University of Washington LEED Building Tour

Introduction

Washington State passed legislation in 2005 mandating all building projects over 5,000 square feet to meet the Leadership in Energy and Environmental Design (LEED) silver standard in order to qualify state funding.

The University of Washington embraced the challenge; it compliments other college programs such as "Restore the Core" and the "Climate Action Plan."

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

LEED is an internationally recognized, voluntary rating system that defines and certifies "build green" standards. To "build green" is to construct or renovate buildings in an environmentally conscious way and to produce buildings that operate in a sustainable fashion, reducing energy and water consumption for example. LEED was developed and is managed by the United States Green Building Council (USGB), a member-based, nonprofit organization headquartered in Washington, D.C. USGB manages checklists that enumerate points earned for particular practices and construction choices. Based on the number of points earned, LEED projects can win awards labeled Platinum (the highest), Gold, Silver and Certified.

Nina Milligan, Winter 2012,
Independent Study

Take a tour of

LEED buildings

on the campus of the

University of Washington

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Merrill Hall

The first University of Washington building to be LEED-certified is Merrill Hall, which houses the Center for Urban Horticulture. This building is located at the furthest northwest corner of the campus, past the sports facilities' parking lots.

Image credit University of WA

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Merrill Hall

Merrill Hall opened in 2004 and earned a LEED Silver rating by choosing sanctioned building materials, reuse of existing structures and waste management practices, just to name a few items from the LEED checklist. Upgrades in storm water management system and reductions in irrigation water consumption by planting native species and using drip irrigation helped the facility realize a 30% savings in potable water consumption. Merrill Hall also earned LEED points for natural lighting, operable windows, bike parking and showers for commuters, and its energy efficient design.

Image credit University of WA

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Denny Hall

The oldest building in the program is Denny Hall, which opened in 1895 as the first building on the new Seattle Campus. It is named for Arthur Denny who donated the original ten acre tract in downtown Seattle where the university began.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Denny Hall

Denny Hall now houses the schools of Anthropology, Classics, Germanics and Near East Studies. The University plans to update the building for seismic and accessibility codes as well as landscaping improvements and others, all leading to a LEED certification.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Savery Hall

Savery Hall houses The Center for Social Science Computation and Research (CSSCR) and the departments of Sociology, Philosophy and Economics. Savery Hall's exterior is cleaned and restored, the interior is dramatically overhauled. The rebuilt interior shines with an ultra-modern style: the sparse and simple finishes are bathed in natural light.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Savery Hall

Savery Hall earned LEED Gold certification in 2010, updating the 1917 Bebb and Gould building to current seismic, access and facilities' codes, plus implementing many innovative green building features. Savery earned LEED credits for natural lighting, an energy saving feature providing free light not just for the exterior offices', but also for the interior hallways and interior offices, too. For example, the third-floor hallway was built as a balcony, open to the second-floor hallway, allowing third-floor light to extend all the way to the second-floor interior offices.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Savery Hall

The energy efficient heating and cooling system was designed to be zonal and responsive to conditions: When the sun shines in one side of the building, cooling is turned on, but not on the side in the shade. Only a few interior historic elements were salvaged and are lovingly displayed, but not used.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Johnson Hall

Johnson Hall hosts the studies of Biology and of Atmospheric Science. Fully renovated in 2006, the preserved windows and stairwells convey the building's long history. The new light fixtures are in keeping with the historical context.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Johnson Hall

The Johnson Hall renovation preserved historical elements while updating to a LEED-certified standard. According to the LEED checklist, "99% of Structural and Shell Elements of Building" were reused in the renovation.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Johnson Hall

The building restoration included LEED practices during construction (low emitting materials, erosion control and construction waste management) and integrated several LEED features in the finished building. The project earned points for incorporating energy and water efficient systems, recycling facilities, bike commuter's facilities.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Clark Hall

Clark Hall houses the Air Force, Army and Navy ROTC programs.

Clark Hall was built in 1899, the fourth building on the campus, Like Lewis Hall, it served as a dormitory. In 2009, the architect firm of CollinsWoerman, working with Absher Construction, completed the award winning renovation in a "Restore the Core" project, winning LEED Gold status.

Image credit Joe Mabel, Creative Commons License

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Clark Hall

In addition to seismic, energy and building code updates, the Clark Hall renovation included many other features, such as restoring the natural lighting aspects of the original building and the connection to HVAC resources in steam and air services of the campus's main lines. It improved landscaping with native plant species and reduced water use. It also preserved much of the existing structure and sourced building materials locally whenever possible. Efficient water systems were also installed.

Image credit Joe Mabel, Creative Commons License

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Green Village Residence Halls

The University of Washington LEED initiative extends also into the resident halls. One example is in what's being called "The Green Village," which sits west of campus. The bright white window-frames jump off the dark grey siding in an irregular window patterns intended to illustrate the diversity of the students living in these halls.

