

OLD CHAPEL RENOVATION

GREEN BUILDING TOUR GUIDE

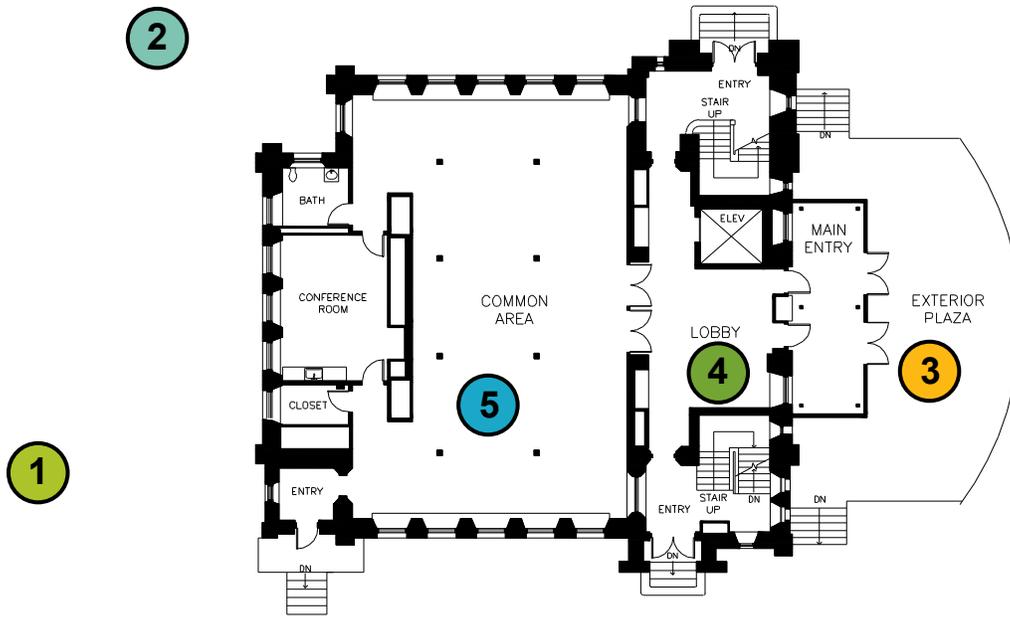


PROJECT OVERVIEW

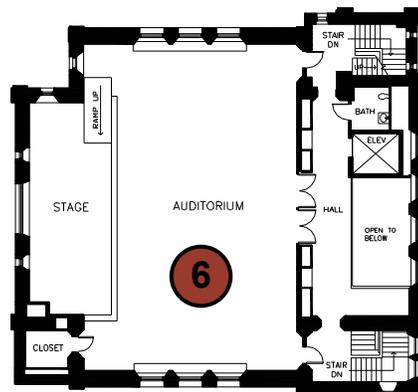
Built in 1885, the [Old Chapel](#) is the most iconic and significant historic building on the UMass Amherst campus. Designed in the Richardsonian Romanesque style, the building originally housed a library, auditorium, and classrooms. It later became home to the [Minutemen Marching Band](#) in the 1960s, before officially closing its doors in 1996.

The Chapel was placed on the [National Register of Historic Places](#) in 2015, and began a \$21 million renovation, addition, and preservation effort to restore the building to its original glory. The revitalized Chapel now serves students, faculty, and alumni as a venue for performances, receptions, weddings, and gallery exhibitions.

The Old Chapel demonstrates how aspects of historic preservation and sustainability can work together in a renovation project. The project aims to be [LEED Gold Certified](#).



FIRST FLOOR PLAN



SECOND FLOOR PLAN

1

NORTHWEST EXTERIOR

- Compact building footprint maximizes open green space
- Original first floor mechanical room was relocated underground to the basement level as part of the renovation project, creating more green space above
- A new air handling unit with integral economizers was installed underground
- Existing basement floor slab elevation was lowered by 1' to provide increased head height per building code requirements
- All existing windows were replaced and upgraded to double-glazed, low emissivity wood units to minimize solar heat gains during the summer, and retain interior heat during the winter. Stained glass windows were removed, saved, and reset, including the circular rose window on the north wall
- Walkable to a library, hotel, restaurants, and other community services. Easy access to eight [PVTA](#) campus bus routes ensures access to a vibrant local community
- Campuswide parking policy with discounts for low-emitting and fuel-efficient vehicles

Southeast Exterior Perspective



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NORTHEAST EXTERIOR

- Stormwater Management Plan includes a detention and infiltration system to reduce quantity, and improve quality of runoff from site. This was added due to increased impervious surface area from a new, paved exterior plaza
- Water efficient landscaping improves site ecology without permanent irrigation methods
- Anticipating a **34%** reduction in potable water use via low-flow plumbing fixtures
- The [W.E.B. DuBois Library](#) acts as a regional chiller plant, sourcing hot water for heating, and cold water for cooling to the Chapel
- A new door opening was cut in the north stone wall to allow for basement kitchen access

Northwest Exterior Perspective



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EXTERIOR PLAZA

- Sitework strategy preserved [historic legacy trees](#) located near the south side of the Chapel
- A glass entry vestibule was added on the south side of the building. The use of glass adds a modern accent, without detracting from the original historic structure
- A new, raised exterior plaza with ramps is designed to meet [Americans with Disabilities Act \(ADA\)](#) accessibility standards, and serves as a public meeting and gathering space during events
- The contractor installed 1” of closed cell spray foam in all exterior walls, and 2” of rigid foam board insulation in the roof system to reduce air infiltration rates and improve thermal performance
- Brand new slate roofing was installed – A historical consultant selected the colors to match the original roof as closely as possible



