

CAMPUS LANDSCAPE NOTEBOOK



Cornell University

Campus Planning Office
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John Ullberg, Landscape Architect, composed text, provided photographs and many graphics. Illiana Ivanova, graphic designer, composed and formatted content and created graphics as well. Andrew Eastlick produced campus base maps. Craig Eagleson provided both technical support and graphic advice. Many others have contributed to the project by editing, researching and advising. Among them are Laurene Gilbert, Ian Colgan, Jim Constantin, Dennis Osika, Frank Popowitch, Peter Karp, Don Rakow, Helen Baker, Craig Eagleson, Phil Cox, Jim Gibbs and Kent Hubbell.

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CAMPUS LANDSCAPE NOTEBOOK

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For six years a political prisoner of the communist government in Laos, the former Laotian official said he was sustained by memories of Cornell University, where he studied in the 1970's. "To sit in the library, to collect books on Laos, to do some research myself - that was my dream," Villiam Phraxayavong said in an interview in a refugee center here. "It is lovely there, Ithaca."

New York Times, November 2, 1986

Landscape has meaning. The quality and meaning of the living and learning experience at Cornell are fundamentally related to the quality of the campus environment.

By any measure Cornell's is a remarkable landscape - deep wild gorges, lakes, cascades, noble buildings set among noble trees, expansive views all contribute to a special presence that sets Cornell apart from its peers. Indeed, evidence suggests that quality of landscape is what draws many of us to Cornell and certainly it is undeniably tied to our living and learning experience.

In a practical sense, landscape is a resource, just as faculty, buildings and endowment are resources and requires similar attention to its management and development.

In 1989 the Trustees formally endorsed the University's commitment to landscape quality by ratifying a set of planning policies that included the following statement:

"The Board of Trustees reaffirms its conviction that the quality of (the) environment is vital to the primary purposes of the University and that its excellence is a central concern of all who share responsibility for its development."

For generations Cornell has grown in stature and beauty, taking advantage of, but always in harmony with the dramatic character of its natural landscape. Recent development is increasing the pressures on the landscape and there is a danger of compromising the scenic resource that is the hallmark of the University.

This document is intended to provide a means for understanding and evaluating Cornell's landscape in the presence of continuing growth pressure. As an updated version of the Campus Landscape Design Notebook created in 1992, it is intended to provide a foundation for the landscape component of a comprehensive physical plan for Cornell.

The basic version of the Notebook includes two sections. Section One delivers a historic view of the Cornell campus and the dynamics that shaped it up to this point in time. Section Two provides inventory, analysis and interpretation of the Cornell landscape.

In a more expanded version, the Notebook will have a third section and fourth section. Section Three will set forth performance-based design guidelines for physical features of the landscape, such as pathways, lighting, benches, etc. Section Four will identify particular landscape projects worthy of attention on campus.



SECTION



THE CAMPUS LANDSCAPE
PAST TO PRESENT



The regional landform. Cornell buildings are shown in red.



A view of East Hill from the west around 1840, thirty years before the founding of Cornell. The fields at the top of the hills in the distance are where the first buildings will be located.

FINGER LAKES PHYSIOGRAPHY

*"Far above Cayuga's waters
With its waves of blue
Stands our noble Alma Mater
Glorious to view."*

Cornell Alma Mater

"Ezra and Alonzo Cornell, (A.D.) White, and (Francis) Finch were eager to fix the University's location. They drove to the hilltop, the present site of Morrill Hall. Ezra Cornell's three companions agreed that the shelf below them would be the ideal situation. 'Young gentlemen,' said Cornell, 'you appear to be considering the location of half a dozen buildings, whereas some of you will live to see our campus occupied by fifty buildings and swarming with thousands of students.'

'Well, where would you build?'

Cornell turned to the east, swung his arms north and south, and said: 'Here, on this line extending from Cascadilla to Fall Creek.'

The three demurred and argued - Mr. Cornell's solution was not practical. The site, beautiful indeed, was inaccessible, far from the village, rough, gullied, roadless. But Cornell wore them down, and at his direction they drove stakes to mark Building No.1."

*Morris Bishop
"A History of Cornell"*

Geologic forces of the last two ice ages have been the primary determinants in establishing the form of the Cornell campus. The site that would carry the future university consisted of terraced fields overlooking the Cayuga Lake valley, partitioned west to east by steep slopes and north to south by deep gorges. There were some woods and hedgerows but the original climax forest had been nearly totally cleared for agriculture by 1790. It was the landform that provided the cues to Ezra Cornell and the first trustees as they imagined the new campus.

Over the university's lifetime variations on the meeting described in the adjoining text have been played out over and over again: i.e. decision makers meet and consider the physical qualities of the Ithaca landscape and the physical needs of the university and bring them into a visionary and creative balance. The accumulation of decisions, large and small, have produced a campus that is uniquely beautiful and one that is uniquely in harmony with its setting.

The Cornell campus landscape is memorable chiefly as a consequence of its location on this profoundly beautiful site that continues to assert itself today. The terraced topography carries Cornell's buildings in zones of development separated by steep slopes offering long prospects to the west and south and skyline exposure to distant viewers. The streams, waterfalls and lakes are continuous refreshment to the campus community. The topographical breaks and the spacing of the gorges effectively (and conveniently) subdivide the campus into clearly perceived development zones. The discipline that these features enforce on the layout of the campus is far more effective than any imposed zoning regulation could be.

