

## PROJECT PROFILE

### WEST BRAZOS JR. HIGH

COLUMBIA BRAZORIA  
INDEPENDENT SCHOOL DISTRICT  
BRAZORIA, TEXAS

### LEED® NC

6% total site disturbed

55% construction waste  
diverted from landfill

17% recycled content

### LEED® Facts

West Brazos Junior High  
Houston, TX

LEED for New Construction  
Certification awarded July, 2007

**Certified** 27\*

Sustainable Sites 7/16

Water Efficiency 4/5

Energy & Atmosphere 1/22

Materials & Resources 4/10

Indoor Environment Quality 6/18

Innovation & Design 5/5

\*Out of a possible 69 points

## PROJECT PROFILE

# COLUMBIA BRAZORIA INDEPENDENT SCHOOL DISTRICT

# WEST BRAZOS JUNIOR HIGH

BRAZORIA, TEXAS

## PROJECT BACKGROUND

West Brazos Junior High School is located on a 53-acre undeveloped, beautifully wooded site. The building's dominant material is concrete masonry, chosen for its natural, durable quality. Stucco and metal panels compliment the masonry to make a more economical structure without compromising durability and maintenance costs. Natural colors of beiges, browns and rusts, complimented by zero-maintenance and energy-efficient green tinted windows allow the building to blend with the natural beauty of the heavily wooded campus.

A 260-foot circulation spine connects multiple learning/activity pods that feature clerestory windows, allowing natural light to penetrate deep into the core spaces. Landscape courtyards provide generous views while classroom windows feature Low-E glazing and inexpensive shading devices that double as light shelves, distributing natural light further into learning spaces. The site consists of rain water detention and natural filtration areas and naturally preserved native landscape that are drought resistant and thrive in the regional coastal environment.

## THE BUSINESS CASE

In schools, sustainable design can foster a better learning and teaching environment. Multiple studies show that improvements in air quality and natural day lighting improve test scores and reduce absences. According to the district, test scores for West Brazos Junior High comparing 2006 (old campus) to 2007 (new campus) improved.

**Reading improved 5 percentage points to 96 percent.**

**Mathematics improved 4 percentage points to 91 percent.**

**Social Studies improved 7 percentage points to 92 percent.**

**Attendance percentage improved from 95.21 percent to 95.70 percent.**

LEED certification for West Brazos Junior High was achieved without adding significant cost to the construction budget. Additionally, maintenance, operations and utilities costs are lower compared to traditional facilities, saving taxpayers long-term lifecycle dollars. West Brazos Junior High School is the first public primary or secondary school in the state of Texas to be LEED certified.

## STRATEGIES AND RESULTS

- Implementation of Green housekeeping protocol by the school district and a recycling policy that includes storage and collection
- Locally manufactured materials (within 500 miles) comprises 55 percent of the school's building materials, which positively impacts the local economy and reduces the effects of transporting materials from long distances
- Low-E window glazing, improving the thermal efficiency of the building while transmitting daylight into the classrooms, the library, cafeteria and office spaces
- A building footprint and paving placed on the site to minimize disruption to the existing pastoral site – a natural habitat to numerous trees and wetlands.
- Native landscaping that is drought resistant and thrives in the region's coastal environment, reducing the need for water usage and irrigation systems.
- A highly reflective Energy Star roofing system and reflective paving, which reduces the heat island effect

## ABOUT COLUMBIA BRAZORIA INDEPENDENT SCHOOL DISTRICT

Columbia Brazoria I.S.D. is a dynamic organization that empowers a community of learners who dare to dream, take risks, and develop new realities. This district offers a small town feeling with the convenience of nearby Houston. Spread over 225 square miles, the district's population is concentrated in West Columbia, Brazoria, Wild Peach and other small communities. CBISD's motto is Catch the Challenge: Learn for Life!

"OUR GOAL WAS TO DEMONSTRATE THAT "GREEN SCHOOLS" WERE ACHIEVABLE WITHOUT SPENDING EXTRA MONEY DURING THE PROCESS. THE KEY WAS SMARTER CHOICES, NOT MORE MONEY."

— MARTHA BUCKNER,  
ASSISTANT SUPERINTENDENT,  
COLUMBIA BRAZORIA ISD



**Owner:** Columbia-Brazoria Independent School District  
**Architect:** SHW Group LLP  
**Engineer:** DBR Inc.  
**Contractor:** Tellepsen  
**Project Size:** 91,500 sf  
**Total Project Cost:** \$9,931,000  
**Cost PSF:** \$108.54  
**Completion:** May 2006

Photography courtesy of Richard Payne Photography

## 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 web site at [www.usgbc.org](http://www.usgbc.org) to learn more about how you can make LEED work for you.

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Greater Houston Area Chapter

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**GREATER HOUSTON  
AREA CHAPTER**



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