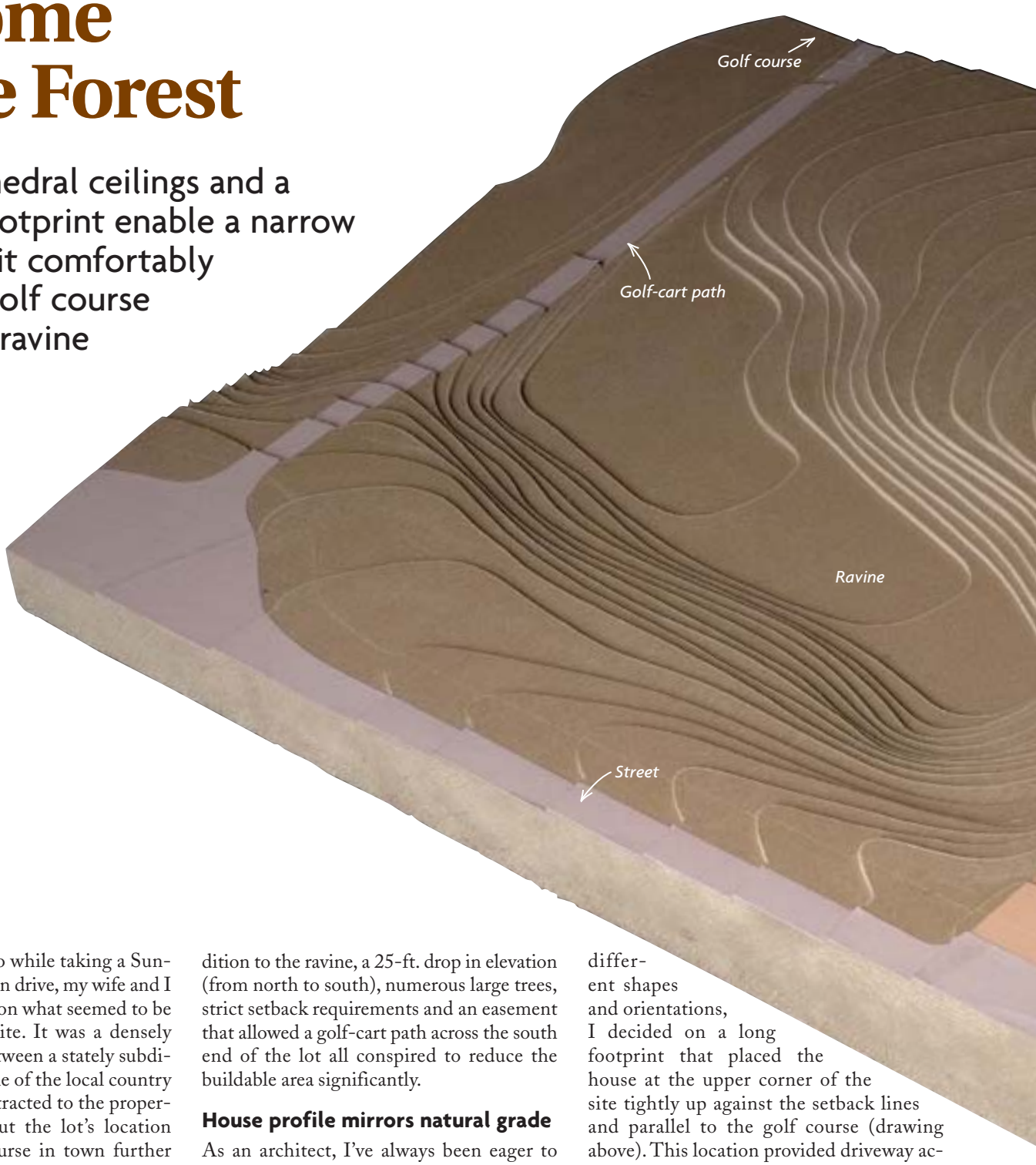
At Home in the Forest

Soaring cathedral ceilings and a four-step footprint enable a narrow cottage to fit comfortably between a golf course and a steep ravine

BY GARY BOWEN



A few years ago while taking a Sunday-afternoon drive, my wife and I stumbled upon what seemed to be the perfect building site. It was a densely wooded lot, tucked between a stately subdivision and the fifth hole of the local country club. We were most attracted to the property's natural beauty, but the lot's location alongside the best course in town further piqued our interest because we're both avid golfers. On subsequent drives past the lot, we speculated about what it might be like to build a home there. We stopped speculating when we noticed the for-sale sign.