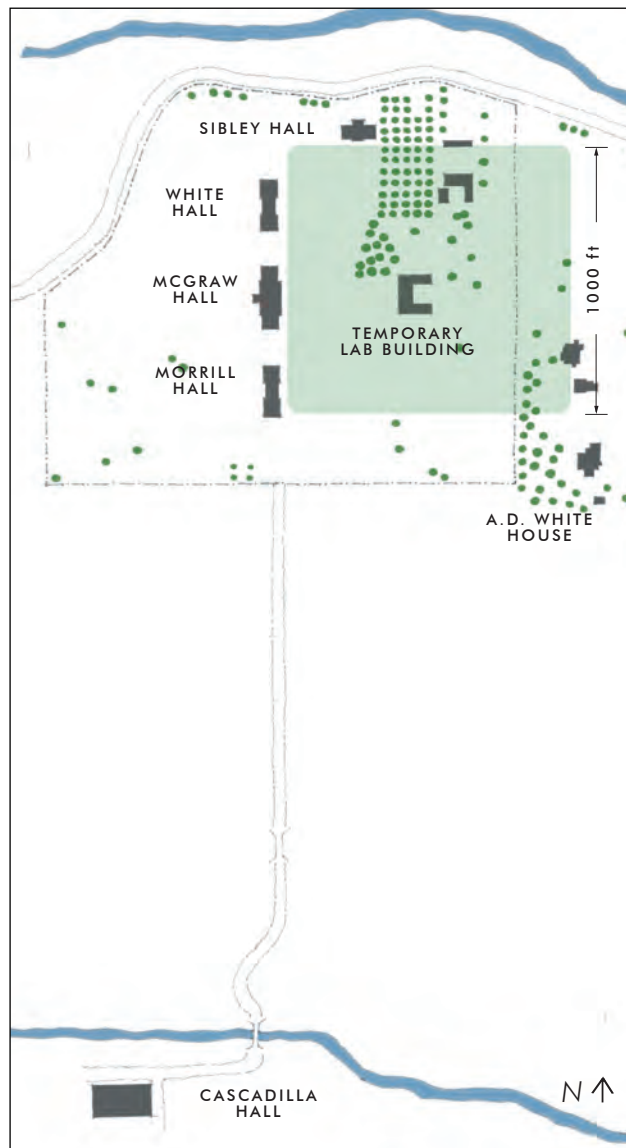
Few campuses are endowed with such a dramatic site and fewer still have achieved as effective a partnership with landscape as Cornell has.



This recent view over Cayuga Lake is probably not much different than the view of the landscape that Ezra Cornell had when he arrived in Ithaca on foot at the age of 21.

1871

The original concept for organizing the Cornell campus was grand but simple -- buildings were to ring a vast quadrangle, one thousand feet on a side and overlooking the Cayuga lake valley from above what came to be named Library (Libe) Slope.



The diagram at the left, above, shows in simplest terms the founders' concept for the new university campus, namely, an open quadrangle, one thousand feet square, surrounded by buildings of stone, overlooking the valley to the west. The map at the right is a transcription of the earliest existing map of campus, showing how placement of the first four buildings (Morrill, White, McGraw and Sibley Halls) set the stage for realizing that vision.



Stone Row from southeast ca. 1868 -- The earliest photographs of campus show, as this one does, a rugged undeveloped site. Most of the early site work was done by student labor.

EARLIEST CORNELL

The site selected for the campus was indeed full of possibilities but in the early 1870's, those possibilities had more substance in the imagination than in reality. The campus was treeless and irregular, full of gullies and ruts, dusty when dry, muddy when wet. There were no paved roads and plank walks were required to make foot travel comfortable.

Most students lived in town and climbed the hill daily for classes. Both North University (now White Hall) and South University (now Morrill Hall) had student living quarters as well as classrooms. Heat was from fireplaces and water was brought up the hill by horse-drawn wagons.

Ezra Cornell set the stage by selecting, and then persuading the trustees to endorse the site for the first building at the upper edge of the ridgeline of what would be named Library (Libe) Slope, overlooking the valley below. By placing simply one building, the die was cast for the establishment of two of Cornell's signature open spaces, the Arts Quad to the east and Libe Slope to the west.

The shape and character of Cornell came together very quickly. Andrew Dickson White had a great influence on establishing the form of the Cornell campus and its planted landscape. His interest in campus design began during his undergraduate days at Geneva College (today, Hobart and William Smith) when he happened upon architectural studies of the colleges of Oxford and Cambridge. Later at Yale, writing in the student newspaper he railed against the brick buildings that he referred to as "muses' factories." As a faculty member at the University of Michigan, he personally planted elms on the central campus open space that he found bare and featureless. He was actually given the title Superintendent of Grounds and a budget for planting.

At Cornell, White called on the services of advisors and consultants frequently and was actively involved with them, sometimes contentiously. Between 1865 and 1880, six campus plans were prepared. He also enlisted help from local residents and from the student body who, as a condition of enrollment, committed to performing a minimum assignment of physical labor.

While advisors helped to shape White's vision, it was clear from the beginning that his desire for "quadrangles of stone" would be the foundation and during his tenure, many struggles would take place over what he perceived to be the relaxing of one or the other of these two fundamental precepts (quadrangle open space, stone buildings).

"A very eminent American man of letters, who had travelled much in other countries, said to me, as we stood upon it, 'I have travelled hundreds of miles in Europe to obtain views not half as beautiful as this.' It was the place to which Mr. Cornell took the Trustees at their first meeting in Ithaca, when their view of it led them to choose the upper site for the university buildings rather than the lower."

A. D. White



The Class of 1873 water fountain, placed in 1873 on the rude and rough quad, was a remarkable expression of confidence in the long-term prospects for Cornell and its aspirations for a high quality environment.



The Arts Quad from the southwest corner looking north towards Sibley Hall, ca. 1869. The frame building to the right was built hastily to provide lab and classroom space. The oak grove in the center survives today.

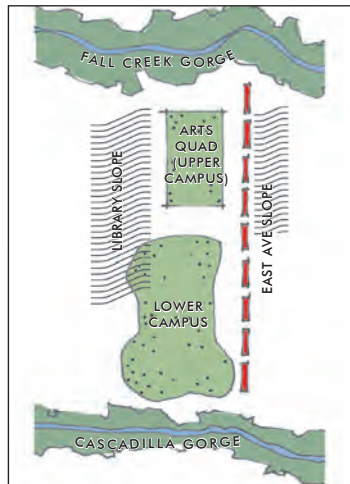


Stone Row from northwest, ca. 1871 -- The first buildings were placed on a site that had been treeless agricultural land.

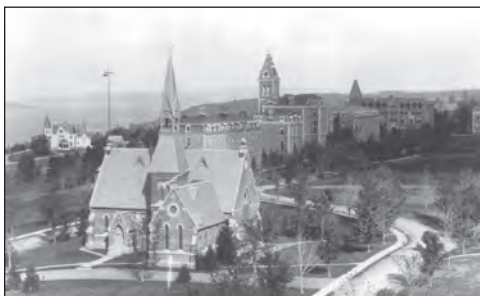
1900

"To this plan Mr. Cornell gave his hearty assent. It was then arranged, with his full sanction, the university buildings should ultimately consist of two great groups: The first or upper group to be a quadrangle of stone, and the second or lower group to be made up of buildings of brick and more freely disposed, according to our future needs and means."

A. D. White



This pair of diagrams show how Cornell, during thirty years of growth, reconciled early visions for its physical form, to the natural features of the site and to the advice and counsel of various consultants. There were three zones of campus, each with its own organizing principles: to the north (Upper Campus) was the formal quadrangle, adjusted to a narrower width than planned in order to accommodate the sharp topographic break to the east; to the south (Lower Campus) there was an informal distribution of brick buildings; and to the east was an alignment of faculty houses along East Avenue. Heavy tree planting established a framework for landscape throughout campus.



