The renovation of the Gannett House at Harvard University’s Law School is designed to completely retrofit the interior of the building in order to improve occupant comfort and provide a healthy indoor environment. The new interior will include new single-zone fan coil units and new automatic control points to allow for controllability of the lighting systems. The system’s controls will be interfaced with a new building automation system (BAS).

Designed by Samuel William Pomeroy in 1838, Gannett House is the one of the oldest buildings on campus. Since 1925, Gannett House has been home to the Harvard Law Review, the prestigious student-run journal of legal scholarship.

In the offices and many of the shared spaces, both lighting and the HVAC systems are connected to dual-connect occupancy sensors that will shut down lighting and setback temperature set-points when occupancy is not detected. For the HVAC system, this is programmed through the building’s BAS.

**LEED® Facts**

**Harvard University**

**Gannett House Renovation**

<table>
<thead>
<tr>
<th>Category</th>
<th>Points Achieved</th>
<th>Total Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Sites</td>
<td>17/21</td>
<td></td>
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<tr>
<td>Water Efficiency</td>
<td>8/11</td>
<td></td>
</tr>
<tr>
<td>Energy and Atmosphere</td>
<td>19/37</td>
<td></td>
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<tr>
<td>Materials and Resources</td>
<td>4/14</td>
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<tr>
<td>Indoor Environmental Quality</td>
<td>6/17</td>
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<tr>
<td>Innovation and Design</td>
<td>5/6</td>
<td></td>
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<tr>
<td>Regional Priority</td>
<td>3/4</td>
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</tr>
</tbody>
</table>

**Project Metrics**

- **34%** reduction in lighting power density (watts/square foot) compared to the baseline standard (ASHRAE 90.1-2007)
- **36%** reduction in annual indoor water use compared to code minimum
- **92%** of construction waste materials were diverted from the landfill
- **92%** of the project’s connected lighting load is connected to occupancy sensors
- **89%** of all furniture and furnishings, by cost, were salvaged, refurbished, or reused
Harvard Law School (HLS) has committed, along with Harvard University as a whole, to reduce greenhouse gas emissions 30% below 2006 levels by 2016, inclusive of growth. Therefore, the following energy conservation measures (ECMs) were implemented as part of the Gannett House renovation project.

### Energy Efficiency

#### ECM 1: Direct Digital Control (DDC)
A new DDC system controls the fan coil units via individual thermostats and occupancy sensors. The DDC system is programmed with an occupancy schedule and a night set-back schedule, which is activated during all off hours, holidays, weekends, and any time in which the space occupancy sensor senses that the space is vacant.

#### ECM 2: ECM Motors
All fan coil units are provided with ECM fan motors, which are more efficient than standard motors.

#### ECM 3: Occupancy Sensors
Occupancy sensors control the operation of the fan coil units throughout the building.

#### ECM 4: Operable Windows
Operable windows provide residents with natural ventilation and control over the thermal conditions of their space. In some cases, this alleviates the need to cool spaces and, in turn, reduces energy usage associated with cooling loads.

#### ECM 5: Thermostats
Thermostats provide a high level of thermal comfort system control by building occupants.

### Electrical Systems

#### ECM 1: Occupancy Sensors
Occupancy sensors are installed in all spaces to turn the lights on, or off, based on actual occupancy. A combination of wall-mounted infrared occupancy sensors and dual technology ceiling sensors were installed throughout. These occupancy sensors combine the benefits of passive infrared (PIR) and ultrasonic technologies to detect occupancy.

#### ECM 2: Energy Star Equipment
Energy Star equipment was selected for 100% of Energy Star-eligible equipment in this project. This includes refrigerators, dishwashers, washing machines, and dryers.
PRODUCTS AND MATERIALS

LIGHTING AND CONTROLS

- 34.7% reduction in lighting power density (watts/square foot)

Verve II
Focal Point
✓ Total fixture wattage = 52 Watts
✓ Highly reflective die-formed white painted aluminum reflector.
✓ One piece steel perforated housing.

Ceiling Mounted Sensor—CMR PDT 92P
Sensorswitch
✓ Dual technology occupancy sensor capable of controlling two line voltages.
✓ Incorporates passive infrared (PIR) technology with Microphonics

Wall Mounted Sensor—WSD
Sensorswitch
✓ Timer is programmable from 30 seconds to 20 minutes and is reset every time occupancy is re-detected.
✓ Passive infrared (PIR).

ENERGY EFFICIENT APPLIANCES

100% of the equipment purchased for the project is ENERGY STAR RATED (by rated power).

Side by Side Refrigerator
Model #PFSS5N9Z
GE Profile
✓ ENERGY STAR®
✓ ClimateKeeper2 System - Keeps food garden fresh longer, while protecting ice from odor transfer, with its unique dual-evaporator system

Undercounter Refrigerator
Model #6ADAM
Marvel
✓ ENERGY STAR®
✓ Exclusive MicroSentry refrigeration monitor saves energy

WATER EFFICIENCY

36% reduction in annual water use (12,280 gallons/year projected savings) when compared to EPAct 1992 baseline standard

Manual Dual Flush Flushometer
Model #WES-111
Sloan
✓ 1.1/1.6 gallons per flush (gpf) vs. EPAct baseline of 1.6 gpf.

Ultra Efficiency Urinal
Model Washbrook
American Standard
✓ 0.125 gallons per flush (gpf) vs. EPAct baseline of 1.0 gpf.

Solar Powered Sensor Faucet
Model #EAF-275
Sloan
✓ 0.5 gallons per minute (gpm) vs. EPAct baseline of 2.2 gpm.

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. Harvard University 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 Harvard University.
PRODUCTS AND MATERIALS

REGIONAL, RECYCLED, LOW VOC

18% recycled content value as a percentage of total materials cost
27% regionally manufactured materials value as a percentage of total materials cost
22% regionally extracted materials value as a percentage of total materials cost
Only low-VOC, or no-VOC adhesives, sealants, paints and coatings were used.

MDF Doors
Trustile
✓ Recycled Content
  • 10% Post-consumer
  • 20% Pre-consumer
✓ 50% FSC certified wood content

Fire Resistant Drywall
Lafarge
✓ Recycled Content
  • 94% Pre-consumer
✓ 100% Regionally Extracted/Manufactured

ProMar 200 Zero VOC
Sherwin Williams
✓ VOC Content = 0g/L vs. 65 g/L VOC Limit

PROJECT TEAM

<table>
<thead>
<tr>
<th>Owner</th>
<th>Harvard Law School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>CSL Consulting</td>
</tr>
<tr>
<td>Architect</td>
<td>Austin Architects</td>
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<tr>
<td>Contractor</td>
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<td>MEP Engineer</td>
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<td>Sustainability Consultant</td>
<td>Harvard Green Building Services</td>
</tr>
<tr>
<td>Commissioning Authority</td>
<td>Harvard Green Building Services</td>
</tr>
</tbody>
</table>

More Information

- Harvard Law School: [http://law.harvard.edu/about/administration/facilities/buildings/gannett.html](http://law.harvard.edu/about/administration/facilities/buildings/gannett.html)
- Harvard Green Building Services: [http://green.harvard.edu/green-building-services](http://green.harvard.edu/green-building-services)
- Harvard Green Building Resource: [http://green.harvard.edu/theresource](http://green.harvard.edu/theresource)
- Follow Harvard Sustainability: [https://twitter.com/greenharvard](https://twitter.com/greenharvard) and [https://www.instagram.com/greenharvard/](https://www.instagram.com/greenharvard/)