

The
SPIRES
of
Princeton University

*An architectural tour
of the campus*





FitzRandolph Gate
Drawing by Heather Lovett

An architectural tour of the campus

A stroll through Princeton University's campus reveals many treasures -rare trees, whimsical gargoyles, monumental sculpture -amidst a wealth of architectural styles. The buildings themselves are worth contemplating.

Each edifice is a monument to fond dreams of architects and campus planners, and Princeton's architecture is a rich blend of the old, the new, and the renewed. Like great thoughts, the buildings weather time.

Year after year, classrooms and dormitories have sheltered and awed students. When they arrive as freshmen, and when they return as alumni, the imposing architecture welcomes them silently yet eloquently.

Just as students outgrow college in four short years, some parts of the University become cramped in their quarters after a few short decades. Modern facilities rise on the fringes of the old campus. Changing tastes thrust new spires above the horizon and signal one's approach to a very special place.

At Princeton, visitors can see new ideas enhancing old styles and old styles inspiring new ideas. According to lofty ideals, the University keeps adding to its home.

Oliver Wendell Holmes found a similar pattern in the architecture of a sea shell, about which he composed the poem *The Chambered Nautilus* . "Build thee more stately mansions," he wrote, "as the swift seasons roll! Leave thy low-vaulted past! Let each new temple, nobler than the last, shut thee from heaven with dome more vast."

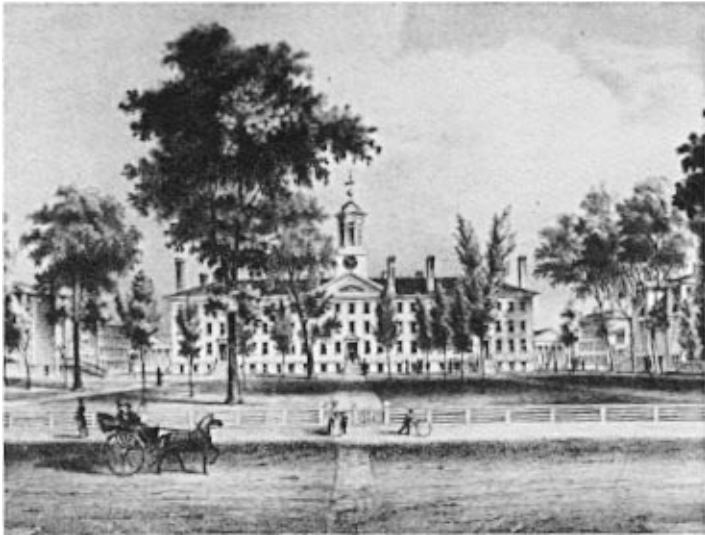
The Georgian Quadrangle

Princeton University, chartered in 1746 in the name of King George II, was originally called the College of New Jersey. It was British North America's fourth college. Originally located in Elizabeth, and later in Newark, the College moved to Princeton in 1756 to occupy the newly completed **Nassau Hall**, designed by Robert Smith and Dr. William Shippen, a college trustee. For nearly half century the building housed the entire College -classrooms, dormitories, library, chapel, dining room, and kitchen.

Nassau Hall was one of the largest buildings in the colonies and played an important part in their early history, serving as the home of the continental Congress in 1783 and surviving bombardment during the Battle of Princeton, January 3, 1777. In fact, on the building's southeastern face there's cannonball scar, sometimes revealed briefly when the ivy is trimmed. Its momentous early history has been recognized by the federal government with both national landmark status and a commemorative postage stamp issued to celebrate the 1956 bicentennial.

"Old Nassau" has survived not only occupation by students and soldiers (of both sides) during the American Revolution, but also two fires. After an 1802 blaze that left only the walls standing, Benjamin Henry Latrobe was engaged to rebuild it along its original lines. John Notman made a number of exterior changes to the building after an 1855 fire, including the staircases at the ends of the building and the arched front doorway.

The lawn to the north of Nassau Hall is known as the Front Campus and is part of the parcel of land given to the College in



Nassau Hall Ranked by Philosophical Hall and East College on the left, and Stanhope Hall and West College on the right

1753 by Nathaniel and Rebecca FitzRandolph, for whom the **FitzRandolph Gate** is named. In 1803, when the campus was expanded, a line going up the steps of Nassau Hall served as the axis on which three pairs of buildings were symmetrically arranged.

Stanhope Hall was built to the west of Nassau Hall, and its mirror image, Philosophical Hall (later destroyed), was built to the east. Originally called the Library, Stanhope housed not only the College's book collection but also the American Whig Society and the Cliosophic Society, the nation's oldest college literary and debating clubs. Later the Library became known as Geological Hall, and finally as Stanhope in honor of Princeton's seventh president, Samuel Stanhope Smith. When first built, Philosophical Hall was the refectory (main dining hall) of the University.



Stanhope Hall
Drawing by Heather Lovett



Whig Hall

Drawing by Peter MATthews '80

Behind Nassau Hall is a quadrangle called Cannon Green. campus plans of 1833 called for two buildings on either side of the green. East College, probably designed by John Notman, was Princeton's first venture in constructing a building to be used solely as dormitory. It later gave way to East Pyne.

