Case Studies on Universal Design

Case 1/Principle One
Equitable Use

Promoting Equality While Preserving History At the University of Virginia

Academical Village
University of Virginia
Facilities Management
Charlottesville, VA
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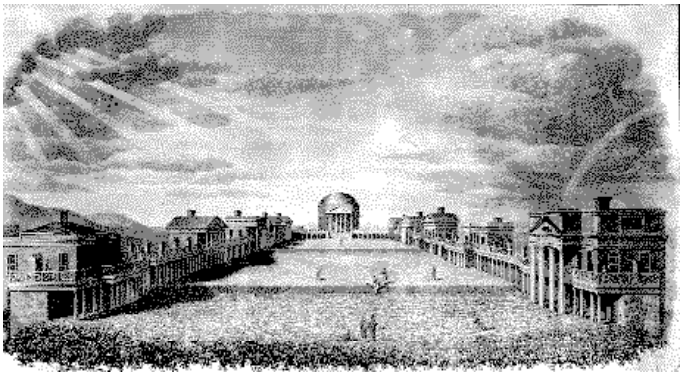
Jefferson's Design

"Making the Lawn accessible will be the biggest challenge," architect James Murray Howard concluded as he contemplated how to accommodate students in wheelchairs on the University of Virginia campus. Known as "the quadrangle" on most university campuses, the vast, terraced "Lawn" was the centerpiece of the original campus designed by Thomas Jefferson. The Lawn had been the site of commencement exercises for such famous graduates as Woodrow Wilson, Edgar Allen Poe, and Robert Kennedy.



Jefferson's terraced Lawn for the University of Virginia
Benjamin Tanner engraving for the University of Virginia from the Boye map of Virginia, 1827, Special Collections Department, University of Virginia Library

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Background

The University of Virginia (UVA) is located in Charlottesville, VA. Founded in 1819, UVA was originally surveyed and sited by Thomas Jefferson in 1815. Classes began in 1825. By 1994, UVA had grown into a state-supported institution of 18,000 students and 1650 full-time faculty.

Jefferson's original Academical Village remained the focal point of the campus throughout its history, which included an 1895 fire in the Rotunda, during which students had saved the life-sized marble statue of Jefferson by carrying it out in a mattress.

It was not until the 1980s that serious conservation of all of Jefferson's buildings was undertaken. By this time, some of the deterioration required considerable investment. In the course of this construction, renovation, and conservation work, it also become necessary to consider the needs of students and visitors with disabilities.

As a state-supported institution, UVA was prohibited by Title II of the Americans with Disabilities Act from discrimination on the basis of disability. As a result, architectural barriers were to be removed wherever readily achievable, especially when construction or renovation was undertaken.

An Architect's Challenge

Murray Howard was the curator and architect of what Jefferson had called Central College. Construction of Central College, which Jefferson later termed the Academical Village, was begun in 1817. Howard and a number of other architects contributed to the daunting task of designing modifications throughout the UVA campus to accommodate students and visitors with disabilities.

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Jefferson's Academical Village was a historical landmark recognized on the World Heritage List, as well as the National Registry of Historic Places. The 5-terrace design for the University's Academical Village Lawn was one of the few original landscape details remaining intact. Most of the architectural details had survived from the 1820s with little alteration.

Bordering the sides of the Lawn were two parallel rows of five houses, the Pavilions, which were connected by walkways and student rooms. Faculty members lived in the Pavilion rooms, while fourth-year students selected according to academic and community service records, lived in the individual rooms between the Pavilions. Residence in a Pavilion room on the Lawn was an honor, even though bathrooms and showers were located separately in buildings behind the rooms, or in cellars below.

At the north end was the Rotunda, the last building built by Jefferson. Bordering the Lawn to the south was Old Cabell Hall, designed by Stanford White at the turn of the century.

An Equitable Balance Between Accessibility and History

Preserving as much as possible of Jefferson's design while allowing students with mobility limitations access to all levels of the terrace for ceremonies was a formidable design challenge to Howard and to the University of Virginia. Though not part of Jefferson's original design, landscaping and buildings throughout the UVA campus had historical significance as well, such as Old Cabell Hall and Monroe Hill Home nearby. These presented additional challenges to accessibility.

Access to the Lawn

As Howard had surmised, access to the Lawn was a complex problem defying a single solution. Therefore, grade-level access to each terrace of the Lawn was achieved through a variety of routes between the Pavilions. Where necessary, modern methods of ensuring access were designed and constructed so as not to disturb or attach to original details, including masonry and plantings which survived from the 1800s. The ramp shown here was entirely self-supporting and did not touch adjacent masonry or disturb adjacent greenery. Even the illumination was arranged so as not to intrude on the evening appearance of the Village.

Modern ramp built adjacent to original shrubbery and stairs

For more direct access during occasional ceremonies such as commencement, a removable ramp and platform system was constructed down the center of the lawn from the Rotunda at the north to Old Cabell Hall at the south.

Some access to the Lawn and the surrounding landscape was integrated into existing structures, as in the case of access to the lowest level of the terrace through Old Cabell Hall opposite the Rotunda. In 1994, Old Cabell Hall was under renovation, and part of the work included incorporation of an access ramp from parking and walkways behind the hall up to the first level of the Lawn. The considerable level change required an elevator and very long ramps to achieve an acceptable grade. The large open space inside Old Cabell Hall made it possible to locate these ramps internally, making all-weather access much easier, as well as minimizing the impact on the exterior design of the Academical Village.

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Equitable Access Throughout the Campus

Designing for the integration of historical details with modern accessibility technology resulted in more equitable use for all students. At the rear of Pavilion V, a modern electrically powered lift provided wheelchair access from grade level to the porch.

All the lift's components, except the controls, were installed entirely below ground in an 8-foot pit. The photos below show that the floor of the lift is covered in brick identical to the surrounding walk, and the lift sides rise from the pit before the lift begins to rise. When not in use, the lift is entirely invisible.

A wheelchair lift integrated into a brick walkway and porch

Creating an accessible 15-foot level change just west of the Academical Village between the grade level at the 1920s Brown College dormitories and the Monroe Hill House on the hill above presented site design as well as architectural concerns. The solution was to install an elevator within a new outbuilding designed to reflect the 1820s era architecture.

To minimize intrusion into the existing pathways, the outbuilding was nestled into the hillside and the surrounding trees. The upper elevator patio was connected to the meeting building by a wooden ramp which appeared to be a natural continuation of the building's original porch.

Elevator concealed in new outbuilding at Monroe Hill House

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Unobtrusive Access

One measure of the success of the design solutions at the University of Virginia were their near-invisibility, as in the example here. But since accessible routes also needed also be easily located, campus guides were well-trained and maps were designed to illustrate access routes for self-guided visitors.

As UVA continued its restoration and renovation, as well as new construction, the concept of Universal Design remained evident. Balance between the needs of a modern 18,000-student campus and historical preservation presented ongoing challenges to the architects who saw these challenges not as problems but as opportunities for creative work.