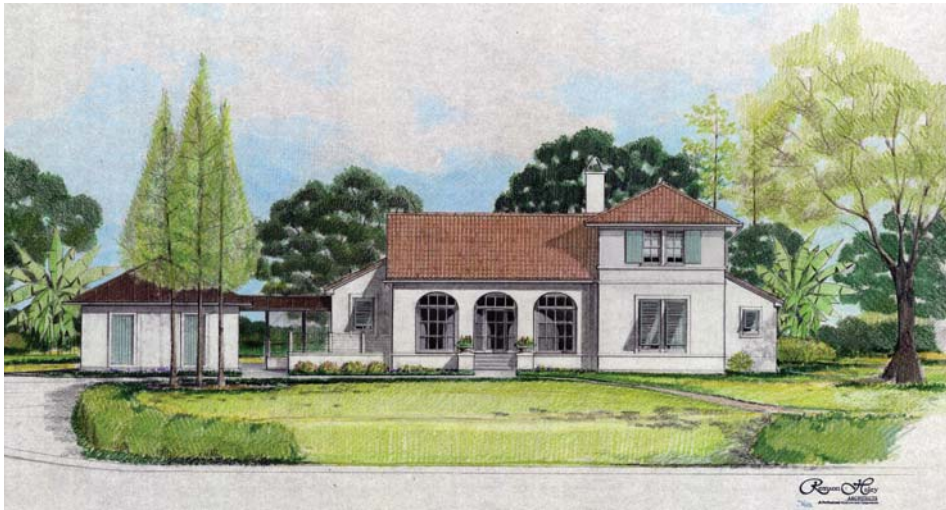


LaHouse Paves the Way for Sustainable Housing

The Louisiana House - Home and Landscape Resource Center (LaHouse) vision is to shape the future by demonstrating ways to combine environmental stewardship with economic benefits and enhanced quality of life – showing how it's possible to have more comfort, durability, value, convenience and better health with less property damage, energy, water, pollution and waste. The LaHouse marketing slogan – shaping the future for Louisiana living – reflects the growing consumer desire to have a sense of control and to make a difference. LaHouse capitalizes on that sentiment to motivate and equip citizens with the research-based knowledge they need to distinguish and demand higher-performance homes.

LaHouse
Louisiana House
Home & Landscape Resource Center



When it's finished, LaHouse will feature several options for building systems as well as roofs, walls, floors and foundations.

LaHouse will stimulate change in the marketplace and housing stock to produce several benefits:

- Homeowners will have more comfortable and durable homes with lower utility bills and higher resale value.
- Children will grow up in healthy, safe homes free of mold and asthma triggers.
- The elderly will live in homes that accommodate their changing needs and facilitate independent living.
- Future generations will enjoy the environmental quality and natural resources we have preserved and protected.
- Communities will save public dollars with lower requirements for waste disposal, water treatment, flood control and disaster recovery.
- Insurance companies will have lower losses, helping to stem premium increases and policy writing restrictions.

■ Mortgage lenders will have better collateral and fewer delinquencies on loans secured by homes that preserve their value and cost less to operate and maintain.

■ Home builders, designers and suppliers will profit from increasing demand for their sustainable products by a growing market segment.

■ Energy companies will reduce peak demand loads and generation emissions.

■ Housing and horticulture professionals will have new continuing education opportunities.

■ Teachers will have a unique educational resource in environmental science, building science, horticulture and technology.

■ Tourism and economic development initiatives will gain from the recognition, visitation and economic activity generated by LaHouse.

The information in this article appeared in a slightly different form in the Fall 2005 issue

of Louisiana Agriculture, Vol. 48, No. 4.

The information in its entirety is available at www.lsuagcenter.com.

LOUISIANA AGRICULTURE
Assuring Our Future Through Scientific Research and Education

Louisiana Agriculture, a quarterly magazine published by the LSU AgCenter, tells the story of the research activities of LSU AgCenter scientists and the impact this research has on Louisiana.



The LSU AgCenter is an educational institution dedicated to providing innovative research and reliable information to improve people's lives.

