

**OMEGA PAVING<sup>®</sup>**

**& ENVIRONMENTAL MANAGEMENT GROUP, LLC**

*Leading a Consortium of Hub Zone and 8-A Certified Firms*

*Introduces*

*Omega Paving's Comprehensive Sustainable Recovery and Reconstruction  
Plan for Jobs, Homes, Churches, Schools in New Orleans and the Gulf Region*

## **Category 5 Hurricane Proof Building Technology for Homes and Churches, Commercial and Industrial Construction**

### **Statement of Need**

Omega's plan as a private company with a community mission is to utilize an enterprise approach to deploying the best possible sustainable solutions to the problem facing evacuees and communities impacted by recent natural disaster. Omega's solutions are for the long-term, not quick fixes and can provide a viable asset-base for family self-sufficiency and community building - essential for preserving human dignity and fostering prosperity in the region.

### **Establishing the Manufacture and Construction of ThermaSAVE Panel Buildings**

Omega is also seeking assistance to develop a \$3.5 million 2 housing manufacturing plants and a future 3 state plant housing development of \$6-7 million over 3-5 years to bring the requisite assets online to mass produce hurricane proof housing, church, commercial and industrial construction panels sufficient to build more than 50,000 homes, hundreds of churches, businesses and job generating plants and to organize and arrange for the training and development of evacuee plant workers, construction crews and subcontractor businesses.

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# A Strategy for Sustainable Disaster Recovery and Reconstruction

Category 5 Hurricane Proof Building Technology for  
Residential & Commercial Construction

## The Company

Omega Paving and Environmental Management Group LLC has positioned its company as a *sustainable solutions provider* and is particularly versed in applications that are cost-effective and contribute to community building/rebuilding in low-wealth areas. The areas chosen by Omega include: the Southern Black Belt of the United States, the Caribbean and Africa.

Of particular concern to Omega and its partners is the impact Hurricane Katrina, and future storms have on a region already impacted by a significant low-wealth populations and underdevelopment. The cycle of destruction temporary fixes and rebuilds without using sustainable approaches will degrade the social and economic viability of the region and affect national progress and security.

**Omega believes that a goodly portion of the massive investment of recovery funds to be spent, must be allocated in a manner that provides *sustainable solutions* and offers *asset-based responses* that generate permanent, long-term self-sufficiency among the evacuees dislocated by the Katrina Disaster.**

## The Plan

Omega Paving and Environmental Management Group LLC has a plan that (1) provides sustainable building technology that mitigates loss of life and property from future events, (2) promotes personal asset-building affordable homeownership replacement and development for residents who have lost homes due to natural disaster; (3) spur the development of affordable rental multi-family housing, reconstruction of churches, businesses, schools and public and commercial facilities to re-establish governments and renew places of employment; and (4) train workers and promote small business development enterprise-based employment for evacuees and returnees to sites of devastation in New Orleans and the Gulf Region.

## The Approach

Omega has already assembled a consortium of Hub Zone 8-A Certified companies that have the engineering, construction and community development capacity to launch the comprehensive program described above. We are presently seeking sufficient investment to develop the first stage capacity of being able to produce the specialized building technology that drives the entire plan.

# ThermaSAVE Structural Insulated Panel Building System



Category 5 Hurricane Proof Residential, Commercial and Industrial Construction

## *What is the ThermaSAVE Structural Insulated Panel Building System*

OMEGA advocates the use of ThermaSAVE structural insulated panel technology as a sustainable approach to reconstruction due to the affordability, strength, energy savings and flexibility of designs from affordable single-family, multi-family and commercial buildings (up to four stories), churches, schools, municipal facilities and more.

