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Home & Garden

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home of the month

April's profile of a well-designed living space

Take a slide show tour of the home and hear architect Frank Harmon talk about it at www.newsobserver.com, search 'home.'



the porch

The panels open to allow seamless connection between the interior spaces and outdoors. Porch lights incorporated into the storefront system are directed out to the marsh allowing occupants to see out from inside the house at night.

PHOTOS COURTESY OF RICHARD LEO JOHNSON

Modern in the marsh

Raleigh architect Frank Harmon uses steel, pine as high-tech design meets low-country culture

Today's Home of the Month is reviewed by Geoffrey Barton, a master's candidate at N.C. State University's School of Architecture and graduate research assistant with the College of Design's Home Environments Design Initiative. Home of the Month, a collaboration with the College of Design, shows possibilities for constructing a living space built with homeowners' living patterns and preferences in mind. Each month we profile a new home, selected by an expert panel, from designs by area architects. The goal: to offer inspiration and knowledge that can be applied to any living space.



the marsh

Anticipating the possibility of high water, Harmon used columns to elevate the floor of the house. Mechanical equipment is kept under the floor.

BY GEOFFREY BARTON
GUEST COLUMNIST

While custom-designed homes are often intended to accommodate the lifestyles and hobbies of their owners, it is rare that an architect provides a home that offers the inspiration to expand and renew the homeowner's interests.

Designed by Raleigh architect Frank Harmon, the Lowcountry House in Charleston, S.C., is just such an exception. The house, designed for an avid bird watcher, features space that flows from inside to out, allowing the routines of daily life to unfold with a constant backdrop of nature.

Ask Harmon what makes this house so special and he is quick to extol the site's natural beauty. "It's really about this spectacular view of the salt marsh where you can watch the grasses change from rusty

brown to lime green in the spring."

The site, a sliver of land that looks out onto the Shem Creek salt marsh, was integral to all the project decisions, from the positioning of the house to the detailing of its materials. "The land decided the placement of the house for us," Harmon says, referring not only to the spectacular view but also to the location of the house on the highest point of the site to keep it safe from flooding.

A drive that once led to a farmhouse on the site takes you under a canopy of Spanish moss-draped live oaks as you approach the house. Rather than disturb such a beautiful site, Harmon designed a home that respected what was already there: the drive, four large live oak trees and all of the salt marsh wildlife — from blue herons to white ibis.

the project
low country residence

architect | Frank Harmon Architect

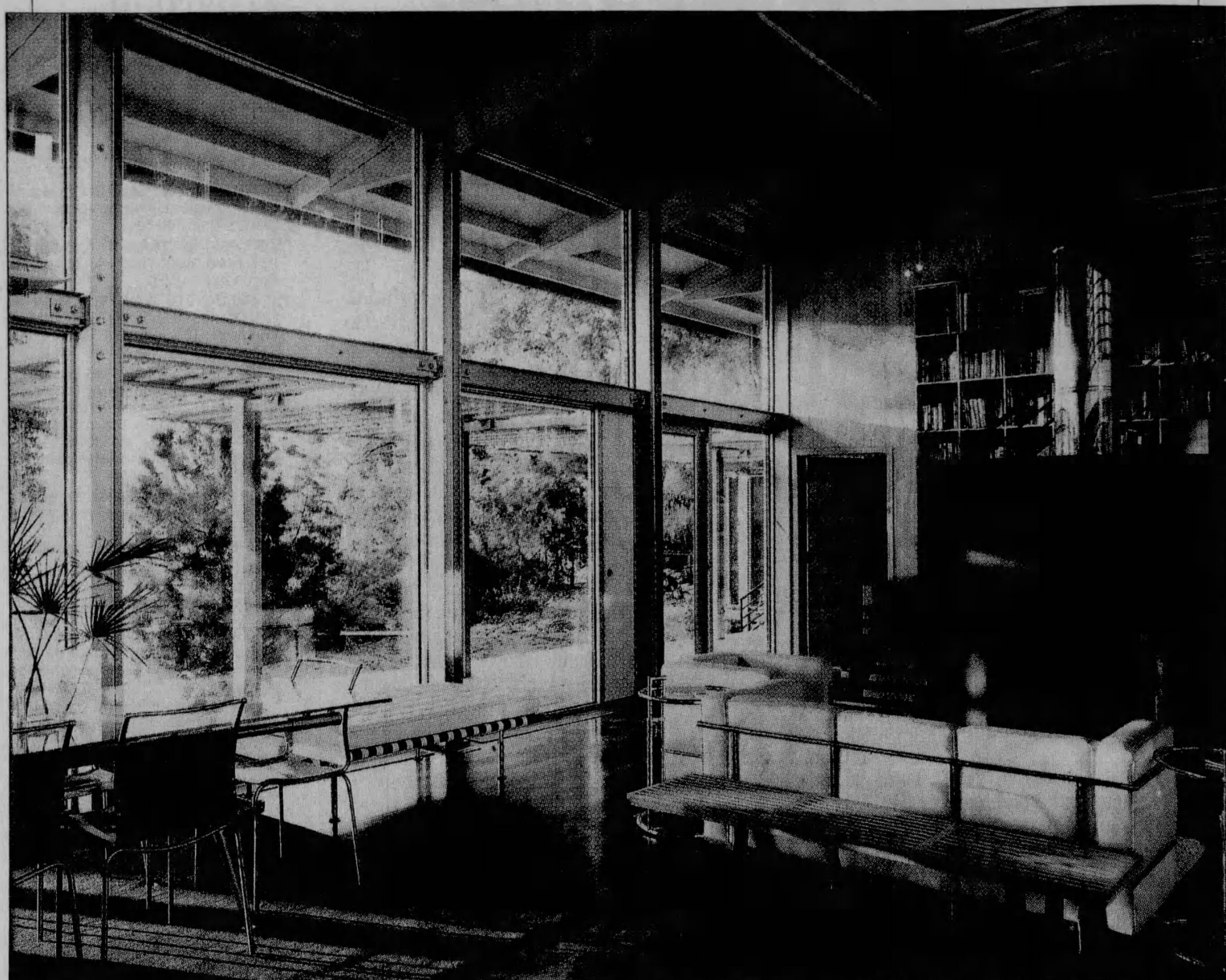
location | Charleston, S.C.

