the overall design and exterior of the home, the first and foremost design requirement is a zero threshold entrance, allowing a walker or wheelchair clear access. Single storey is the only design to be considered and, if at all possible, build the home on a pad with in-floor radiant heating. The exterior should be finished with as close to zero maintenance as possible, with landscaping kept to shrubs and trees like cedar or spruce; no leaves to rake up. Any flower display should be kept to window boxes with clear access or knee high planters, located near the entrance of the home; even then these should be kept to a minimum. Lawn maintenance can be contracted with snow plowing/shoveling included. This service is one of the fastest growing service businesses in Canada right now. That however can be costly, so the smaller the lot the better.

With an “at grade” home, the private back yard patio can be larger and level with the rear of the home, as well. Designing a pergola over a patio, with a correctly angled roof frame, allows quiet outside comfort. This design will keep out mid-day sun, but still allow the daylight in; location here is paramount to comfortable use. A pergola could have a retractable roof installed, but this adds significant cost and maintenance. A garage should be attached and designed a little wider to allow clear and unobstructed exit from the car. Having floor bumpers installed to offer some chance of stopping or slowing the car down in

case the driver's reaction time is slow is worth considering. There is one company that offers such a product made of recycled rubber, go to [www.trafficsafetystore.com](http://www.trafficsafetystore.com) for more information.

Inside the home there are a number of features that can make occupancy safe and comfortable. First off, use as much of an open concept floor plan as possible and consider the "turn space" needed for a wheel chair or walker. "Sun tunnels" were incorporated into the building I worked on and they were raved about by the occupants. Strategically located, they offer constant natural light in hallways, bathrooms and even kitchen/dining areas. Next, overall access is primary for a new home or renovation. All door openings should be no less than 36" and all door handles fitted with the lever style handles. In fact, all homes should have these. They are code in BC.

When the wiring is being done, lower the light switches and make them backlighted. Motion sensors lights in strategic areas like hallways and bathrooms are readily available at reasonable cost today. Controls for thermostats and the use of the green plug concept with the main switch at the bedside are ideas worth considering. This would allow seniors to turn one switch on and have a number of strategically located lights activate for safety. The use of pocket, accordion, bi-fold and sliding doors allows the occupant easier access to rooms and closets.

The two areas that were concentrated on during my CMHC course were the bathroom and kitchen. Install a shower with a "curb" lip floor that allows a wheelchair or walker easy access. This is best done with a tile wall and floor. Back the shower walls with  $\frac{3}{4}$ " plywood so grab bars can be located and changed as needed for occupant safety. Hand held shower wands should be used and a bench should be installed. Vanities should be lower, taps should be motion activated and of the temperature controlled style. Toilets should be the elongated, raised style. Handrails should be located on both sides, bolted to the floor and wall behind the toilet. Motion lights in both the bathroom and in the actual shower area. A wall cabinet to the side of the vanity, installed at proper height for easy access to medications is also a good idea.

In the kitchen, service levels are the primary consideration. All appliances, like the microwave and oven, should be designed at service height. The drawer style dishwasher is worth considering, as it is a lot easier to load and close. The cabinet in the front of the sink should fold out to the side allowing a wheelchair or walker closer access. They could have doors for cosmetic effect, only. Upper cabinets should be open shelves so that seniors can see where everything is. They should also be lowered to occupancy service height. Under cabinet lighting is also a good

feature. Islands are a pain for disabled access; however a peninsula works well for both serving and eating.

The single most important feature I would add to any kitchen in a home occupied by a senior or disabled person is a stove fire suppressant. While I have not seen one of these in action, the reports I got were excellent. One of these is called "stove top fire stop" and it's sold in Canada by a company in Vancouver called "Kitchen Fire." Their web site is [www.kitchenfire.ca](http://www.kitchenfire.ca). Guardian also makes one for home use. Up to 45% of all home fires start in the kitchen. When a senior is involved, that number ratchets up to nearly 80%. This is a really worthwhile option for both new and renovated kitchens. With this in mind, obviously, fire extinguishers, carbon monoxide and smoke detectors are top priority, as in any home.

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