

Remodeling

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Barn Ennobled

page 54

There's more than one
way to dress up a ranch
page 78

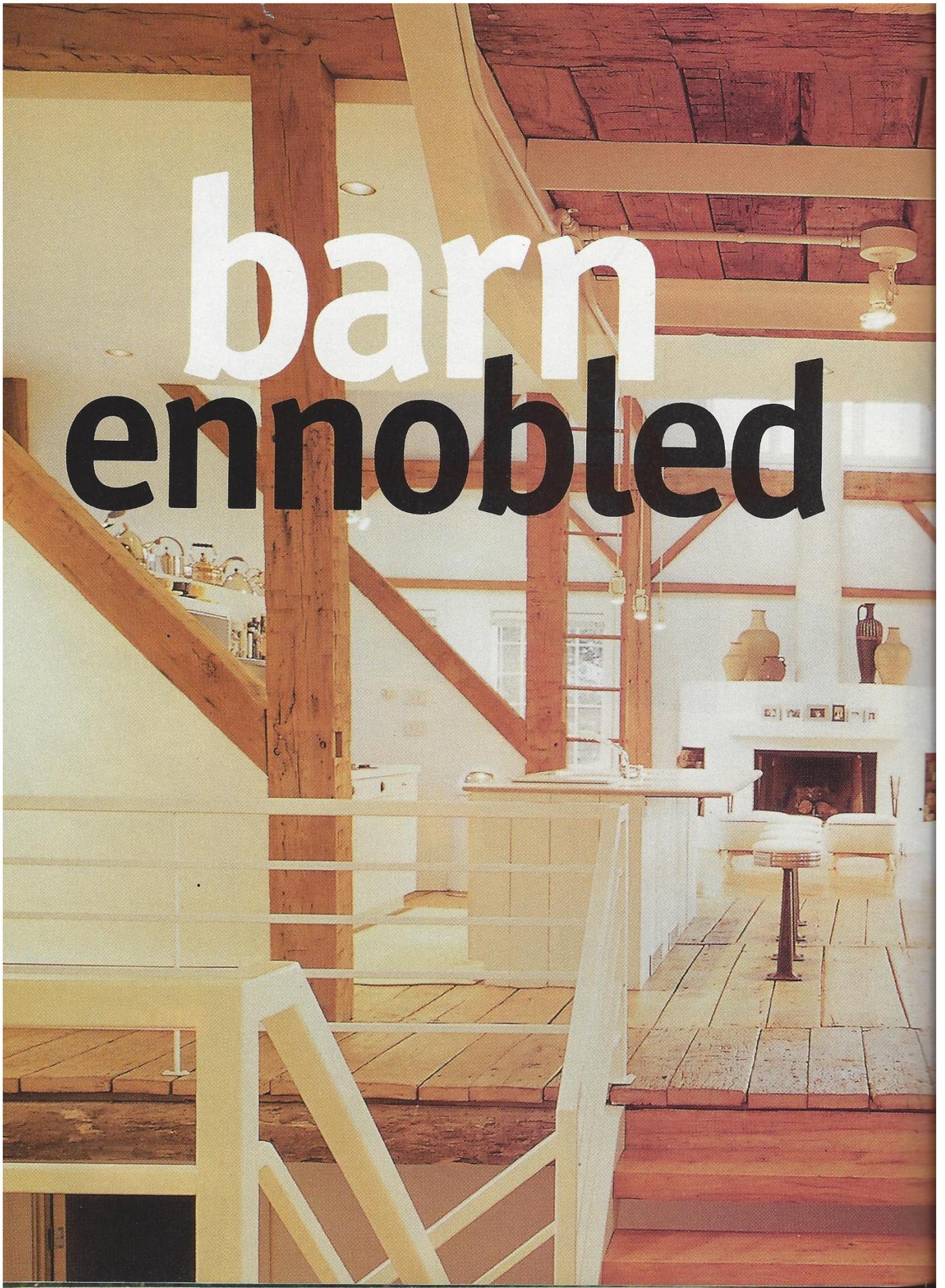
Never a dull moment
in a typical day for a
remodeling company
page 90

Tom Swartz's straight talk
wins him our third annual
Foundation Award
page 114

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barn ennobled



Before & After

The Project

Convert an abandoned 1830 barn into a livable house, while protecting the natural surroundings and using modern technologies to keep the 72-foot-wide, 38-foot-deep, and 31-foot-high structure affordably warm or cool year-round.