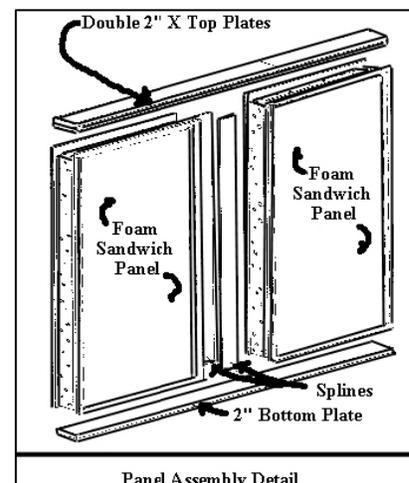
***A ThermaSAVE house can be framed without skilled labor in a third of the time needed to put up a traditional “stick-built” house without the need of trained craftsmen.***

1. Can withstand Category 5 Hurricane Winds of 200 mph
2. Has survived 7+ Richter scale earthquake testing
3. Provides 75% greater energy envelope and reduces energy use 50% to 70%,
4. Is constructed without the use of wood
5. Resists the effects of flooding Will not support mold,
6. Is termite-proof, fire-proof, and mold-proof
7. Provides extreme high indoor air quality
8. Can last a century or more with minimal maintenance

Structural insulated panels, or SIPs, are a building technology that has been in commercial use for over 20 years, but until recent improvements by ThermaSAVE, SIPs has been the method of choice for only a small percentage of builders and savvy homeowners.

### **ThermaSAVE, the Superior SIPs**

ThermaSAVE SIPs have now has met the building code requirements for certification by the International Code Council (ICC) and has been presented by the US Department of Energy at the international G-8 Conference,



and most recently, the United Nations as a US standard for energy efficiency, and a technology that has the greatest energy savings, structural integrity and least environmental impact of any other construction material.

The material consists of 4-inch (or greater) “sandwiches” of expanded polystyrene foam (EPS) and fiber cement board which makes the panels extremely light weight but incredibly strong and resistant to fire and flood. The material has passed 20 minute fire testing by the Federation of American Scientists, and when built using metal roof supports is impervious to termite and water damage.

ThermaSAVE panels provide a complete structural system - to build flood proof foundations or basement walls below grade, load-bearing walls to four stories, floors spanning 16' and roof panels with spans up to 24'. Panels can be produced as large as 4'X42'. The thickness of the cement board skins and foam (thickness and density) is dictated by the structural requirements of the building. Where cement board is used, panels are fastened together with power-driven screws.

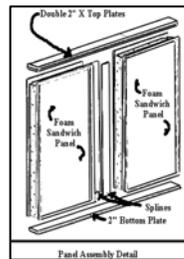
The system is environmentally desirable for a number of reasons: with cement board skins, it eliminates the use of wood resources, the expanded polystyrene (EPS) foam does not contain unstable gases and the blowing agent used in producing it is pentane, which is free of chlorofluorocarbons (CFCs).

Developers and consumers have the option of employing panels for flooring, or erecting the walls and roof on a concrete slab. The basic components of the house go up in three days, or less. Finishing work can be kept to a minimum as both the exterior and interior wall surfaces of the panels are ready to paint - because of the fire rating of fiber-cement board, there is no need to sheetrock the interior walls. Also, windows, doors and electrical chases are already cut into the panels making these installations part of an assembly process requiring little or no carpentry on site.

ThermaSAVE homes and buildings will provide a 75% greater energy envelope than conventional stick houses, and have been tested to resist 7+ Richter earthquake forces and Category *Five* Hurricane winds of 200 mph. Omega can produce a hurricane proof, standard 1,456 sq. ft. home for \$60.00 sq. ft. that will appraise for \$86.00 sq. ft. providing a low-moderate homebuyer with instant equity and save the homeowner 50-75% of their current energy costs from now on.

