

# Florida Companies Work Together to Build Back a Better Haiti

Miami-based CMF International Group, Inc. chose Oldsmar, Florida based Structural Insulated Panel (SIP) manufacturer, Structall Building Systems, Inc. to provide the 26 Gauge Steel SIP panels that formed the envelope of CMF's entry in the "Building Back Better Communities" Expo.

CMF International, Inc. was chosen as a finalist in the "Building Back Better Communities" (BBBC) housing competition initiated by the Government of Haiti to investigate alternative forms of permanent housing for displaced citizens. The Expo was held on July 21, 2011 at Orangers, just north of Haiti's capitol, Port-au-Prince.

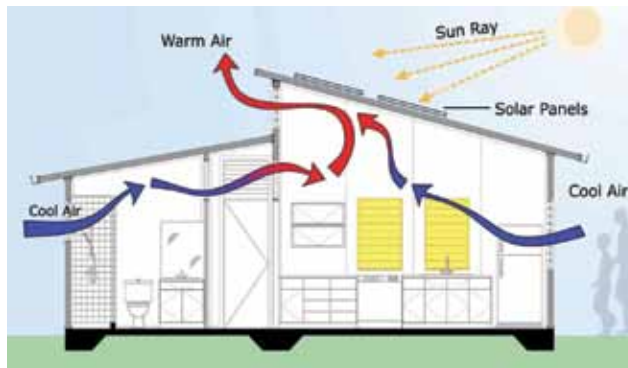
The property was provided by the Haitian Government and the Expo was offered through the Minister of Tourism and the Minister of Finance. A total of 64 lots were provided in order to build 64 houses.

CMF International President and Architect/Designer, Carlos M. Flores, AIA says, "CMF has designed and engineered the Model Home to meet and exceed the requirements for seismic, high velocity wind, and thermal design, as required by the International Code and the Florida Building Code. We selected the Structall panel system because it is sustainable, fast and easy to erect, and cost effective."

The exterior walls and roof are solely comprised of a new SIP developed by CMF International and Structall. Each 4' wide SIP consists of a 4" thick sheet of expanded polystyrene foam bonded on both sides to a 26 gauge embossed steel skin. The new panel system incorporates two aluminum I-beams within each panel. The result is an R-Value of 16 on all sides, and a structure that is remarkably strong, easy to assemble, and structurally anchored to the foundation. The panels are locked together by Structall's exclusive Snap-N-Lock™ interface system which creates an uninterrupted envelope of insulation from the elements.

## Passive Design

CMF approached the design with Sustainability and Green Design in mind. Using the louvered windows and clear story windows as an integral part of the design allows for constant air circulation inside the house as well as offering a secured environment.

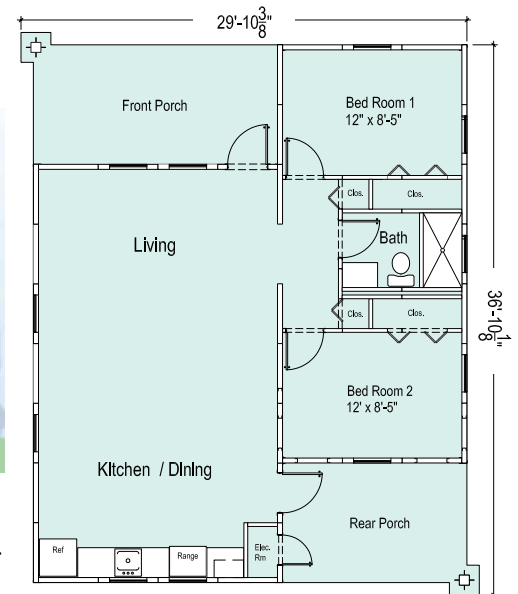


Mr. Flores says, "The wall and roof panels are white in color to allow for the reflective and insulating properties to provide its full benefit, which makes this system so appropriate for the inclement weather of this Caribbean nation. We also measured the interior of the home to be 12 degrees cooler than the temperature outside."

"We elected to design the model home with a fully integrated solar powered energy system that makes it a self sustained energy home," says Mr. Flores. The dwelling will have clean running water by providing a well water system. Rainwater will also be collected using a roof gutter system and water collection tanks, allowing for the reclamation of the rainwater to be reused for toilets and irrigation. The sanitary line is connected to a septic tank / drain field that allows the household waste to be collected and processed in the septic tank by separating the water from solids.

Mr. Flores says, "The integration of all passive systems into the Model Home: Solar Power, Clean Well Water and a Sanitary System, will allow for a cleaner and healthier environment to live in. This will reduce the health risk the Haitian people are faced with."

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2 BED / 1 BATH

Total Living Area: 815 Sq Ft  
Total Area: 1,049 Sq Ft





## Completed in 8 Days

The construction of the house started May 22, 2011 and it was completed on May 29, 2011. The final product was photographed on May 30, 2011. The total time to erect the house was 8 days. It was completed using only three people trained in erecting the house (a technical person, a plumber, and the architect) and twelve unskilled laborers from the local community that were trained during the construction process.

Solar Panels mounted on the roof.



Day 1



Day 3



Day 4



Day 5



Day 6



Day 7



The building crew consisting of 15 men. 12 of whom were locals and trained at the job site.



Day 8

## Structall Building Systems Snap-N-Lock™ Structural Insulated Panel

SIPs are high-performance building panels for floors, walls and roofs in residential and commercial buildings. The result is a building system that is very strong, predictable, energy efficient, and cost effective. Structall's Snap-N-Lock™ Structural Insulated Panel is Miami-Dade County and Florida Product Approved.

