



In 1980, the Board of Trustees and the Committee on Food Service Facilities decided to construct one centralized dining hall to accommodate students from Richmond and Westhampton Colleges. In August of 1982, the new Bruce E. Heilman Dining Center opened to the University Community.

Almost 30 years later, the University decided to construct an addition to the Heilman Dining Center, along with a complete renovation of existing dining facilities. When completed in 2009, the Heilman Dining Center addition was the second LEED-certified building on campus. As of 2013, the addition houses the campus post office, a convenience store (ETC.), One-Card Services, kitchens for dining and catering staff, and administrative offices for Dining Services.



PROJECT HIGHLIGHTS

LEED® Facts

Heilman Dining Center
University of Richmond
2009



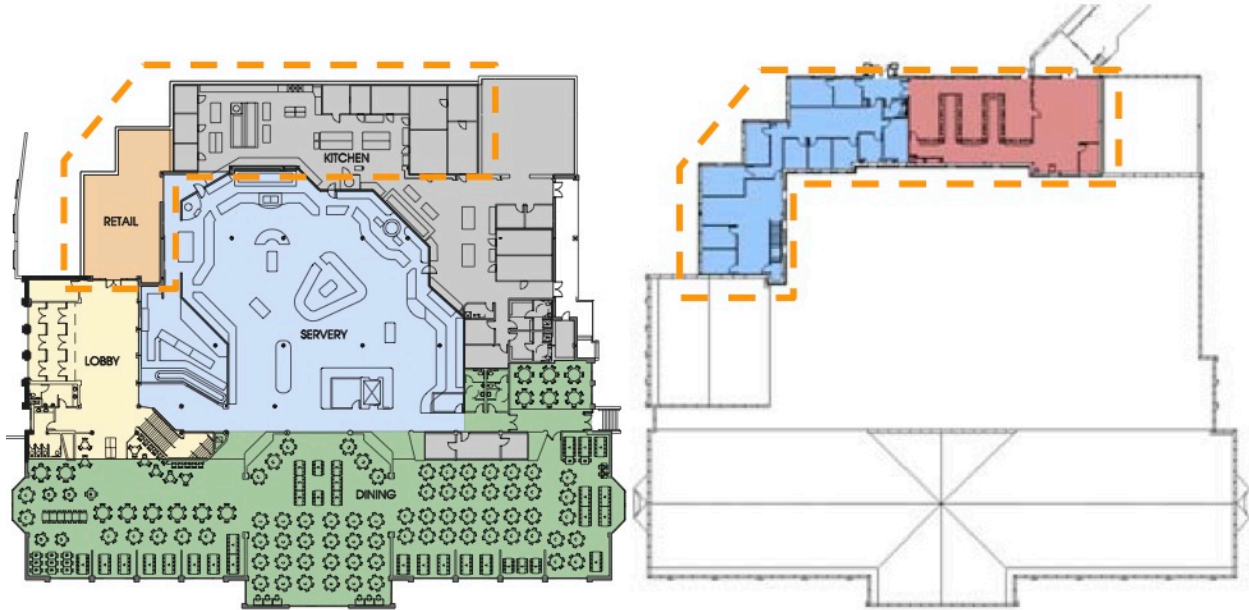
Location.....	28 Westhampton Way Richmond, VA 23173
Rating System.....	LEED-NC v2.2
Certification Achieved.....	Certified
Total Points Achieved.....	26/69
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Sustainable Sites.....	9/14
Water Efficiency.....	2/5
Energy and Atmosphere.....	0/17
Materials and Resources.....	5/13
Indoor Environmental Quality.....	8/15
Innovation and Design.....	5/5

- 10%** Recycled materials used in construction
- 42%** Construction materials that were harvested and manufactured within 500 miles
- 80%** Construction and demolition waste recycled
- 92%** Occupied space with views of the outdoors



PROJECT TEAM

Owner	University of Richmond	Civil Engineer	Draper Aden & Associates
Architect	BCWH Architects	Landscape Architect	Higgins and Gersteinmaier
Contractor	Kjellstrom & Lee.	LEED Consultant	BCWH
MEP Engineer	Engineers Plus	Food Service Equipment	Porter Consulting Worldwide
Structural Engineer	Dunbar Milby Williams Pittman & Vaughan		



