

PROJECT PROFILE

STRESS ENGINEERING

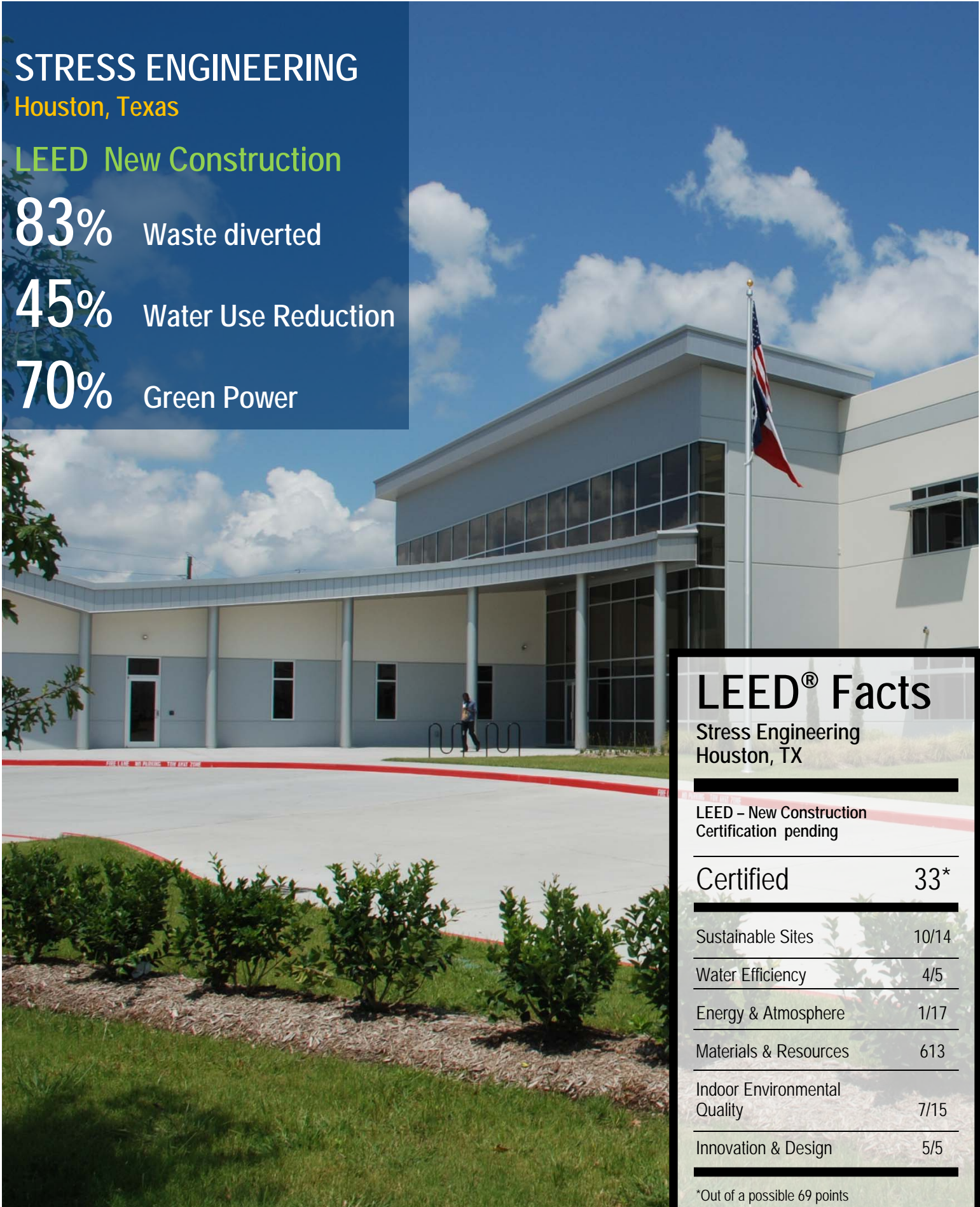
Houston, Texas

LEED New Construction

83% Waste diverted

45% Water Use Reduction

70% Green Power



LEED® Facts

Stress Engineering
Houston, TX

LEED - New Construction
Certification pending

Certified 33*

Sustainable Sites 10/14

Water Efficiency 4/5

Energy & Atmosphere 1/17

Materials & Resources 6/13

Indoor Environmental
Quality 7/15

Innovation & Design 5/5

*Out of a possible 69 points

Stress Engineering

Focus on the Employee

PROJECT BACKGROUND

This new addition to the Stress Engineering campus consists of a two-story office building with a single story conference center for the Upstream Oil & Gas and Stress Subsea divisions. This addition was necessitated by rapid company expansion and the need to provide employees quality office space in a competitive industry. The office wing will be used mainly by engineers in private offices as required by company policy. Offices are to be laid out at the perimeter of the building to provide natural light and views to its occupants, with service areas being confined to interior spaces. A limited amount of open office space is provided for the drafting team. The conference center will be used by the whole company campus and could at times require one large space for large meetings or two smaller spaces for concurring training sessions using a sliding partition. Stress Engineering is located at 13610 Westland East Blvd., Houston, TX 7704, just off Eldridge Parkway and Highway 290 in northwest Houston.

THE BUSINESS CASE

Achieving a high level of comfort and productivity of the building occupants and doing so in an energy-efficient manner is a main priority in this project. The owner believes strongly in the idea of a sustainable place leading to a strong and positive working environment. A variety of LEED credits were sought to achieve balanced mixture of comfort, energy efficiency, and sustainable practices, with an emphasis on the Indoor Environmental Quality category.

STRATEGIES AND RESULTS

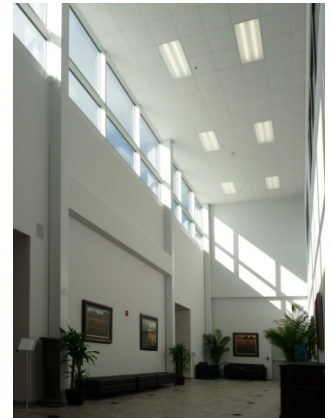