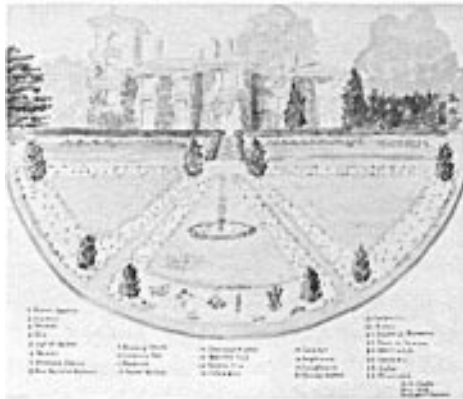
East College's twin **West College** (probably designed by John Notman) was built in 1836. On cannon Green residents of east and West colleges opposed one another in football, first played at Princeton on crisp autumn afternoons in 1840s. For over a hundred years West College continued to serve as a dormitory, although its ground floor was an early home of the University Store.

The four original buildings of the Georgian quadrangle, East College, West College, Stanhope Hall, and Nassau Hall, were made from orange Trenton sandstone. In 1837, the southern end of the formal campus compound was enclosed by two wooden and stucco buildings, **Whig Hall** and **Clio Hall**, which housed the debating and literary societies. One burned and both were replaced in 1893 by the present marble structures designed by A. Page Brown. The new buildings are slightly closer to each other and their predecessors were, but they still maintain the axis of the original Georgian quadrangle.

The Victorian Pleasure Garden

The formal, axial models that had prevailed in early 19th-century architecture at Princeton and other American colleges gave way to a new strategy. Instead of placing buildings on an axis within a formal compound, architects preferred to place their work in picturesque landscapes or pleasure gardens.

Buildings no longer had to bear a formal relationship to one another, nor did they have to be symmetrically arrayed in pairs. They did not have to face one another nor fit within perpendicular walks. Architects began to place buildings at oblique angles to be appreciated from any prospects, not just from the front. Walkways were allowed to curve around the lush environments of buildings. Thus Princeton fostered the



Prospect Garden Map

Watercolor by Margaret M. Dodds, May 1944

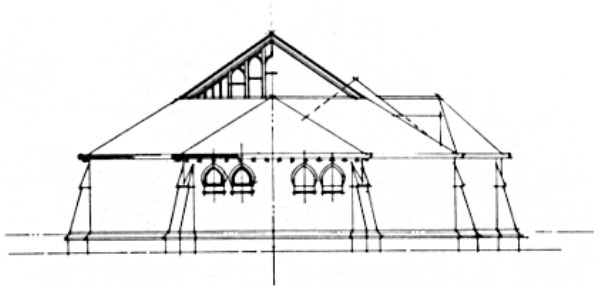


Prospect
Drawing by Charles McVicker

development of landscape architecture as a separate profession., exemplified at this time by the work of Frederick Law Olmstead in Central Park and elsewhere.

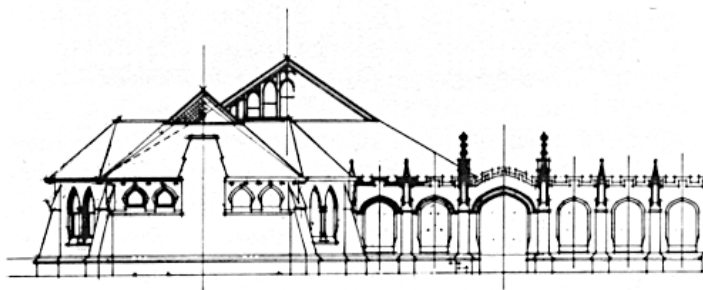
The Victorians enjoyed natural beauty, elaborate detail, enormous amounts of decoration, and informal yet lush parklike settings. In addition to the University's many buildings that demonstrate all these qualities, its landscaping manifests the aesthetic of this era.

James McCosh, Princeton's eleventh president, launched an ambitious program of planting that greatly enhanced the hitherto bare campus. McCosh was the first president to live in **Prospect**, the Florentine-style mansion designed by John Notman and completed in 1849. Prospect is an excellent example of Victorian preferences for ornate balconies, towers, and terraces from which to view beautiful grounds. McCosh compared Prospect's grounds to Eden.



- SIXTH ELEVATION -

Murray-Dodge Hall



- NORTH ELEVATION -

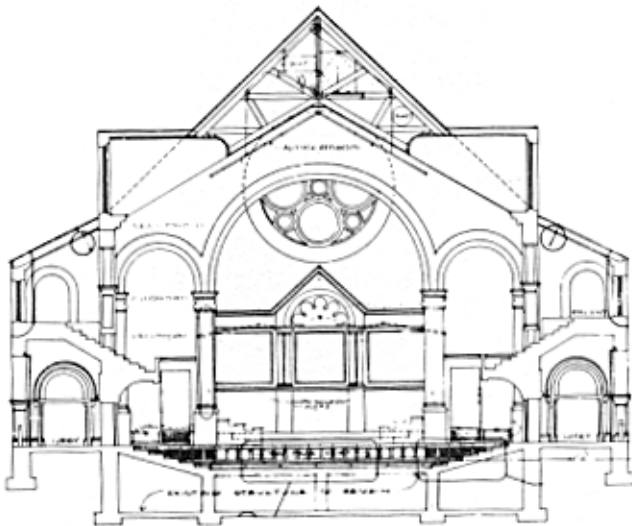
Various architectural styles and materials were used between 1850 and 1900. **Witherspoon Hall**, designed by R. H. Robertson and built in 1877, is a Romanesque Revival building of variegated stone facades. John Ruskin, an architectural critic of the 19th century, popularized the Romanesque style as well as the Venetian Gothic style, characterized by decorative stonework and slate roofs of colored patterns.