It was not until the property was in hand that we finally understood why no one had built on this land. Although the lot was a full acre in size, much of it was unusable because a steep ravine bisected the property almost from corner to corner (photo above). In addition to the ravine, a 25-ft. drop in elevation (from north to south), numerous large trees, strict setback requirements and an easement that allowed a golf-cart path across the south end of the lot all conspired to reduce the buildable area significantly.

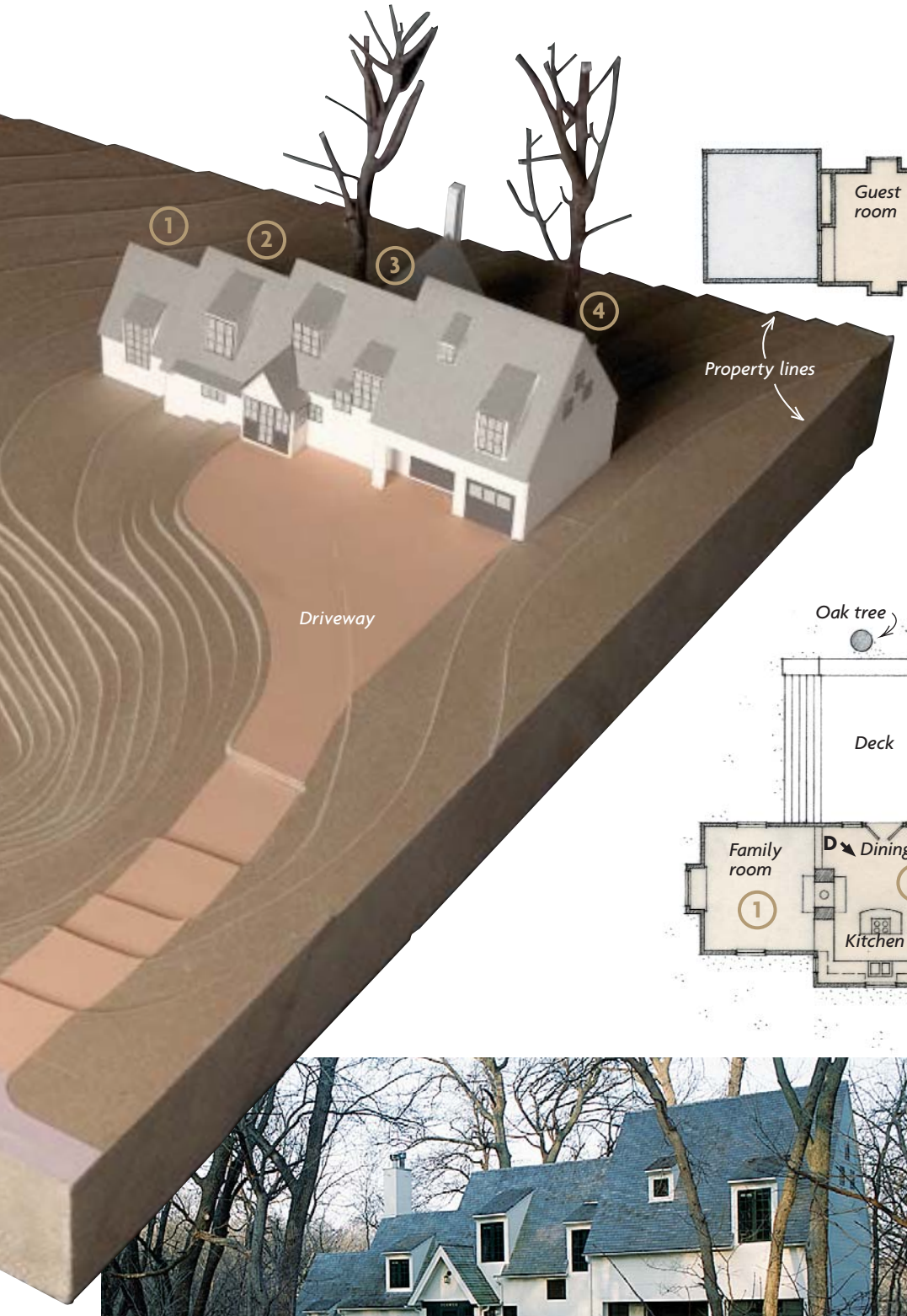
House profile mirrors natural grade

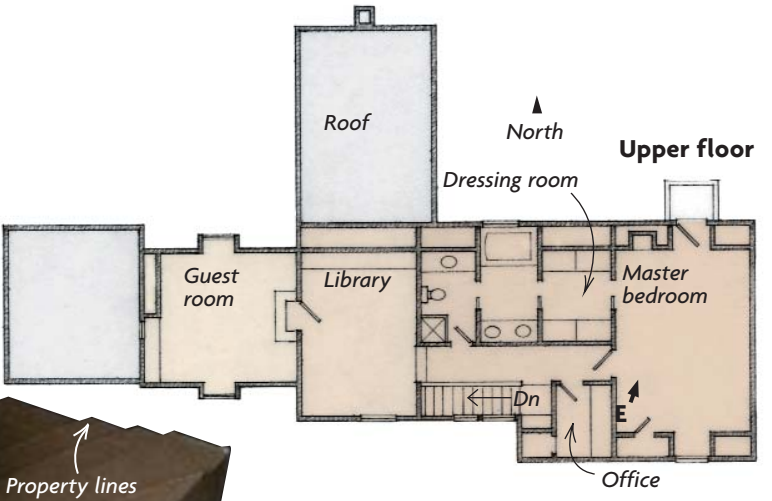
As an architect, I've always been eager to tackle a challenging site, so I began to plan our new home. My objective was to design a house that would not only fit the site but also minimize disruption of the natural environment. Filling in the ravine and bulldozing the trees were out of the question.

Because of the wooded setting, we wanted to build a house that not only would evoke the character of a forest cottage but that also would take advantage of the golf-course views. After building several models to test different shapes and orientations, I decided on a long footprint that placed the house at the upper corner of the site tightly up against the setback