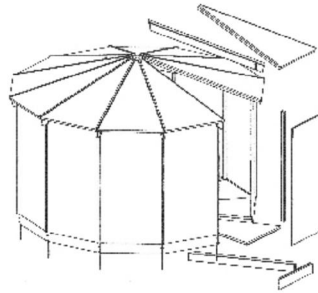


Full Circle Shelters Polyurt.®



fullcircleshelters.com

21952 County Highway SR
608-647-5007

Richland Center WI 53581
Cell 608-475-0531

Full Circle Shelters

Welcome to Full Circle Shelters!

This packet will introduce you to our versatile shelter and its possibilities.

Included here are the following: a quick overview of our Polyurt[®] with a few of its possible uses; a brochure on our wood shell packages; and a description of our “Community In A Container” and its costs.

Please review this packet and then take a moment to look at our website and view the assembly video.

Our contact information is below. Please feel free to contact us with any questions you may have.

Thank you!

What is a Full Circle Shelter?

It's a tiny house for those wanting to downsize, an answer to prayers for persons displaced from their normal homes, a guest house or vacation cabin for some, or the first solid, safe family home for others.

The first Full Circle Shelter was designed as an easy-to-assemble storage/utility building. Quickly we realized it could fill the need for temporary post-disaster relief housing units. Some have said the shelters are "too good for temporary shelters; they should be used as small homes", and so our shelters have evolved to meet a variety of needs and conditions.

A Full Circle Shelter is...

- Ø ...a Polyurt® – a multi-sided circular structure with the efficiency and portability of a yurt. The circular shape is inherently strong and economical. It is available in various sizes from a one-room, 180 square foot shelter to a small, 500 square foot two-bedroom home. It is very easy to expand if needed, by combining units or adding wings to a central core.
- Ø ...a temporary, reusable, post-disaster relief shelter constructed of metal. It's an alternative to FEMA trailers, to provide short-term housing for displaced persons, military personnel, and aid workers. It is easily assembled and disassembled, and can be staged in a compact amount of space. Full Circle Shelters can be stored and/or shipped to sites as needed, reassembled, and used many times over, making them extremely cost effective.
- Ø ...a small, economical house for those wishing to downsize, or can be used as small family housing units for persons now living in substandard conditions. Its adaptable design allows for use of locally available materials and labor to fit a wide variety of circumstances.
- Ø ...a backyard, back forty, or backwoods cabin or guesthouse. It's a home workshop, studio, or spare room. It is temporary housing for seasonal uses or migrant workers. It is easier to assemble than typical buildings used for these purposes, more affordable, and easier to disassemble and relocate as needed.

A Full Circle Shelter can be...

- Ø ...a "Community In A Container," a standard shipping container packed with materials and tools for 50 small homes and one larger building that may be used as a school, community center, or clinic. The container becomes a micro-factory, allowing local labor to build or rebuild their homes and community. In approximately 4 weeks, 50 families can be housed in safe, strong, and economical housing, easily expandable to fit future needs and resources.

A \$4500 HOUSE

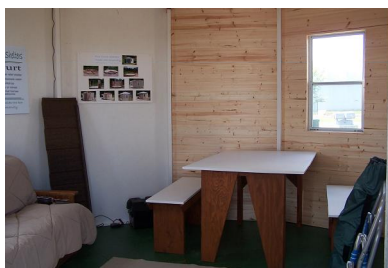
is much like any home...a roof for shelter from the elements, windows for light and ventilation, solid walls to keep the weather out, and a floor to keep you up off of the ground. What does a \$ 4500 house look like?

In some ways it is more than a home we think of as “normal” – it’s portable, easily assembled in a few hours and just as easily disassembled and moved to a new site if desired. It doesn’t include is a thirty-year mortgage, and it’s built with low maintenance materials.

In one important way it is less than a “normal” home – in its size. The basic shell is a 180 square foot, 12-sided polygon with an open floor plan. Panelized construction makes for easy transportation and handling. This is almost twice the size of tiny or “micro homes” now in use. It is about the same size as the average travel trailer. One person can accomplish assembly in three to four hours, even more quickly with two people. The circle or polygon is the strongest and most common shape in the universe and a very efficient use of materials.

