



ROBERT CANFIELD

THE GARDEN HOSPITAL

Today's cutting edge green facilities use natural settings to promote healing and the environment

[BY DENNIS MCFADDEN]

NATURE PROMOTES HEALING.

More than simple intuition, this fact is based on results confirmed by numerous academic and industry studies. Not surprisingly, evidence shows that access to nature reduces stress associated with the typical clinical environment and has a positive healing effect on patients. Perhaps what should be surprising is how far the modern hospital has diverged from the 19th century roots of the building type which supported healing through natural processes, focusing on gardens, views of nature and abundant natural light.

When CO Architects began designing Palomar Medical Center West, a new 360-bed hospital now under construction in northern San Diego County, a primary goal was to create a 'healing environment' with two equally important components — a humane place of healing for

patients, and a model of sustainability in the larger environment. The intersection of these two aspects — the integration of nature and technology — became the principal guiding vision of Palomar West and is embodied in the concept of a garden hospital.

The initial diagrams tested the possibility of a two- or three-story organization that gave all patient rooms a visual connection to landscape gardens. For the 750,000-square-foot Palomar West, the consequential 1,200-foot long building proved unrealistic. The resulting walking distances were too great; functions that required immediate adjacency were dispersed. The challenge, then clearly defined, was to bring the qualities of a horizontal garden hospital to a vertical organization. In the case of Palomar West, it meant 11 stories.

Left: Expansive picture windows bring gardens inside the Peter and Paula Fasseas Cancer Clinic in Tucson, Ariz.

The blooming garden hospital

While the roots of the modern hospital patient wing may be found in 19th century examples, there is no historical ancestor for the diagnostic and treatment wing. The growth of specialized functions such as emergency, surgery and imaging are integrally related to the evolution of modern medical science and technology, and require a type of space unrelated in form to that of the patient wing. In large hospitals, the D&T is typically a large, deep floor plate of two or three stories with the smaller floor plates of the nursing towers stacked above.

But at Palomar West, the nursing towers were pushed to one end of the D&T wing, exposing as much roof as possible. The D&T roof was designed to accommodate a 2.5-acre undulating green roof and public terrace planted with a drought-tolerant landscape. This roof garden is not only visible from the eight-story patient tower, but provides thermal insulation for the D&T wing, reduces ground reflectance and filters water from the building's cooling towers for irrigation use.

The concept of the garden hospital is brought to each floor of the patient tower through large conservatory gardens located at the center and both ends of each floor. Besides bringing 'nature' to all patients, staff and visitors of the vertical building, these gardens also provide an additional layer of solar protection for the fully glazed public spaces they adjoin.

These natural elements, together with the green roof, are vertical extensions of a rich site landscape that

envelops the hospital. Organized as a campus, Palomar West enjoys an extensive central garden that extends around three sides of the hospital, and includes a variety of intimate sensory gardens. A landscaped pedestrian walkway extends the length of the site to ensure connections between all elements of the campus.

As a part of Palomar West's commitment to sustainability, the hospital is a pilot project following the Green Guide for Healthcare, a LEED-like rating system specifically designed for healthcare projects. An important element of the GGHC is the consideration of solar orientation and the control of natural light. The main patient wing of Palomar West is oriented to minimize the low sun angles of east/west exposures in its arid inland valley context. A perforated metal screen system on the south façade provides shade to patient rooms while

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allowing maximum views and natural light. A patient will be able to keep the window shades up throughout the day, thus benefiting from the natural light and views which studies have shown contribute to a patient's healing environment. Where the screens extend to the terraces of the conservatory gardens, they serve as wind protection for the high-rise outdoor spaces.

To bring elements of the natural world to patients and staff in the technological world of the D&T, garden courtyards were incised into the large, two-story floorplates. The fully glazed courtyards not only bring garden views deep into the D&T wing, but also act as natural light-boxes.

Palomar West offered the rare opportunity to explore the concept of a vertical garden hospital in a completely new facility. Roof gardens are a good fit for hospitals since inherent programmatic complexities often result in the stacking of uneven floor plates or in large expanses of rooftops overlooked by patient areas.

These fortuitous spaces create opportunities for valuable garden areas, particularly in the case of addi At the recently opened Kaiser Permanente Panorama City hospital in Los Angeles, the roof of an existing loading dock was transformed into a landscaped plaza that has become the heart of the facility. By locating





the hospital café adjacent to the new rooftop garden, a found condition was exploited to create an important public amenity with green space.

Flowers bloom in the desert, too

The Peter and Paula Fasseas Cancer Clinic in Tucson, Ariz. invokes the power of the desert landscape to define it as a place of inspiration and healing. This outpatient cancer center delivers cancer treatment, prevention, research and education in an environment offering hope and comfort. Embracing nature as a healing force was integral to its mission. As a result, ample use of daylighting and views of the desert and the nearby Santa Catalina Mountains were considered paramount.

The resulting new cancer center provides visual and physical access to the outdoors that allows patients and staff at the intimately scaled facility connections to the healing power of nature.

Peter and Paula Fasseas Cancer Clinic

Tucson, Ariz., CO Architects

Above: Use of trellises, shades and desert plants shield clinic; Left: Bridges, desert gardens between parking area and clinic

The cancer center is an adaptive reuse of a 50-year-old, two-story, vacant hospital building designed with little natural light. The challenge was to bring natural light into the recesses of the original building's deep floor plate and offer vistas of the surrounding landscape. The solution entailed gutting the original building and removing segments of the deep floor plate to create three courtyards to bring natural light and views into the building. Courtyards are surrounded by windows on all sides, allowing natural light to extend into every exam room, infusion therapy room and all public spaces.

The focal point of the campus is a series of healing gardens that exploit the subtlety and diversity of the na-



Palomar Medical Center West
Escondido, Calif., CO Architects

Top: Expansive windows bring gardens indoors; Bottom: The Modern-Day Garden Hospital

in shaded locations and groups of tables on patio terraces. Meandering pathways encourage strolls through the landscape with small water features and outdoor sculptures offering points of interest along the way.

Common sense can make cents

Creating light-filled garden hospitals and medical facilities is a prerequisite to providing the best care for patients and for providing a positive environment for staff. The building of garden hospitals is achievable in a manner that is consistent with hospital functional and programmatic needs. In the modern hospital, unprogrammed spaces can create opportunities for valuable garden areas that provide beauty and function as places for respite. Garden hospitals are also

tive landscape. A reconstructed desert arroyo traversing the site is the dominant landscape feature and separates the gardens from the parking areas. The arroyo functions just as it does in the natural desert, collecting rainwater and irrigating indigenous vegetation. Bridges connect the parking lot to the gardens and the clinic. The bridges pass over the arroyo and symbolize passage from the secular world to the healing world. Rainwater and air-conditioning condensate is collected from the roof and funneled to the arroyo, providing additional irrigation.

Most of the existing trees and mature shrubs were retained and incorporated into the healing garden, which essentially returns the site to the natural desert landscape. The gardens are easily accessible from all patient areas and include small intimate seating areas

consistent with newer efforts to build 'green' hospitals. Indeed, some aspects of garden hospitals, such as the abundant use of natural light, resonate with the green movement and the goal of reduced energy consumption.



Likewise, rooftop gardens can act as insulation, reducing energy consumption while adding beauty. Integrating today's technology-rich medical facilities with environments closely linked to nature is not only achievable but desirable, with positive results on many levels. ■

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