



# Home Again, Quick

A team led by Reena Racki, AIA, develops an innovative approach for post-Katrina replacement homes

by Ronald O'Rourke

In the weeks following hurricane Katrina, news stories about the dreary emergency housing settlements used to house victims of past disasters—consisting of mobile homes organized in rows, like military camps—prompted many to ask, “Can’t we do better?”

Architect **Reena Racki, AIA**, principal of a six-person DC architecture firm, asked herself that question. Home with the flu when Katrina hit, she had time to ponder it. By the time she recovered, Racki had resolved to do something about the problem of post-disaster housing by developing and implementing a new and innovative solution. “I was determined,” said Racki, “that as soon as I got back to the office, I was going to put aside our normal project activities for a while and see if, in a rapid charrette process, we could develop the concept I had been thinking of.” (“Charrette” is an architectural term for “intense design workshop.”)

Racki’s concept—which she hopes to call “Going Home”—is a novel approach to the problem of rebuilding livable homes and functional communities destroyed by natural disasters. A prototype of Racki’s concept is to be built on church land in Chevy Chase Circle, and a multidisciplinary coalition that Racki has assembled (see sidebar) is working through the many

practical details of implementing the concept as soon as possible at a site on the Gulf Coast.

Some architects have responded to disasters with designs for temporary emergency dwellings. Others have focused on developing new designs for permanent replacement housing. Racki’s approach draws on “core housing” strategies used in her native South Africa and her studies of American “catalogue houses,” complete house assembly kits that, until the early 1930’s, could be ordered from major retailers such as Sears, Roebuck and Montgomery Ward. Racki proposes to marry the concepts of temporary and permanent housing by designing a factory-built, modular home that can start as a small emergency dwelling and then grow, with the addition of later modules, into an individualized, permanent house that forms part of a well-designed, livable community.

“In addition to the total disruption to people’s daily lives, the loss of all their possessions and their shattered communities,” Racki noted, “the psychological sense of loss—of place, neighborhood, and home—is what haunted me the most as an architect. I was therefore intent on designing not just emergency temporary housing, but a primary emergency shelter that could also serve as a stepping stone [to a larger permanent

home] and as a basis for new community and micro neighborhoods.”

“The houses are therefore designed as part of an integral community that is intended to provide welcoming common spaces,” she says. “These could help foster a feeling of neighborliness and a sense of reestablishing community. The design concept is in stark contrast to what [one newspaper article] called ‘FEMA’s City of Anxiety.’”

Recognizing that Katrina destroyed the homes of people of various financial circumstances living in a mix of urban, suburban, and rural settings, Racki decided that a one-size-fits-all solution to post-Katrina housing would not work. So she focused on developing a solution for a specific segment of the population: low-income residents whose small coastal towns were destroyed by the storm.

Racki’s strategy is a home consisting of factory-built modules. Each module would measure 12 feet by 12 feet, dimensions that Racki chose to take advantage of standard-size construction materials, so that the modules could be built quickly with little waste and at minimal cost. The initial module, which would serve as a temporary emergency dwelling for one or two people, includes a small kitchen and compact bathroom along one side, and a bunk bed



and banquette-style eating and sitting area along the other. It's a tight fit, but the space is made a little roomier by the 10-foot ceiling height, which would be standard for all modules. Attached to the front of the module would be a twelve-by-six-foot screened porch.

Though not much larger than a modest hotel room, the initial module could be assembled quickly in the resident's former neighborhood, a significant improvement over the dislocation of living in a remote hotel, far from the vital elements of daily life: work, family, neighbors, church, and schools. It also puts people where most people need and want to be—at home—so they can more quickly begin the process of returning to normal life.

The second module for each home, which would be added to the rear of the first, would include a storage unit along one side and an additional living and sleeping area with a king-sized sofa bed. The resulting two-module configuration could serve as an interim home for a couple with two children.

Subsequently added modules would provide additional bathrooms, bedrooms, and living and work areas, depending on the needs of each household. Completed homes might include as many as 10 modules—a total of 1,440 square feet—assembled in various configurations. The homes would vary from one another by the number and arrangement of modules, the choice of roof style (shed, gable, or pyramid), and color.

Racki consulted with a structural engineer to identify features that would

make the homes resistant to future bad weather. The wall panels would be made of exterior plywood and cementitious board—materials that can be painted and that resist water damage. The structural design of exterior walls would incorporate hurricane clips and other features to resist the sheer forces of high winds. Roofs would be finished in standing-seam metal, an inexpensive, light colored durable material that also deflects the heat of the sun.

Module components would be built in factories and flat-packed for shipment to the construction site. Local contractors would build the foundations and assemble the modules, creating a local source of employment. Where possible, module construction factories could be quickly established nearby, further helping to regenerate the local economy.