The basic shell is perfect for a summer vacation cabin or a small house in a mild climate. Or think of it as a creative studio for painting, music or meditation, as a guest house, a backyard or back forty getaway and even as a home office space. Add insulation, solar or “on grid” electricity, and various bathroom options to create a very affordable home, suitable for any climate, and year round use.

What if a basic, low cost, low maintenance home was available for just \$4500? Please visit our web site at www.fullcircleshelters.com for photos and an assembly video, and see just what a \$4500 house looks like.



Model 180 wood shell package shown.

Basic Model 180 Wood Shell

Floor – Poured in place concrete slab or prefabricated wood panel floor system over treated wood framing.

Walls – Corner posts with connector pins to floor and roof frame
LP Smartside textured and primed sheet siding

Roof – BCX exterior plywood with elastomeric coating over framing rafters

Pre-finished aluminum door and windows with screens, skylight dome

Building options

Finish roofing of prefinished steel, fiberglass panels or sheet rubber roofing over plywood

Interior bathroom partitions or add-on bathroom

Expandable by combining units or adding “wings” around starter core

Utility options

Solar shower

Compost toilet

Camp kitchen with sink inside or out

Outdoor rocket cooking stove

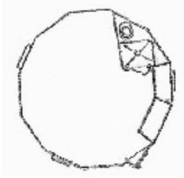
Solar/LED lighting

Rainwater collection and filtration

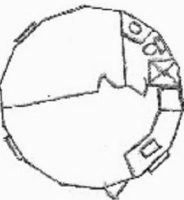
Future

Full Life Support package including small scale family food production, waste handling, power generation and security

Wood Shell Packages



Model 180
12 sides
180 Sq. Ft.
15.5 Ft.Dia.
\$ 4480.00



Model 250
14 sides
250 Sq. Ft.
18 Ft.Dia.
\$ 6250.00



Model 320
16 sides
320 Sq. Ft.
20.5 Ft.Dia.
\$ 7930.00



Model 400
18 sides
400 Sq. Ft.
23 Ft.Dia.
\$ 9890.00



Model 500
20 sides
500 Sq. Ft.
25.5 Ft.Dia.
\$ 12,460.00

All wood shell packages include:

Wall panels, roof panels, corner posts, roof rafters, center roof ring, vinyl door and aluminum frame windows, roof center dome, hardware and flashing/trim.

Floorplans shown are examples only, shell packages do not include interior walls, cabinets, counters and fixtures.

Prices shown are for a shell package intended for erection on a concrete slab floor.

Model 180 has a wood floor panel system available.

The estimated cost to finish your cabin with insulation, interior walls, ceilings and floors, cabinets and counters, wiring, plumbing and fixtures will be about 2 1/2 the cost of the shell package.

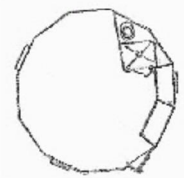
Always check local building and zoning codes to insure compliance in your area.

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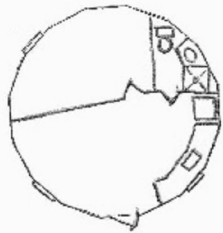
Concrete Shell Packages



Model 180

12 sides
180 Sq. Ft.
15.5 Ft. Dia.
\$ 6040.00

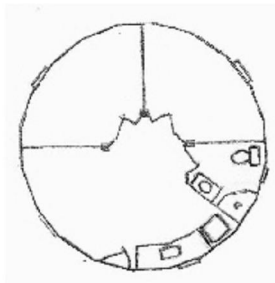
Estimated finished \$ 9060.00



Model 320

16 sides
320 Sq. Ft.
20.5 Ft. Dia.
\$ 10550.00

Estimated finished \$ 15825.00



Model 500

20 sides
500 Sq. Ft.
25.5 Ft. Dia.
\$ 16180.00

Estimated finished \$ 24270.00

Concrete shell packages include:

Concrete slab floor, concrete block walls reinforced with steel bars and poured in place concrete fill, treated wood roof rafters and roof panels, center roof ring, prefinished metal door and windows, roof center skylight dome, hardware and flashing/trim.

Floorplans shown are examples only, shell packages do not include interior walls, cabinets, counters, electric, plumbing and fixtures.