beds/baths | 3, 3

completion | 2005

square footage | 4,200

key design concepts
Maximize view of salt marsh



the living area

The main living space as seen from under the balcony, which is not supported by interior columns but is suspended by ties from wood roof beams. This creates a lower ceiling without disrupting the openness of the entrance and living space. Polygal windows, typically found in greenhouses, diffuse the light entering the balcony and give the main living space morning light from above.

PHOTO PROVIDED BY RICHARD LEO JOHNSON

HOME

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Distinction in details

The house plan places bedrooms on either side of the central living area, allowing maximum privacy without sacrificing communal living space. The shed roof provides space for a balcony along the eastern side of the house, providing space for the client's large collection of books.



Harmon is an architect from Raleigh.

The balcony is not supported by interior columns but is suspended by ties from wood roof beams. This creates a lower ceiling without disrupting the openness of the entrance and living space below. Polygal windows (a material typically found in greenhouses) diffuse the light entering the balcony and give the main living space morning light from above.

The north end of the house contains a workshop area to facilitate another of the client's hobbies — automobile and boat restoration. Consistent with the rest of the house, the workshop is very open to the outdoors, with a concrete ramp on one side and screened porch on the other.

In contrast to more typical wood-frame constructed houses, the Lowcountry House uses hot-dip galvanized steel columns and laminated Southern yellow pine roof beams (available locally). This efficient structure allows more expansive storefront windows — typically found in commercial buildings, but fairly uncommon in residential applications. The large floor-to-ceiling windows in this house give an expansive view of the marsh.

With an interior space just 20 feet deep at its widest point, the house gives virtually every square foot of living space a view of the salt marsh to the west. This view

required an orientation in which the western exposure, with large storefront windows, would make interior spaces inhospitably hot in the summer.

Typically, architects try to avoid having too many windows on the east and west facades because harsh, direct sunlight can cause excessive heat. In this case, however, the exceptional site made west-facing windows desirable. The architect was faced with the challenge of creating something to prevent the afternoon sun from overheating the house through the west-facing windows.

The solution gives the house its most striking and distinctive feature: rotating metal screen panels that serve as shading devices. Praised by the Selection Panel, this "kinetic architecture" accommodates variable environmental conditions. Each of the 10 panels can be opened up to the view of the salt marsh or locked down to enclose a shaded porch. The closed screens can be used to naturally ventilate the house, allowing cool prevailing southwest breezes to enter. Additionally, when closed and locked down, the screens protect the glass from debris

blown by high winds, a reasonable threat in the low-country area.

