As promised when we introduced the winners of the 2011 COTE Top Ten Green Projects by the American Institute of Architects, we will be posting individual stories about each project. The projects have already been featured in more details on AIA's web site.

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I've got
new fries.
They're free this Fryday
Yup, Friday

Photographs © John Linden

Land Use & Community

The building is at the crossroads of Fairfax Boulevard and the famous Melrose Avenue and within a half mile of the Sunset Strip and many other popular cultural and entertainment attractions. The location ranks a “Walker’s Paradise” on Walkscore.com (95 out of 100) because of its proximity to restaurants and entertainment, schools, shopping, grocery stores, and other essentials.

Retail space invigorates the formerly vacant streetscape and encourages pedestrian traffic. As

such, the project benefits its occupants and the environment by promoting a walkable community that minimizes dependence on the automobile and thus reduces pollution and congestion.

Photograph © John Linden

A shared-use parking analysis was performed to show that combining residential and commercial parking was possible and could reduce the need for additional parking, thereby conserving valuable resources.

Environmental Aspects

Passive Strategies:

The passive strategies alone make this building nearly 50% more efficient than similar conventionally designed structures.

The perforated aluminum panels of the building create an ever-changing screen, providing shade to cool the building, reducing noise, and enhancing privacy while still allowing for spectacular views, natural light, and ventilation from ocean breezes that pass through its millions of perforations even when all panels are fully closed.
Passive design strategies include locating and orienting the building to control solar cooling loads, shaping and orienting the building for exposure to prevailing winds, shaping the building to induce buoyancy for natural ventilation, designing windows to maximize daylighting, shading south-facing windows and minimizing west-facing glazing, designing windows to maximize natural ventilation, utilizing low-flow fixtures and storm water management, and shaping and planning the interior to enhance daylight and natural airflow distribution. The building is designed to incorporate passive and active energy-efficient measures and optimize building performance.

Material:

Materials such as formaldehyde-free fiberboard, concrete, natural stone, and natural solid woods were used. Material with natural finishes throughout the thickness of the material were specified so that when the material suffers from abuse, it shows less wear and therefore lasts longer.

Recycled and locally procured materials were preferred and used throughout. Interior finishes were selected for their high levels of recycled content, low chemical emissions, and use of rapidly renewable materials.
Exterior finishes are naturally pigmented stucco, recycled steel, and recycled, powder-coated aluminum and concrete; the exterior requires no painting or other refinishing. To date, the building has required no maintenance other than adjusting and tuning pumps and irrigation systems (and cleaning gutters).

The building has facilities to sort, collect, and recycle paper, plastic and metal products. Because of the very low power demand of the building, thousands of feet of wire were saved. More than 80% of all construction waste was recycled. Waste haulers picked up commingled waste and provided a report detailing the amount of waste that went to the landfill vs. the amount of waste that was recycled.

Photograph © John Linden

Water Conservation:

100% of storm water is captured on site. Most of the water is captured by the green roof and is returned to the groundwater after being cleaned of pollutants. All other storm water is collected in a subsurface infiltration system.
This infiltration system is one of the most unique features of the building, because it was the first privately funded stormwater mitigation system ever built in the public right-of-way in Los Angeles. The system enables most Southern California storms to replenish the local groundwater rather than running off, picking up trash, and polluting the ocean.

To further reduce the building's impact on the water cycle, 100% of the water-using fixtures are low-flow, the toilets are dual-flush, and the plants are native and drought tolerant with drip irrigation. Appliances are Energy Star or better and were chosen for both energy efficiency and water conservation. Clothes washers use less water than traditional models.

Photograph © John Linden

Bioclimatic Design

The most important climatic issue to address for a building in this climate is mild heating in the winter. Air conditioning is generally not needed, but it is important to have good passive solar orientation and shading to take advantage of natural ventilation. The breezes from the coast, from the southwest and northwest, are fairly constant and predictable. On most days, passive natural ventilation will provide sufficient cooling for the residential spaces. The building is designed with a private exterior courtyard to induce airflow and provide maximum natural light and privacy.

Indoor Environment

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Photograph John Linden

Project Credits :

Architecture: BROOKS + SCARPA (formerly Pugh + Scarpa) Santa Monica, California
Structural engineer: John Pao, Broad Pao, Vancouver, British Columbia, Canada;
Mechanical engineer: Albert Bicol, Cobalt Engineering, Los Angeles, California
Interior design: Lawrence Scarpa, BROOKS + SCARPA (formerly Pugh + Scarpa)
Electrical engineer: Albert Bicol, Cobalt Engineering
Energy consultant: Albert Bicol, Cobalt Engineering