WAYLAND HALL
JAMES MADISON UNIVERSITY'S NEWLY RENOVATED RESIDENCE HALL
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OVERVIEW

The renovation of Wayland Hall transforms the 41,000 square foot residence hall into an innovative new living-learning community dedicated to the visual and performing arts. The renovated building includes a gallery, music practice rooms, an art studio, and a performance and exhibition room. All aspects of the program, including an ambitious re-configuration of the bedroom spaces, are designed to encourage interaction, promote sustainable living, and expose students to the discipline and joy of the arts.

Through a variety of carefully selected systems and finishes, the project has earned LEED Platinum status. A variety of rigorous design strategies including a ground source heating and cooling system, rainwater and condensate collection, and water efficient fixtures, contribute to an expected 39% reduction in energy consumption and savings of over 1.3 million gallons of water each year.

While the public front of Wayland Hall is preserved, site improvements along and behind the residence hall replace a parking lot with a series of landscaped terraces. The new design reduces impervious site cover, improves pedestrian connectivity, and provides new opportunities for residence life to extend outside. In all, the site design creates a stormwater management strategy that is equally environmentally friendly and beautiful.

With innovative materials and thoughtful design strategies, the renovated Wayland Hall demonstrates that a residence hall renovation can re-define an existing building in powerful and lasting ways.
DEVELOPING A COMMUNITY DEDICATED TO THE ARTS

Home to a new living-learning community sponsored by James Madison’s College of Visual and Performing Arts, Wayland Hall will embody an ethic of interdisciplinary collaboration. The renovated building includes a student-run art gallery, music practice rooms, an art studio, and a performance exhibition room - all of which will allow students to pursue their passions for theater, dance, music, art, and art history. By bringing a diverse group of students together, “the students can learn from one discipline to the next,” according to George Sparks, Dean of the College of Visual and Performing Arts. “They learn new things that enrich their own discipline, and they learn about arts as a whole… We want to get as many interdisciplinary divisions involved, for the creative spirit is infectious.”

ENCOURAGING INTERACTION ON THE FLOORS

A re-organization of student bedrooms will change the daily traffic patterns of Wayland Hall residents. Bucking a broader national trend toward privacy, the building is transformed from a semi-suite arrangement (where 2 doubles share a bathroom) into singles, doubles, triples with common baths on each floor. This re-organization increases floor traffic, pulling students out of their rooms and into the common space of the corridor. By counteracting the tendency of “cocooning,” the re-designed floors encourage interaction, and actually help students to get to know their neighbors - a fitting goal for a first-year residence hall.

INDOOR ENVIRONMENTAL QUALITY

Students spend far more time in their bedrooms than any other space in the building. Therefore, efforts to provide a healthy, comfortable indoor environment are especially important here. Wayland Hall student bedrooms provide:

- Thermostats to provide temperature control
- Low-emitting materials that minimize exposure to Volatile Organic Compounds and eliminate urea-formaldehyde
- Green housekeeping practices
- “Smart” building controls that turn off the heat & air conditioning when the windows are open, providing access to fresh air year-round

“The sustainability component is what distinguishes Wayland from past renovations.”

Maggie Burkhart Evans, Director of the Office of Residence Life
CREATING DYNAMIC PUBLIC SPACE

A recreation lounge on the ground floor will attract students looking to enjoy billiards, ping pong, video games, or television. Adjacent to a common kitchen and laundry area, the recreation lounge invites students to tend to their basic needs in the heart of activity. A seven hundred square foot multi-purpose room immediately beside the recreation lounge is equipped with folding doors that allow the two spaces to seamlessly connect to host receptions and special events.

A variety of flexible study spaces allow students to learn as individuals and in small groups. With building-wide wireless service, ample plug-ins and white boards for collaboration, students will be able to access information and share knowledge as they pursue their studies.

“I feel really lucky to be able to live here. It’s amazing what they’ve done. It shows how much they care about housing.”
Sean Cassidy, Student, James Madison University

KEY TO GROUND FLOOR SPACES
1. Performance Room
2. Practice Rooms
3. Studio
4. Laundry
5. Kitchen
6. Recreation Lounge
7. Program Space
8. Large Study
9. Mechanical Room
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PERFORMANCE ROOM
The new performance room is the heart and soul of the living-learning community. A pivotal component to the program’s success, the floor was actually lowered four feet to accommodate the new space. Designed as a flexible space for performance and practice, the room will serve actors, musicians, and dancers looking to refine and share their craft. Tiered seating accommodates up to ninety for performances, and is easily retracted to make space for larger-scale activities. Automatic shades darken the room for lectures and presentations – which are easily accommodated by a high-quality sound system as well as an integrated projector and screen system. Equipped with a ceiling isolation system, the room is designed to provide excellent acoustics while minimizing sound transmission to adjacent spaces. Adjustable curtains allow artists to modify the room’s acoustical properties while angled interior walls prevent acoustical echoes from interrupting performances.