The estimated cost to finish with interior walls, ceiling and floor finishes, cabinets, counters, wiring, plumbing and fixtures will be about 1 1/2 times the cost of the shell package.

Options available-interior walls, steel roofing, plumbing, electric

Always check local building and zoning codes to insure compliance in your area.

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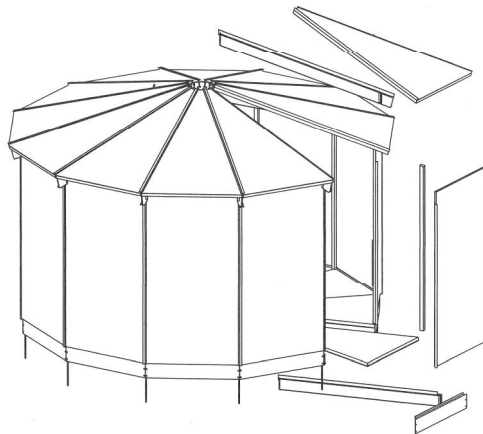
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Full Circle Shelters

Community in a container...

What would you say if you were told that in less than a month, affordable and expandable housing units could be built for 50 families? What if the materials for these 50 units, as well as the micro factory building used to manufacture them, could come to you in one 40 foot standard shipping container, and construction of the housing units could begin in less than 24 hours from when the container hits the ground? And what if this same housing solution had the possibility of employing 5-8 local workers at a living wage, manufacturing, delivering and constructing the housing? Most people would say this sounds impossible. We say all it takes is a little thinking outside the box.

Full Circle Shelters owner/designer Dennis Fry is not only thinking outside the box, but has eliminated the box altogether in designing the Polyurt.



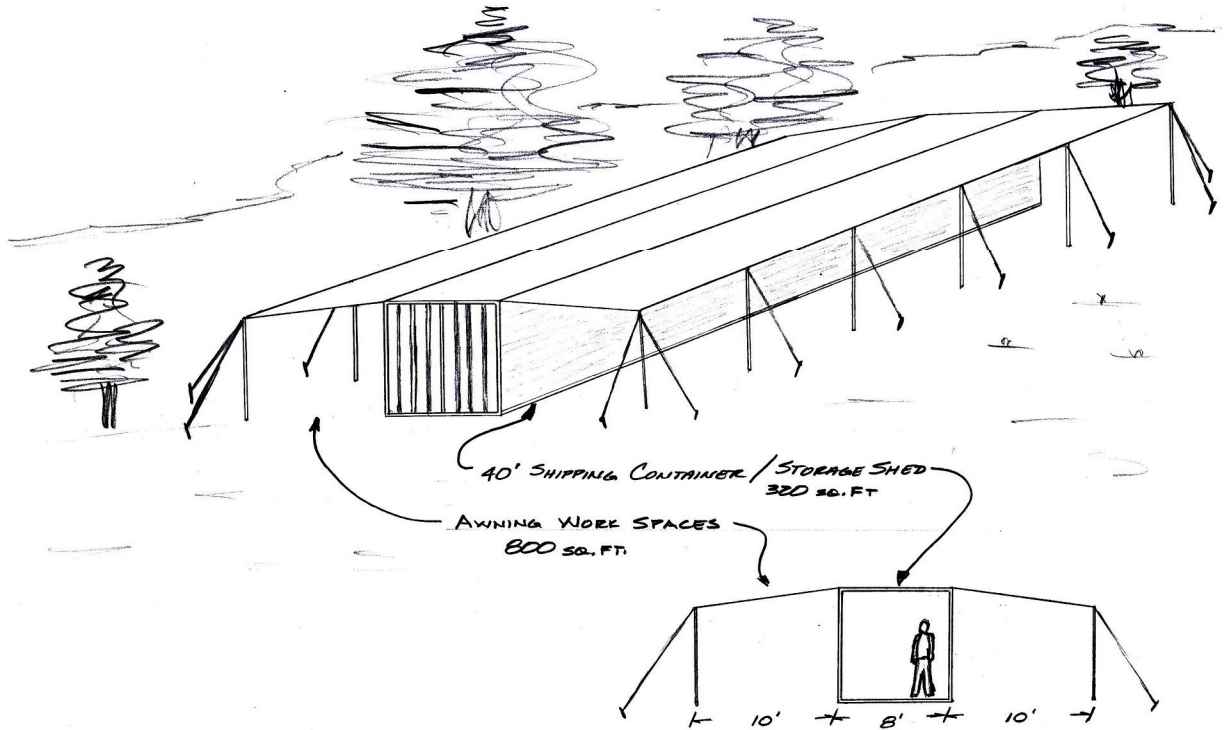
The Polyurt is...

