Miller Library, originally built in 1939 and renovated in 1983, is the main library among three at Colby, supporting research in the humanities and social sciences, and housing the college archives, special collections, library administrative and technical services offices, group study areas, and computing spaces.

Colby College is a campus committed to sustainability. The Miller Library renovation is designed to be as environmentally responsible as practical. Reuse and renovation of this campus icon building is an important sustainable feature, even though ‘retrofitting’ an old building is more challenging than building a new one. Virtually all of the building’s structural elements, floors, and walls were maintained, along with doors, windows, and many existing finishes. The upgraded facilities provide new energy-efficient HVAC equipment and lighting, significantly reducing energy use. Moreover, lighting controls are provided throughout most of the private and common spaces, significantly reducing their operation time. Modern water-saving bathroom fixtures throughout the Library reduce water consumption by 41%. The renovated Miller Library provides staff, students, and visitors with an inviting, comfortable, and well-organized space for research and study.

**LEED® Facts**

Colby College
Miller Library

<table>
<thead>
<tr>
<th>Category</th>
<th>Points Achieved</th>
<th>Achievable</th>
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<tbody>
<tr>
<td>Location…………………Waterville, ME</td>
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<td>Rating System………………LEED-CI v2009</td>
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<td>Certification Achieved…Gold</td>
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<td>Total Points Achieved…62/110</td>
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<td>Water Efficiency………………8/11</td>
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<td>Energy and Atmosphere………25/37</td>
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<td>Materials and Resources…5/14</td>
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<td>Indoor Environmental Quality…8/17</td>
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<td>Innovation and Design…...8/17</td>
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<td>Regional Priority………………3/5</td>
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</table>

**Project Metrics**

- Reduction in **lighting power** compared to the baseline standard (ASHRAE 90.1-2007)
  - 37%
- Reduction in **water use** compared to the baseline standard (International Plumbing Code/Uniform Plumbing Code)
  - 36%
- **Reused** furniture value as a percentage of total furniture cost
  - 36%
- **Recycled** content value as a percentage of total materials cost
  - 25%
- **Regionally manufactured** materials value as a percentage of total materials cost
  - 20%
SITE

LEED recognizes the value of redeveloping and renovating existing buildings as opposed to developing on previously undeveloped sites. By renovating our existing library, we were able to leverage existing infrastructure instead of starting from scratch.

As a part of this renovation, we also remediated several areas on the project area that contained asbestos in order to limit the exposure of the building occupants to these harmful materials.

PLUMBING SYSTEMS AND POTABLE WATER USE REDUCTION

By switching the bathroom faucets, toilets, and urinals to more efficient fixtures, we reduced our water consumption by 36% compared to a calculated baseline of code-compliant water fixtures and fittings. Over the course of the year, it is expected these savings will result in a water savings of 273,210 gallons.

PRODUCTS AND MATERIALS

Allsteel Relate Arm Chairs
- meets high air quality standards
- Shipped blanket-wrapped
- 26% post-consumer, and 12% pre-consumer recycled content

Allsteel Transfer Tables
- meets high air quality standards
- Shipped blanket-wrapped
- 28% post-consumer, and 61% pre-consumer recycled content

Eggers Doors
- Certified by Rainforest Alliance
- Low-emitting materials credits
- 100% pre-consumer recycled content

Please note that while many products are described in this project profile, these are provided for informational purposes only, to show a representative sample of what was included in this project. Colby College and its affiliates do not specifically endorse nor recommend any of the products listed in this project profile and this profile may not be used in commercial or political materials, advertisements, emails, products, promotions that in any way suggests approval or endorsement of Colby College.
**ENERGY EFFICIENCY AND OCCUPANT COMFORT**

**MECHANICAL AND ELECTRICAL SYSTEMS**

As part of the building renovations in 1981, a mechanical room was constructed on the ground floor where campus steam enters the building and is piped into a steam to hot water converter to provide building heating. Heated hot water is distributed throughout the building with hot water pumps which are sized to be fully redundant. Heating elements throughout the building include hot water baseboard, convectors, unit heaters and unit ventilators. The heating system is shared by the Miller Library (tenant space) and the non-library portion of the building.

As an energy saving measure, variable speed drives have been installed on the hot water heating pumps. As zones call for heating, their respective control valves open up, which in turn causes the static pressure in the hot water system to drop. In response, the pumps speed up to maintain the system static pressure. As zone space temperatures become satisfied, their respective control valves close, thus increasing the static pressure in the hot water system. In order to maintain the system static pressure, the pumps slow down which saves energy.

Two new central air handlers provide ventilation air to the Miller Library portion of the building.

**ELECTRICAL EFFICIENCY AND OCCUPANT COMFORT**

We achieved a 37% reduction in lighting power by switching to more efficient fluorescent and LED fixtures. We also installed occupancy sensors on 89% of the lights to ensure that the lights are only on when areas are in use.

Additionally, 98% of the equipment inside the project barriers were Energy Star rated.

100% of the electricity used in this building is certified Green-E Renewable power.

We increased air filtration for occupant comfort and increased opportunities for occupants to control the environment through window shades, easily movable furniture, tables, and chairs.

**MORE INFORMATION**

- Green Colby: [http://www.colby.edu/green/](http://www.colby.edu/green/)
- Colby Physical Plant Department: [http://www.colby.edu/campus_cs/ppd/index.cfm](http://www.colby.edu/campus_cs/ppd/index.cfm)
- Follow Green Colby: [https://www.facebook.com/GreenColby](https://www.facebook.com/GreenColby) and @Hoof_lightlyGC