Image credit Mahlum

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Green Village Residence Halls

Image credit Mahlum

Of the four buildings, Poplar, Elm, Cedar and Alder Halls, Poplar was the first completed and earned LEED Gold. Mahlum is the architect for all four halls, the builder for Poplar and Alder is Walsh Construction Company. W. G. Clark Construction Co will be the builder for Elm and Cedar Halls. In 2010, Mahlum was awarded the AIA Seattle Citation Award for Washington Architecture. The West Village created a mixed-use neighborhood, providing support and services for the students and vitality to the surrounding area.

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Molecular Engineering Building

An example of LEED-certified construction in a research building is the Molecular Engineering Building. The Molecular Engineering Building houses the Research Lab and the Ultra Sensitive Ground Contact Lab.

Image credit Rolluda

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Molecular Engineering Building

Image credit Rolluda

Though the University's LEED mandate regards publicly funded construction, this facility was funded mostly by private money. The Molecular Engineering Building gained LEED Silver for many features, most notable being that natural ventilation was incorporated, which is unique in a research building. The architect firm was Zimmer Gunsul Frasca, the builder Hoffman Construction and the engineers Affiliated Engineers, Inc.

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

The HUB

The Husky Union Building, or "The HUB" is thought of as the "heart and soul" of the campus, providing goods and services for students, staff, faculty and guests for everything from bike repair to burgers to bowling.

Image credit Perkins+Will

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

The HUB

The HUB's renovation and expansion will be completed in fall 2012. Perkins+Will is the architect, general contractor/construction manager is Skanska USA Building Inc. PBS Environmental provides engineering design and services. The renovation combines the old 1949 building with a glass dominated modern expansion.

Image credit Perkins+Will

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Floyd and Delores Jones Playhouse

The Floyd and Delores Jones Playhouse 200-seat theater was built in 1931. It is a University of Washington “Restore the Core” project.

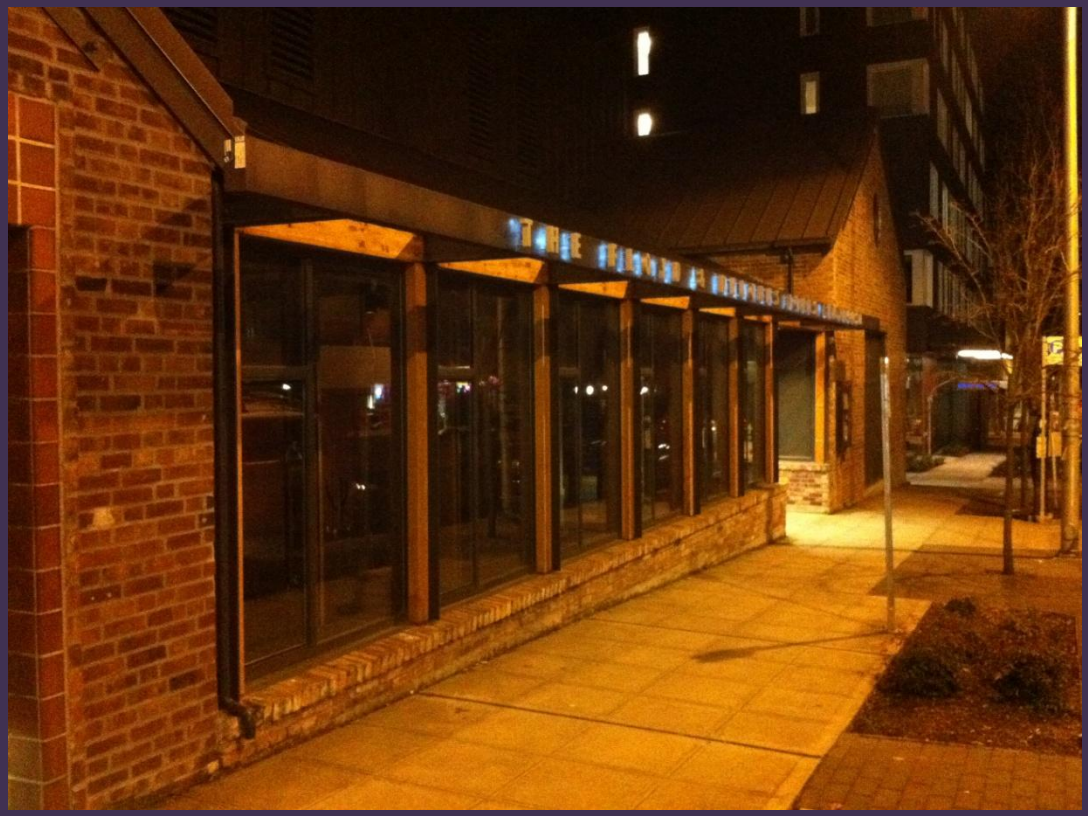

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Floyd and Delores Jones Playhouse