In this view from Sage Hall Tower looking north in 1900 the maturing landscape, the well-established road and path system and the rich architecture deliver the message that Cornell is firmly grounded.



Sage Chapel from the northwest ca. 1910. Typical of Lower Campus, buildings were sited freely across the rolling lawn.

HISTORY AND EVOLUTION

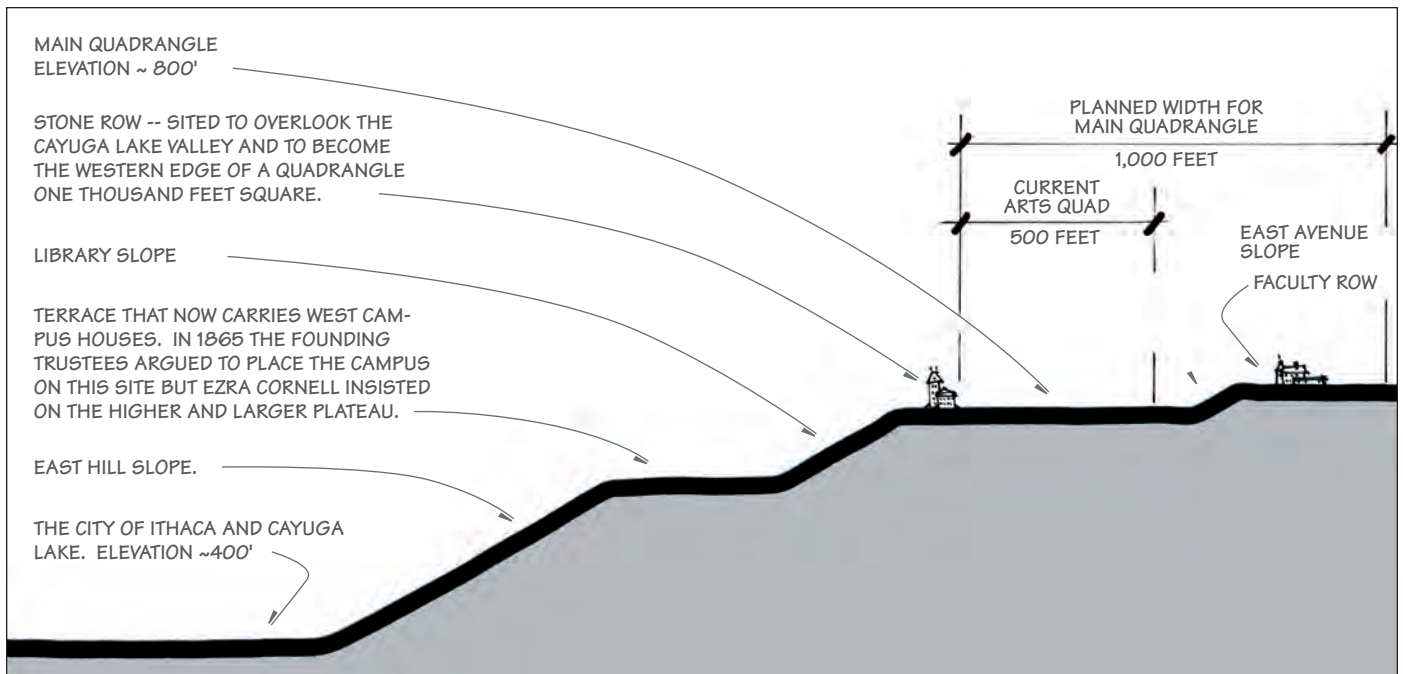
CORNELL'S OPEN SPACES AND LANDSCAPE
TAKE SHAPE

Within twenty years of completion of the first buildings, maps and photographs show us that the gullies were filled, trees were well-established, a road system was in place and an organizational geometry for the campus was in place. By 1890 the institution was firmly established and recognized as one of the most beautiful campuses in the country.

Along the way it became clear that the grand vision for a quadrangle one thousand feet square would not fit the topographical relief of the site. With the construction of Lincoln Hall in 1888, a concession was made to the landform and the quadrangle width was established at 500 feet, essentially the configuration that it has today.

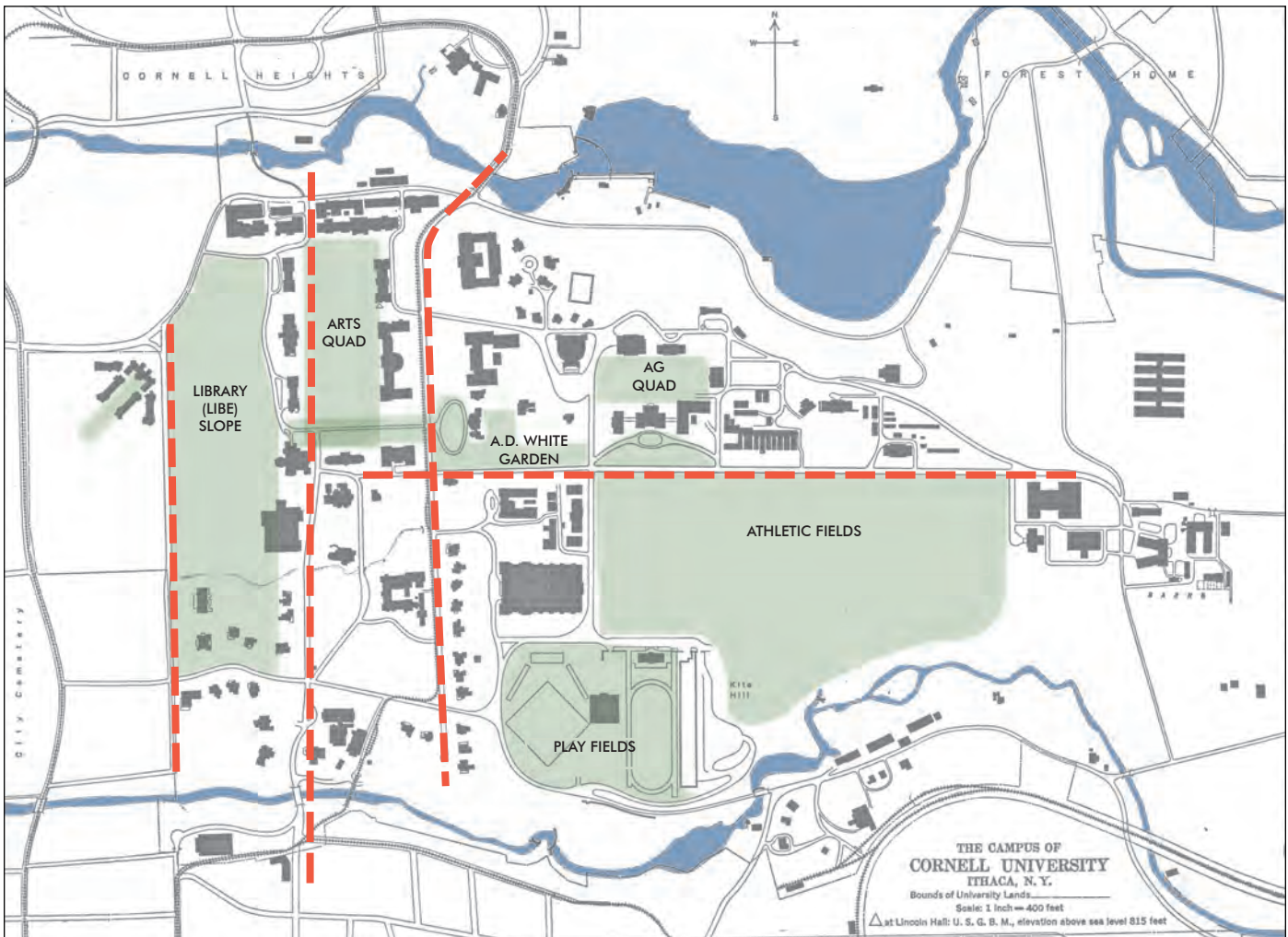
In addition to the "quadrangle of stone" as conceived by the founders, two new forms were adopted: an informal arrangement of brick buildings to the south of the quad and a line of faculty cottages to the east. Each of these three forms grew from a response to natural features of the site.