lines and parallel to the golf course (drawing above). This location provided driveway access through a narrow strip along the top of the ravine (photo facing page) and required the removal of only one significant tree. I compensated for the 6-ft. change in grade along the length of the house by placing rooms in a linear configuration, with steps separating the rooms on both floors (floor plans, facing page).

The roof follows the steps in the floor plan, so the profile of the house mirrors the natural grade. On the outside, the steeply pitched

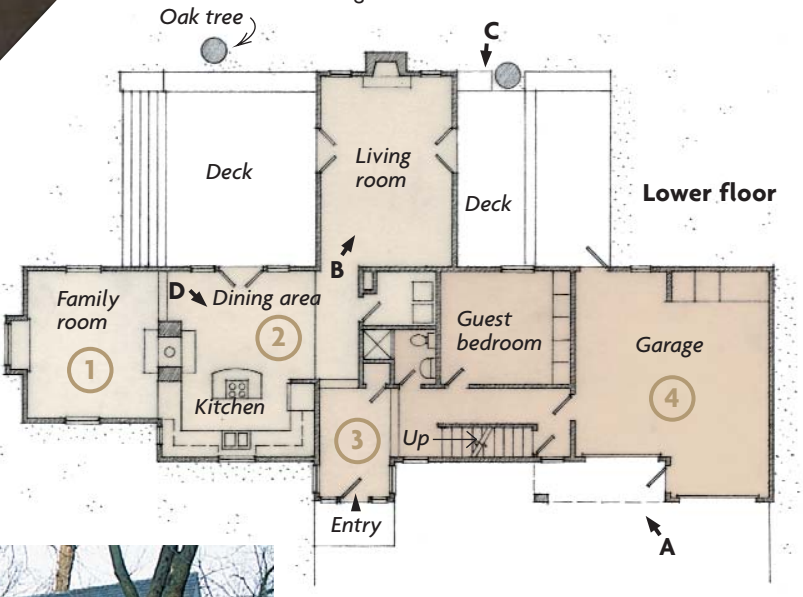
Photo this page: Kate Heller





LINEAR HOUSE TAKES FOUR STEPS DOWNHILL

Orienting the primary rooms in a straight line with two steps between each of them lets this house conform to the natural grade (circled numbers indicate changes in elevation). Building a scale model of the site topography (left) made it possible for the author to design a house that could fit this site.



Four little houses in a row. Four separate modules enable this narrow house to make the best of a sloped lot. Photo taken at A on floor plan.

SPECS

Bedrooms: 3
Bathrooms: 2
Size: 2409 sq. ft.
Cost: N/A
Completed: 1999
Location: Omaha, Nebraska
Architect: Gary Bowen
Builder: John Luce Co.

Photos taken at lettered positions.

