

# A Small, Spacious



# House for a Skinny City Lot

A contest-winning design squeezes a vaulted living room, a master suite, and room to breathe onto a pencil-thin lot

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As an architect and an urban designer, we like fitting more into a design than there seems to be space for. When we learned the city of Portland, Ore., was having a design competition for a narrow urban infill house, we jumped at the chance. Portland wanted plans for so-called skinny lots (25 ft. wide by 100 ft. deep) around the city. The impetus for the design competition was to create a narrow house with curb appeal. Our entry could be no wider than 15 ft., yet include a garage.

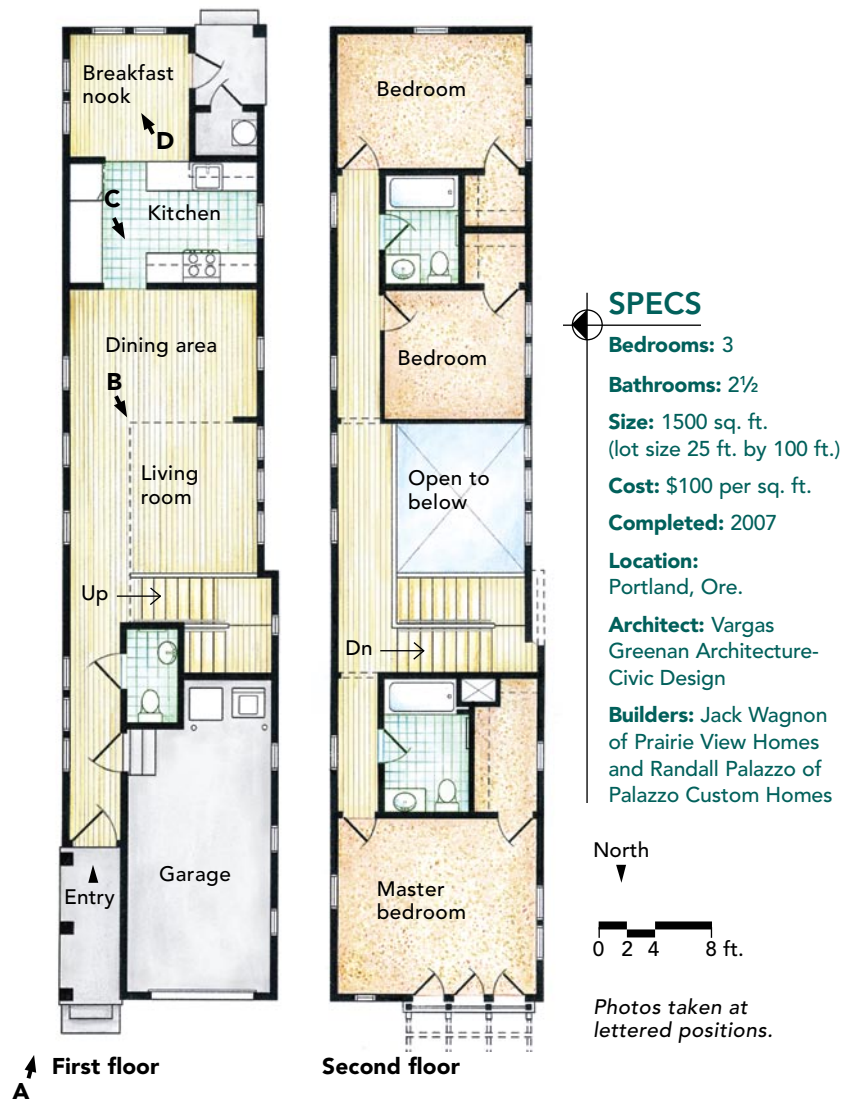
For livability and marketability, we wanted the design to have at least three bedrooms and large living spaces. It was important for the design elements to reflect the historic architecture of the Portland area. We wanted the interior to be comfortable and uncompromised by the narrowness of the house. Out of more than 400 entries submitted from around the world, our design won a People's Choice Award, and our entry was one of two designs the city chose to offer as permit-ready plans ([www.livingsmartpdx.com](http://www.livingsmartpdx.com)).