ADDITIONAL RESOURCES

Heilman Dining Center

<http://dining.richmond.edu/locations/heilman/index.html>

Heilman Dining Center Sustainability

<http://dining.richmond.edu/sustainability/index.html>

Office for Sustainability

<http://sustainability.richmond.edu/>

Office for Sustainability Resources

<http://sustainability.richmond.edu/buildings/index.html>

Follow the Office for Sustainability

<https://www.facebook.com/SpiderSustainability>

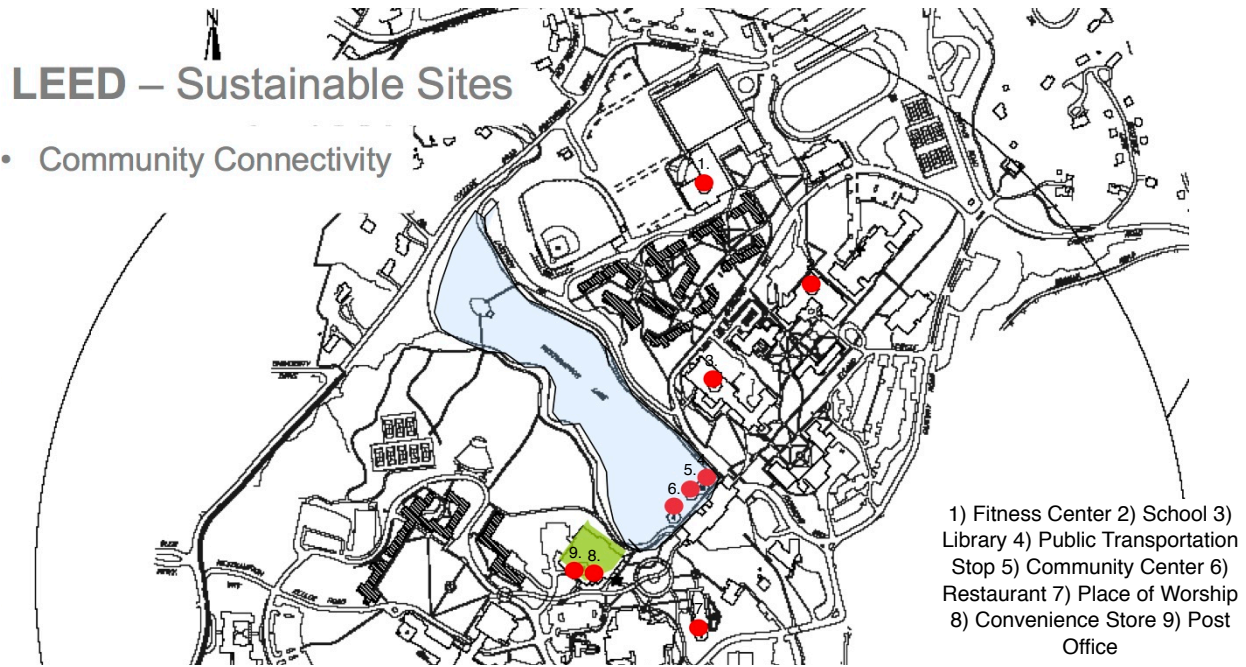
<https://twitter.com/BeAGreenSpider>



SUSTAINABLE SITES

The Heilman Dining Center addition is located within walking distance to essential basic services including a place of worship, a theater, a museum, a library, a restaurant, and a fitness center. The addition itself houses a post office and a convenience store. The close proximity of these services reduces the transportation impacts from travel between them and increases productivity of occupants by decreasing travel times.

Bike racks are available onsite for use by members of the University community, to encourage use of alternatives to carbon emitting transportation. The parking area behind the Heilman Dining Center has three reserved preferred parking spots for high occupancy vanpools and low emission vehicles.

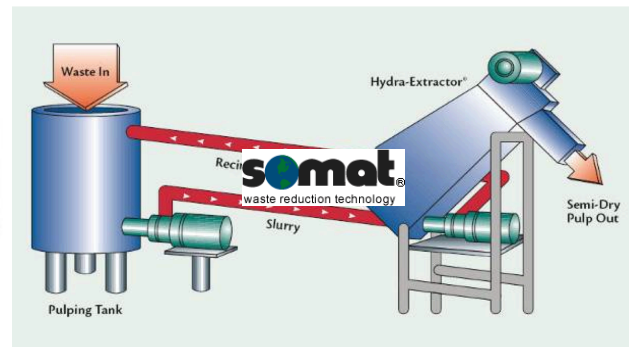


To maximize open space, an open area covered with vegetation was created directly adjacent to the addition. The storm water that falls onto the project area runs off into Westhampton lake, which acts as a Best Management Practice, controlling the quality of runoff into the James River watershed. Additionally, the LEED project preserved a valuable aquatic ecosystem through conservation of the land adjacent to the dining center and along the Westhampton Lake. The facility minimizes light pollution, improves nighttime visibility and diminishes the impact on nocturnal environments by reducing light areas to those only as required for safety. The building’s white roof reduces the heat island effect minimizing impacts on microclimates and human and wildlife habitats.



