

Tiny Houses – Big Solutions?

Tiny houses may be one of the solutions to housing very low-income families, homeless persons, elderly persons and others who want a home at a low cost. As a result, many could own their homes without the continuous expense of rent or mortgages.



The current Tiny House/Small House Movement is attractive to people with environmental concerns, people with financial concerns and people looking for solutions to homelessness, among others. In addition to their attraction as environmentally friendly and much less costly, Small Houses have found application in other areas. After hurricane Katrina in 2005, “Katrina Cottages” as small as 308 square feet, were used to supplement FEMA trailers.

On February 26, 2014, NBC News reported on *Tiny Houses: A Big Idea to End Homelessness*, which described how tiny house developments across the U.S. were created to house those who are homeless. It describes small housing structures that could be built at very low costs. In many cases, these tiny structures can be built for far less than the cost of rent for one year. The report explains that these tiny homes provide stability, a home base, safety and normalcy that often alleviates mental health issues.

<http://www.nbcnews.com/business/real-estate/tiny-houses-big-idea-end-homelessness-n39316>

Small houses (less than 1,000 square feet) have been popular at various times in the U. S. At the turn of the 20th century, the average house size was about 800 square feet. Up until about 1940, build-it-yourself house plans and “house kits” were periodically popular, sold by many companies including Sears Roebuck and Montgomery Wards. From about 1907 to 1940, almost a million kit homes were built in the U. S.

In 1990, the average home size was less than 1,000 square feet, with increases following World War II. The desire for larger homes was evident by 1960, when the average home was about 1,200 square feet, with two or three bedrooms and one bathroom being considered the absolute minimum. By the year 2000, average home sizes had grown to about 2,200 square feet, not counting garages, etc.

<http://www.smallhouseliving.org/random-thoughts/history-sm-house-mvmnt.htm>

The Small House movement again picked up interest during the housing downturn/recession of 2007–2010. Small houses have also been attractive as accessory dwelling units to house elderly relatives, serve as a home office, or as a guest house.

Housing for the Homeless

More recently, the Small House has been considered as a solution to housing for homeless people. The National Low Income Housing Coalition reported in 2013 that for every 100 "extremely low income" renter households (earning 30% or less of the Area Median Income), there are only 30 affordable apartments available. Localities from coast to coast are trying Small Houses to alleviate this shortage.

<http://www.urban.org/housingaffordability/>



In Newfield, New York, Second Wind Cottages, a tiny-house village for the chronically homeless began with six 16 by 20 foot houses for homeless men. The nonprofit Occupy Madison Build is building 99 square foot houses in Madison Wisconsin. In Eugene Oregon, 960 square foot huts and 21 64-80 square foot bungalows comprise Opportunity Village that opened in September 2013.

On donated land outside of Ithaca New York, Second Wind Cottages provides 320 square foot cottages for homeless men. Some tiny homes have been built on wheels, and can be moved easily when necessary.

<http://news.yahoo.com/tiny-houses-help-address-nation-39-homeless-problem-064601000.html>

Using tiny houses to address homelessness alleviates several problems, including high cost of land (especially in urban centers), materials (often through donations), and labor costs (low through using volunteers. However, problems occur when zoning laws do not allow this kind of dwelling or do not allow several on one lot, or when neighbors become concerned that property values will go down.

Quixote Village in Olympia, Washington, began after homeless people assembled in a parking lot in 2007 to protest an ordinance that made it illegal to sit, lie down or sell items within six feet of a downtown building. After the police evicted them from the parking lot, a local congregation helped and offered temporary refuge, which began a rotation to different local churches.



In December 2013, homeless people began moving into homes in Quixote Village that cost about \$88,000 per unit, less than half the cost of an average public housing unit. There are 30 structures, 29 occupied by disabled adults, primarily those who were chronically homeless.

The project was developed through state and local grants and private donations and was accompanied by an outreach campaign to create public acceptance, operated through the nonprofit sponsor, Panza.

<http://www.yesmagazine.org/new-economy/tiny-house-villages-for-the-homeless-an-affordable-solution-catches-on>

Elder Cottages

Tiny Houses have also been used to provide housing for seniors who are often on fixed incomes. These are based on the “Grossdawdy Haus” concept from the early 1800’s when elders would have a small house next to the main house.



<http://www.eldercottages.com/index.php>



<http://www.medcottage.com/>

In Virginia, backyard “Granny Pods” are pre-fabricated alternatives to nursing homes. Families can house elderly relatives in 288-605 sq. ft. “MedCottages” in their backyards, with a handicap accessible bathroom, refrigerator, microwave and medication dispenser. These cottages have technology similar to hospital rooms, with safety rails, lighted flooring, built-in cameras and a defibrillator machine. The MedCottages include “robotic features” to monitor vital signs, filter air contaminants and to alert caregivers to problems.

Tiny houses can also be designed to be accessible for those who are disabled or aging people with mobility problems. These homes, often single-story be wheelchair-accessible and can be as small as 180 square feet

<http://occupymadisoninc.com/om-build/how-do-i-get-one/>

Tiny Homes for Families, Students, and Others

Those who live in highly populated areas have experienced confined living for years because of the limitation of available space and costs. Families who have lower incomes and those who want to own a home without a mortgage may choose tiny homes.

<http://www.tinyhousefamily.com/>

In northeast Washington, DC, residents built a cluster of four tiny homes to meet their housing needs because of the lack of affordable housing. Each house is no more than 200 square feet to meet a need in a city that is about 30,000 units short of affordable housing.

