

A Seattle home expands with a stylish in-law apartment that's environmentally sound and pays for itself over time

# One Lot,

BY GEORGE OSTROW

**T**he view was great. Perched westward on a hill that looks down on Seattle's Portage Bay and the mountains beyond, the house had location written all over it. However, at three stories tall and 20 ft. wide, the 1980 structure resembled a glorified tree house that had been plunked down in the middle of the site (inset photo, facing page). New owners Mark and Mollie Huppert bought the house in 2000 and immediately set out to reorganize the interior and to add a separate apartment that would complete the look of the entire structure.

## More space from the same footprint

Remodeling the original house came first. Organized around a central staircase, the original design separated the water-view front rooms from the rooms at the back (floor plans, p. 76). To give the kitchen a slice of the view to the west, we opened up the wall between the kitchen and the living room.

On the top floor, we moved the dressing area into an under-roof space adjacent to the master bedroom (photo p. 76). That move freed the former closet space for a double-sink vanity, over which we added a new skylight for headroom and light.

The original house had only one bedroom, so we waterproofed the second-floor deck and added a room below; then we converted the first-floor den into an entry hall and a guest bedroom. The homeowners use the new front room on the first floor as a study;



# Two Houses



**Where's the rope swing?** Although blessed with a great view, the original house was spindly and looked somewhat temporary. Photo by Mark Huppert; taken at A on floor plan.



# Old and new are joined by a tall, light-filled corridor

We planned a way to join the addition to the main house in the future. The floors of both buildings are at the same elevation, and a set of windows in the addition looks across the atrium to a matching set in the main house. Both sets are framed so that each could become a doorway. Photo right taken at B on floor plan.

## SPECS

**Bedrooms:** 3 (main), 1 (apartment)

**Bathrooms:** 3 (main) 1 (apartment)

**Size:** 1725 sq. ft. (main);  
675 sq. ft. (apartment)

**Cost:** \$173 per sq. ft.

**Completed:** 2003

**Location:** Seattle, Wash.

**Architect:** Velocipede Architects

**Builder:** Stonewood Builders/Borromeo Construction

the guest bedroom and study both lead out to a new balcony.

### Adding an apartment has social and economic benefits

What distinguishes this house from its neighbors is that it consists of two dwellings on the same single-family lot. As long as there is sufficient on-site parking, the rental apartment is permitted as an accessory dwelling unit (commonly known as a mother-in-law apartment), a Seattle zoning-code provision since 1994. Other cities around the country also have adopted similar provisions.

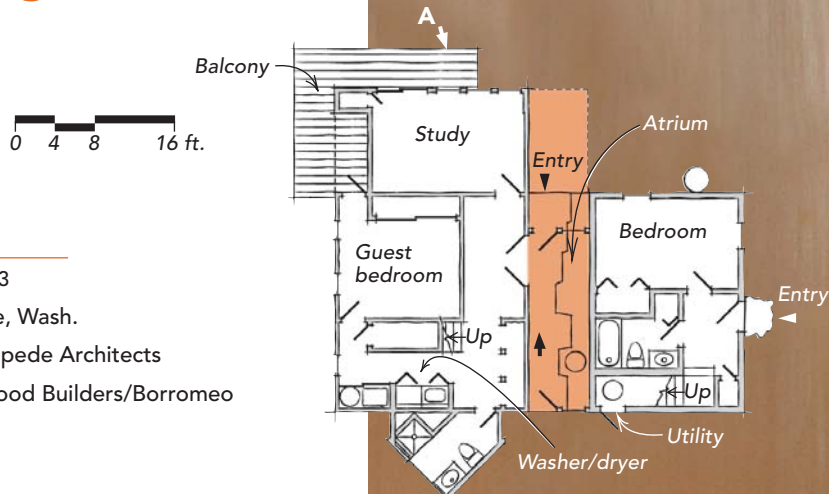
Metro Seattle has grown 15% during the past 10 years, and it now sprawls into the foothills of the Cascade Mountains. The Hupperts wanted to demonstrate that single-family neighborhoods within city limits can

absorb growth without harming the quality of life, thereby allowing the countryside to remain rural.

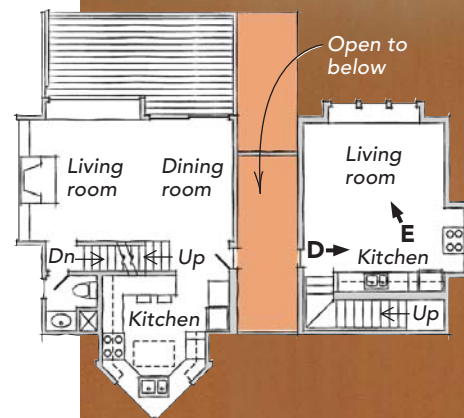
There are several benefits of a separate apartment, even if you don't have such high-minded goals: There's always someone to watch the other house or walk the dog when you're away; two families can share the yard work and the tools to do it; and of course, the rental income offsets a considerable portion of the mortgage.