Location: Bath Township, Ohio

Size:

Before: 5,479 square feet

After: 6,600 square feet

General contractor and designer:

Franklin & Associates,
Bath Township

Cost:

\$405,974 (includes built-in fixtures and custom furnishings)

South of Lake Erie, an Ohio remodeler and his family find sanctuary in an Industrial Age-remodel of a 170-year-old bank barn.

JOSEPH F. SCHÜLER JR., SENIOR EDITOR

PHOTO: IAN NAYSMITH



AFTER THE MINGO INDIANS HAD BURIED THEIR DEAD

IN LONG mounds atop the earth and the first settlers of the Connecticut Western Reserve arrived on horseback, Abraham Lutz and his farmer brothers built barn four miles west of the Cuyahoga Canal in Bath Township, Ohio.

The year was 1830.

Lutz bought the 144-acre parcel he would build his barn on for about \$1 an acre. It would be a cavernous structure—72 feet wide, 38 feet deep, and 31 feet high—likely used by Lutz and two brothers. From oak trees, the farmers cleaved 10-inch- and 12-inch-square beams—some running 38-feet long—to frame the building. Wooden dowels joined the rough lumber. It was a bank barn, built into a hill so that hay wagons could roll in off the bank and pitch hay over the loft's edge to feed the animals below.

As the years passed and the Cuyahoga Canal ferried more trade and settlers to the area, and as Cleveland and Akron converted Bath into an upscale suburb where .25-acre building lots now sell for \$225,000, the barn was bought and sold almost a dozen times. The parcel it sat on was divided again and again. Finally, the barn, a home to pigeons and a basketball rim used by neighborhood boys, was abandoned.

Architect Tim Franklin discovered the dozing building in 1989. It was only 4 inches out of plumb, a tribute to the craftsmen who had erected it nearly 200 years earlier. For Franklin, a remodeler of exceptional visualization, the massive, nearly blank interior was a weathered tablet for him to sketch his Art Deco ideas on. The perfectionist details that resulted belie the fact that the project often kept Franklin up nights, on a mattress in the top loft, not far from a picnic table he ate on, thinking every facet through. He has 20 early schematics from those early days to prove it.

"I've always liked loft spaces," Franklin says. "And I've always been kind of intrigued by barns. I

wanted to do a project that just was completely different."

The project took seven years. And if Abraham Lutz saw what Franklin did to the place where his cows and pigs milled and wallowed, and where in good seasons his hay rose high, he might have, in all his German sensibilities, smiled.

Franklin's efforts, like Lutz's, withstand scrutiny. The architect/contractor who owns the \$2.4 million-a-year design/build firm Franklin & Associates, won a NARI Region 4 Contractor of the Year Award this year in the historical renovation/restoration category for the rehab of the house he affectionately refers to as "the barn." Because of its roominess, he often entertains family and friends there.

"Home means everything to us," he says. "We call this our sanctuary." Especially now because the Franklin recently welcomed daughter Carolyn Janice, or C.J., now months, into his home.

Franklin's before-and-after story is bursting with detail. He did learn that as a remodeler it is extremely difficult to work on your own home (See "Lessons Learned," Page TK). But beyond those lessons, he took away even more—especially how to blend raw and refined in the interior and exterior design of an elephantine structure and how to make open loft space work as one, from "room" to "room."