A multi-sided circular structure or polygon with the efficiency and portability of the southeast Asian yurt. Polyurts vary in size from a one-room shelter 15' in diameter and 180 square feet, up to a 25' diameter, 2 bedroom home of 520 Square feet. In addition to being the strongest and most energy efficient building shape, the circle/polygon is also the most economical to build and maintain.

How it is done...

We pack a shipping container full of materials and precut parts for 50 small homes. One 40 foot container holds all of the materials, doors, windows, hardware and the tools required to build 50 of our homes. The container then becomes the factory, as well as being a lockable storage shed during the fabrication of the homes. The container factory includes its own power source in the form of a generator or solar panels and an inverter, depending on the area it's used in. Local labor is employed to manufacture parts and assemble the homes, and for site preparation. Included in the container is enough additional materials, doors and windows to also complete a larger building of approximately 500 square feet. The solar panels and inverter from the micro factory are then used to power this building as a community center, a health care clinic or school classrooms.

Micro factory in a container



Container Packing

D	D	D	D	D	D	D	D	D	D	D	D	D
T	W	2x4	1x4 1x6	2x4	1x4 1x6	1x6	2x4	2x4	2x4			
H	W	S	S	S	S	S	S	S	S	S	S	S
H	W	2x4	R	R	R	R	R	R	R	R	R	R
2x4	2x4	S	S	S	S	S	S	S	S	S	S	S

D = doors W = windows H = hardware

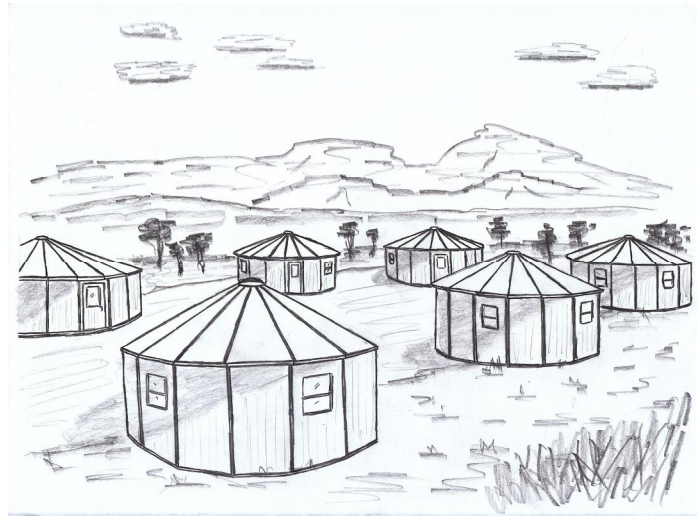
S = siding R = roofing 1x4, 1x6, 2x4 wood

T = tool package

It is possible...

Full Circle Shelters community in a container can provide:

- 50 small homes
 - community center or school
 - local jobs
- all in less than 1 month.



fullcircleshelters.com

Full Circle Shelters

Community in a container...cost breakdown

This breakdown is based on 50 model 180 buildings with additional materials included for 1 model 500 building.