## Attractive street frontage was the big challenge

At 15 ft. wide, a house has barely enough room for a front door and a garage. We had to include a street-facing garage door because Portland blocks don't have alleys and because the city required the designs to accommodate parking. A garage, however, is not necessarily the most-attractive element to see from the street.

To reduce the garage's prominence and to create an inviting entry, we added a small porch. This approach offers two advantages. First, it shortens the narrow hallway required to move beyond the depth of the garage when entering the house. It also creates a transitional space for people to pause as they move from the public street to the private home.

We de-emphasized the garage by reducing the size of the door from the standard 8 ft. by 8 ft. to a special-order 7 ft. by 7 ft. Additionally, we designed a custom garage door with



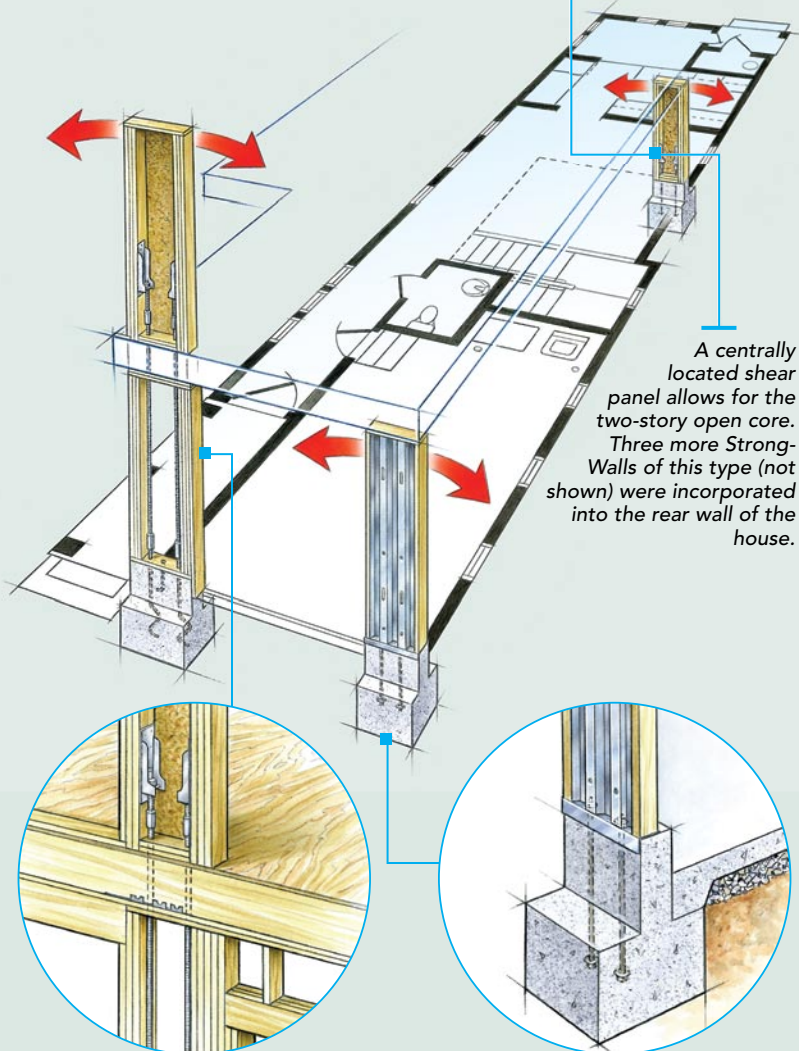
## APPEAL OF A COMPACT DESIGN

Less square footage benefits the occupants and the builder. Rooms are clustered around high-use areas like the kitchen and the bathrooms. The double height of the living room and its squarish shape provide a central focus. Builder Jack Wagon ([www.prairieviewhomes.net](http://www.prairieviewhomes.net)) likes the centralized plumbing and stacked wall locations for efficiency in building.