PERFORMANCE ROOM FLEXIBILITY

The Performance Room is used for lectures, performances, group rehearsals, and impromptu drama, dance, and music-making.
SUSTAINABLE SITE DESIGN
Whereas many renovations are limited to a building’s interior, the Wayland Hall project addressed site design as a major component of the project’s success. A series of terraces, pathways, and native plantings replace 23 parking spaces to the building’s immediate south. These new features establish a connection between key interior spaces and the outdoors, creating attractive places for students to relax and interact outdoors.

In addition to creating appealing spaces for students, the site includes the following sustainable features:

• **Minimizing Stormwater Quantity** - By collecting stormwater from the roof and eliminating a 7,800 sf parking lot, the amount of stormwater entering storm sewers is reduced by 30.7%.

• **Maximizing the Quality of Stormwater** - A new bioretention basin to the building’s immediate west treats all on-site stormwater, removing 80% of the total suspended solids (TSS) and improving the quality of water returned to the local watershed.

• **Encouraging Alternative Transportation** - with covered bike racks for 30 bicycles, minimizing the number of vehicles in the campus center

• **Preserving an open space** - for the campus that is double the size of the building’s footprint.

• **Providing native and adaptive native plantings** - that provide wildlife habitat and do not require irrigation.
The renovation strategy at James Madison University’s Wayland Residence Hall pursues the highest levels of sustainable design. Essentially, the renovation ties innovative design strategies such as ground-source heat exchange and rainwater harvesting to the university’s standard building systems. The building is now on track to achieve 39% energy savings, 68% water savings, and has achieved LEED Platinum recognition.

Energy Conservation efforts are projected to save the University over $59,000 annually. Strategies utilized to achieve these savings include:
- Reduced lighting power densities
- Reduced domestic hot water use
- Ground source heat exchange for heating and cooling
- Ground source system tied to domestic hot water
- Variable speed pumping for the geo-thermal system
- Ventilation air energy recovery
- R-16 spray applied insulation on the roof deck
- 1 1/2” - 2” inches average insulation on the exterior wall
- Low-E glazing
- Shower drain heat recovery
- Demand control ventilation

Water Conservation efforts are designed to minimize reliance on treated, potable water for non-drinking uses. Conservation strategies will save 1.3 million gallons annually - enough water to fill two Olympic-sized swimming pools.
- 10,000-Gallon cistern used for toilet-flushing fed by rainwater and condensate recovery, expected to collect over 340,000 gallons of water each year
- 1.5 gpm shower heads
- Dual-flush toilets and pint-flush urinals
- Low-flow lavatories and sinks
- Irrigation-free plantings

Material Conservation strategies are showcased through the finishes selected for student bedrooms. The wall paneling provides a warmth to the room and displays the textured surface of wheatboard (a material that can be re-generated quickly through natural processes) and the smooth finish of wood paneling (created from the bedroom doors used in Wayland Hall prior to the renovation). These efforts contribute to material conservation strategies throughout the building - 21% of the renovation materials from recycled sources, 6% are from rapidly renewable sources, 53% of the wood is certified by the Forest Stewardship Council, and 98% of construction waste was diverted from landfill and will be recycled.
## WAYLAND HALL SUMMARY

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
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<tbody>
<tr>
<td>Design Start</td>
<td>August 2009</td>
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<tr>
<td>Construction Completion</td>
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<tr>
<td>Building Area</td>
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<td>Location</td>
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<tr>
<td># Beds</td>
<td>14 singles</td>
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<tr>
<td></td>
<td>132 doubles</td>
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<tr>
<td></td>
<td>15 triples</td>
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<td></td>
<td>161 Total</td>
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<tr>
<td>Bedroom Size</td>
<td>112 to 132 sf (singles)</td>
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<td>170 - 225 sf (doubles)</td>
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<td>288 - 328 sf (triples)</td>
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<td>Owner</td>
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<td>Lawrence Perry &amp; Associates, MEP/FS Engineering</td>
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<td>Creative Acoustics, Acoustical Consulting</td>
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<tr>
<td>Sustainability Facts</td>
<td>Conservation efforts are projected to reduce energy consumption by 39% and save 1.3 million gallons of water</td>
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<tr>
<td></td>
<td>Ground source heat exchange system tied to HVAC and domestic hot water</td>
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<tr>
<td></td>
<td>Rainwater and condensate collection for toilet flushing</td>
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<td>Heat recovery enthalpy wheel capturing heat from exhausted air</td>
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<td></td>
<td>Shower drain heat recovery</td>
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<td></td>
<td>Re-used existing doors for wood paneling</td>
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<tr>
<td></td>
<td>Bio-filtration system for stormwater treatment annually</td>
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