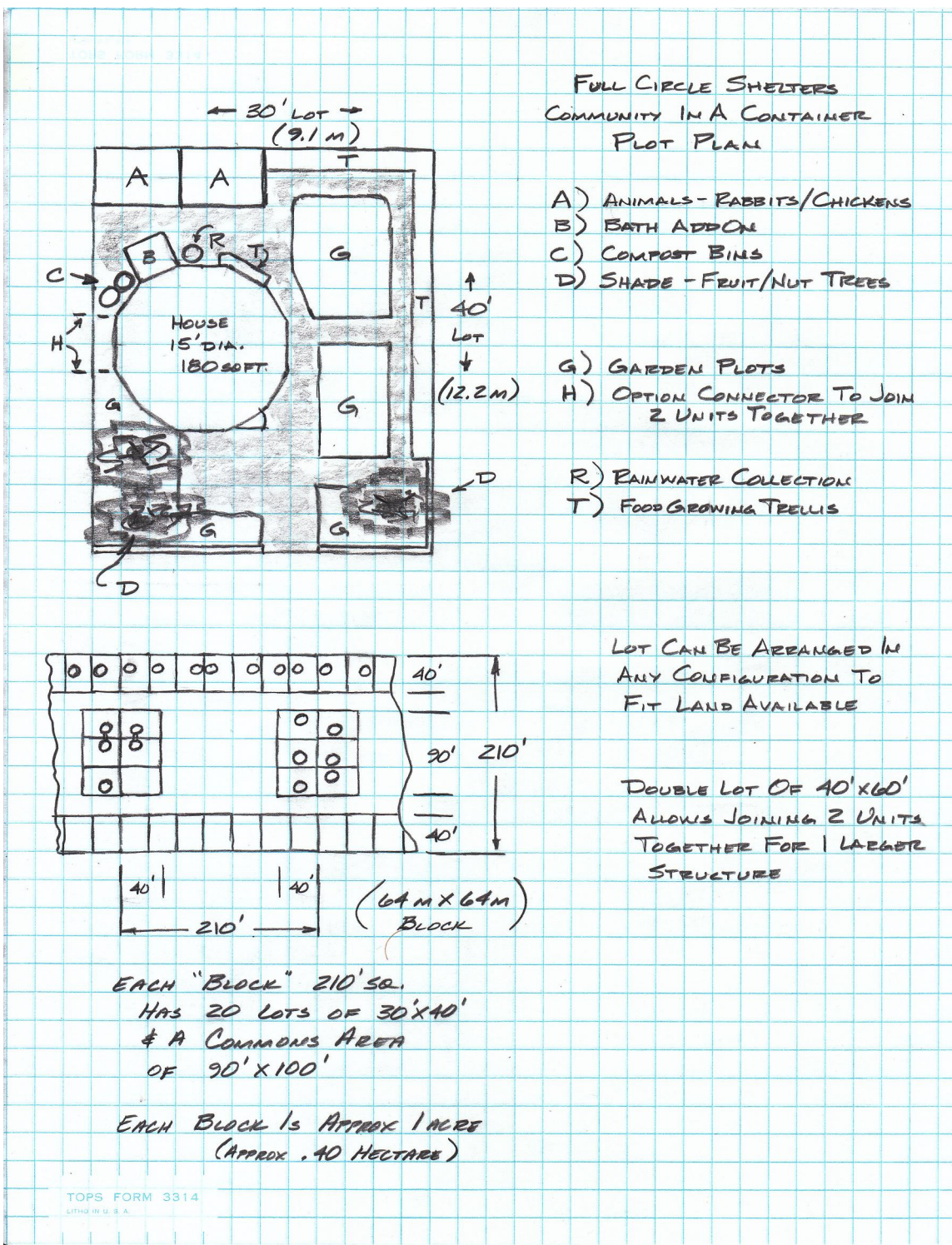
Material	-all roof framing, wall panels, doors, windows, and hardware for (50) 180 SF buildings and (1) 500 SF building		
	50 at	\$ 2900.00 each	\$ 145000.00
Tool Package	-all tools needed to fabricate and assemble buildings, including power generator or solar panels		
		\$ 160.00 each	\$ 8000.00
Local labor	-5 to 8 at site local workers for site preparation, part fabrication and building assembly		
		\$ 240.00 each	\$ 12000.00
Full Circle Shelters	-material purchasing, loading and site supervision		
		\$ 700.00 each	\$ 35000.00

Total community in a container cost

\$ 4000.00 each \$ 200,000.00

Shipping container, freight costs, taxes, import duties and permits are dependent on location and are not included.

Sample Plot Plan



MICRO FACTORIES / HAITI HOUSE OVERVIEW

Full Circle Shelters has developed the “Haiti House” to fit the need for safe long term housing, along with the goals of Haven Partnership in Haiti, to provide both housing and job opportunities for the Haitian people.