Murray-Dodge Hall (Murray was built in 1879, Dodge was built in 1900) is an example of the Gothic Revival in brownstone. Murray, the east section containing a small auditorium, was designed by H. S. Harvey. Dodge, the west section with a tower,

was designed by Parrish and Schroeder. Gothic details include battlements, leaded windows, and miniature turrets encrusted with crockets.

Brown Hall, designed by John Lyman Faxon and built in 1891, is modeled on a renaissance palazzo, with a heavily rusticated base, Roman brick top, and central courtyard. Rustication, characterized by rough-hewn stone, represents a design convention of the era. Although Victorian architects could, have ordered smooth stones, they preferred the exaggerated rough edges.

Alexander Hall, designed by William A. Potter and built in 1892, is regarded as one nation's classic examples of the Romanesque Revival. This large granite and brownstone building, heavily rusticated and augmented by two large towers, is decorated with sculpture, mosaics, and stained glass windows.



Cross-section of Alexander Hall



Statue of McCosh by John Massey Rhind, located to the right of the archway on the west side of East Pyne

Drawing by Heather Lovett

It was originally erected as a convocation hall for commencement exercises (held there till 1922) and other large gatherings.

Various functions held in Alexander Hall over the years have included Sunday chapel services, Woodrow Wilson's inauguration as Princeton's 13th president, student mass meetings, political gatherings, lectures, speeches, and even football rallies. Renovations completed in 1985 transformed Alexander Hall into a superior concert hall.

The Victorian era saw the partial erosion of the original campus plan. Some of the early buildings on the east side of Nassau Hall were replaced. Philosophical Hall gave way to **Chancellor Green** Library (1873), a Ruskinian Gothic building with stained glass windows and iron-work balconies. It was the first separate library building on the campus, but the collections soon outgrew their space.

To make room for the construction of the larger Pyne Library, East College was razed in 1896. The new building, now called **East Pyne**, was connected to Chancellor Green, which was kept as a reading room for the new library.

East Pyne's brownstone construction is flavored with Gothic extravagances such as vaulted arches, bay windows, and rich stone carving. Beautiful bosses hide the junctures of the arches stone ribbing. Many elaborate niches for statues still await occupants.

These last three buildings of the Victorian Age - Murray Dodge, Chancellor Green, and East Pyne - show the origin of the Gothic Revival style, another great legacy of the Victorian period.

Along with the origins of the Gothic style, Victorian architects brought new creatures to campus. As the Collegiate Gothic style blossomed at Princeton, almost as many gargoyles as new students arrived.



Mather Sundial
Drawing by Heather Lovett

The Collegiate Gothic Episode

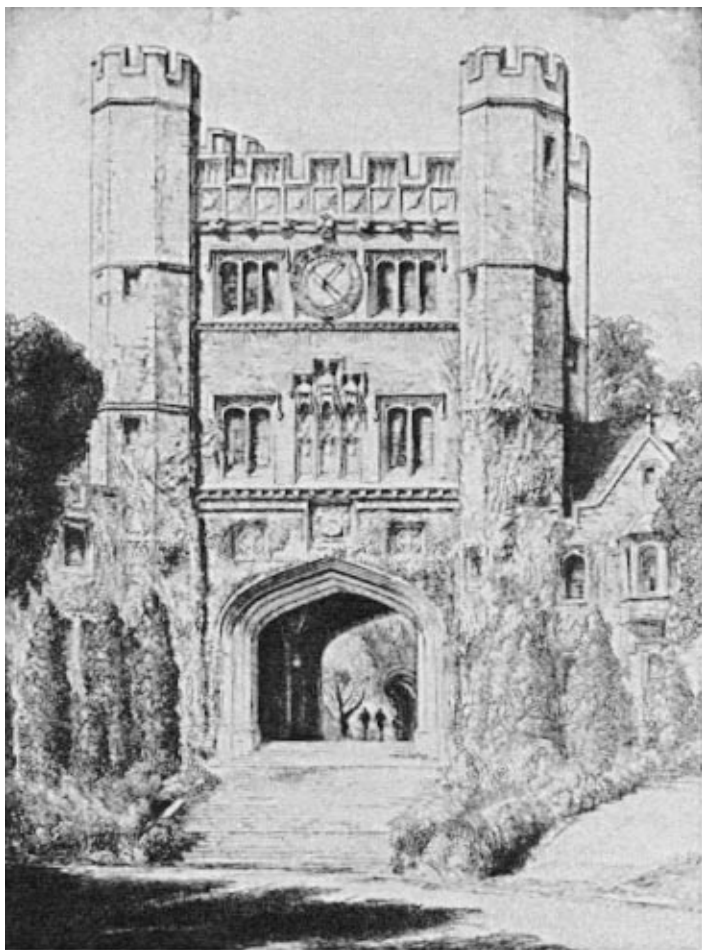
“Gothic found at its best in the remaining examples at Oxford and Cambridge fully accords with our desires for Princeton,” said Andrew Fleming West, first dean of the graduate School, attempting to make an explicit connection between Princeton and the educational traditions of England

As a symbol of this allusion, Sir William Mather gave Princeton a copy of the Turnbull Sundial from Corpus Christi College at Oxford. Princeton’s copy of the 16th-century original was named Mather Sundial and placed in the courtyard south of the University Chapel.

