



96 Five Housebuilding

SAMPLE

## A Modest House for the Hamptons

Efficient design and a simple footprint temper the dramatic space and architectural detailing of this eastern Long Island home

by Duo Dickinson

**W**hen the young Manhattan couple first approached me about designing a home, they were a classic urban dyad: city-weary lawyers needing a respite from their stressed-out professional lives. They had managed to find a relatively inexpensive lot in chic eastern Long Island and were eager to build a vacation home that included lofty spaces, customarily detailing and a prosy vertical presence.

Like many young couples, however, their dreams were bigger than their budget, and our preliminary designs received construction bids well over what they could afford. Fortunately enough, a couple of pregnancies intervened, and this project was put on the back burner while the couple attended to the immediate task of raising a family. These intermittent delays meant that we could spend more time tweaking the design and thinking carefully about maximizing a limited budget.

The revised plans reflected the original interests and changing needs of the growing family, as well as the ongoing concern for the bud-

get. Complicated details were simplified, floor plans modified, and new drawings sent for bid.

**A near-death experience brings life to the project**—The six or seven bids that came in were all higher than we had hoped, only by about 20%, but still disappointing. The last outstanding bidder, Jim Naples of Moriches, New York, finally contacted us, explaining that his delay was caused by a near-death experience involving Lyme disease. We pleaded with him to submit a bid, and he became the project's instant hero by resubmitting a bid within 30% of what we were banking on. Additionally, his impressive references were verified, and his experi-

ence and skill proved to be invaluable assets to this project.

With commonsense design and Jim's input, we obtained a price tag of \$85 per sq. ft. for this 2,100-sq.-ft. house. The size of the rectangular foundation was predetermined by the width required for two simple framing bays of 14-ft. long 2x10 floor joists, 16 in. o. c. A ganged 2x10 beam runs through the middle of the basement and carries the load of the two framing bays.

At Jim's suggestion, footing drains were eliminated because the house is essentially built in a natural sandbox. A full basement cost only about \$1,200 more than the originally specified crawlspace because excavation was so easy given the soil type and because the formwork Jim's concrete subcontractor used came in full-height sections anyway. The only major additional cost for the extra basement space was the material cost for more concrete.

Although eventually involving a fairly significant change order, this basement space allowed us to accommodate a future playroom for



**A simple form and a focus on details.** With a rectangular footprint and a 12-in-12 pitch roof to simplify framing, the exterior of this house is crisscrossed by cedar roofing and siding, synthetic-stucco eaves and the judicious use of curves. Photo taken at A on floor plan.

**Creating comfort in a dramatic space.** The living room's cathedral ceiling and tall windows are balanced by the counteracting curve and natural-wood finish of the entryway. The curved hearth of the prefabricated fireplace echoes the house's entry. Photo taken at B on floor plan.



### SPECS

**Bedrooms:** 3  
**Bathrooms:** 2  
**Heating system:** Oil-fired forced air  
**Size:** 2,100 sq. ft.  
**Cost:** \$85 per sq. ft.  
**Completed:** 1994  
**Location:** Eastern Long Island, New York

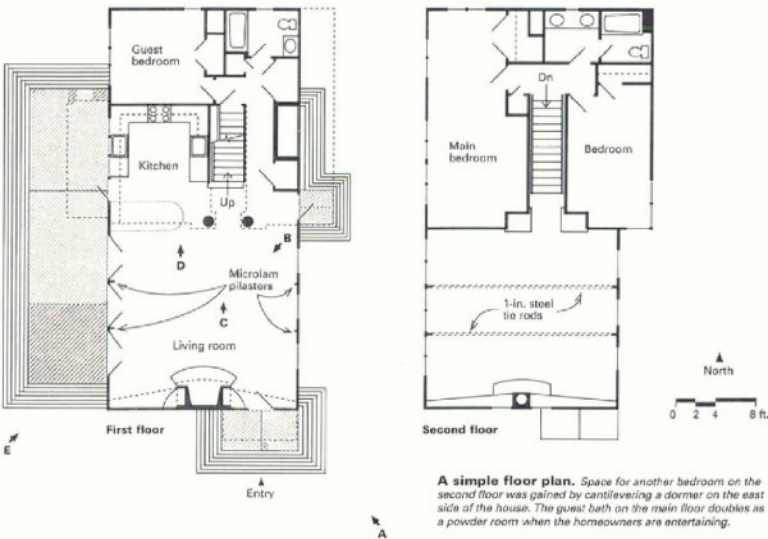
Photos taken at entered positions.

