DOMES FOR THE WORLD

World Youth International constructed this EcoShell orphanage in Nyamasaria, Kenya. The Owiti Children's Home serves a few of the many innocent children who have been left orphaned by the AIDS virus. www.dftw.org

Domes for the World Foundation is a Nonprofit Corporation.

Donations are tax deductible.

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Please donate today.

The Monolithic EcoShell Dome Offers Answer to Housing Shortages in Developing Countries

The name "Monolithic" means "one piece" and refers to the Monolithic Dome Institute which developed the EcoShells.

EcoShells are constructed with 2 or 3 inches of concrete and a modest amount of rebar.

EcoShells use less than 50% of concrete and rebar when compared to a conventional, rectangular building of the same square footage.

The compound curve of the dome makes it stronger than virtually any other structure. They also take much less money and time to construct-- a small house can be built in just 3 days!

EcoShells are constructed of readily available and environment-friendly materials. Trees and other local natural resources are conserved. Construction can be done by hiring local labor with very little special skills and/or equipment.

These Domes are as disaster proof as a building can get. They will withstand tornadoes, earthquakes, hurricanes, and fire. They cannot be burned, eaten by bugs or destroyed by mold. They will last for centuries. And because of the concrete's thermal mass, interior temperatures remain stable.

Sustainable buildings, according to the U.S. Green Building Council, save energy, water and materials; preserve the local surroundings; assure the health of their occupants; and require little maintenance.

Mr. Perry Gray-Reneberg, professor of industrial technology at Humboldt University, says, "Monolithic Domes [and EcoShells] inherently resist the wasting of more precious resources in that they sustain human life and protect our considerable investment of time. We work to build, commune with nature and one another, and thrive as a culture and society. If our structures are no sanctuary from stray bullets, indiscriminate winds, devouring insects, or raging fires, then they are not sustaining. Monolithic Domes [and EcoShells] demand our labor once to assure the security of ten generations to follow.

Building for the future involves community-wide effort to educate public servants and economic leaders with what our grandchildren will have as common sense: Monolithic Domes [and EcoShells] sustain all communities of Earth."

Catalytic Software in Hyderabad, India has a complete city made entirely of EcoShell Domes. These buildings are much taller than those we are building in other countries. These are three stories tall and house up to six families, each.

The Domes For The World Foundation's mission is to improve the lives of people worldwide through the introduction and construction of Monolithic Domes and EcoShells for personal and public use.

We will initiate and coordinate efforts to alleviate storage, shelter and housing shortcomings in struggling cultures and impoverished lands.

We will seek out grants and donations to fund construction of permanent, affordable, sanitary, and safe structures for those who have none. We will train local peoples in our methods of construction and transfer our technology.

EcoShell Construction Is Simple

The EcoShell starts as a combination ring-beam footing and concrete slab floor reinforced with steel rebar. Vertical steel bars embedded in the outer ring later attach to the steel reinforcing of the dome itself.

An Airform -- fabricated to the proper shape and size -- is attached to the ring base. Using blower fans, it is inflated and creates the shape of the structure to be completed. The fans run throughout construction of the dome.

A grid of vertical and horizontal rebar is placed over the exterior of the Airform. The verticals go against the Airform and the horizontals on the outside.

Next, enough concrete is applied to the exterior of the Airform to embed the rebar and can be trowelled smooth.

After the concrete has set, the Airform is removed from the inside and re-used.

The rebar, still showing on the inside, is brushed with a wire brush to remove any loose material. Then a finish coat of concrete is applied to the inside surface.

"Technology has thankfully shrunken our world to the extent that we can no longer ignore the plight of our neighbors and has given us the means by which we can take better care of each other. We must do that. There is really no other option."

-- David B. South, Inventor of the Monolithic Dome and the Monolithic EcoShell Dome.