Exterior Plaza & Main Entry

4

LOBBY

- Pollutant-collecting floor mats and HVAC filters are located at building entrances to ensure occupant health and safety
- The wall directly to right of the main entrance honors UMass donors. A series of display cases contain historical photos and artifacts documenting the Chapel's rich and diverse history
- A historical consultant used microscopes to identify the original paint colors used in the building, and matched them as closely as possible for the renovation
- Previously closed off during the 1932 renovations, the second story mezzanine is now open to the first floor below
- A new elevator shaft was installed for accessibility. A hidden steel beam system above provides structural reinforcement to the exterior walls for wind resistance
- The east and west stairwells were rebuilt with new wood treads and risers to match the existing. Original balusters were saved, reinstated, and refinished



Lobby



Display Case

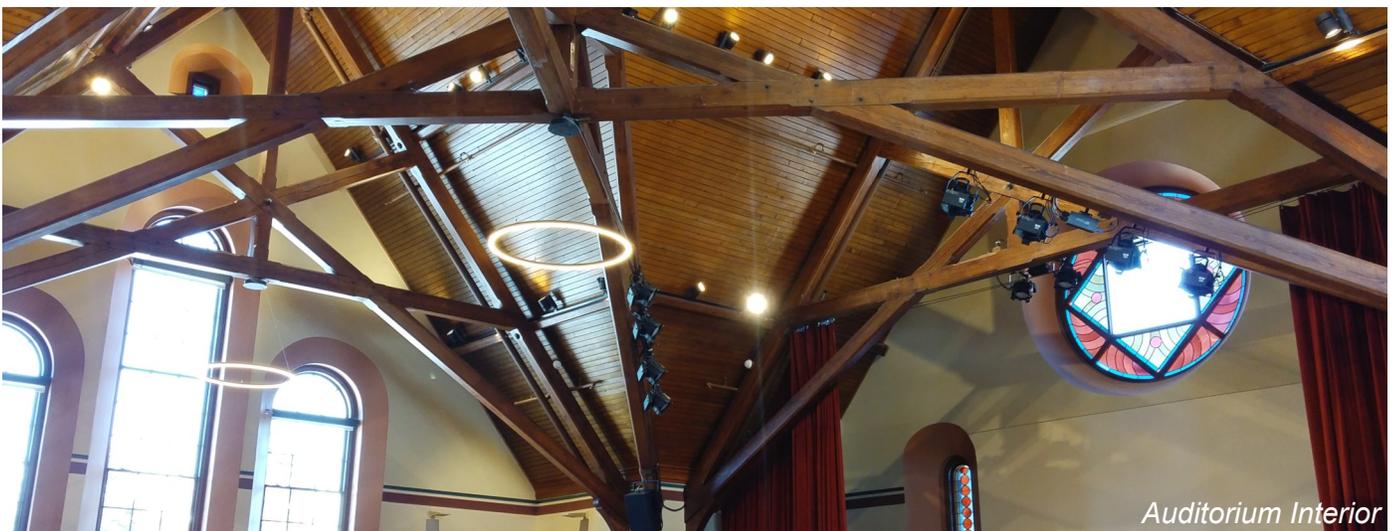
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COMMON AREA

- The common area is designed to be a multifunctional lounge space dedicated to students
- Flexible furniture allows the space to adapt for a wide variety of different uses, including club meetings, lectures, and musical performances
- A future interactive display wall will include 12 monitors documenting the history of the UMass campus, upcoming events, bus schedules, and additional information
- A conference room behind the interactive display wall serves as a prep area for special events
- Cut overall energy use by **21%** through added insulation, exhaust air recovery, improved interior and exterior lighting power density, and variable speed pumping on chilled and hot water distribution
- Individual lighting and temperature controls allow occupants to make adjustments for maximum comfort
- High efficiency LED light fixtures are programmed on a direct in/out system. This allows users to choose between several, predefined light levels. Artificial lighting works in conjunction with daylight and occupancy sensors to provide ample light levels for interior spaces
- Developed and implemented an Indoor Air Quality Plan during construction and before occupancy



- The second floor auditorium provides a large space for special events, including dinners, guest speakers, and wedding receptions
- The space can accommodate tables and chairs, just chairs, or can be cleared to create an open standing area, maximizing flexibility for a variety of different events
- New hardwood flooring was installed throughout the entire second floor
- Acoustical plaster is adhered over sound absorbing wall boards to control interior acoustics
- The auditorium's audiovisual (A/V) system links to the interactive display interface on the first floor to broadcast events in real-time throughout the building
- The original stage height was lowered to create an accessible ramp
- Built-in air conditioner units were added along the east and west perimeter walls
- Reused **83%** of existing structural elements - All original structural wood columns, beams, trusses, and wainscoting trim were restored and refinished
- Diverted **84%** of construction wastes from landfill
- **82%** of new wood products are [Forest Stewardship Council \(FSC\) Certified](#)
- Low-VOC flooring, paints, coatings, adhesives, sealants, and composite wood
- Green Housekeeping Program
- **99%** of regularly occupied spaces have access to exterior views and natural daylight



Auditorium Interior