To the east, faculty houses were sited to take advantage of the long north/south crest of slope that afforded grand views to the west (not to mention the tactical advantage over the students at a lower elevation). To the south, President White acceded to Frederick Law Olmsted's advice that, given its Land Grant mission and the topographical variability of the Ithaca campus location, Cornell's physical arrangement of buildings and space should be informal, more village-like.

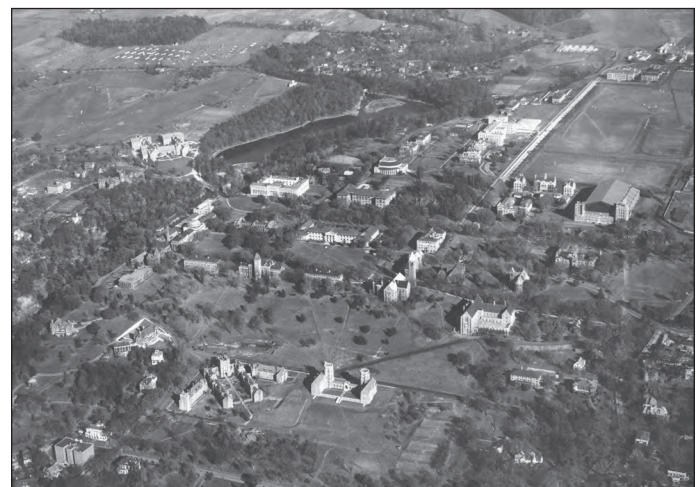
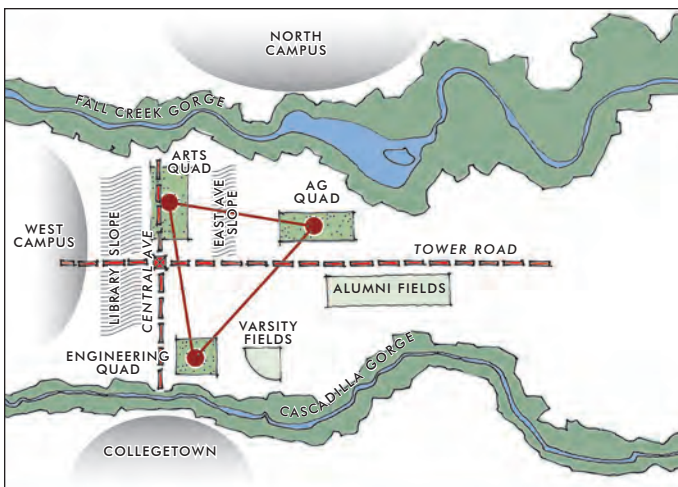


This diagrammatic section shows topographic conditions that influenced site selection for the new university campus, placement of its first buildings and then the open space framework that became the Arts Quad, Libe Slope and East Avenue.

1925



Following the end of the nineteenth century, Cornell's physical organization changed dramatically. The Arts Quad remained the center of gravity but two new quadrangles were conceived and the academic core leaped eastward over the faculty cottages along East Avenue with the establishment of Tower Road. In addition, it expanded north and west by establishing student residence enclaves there. It reserved expansive open fields for athletics. An arboretum was established to the northeast and, one by one, faculty houses were replaced by academic buildings. Cornell, which had until now followed topographic contours north and south, took on an east/west configuration as illustrated in the diagram below left. This basic form holds to the present day.



This 1920 aerial view of campus reveals the major big moves that established the new framework for central campus. Balch Hall set the stage for a housing complex to the north just as Baker Complex does for the west. The Ag Quad and Tower Road, in fresh new concrete, carry campus development eastward.

THE EARLY TWENTIETH CENTURY

By the early part of the twentieth century Cornell began to press against its original boundaries and reached out in four directions. In 1906 under the leadership of Liberty Hyde Bailey, the agriculture department, which was originally on the Arts Quadrangle in the Dairy Building (now the north wing of Goldwin Smith Hall), started its own new major quadrangle to the east with the construction of Roberts Hall. This by itself was an enormous change in that, in one bold move, it opened up a vast new area highly suitable for growth. Tower Road was laid out and almost overnight Cornell went from being a modest sized college campus with a predominantly north-south orientation tightly bounded by gorges on the north and south to being a large university organized on a grand avenue running east-west with no major constraints to eastward growth. Triphammer Bridge was built across Fall Creek, facilitating access to undeveloped land to the north, a major move that enabled Cornell to envision a student housing complex there that was separate from but convenient to center campus.

Academic buildings displaced the faculty cottages along East Avenue. Student housing became concentrated in two enclaves, one to the west below Libe Slope for men and one to the north for women. Athletic activities, which had been accommodated on the Arts Quad and downtown on the current site of Ithaca High School were given their own precinct south of the Agriculture College and Tower Road. The Cornell Arboretum (now Plantations) was established in 1944 and became custodian of Cornell's natural areas, gorges and waterways. And finally, in the mid-fifties the Engineering College moved from the Arts Quad to establish its own major quadrangle at the southern edge of campus.