LaHouse is an LSU AgCenter public/private initiative, educational program now midway under construction in Baton Rouge, Louisiana. LaHouse includes a permanent demonstration house with cutaways and displays, 7 acres of environmental landscape exhibits and a multi-media teaching center. It is designed to relate to citizens "where the heart is" (home) and provide an inviting, user-friendly source of credible information, inspiration and guidance.

An interdisciplinary team of faculty, highly respected professionals, the Institute of Business and Home Safety's Fortified for Safer Living program and the U.S. Department of Energy's Building America scientists have all been heavily involved in the design and research base for LaHouse. It is operated by the LSU AgCenter as an information, outreach and training center to stimulate change for sustainable homes and development.

LaHouse is uniquely positioned to facilitate adoption of high-performance home building and restoration. Current and planned exhibits

are tailored to the region's conditions and showcase a variety of solutions – including low-cost and high-performance strategies that integrate hazard resistance with energy-efficiency, environmental, economic and quality of life benefits. LSU AgCenter provides an established delivery system for collaboration and educational outreach through its local relationships, seminars, Web site, county extension educators and distance education. LaHouse construction is being documented to create a catalogued collection of educational media. Go to www.LouisianaHouse.org for more information.

Special Panel Systems

Brace 'LaHouse' for Severe Weather

Factory-made wall, ceiling and roof panels are among the four building systems of the LSU AgCenter's state-of-the-art demonstration house that can withstand Louisiana's climate and harshest elements, including hurricane winds.

The panels are called SIPS – structural insulated panel systems. They are incorporated into LaHouse, which is the shortened name for the Louisiana House – Home and Landscape Resource Center. This structure is being built near the LSU campus as a demonstration, exhibit house.

"LaHouse incorporates various design and construction advances into a safe and healthy, attractive, practical and efficient home, which also is kind to the environment. It is a dynamic educational tool for consumers, students and industry alike," said LaHouse Project Chair Claudette Reichel.

The SIPS – used in LaHouse consist of expanded polystyrene (EPS) rigid foam insulation sandwiched between oriented strand board (OSB). They can be used for wall, ceiling, roof and floor framing in both commercial and residential structures.

The SIPS act as both framing and insulation, which makes construction much faster than stick-framing. The quality of construction often is more consistent, too, because there are fewer components, thus fewer places to make mistakes.

The SIPS are highly energy-efficient. In a 2003 study, Oak Ridge National Laboratory in Tennessee documented a 65 percent energy-use savings in a SIP-built home over the same house built with conventional technology.

Even with 4-inch walls having an insulating R-value of about 15, SIPS typically outperform an R-19 framed wall because the insulation is continuous (no gaps for studs) and the joined panels form an exceptionally air-tight shell.

"In this climate, reducing air leakage brings a much greater energy saving benefit than increasing insulation levels," Reichel said.

SIPS meet national building codes for load-bearing capacity and fire tests. The panels inherently provide high wind-shear resistance without additional sheathing. In addition, the particular SIPS used in LaHouse (by R-Control) resist termites, because both the EPS insulation and OSB panels are treated with borates, a

natural mineral formulated to resist the insects. They contain no hazardous chemicals.

"SIPS are right for our climate," said Sandy Scallen, LaHouse coordinator. "They are strong, airtight and energy efficient." The panels can be pre-cut with window and door openings to order, or ordered whole and cut on-site.

In LaHouse, SIPS are used for the walls in the kitchen, dining and home office areas. A SIPS ceiling with a framed, vented attic covers half of this area, and a SIPS roof system tops the other half in part of the unvented, partially air-conditioned attic exhibit room.

Although the cost of material is higher, SIPS construction is gaining popularity because of its labor- and time-saving assembly.



AFM R-Control®
provided the SIPS
for the LaHouse Project.

For complete information on R-Control SIPS please visit our Web site at www.r-control.com or call toll free 800-255-0176.



A structural insulated panel system – or SIPS – is featured in LaHouse to create an airtight, insulated attic.