BUYING • SELLING • RENTING • BUILDING

# Homes

www.startribune.com/homes | Star Tribune | Saturday, March 5, 2005 • Section H

**HOME OF THE MONTH** | A HOUSE BUILT FOR A LONG, HEALTHY LIFE TOGETHER

## With accessibility in mind, a Minneapolis couple spent five years planning just the right house and another 1½ years building it in just the right spot in the Bryn Mawr neighborhood.

Provided by Andrea Rugg Photography

**Barb and Hans Gasterland's Minneapolis house was designed to accommodate people of all abilities, including someone who uses a wheelchair; note the reduced-height countertops and easy-to-reach outlet and light switches. This is their combination living room, kitchen and dining room — a compact space that gains visual openness because it receives lots of natural light. To the left is a pocket door with window that opens into Barb's office.**

# Just the right place for life's possibilities

By Jim Buchta
*Star Tribune Staff Writer*

**Baby boomers beware:** You're getting older, and you'd better start thinking about the days when you won't be able jump around like a teenager. Yes, there will come a time when you'll sleep on the couch because you don't want to climb the stairs. There will come a time when turning a doorknob will feel like squeezing a porcupine. And there will come a time when your wheelchair won't fit through the bathroom door.

Hans and Barb Gasterland anticipated all of those possibilities when they built their new house, which has an elevator, wide doorways and lever-style door handles.

Old age wasn't the only motivation, however.

Barb has a degenerative joint disease and knows that someday she could be in a wheelchair. She also has multiple chemical sensitivities. So when they started considering ways of making their south Minneapolis house safer and more accessible, they decided to start from scratch and build a new house.

That was seven years ago.

Planning the project took five years, and building it took another 1½ years after finding just the right spot, a suburban-size double lot that backs up to a wooded knoll in Bassett's Creek Park in a quiet corner of Minneapolis' Bryn Mawr neighborhood.

**HOME continues on H8:**
*— Accessibility, healthy air were owners' highest priorities.*

Bruce Bisping/Star Tribune

**Even the gardens are accessible, including this raised concrete planter, one of several raised beds that are easy to reach for someone using a wheelchair. Landscape designer Cole Burrell helped design these features.**

"This idea of the exterior and the interior coming together is something that cheered them both. Some accessible houses make you feel detached from the yard space around it. This feeling of being integrated was one of the primary forces of the project."

**Architect**
**Rosemary McMonigal**

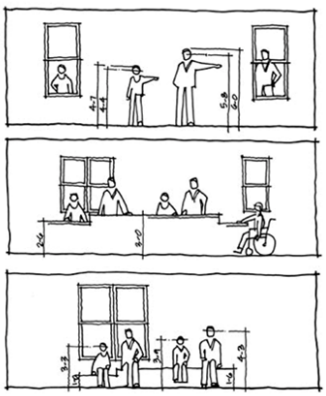


Illustration provided by architect Rosemary McMonigal

**Thoughtful design takes into account how everyone will use the house.**

## The Gasterland Plan

### Accessibility

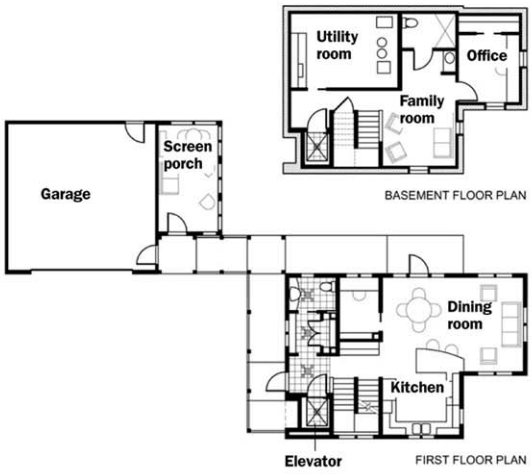
➤ Make doorways 36 inches wide with 18 inches clearance to the side so you can open them if you're in a wheelchair.
➤ Use space-saving sliding pocket doors in hallways.
➤ Elevators allow you to build multilevel houses on small lots.
➤ Thresholds between rooms should be no more than a half-inch.
➤ Use lever-style door handles instead of hard-to-grab handles.
➤ Use bathroom grab bars that are attractive and can double as towel bars.
➤ Put light switches and outlets in easy-to-reach places like the front of the counters.
➤ Lower the counters and create space under the counters and sinks for wheelchairs.

### Healthy air

➤ Don't use carpet. Solid-surface floors are easier to clean and not as hospitable to dust mites and other nasty things.
➤ An air-to-air heat exchanger brings fresh air into the house.
➤ A detached garage eliminates the risk that exhaust and other smells will make their way into the house.
➤ No natural gas appliances — electric only.

### Make a small house feel larger

➤ Add natural light. Installing windows on two sides of each room helps strengthen the connection to the outdoors.
➤ Create openness between the rooms and make the rooms flow easily from one another without wasting space with hallways.
➤ Add an open stairway that strengthens the connection between the two floors.
➤ Add an outdoor room.
➤ Finish the basement. Add egress windows and use that extra space.



Photos provided by Andrea Rugg Photography

**In the owners' bath: Two counter heights make it easy for everyone to use; there's also a large roll-in shower.**

**HOME from H1**

# *Owners' highest priorities were accessibility and healthy air*

It was a perfect fit for this urban, nature-loving couple.

