

CENTRAL TEXAS BALCONES CHAPTER PROJECT PROFILE



DELL CHILDREN'S MEDICAL CENTER OF CENTRAL TEXAS AUSTIN, TEXAS

92% of construction waste was reused on site

250,000 gallon water storage cistern
collects rainwater and AC condensate to be used for landscape
irrigation and water features

First healthcare facility in the world to achieve a LEED
Platinum rating

LEED® Facts

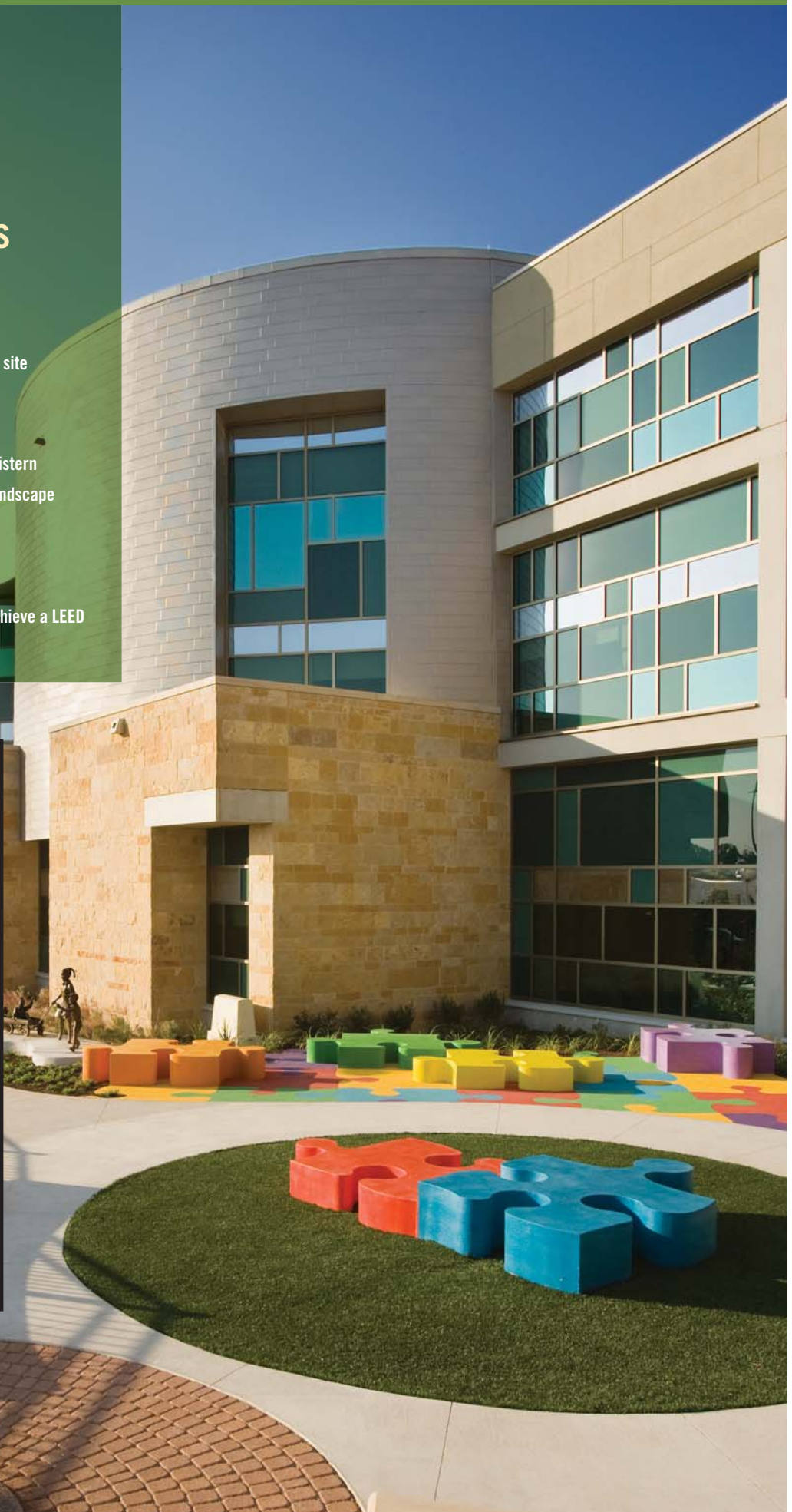
Dell Children's Medical Center of
Central Texas
Austin, Texas

LEED for New Construction
Platinum Certification January 7, 2009

Platinum	54*
Sustainable Sites	13/14
Water Efficiency	4/5
Energy & Atmosphere	14/17
Materials & Resources	7/13
Indoor Environmental Quality	11/15
Innovation & Design	5/5

*Out of a possible 69 points

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.