Obstacle course

One of the first challenges the barn presented was cleaning out the manure and pigeon droppings that had

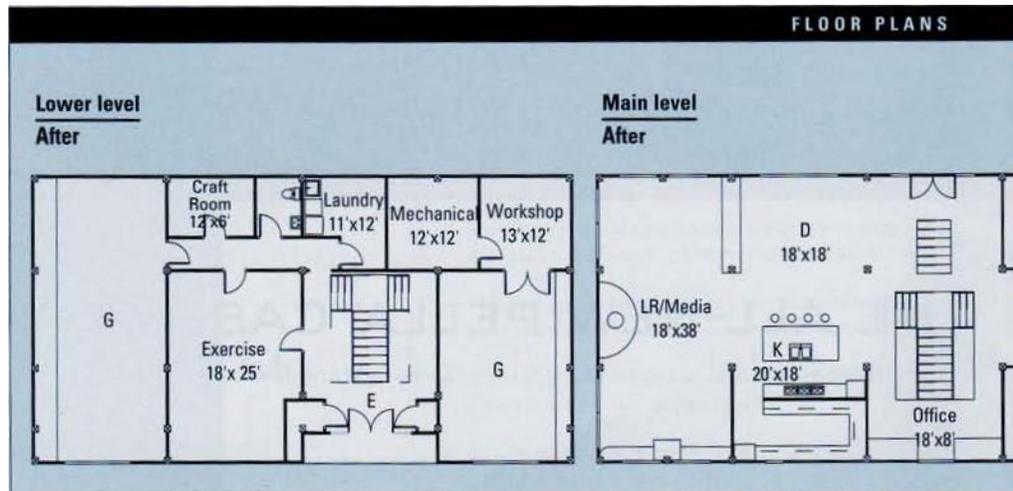


"I've always liked loft spaces. I wanted to do a project that just was completely different."

Tim Franklin, contractor designer and homeowner



The kitchen (above) has plenty of prep room, if you include the hidden pantry (lower right). The low pantry wall allows transom windows to let in morning sun and east-west breezes. The centerpiece of the dining area, immediately across from the kitchen, is the Franklin designed table that seats 12. Light from the evening sun streams into the living area (far right), highlighting the Industrial Age, barrel-rounded chairs Franklin designed to soften the barn.



PROJECT TIMELINE



March – December
1993

DESIGN
Design

February
1994

EXCAVATION
Brush & trees cleared

March
1994

FOUNDATION
Foundation repair & build



April
1994

DEMOLITION
Existing exterior removal & one-week delay for beehive removal



May – June
1994

INTERIOR
Third-floor lofts built. Radiant heat tubing laid.

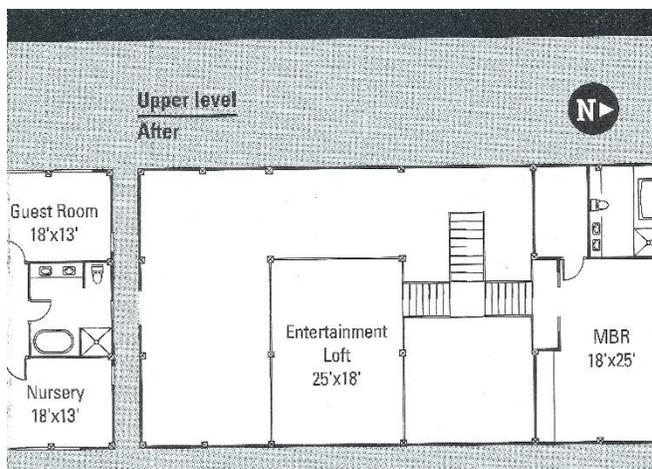
made the oak beams as black as tar the pig troughs were ripped out and the soiled earth, removed. The beams were power washed—twice—so that now they're a rich golden copper color

Franklin and his entirely subcontracted crew then faced perhaps the largest challenge of the project: devising a way to efficiently heat and cool the structure. Franklin estimated a forced-air mechanical solution would cost \$14,400 a year to operate.

His solution was to install 6-inch thick stress-skin panels on the roof on top of the skip sheeting, or lathe, installed by the barn's 1920s owners. To maintain the rustic feel, the skip sheeting was left exposed inside. On the walls, he put 4-inch thick stress skins. The panels provide incredibly stiff structural support (there's no conventional framing) and insulation values OT R-40 on the ceiling and R-30 on the walls, more than triple the value of conventionally framed homes. For heat, Franklin installed 5,232 square feet of composite plastic radiant tubing, warmed by two 100,000 BTU boilers. "It's great on the feet," the remodeler says of the \$15,627 sub-floor system. Because the building leans 4 inches east and could not be righted, the concrete covering the tubing had to be poured in layers. The wet mixture wanted to run one way.

