

# Rebuilding Haiti

## Five Weeks on the Ground

Thanks to the support of our friends and well-wishers SARID, Inc. (SARID) raised enough money to build a single room structure using a technology that will provide Haitians with another building option. It is labor driven, non-wood (only in use of reusable formwork), non-fossil fuel dependent, recycles waste, and is not based on value added imported building components and materials. It may increase local manufacturing and help in job creation for the unskilled and semi-skilled. The technology relies on local resources and local



Laying the foundation

manpower and in time can be made far more affordable than what is possible now.

We feel that Haitian folks have quite a bit of work to do before they can recover from the earthquake of some three years ago. A lot of people, especially the poor, are still living in tents and it is not clear how they will rebuild. It will require intervention at many levels including public policy, price control of building material and tools, and experimentation with many different affordable building strategies.



Lunchbox/ Bottles:  
Recycled as Insulation  
Panels

Our building type is seismic resistant, conforms to International Building Code, is multi-story capable and Haitians will be able to build schools, orphanages, clinics, homes, apartments using the technology. It allows for incremental (phased) growth as money becomes available. It is our hope that once people work on these projects, they will be able to use what they have learnt to build their own homes. We intend to guide them through the process at our resource centres. Hence we are relying on a trickle down approach to recovery.

Calvin Flowers, a member of the SARID team, and I left Boston for Port Au Prince on April 17. Our local Haitian engineering partner provided us the land on which we would collaborate and build the structure using Kinoo's proprietary "MASS" technology. Unfortunately for us the site turned out to be very poor, not one we had anticipated and hence planned for- it was on a steep incline as opposed to being relatively



Window Frames and  
Electrical Cut-outs

flat. This alone increased our formwork and associated cost considerably and added a week to the schedule – which in turn contributed to the budget overrun. We had to bring all the tools from USA, as the same tools cost two to three times more in the local market. We had to start from scratch. We built all the formwork, including the table tops, ourselves at site. That mobilization and prep work took us a week to 10 days of the five weeks we were in Haiti. Our site was cramped with very little room to work with. But we decided to confront the odds. The start was slow and gradual. Calvin and I worked six days a week ( we volunteered our time) putting in 10 to 12 hours of work a day building the structure with most of the work being done by ourselves and mostly unskilled and semi-skilled labor.



Building after 5 weeks – minus  
painting and minor works

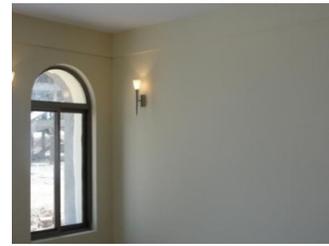


Calvin with  
completed lunch box  
panels



Interior Walls with Insulation  
– semi-skilled workers  
plastering

At the end of the five weeks we had built our structure to the roof level. We had cast the roof but not placed it on the building. We did install the electrical conduits and rough work before we left. We have only a few items left to do primarily final plastering and painting and installation of electrical fixtures.



Interior View - Built with MASS technology by JS - 2011

The key features of our structure are:

- *A seismic resistant and high wind resistant structure, with characteristics equal to and exceeding steel frame or wood frame structure.*
- *A non-wood, non-combustible construction built by unskilled labor at site using only cement and reinforcements*
- *An insulated building using recycled material such as lunch boxes and recycled water and soda bottles – with excellent temperature moderation for warm climates*
- *Passive cooling features, as a result of carefully placed insulation, utilization of thermal mass, as well as leveraging of shading and sun orientation. It provides for greater cooling than insulated wood or steel frame structures and/or any known structure type including Adobe, Plastered bales of hay, Insulated Concrete Form (ICF) or Structural Insulated Panel (SIP). Highly relevant for design for warmer climates*
- *A labor driven strategy that creates jobs*
- *A building that has a flat slab so people can grow vertically*



Front view - Built with MASS Technology by JS- 2011

Once the building is painted it ought to look similar to the buildings on the right (above) and left - which were made with a similar technology in Pakistan in 2011.

Once we have completed the building we will invite donors and interested parties to help us build a resource centre where we can teach people to build their homes using a similar but far more affordable technology.

Our prototype in Haiti is not finished as we have run out of money. We are hoping that we will be able to raise enough money to go back and complete the building. Please visit our website for more details.

Javed Sultan (JS) &  
Calvin Flowers (CF)

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Note: If you want to help please go to our website [www.sarid.net](http://www.sarid.net) and click on the donate button.