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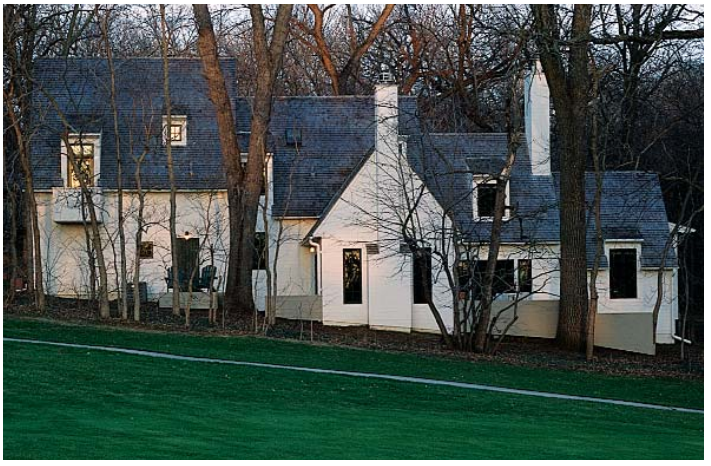
Drawings this page: Vince Babak

ROOM IN THE BACK FOR GUESTS



The formal living room juts out perpendicular to the main part of the house (photo facing page). Photo taken at B on floor plan. French doors on each side of the room lead to separate exterior decks (inset photo). Photo taken at C on floor plan.

roofs emphasize the house's cottage style. On the inside, they allow for soaring cathedral ceilings, which make the modest rooms feel spacious and comfortable (photo left).

Timber ceilings add warmth

I love wood ceilings. When we built our previous house, we used 2x8 exposed rafters and wood decking for the cathedral ceilings. I wanted a more substantial, timberlike appearance for this house, so I originally specified 4x6 Douglas fir for the rafters, even though I knew that affordable, high-quality timbers were hard to come by.

I discovered a local supplier that had a large supply of No. 2 grade SPF (spruce/pine/fir) 4x6s. This material was a lower quality than the No. 1 Douglas fir I would have preferred, but I was allowed to sort through the piles and hand-select clean, straight timbers without splits or gouges. After the lumber was delivered to the job site, I spent many cold winter nights on site belt-sanding away mildew, blemishes and sawmill marks, but the result was worth the work.

Shiplap 1x6 No. 2 pine above the exposed rafters completes the cathedral ceiling. To form interesting shadowlines, I had the shiplap boards custom-milled to make their tongues 3/8 in. longer than their grooves (photo left). The roof above the shiplap is composed of a 4-in. rigid insulation board (foam core bonded to oriented-strand-board sheathing), which is covered by cedar shingles. Walk-out dormer windows punctuate the roof, providing light and ventilation as well as views for all the upstairs rooms (photo p. 83).

Consistent color scheme unites interior spaces

We spend much of our leisure time at the large harvest table in the kitchen and dining area (photo below). To provide a greater feel-

Open floor plan adds to sense of space. **Combining the kitchen and dining spaces and allowing open access throughout the lower floor make narrow spaces feel much larger. Photo taken at D on floor plan.**

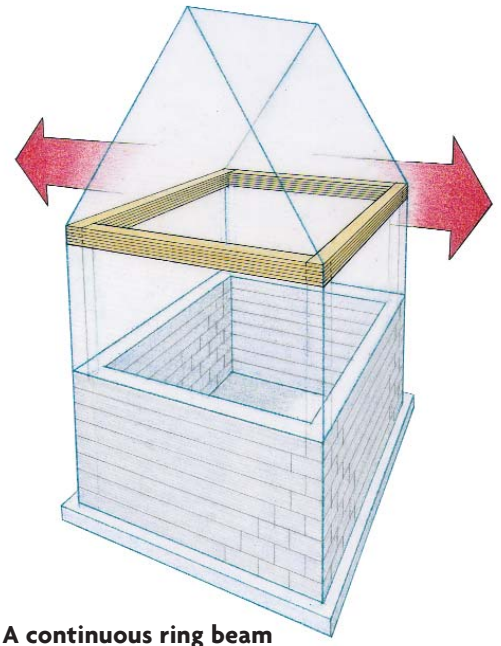
Framing cathedral ceilings without cross ties

Cathedral ceilings require some kind of structural tie to prevent the rafters and sidewalls from spreading outward. Tie beams or joists are common solutions, but I wanted to eliminate all visible cross members. Because of the structural differences between various rooms in this house, our structural engineer had to come up with two different systems to keep the roof from spreading.