## SHEAR-WALL PANELS ALLOW FOR AN OPEN INTERIOR

Providing adequate shear-wall protection is challenging in a long, narrow two-story house with many wall openings. The key to success was using Simpson's manufactured Strong-Wall Shearwall panels ([www.strongtie.com](http://www.strongtie.com)). Panels are available from 15 in. to 24 in. wide and, depending on the structural needs, are made with either wood or metal webbing that provides shear support. A total of six Strong-Wall panels were used in this house.



A centrally located shear panel allows for the two-story open core. Three more Strong-Walls of this type (not shown) were incorporated into the rear wall of the house.

Connected to the foundation with 1-in.-dia. steel rods, a second-floor Strong-Wall secures the structure against the seismic and wind-shear loads that a tall, skinny building might encounter.

This metal Strong-Wall is bolted directly to the footing. It secures the corner yet leaves room for the garage-door opening. At only 18 in. wide, it replaces a 4-ft.-wide traditionally framed shear wall (OSB fastened to studs).







**Let in the light.** The open two-story core of the house serves to connect the different living zones while allowing light to penetrate fully. Photo taken at B on floor plan.



**Kitchen is close but separate.** The cooking is centralized, but a structural wall blocks the rest of the house from clutter and noise. The breakfast nook at the back of the house is open to the kitchen. Photos taken at C and D on floor plan.

large windows to help the front of the house feel occupied.

Above the garage, the master-bedroom windows look out to the street. For visual interest, we created a French balcony with cedar 4x4s supporting a shed roof that interrupts the larger roof plane (photo p. 70, taken at A on floor plan). These features give the building a welcoming appearance.

### **We used the narrow footprint to our advantage**

It would be easy for a narrow house to feel cramped. However, we wanted to create the opposite effect by emphasizing the strengths of a narrow design. First, in a narrow house, window light easily penetrates to the core. In this design, we increased that advantage by creating a two-story living room. Here, the windows extend all the way to the eave. This lets in more sunlight throughout the year, which is a big benefit in the Pacific Northwest, where winters can be cloudy. The height also allows light to penetrate beyond the living spaces into the hallways, which gives the interior a sense of openness.

The vaulted living room also breaks up the linear feel of the house and links different living areas. The master bedroom in front and smaller bedrooms in back are joined by a bridgelike corridor that maintains the bedrooms' privacy but creates a connection to the lower living spaces.

This plan allows for flexibility. The gathering space downstairs can be expanded beyond the living room onto the stairs and into the second-floor hallway as needed during parties. The advantage is that you can incorporate circulation space, which otherwise would be wasted, into active living space.

Downstairs, the vaulted room gives the small house a surprising sense of grandeur.

### **Affordability is a balancing act**

We want our designs to be affordable, but stripping a house to its basics would not help the city to establish attractive urban infill. To retain important details, we prioritized design elements. Outside, the most-important elements are the recessed windows, the French balcony, and the wooden garage door with windows. Additionally, we recommend high-quality environmentally friendly paints and finishes, an open floor plan, and a double-height living room.

To reduce energy costs and to be certified by the local green-building body ([www.earthadvantage.com](http://www.earthadvantage.com)), we reduced the floor-to-window ratio to less than 25%. Additionally, we increased the floor joists from 2x8s to 2x10s to get R-38 insulation under the house. In the attic, we achieved R-49 and R-38 in the areas with scissors trusses.

We made some compromises to reduce costs. For example, we re-engineered the foundation to reduce the volume of concrete used. We provided options for fixed instead of operable windows. We also repeated window configurations when possible and found affordable window and door options that matched our design standards. □

Roxana Vargas-Greenan and Trent Greenan live in Berkeley, Calif. Photos by John Ross.

**FineHomebuilding.com**

Look for the Magazine Extras on our home page to link to a video tour of this house.