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A photograph of a modern, two-story house with a mix of white and grey corrugated metal siding. A young boy in a green shirt is on a swing in the foreground, facing away from the camera. In the background, a man and a woman are standing together on a grassy lawn. The house has large windows and a flat roof. The scene is set outdoors with trees and a clear sky.

Tom McMurtrie and Genia Service with their five-year-old son, Gary. Their new Ann Arbor home is a study of different shapes and volumes.

## Steel and Magnolias

What sort of house might a man with the title “recycling coordinator” live in? Would it be constructed entirely of old aluminum cans? Or would it consist solely of yesterday’s newspapers and last week’s *New Yorker*? It might surprise you to learn that even in the liberal bastion of Ann Arbor, Michigan—where aluminum-can cottages might be welcomed with open arms—the person holding that post lives in nothing of the sort.

Located on a quiet residential street in this university town, the home of Tom McMurtrie—the recycling coordinator for the city of Ann Arbor for the past 14 years—and his wife, graphic designer Genia Service, was designed and built with careful attention to energy usage. Though it incorporates energy-efficient materials, a stereotypical hard-core hippie house it is not. ▶

Christened the SunHome by the family, the house was designed by Monroe, Michigan-based designer Tonino Vicari, who began the project fresh out of the University of Michigan's architecture school.

"We were both interested in the clean, contemporary look," says McMurtrie of his and his wife's decision to build their home from the ground up rather than trying to buy into some of Ann Arbor's older housing stock. "It is something neither of us had lived in before." Service continues, explaining that she "grew up on a farm and then I lived in a small Victorian for 12 years in San Francisco. But I guess I've always wanted a loft." And now she has one—complete with a backyard and a garage.

Despite its overwhelmingly industrial appearance, the unusual home responds to Michigan's changing climate like a champ. In the summer, when the angle of the sun is higher, the interiors receive less heat but remain bright while the concrete floors keep cool throughout the day. In winter, the lower angle of the sun warms the rooms directly and radiant heating coils in the floor heat the house. But these are just the beginnings of a home whose whole being is predicated on its relationship to the sun.

Addressing the couple's desire for a cutting-edge house that still respected its immediate surroundings as well as the environment in general, Vicari designed a two-story, C-shaped structure, which he placed neatly on a quarter acre of land and built around a 75-year-old magnolia tree that blossoms with pink flowers every spring. With its reflective steel cladding on the sun-drenched second floor and reclaimed wood from an old barn on the heavily shaded ground floor, the flat-roofed SunHome looks not unlike an early Frank Gehry project. The weather-worn red-painted panels of reused barn wood are visible in the courtyard, but the color on the wood fades into a silver hue as it wraps around the garage.

While the exterior shape of the house was largely derived from the magnolia tree—which the house elegantly frames and preserves—the interior space was guided by an advanced software simulation tool called Lightscape. Used to predict the light conditions during specific times of the year, and even down to definitive times of the day, the computer studies also helped determine where all rooms and windows would be placed and the size of each. "The morphology of the house ▶

Poured-concrete floors are heated using radiant coils embedded in the floor. The dining table and chairs are by John Widdicomb Furniture. The light fixtures are by Weplight. [p. 210](#)





The base of the house was built using a custom-prefabricated concrete foundation. The roof (bottom) is a standing-seam steel roof from Wick Building. The material came to the site in two rolls of 28-gauge steel and was roll-formed onsite.

was based on the maximum solar absorption," Vicari explains. This thinking has led to a home flooded with natural light and also allows for the bare minimum of electricity usage year-round.

A basement boiler efficiently distributes hot water through radiant heating tubes cast into the concrete floors, helping to eliminate stuffy hot air in winter. According to McMurtrie, the house's complete energy costs are nearly the same as those of a more traditional neighboring house with half the square footage.

"It's great to show people an alternative," he says. "People are excited that this is a different way to build a house. And it doesn't cost that much more."

McMurtrie and Service admit that a steel-clad house on a street of older homes in a Midwestern town has attracted its share of disapproving bystanders. "A lot of people really love it, but it's a bit controversial to some," says McMurtrie. "But it's also in the Midwest, so it's got a little bit of Garrison Keillor." Regardless, there's proof that the house has finally won over the neighborhood: Vicari is set to begin construction on a similar house right next door. ▶



## I Love Trash

Before Tom McMurtrie became the recycling coordinator of Ann Arbor in 1991—a position that lets him shape the town's recycling policy—he made his business selling Solarwall ([www.solarwall.com](http://www.solarwall.com)), a product that uses solar energy to collect hot air for heating purposes. "I've always been a believer in sustainable systems," says McMurtrie. That strong conviction, shared with his wife, led the family to steer away from using unrecyclable materials like vinyl

siding, and instead to build with reusable materials like steel and reclaimed wood.

McMurtrie's background in solar energy had a large impact on the features of the house, from the location of windows to the reflective steel siding, which absorbs less heat from the sun than the normal wood-clad homes found throughout the Ann Arbor area. And the house's six-inch-thick walls incorporate 50 percent more insulation than normal, keeping the house warm in winter

and drastically lowering the need for air-conditioning in the summer.

In his 14 years on the job, McMurtrie has seen a profound change in the way residents view sustainability. "Once people try recycling, they realize it's not that difficult and it's really quite an easy thing," he says. That makes him optimistic about his ability to effect change. "People are a little hesitant to experience things initially, but with time they are very accepting." ■