That was just the start of an extended timetable, due to the complex nature hidden in the old barn.

The stress-skin panels, made of composites that look like Styrofoam and sandwiched between OSB, were cut by Franklin's carpenters with chainsaws and affixed to the hand-hewn beams at key points with 10-inch spikes. But because the beams were so hard—almost petrified—carpenters had to drill pilot holes for the nails. "I can't tell you how many drill bits we went through," Franklin says. The contractor thought the panels would save him money on labor costs, but they took six months longer to install than expected. Along the way a beekeeper needed a week to remove a 7-foot-high, 14-foot-long, and 8-inch-thick beehive from a barn wall. To capture heat from the sun in winter Franklin's crews installed 12 4-by-8-foot windows throughout the building. In summer window shades cut the heat. The radiant heat system, together with the two central air conditioning units, keep cooling and heating costs under \$3,600 a year no small feat for a building with 6,600 square feet of living space that often is hit with sub-zero-degree winds off Lake Erie.





June– December
1994

FRAMING/MECANICAL

Stress-skin panels
plumbing, electrical,
drywall & trim



January-March
1995

PAINTING

Interior & finish
trim painting



March
1997

DESIGN

Landscaping & interior
design begin



November 1997–
January 1998

INTERIOR

Media Room custom
cabinets & furniture

LESSONS LEARNED

Remodeling your own home while running a business is tough. And Tim Franklin was schooled at Hard Knocks U. He offers tips for colleagues considering the same curriculum.

• **Don't rush the job.** Just because you're pro doesn't mean you can crank through a project. Even though it's your own crew and you know the project better than any client would, don't be overambitious about time-frame. Everything is custom. Every twist adds delays,

• **Don't let it suck you in.** It's like a second job. Don't let it woo you. Don't over-estimate the work you think you can do yourself. It's more cost efficient to let your crew finish while you work on new business.

• **Listen to your subs.** Be open-minded in solving problems. If you listen to your tradesmen, you'll come up with a better project.

• **Treat yourself as a client.** In planning, you still need to design thoroughly, just as you would for a paid job. The more you do

that, the easier it makes it for everyone. It saves money, too, because your subs won't have to stop work to ask about details.

• **Make your house a showplace.** You can use it to show clients the quality of your work, even if it's not the style of home they want to remodel.

• **Watch your subs.** Working with them day-in, day-out will reveal how they deal with stressful, challenging situations—helpful on upcoming jobs.

What's old is new

As new materials were installed, including a tongue and groove cedar exterior old materials were recycled. The old siding was used for trim around the kitchen counter and exterior fencing. Removed beams were milled and refinished as steps for the dramatic staircase. Barn stone was incorporated into landscape design, acting as a wind shield for the outdoor hot tub in the winter

Two third-floor loft spaces were added, one the master suite, the other an entertainment area that now showcases a Franklin-designed pool table covered in red felt. On a warm May day neither space shows. an appreciable temperature difference from the ground floor despite several skylights again, the result of Franklin's meticulous planning. The upper loft also is the place to best view the hay track, once the system to move hay from one end of the barn to the other now a track for the barn's lighting.

That's one of the remarkable aspects of the project: The mechanical systems are largely hidden. You don't see wires or plumbing or ductwork or trunk lines running up walls. This is because many of the mechanicals are hidden behind a false wall on the ground floor and in closets and other strategically placed locations.

Once the framing and the Sheetrock were finished (the plasterboard took longer because of all the scribing around existing beams) and painters were done with five coats of primer and paint, Franklin admits he was emotionally and physically spent. "Burnout," he says. He took a break from the project for two years. He says that at times, with running his business and remodeling his home, it felt like he was going 24 hours a day.

