

The Visitor Center is the first place prospective students and visitors go to learn about Rutgers University. The center is the starting point for tours of the Rutgers–New Brunswick Campus and a place to interact with exhibits that illustrate the university’s history and the contributions Rutgers’ faculty, students, and alumni have made to New Jersey, the United States, and the world.



Rutgers University Visitors Center New Brunswick, NJ



"This building will be a showcase to prospective students and visitors, that Rutgers is committed to sustainable practices"



Location of Project: New Brunswick, NJ

Owner: Rutgers University

Overview

Built to a LEED Silver Equivalent, The Rutgers University Visitor Center is the first place prospective students and visitors go to learn about the university. Completed in September 2009 the 2-story facility incorporated green principles in its design and construction.

HVAC and Envelope

The building is oriented to maximize the use of day lighting and thermal radiation. On both the southern and eastern exposures, there are sun screens which let in day light and reduce heat gain during the summer and let light and heat in during winter. Also high efficiency lighting and HVAC are used in the building. The air conditioning uses a dual refrigerant condensing unit and interior fan coil units. High efficient gas fired boilers are used for heating the building. The boilers are staged for demand and the heating hot water is distributed using variable speed pumps. The outside air is controlled by CO₂ sensors in occupied spaces.

Materials and Indoor Air Quality

Many environmentally friendly finish materials were installed—for example flooring made from poured concrete, recycled carpeting, recycling ceiling tiles. Low or no-VOC paints used throughout the building reduced toxic off-gassing and contributed to a healthy interior environment

Water and Operations

Dual Flush toilets and low flow urinals. There is no permanent irrigation. Daily building operation supports a mandatory recycling program of all traditional materials such as paper, metal, plastic, glass as well as a compact fluorescent lamp (or CFL) recycling program. Green cleaning products are used in all aspects of cleaning.

Project Team

Architect: *The Biber Partnership AIA*
Peter Biber | Principal
Derrick Overbay | Project Manager
Lauren Mitchell | Design Standards

MEP & Structural Engineer: *Bala Consulting Engineers, Inc.*
Victor Pronesti | Senior Project Manager
Anthony Gibbons | Electrical Project Engineer
Mark Novasack | HVAC Design Engineer
David Holst | Plumbing / Fire Protection
Scott Holsinger | Structural Project Manager

Civil Engineer: *Maser Consulting P.A.*
Besrick Plummer | Project Manager

Contractor : *Michael Riesz and Co.*
Eric Jensen | Project Executive
Richard Schroeder | Project Manager
Tom Noraas | Superintendent

Roofing Consultant: *ESA Architects*
Modeste Sobolta | Principal

Exhibit Designer: *Ralph Applebaum Associates*

Process

Design

A design charrette was held as a start to the project design. The charrette included all the design professionals along with people from each department in the University directly involved with the design, construction and occupancy of the building. All sustainable design strategies were implemented during the construction of the building and surrounding site.

Build

During construction, the University's project manager ensured that all the sustainable strategies and principles were followed. Recycling of construction debris was implemented, and easy to use recycling centers were available. In addition, prior to building occupancy an Indoor Air Quality flushing was done.

Operate

The building was commissioned and brought on line with the maintenance staff, being educated, to run the building efficiently. A BMS system was incorporated into the HVAC to maintain building comfort, IAQ and energy savings. In addition, a preventative maintenance program based on seasonal or equipment life cycles was developed and implemented.

Evaluate

The building was commissioned and the energy use is monitored on a monthly basis. A Building Performance Evaluation (BPE) was performed. An interactive energy management tool that allows tracking and assessing energy and water consumption was employed



Ratings and Awards

LEED Silver Equivalent

Performance

The building is designed to operate 15% more efficient than a base building as based on ASHRAE 90.1, 2001

Lessons and Trade-offs

The Rutgers University Visitor Center is being used as a learning tool for sustainable practices at Rutgers in the hopes of employing more of these strategies in future building projects.

List of Green Strategies

Design

- Integrated Design Process
- Thermal Massing
- Building Information Modeling (BIM)
- Energy Modeling
- Life Cycle Cost (LCC) Analysis

- Transit Oriented Design (TOD)
- Native and Adapted Plants
- Tree Preservation
- Use of High Reflectance Hardscape Materials
- Water-Efficient Landscape Design
- Pervious Materials
- Low Flow Fixtures and Fittings
- Building Orientation for Solar Access
- Highly Insulated Building Envelope
- High-Efficiency Lighting Systems
- Properly Sized HVAC
- Dedicated Mechanical Systems
- Demand Control Ventilation
- Energy Recovery Systems
- Smart & Sensor Controls
- Photovoltaics
- Solar Thermal Systems
- Life Cycle Assessment (LCA)
- Rapidly Renewable Resources
- Regional Materials
- Construction and Demolition Waste Recycling
- Certified Wood
- Indoor Air Quality Management Plan
- Low-Emitting Materials
- Individual comfort controls
- Entryway Systems



- Moisture Control
- Biophilia
- Crime Prevention Through Environmental Design (CPTED)

Operate

- Green Cleaning

Evaluate

- Building Performance Evaluation
- Management Tools

