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THE GARDEN ROOF ASSEMBLY, FROM AMERICAN HYDROTECH, HELPS TO REDUCE STORMWATER RUN-OFF & HEAT ABSORPTION.

Photo courtesy of Tim Griffith.

Child's Play

Garden Roof Benefits Patients at Pediatric Hospital in Palo Alto, California

by Marcus Dodson, editor & publisher

There are many reasons to incorporate a green or living roof into a design, including energy conservation, water management, and financial benefits. For one project in Palo Alto, California, the benefits of having a green roof transcended financial gains, and instead served a higher role.

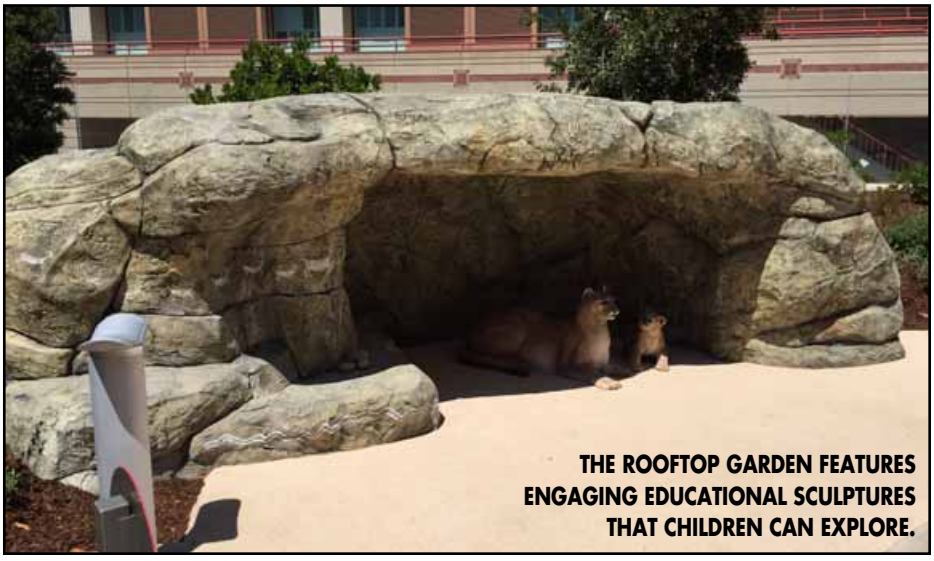
The Lucile Packard Children's Hospital (LPCH) at Stanford, originally constructed in 1991, is ranked as a top pediatric hospital in the nation and wins numerous healthcare awards year after year. A 2017 expansion opened a new 521,000 sq.ft. building and 3½ acres of gardens and green space. There is overwhelming evidence that a connection to nature actively supports the healing process for patients, especially children. The LPCH recently incorporated healing, outdoor spaces into its new design, as well as outdoor patios at every level to bring the beauty of nature inside.

The hospital's rooftop Dunlevie Garden provides a space for children, caregivers, and family members to play, unwind, and socialize. It features engaging educational sculptures that children can explore, including a puma den, gopher burrow, and two-story redwood tree trunk. A life-size sundial with large animal sculptures and a stone labyrinth is fun for visitors of all ages. The design teams incorporated an innovative entry from the hospital building to the roof that creates a seamless transition from outdoors to inside, and vice versa. A wide, curving breezeway with slatted glass panels allows rainwater to drop into the plants below, conserving water and helping to maintain the living landscape. The new hospital building was designed by HGA, San Francisco, California, and Perkins and Will, Chicago, Illinois. The general contractor on the project was DPR Construction Inc., Redwood City, California.

Aside from adding a stimulating and fun area for patients and their families, the rooftop garden also benefits the hospital

and surrounding environment. By utilizing a Garden Roof® Assembly from American Hydrotech, the 180,000 sq.ft. garden helps to reduce stormwater run-off and heat absorption. Stormwater affects a building's surroundings in many ways, including contaminated drinking water, landscape degradation, and flooding.

American Hydrotech's Monolithic Membrane 6125® was installed first to ensure a waterproof roof barrier. It is a thick, tough, flexible, self-healing membrane that is a special formulation of refined asphalts and synthetic rubbers that has a minimum 40% recycled content. The advantage of specifying the American Hydrotech waterproofing assembly on the Dunlevie Garden Roof, as well as similar amenity decks, is that the membrane is a seamless hot rubber asphalt that is adhered directly to the structural concrete substrate in a protected membrane roof (PMR) application. Unlike a traditional roofing or waterproofing assembly, where the membrane is installed atop the insulation board, a PMR is adhered directly to the substrate and utilizes the XPS insulation board that is above the membrane, thus protecting the waterproofing assembly and alleviating the potential for damage to the membrane throughout the life of the structure.



THE ROOFTOP GARDEN FEATURES ENGAGING EDUCATIONAL SCULPTURES THAT CHILDREN CAN EXPLORE.

An additional advantage of specifying the American Hydrotech waterproofing and garden roof assembly is that the hospital was able to obtain a 20-year Single-Source Ultimate Warranty, which includes the removal and reinstallation of all of the garden roof components and insulation board if

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Child's Play

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there were every any deficiencies in the membrane that needed to be addressed, at no additional cost to the owner.

"Our Monolithic Membrane 6125 was the original hot rubberized asphalt waterproofing membrane in the industry," said Rob Erklin, West Coast regional manager, American Hydrotech. "With over 50 years of experience, we have worked closely with world-renowned architects, landscape architects, and general contractors to successfully complete a wide variety of projects and we have set the industry standard with our waterproofing products and garden roof assemblies."

THE ROOFTOP ASSEMBLY HELPED THE CHILDREN'S HOSPITAL TO EARN LEED PLATINUM CERTIFICATION.

The Dunlevie Garden is a mixture of hard and soft landscaping that incorporates plants, shrubs, and built structures that requires regular irrigation and maintenance. With a Garden Roof assembly from American Hydrotech, the design possibilities are endless, which allowed the hospital to create a truly healing and innovative space for its patients. The rooftop assembly even helped the LPCH to earn LEED® Platinum certification from the United States Green Building Council, the highest level achievable. The LEED certification denotes the hospital as a healthy, highly efficient, and cost-saving building. In fact, the hospital uses 38% less water and 60% less energy than average Northern California hospitals.

The outdoors can have a truly restorative and holistic effect on the human spirit, and perhaps no one needs this more than the children undergoing treatment at the LPCH. A Garden Roof assembly from American Hydrotech has allowed the pediatric hospital to create an eco-friendly and fun space that allows children to simply be children.