In heavily devastated areas, Racki envisions entirely new communities in which the homes would sit close to the street, on lots large enough to provide ample back yards. Property boundaries would be marked by privacy fences, a feature missing from emergency settlements that Racki believes is important to reestablishing a sense of normal community life. Initial planning could also aim to provide community buildings and spaces whose scale, layout, and uses reflect residents' needs and views, such as chapels, child-care and play areas, community meeting facilities, and laundry facilities. A pilot community might include 50 to 80 homes.

Planning is underway to build a two-module prototype—intended to prove the concept and iron out any wrinkles—on the

grounds of the Chevy Chase Presbyterian Church at Chevy Chase Circle. Acadia Construction has offered to build it using donated construction materials. The construction process would be filmed, and the prototype left in place for about a month. The prototype would be visible from the sidewalk and the street, and may be opened to the public for up-close inspection. Members of Racki's coalition, meanwhile, are busy working out the legal and financial details of implementing the project, traveling to the Gulf Coast to consult with local community leaders, and selecting a site for the pilot community.

The coalition is forming a nonprofit organization to manage the implementation of the concept over the long run. The nonprofit will retain copyright to the design concepts, which could be licensed to other nonprofit groups or for-profit companies. Licensing fees would be used to help finance further construction. Racki also hopes to interest government officials in manufacturing and stockpiling modules, so that they could be shipped immediately in response to future disasters.

When asked what differentiates her project from other approaches to post-disaster housing, Racki notes not only the idea of expanding a temporary residence into a permanent home, but also the project's focus on rapidly reestablishing "the notion of ordinariness." The design of the homes and the communities they would form, she says, "celebrates the ordinary appeal of everyday-ness." The strategy is to "use new materials if they make sense, but combine them with familiar things that make a home," so that residents can resume living a normal life as soon as possible. 🏡

## The Going Home Coalition

The staff of Reena Racki Associates provide vital support for the project: Reena Racki, AIA; Debie Boehman; Sarah Mandell; Sylvan Miles; Peter Seidel, AIA; and Vanja Tritten. In addition, Racki's growing coalition includes the following people and organizations as of this writing

NAME	AFFILIATION	ROLE IN COALITION
Kathleen Behan	Arnold and Porter LLP	Nonprofit strategy, Gulf Coast contacts
Andrea Oppenheimer Dean	Writer/Editor	Board of Directors
Louise Elving	Former Vice President, Housing Development, Housing finance, Community Builders, Boston	Development strategy
Paul Jeffs	Acadia Construction	Prototype construction
Sanjay Khanna	Tadger Cohen Edelson Associates	Structural design
Robert Lautman	Photographer	Photography, Board of Directors
Michael Lee	Arnold and Porter LLP	Real estate, tax law, development
Marc Pachter	Smithsonian	Board of Directors
Anita Rechler	ICF Consulting	Housing and community development
Ian Richardson	Chevy Chase Presbyterian Church	Land for prototype
Julian Spirer	Spirer and Goldberg	Trademark, nonprofit law
Martha Volner	Consultant	Nonprofit administration
Judy Weisman	Art Consultant	Community art

## Coalition Statement of Mission and Intent

Going Home is a nonprofit organization dedicated to designing affordable, technologically innovative housing suitable to disaster areas.

Going Home has created a modular, prefabricated house design that is responsive to the emergency situation on the Gulf Coast. These units are inexpensive, easy to erect, and sufficiently light and compact to be transported to the site where they will be erected. The units provide all the essentials of shelter in one package—along with permanence—and will be configured to create community-oriented neighborhoods. The concept is sensitive to the environmental setting and concerned with preservation of investment and visual variety. The units feature permanent building materials, modular design, and structural systems that permit simple, incremental, and inexpensive expansion.

The problem: For many people are already living in poverty, mobile homes have become the default resource when displaced by natural disasters. Mobile homes—easily destroyed by storms, dangerous to inhabit, and unattractive—are as much a problem as a cure.

The vision: to replace the mobile home with more innovative permanent homes, designed to create small-scale, attractive communities. These micro neighborhoods will be comfortable and identifiable places. The houses will be affordable, designed to better withstand severe weather, and easily expandable and upgraded.

The solution: Going Home proposes to design and build small homes and communities that are:

- permanent
- modular
- inexpensive
- resistant to severe weather
- available in a variety of attractive designs and prototypes
- expandable
- adaptable to a variety of environments
- suitable for small clusters or making up sections of larger communities
- easy to manufacture
- transportable by train or truck
- simple to erect

Action: Going Home has:

- gathered creative and experienced design, construction, legal, and management professionals necessary to develop this project, initially working pro bono;
- arranged to construct the prototype module on land in the District of Columbia;
- designed a number of models and modules;
- established a nonprofit 501(c)3 organization; and
- organized a capable, talented, and professional Board of Directors.

Following construction of the prototype in Washington, DC, Going Home will pursue funding in the private, religious, and government sectors to manufacture and erect homes in affected communities. 