To accentuate further Princeton’s ties to its institutional mentors in Britain, Dean West helped engage Cope and Stewardson, renowned for their Gothic buildings at Bryn Mawr College. For Princeton, this architectural firm designed **Blair Hall** and its tower (1899) and Stafford Little Hall (1899-1902), complete with battlements, pointed arches, leaded glass, bay windows, and gargoyles. Gray foxcroft and limestone were used in preference to the brownstone of the Victorian buildings.

Collegiate building architecture was then solidified when the University retained Ralph Adams Cram (Cram, Goodhue and Ferguson) as campus architect, a post he held for more than 20 years. Cram put Den West’s vision into force, but he had reasons of his own for embracing it.

Cram believed Gothic was an architecture of real craftsmanship. He felt the work of the human hand could be seen in the building, and the presence of real labor was instantly apparent. This was important to people of the late 19th- and early 20th-century who felt alienated by the Machine Age.



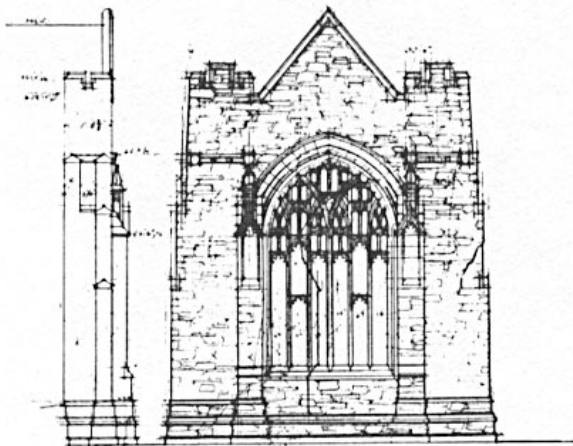
Blair Arch

Illustration from an *Undergraduate Announcement*, 1920s

In popular culture, Gothic came to symbolize the opposite of everything the machine meant. Each stone was hand-hewn, crafted, cared for, and lovingly made. The gargoyles are eloquent examples of the builder's fondness for handmade detail -each one is unique. Gothic became the favored style for colleges and churches all across the country.

Of course, the buildings weren't made exactly like their 13th-century ancestors. Cope and Stewardson as well as Cram, Goodhue and Ferguson employed modern methods and materials -concrete reinforced with steel and metal. The architects saw no contradiction between the style of the 1200s and the technology of the 1900s. They felt it was important to express the tradition yet keep the job economical.

In 1907, Cram developed a three-part master plan for the campus. It represented another pendulum swing in architectural taste -the return to formal arrangements of buildings. First, the plan called for an extension of the original campus axis, up the steps of Nassau Hall, between Whig and Clio, and down to the



Tracery pattern for a window of Madison Hall

southern end of the campus. Second, an east-west axis would run from Tiger Gateway (between Blair Hall and Little Hall) along a crosswalk to Washington Road. This axis has been maintained to the present day. Third, there would be tremendous expansion of dormitory space at the west end of the campus. Construction went on for the next 20 years.

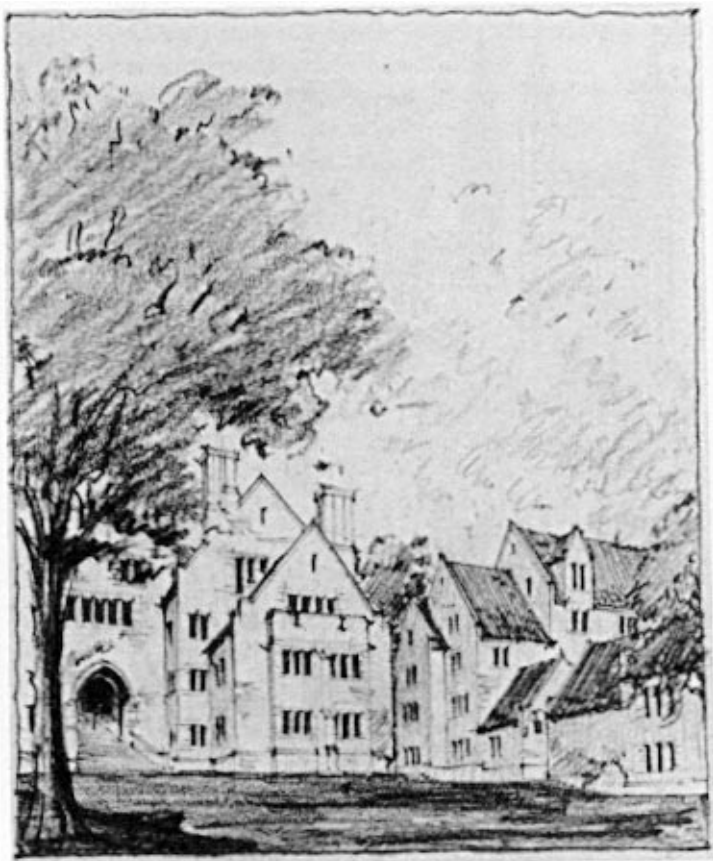
Today the dormitories stretch from the train station to Nassau Street. Prime examples of the flowering of Collegiate Gothic architecture include **Madison Hall**, **Hamilton Hall**, and **Holder Hall** (1910-11), designed by Day Brothers and Klauder of Philadelphia. **Holder Tower** is modeled after Canterbury Cathedral.