WATER EFFICIENCY

A permanent irrigation system was not installed on the site. The planting design replaces the pre-existing lawn with vegetation such as native shrubs, canopy trees, and understory trees which do not require irrigation during typical rainfall. These efforts resulted in no potable water use for irrigation.



The facility also focused on water efficiency inside the building. Water conserving fixtures were installed in every bathroom including aerators, dual flush toilets, and waterless urinals. In the kitchens, ice machines use air as a coolant instead of water, the dishwashers use steam technology to boost heat and decrease water use, and the addition of a pulper system reduces waste and recycles water.

ENERGY AND ATMOSPHERE

All new cooking equipment is energy efficient and all lighting is either low voltage or compact fluorescent. All new, as well as replacement equipment, contains no chlorofluorocarbons.

Actual food refrigeration accounts for 5% of food services energy cost, so replacement refrigerators adhered to ASHRAE energy efficiency guidelines. The new refrigerators have four inch thick insulation with electronic/remote controls and off site monitoring.

Cooking stations were designed with exhaust fans that incorporate electronic sensors which automatically set the exhaust to minimum levels when not in use.



MATERIALS AND RESOURCES

The intense interior renovation work from the Heilman Dining Center renovation, in addition to the new construction, created over 800 tons of waste materials, of which 80% was recycled. The paneling for the wall features is made of lyptus venner plywood, which is a rapidly renewable product. Ten percent of the Heilman Dining Center addition is composed of recycled materials. These recycled materials make up 90% of the steel structure. Additionally, 42% of the products incorporated into the project were also manufactured within 500 miles of the project site.



INDOOR ENVIRONMENTAL QUALITY

To meet the Indoor Environmental Quality prerequisite, the Dining Hall had to change its long-standing policy of allowing smoking in one of the three dining rooms. All of the carpets throughout the Heilman Dining Center are low volatile organic compound (VOC) certified and do not emit a variety of chemicals



that could negatively impact the indoor air quality and the health of the occupants. All of the composite wood or agrifiber products throughout the Heilman Dining Center extension do not contain urea formaldehyde, which also helps to minimize the VOC levels throughout the building.

To limit the exposure of occupants to chemicals, all areas where cleaning and chemical products are mixed or stored have separate ventilation and plumbing systems.

To bridge the gap between the indoor and outdoor environments, 92.61% of regularly occupied space throughout the Heilman Dining Center extension has access to views outside.

INNOVATION AND DESIGN

As the second LEED building on campus, the University wanted to incorporate the information about the new addition into the collective knowledge of the campus community. Information about the elements of the new building was integrated into part of “The Built Environment and Creating a Sustainable World” course used to teach students about sustainable buildings. Additionally, there is an informational LEED poster inside the building, outlining the LEED features of the new addition.

To avoid using harmful pesticides and rodenticides, and limit risks to human health and the environment, the building uses an integrated pest management system to discourage the development of pest populations.

The new addition received an exemplary performance rating in maximizing open space by more than doubling the land necessary for the requirement. To preserve a valuable aquatic ecosystem, land adjacent to the Heilman Dining Center and the Westhampton Lake is now permanently protected.

Furthermore, the new addition obtained an exemplary performance rating in the utilization of regional materials because 42% of the building materials were harvested & manufactured within 500 miles. This amount is far above the 20% required for the Regional Materials credit.



LEED SCORE CARD



LEED for New Construction

HEILMAN DINING HALL (10003357)

UNIVERSITY OF RICHMOND, VA, US

Certification Level: **Certified**

Certification Date: **2009.07.29**

26 Points Achieved	Possible Points: 69
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Certified 26 to 32 points Silver 33 to 38 points Gold 39 to 51 points Platinum 52 or more points

9 Sustainable Sites Possible Points: 14

Y	Prereq 1	Construction Activity Pollution Prevention	
1	Credit 1	Site Selection	1
1	Credit 2	Development Density & Community Connectivity	1
	Credit 3	Brownfield Redevelopment	1
	Credit 4.1	Alternative Transportation, Public Transportation Access	1
1	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
1	Credit 4.3	Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles	1
1	Credit 4.4	Alternative Transportation, Parking Capacity	1
	Credit 5.1	Site Development, Protect or Restore Habitat	1
1	Credit 5.2	Site Development, Maximize Open Space	1
	Credit 6.1	Stormwater Design, Quantity Control	1
1	Credit 6.2	Stormwater Design, Quality Control	1
	Credit 7.1	Heat Island Effect, Non-Roof	1
1	Credit 7.2	Heat Island Effect, Roof	1
1	Credit 8	Light Pollution Reduction	1