**ThermaSAVE**

## A Sustainable Way of Building Homes, Churches, Schools and Businesses

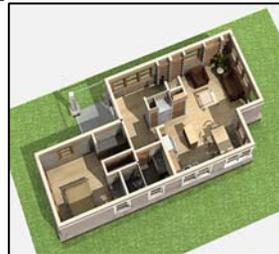


1,456  
Sq. Ft



Polystyrene

R- 25 Walls  
R- 35-40  
Ceiling

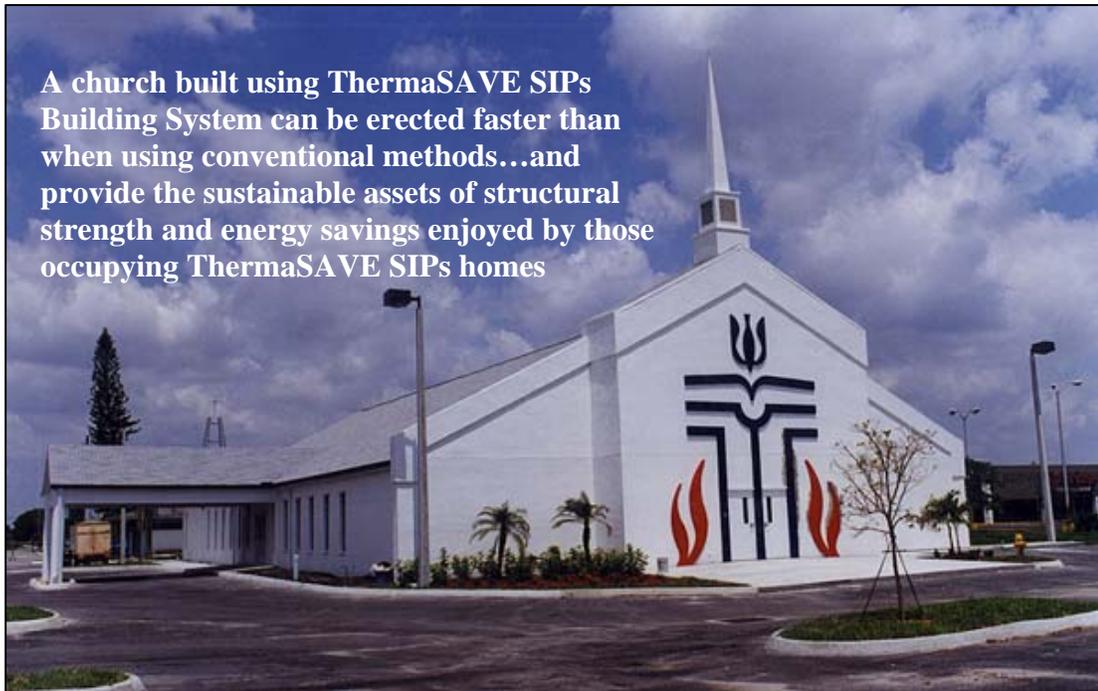


200 Mph  
Hurricane  
Wind Load  
Resistant



SONSHINE Church, Florence, Alabama

It is expected, that due to the hurricane, fire, flood and mold resistance benefits of SIPS construction...and in particular, ThermaSAVE will become the technology of choice for re-building the Gulf including homes, schools, churches and businesses. Each plant will have the capability of producing panels of various sizes and thicknesses for any such application. This capability heightens the prospects for long-term feasibility of plant and construction operations that are based on this technology.



Typically a ThermaSAVE shell (Walls and Roof) on concrete slab is supplied to the customer. Customers do have the option of also purchasing panels for use as flooring, particularly beneficial if the structure is multi-story. Finish work is additional, and can be scaled to the owner's preference and budget creating an attractive affordable home, or any type of custom home or building design desired.

### **SIPS Houses are Hurricane, Flood and Fire Resistant - Highly Energy Efficient**

A SIPS built home using a steel frame can withstand winds of more than 200 mph. The frame supports a continuous steel ridge beam to which the roof panels are attached. Once the home is complete, the steel beams are hidden by the interior walls.

**Two views of the same house shown at right are before and after photos of the structure following Hurricane Charley that struck Port Charlotte Florida, August 13, 2004**

Each wall panel is a "sandwich" consisting of a 4-inch-thick core of polystyrene laminated between two 8mm-thick sheets of cement board. The panels have a breaking strength of approximately 7,000 pounds — so strong that they can even be used as



header beams over the garage doors. The panels are joined together with patented splines that slide into slots at the edges of the panels and are fixed with stainless-steel self-tapping screws.