This land use and open space pattern that developed over a relatively brief period persisted and matured in its essential form for the next seventy five years. Today, while there is some modest movement beyond the bounds of Route 366 to the east, Cornell tends to continue to develop in the interior.

The landscape matured as the elms grew to magnificent size and, with each new building, new landscapes were created. Small courtyards sometimes were part of building projects such as Day Hall and Myron Taylor Hall. Gardens such as Miss Minn's Garden on Tower Road and the A.D. White Garden were created. Interstitial green spaces, such as the one between Goldwin Smith Hall and Stimson Hall took on special identity.

During the years up until about the thirties, Cornell engaged the expertise of fine planners, architects and landscape architects such as Frederick Law Olmsted, Warren Manning and Bryant Fleming, Charles Lowrie, Carrère and Hastings, among others. Through the process of creating and testing many ideas in master plans, individual decisions about building layout and site design were made in the context of broad objectives for Cornell as a larger entity.



One of many enriching landscape features that overlay the basic open space armature of the campus is President's Walk, the open space avenue between the A. D. White House and the A. D. White Bench overlooking Libe Slope. One reason that Kroch Library was built underground was to preserve this historic east/west allée.



The signature tree at Cornell from its earliest days was the American Elm. Its unique form and size contributed stature and elegance to each of its settings, most dramatically to the Arts Quad and to old Central Avenue.

2005



The map is Cornell in 2004. It shows that the campus layout, diagrammatically, is simply a refinement of the layout established in mid-twentieth century. There is some tendency to sprawl to the east, but road and highway boundaries and the constraint of walking distance from core campus contain the heaviest academic uses to the center.

RECENT HISTORY

One objective of this document is to communicate what is important about open space at Cornell so that growth may occur in the context of shared objectives for the larger open space system.

Ever since the 1950s when the Engineering College built a major complex of buildings around its own quadrangle, Cornell's growth has been accommodated primarily by densification.

On central campus the university has been creative and willing to pay a premium to integrate new construction in the landscape. While densification has displaced open space quantitatively, in many cases it has been accomplished in ways that qualitatively enhance the open space system. For example, the North Campus Residential Initiative subdivided open space in a way that brought order to chaotic growth patterns there and created four new major outdoor spaces. Kroch Library was designed and built underground in order to respect and preserve the landscape above it, an avenue of open space traditionally known as President's Walk, that extends east to west from the A. D. White House through the Arts Quad to the A. D. White bench at the crest of Libe Slope.



In 1992 Kroch Library was built underground in the space between Goldwin Smith Hall and Stimson Hall.



Between 1984 and 1989 three major new buildings totalling 250,000 GSF were constructed without compromising environmental quality in one of the most dense areas of campus.

The inventory of open space is finite however and it becomes increasingly difficult to accommodate growth and preserve quality open space. Adding to the challenge is the fact that the average size of building has increased and building systems have become much more complex. Also, each increment of building growth is accompanied by parking and service needs that have enormous impact on green space. These ancillary needs have greater and greater influence. Requirements for special loading docks, ADA mandates for parking and access, transformer installations, emergency generators, expanding and sophisticated underground utility networks, etc. all make site design more challenging if one is to maintain the campus environment as a quiet enclave for creative thought.

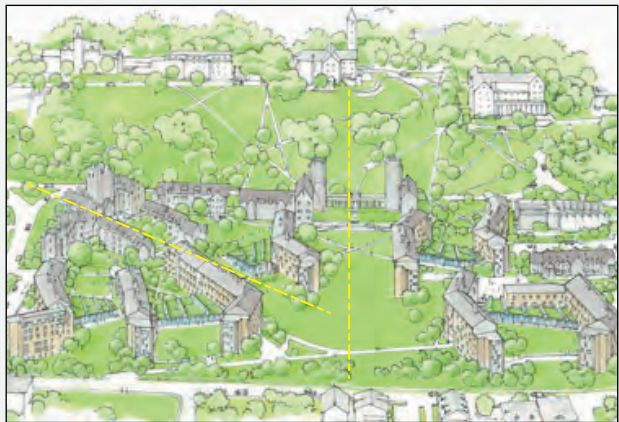
In the face of these challenges Cornell has managed, for the most part, to accommodate growth in ways that respect the natural environment while meeting the needs for new facilities to fulfill its academic mission. There are many models on campus to draw from to continue this tradition.

NORTH CAMPUS



The image at the left, above, is an aerial view of North Campus in about 1990. It shows a scattered collection of independent building complexes, each built in anticipation of a grand plan that was never realized. In 2001 the North Campus Residential Initiative brought order to the chaos by integrating new with old open space and architecture as seen in the image at right.

WEST CAMPUS



On West Campus the University Halls, the brick buildings in the image on the left, are being replaced with residential units that will take advantage of site topography by opening up long views to the west and freeing up generous green space. The density of development remains roughly the same.

ENGINEERING QUAD



The aerial photograph on the left is of the Engineering Quad in 1986. Duffield Hall was sited in 2003 to the west of Phillips Hall (foreground of the building in the upper left corner). The University recognized that this required new thinking about the quad as an open space that serves all abutters and commissioned an independent study and design for the quad. The quad was reconfigured to create a level open lawn flanked by a naturalized slope that has the character of nearby Cascadilla Gorge.

EMERGING OPEN SPACES

The three sets of images on page 18 show three recent projects in their before and after conditions. They illustrate three ways that Cornell looked at open space in fresh ways while accommodating growth or change.

Example One

The North Campus Residential Initiative introduced three major new building blocks to North Campus. This area of campus had been a classic example of piecemeal planning and development lacking a coherent open space organization. The proposed new development was approached as an opportunity to bring order to the chaos and started with open space studies before building design began. By distributing the new buildings in a way that respects certain existing site axes, and by delimiting new open spaces in combination with buildings already on the site, a fine integrated open space complex was created almost from whole cloth. It also created three new types of open space for residents: Rawlings Green, the Mews and the Court.

Example Two

The West Campus Residential Initiative totally reconfigured the West Campus residences area. Removing and replacing the University Halls presented an opportunity to look at the unique physical properties of the West Campus site. The site is a west-facing, sloping terrace below Library Slope and directly west of McGraw Tower. The solution for siting five new building blocks was to organize them in such a manner that they would step down the slope, enclosing open-ended east-west linear open spaces exposed to the west. The central shared open space is a broad sloping lawn on axis with McGraw Tower.