2 Water Efficiency Possible Points: 5

1	Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
1	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
	Credit 2	Innovative Wastewater Technologies	1
	Credit 3.1	Water Use Reduction, 20% Reduction	1
	Credit 3.2	Water Use Reduction, 30% Reduction	1

0 Energy & Atmosphere Possible Points: 17

Y	Prereq 1	Fundamental Commissioning of the Building Energy Systems	
Y	Prereq 2	Minimum Energy Performance	
Y	Prereq 3	Fundamental Refrigerant Management	1
	Credit 1.1	Optimize Energy Performance, 10.5% New / 3.5% Existing	1
	Credit 1.2	Optimize Energy Performance, 14% New / 7% Existing	1
	Credit 1.3	Optimize Energy Performance, 17.5% New / 10.5% Existing	1
	Credit 1.4	Optimize Energy Performance, 21% New / 14% Existing	1
	Credit 1.5	Optimize Energy Performance, 24.5% New / 17.5% Existing	1
	Credit 1.6	Optimize Energy Performance, 28% New / 21% Existing	1
	Credit 1.7	Optimize Energy Performance, 31.5% New / 24.5% Existing	1
	Credit 1.8	Optimize Energy Performance, 35% New / 28% Existing	1
	Credit 1.9	Optimize Energy Performance, 38.5% New / 31.5% Existing	1
	Credit 1.10	Optimize Energy Performance, 42% New / 35% Existing	1
	Credit 2.1	Renewable Energy, 2.5%	1
	Credit 2.2	Renewable Energy, 7.5%	1
	Credit 2.3	Renewable Energy, 12.5%	1
	Credit 3	Enhanced Commissioning	1
	Credit 4	Enhanced Refrigerant Management	1
	Credit 5	Measurement & Verification	1
	Credit 6	Green Power	1

5 Materials & Resources Possible Points: 13

Y	Prereq 1	Storage & Collection of Recyclables	
	Credit 1.1	Building Reuse, Maintain 75% of Existing Walls, Floors, & Roof	1
	Credit 1.2	Building Reuse, Maintain 95% of Existing Walls, Floors, & Roof	1
	Credit 1.3	Building Reuse, Maintain 50% of Interior Non-Structural Elements	1
1	Credit 2.1	Construction Waste Management, Divert 50% from Disposal	1
1	Credit 2.2	Construction Waste Management, Divert 75% from Disposal	1
	Credit 3.1	Materials Reuse, 5%	1
	Credit 3.2	Materials Reuse, 10%	1
1	Credit 4.1a	Recycled Content, 10% (Post-consumer + 1/2 pre-consumer)	1
	Credit 4.1b	Recycled Content, 20% (Post-consumer + 1/2 pre-consumer)	1
1	Credit 5.1	Regional Materials, 10% Extracted, Processed, and Manufactured Regionally	1
1	Credit 5.2	Regional Materials, 20% Extracted, Processed, and Manufactured Regionally	1
	Credit 6	Rapidly Renewable Materials	1
	Credit 7	Certified Wood	1

8 Indoor Environmental Quality Possible Points: 15

Y	Prereq 1	Minimum IAQ Performance	
Y	Prereq 2	Environmental Tobacco Smoke (ETS) Control	
	Credit 1	Outdoor Air Delivery Monitoring	1
	Credit 2	Increased Ventilation	1
1	Credit 3.1	Construction IAQ Management Plan, During Construction	1
	Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1
	Credit 4.1	Low-Emitting Materials, Adhesives & Sealants	1
	Credit 4.2	Low-Emitting Materials, Paints & Coatings	1
1	Credit 4.3	Low-Emitting Materials, Carpet Systems	1
1	Credit 4.4	Low-Emitting Materials, Composite Wood & Agrifiber Products	1
1	Credit 5	Indoor Chemical & Pollutant Source Control	1
1	Credit 6.1	Controllability of Systems, Lighting	1
	Credit 6.2	Controllability of Systems, Thermal Comfort	1
1	Credit 7.1	Thermal Comfort, Design	1
1	Credit 7.2	Thermal Comfort, Verification	1
	Credit 8.1	Daylight & Views, Daylight 75% of Spaces	1
1	Credit 8.2	Daylight & Views, Views for 90% of Spaces	1

5 Innovation & Design Process Possible Points: 5

1	Credit 1.1	Innovation in Design	1
1	Credit 1.2	Innovation in Design	1
1	Credit 1.3	Innovation in Design	1
1	Credit 1.4	Innovation in Design	1
1	Credit 2	LEED® Accredited Professional	1