The roof panels consist of a minimum 6-inch-thick polystyrene core clad in metal inside and out, with a durable baked-enamel finish. Owing to the strength of the steel frame and the roof panels, there is no need for an attic space with trusses or other supports. The panels serve as both roof and ceiling, and need no further finishing.

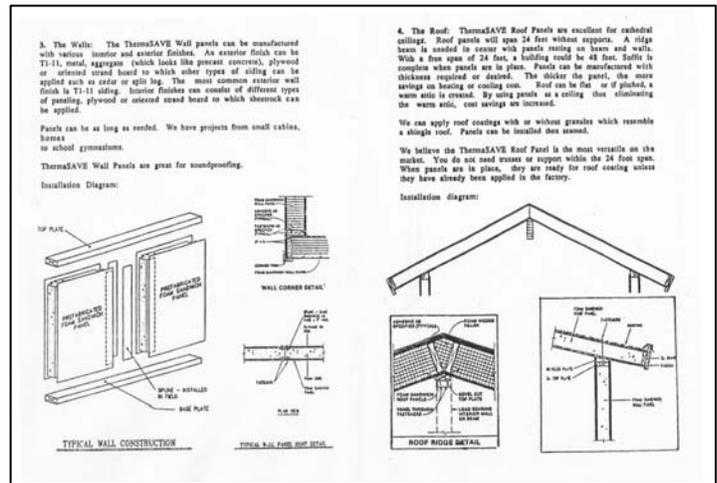
No wood products are used in the system. The primary ingredients are polystyrene, cement board, steel and aluminum. There is so little waste - there is no need for a Dumpster at the job site - which means less waste going to the landfill.

SIPS built homes are far more energy-efficient than traditional residential construction. Wall panels have an insulating value of at least R-20 and ceilings provide at least R-30 (higher R-values are available at the buyer's option). Furthermore, the ductwork for the heating and air conditioning is contained in the climate-controlled space, rather than in an un-insulated attic, making the HVAC system more efficient.

*A 1,100-square-foot SIPS house in South Florida has a typical electric bill of \$45 a month in the peak summer months - about half the energy use of a traditional home.*

**Hurricane Proof Housing Commercial Construction**

ThermaSAVE Panel building technology as perfected provides an economical, structurally strong, energy efficient home or building that can withstand 'Category FIVE Hurricane winds of 200 mph and 7+ Richter scale "earthquake shake test"



## Safer Permanent Temporary Housing Can Be Deployed for Disaster Victims

**All forms of commercial structures can be built using ThermaSAVE SIPS, even manufactured housing can be constructed and quickly deployed and provide the same structural and energy characteristics of the conventionally built ThermaSAVE home.**



**An affordable ThermaSAVE home can be constructed for \$60 sq. ft resulting in a structure that will appraise at a 72% Loan to Value enabling low-wealth homebuyers to begin their homeownership career *with equity in the bank.***



Due to its speed of construction, Omega's ThermaSAVE panels provides a swift, resilient and permanent answer to how to provide housing for disaster evacuees and build the housing stock of local communities impacted by their resettlement. Further, Omega's housing solution meets the need for housing and other construction that can withstand hurricane winds, earthquakes, fire, and flood when built in areas vulnerable to natural disasters.

**A crew of 4-6 semi-skilled workers can erect the walls and roof system of a ThermaSAVE building in less than 3 days....experienced workers can erect the system as quickly as a few hours...overall speed to completion using ThermaSAVE panels is 37% faster than conventional stick built methods.**

# Speed of Construction of a ThermaSAVE Home

Day One



Day Two



Day Three



Persons of average or low skill, including family members can easily manage the panels and the erection of walls and roof with minimum technical supervision

## **Omega's Comprehensive Employment and Residential, Church, School, Business, and Public Facilities Renewal Sustainable Recovery and Reconstruction Plan**

**An investment of \$10,000,000 will enable Omega to produce nearly 50,000 units of ThermaSAVE Structural Insulated Panel (SIP) housing over the next 3-5 years and 100-150,000 units over the next ten years and supply the basis for sustainable building technology to be shared with affordable homeownership and multi-family rental housing; custom housing, churches, commercial and municipal facility construction.**