Haiti House construction:

• 12 sided polygon, round in overall shape, and measuring 24 square meters, or 259 square feet in size.

• Constructed on a 6 inch thick concrete slab floor with edges 12 inches thick, and reinforced with #5 steel re-bar.

• Concrete block walls – 6 inch block, dry stacked 11 courses high, with concrete fill and #5 steel re-bar in the corners and in every other core. Coated inside and out with fiberglass reinforced surface bond stucco. Anchor bolts in the top course of block secure the roof.

• Wood frame roof – Treated 2 x 6 timbers bolted to wall anchors and secured with metal tie down straps. Roof decking of 1/2” treated plywood covered with steel roofing. Rafters slope up to a height of 9 feet 4 inches, and are bolted to a 15” diameter steel center ring covered by a clear acrylic dome.

• Doors and window shutters – 1 inch tongue and grooved treated wood with battens on the inside. Hinge mounted in 2 x 6 treated wood frames anchored into concrete walls.

• Interior partition walls – Constructed of 2 x 4 treated wood framing and 1/2” plywood, built to height of outside walls but open above for free airflow.

WHY BUILD ROUND?

Our buildings are constructed in a circular shape because of the inherent strength of the circle, and the efficient use of materials. The chart below shows that the circular shape uses 10% less wall to enclose the same floor area. Less lineal feet of wall per building equals less material costs and less time to construct, while producing a stronger building.

SQUARE	CIRCLE
24 square meters or 258.5 square feet	24.05 square meters or 259 square feet
16 x 16 feet square	17.96 feet in diameter
64 lineal feet in circumference	58 lineal feet in circumference

Wind load studies have proven that round structures withstand hurricane force winds better than rectangular structures. The circular shape is naturally wind resistant as only a small portion of the wall surface faces the wind coming from any given direction, and the air then flows around the building.

COST

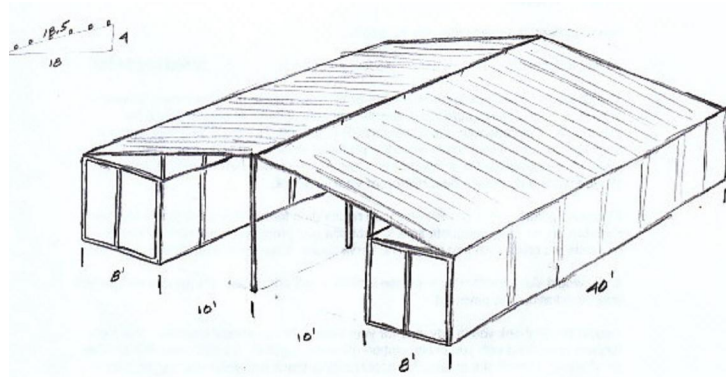
The cost for a 24 square meter building as described above is \$6,850. We have calculated the cost per unit based upon our experience with costs in Puerto Rico (see the attached sheet on our Puerto Rico house). We've included shipping and import duties using percentages from discussions with Haven personnel. Pricing may be adjusted dependent upon better material sources that Haven may have available.

MANUFACTURING AND BUILDING PROCESS

Full Circle Shelters will employ Haitian labor in both the manufacturing and construction steps of the Haven House. Each factory will employ approximately 60 people in factory production and construction crews.

FACTORY

The factory building will consist of two standard shipping containers, separated by a 20 foot wide work bay. The entire 36 foot wide factory unit will be covered with a sloped roof and the ends enclosed for security. Using this method, factories can be located near sites where the homes will be constructed. This allows employing workers in the areas of the most need as well as reducing transportation costs and time.



FACTORY CREW

A crew of ten people will be employed in each factory. The crew will produce parts for 50 homes per month. Factory start-up will be approx. two weeks prior to when home construction begins.