Built on the last remaining site on the existing campus, the design team was limited, but able to maximize sustainable site credits through careful orientation. The site was developed to treat 90% of the runoff to eliminate 80% of total suspended solids. The landscape design limits the demand of water by using native and drought tolerant plants and a highly efficient irrigation system to cut their landscaping water usage by 59%. Stress Engineering has reduced its building water usage by 45% (translating to 99,500 gallons annually) by installing low flow plumbing fixtures. The building used 17% regional materials (within 500 miles) that conserved transportation fuel and is built of 20% recycled materials. Wheat straw core doors were used as a rapidly renewable material. The building has purchased Green Power offsets for 35% of their total energy use. Other sustainable design elements include low-VOC paint, no-VOC adhesives and low emitting carpet. Innovative credits included green housekeeping and an educational outreach programs. Contractors followed stringent LEED construction requirements by ensuring that a waste management plan was implemented. As a result, 83% of construction waste was diverted from the landfill and proper air quality was maintained in the building during construction.

ABOUT STRESS ENGINEERING

Stress Engineering Services is an independent, employee-owned consulting engineering firm that provides engineering services and solutions to both the up and down stream oil industry. Headquartered in Houston, Texas we also have offices in Cincinnati, New Orleans, and Baton Rouge. Stress performs full-scale testing, mechanical design, product development, subsea engineering, failure analysis, metallurgy, and other engineering services for the oil and gas, chemical / refinery, medical, power, and consumer products industries.

“Our goal is to offer efficient, economical, and high quality projects to our clients. This building helps us do that.” -

Dr. Joe Fowler, P.E.
President
Stress Engineering Services, Inc.



Owner: Stress Engineering Services, Inc.

Design/Build Contractor: Clay Development & Construction

Architect: Morris Architects

Engineers:

Mechanical: Bates A/C

Plumbing: Rogers & Associates

Electrical: Advantage Electric

Project Size: 40,894 sq. ft.

Total Project Cost: \$5 million

Photography courtesy of Stress Engineering.

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 to learn more about how you can make LEED work for you. Access the local chapter of USGBC by visiting www.usgbc-houston.org