

ECO- STRUCTURE

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MORE THAN MEETS THE EYE

THE AIA COTE TOP TEN GREEN PROJECTS



VIEWPOINT

Top Notch, but Something is Missing

Fifteen years ago, the AIA Committee on the Environment (COTE) marked Earth Day 1997 by releasing a list of the top 10 green projects at that time, dubbed the Earth Day Top Ten. The purpose in compiling the list was to provide a collection of exemplary sustainable projects that married qualitative design excellence and quantitative performance excellence.

Each year since then, COTE has continued to release a new list under the now-named Top Ten Green Projects program.

In this issue of *ECO-STRUCTURE*, we celebrate the 2011 winning projects. In addition to the highlights that start on page 39, our coverage of the 2011 Top Ten Green Projects continues online, with extended slide shows and detailed breakdowns of each project's metrics including square footage, number of occupants, energy and water use, and percentage of space with natural daylight. In addition, you can check up on a number of past Top Ten projects in the archives of our Flashback column.

Looking beyond this year's individual winners, the awards program itself provides an interesting chronicle of the evolution of sustainable design and construction. Currently, the program reviews project submissions with 10 specific measures in mind: design and innovation; regional and community design; land use and site ecology; bioclimatic design; light and air; water cycle; energy flows and energy future; materials and construction; long life and loose fit; and post-occupancy evaluation. With this in mind, take a moment to browse past winners at aiatopten.org.

Would a project that might have been considered award-worthy in 2001 still take home honors in 2011? Not necessarily, according to this year's jury—and that's a good sign. As one juror noted, "There were a lot of good projects that would have been award winners five years ago, but the bar has been raised. Now we want to see diverse project types, projects that resolve urban

issues or social issues, and projects that change occupant behavior." Added another: "At this point, they [these buildings] need to inspire. They need to inspire the occupant, the designer, and the populous in general. It's not just sustainable strategies. It's how seamless they are integrated in an effortless way. It had to be equally as powerful from the outside in as the inside out."

As you browse through our coverage in this issue and online, you may notice something missing: a healthcare project. Of the 150 projects that have won COTE Top Ten recognition over the past 15 years, not a single healthcare project has cracked the list.

Why is this absence glaring? As one of this year's COTE jurors put it: "You wanted to see large-scale complex buildings on urban sites; Gnarly projects like hospitals that are usually energy and water hogs." Healthcare facilities are notoriously energy intensive and unfortunately, often designed more for function and sterility than comfort. It's a market segment that cannot be ignored by green-building practitioners.

Last July, as part of a focus on healthcare, *ECO-STRUCTURE* published a summary of strategies that could reduce the energy use of a 225-bed, 520,000-square-foot acute-care hospital in Seattle from an Energy Use Index (EUI) of 270 kBtu per year to an EUI of 108 kBtu per square foot per year. The strategies were the findings of a study called "Targeting 100! Envisioning the High Performance Hospital: Implications for A New, Low Energy, High Performance Prototype." The study was produced by the University of Washington in collaboration with NBBJ, Cameron Macallister Group, Mahlum, Mortenson Construction, Solarc Architecture and Engineering, and TBC Consultants.

The overriding goal of the study was to examine how a hospital—specifically the 225-bed, 520,000-square-foot model in Seattle mentioned above—could reduce its overall energy use by 60 percent in order to meet targets of the 2030 Challenge. Among the design strategies recommended were options that not only would benefit a facility's bottom line, but also would improve patient and employee comfort, such as in-room environment controls, access to natural

light, views of nature, and additional green space. (Read more in the July/August 2010 issue, page 46; or read it online at go.hw.net/targeting100.)

We continue to discuss the pursuit of a more environmentally responsive, occupant-friendly, and architecturally inspirational hospital in this issue's Deep Green column, "Living, Breathing Hospitals," on page 19. The column takes its name from a research study currently being developed by Stantec's office in Vancouver, British Columbia, Canada, the University of Cambridge's Department of Architecture, and the BP Institute for Multiphase Flow, also located in Cambridge, England.

This team is completing a multiyear study to develop a conceptual 250-bed acute-care hospital that is both energy efficient and effective in improving the quality of care for patients and staff. It aims to create a facility that reacts and capitalizes on its climate zone and environment, so that systems respond to natural energy flows and temperature swings. Their inspiration: the meters-high towers constructed by colonies of termites, or white ants, in the Australian Outback. The team is aiming to present its conclusions this fall.

Will 2012 be the year that a healthcare facility makes it into the Top Ten? We'll have to wait until next year to see.

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