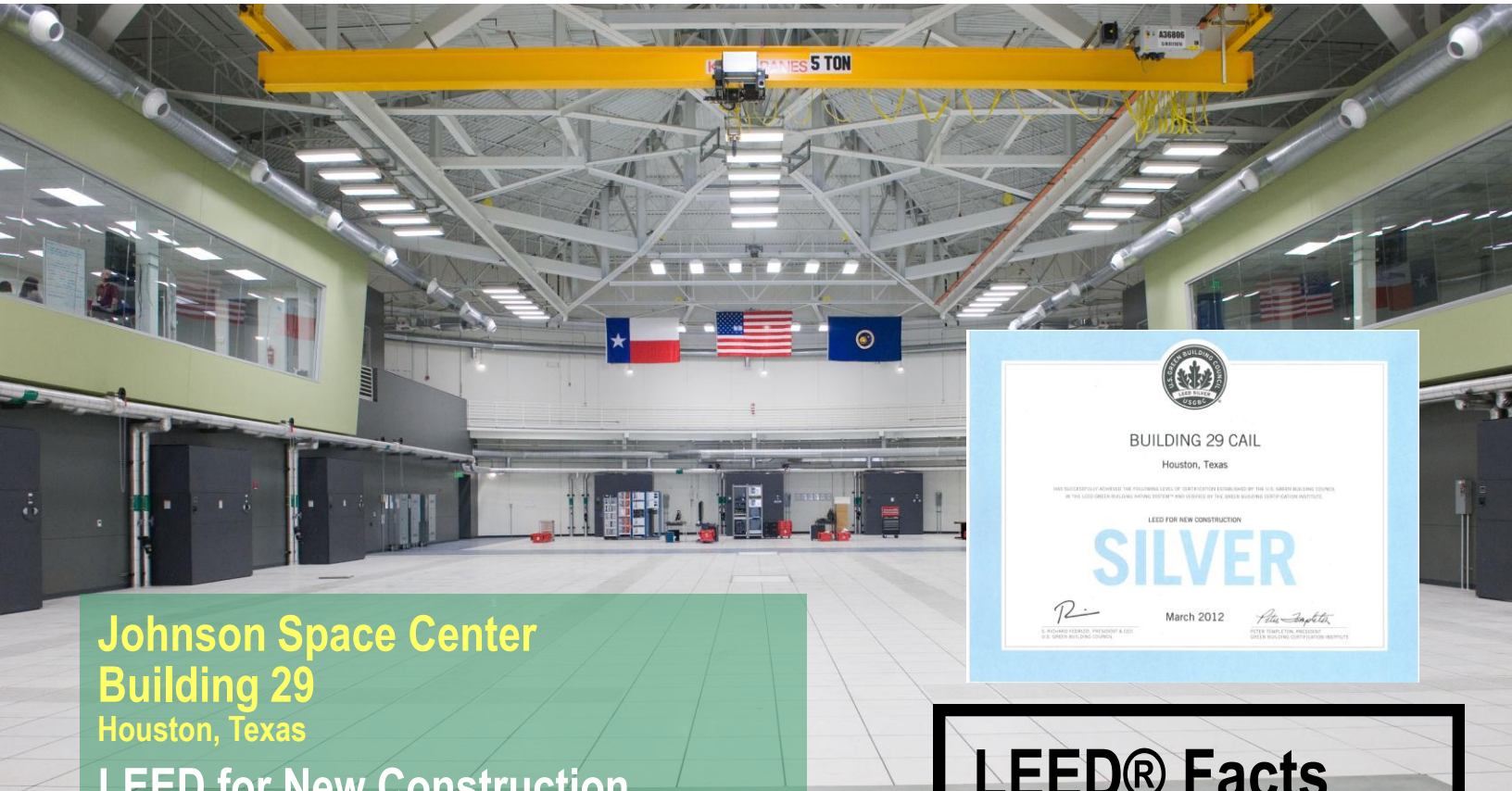


# PROJECT PROFILE



## Johnson Space Center Building 29 Houston, Texas

### LEED for New Construction

- 10% Recycled Content
- 11.2% Less energy
- 29% Regional Materials
- 31.5% Reduced Potable Water Usage
- 75.7% Tradable Renewable Certificates
- 80% Wood used harvested from FSC forests