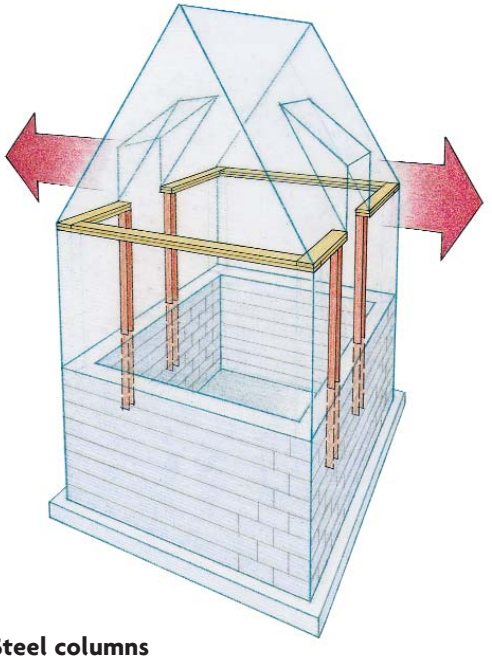
In the living room, he proposed a continuous ring beam at the top of the wall that consisted of six horizontal 2x6s with overlapping ends bolted together (top drawing). A steel angle on each side attaches them to this ring beam.

The walls in the family room and on the second floor are interrupted with dormers, so a ring beam was not possible. Instead, we placed a 4x4 steel column on each side of the windows and embedded the base of the column within the foundation (bottom drawing). Wooden plates at the top of the wall are bolted to the steel columns and then attached to the cross walls at each end. Both details have worked perfectly—no cracks or movement.

—G. B.



A continuous ring beam formed by stacked and bolted 2x6s prevents the roof load from spreading the walls outward.



Steel columns provide vertical reinforcement when a continuous (horizontal) ring beam is not possible.

ing of openness in this beamed-ceiling space—the only public room in the house without a cathedral ceiling—I selected an island cooktop with a downdraft vent (Dacor; 626-799-1000), avoiding the need for a vent hood. I looked at several premade kitchen-cabinet lines but opted to have ours made by a local millwork shop. I chose Cold Spring granite for the countertops.

To make the best use of limited building space, I placed the formal living room perpendicular to the main body of the house (drawing p. 83). Although its interior space is reserved for special occasions (photo p. 84), the living room also serves to separate the exterior decks into two distinct outdoor "rooms." The decks provide plenty of shaded space for entertaining guests or for watching the owls that roost in nearby trees.

To achieve a comfortable, organic feeling throughout the interior, I selected a combination of natural and hand-crafted materials. Large slabs of green Chinese slate adorn the fireplace in the formal living room (photo p. 84). A local blacksmith fabricated the wrought-iron stair railing; and all the interior doors were made locally.

Because the interior spaces and details are busy, I used a three-part color scheme in the house to tie the various parts together visually. The wood ceilings and floors are the most dramatic part of the color scheme, so I chose a neutral, off-white color for the walls. All the trim surfaces are painted a chameleonlike shade, silver-sage (Pratt & Lambert; 800-289-7728). Natural and subdued, the color seems to change depending on the lighting: sometimes silver, sometimes blue-green.

Flush siding enhances cottage feel

Apart from the roof forms, the most noticeable exterior feature of the house is the siding. The horizontal siding is 1x6 clear western red cedar with a custom-milled tongue-and-groove shape that creates a flush appearance (photo p. 83). I chose an off-white color in lieu of a natural hue because the white house is an attractive counter to the wooded backdrop. Like the interior walls, these smooth, white walls also act as a neutral background onto which the more complex doors, windows and roof forms can play. The solid-wood board-and-batten doors were custom-fabricated in Idaho (Alternative Timber Structures; 208-456-2711). All the windows are divided-lite casement units with a factory-applied dark-green finish (Kolbe & Kolbe; 715-842-5666).

All this, plus free golf balls

I named our house Penwyn after my great-grandfather's ancestral home in Wales. In Welsh, Penwyn means "white house at the end of a grove." Nestled within the trees, our house is shaded (almost invisible) during summer months. In winter, when the trees are bare, the sunlight bathes the interior, and the views out are uninterrupted.

Living in our new home in the forest has given us much enjoyment. Since we moved in, I've joined the golf club and taken frequent advantage of the opportunity to practice in our spacious "front yard." I've also enjoyed a fringe benefit to living alongside the fifth hole: an unlimited supply of free golf balls. So far, the trees have prevented any direct hits to the house, but just to be safe, all the windows that face the fairway are fitted with tempered glass. □

Gary Bowen, FAIA, is a partner with Bahr, Vermeer, Haecker Architects in Omaha, NE. Photos by Tom O'Brien, except where noted.

Drawings this page: Vince Babak

Like waking up in church. Wood-frame cathedral ceilings add warmth and light as well as a sense of spaciousness to the master bedroom. Photo taken at E on floor plan.