Barb is a certified master gardener, so the front yard is covered by a field of low-maintenance prairie plants that attract wildlife and admiring passersby. In the back yard is an elevated concrete planter along one side of a concrete patio and a row of elevated plant beds made of metal watering troughs along the other side.

There's nary a noise from the city, but you know that the city skyline is just above the treetops.

That's what captured Hans' heart the first time he walked the land. "I got onto the hill and I could hear the water whistling and I knew that I just had to buy this; it was pure magic," he said.

Their diamond-in-the-rough double lot and a house next door had been owned by a family that used the property for storage.

"It was a neighborhood eyesore" that residents were happy to see cleaned up, Hans said.

To honor the natural surroundings and the simple lines of neighborhood houses, the Gasterlands favored a style that would mimic the charm and simplicity of the farmhouses on the outskirts of the small Wisconsin town where Barb grew up. But their highest priorities were accessibility and healthy air.

After interviewing several architects, they hired Rosemary McMonigal, who was sensitive to their priorities and willing to help find solutions to their many design and building challenges.

For nearly two years, they worked with McMonigal and Texas-based environmental consultant Mary Oetzel, testing hundreds of building materials, products and finishes to make sure that Barb could tolerate them once they were installed. When something didn't work, they searched for alternatives. Still, there were no guarantees, and sometimes the choices weren't obvious.

The Gasterlands, for example, considered using water-based paints, which are supposed to be less toxic than petroleum-based solvents. But they discovered that some of the most volatile oil-based paints and primers were a better choice because they did most of their off-gassing right after application.

They used a water-based finish on their hardwood floors but found that the one they used wasn't durable enough. They realized that they could have used a tougher oil-based finish because construction delays would have provided enough time for the irritating fumes to dissipate.

And sometimes, when good alternatives to highly toxic products weren't available, they had to weigh the risks of not using the product. They decided to use a toxic waterproofing on the exterior of the basement walls, for example, to protect them from water leaks and mold growth that were much more likely to cause a problem than the application of the waterproofing.

"You can never eliminate, you can only reduce," Hans said. "You just have to do the best you can."

The goal was to make the house accessible to people of all abilities, but without looking that way. McMonigal started at the front entrance. Instead of a stairway and a ramp that could look out of place, there's an inconspicuous concrete ramp that rises up to the front door under a covered porch. Wheeling right into the front door is easy because there's no abrupt transition between the ramp and the foyer. Inside that foyer, there's an open stairway to the basement and second floor, but there's also an elevator behind what looks like a traditional hall closet so that everyone can enter the house through the same door.

## Resources

- "Healthy House Building" by John Bower. Published by the Healthy House Institute.
- Building Science Corp. is a Massachusetts-based company that provides research, guidelines and links to related to the latest building technology. Go to www.buildingscience.com.
- Building Knowledge Companies in Minneapolis, www.buildingknowledge.net, and Shelter Supply in Lakeville, www.sheltersupply.com, can provide information about a variety of products and materials for building healthier houses.
- Human Ecology Action League (HEAL) is an Atlanta-based nonprofit group that provides information and resources for people concerned about chemical sensitivities and other environmental exposures. For more information, go to http://members.aol.com/HEALNatnl/index.html.

Provided by Andrea Rugg Photography

**An elevator opens into a foyer that's large enough for a person in a wheelchair to turn around.**

**Accessible features aren't always obvious. 1. A pull-out step below the sink. 2. Easy-access oven. 3. Easy-to-reach appliance garage. 4. Easy-reach outlets and light switches at a reduced-height counter. 5. Roll-under countertop.**

**HOME from H9**

Incorporating all of these features into the house does cost a bit more. Exactly how much more, though, is hard to calculate. That's why McMonigal kept the house smaller than many new houses today.

The house has about 2,100 finished square feet on three levels, including a small office for Barb, an open living room, dining room, powder room and kitchen on the main level. Downstairs, there's a laundry room, family room, full bath and an office for Hans. Upstairs, there are two bedrooms and a big bathroom with a soaking tub and roll-in shower.

"They were of the mind-set that as long as the house met their needs, it didn't have to be overly large," McMonigal said.

In addition to being more expensive, accessibility features can chew up valuable floor space in bathrooms and hallways. In bathrooms, for example, you need 5-foot turnaround spaces for a wheelchair. And so with physical space at a minimum, McMonigal tried to create visual space and easy transitions between interior and exterior spaces by designing a house with rooms that flow easily from one to the next and by putting windows on two sides of every room.

"This idea of the exterior and the interior coming together is something that cheered them both," McMonigal said. "Some accessible houses make you feel detached from the yard space around it. This feeling of being integrated was one of the primary forces of the project."

The result is a custom house that clearly reflects the wants and needs of the Gasterlands. But have they committed resale suicide?

"I'm not selling," Barb said. "You can wheel me out in the end. I can't imagine building another house. It was stressful and time-consuming, and I can't imagine finding another beautiful spot like this."

*Jim Buchta is at jbuchta@startribune.com.*

## Home of the Month

The Home of the Month is published the first Saturday of every month through a partnership between the Star Tribune and the Minnesota chapter of the American Institute of Architects.

The 12 architect-designed houses were selected by a jury of experts; the houses represent a range of price levels, styles and locations.

For more information about how to work with an architect or to find a registered AIA Minnesota architect, visit http://www.aia-mn.org/home.cfm.