**Public spaces, private places.** The custom-tuned columns are structural but also mark the transition from the high-ceilinged living room into the more intimate kitchen, bedroom and bath areas. Photo taken at C on floor plan.

the children. Two relatively large windows set within a large window well and a legitimate airway (vs. the dimension-lumber variety) were added. Also, we located ductwork and other mechanical hookups so that this space could be easily finished at a later date.

**Planning for efficient framing and finishing**—The roof form is a steep, symmetrical gable (photo p. 95). The 90° angle formed at the ridge by the 12-in-12 pitch roof is a marginal framing simplification, but everything helps. Two-by-ten rafters are untrussed at their tails and extend a full 2 ft. from the plate, creating a broad overhang that protects the sidewalls and simplifies trimming out. Synthetic stucco on the underside of the eaves and in the gables is both the finished surface and the "paint" for these areas. Not having to repaint this area every few years is a long-term cost-saving bonus.

The problem with simple rectilinear homes is that they don't allow for a great deal of spatial diversity. We conquered that problem in two ways. First, because just about half of the house (the living/dining area) was to be double-height



**A simple floor plan.** Space for another bedroom on the second floor was gained by cantilevering a dormer on the east side of the house. The guest bath on the main floor doubles as a powder room when the homeowners are entertaining.

space, we needed extra space in the constricted second floor. We simply cantilevered the floor framing to accept a straight extension of the roof. This feature made room for a larger bathroom and bedroom easily accommodating the couple's two boys.

As you might predict, head height decreases whenever a roof extends down from a normal eave height. In this case, a skylight provides light relief at one corner of the bedroom, and the other corner of this extended bay terminates in a dormer (photo p. 96). Although this dormer was a relatively costly item, it's a nice focal point, and its roof directs water and snow away from the side door beneath it.

The second way we defeated predictability was with the creative use of windows. Although there are a great many windows for a house of this size, they are all stock sizes, which helped to reduce costs. What customizes these windows are two simple design tools. The first involves grouping windows together either by factory caulking or by setting them directly to 2x framing lined out with continuous 5/4 flat stock, thus visually linking them (bottom photo, p. 101).

The second method of customization is the use of custom muntins, or divided lites. These subdivisions between the insulating glass are more expensive than snap-in grilles, but the patterns they create are worth the added cost. In this case, cruciform patterns visually link the windows and doors.

**Designing a tall space**—Obviously, the most dramatic aspect of the home is the living and dining area (photo p. 97; sidebar p. 100). With tall white walls and oversized glazing, there is a sense of entering a space that is not explicitly residential in character, but not civic or institutional, either.

The entryway, rather than becoming a progressively enclosing sequence, is really a quick transition from large-scale outside to large-scale inside. The cantilevered gable over the front door provides shelter from rain and snow.

A tall space such as this one can feel like a big box. But the stairway and large columns help to focus attention at one end of the room, and the smaller open spaces for the kitchen and hallway on the sides of the stairwell lead the eye in-

to other places (photo facing page). Plenty of tall windows open the room to the outdoors, and the hearth and the exposed chimney chase balance the stairway on the other side of the room. By simplifying the shape of the prefabricated fireplace, we saved considerably on framing and trimming and were able to provide two built-in plywood-sided storage boxes within the firebox enclosure (photo p. 97).

**Columns are structural and transitional**—Two custom-turned columns (A. F. Schwend Manufacturing Co., 3215 McClure Ave., Dept. FH, Pittsburgh, Pa. 15212; 412-756-6322) (photo facing page) punctuate the high-ceilinged living area. The cornice above these columns is built with custom-milled large-scale cove trim and stresses the out-of-scale nature of the space. The stairway framed by these columns is a cost-effective straight run with painted risers.

This portal marks a transition to the more conventional kitchen and sleeping areas, characterized by standard 8-ft. ceilings and less elaborate trim. The kitchen itself is open to the main living area, and the bright-blue cabinetry offers

### Engineering a tall space

When building a three-story-tall space with a vaulted ceiling and a wood-shingled roof, there are two great structural concerns. The first imperative is making sure that everything defies gravity. Two-by-six balloon-framed sidewalls, stiffened by four 1½-in. by 11¼-in. microlam pilasters, efficiently transfer roof loads down to the foundation. The paired microlams are framed between the doors and the windows on the opposing walls (floor plans p. 99). Continuous 2x10s are let in to both sets of rafters just above the top plate; similar continuous 2x8s are let in just below and on both sides of the ridge. These steps help to stiffen the wall and roof structure further.

The most critical concern was dealing with the impact of wind on a space as large as this one. Because there are no wings buttressing this space, three sides are essentially unrestrained. In addition, the skip sheathing necessary for ventilating the underside of the cedar roof shingles isn't as strong as continuous plywood sheathing. So engineer Martin Gehner of Branford, Connecticut, essentially had to create a super-stiff box.