Other buildings in this style include **Patton Hall** (1906), designed by Benjamin Wistar Morris Jr., **Cuyler Hall** (1912), designed by Day Brothers and Klauder, and the older section of the **Graduate College** (1913), designed by Ralph Adams Cram.

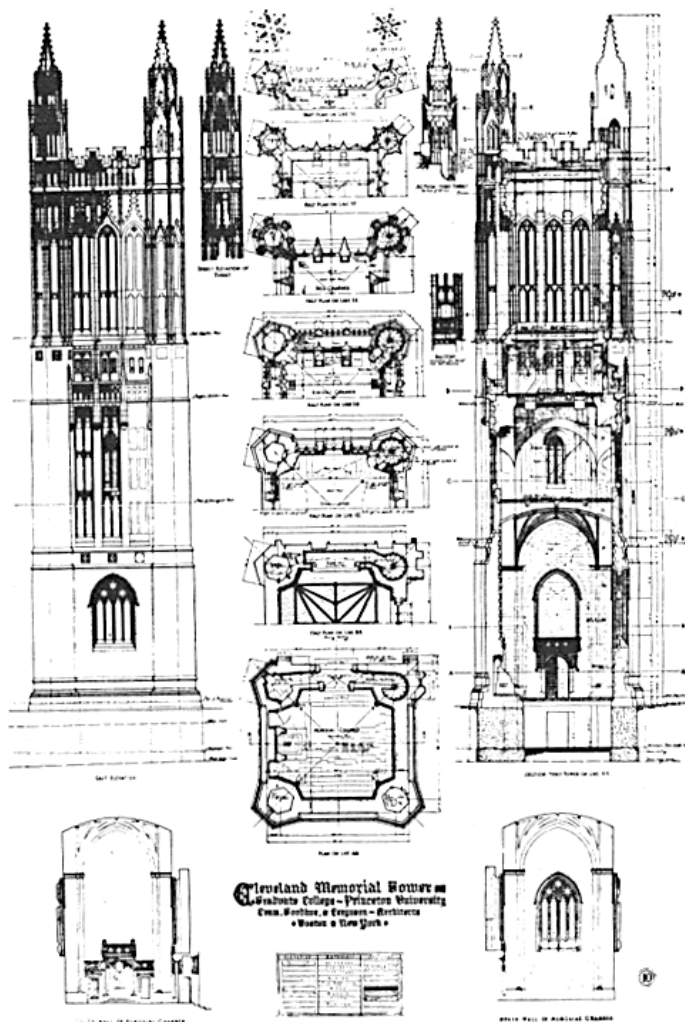
The graduate college was a dream shared by Woodrow Wilson, Princeton's 13th president, and Dean West, who was its founding dean. By the time financial backing was obtained, they bitterly disagreed about its site. Wilson wanted the Graduate College to be in the heart of the main campus; West preferred to locate it a mile from Nassau Hall, on the other side of the golf course. But everyone agreed that it should be a place reminiscent of medieval splendor.

West won the skirmish, and Princeton's group of residential and dining halls for graduate students became the first facility of its kind in the United States. **Cleveland Tower**, rising 173 feet above surrounding landscape, is one of Princeton's most prominent landmarks. It was erected by public subscription as a memorial to Griver Cleveland. The tower's belfry features a 67-bell carillon with a range of five octaves.

Procter Hall, the main dining room, has a huge stained glass window at its western end and high pointed roof with sturdy wooden hammer beams thrusting toward the room's center. At the end the beams are carved wooden figures,



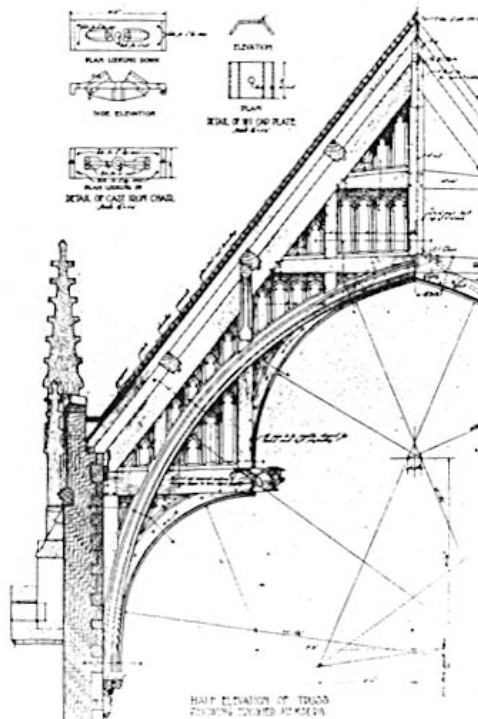
Crayon sketch of Cuyler Hall



Elevation of the Graduate College

depictions of the trustees of the early 1900s. Each title man holds an item symbolic of what made him wealthy.