DELL CHILDREN'S MEDICAL CENTER OF CENTRAL TEXAS

Sustainable Healing

Green Design Promotes Therapy

PROJECT BACKGROUND

Envisioned as a model of sustainability from initial project conception, Dell Children's Medical Center of Central Texas, the world's first LEED Platinum healthcare facility, provides an extraordinary model for sustainable development and healing environments, which form a symbiotic relationship and share many common design characteristics. Realized from a 32-acre redevelopment site, Dell Children's offers a sustainable healing environment, predicated on evidence-based design, that effectively accommodates the unique needs of patients coping with critical illnesses and encourages positivity among patients, families and healthcare workers.

REGIONAL INFLUENCE

Six separate courtyards within the building footprint encompass 30,000 square feet and reflect the six ecoregions representative of the hospital's 46-county service area—rolling plains, Llano uplift, Edwards plateau, post oak woods, Gulf Coast prairie and blackland prairie—and feature regionally native plantings, introducing educational and regional character to the facility.

STRATEGIES AND RESULTS

A truly sustainable project in both design and construction, Dell Children's employs an array of valuable green features. The 475,000-square-foot facility sits on land that was originally part of the Mueller Municipal Airport, representing one of the largest redevelopment efforts in Austin's history. Dell was conceived as a model of sustainability from initial project commencement and features innovative components that include: a reclaimed water irrigation system that significantly reduces the hospital's need for potable water; 30,000 square feet of courtyards that illuminate the hospital's interior, reducing daytime lighting needs and energy consumption; and resilient, regionally appropriate native and adaptive plants utilize drip irrigation and, along with synthetic turf, further alleviate irrigation needs.

Recycled content was used abundantly, including composite wood, recycled glass and high fly-ash content concrete, and all woods were FSC-certified. Several interior courtyards feature green roofs, which were utilized for their thermal value and to reinsert habitat within the building footprint. In addition, 92 percent of construction waste was reused on site (among other materials, 47,000 tons of Mueller airport runway materials were reused for parking lots and garages). Roughly 40% fly ash was used instead of Portland cement in the concrete mix, yielding a drop in carbon dioxide emissions equivalent to taking 450 cars off the road. Sustainable and indigenous building materials, including Texas limestone, recycled glass and rapidly renewable cork, were used throughout the hospital's exterior façade, flooring and walls.

ABOUT DELL CHILDREN'S MEDICAL CENTER OF CENTRAL TEXAS

Regarding energy efficiency, an on-site 4.3-megawatt natural gas turbine (75 percent more efficient than coal-fired plants) supplies the needed electricity and links to the municipal grid and an emergency generator that provides backup power. It is wholly capable of meeting the hospital's entire electricity, heating and cooling needs. Converted steam energy from a heating/cooling plant supplies all chilled water needs. Other cooling features that contribute to the hospital's energy efficiency include reflective roofing and surface pavements as well as an under-floor air distribution system that requires less power to operate than a traditional ceiling system. Parking lot trees and reflective surface pavement and roof materials reduce the heat island effect.

"We designed various courtyard environments to reflect the biodiversity of Central Texas by incorporating six ecoregions, each corresponding to a distinct area of the hospital's 46-county service region. Since the installations, Dell Children's has received widespread acclaim for combining cutting-edge medical technology with art and green building design to create a cohesive healing environment."

- Brian Ott, ASLA, LEED AP



Architect: Karlsberger
Civil Engineer: Bury + Partners Engineering Solutions
Commissioning Agent: Phil Risner
Contractor: White Construction
Landscape Architect: TBG Partners
LEED Consultant: Gail Vittori
Water Feature Consultant: Rock and Waterscape Int.
MEP Engineer: ccrd Engineers
Structural Engineer: Datum Engineering
Photography: John Durant, TBG Partners

Project Size: 32 Acres
Total Project Cost: \$200 Million
Cost Per Square Foot: \$257

ABOUT LEED

The LEED® Green Building Rating System™ is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S. Green Building Council's website to learn more.



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