We sheathed all of the interior surfaces, including the ceiling, with ½-in. CDX

plywood (bottom photo). When combined with the let-in 2x framing and the microlam pilasters, we essentially created box beams at the roof and wall planes and braced the tall walls against the wind. Next, 1-in. steel tie rods bolted at the top of the microlam pilasters hold the walls parallel. Because there is such a long span, we used steel stays set at an angle to help defeat the sag that normally occurs when a 1-in. steel tie is forced to span more than 20 ft. (top photo).

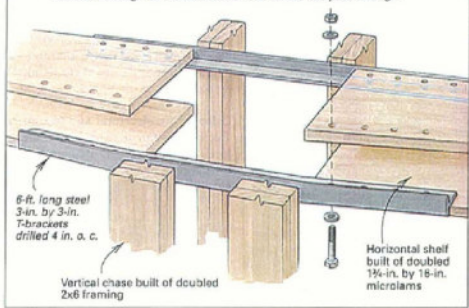
Finally, we used the fireplace and chase to help stiffen the gable-end wall, along with a stiffening shelf that transversely crosses the chimney chase. The chase itself is a plywood-sided vertical box beam extending up the gable-end wall. The transverse shelf is constructed of doubled 1½-in. by 16-in. microlams that taper to 8 in. at the two corners. The two sides of the shelf are bolted together and into and around the chase with steel T-brackets (drawing below). When combined with some 1-in. 16-ga. steel strapping set diagonally at the corners of the ceiling, the wall and the ceiling are extraordinarily stiff and have shown no movement whatsoever, despite the gale-force winds that often buffet Long Island.—D. D.



**Reinforcing with plywood and steel.** In the absence of collar ties, 1-in. dia. steel tie rods supported by angled stays keep the tall walls from spreading. Because the rafters are skip-sheathed to allow the cedar roof to breathe, adding another layer of ½-in. plywood on the interior of the framing helps to stiffen the roof and walls against the wind.

### Steel bridges the intersection

Doubled microlams stiffen the gable-end wall horizontally, and the chimney chase, essentially a box beam, stiffens the wall vertically. Steel T-brackets strengthen the intersection and let the flue pass through.



Photos (this page, Duo Division, Drawing: Rob La Pina)

an expressive contrast to the classical columns (top photo). And although much of the kitchen was fabricated on site and field-painted (thus saving money), it is still custom-crafted and offers such amenities as pullout toy bins, oversize drawers and a built-in dish rack.

A slightly curving range hood echoes the curved-granite peninsula countertop. Although the granite countertop had a high initial cost, its cost per year over its life span compares favorably with less durable plastic laminate.

These curved forms occur throughout both the interior and the exterior of the house. In a potentially stark rectangular form such as this one, curves help to focus attention and add a sense of centering. The most visible example of this occurs immediately at the entry, where the porch ceiling arches over the curved top of the custom-fabricated, 8-ft. tall mahogany doorway (photo p. 96).

**No compromise in finish materials**—The real bottom line is value over time, and the use of quality finish materials translates into long-term savings. For example, a wood-shingled roof has a higher initial cost than its asphalt-shingle counterpart. But here the simple roof shape minimized valleys and variations in the surface area, the number of cut shingles and areas requiring extensive flashing. The shingle roof's visual impact is undeniable, and it should long outlast an asphalt roof.

A traditional siding choice in this area of Long Island, cedar shingles are a match for the weather in this region. There are less expensive options available, of course, but the bleached shingles we used on this house require little maintenance, a cost factor that can add considerable savings over the life of the structure. Hardwood floors are used throughout, and not unlike the cedarshingled roof and siding, these floors are more expensive initially but will outlast carpet or vinyl and can be easily renewed.

Although not all design and building decisions can be reduced to a simple cost/benefit formula, keeping sight of long-term economy and utility when making aesthetic decisions can pay substantial dividends. Finding an experienced builder with ingenuity and skill is important. Building small—in this case about 400 sq. ft. less than typical neighbors—also helps. But in truth it is the simple footprint and the rationing of hand-crafted architectural detailing to the public space that makes this house affordable yet uncompromised in its materials. □

*Duo Dickinson, an architect in Madison, Connecticut, is the author of Small Houses for the Next Century (McGraw-Hill Inc., New York, N. Y., second edition, 1995). Photos by Carol Bates except where noted.*

Bottom photo: This page: Andrew Wormer



**A site-built kitchen.** Bright-blue cabinetry reflects the owners' passion for the folk architecture of the Islands of Greece. The kitchen is open to the living room and dining area. Photo taken at D on floor plan.



**Plenty of windows on the western wall.** Combining stock sizes of windows and doors in different patterns creates a custom look on a limited budget. Photo taken at E on floor plan.