The private garden of **Wyman House**, home of the dean of the Graduate School, goes one step beyond the English allusion of Mather Sundial. The brick walls of the garden incorporate pieces of original stonework from Oxford and Cambridge.



Detail of interior of Procter Hall, the Graduate College



Architect's watercolor of the University Chapel

Although the Graduate College is a fine example of Gothic architecture, the epitome of Gothic style at Princeton is the **University Chapel**, which Cram modeled after the chapel at King's College, Cambridge. In accordance with the traditions of Gothic architecture, the chapel's plan consists of four parts that form a cross. The first is the narthex, a low-ceilinged front hall. The next is the nave, the largest area of the chapel. The widest section is the crossing, with transepts on either side. The fourth part, reached by steps between the high medieval French pulpit and the lectern is the chancel.

The chancel's oak paneling was carved in England from Sherwood Forest trees. The pews were made for army surplus wood originally designated for Civil War gun carriages. Some of the many stained glass windows depict scenes from great literary works -Bunyan's *Pilgrim's Progress*, Dante's *Divina Commedia*, Malory's *Le Morte d'Arthur*, and Milton's *Paradise Lost*. Four great windows visible from the transept symbolize Endurance, Love, Truth, and Hope.

Across a courtyard from the University Chapel is Princeton's last great Collegiate Gothic building. **Firestone Library** was designed by R. B. O'Connor GS'20 and W. H. Kilham and completed in 1948.

After the depression and certainly by the 1950's, the Collegiate Gothic style began to fall into some disfavor. The richness and detail of the style's original flowering was not present in the newer buildings because architects weren't as willing to practice the methods and or use the design conventions of the previous 50 years. Campus planners wanted Princeton to come out of what some regarded as a Gothic backwater and into a modern age.

The Modern Era

Day Brothers and Klauder built 30 gothic buildings at Princeton during the first half of the 20th century. It's not surprising that such a boom has not occurred since. Instead, modern campus planners have used an "infill" strategy -building between or onto existing buildings or renovating them.

By nature this strategies is rather random: build where possible, built only what is needed, update and augment. Infill is not grand in scale, but the modern era does have exceptions.

The Engineering Quadrangle (1962), which forms its own small campus at the east edge of the main campus, is a series of seven interconnected buildings around a central court with gardens and reflecting pool. It was designed by Voorhees, Walker, Smith and Haines.

The Woodrow Wilson School of Public and International Affairs moved to its present home on the corner of Washington Road and Prospect Avenue in 1966. It was Princeton's last attempt to place a classical style building within a formal space near the center of the main campus. A portion of land was cleared by moving Corwin Hall, which once abutted Washington Road. Such an experiment has not been repeated.

The new building, by Minoru Yamasaki, was surrounded by an appropriate environment: an axial plaza and reflecting pool with a fountain. Yamasaki sought to embody the ideals of the school in the soaring open space, large plate glass windows, and open interior balconies. Supporting most of the building's weight are 58 quartz-surfaced concrete columns that sparkle in sunlight. When backlit at night, the columns form graceful silhouettes that bring the Acropolis to mind.