Example Three

The Engineering Quad. When it was determined that the best site for Duffield Hall would require sacrifice of a significant portion of the Engineering Quad, the University identified and funded the redesign of the quad as an independent project common to all the neighboring buildings, not just Duffield Hall. The new configuration takes its cues from surrounding natural areas and topography. A large open central leveled area replaced the old sloping quad and it, in turn, is flanked by a naturalized steep slope that expresses the landscape character of Cascadilla Gorge nearby.

LEGEND

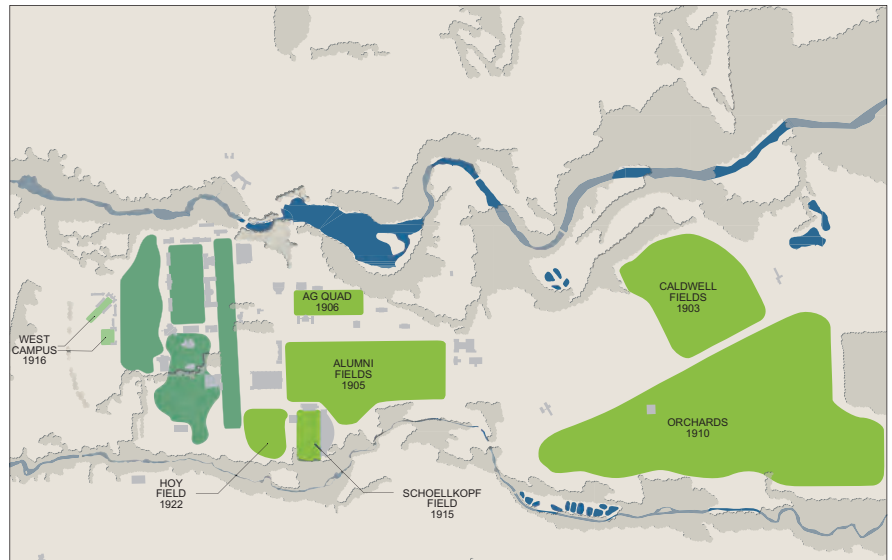
Bright Green- Landscapes created during the years indicated.

Dark Green- Older Landscapes.

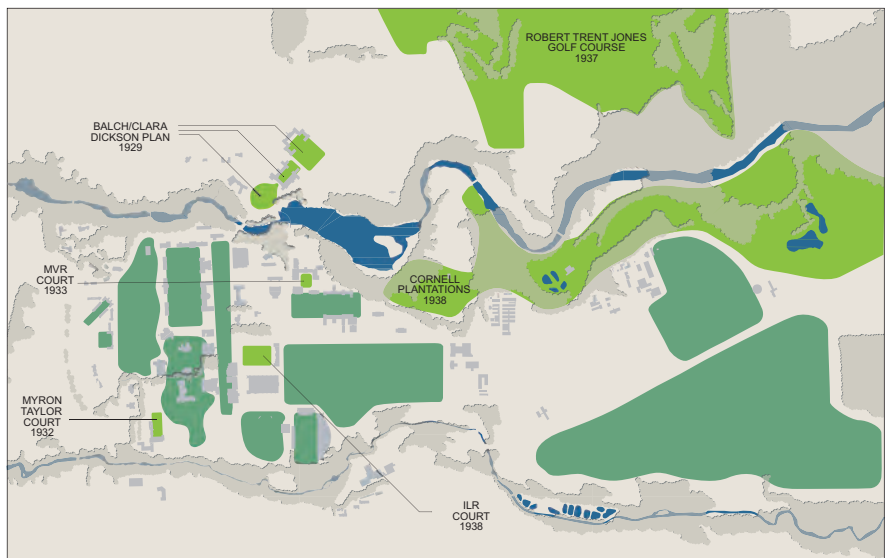
1868 -- 1900



1900 -- 1925



1925 -- 1950



CHRONOLOGY OF OPEN SPACE DEVELOPMENT

1868-1900

- 1868 Arts Quad
- 1868 Libe Slope
- 1872 Lower Campus (south of Arts Quad)
- 1875 East Avenue

1900-1925

- 1903 Caldwell Field
- 1905 Alumni Fields
- 1906 Ag Quad
- 1910 Orchards
- 1915 Schoellkopf Field
- 1916 West Campus Complex
- 1922 Hoy Field

1925-1950

- 1929 North Campus Complex (Balch plan)
- 1932 Myron Taylor Hall Court
- 1935 Plantations
- 1937 Robert Trant Jones Golf Course
- 1938 ILR Courtyards

1950-1975

- 1953 Engineering Quad
- 1961 Hasbrouck Courts
- 1973 Wee Stinky Glen
- 1974 North Campus low- and high-rise complex

1975-2004

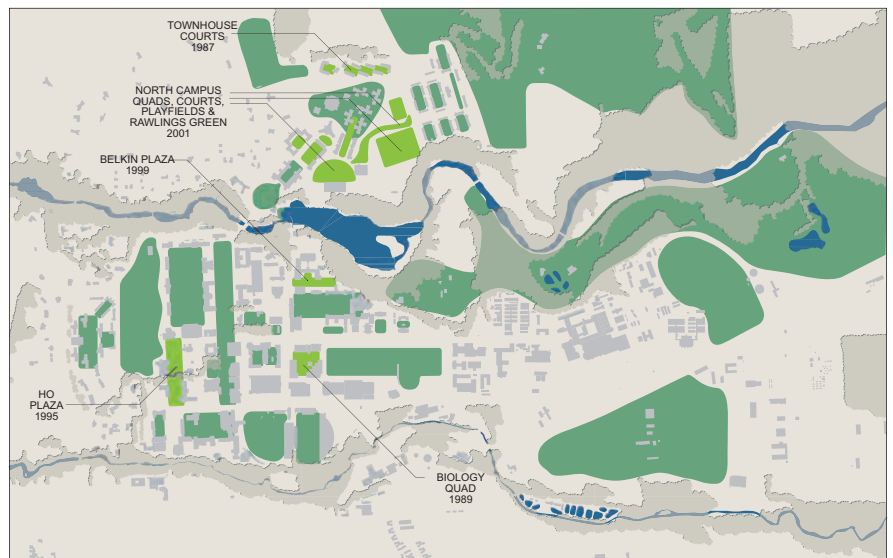
- 1987 Townhouse Courts
- 1989 Biology Quad
- 1995 Ho Plaza
- 1999 Belkin Plaza
- 2001 Rawlings Green, Court and Mews
- 2004 West Campus Complex Courts

Most maps of campus development emphasize building footprints. This series of diagrams emphasizes open space development. It shows how the Cornell campus landscape developed from a fairly shapeless farm field prior to 1868 to an intricate, interconnected network of large and small open spaces of great variety.