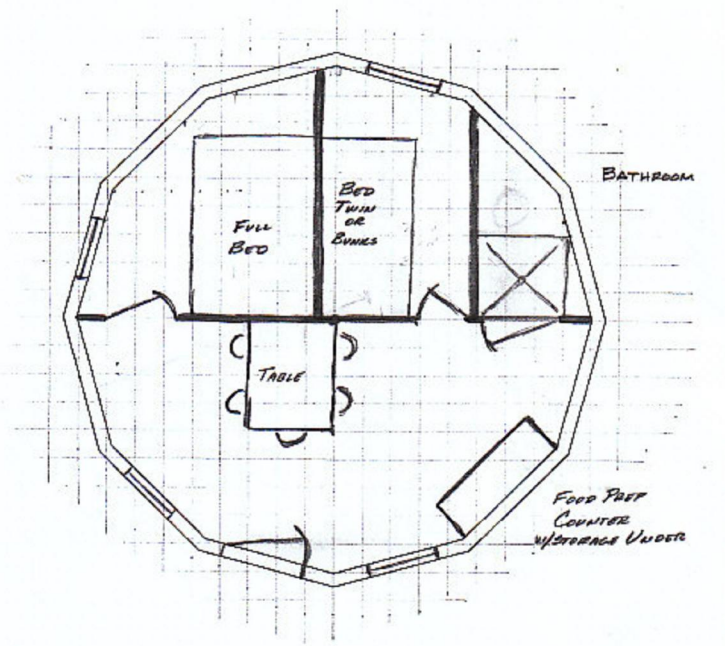
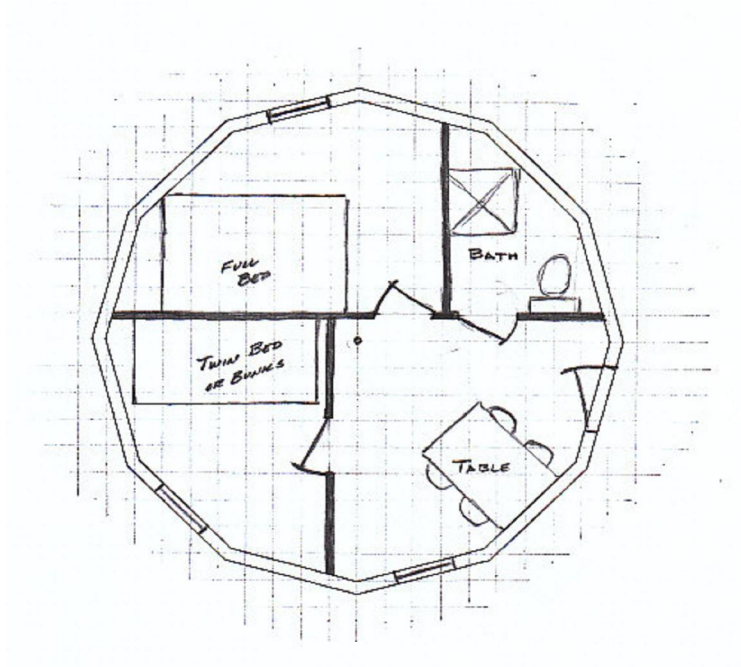
CONSTRUCTION CREWS

Construction crews consist of 15 crews of 3 people each, and 5 cross-trained “floating” workers. Each crew will perform specific construction duties. The building process consists of 5 steps: slab floor, walls, roof framing, steel roof covering, and finishing. Three crews will be working on each step of the process at any given time. In addition, local labor will be hired to provide delivery of materials to the construction sites, and security at both the factory and the job site.

With this method, each factory and construction team can complete 50 homes per month. The overall production process is scalable in increments of 50 units per month, per crew, and located close to building sites. Additional factories and build crews increase production by 50 units per month each.

Sample floorplans – 259 sq. ft.

Both floor plans offer 2 bedroom spaces and a bathroom area as well as an indoor food prep and eating area.



Puerto Rico House

This is a house I built in Puerto Rico using the same proven construction methods proposed for use in Haiti as the conditions are the same. General construction is as follows:

Cement block walls- dry stacked with rebar and concrete in corners and alternate cores then coated in side and out with fiber reinforced stucco on concrete slab floor.

Treated wood roof frame with plywood and roof finish material and center skylite dome.

Treated wood framed interior partitions and treated wood tongue and groove board door and window shutters.



This home is completely finished with tile floors, hot and cold running water and electricity.

Doors all around for open air flow and white roofing to help keep building cool. Covered

outside area extends living area. This home is approx. 520 sq. ft. with 2 bedrooms.