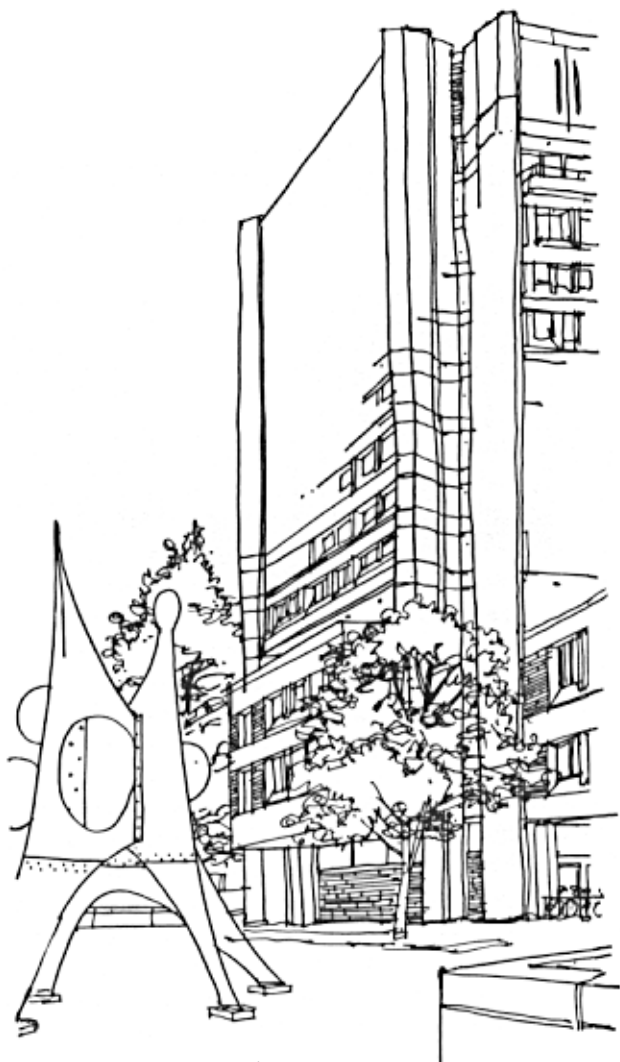


Woodrow Wilson School

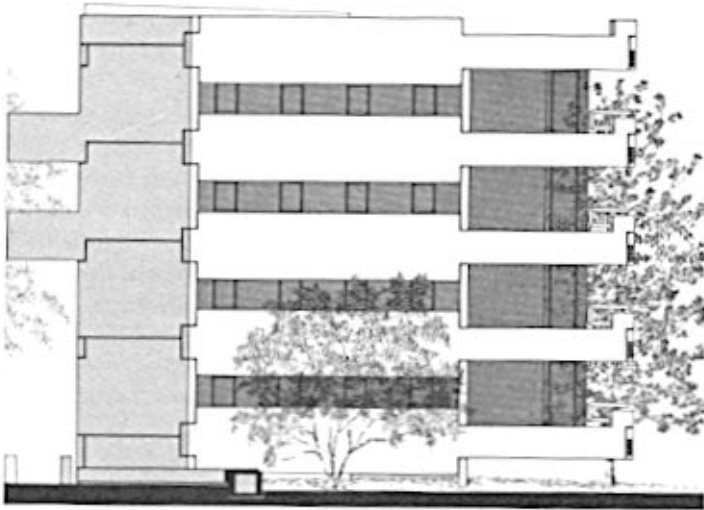
Drawing by Charles McVicker

Other exceptions to the infill strategy are **Fine Tower** and **Jadwin Hall**, built 1968 and designed by Warner, Burns, Toan and Lunde. They too form a corner campus with modern spirit. Through the ages, towers have been a favorite symbol of learning; Oxford and Cambridge have many. As favorite devices of scholastic architecture, they have a dual purpose, signaling one's approach to the campus, and providing vistas of one's surroundings. The view from Fine Tower's top floor is especially breathtaking at sunset.

In contrast to the grand statement of a tower is the quiet statement made by the new interior of **Whig Hall**, camouflaged



Fine Tower
Drawing by Charles McVicker



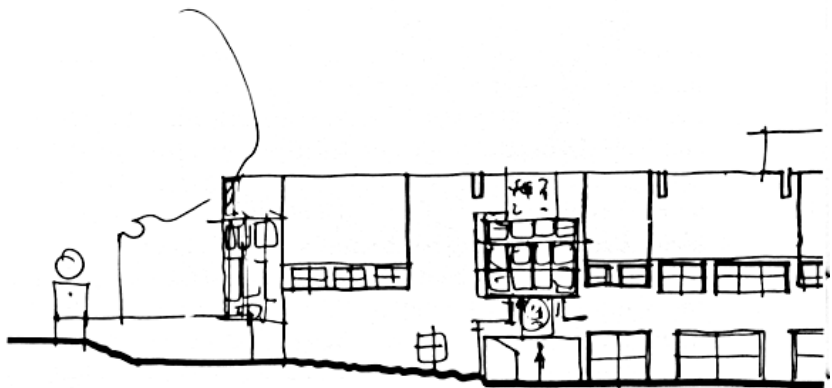
Elevation of Spelman Halls

by the building's old shell. It is a good example of contemporary infill strategy. After being gutted by fire in 1969, the interior and east wall were redesigned by the architectural firm of Gwathmey and Siegel. The building's new interior, completed in 1972, is actually an insertion of a modernist, pure-form renovation within curving walls of glass and white stucco. The intention is plain: A modern object has been placed in antiquity.

Between a row of Gothic dormitories and the train station at the southern end of campus are more modern objects. The **Spelman Halls** designed by I. M. Pei and Partners have been compared to whitewashed Tuscan village by some; other say they resemble a giant set of avant-garde building blocks. An exercise in pure modernist abstract form, they stand in stark contrast to neighboring buildings.

Yet some of Princeton's most recent buildings attempt to lessen the contrast between old and new. **Wu Hall** (1984) by Robert Venturi '47 GS'50 stands as just such a mediator and is Princeton's most important example of modern architecture. Wedged into a very tight site on the main campus, it is an addition to an existing dormitory and cafeteria.

Wu Hall, which provides dining and recreational space for Butler College, attempts to enhance nearby structures, primarily the red brick buildings from 1950s, and to complement present spatial qualities of the campus. For its formal detailing, it makes particular use of the earlier Collegiate Gothic tradition. Many of the windows have limestone surrounds in the Gothic style. The window mullion patterns recall Gothic leaded glass, and the huge bay windows at either end of the building recall the bay windows at the ends of the great Gothic halls.