Typically, a single Omega ThermaSAVE plant will produce 10 wall and roof systems per day (sufficient to erect 300 1,400 sq ft homes per month). Each plant will employ 35-50 workers, additional new jobs will be created in trucking and transportation, work crews in local communities of 4-6 will erect the units, and then skill trades will be employed to finish the work required. The plan includes the use of Section 3 of the Housing and Urban Development Act to organize low-wealth recipients of Federal housing assistance into semi-skilled and skilled sub-contractor businesses to carry out the deployment, erection and finishing of Omega ThermaSAVE Panel System homes and buildings.

Additional persons would be employed through community and faith-based organizations, developers and real estate agencies to identify qualified applicants, sites for development and connect end users with the myriad of affordable housing strategies that are presently on the books and new ones that are being devised in response to the crisis. The manufacturing facilities are multi-purpose and can simultaneously produce panels in sufficient quantities to build churches, schools and commercial real-estate.

**Omega recommends the initial deployment of five (5) ThermaSAVE manufacturing plants in territories needing reconstruction or otherwise benefiting from improving their stock of affordable housing and commercial real estate- particularly if they are in areas at-risk to natural disaster.**

1. Omega and its sustainable reconstruction partners will produce 50,000 units of hurricane proof - single family housing over the next 3-5 years and 100-150,000 units over the next ten years and supply the basis for sustainable building technology to fuel the rebuilding of homes, churches, schools, businesses, and public service facilities throughout the region.
2. Evacuees and other low-wealth persons will find employment in the manufacture, transport and construction of these homes and additional

commercial properties developed through Omega's sustainable development partnerships.

3. Launch a Family Self-sufficiency Model that will demonstrate the best practice of providing an asset-based affordable homeownership solution to housing, while involving disadvantaged evacuees and other low-wealth persons in the employment opportunities that are spun from reconstruction activities.
  - \* Promote the utilization of family sweat equity, low-skilled and skilled labor from the pool of evacuees to manufacture, transport, build and finish insulated panel construction housing, schools and commercial real estate
  - \* Provision affordable homeownership of single-family housing that has an equity building price point, high energy savings, and is resistant to hurricane winds, fire and floods
  - \* Organize Multi-trade construction skills training and community-based basic skills and workplace skill training for out-of-school youth and adults
  - \* Establishing a strong community-building network by provisioning community and faith-based organizations with the capacity to partner with the private sector and governmental organizations and spearhead the mobilization and implementation of family self-sufficiency solutions in their home communities

Omega will partner with non-profit and private sector developers to offer the best possible match of design and cost for each level of housing or other construction needed. Our universal focus will be on the manufacturing and deployment of the technology, leaving the design and construction end of the process to professional and community partners within each home community,

**- Design new, culturally and architecturally suitable hurricane proof permanent replacement construction for New Orleans and the Gulf region including affordable and market rate homes; schools, businesses and municipal facilities using thermo-panel construction technology**

**- Bring 1-2 thermo-panel manufacturing operations online immediately and begin producing the panels at a rate to build 300-600/month for affordable single-family and low-rise multi-family units, churches, schools, businesses and public facilities in areas of devastation and in the localities where there are concentrations of evacuees in need of temporary/permanent housing.**

**- Establish a network of five (5) or more thermo panel fabrication plants in the region to supply up to 100-250,000 units of affordable single-family homeownership and low-rise multi-family housing units over the next ten years.**

Omega's Hub Zone 8-A sustainability partners have the full capacity to:

1. Secure the License and Equipment to Manufacture and Sell ThermaSAVE Panels
2. Operate multiple production plants
3. Design-build ThermaSAVE structures
4. Design workforce and small business development strategies to employ and bring prosperity to victimized families and individuals
5. Partner with local faith and community based organizations to promote citizen involvement and employment
6. Partner with local, state and Federal officials, leading charitable organizations in developing and carrying out essential comprehensive planning and coordination to effect the total redevelopment of the region

## Omega's ThermaSAVE Factory Plan

The need for this SIPs product is stronger today than ever. Because of this, and with us putting together a strong qualified knowledgeable team, we know that it is time to own and operate our own SIPs factory. Preliminary market estimates assure plentiful demand in any geographic area within the impact zone of Hurricane Katrina and its aftermath.