### The apartment is made of up-to-date, energy-efficient materials

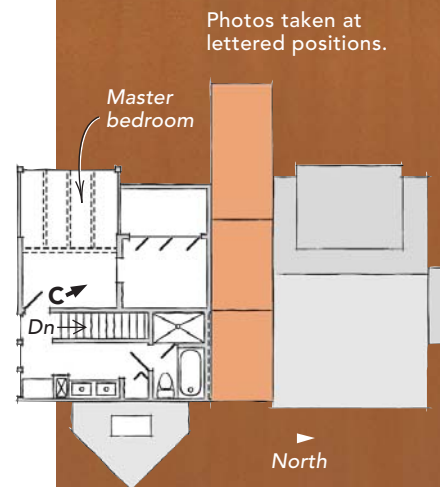
We chose to defer to the original house for the apartment's proportions, roofline, siding style, and windows. Externally similar, the apartment was constructed in a radically different way than was its 20-year-old prede-



First floor



Second floor



Third floor

Photos taken at lettered positions.



**New space blossoms under the eaves.** On the top floor, a wall was removed, closets were added, and a former storage space became the dressing room for the master bedroom. Photo taken at C on floor plan.



**Adding space on a tight lot.** In the addition's second floor, the author was able to incorporate a bump-out that hung out over the setback and made space for the stove and the cabinets. Photo taken at D on floor plan.

cessor, with the latest green-building methods and materials. For instance, because portland cement is energy intensive to produce, we used it sparingly. All new concrete was poured with a 43% fly-ash mix that reduced the cement content by 40% while still exceeding the required 2500-lb. compressive strength. A by-product of fossil-fuel-burning power plants, fly ash doesn't cost any more than the equivalent cement, and most batch plants stock it.

Foundation walls were built with one course of Rastra block ([www.rastra.com](http://www.rastra.com)), an insulated concrete form (ICF) made of 85% recycled polystyrene foam. The ICFs allowed a 50% reduction in the concrete volume, eliminated formwork, and provided an insulated edge for the slab, helping to keep the floor warm.

For the price of delivery, we arranged for an order of crushed glass from Seattle's curbside recycling program and used it under the slab instead of the usual layer of crushed stone. The slab itself, embedded with PEX hydronic tubing (Wirso; [www.wirso.com](http://www.wirso.com)), serves as structure, as finished floor, and as heat source.

For the addition's shell, we used structural insulated panels (SIPs), expanded polystyrene foam sandwiched between two sheets of oriented strand board (OSB). Built in a factory and trucked to the site, the SIPs saved a month of project time in our region's rainy

**Comfort with a view.** The apartment's main living space features a high ceiling and a seat for gazing through the big windows. Heat-reflective film within the windows keeps the western exposure cool in the summer. Photo taken at E on floor plan.



season. The foam insulation in the SIPs provides superior thermal performance. Brian de Young of Stonewood Builders covered the panels with #15 builder's felt, and then nailed up plywood strips to create a rain-screen wall underneath the fiber-cement siding that protects the sheathing from wind-driven rain (see *FHB* #137, pp. 86-91).

Inside the apartment, we used nontoxic paints and finishes. The second floor's flooring and trim, which were remilled from salvaged school-gym-bleacher boards, are finished with a plant-based penetrating oil called OS Hardwax (Environmental Home Center; [www.environmentalhomecenter.com](http://www.environmentalhomecenter.com); 800-281-9785).

The view from the window seat in the west bay is stunning (photo above), but because the afternoon summer sun can overheat the room, we specified windows from Milgard ([www.milgard.com](http://www.milgard.com)) with a heat-reflective film between glass layers.

Because the main house's furnace and water heater were not large enough to serve the addition, the Hupperts picked a 50-gal. combination water heater (Wattersaver; ECR International; [www.ecrinternational.com](http://www.ecrinternational.com)) to

provide both domestic hot water and heating. A single-fan electric heater that is mounted along the floor (Whispa II; Myson Inc.; [www.mysoninc.com](http://www.mysoninc.com); 800-698-9690) handles the heat on the second floor of the apartment. Passive inlet vents in the addition's bedroom provide fresh air, while the fans in the stove hood and bath exhaust stale air; so the interior is ventilated continuously, even when the windows are closed. □

**ONLINE CONNECTION**  
Tour this house on our Web site at  
[www.finehomebuilding.com](http://www.finehomebuilding.com).

George Ostrow lives in Seattle, where his firm, Velocipede Architects, actively pursues the business of green building. Photos by Charles Bickford, except where noted.