Wu Hall

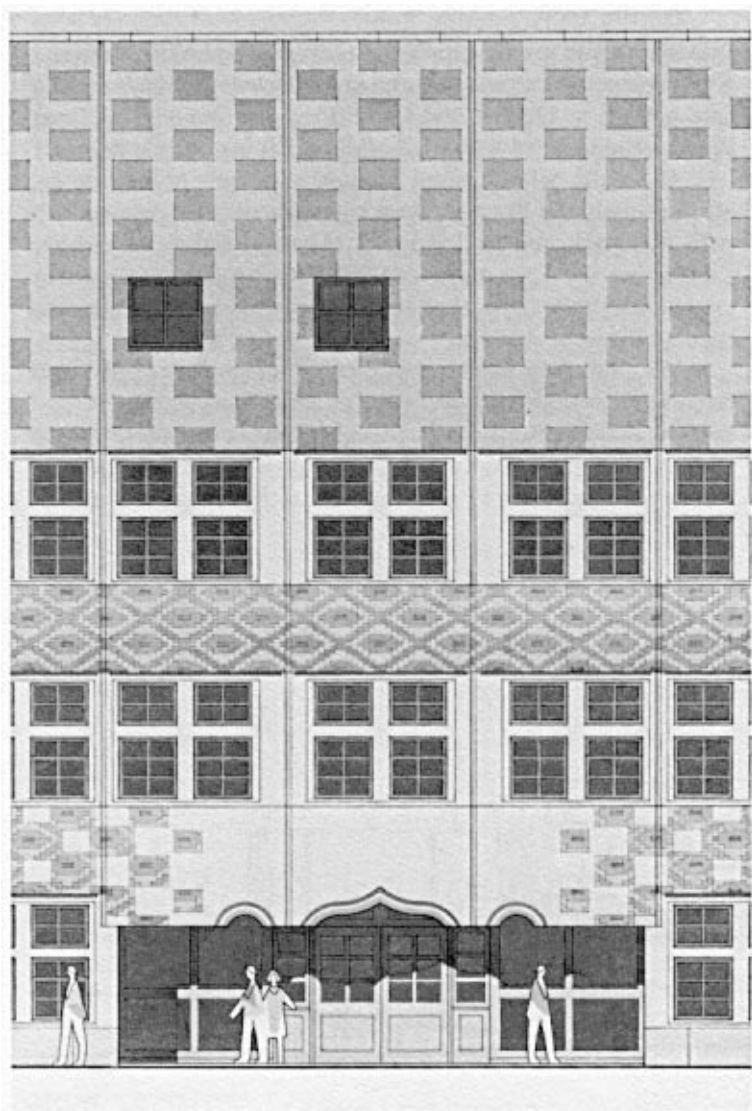
Drawing by Robert Venturi

On Wu Hall's exterior, Robert Venturi used symbols from Princeton's past in a flat, applied way. For instance, the black and white geometric pattern over the main doorway is symbolic of a gate pattern at Oxford and Cambridge - a reminder of Dean West's vision placed within a building that is clearly modern.

The walls, when viewed from an extremely oblique angle, are absolutely flat like a modern curtain wall. The glass is flush with the brick and is developed in strip-window elevations. Continuous windows of glass without interruption are a modern expression, something that is only possible using up-to-date structural systems.

Wu Hall is a subtle combination of modern forms and references to tradition. The play of modern construction and spatial arrangement with the simultaneous reference to architectures from Princeton's past makes this building one of the key monuments of post-modern architecture in the U.S. today.





Detail of Molecular Biology Building

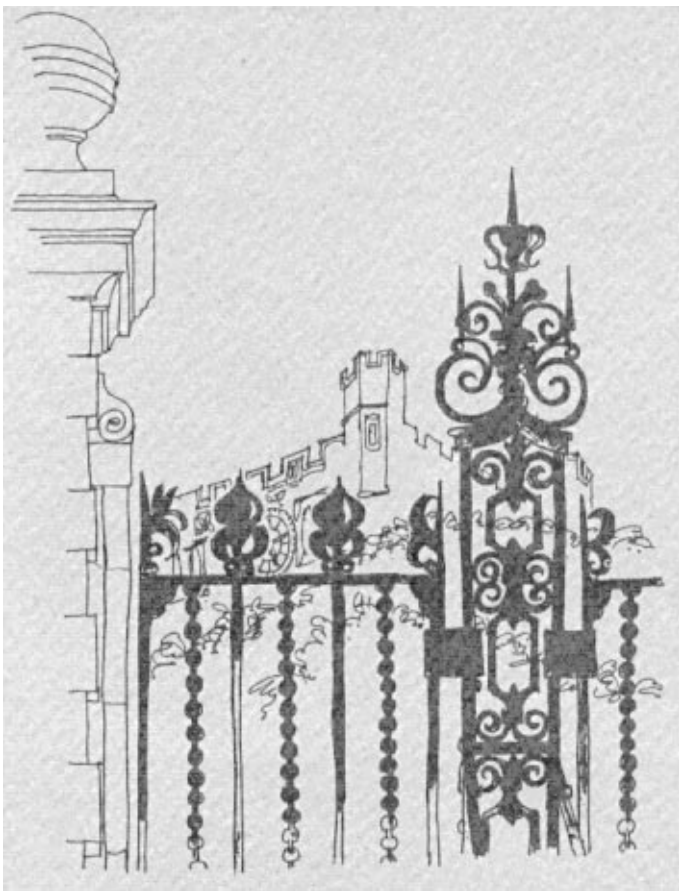
Continuing the reference to Oxford and Cambridge is **Thomas Laboratory**, home of the molecular biology department. Also designed by Venturi, Rauch and Scott Brown, its multicolored brick patterns are reminiscent of those found on English academic buildings, while the stonework over the entrance refers to the graceful pointed arches of the Gothic.

The mixture of old and new, with that has been built next-door and what has been built on another continent is the legacy of the modern tradition. As the Gothic style linked Princeton to the greatness of Oxford and Cambridge, these recent additions link today's Princeton to its own distinguished past.

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Gate between Class of 1904-Henry Memorial Dormitory and
Class of 1901-Laughlin Hall
Drawing by Charles McVicker