Standard manufacture of panels can produce 10 housing units per day based on a three 8-hour shifts per day. Additional productivity can be achieved by capital investment in more automated equipment.

**Labor:** Each plant when fully operational will employ up to 35 workers, most of whom will be low-skilled or unskilled with a supporting shop foreman, draftsman, maintenance mechanic, shipping and receiving clerk, management and administrative staff. Truck drivers and installation crews can add to this number and will be employed for local area delivery and set-up of ThermaSAVE shells.

**Materials:** Each panel is typically made using expanded polystyrene (EPS) rigid foam insulation sandwiched between two structural skins of fiber-cement board laminated to the foam. The factory will build panels that could range in size from 4' x 8' up to 8' x 32' depending upon our customers need.

The quality of SIPs' manufacturing is very important to ensure a long life and performance. The panels must be glued, pressed, and cured properly to ensure that they don't delaminate. The panels also must have smooth surfaces and edges to prevent gaps from occurring when they're connected at the job site. ThermaSAVE accomplishes exacting pre-engineering success by utilizing a series of presses and cutting tables designed by ThermaSAVE for its panels.

**Design:** A buyer/builder or developer selects one or more designs, and a computer cad system maps out the number, sequence and cuts needed to produce the panels that when assembled will support the design selected.

Once the panels are laminated using a special bond adhesive and presses and cures for a short period, the panel goes to cutting tables where specially designed tools cut "chases in the foam for electrical and plumbing access; and cut-outs for doors, windows and HVAC ventilation.

Each panel is numbered according to the plan, and the ThermaSAVE, ICBO, ICC and Energy Star labels are attached. Each set of panels is loaded on a single flat bed truck for delivery to the construction site. For volume shipments, panels can be packaged and shipped by rail...

Omega intends to establish up to five-plants over the next 3-5 years and produce a minimum of 50,000 units of housing. Initial capitalization for the first plant is \$2.5 million and will produce nearly 3,000 units in year-one.



Each plant will produce walls and roof components sufficient for 10 houses per day. The cost for these is approximately \$14,500 leaving the balance of the construction budget for interior installations, windows and doors, appliances and amenities. No interior sheetrock is required, and the exterior and interior surfaces are ready to paint as soon as they are erected.

**An investment of 10,000,000 will enable Omega to produce nearly 50,000 units of housing over the next five years. Beginning with two plants, each capable of producing (a full capacity, 300 housing units per month - within five years, more than 50,000 units of housing and other construction can be produced.**

Five -Year Production and Sales Forecast	Year 1	Year 2	Year 3	Year 4	Year 5	
	<u>3 Plants</u>	<u>4 Plants</u>	<u>5 Plants</u>	<u>5 Plants</u>	<u>Total</u>	<u>Total</u>
Units Produced Annual	2,856	8,900	10,600	14,200	15,900	52,456
Capitalization	3,500,000	1,902,983	1,712,684	1,541,416	1,387,274	10,044,357

**Development Pro Forma for Dual Plant Startup**

<b>Omega ThermaSAVE SIP Dual Panel Plant Capacity 600 Units per Month</b>	
Pre-Development Mobilization Expense	250,000
Building Acquisition	To Be Determined
Remodel Building	35,000
ThermaSAVE License and Equipment	1,200,000
Manufacturing Consultant Expense	150,000
Management/Marketing Consulting Expense	100,000
Architect/Engineering Consultant Expense	75,000
Worker Training Expense	125,000
Pre Development Personnel Expense	75,000
Factory & Outside Tools	10,000
Vehicles (4 tractors and trailers)	240,000
Inventory	300,000
Misc.	15,000
Marketing Materials (Incl. 3 Demo Houses)	300,000
Office Equipment & Supplies	25,000
Initial Operating Capital	600,000
	<b>3,500,000</b>