

# Duke Sustainability

## Smith Warehouse



### Building Information

Architect: Brockwell

Construction: Mixon

Purpose: Administrative

Footprint: 48,000 sq ft

The Smith Warehouse was constructed in 1906 by the Liggett Tobacco Company a block south of Trinity College (now Duke's "East Campus"). Duke's decision to purchase and renovate the space, located adjacent East and Central Campus, demonstrates the institution's commitment to revitalizing urban spaces before encroaching upon green space.

[View the Smith Warehouse LEED™ Scorecard](#)

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### Sustainable Site Features

In addition to reusing the building's original materials and foundation, renovating the old tobacco warehouse puts Duke employees closer to existing city, regional and campus bus routes. The building includes bike racks and showers to encourage biking. Exterior lighting is directed downward and controlled to reduce ambient light pollution.

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### Water Efficiency

The building achieves more than 20% improvements in water efficiency through fixtures on all faucets and low-flush toilets.

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### Energy Efficiency

Smith Warehouse received LEED™ points for the use of contracts that ensure the mechanical systems in the building perform to efficient standards over the lifespan of the building.

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### Indoor Air Quality

Spaces are provided for the mixing of housekeeping chemicals, which are stored outside of the building. Copy machines, which can contain chemicals with suspected carcinogenic, neurotoxin, and other negative health impacts, are located in copy rooms, away from workspace, but convenient and accessible to all staff.

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### Resource Management

The building makes extensive use of locally-sourced renewable materials, including reuse of the historic warehouse itself. Lumber used in the building is FSC certified and recycled-content materials were used throughout the building. The construction team helped to reduce waste during the renovation, setting up construction & demolition recycling areas on site.

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### **Integration of Sustainability in Design & Construction Process**

The Smith Warehouse renovation received one point in this area for having a LEED™ certified Project Manager involved throughout the design and construction process.



# Duke University - Smith Warehouse, LEED®-EB Pilot Project

## LEED-EB Certification Level: CERTIFIED

December 20, 2004

**28 Points Achieved**

Certified 28 to 35 points Silver 36 to 42 points Gold 43 to 56 points Platinum 57 or more points Possible Points: 76

### 5 Sustainable Sites

Possible Points: 16

Y	Prereq	Y	Points	Description	Points
Y	Prereq 1	1	1	Erosion & Sedimentation Control	1
Y	Credit 1	1	2	Site Selection	2
Y	Credit 2	1	1	Urban Redevelopment	1
Y	Credit 4.1	1	1	Transportation: Public Transportation Access	1
Y	Credit 4.2	1	1	Transportation: Bicycle Friendly	1
Y	Credit 4.3	1	1	Transportation: Alternative-Fuel Refueling Stations	1
Y	Credit 4.4	1	1	Transportation: Parking Capacity	1
Y	Credit 5.1	1	1	Reduced Site Disturbance, Vegetated Ground Cover	1
Y	Credit 5.2	1	1	Reduced Site Disturbance, Native or Adapted Vegetation	1
Y	Credit 6.1	1	1	Stormwater Management, 25% Runoff Reduction	1
Y	Credit 6.2	1	1	Stormwater Management, Treatment	1
Y	Credit 7.1	1	1	Reduce Heat Islands, Non-Roof Surfaces	1
Y	Credit 7.2	1	1	Reduce Heat Islands, Roof Surfaces	1
Y	Credit 8	1	1	Light Pollution Reduction	1
Y	Credit 9.1	1	1	Green Site and Building Exterior, Overall Plan	1
Y	Credit 9.2	1	1	Green Site and Building Exterior, Chemicals	1

### 5 Indoor Environmental Quality

Possible Points: 18

Y	Prereq	Y	Points	Description	Points
Y	Prereq 1	1	1	Minimum IAQ Performance	1
Y	Prereq 2	1	1	Environmental Tobacco Smoke (ETS) Control	1
Y	Prereq 3	1	1	Asbestos Removal or Encapsulation	1
Y	Credit 1	1	1	Carbon Dioxide (CO2) Monitoring	1
Y	Credit 2	1	1	Increase Ventilation Effectiveness	1
Y	Credit 3	1	1	Construction IAQ Management Plan	1
Y	Credit 5.1	1	1	Green Housekeeping, Entryway Systems	1
Y	Credit 5.2	1	1	Green Housekeeping, Mixing Areas	1
Y	Credit 5.3	1	1	Green Housekeeping, High Volume Copying	1
Y	Credit 5.4	1	1	Green Housekeeping, Low-Impact Cleaning and Housekeeping	1
Y	Credit 5.5	1	1	Green Housekeeping, Low Env. Impact Disposable Products	1
Y	Credit 5.6	1	1	Green Housekeeping, Low Env. Impact Pest Management Policy	1
Y	Credit 5.7	1	1	Green Housekeeping, Outdoor Chemical Storage	1
Y	Credit 6.1	1	1	Controllability of Systems, 45% of Occupied Areas	1
Y	Credit 6.2	1	1	Controllability of Systems, 90% of Occupied Areas	1
Y	Credit 7.1	1	1	Thermal Comfort, Compliance with ASHRAE 55-1992	1
Y	Credit 7.2	1	1	Thermal Comfort, Permanent Monitoring System	1
Y	Credit 8.1	1	1	Daylight & Views, Views for 40% of Total Building Area	1
Y	Credit 8.2	1	1	Daylight & Views, Views for 80% of Total Building Area	1
Y	Credit 8.3	1	1	Daylight & Views, Daylight for 65% of Total Building Area	1
Y	Credit 9	1	1	Contemporary IAQ Practice, ASHRAE 62-1999	1

### 5 Energy & Atmosphere

Possible Points: 22

Y	Prereq	Y	Points	Description	Points
Y	Prereq 1	1	1	Comprehensive Building Systems Commissioning/ Retro Commissioning	1
Y	Prereq 2	1	1	Minimum Energy Performance	1
Y	Prereq 3	1	1	Ozone Protection	1
Y	Credit 1	1	10	Optimize Energy Performance, 10%, 20%, 30%, 40%, 50%	10
Y	Credit 2.1	1	3	Renewable Energy, 5%, 10%, 15% (1 point each)	3
Y	Credit 3.1	1	1	Commissioning and Maintenance, Continuous Commissioning	1
Y	Credit 3.2	1	1	Commissioning and Maintenance, Maintenance Contracts	1
Y	Credit 3.3	1	1	Commissioning and Maintenance, Compr. Prev. Maint. Program	1
Y	Credit 4	1	1	Additional Ozone Protection	1
Y	Credit 5.1	1	1	Measurement & Verification - First Grouping	1
Y	Credit 5.2	1	1	Measurement & Verification - Second Grouping	1
Y	Credit 5.3	1	1	Measurement & Verification - Third Grouping	1
Y	Credit 5.4	1	1	Measurement & Verification, Emission Reduction Reporting	1
Y	Credit 6	1	1	Green Power	1

### 1 Innovation & Design Process

Possible Points: 5

Y	Prereq	Y	Points	Description	Points
Y	Credit 1.1	1	1	Innovation	1
Y	Credit 1.2	1	1	Innovation	1
Y	Credit 1.3	1	1	Innovation	1
Y	Credit 1.4	1	1	Innovation	1
Y	Credit 2	1	1	LEED® Accredited Professional	1