THE LUCKY HORSE SHOE THAT HANGS ABOVE THE ENTRY STAIR POINTS TO FRANKLIN'S COMPACT HOME OFFICE (RIGHT) AND THEN TO AN ENTERTAINMENT AREA WITH A CUSTOM-MADE POOL TABLE (FAR RIGHT). THE LIGHT MAPLE DESK TOOK FOUR MONTHS TO BUILD AND ASSEMBLE. IT NOW FRAMES ONE OF THE BARN'S 12 4-BY 8-FOOT WINDOWS.

New attitude

The two-year recess provided Franklin a fresh perspective. "And by then I wanted to do something, so it was our home, not just my home," says Franklin.

The largest challenge inside was how to divvy up the bulk of the living space, not separated by interior walls, so that each area stood apart, yet worked together as one. "If you went Oriental here and Georgian there, they'd be clashing in the middle, and unfortunately a lot of people make mistakes like that in an open



PHOTOS: IAN NAYSMITH

space,” Franklin says. Because of the airiness of the space, with second- and third-floor ceiling heights anywhere from 12 to 22 feet, Franklin was careful to create living areas that don’t overwhelm, but that draw in. “Otherwise it becomes like a gymnasium,” he says. “Most barns are very dark. Instead we used light colors, huge windows, and again, these beams—they’re priceless.”

The light and space put attention on the furniture. Franklin designed almost every piece in the barn, most built into their surroundings: an 18-foot-wide pearwood entertainment center; a 14-foot-long beechwood dining room side table that appears to





PHOTOS: IAN NAYSMITH

The barn's skip sheathing, or lathe, installed by its 1920s owners, is best seen in the master bedroom (left) or master bathroom (above). The skip sheathing was left exposed inside to maintain the barn's rustic feel.

float because it's hung by aluminum pins anchored into the barn's frame; a sectioned desk, entirely self-contained. Built in two 7-foot-square pieces, the maple furniture's brushed aluminum insets reflect different colors as the light of the day wanes.

Each of these major built-ins took five months, partly because their mixed-materials construction meant bringing them from one trade shop to the next.

The stairs—open from the first floor to the third—help define the three spaces. Their design is subtle. The stringers are channel iron, and four anchor the top flight. Metal slats were welded at 8-inch intervals and 4-inch-thick milled oak beams (more existing

leftover lumber) were slid into place for steps, rendering the stairway rock solid

(See "Tech Idea," below). Its metal handrails were set directly into anchoring beams at the top of the stairs for more support and a cleaner look.

Dream come true

When construction finally wrapped up in May of last year, Franklin finally got a chance to do his reckoning of what his dream renovation cost. He was about 17 percent over projections, "which really isn't bad in a structure of this size," he says. "10, 12 percent is a range I've seen defined, so when I came 5 percent above that, I felt pretty good."

And Franklin approaches home remodeling like Seattle glass sculptor Dante Marioni (whose one-of-a-kind work sits atop the Franklin-designed sideboard) approaches glass blowing. He's down-to-earth, practical yet visionary.

Franklin has planted hay, timothy, and wildflowers south of his barn to maintain its roots. It's also to remind people who travel on the road below—one of the township's scenic byways that pass 150 homes that are over 100 years old—of the building's agricultural past. But clearly, on the inside, it's a one-of-a-kind modern space, one that's a showplace for "the work," as Franklin calls his vocation.

The project, however, is far from over. The contractor plans a new office, sunroom, and lap pool. ®

TECH IDEA

When Tim Franklin was planning access to his barn's three levels, he examined all kinds of wood steps. No matter what he considered, he realized he'd need a lot of bracing for the stairs to span the 18-foot opening, and "it looked cumbersome and busy." He started mixing materials, using metal and recycled hardwood. The look was clean. The engineering to support the two flights of stairs was deceptively simple.

There are 13 steps from the lower level to the main level and 19 steps from there to the third-story lofts. Yet all that supports the flights are large screws at the top and bottom of each stringer. The 4-foot-wide wood stairs were notched so that they could slide into place over 1/2-inch-thick by 3-inch-wide metal plates welded to the channel iron stringers. In place, the stairs render the stairway extremely rigid.