## LEED® Facts

NASA Johnson Space Center  
Building 29  
Houston, TX

LEED for New Construction version 2 -  
Certification Awarded March 2012

Silver 33\*

Sustainable Sites 6/14

Water Efficiency 2/5

Energy & Atmosphere 3/17

Materials & Resources 6/13

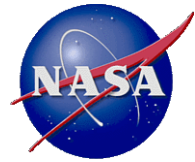
Indoor Environmental Quality 11/15

Innovation & Design 5/5

\*Out of a possible 69 points

# PROJECT PROFILE

## NASA Johnson Space Center – Building 29 A Very Historical Building Still Pays Off



### PROJECT DESCRIPTION

Building 29 has a total of 58,423 square feet within its main building. It includes open offices, enclosed offices, conference rooms, and a main briefing room. The building structure was left the same, but new walls and windows were added. The rotunda (a cylindrically shaped high bay attached to the main building) was also updated during reconstruction. It has been renovated to support future NASA spacecraft hardware and software integration verification testing, as depicted on the first page.

### SUSTAINABLE SITES (6/14)

The project site is located within 0.5 miles of a minimum of 10 community services and a residential district with a minimum density of 10 units per acre. Building 29 also provides one preferred parking space for low-emitting and fuel efficient vehicles. No new parking has been added to the site.

### WATER EFFICIENCY (2/5)

The project has reduced potable water use by 31.5% from a calculated baseline design through the installation of ultra-low flow lavatory faucets, dual-flush flushometers, and low-flow sinks.

### ENERGY & ATMOSPHERE (3/17)

The project performs 11.2% better using the ASHRAE 90.1-2004 Appendix G methodology. Additionally, Building 29 has a purchased Green-E accredited Tradable Renewable Certificates (REC) equal to 75.7% of the predicted annual electrical consumption over a one-year period. No CFC-based refrigerants (ozone depleting) substances were used in the HVAC system.

### MATERIALS & RESOURCES (6/13)

The project is a renovation of an existing building and 95.88% of the existing wall, floor, and roof elements have been maintained. The project has diverted 1,859 cubic yards (89.85%) of on-site generated construction waste from landfill. 10% of the total building materials content, by value, has been manufactured using recycled materials. 79.75% of the total wood-based building materials are harvested from FSC certified forests.

### INDOOR ENVIRONMENTAL QUALITY (11/15)

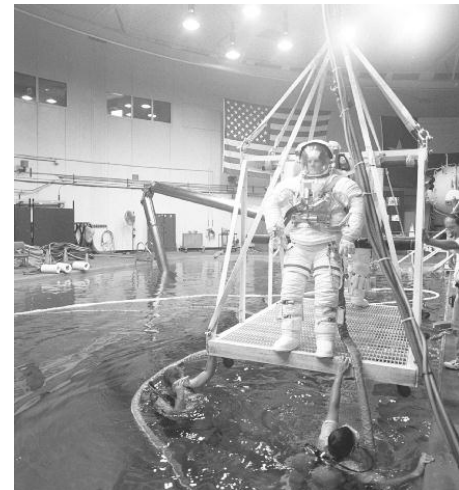
The project's CO2 concentrations within naturally ventilated spaces is monitored using interior sensors mounted in the occupied spaces between three and six feet above the floor. Low emitting adhesives, sealants, paints, coatings, carpets, composite wood, and agrifiber used in construction comply with VOC limits. Lighting controls have been provided to enable 100% of occupants to make adjustments to suit individual tasks needs and preferences, and to permit transient groups to share lighting controls in all shared multi-occupant spaces.

### INNOVATION IN DESIGN (5/5)

The project received exemplary performance for its innovation in reduction of Mercury based lighting, use of Tradable Renewable Certificates, and open space accommodation.

“The rotunda of Building 29 originally housed the Flight Acceleration Facility for human testing of up to 30 centrifugal Gs of acceleration during the Apollo missions. In 1985 it was converted into the Weightless Environment Training Facility (WETF) through the inclusion of a pool for extravehicular activity (EVA) testing. The Neutral Buoyancy Laboratory replaced the WETF, in 1996. And, for a short period following, the WETF pool also served as the astronaut rehabilitation center until completion of Building 26, a JSC LEED gold building.”

**Laurie Peterson,**  
**JSC Sustainability Champion**



**Owner:** NASA, Johnson Space Center  
**Architect:** HOK Architects  
**Structural Engineer:** Walter P. Moore  
**MEP Engineer:** HOK Architects  
**Commissioning Authority:** Page Sutherland Page  
**Contractor:** Sauer Inc.  
**Project Size:** 58,423 SF  
**Project Cost:** \$20,737,000  
**Completion:** December 2010  
**Photography:** NASA

### 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) and the TX Gulf Coast Chapter of USGBC at [www.usgbc.texasgulfcoast.org](http://www.usgbc.texasgulfcoast.org) to learn more about how you can make LEED work for you.