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Shipping containers could be 'dream' homes for thousands

- Story Highlights
- U.S. builder hopes Mexicans will want homes made from shipping containers
- Company targeting poor factory workers in Ciudad Juarez, Mexico
- Homes are 320 square feet, around \$8,000 with kitchen, bath, sleeping area
- Home builder wants factories to offer homes as part of workers' benefits

CORRALES, New Mexico (AP) -- It was a side trip through a destitute, ramshackle neighborhood in Ciudad Juarez, Mexico, that detoured Brian McCarthy from building houses in Albuquerque to an idea to offer the very poor a chance to own a home.

His answer lies in a humble steel shipping container, 40 feet long, 8 feet wide, 8 1/2 feet tall.

McCarthy, 30, and three partners, Pablo Nava, 22; Kyle Annen, 23; and Mackenzie Bishop, 22, have made a prototype out of a standard shipping container that hauls goods worldwide -- a 320-square-foot home with a kitchen, bath with toilet, sleeping areas, windows and a bright blue door. The exterior is painted with a white epoxy coating that has light-reflecting properties to prevent the sun's heat from penetrating.

Each small house includes hookups for air conditioning, ventilation, electrical and water systems -- and the units ideally could be set up in small communities to make accessing utilities more efficient.

The idea began to take shape several years ago, when McCarthy went to the Mexican border city on a field trip as part of an executive MBA program. He found himself impressed by the sophistication and rapid growth of industry in [Juarez](#), but shocked when the bus cut through a poor neighborhood on the way out of the city.

"We saw hundreds of homes that are made out of wood pallets and cardboard and scrap metal and scrap building material," McCarthy said. When he questioned the bus driver, "he said, 'Well, all the people who live here work in the places you just visited.'"

"It was amazing to me that in an area where there was such growth and economic prosperity, that these employees of Fortune 1000 companies were living in such poor conditions."

With Juarez growing by 50,000 to 60,000 people a year and wages low, it was evident traditional homebuilding couldn't respond, said McCarthy, who'd worked in various facets of building homes in [Albuquerque](#).

An idea began taking shape about a year and a half later when he saw an article about a shipping container converted into guest quarters.

"They talked about the merits of the construction, how strong they are, how affordable they are, and how plentiful they are," McCarthy said.

He called Nava, his cousin, with the low-cost home idea. A year later, Nava, then a junior at Notre Dame University, suggested entering the university's business plan competition.

Their initial three-quarter page concept expanded as they advanced in the contest. Along the way, Nava invited his roommate, Annen, to join. As the group's acknowledged computer graphics whiz, Annen added drawings to give the presentation more life.

Eventually, they won the contest with a 55-page document, illustrated by renderings and floor plans.

In July 2007, the partners formed PFNC Global Communities -- PFNC stands for "Por Fin, Nuestra Casa," which roughly translates as "Finally, our own home." They operate out of a back room in a Corrales realty firm but eventually expect offices in Juarez or adjacent [El Paso, Texas](#), and a Juarez plant to manufacture shipping container homes.

The house faces two constraints: designing in only 320 square feet and keeping the price to around \$8,000 to be affordable for the average worker at maquiladoras, manufacturing plants in Mexico along the U.S. border, McCarthy said.

The partners looked at clever designs for small condos and lofts, travel trailers and even private jet planes, adapting ideas they felt would work.

"We started with a kitchen and bathroom because they're the most necessary and most basic ingredients of a home," McCarthy said. They designed a galley-style kitchen with a stove, sink, refrigerator and dinette, and a 48-square-foot bathroom with a pedestal sink, shower and commode. Adjacent to the kitchen is a bunk area for children; separate sleeping quarters for the owners lie behind the bathroom wall.

The house may be sparse by U.S. standards, but Nava said it's a huge improvement in safety, security and health over where many now live.

When drawings and color pictures of the prototype were shown around a poor Juarez neighborhood, people said, "You know it'd be like a dream to live in one of these," Nava said. "You know, just the thought of having nice fresh air ventilating through the house, a large bed ... a normal kitchen and a safe home that locks and closes each night was more than appealing."

Annen cites modern architectural design, with bare metal and piping. "This would fit right in any major city," he said.

The company has received a commitment for equity investment and is in the process of finishing details and closing its first round of funding. The partners anticipate starting production early next year, with the capacity to produce 3,000 homes in the first year and later ramping up.

They figure a half million people could benefit from such homes in Juarez alone.

PFNC doesn't intend just to build shelter. It wants to build communities, and McCarthy said the group expects to have the first pilot community on the ground late next year.

"That was our goal, more than just four walls and a roof but to kind of raise the standard of living in Juarez and other places," Nava said.

The shipping containers, which can be hauled by truck, rail or ship, are designed to stack. PFNC envisions a cluster arrangement, eight side by side and four high, with apartment-type balconies and staircases in the corners.

Clusters could be arranged into squares, creating "a safe little plaza in the middle where we hope to build a soccer field or a playground, some safe area for families to be," Nava said.

PFNC wants to set up programs with maquiladoras to offer housing as an employee benefit, helping cut the high rate of worker turnover, now between 7 percent and 10 percent a month, McCarthy said. The company is working with a Mexican law firm that has handled work-to-own housing programs.

"This is not a rental-type situation or free housing while you work here," McCarthy said. "Rather, the employer takes on some of the burden in setting up the financing program to transfer ownership to the employee."

That's important because PFNC needs large orders to keep costs down so low-wage workers can afford the home. The incentive for employers: Studies show housing for employees dramatically increases retention, and having more workers in a given area will reduce the number of buses maquiladoras run to take people to and from their jobs.

PFNC doesn't view its homes as the last stop.

"With our design and with our price point, we think we'll at least be able to take the first step of getting more families into more homes" and formal property ownership, McCarthy said.


"We fully anticipate that people will move into our homes, build up some equity, sell this home," he said. "We see this is a stepping stone to get into a bigger or more comfortable home."

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