<http://www.nationaljournal.com/next-economy/solutions-bank/a-tiny-house-grows-in-washington-d-c-20131202>

Boneyard Studios, Washington, DC, created designs for home styles including the 140 sq. ft. Matchbox, the 145 sq. ft. Pear House and the 210 sq. ft. Minim House. Their web site provides information about reasons for building a small house, a description of how the water/electric/septic systems work, affordability, etc. The site also provides links to media coverage about tiny homes.

<http://boneyardstudios.com/press/>



The Not So Big House concept is also for mainstream use, and includes different sizes of homes that are smaller than typical current houses. The houses, ranging from about less than 500 square feet up to much larger, are designed precisely to meet the needs of occupants. It includes related issues in terms of personal purpose, priorities and an enhanced quality of life.



640 sq. ft./1 bed/1 bath/32'x20

<http://www.entsobighouse.com/>



678 sq. ft./1 bedroom/1 bath/1 garage



320 sq. ft./1 bedroom/1 bath

<http://www.coolhouseplans.com/index.html?ordercode=C132&mode=fl1#14581>

Greenville, South Carolina, has the City in the Woods, a 45-acre development of tiny eco-village homes. The cost for a quarter of an acre of land plus a house costs \$18,000. Other tiny home communities (with varying costs) have been created in Luling, Texas; Cabot, Vermont; Fairfield, Iowa, and various other locations in the U. S., Canada, Mexico and the United Kingdom. In addition to Quixote Village, other communities for temporary or homeless shelter are being developed:

- Second Wind Cottages, Newfield New York - <http://secondwindcottages.org/index.html>
- Community First Village, Austin, Texas - <http://mlf.org/community-first/>
- Opportunity Village, Eugene, Oregon - <http://www.opportunityvillageeugene.org/>
- Dignity Village, Portland, Oregon - http://www.oregonencyclopedia.org/entry/view/dignity_village/
- Occupy Madison, Madison, Wisconsin - <http://occupymadisoninc.com/om-build/how-do-i-get-one/>

<http://tinyhousecommunity.com/>



Community First Village



Dome Shelter System



Tumbleweed Elm

An example of a college student living in a tiny house is a graduate student from the University of Oregon who lives in a 130 sq. ft., 8'x19' tiny house. Almost all materials were reclaimed, with the flooring from an old gymnasium. It is on wheels so that it is portable and she built it with the assistance of her friends.

<http://tinyhousetalk.com/student-tiny-house/>



Students at Green Mountain College in Vermont developed an off-grid tiny house, a sustainable home with a small footprint. As part of a course on renewable energy and ecological design, the OTIS was created (Optimal Traveling Independent Space).



The OTIS can be towed by car or a standard open-bed utility trailer. Excluding labor, a typical OTIS would cost \$8,000-\$10,000, but the 8'x12' class project house cost \$1,927 and used primarily reclaimed materials. Students in the millennial generation were interested in having their own low-maintenance, mobile living space, rather than to be tied down with rent or a mortgage immediately after college.

http://www.greenmtn.edu/news_events/new_releases/tinyhouse.aspx

<http://www.gizmag.com/otis-green-mountain-college/30534/>

As a final project for a Master's degree in Architecture at the University of Minnesota, one student converted an old school bus into a 225 sq. ft. flexible living space, with reclaimed gymnasium flooring and dimmable LED mood lighting.

In August, he began traveling on the tiny mobile house and writing a travel blog from Minnesota through Iowa, Kansas, Colorado, Utah, Nevada, Arizona, Nevada, California, Oregon, Washington, Montana, Wyoming and South Dakota.



<http://www.archdaily.com/419074/student-thesis-project-turns-bus-into-tiny-house/>

Sustainability

For those who want sustainability and ecologically sound, there are methods to make the tiny houses more self-sufficient. This also makes them suitable for remote off-grid areas. Modifications for sustainability include solar panels (which depend on space and sunlight availability), higher efficiency appliances, a rainwater catchment tank, a small on-demand water heater for the shower and sink.

<http://inhabitat.com/tiny-off-grid-cabin-in-maine-is-completely-self-sustaining/>

In terms of fuel for heating, electricity is probably easiest, cheapest and most efficient. Other options include a wood stove for an approximate cost of \$600-\$1,000 (carbon neutral and abundant in some areas); propane at a cost of about \$1,000 including fuel (clean burning, easy to find, efficient); or a kerosene heater at a cost of \$100-\$6,000 including fuel (burns very hot and is efficient, but is more polluting and requires precautions against carbon monoxide).

<http://thetinylife.com/heating-a-tiny-house/>

Composting toilet systems are available as an alternative to traditional septic or sewer systems, similar to some used on boats or RVs. Depending on the capacity and type of equipment used, these can range up to \$2,000 or more.

<http://www.sun-mar.com/prod.html>

Gastineau Log Homes - \$44,900
400 sq. ft. oak log cabin, on wheels
<http://logcabins2go.com/>



Below are a few examples of other alternatives to traditional homes that were not been included in this report:

<http://www.trendhunter.com/slideshow/56-alternative-homes-and-innovations-when-you-cant-get-a-mortgage>

<http://www.sweetwaterbungalows.com/portable-structures/alternative-housing.php>

<http://realestate.msn.com/article.aspx?cp-documentid=13107833>

<http://www.survival-spot.com/survival-blog/9-unique-alternative-housing-ideas/>