After working out an initial concept, Harmon enlisted Raleigh-based sculptor and designer, Christian Karkow, to design and fabricate the screens. Made using galvanized steel grate-lock floor planks often found on oil refineries, the screens are well-suited to resist corrosion from salty breezes. Thoughtfully designed with ease of operation in mind, the 625-pound panels are counterbalanced so that each of the 10 panels can be effortlessly moved from a vertical to horizontal position.

Using detailing that is consistent with the rest of the house's structural elements, the rotating screen doors are integrated seamlessly with the rest of the house, further enhancing the continuity from interior to exterior. "This house had excellent craftsmen" Karkow says. "I learned how to detail the doors by watching the carpenters."

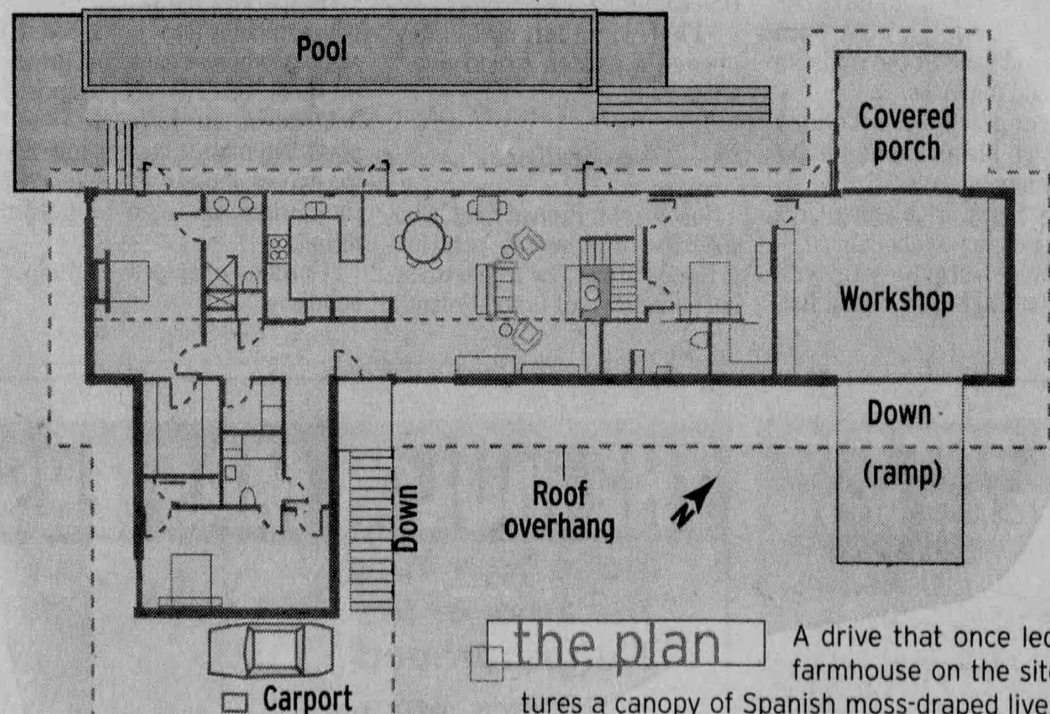
Responsive to climate

While the rotating screens make this house unique, they re-

spond to the same local climate conditions that helped form the distinctive architectural character of Charleston. Porches of traditional Charleston residences are used to shade the houses (along with operable shutters) and serve as gathering places.

Growing up in North Carolina, Harmon recalls, "My mother was always excited to take us down to Charleston. As a kid, Charleston was like Paris to me!" Harmon's extensive understanding of the unique architectural tradition of Charleston as well as the challenges posed by its climate make the novel design of the Lowcountry House truly exquisite.

With the Lowcountry House, Harmon taps into the accumulated knowledge of the archetypal Charleston Single House while proposing contemporary solutions to centuries-old challenges of building in such a difficult climate. The industrial aesthetic contrasts with its natural setting while allowing occupants to feel truly connected to the land. In this house, which frames a dynamic experience with the land and its variety of wildlife, birdwatching becomes less pastime and more full time.



the plan

A drive that once led to a farmhouse on the site features a canopy of Spanish moss-draped live oaks. Harmon designed a home that respected what was already there. 'The land decided the placement of the house for us,' he says.