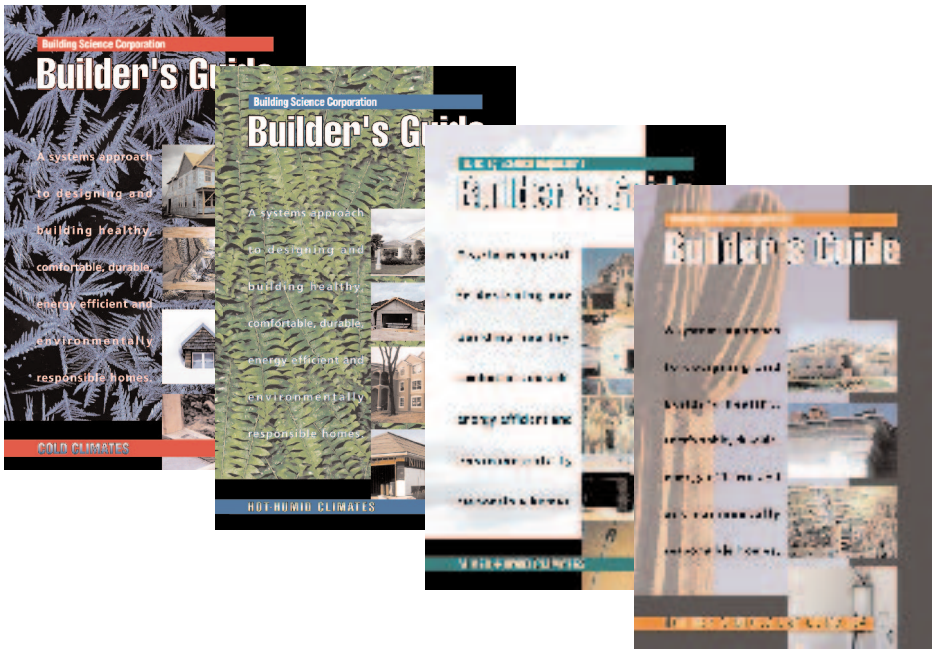
There's No Place Like Home

by Dave Holbrook

I find analyses that break building systems down into subsystemic hierarchies fascinating, don't you? Actually, I don't have a clue how anyone goes about that sort of thing, but author Joe Lstiburek, P.E., has taken contemporary building science and examined it every which way but loose, with results well worth keeping on hand. Lstiburek has created a four-book companion-series, respectively titled *Builder's Guide for Hot-Humid Climates, Builder's Guide for Mixed-Humid Climates, Builder's Guide for Cold Climates,* and *Builder's Guide for Hot-Dry & Mixed-Dry Climates* (Building Science Corporation, 70 Main St., Westford, MA 01886; 978/589-5100; www.buildingscience.com; $40 each). The *Guides* illustrate contemporary building systems logic and how-to that I haven't seen articulated to this extent anywhere else.



In *Hot-Humid's* "About this Guide," we're told that "Buildings should be suited to their environment. It is irrational to expect to construct the same manner of building in Montreal, Memphis, Mojave, and Miami. It's cold in Montreal, it's humid in Memphis, it's hot and dry in Mojave, and it's hot and wet in Miami. And that's just the outside environment. It is equally irrational to expect to construct the same manner of building to enclose a warehouse, a house, or a health club with a swimming pool. The interior environment also clearly matters." That said, there's a map in the early pages of each book to define the various climate zones of the North American continent. Find your region and choose your book.

All the books share common chapter headings and structure, enabling the reader to go directly to the topic of current interest, whether it's the building's foundation, HVAC, insulation, paint, or a so-called alternative method of construction, such as SIPS or ICFs. Under any chosen topic, there's a reasoned review of the considerations and conditions that should govern the design and function of the system in question. It's a good bet that whatever you know about a particular system will be enhanced by the material presented here.

It's always interesting to listen in on the conversation between builders from opposite coasts, especially when the subject is the disparities between their respective materials and methods. The discussion may devolve into a head-butting disagreement on the primacy of one technique over another. But in certain climates, a roof constructed to leak only when it rains may well be *the* state of the art. While never recommending a leaky roof, each *Guide* provides a rationale for applying a regional overview and the ability to make a side-by-side comparison of the otherwise idiosyncratic differences in construction that have evolved in the diverse climate zones. Perhaps the most important difference highlighted is the one between traditional construction and modern construction. In spite of a good builder's use of the best materials and methods, modern systems introduce a set of interior climatic variables that never existed before and therefore had no effect on the longevity of a structure. Tight construction, forced-air heating and cooling, insulation, and energy efficiency are all historically recent influences on

structural performance that have an indeterminate effect on the durability of a building as a system. After analyzing the influence of regional climate on the performance characteristics of all of these systems in their adoptive settings, the author offers prescriptive designs for their optimal configuration and performance. The *Guide's* text is generously balanced with illustrations, graphs, and construction details.

Perhaps you agree with the florid quote, attributed to John Ruskin, in the opening leaf of each book that states:

> *When we build, let us think that we build forever. Let it not be for present delight nor for present use alone. Let it be such work as our descendants will thank us for; and let us think, as we lay stone on stone, that a time is to come when these stones will be held sacred because our hands have touched them, and that people will say, as they look upon the labor and wrought substance of them, "See! This our parents did for us."*

(Well, I think that Frank Lloyd Wright, for one, would like to have torn down the Parthenon, or at least obliterated its paradigm. On the other hand, he seems to have appreciated the architecture of the Mayas.) Whatever your intention, whether you merely build *for* your climate or *in spite of* it, your work will weather better for having applied these guides.