



# Zero Tolerance

The University of Texas Health Science Center is planned to reflect the principles that are fundamental to its mission.

BY PENNY BONDA, FASID

Every so often an environmental event happens that is truly significant—the type of event that exerts such influence that it causes others to emulate it to the extent that the market is transformed; 4 Times Square comes to mind as an example. The development of the LEED™ Green Building Rating System is another, as is GSA's environmental commitment through its Planet GSA program.

These initiatives almost always come about through the vision, dreams and extraordinary efforts of dedicated individuals. Such an event is potentially taking place at The University of Texas Health Science Center at Houston, specifically at the Nursing and Biomedical Sciences Building, under the direction of John Porretto, UT-Houston executive vice president. This project is in the planning stage but its genesis can be found in the Campus Development Master Plan, formulated in March 1995 in which the “model health sciences university for the 21st century” was defined. The plan addresses roughly three million square feet of space and covers UT's goals, aspirations and vision.

Happily that vision establishes sustainability as a priority. Beginning in 1996, the University committed to operate in a more sustainably holistic fashion by relying on individual initiative to bring environmental responsibility to the process. The road to sustainability included training in The Natural Step, which in turn prompted some basic questions. “How could the university become a more conscientious steward of the earth's resources? How could it become a more responsible consumer of resources? How could it substantially



reduce its impact on the earth? How could it move toward eliminating the very concept of a waste stream?”

In 1999 UT-Houston issued a Sustainability Report that details the university's environmental commitment and achievements. They include a solar power initiative with the installation of its first solar power array in 1998, a lighting retrofit, an urban ecosystem study, bicycle and water conservation initiatives, an education and outreach program and the establishment of a sustainability team to advance environmentalism throughout the organization.

Although these undertakings are com-

mendable they are neither unique nor transforming. However, the new Nursing and Biomedical Science Building is both, and may be the type of project to put UT-Houston in the forefront of environmental achievement. The University of Texas Health Science Center at Houston, with six health professional schools, is the most comprehensive academic health center in Texas. The Nursing and Biomedical Science Building, which would complete the campus, will be the home for the School of Nursing, the School of Allied Health Sciences and most student services.

Recently, Porretto issued a statement on behalf of the university, defining this pro-

ject and its environmental goals. "Our primary mission," he said, "is to cultivate knowledge about health and illness and to transmit that knowledge to students and practitioners so that they then can care for the health needs of people. A central focus of our research is the influence of the environments in which we live on the health and illness of individuals and communities. By environments, I mean not only natural environments such as air, water and land, but also the artificial spaces we build to conduct our personal and working lives."

"The most powerful lessons are conveyed more by how we behave than by what we say. The environment in which we teach our students, treat people and seek new knowledge reveals much about our institutional principles. We cannot profess to be genuine in our aims for health and well-being if we provide services in facilities that are unhealthy and economically wasteful. These are the kinds of disconnects that reflect poorly on all of us, and those for which we should have no tolerance.

"Central to our responsible behavior as advocates for health, we propose to build a new kind of building, one that is based on fundamental principles that are inextricable from our mission and role as healers and good citizens," he continued. "These principles are stewarding resources, doing no harm, benefiting others in the present and future, and respecting the environment. These principles will guide us in meeting our fiduciary responsibilities that do not end with the building's design and construction costs. These costs represent only 20 percent of lifetime building costs.

These principles will also help us to prevent, not create, illness and economic burdens. They will lead us to think in long-range terms in the interest of what we are leaving behind. Their use will engender sound investments designed to achieve significant savings in operation and maintenance costs. These savings will make it possible to redirect dollars otherwise required for infrastructure to the core mission of the university—the cultivation of knowledge.

"Based on the preceding principles, our building will be designed and constructed:

- To endure for more than 100 years, therefore facilitating adapted reuse.
  - To uplift the spirit of dwellers with interior spaces that capitalize on daylighting, radiate simple elegance, reflect timeless design, and are welcoming and comfortable.
  - To respect its surroundings and thus create an academic climate that inspires creativity, collaboration, collegiality and learning.
  - To minimize the negative effect of the structure on its natural site.
- To contain the best workmanship by partnering with companies that use only proven state-of-the-art equipment and materials.
- To sustain economic efficiencies by mandating that utility costs be 70 percent less than the UT-Houston School of Public Health (a comparably sized and purposed building); and, concurrently, targeting actual construction costs not to exceed 105 percent of the cost of a conventionally constructed building.
  - To incorporate all natural opportunities

presented by the physical site and to design economy into long-term maintenance and operational costs.

- To extol the indigenous environment by landscaping exterior spaces with plants and trees that are natural to the Houston area, and take minimal care, chemicals, and water.
- To focus on non-toxic materials and to take advantage of renewable energy sources wherever health and economy are issues. To arrive at these decisions, life cycle costing will be applied (end use least cost assumptions).
- To use natural, recycled and reclaimed materials from sources and manufacturers in Texas to the fullest extent possible.
- To incorporate into our infrastructure systems that ensure efficient use of resources and drive recycling.

This building, constructed in accordance with these aims, will be a prototype with the presence and power to influence the design and construction of future university buildings and, ultimately, all buildings."

The design team of Berkebile, Nelson, Immenschuh, McDowell Architects and Lake/Flato Architects will present their schematic designs to the university's board of regents the first week of January 2001. This magazine will follow the progress of this project throughout the design and construction process with regular updates, especially as they pertain to the stated environmental principles. We believe, along with Porretto that, "this project provides a unique opportunity to illustrate the pioneering spirit of Texas, and, in particular, its capability to fuel breakthroughs in academic leadership and economic efficiency." @