These quads, courts, gardens and fields have frequently been shaped and planned with the same deliberation and care as buildings themselves. When they have not, it has often been necessary to intervene at great cost and disruption at a later date.



1950 -- 1975



1975 -- 2005

THE CAMPUS OF 2025

As Cornell moves into the twenty-first century it continues to build at a rate that even Ezra Cornell at his most prescient would find surprising. The demands for additional new academic and research space, centrally located, suggest that Cornell in the future will be even more dense with buildings. As land is consumed for building sites there is a consequent loss of open green space. However, the loss of open space does not have to equate with a sacrifice of environmental quality. The important thing is that Cornell enter this phase with deliberation and understanding of its values and how they manifest themselves in the changing landscape. There is reason for optimism as long as there is a recognition that with every increment of building growth there are opportunities to consider landscape context and to integrate the change with the existing framework.

The incidental physical demands that accompany new construction on campus are often as consequential as the requirements for the building itself and the impacts on open space much more difficult to accommodate. Parking, utility infrastructure, roads and paths, service requirements, emergency vehicle access, ADA mandates, all have physical requirements that have the potential to compromise the quality of open space nearby. These are the things to be controlled if Cornell is to maintain a vital engaging campus whose grounds are as stimulating as its laboratories.

The dynamics that created the Cornell campus that we enjoy today can continue to shape a fine Cornell campus in the future.

They are:

1. Vision - Decision-makers with vision and conviction had a clear idea of what they wanted the campus to become. Maintaining and adapting that vision to changing circumstances is the task of today's decision-makers.
2. Vigorous debate - Different people have different vision. There is a long tradition of give and take before buildings or landscapes take form at Cornell. Open debate ensures that all ideas are on the table for consideration and that the best ideas prevail.
3. Process - The university has frequently turned to experts for advice, sometimes taking the advice, sometimes not, but the discipline of process keeps ideas accessible and helps build consensus.
4. Holistic thinking - Cornell has, with a few lapses, tended to think large. It works at integrating each component of change into a coherent whole.
5. Information - Decisions made with access to information are better decisions. This document was created to provide a shared text, as it were, for Cornell decision-makers to reference as they deliberate in shaping the campus landscape.

CONCLUSION

Significant milestones in establishing the form of the campus:

1. 1867 Ezra Cornell establishes the placement of the first three buildings (Stone Row) of what is conceived will eventually be a quadrangle one thousand feet on a side.
2. 1872 With encouragement from Frederick Law Olmsted, the first of a series of brick buildings to be sited in a more freeform distribution is built on the "Lower Campus".
3. 1906 With the guidance of Liberty Hyde Bailey a second quadrangle is begun to the east, to become the locus of the School of Agriculture.
4. 1913 Risley Hall is constructed on the far side of Fall Creek Gorge, setting the stage for this area becoming a student housing precinct.
5. 1915 The construction of McGraw Tower and the alignment of new Tower Road establishes the armature for academic expansion towards the east.
6. 1951 A third quadrangle is established for the engineering college at the south edge of the campus.

Cornell has benefited from a tradition that values landscape. A brief walk through campus will treat the observer to a great number of landscape experiences, from wild gorge to quiet stream, from vast quad to simple court, from natural wood to cultivated garden. All of these landscapes are legacies of deliberation by former decision-makers at the university.

The campus landscape is the matrix for all that happens at Cornell. At the most rudimentary level it serves the community by providing support for various activities, whether they be research, recreation, or convocation, or for that matter, parking. The challenge to designers is to accommodate these practical mandates while shaping the campus to meet less material objectives.

The landscape also serves Cornell and the larger community in more profound ways. It is sanctuary. It is expressive of the values and aspirations of us all as stewards. It provides education as well as forum for education. It inspires and it protects. And it provides a sense of place and order, a benchmark in the cosmos. These qualities are difficult to quantify and thus difficult to analyze and describe but are no less important to consider in the programming for new construction than classroom size or office suite organization.

In his 2004 Call to Engagement President Lehman asked "What should we be teaching our students? How can we prepare them for well-rounded lives that incorporate artistic, athletic, cultural, humanitarian, political, and social dimensions? How should we be teaching?"

A premise upon which this document is based is that great lessons are learned not just in the classroom but also from the environment, from the larger milieu of the classroom and the teacher. The Cornell student spends his/her most impressionable years on the Ithaca campus. The physical qualities of that campus experience play a powerful role in shaping well-rounded lives that incorporate artistic, athletic, cultural, humanitarian, political, and social dimensions. The shaping of the campus and the landscape should be done in a way that continue to foster those qualities.

One way to evaluate the success of the campus as a living and learning environment is to observe it in use. The collection of photographs on the next two pages along with quoted observations of students and faculty should bear better witness than any empirical measure to the importance of the campus landscape to the college community. The photographs and quotes also testify to the wide and unpredictable variety of uses to which the campus is put. This argues for a design approach that opens up possibilities rather than designing to a narrowly defined program that restricts choices to only those that are planned for.



RESEARCH

Gottfried:

The campus is memorable because of the shape of the land, of environmental history on the campus, and the opportunity to understand its context.

Student:

(From the Johnson Museum)- "This view makes me realize the strong connections each one of the buildings have to one another and makes me feel the important connection I have with the University."

"The center of the Arts Quad in the winter at night is majestic." "You can feel the history, and you feel privileged to be studying at such a great, beautiful university."

"The sound of water flow is extremely therapeutic."



COURT



PARADE



PARADE



PROCESS



REST



ACT



REST



REFRESH



REFRESH

THE CAMPUS EXPERIENCE

THE CAMPUS AS EXPERIENCED BY THE CORNELL COMMUNITY

In 1995 Professor Herb Gottfried, Chair of the Department of Landscape Architecture, was asked to contribute to this edition of the Campus Landscape Notebook. Professor Gottfried described the campus landscape in theoretical terms. Later, quite independently, we asked for and received feedback from Cornell students to the request, "name and describe a place or space on campus that has particular meaning for you." A hundred students replied. There was remarkable reinforcement between the two sets of observations.

Gottfried's words and the corresponding student testimonials are paired up on this page in theorem and proof format. They are presented as further illustration of the many ways that people and place come together here at Cornell.