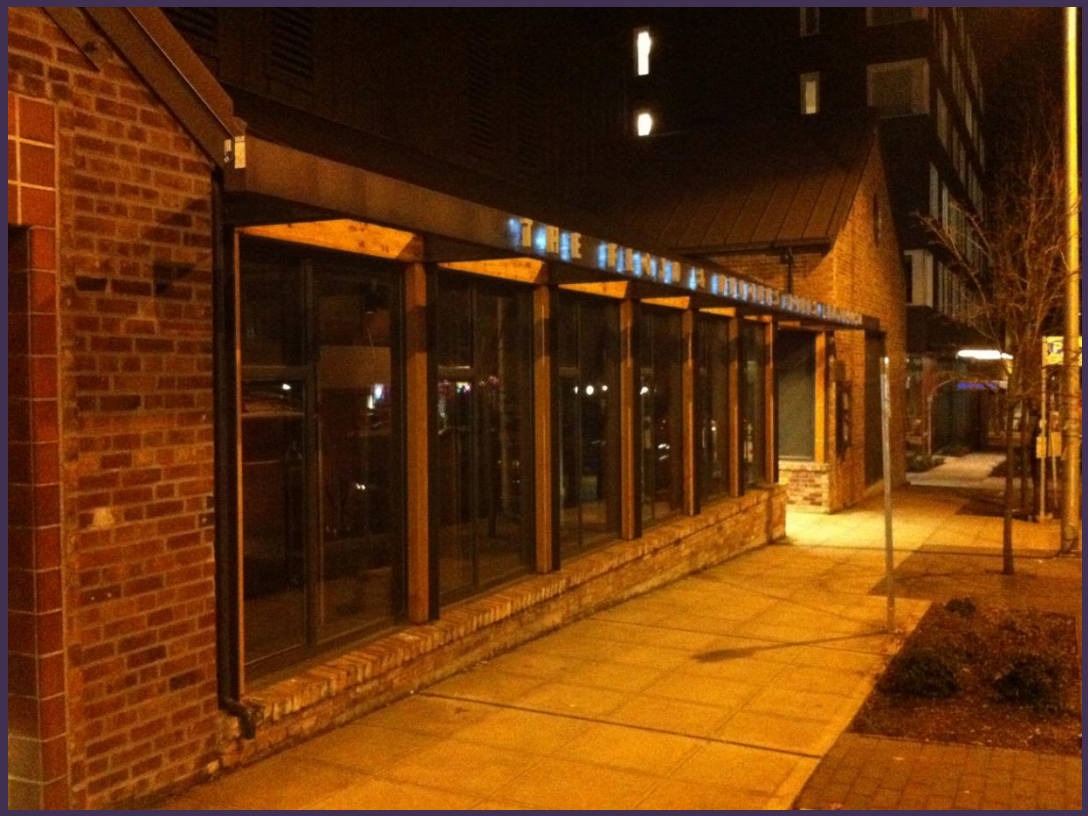

Image credit N Milligan

The Playhouse underwent a LEED-certified renovation in 2008, bringing it up to seismic and systems code while improving the academic efficacy of the facility. The renovation leveraged integrated design, and earned LEED points for natural ventilation, efficient hydronic floor heating, lighting fixtures and controls, water conservation systems, low VOC treatments, access to public transportation, and recycling of construction waste.

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

University of Washington Medical Center (UWMC) Expansion

The University of Washington Medical Center expansion on Columbia Road will house a neo-natal intensive care unit as well as the center for bone marrow transplants and oncology. The architect team is NBBJ. The builder is Skanska USA. Completion is expected in 2012.

Image credit NBBJ

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Paccar Hall

Paccar Hall houses the Foster School of Business.

This new building was completed in 2011 and earned LEED Gold certification.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Paccar Hall

Paccar Hall was phase one of a two part project, the second part being the replacement of Balmer Hall, which houses the Foster Business Library. Paccar Hall's four-story naturally lighted atrium runs the full length of the building. It was designed to bring LEED-favored natural lighting to classrooms, offices and corridors. The glass windows also provide fire suppression and protection.

Image credit N Milligan

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Paccar Hall

Image credit N Milligan

The atrium exemplifies integrated-community-design with its open spaces arranged for connectivity.

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Benjamin D. Hall

Benjamin D. Hall Interdisciplinary Research Building is a Design-Build-Operate-Maintain, LEED-certified building. As the designation implies, the designer-builder contracts to operate the building for 30 years at a fixed cost. Building materials and systems are evaluated on a life-cycle cost basis.

Image credit CollinsWoerman

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Benjamin D. Hall

Image credit CollinsWoerman

LEED points were also earned for water and energy efficiency, natural lighting and healthy or recycled product use. Benjamin Hall was certified LEED Gold for Core and Shell.

The architect was CollinsWoerman, the builder M.A. Mortenson with engineering services provided by Johnson Controls.

Nina Milligan, Winter 2012,
Independent Study

University of Washington LEED Building Tour

Conclusion

With The HUB, the Molecular Engineering Building and the and the UW Medical Center Expansion opening in 2012, and the continuing work on the West Village, there is much to look forward this year. The "Restore the Core" projects will restart when funding is available, with a mix of examples to follow providing information from years of operation. The University of Washington will be the campus to watch for all interested in architecture and sustainability.

Nina Milligan, Winter 2012,
Independent Study