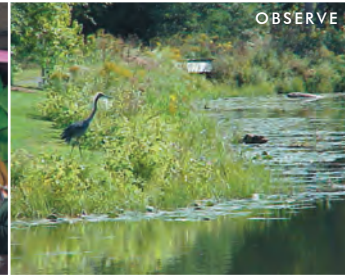
ORIENTATE



ORIENTATE



PARADE



PARADE



REST



REFRESH



REFRESH



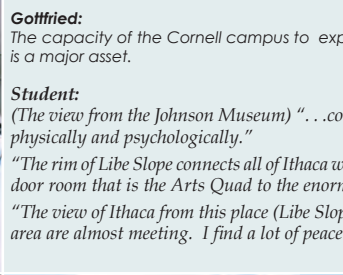
REFRESH



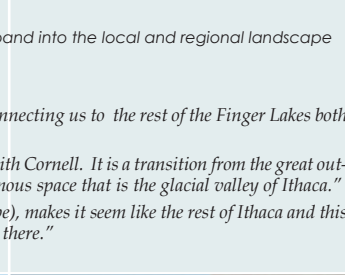
COMPETE



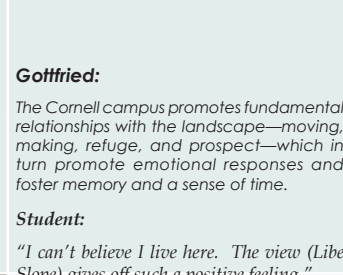
COMPETE



PARADE



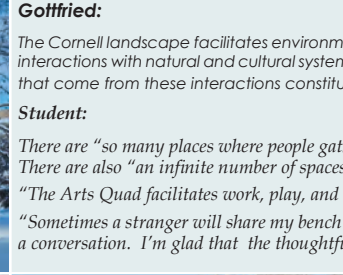
PARADE



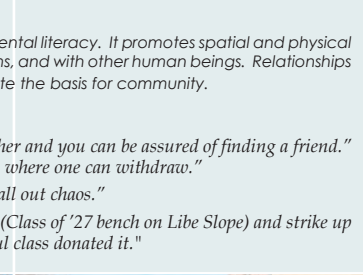
REST



REFRESH



REFRESH



REFRESH



PERFORM



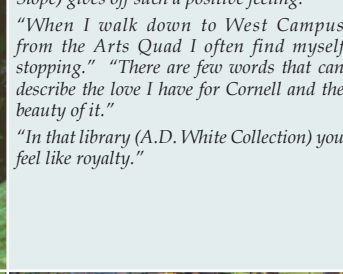
PERFORM



PARADE



PARADE



REST



REFRESH



REFRESH



REFRESH

Gottfried:

Every landscape feature at Cornell University is but a part of something larger, a landscape within landscapes, the part within the whole. The campus landscape has consequences, the most valuable of which is its capacity to educate, by empowering its community to read, narrate and compose aspects of landscape in relation to their lives.

Student:

"This place makes me want to think about life and feel as if I am at one with nature."

(Libe Slope reminds me) "that the world is a much larger place."

(Beebe Dam footbridge) "I used to stop on the footbridge every night to look at the falls. Experiencing the beautiful sight made sense of life."



REHEARSE



PARADE



PARADE



REST



REFRESH

Gottfried:

Landscape has meaning. Some meaning is inherent in the land; other meaning results from human intervention. Landscape has significance, which can be discovered, perceived or imagined.

Student:

"Today a view of a quiet waterfall cascading down the gorge was a pleasant beginning to my hectic day. I cannot wait to see what is in store for me as I return home tonight. Undoubtedly, the view will have a calming effect as it always does."

"I look over into the gorge, thinking about my father and enjoying the beauty of Cornell. It is my safe place- where I can feel at home."

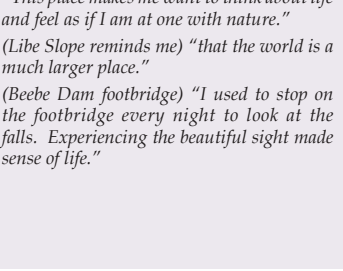
"It (Triphammer Bridge gorge) reminds me of a mountain I went to when I was younger. I had totally forgotten..."



REFRESH



REFRESH



REFRESH



REFRESH



PARADE



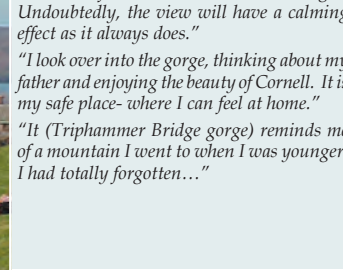
PARADE



REST



REFRESH



REFRESH



REFRESH

SECTION

2

LANDSCAPE SYSTEMS
AT CORNELL

CORNELL UNIVERSITY
CAMPUS LANDSCAPE



LANDSCAPE SYSTEMS ANALYZED

Landscape is comprised of many features and systems. This section of the Campus Landscape Notebook presents ten aspects of landscape and looks at how, individually, they contribute to the experience of the Cornell campus landscape.

PHYSIOGRAPHY**1**

Landform, Hydrology, Ecology.

THE OPEN SPACE SYSTEM**2**

Character and Order.

THE WORKING LANDSCAPE**3**

Functionality.

LINKS**4**

Movement systems.

GEOMETRY**5**

Orientation of buildings, roads, and open spaces.

ARCHITECTURE**6**

As integral to landscape.

WAYFINDING**7**

Navigating.

VIEWS**8**

Topography and exposure.

LANDSCAPE VOCABULARY**9**

Building blocks of landscape.

LANDMARKS**10**

Memorable features of Cornell.

SUMMARY



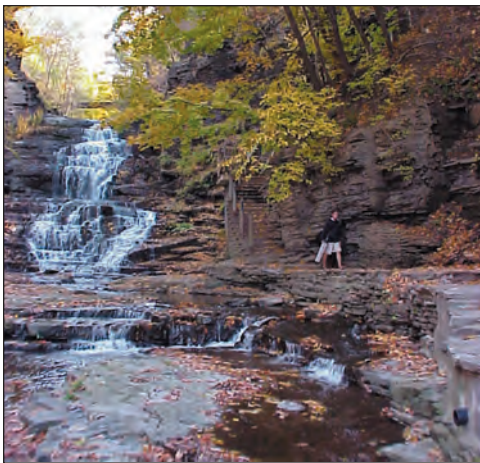
Cornell recognizes distinct boundaries between developed areas and natural areas. Each has strong form and both play important roles in the educational and social lives of the Cornell community. This map shows landform and woodlands and their relation to campus layout.

1

MUCH OF THE PHYSICAL ORGANIZATION OF CORNELL SPRINGS FROM RESPONSES TO PRE-EXISTING LANDFORMS, STREAM SYSTEMS, AND NATURAL AREAS.

Physiography comprises all the natural features of a site, independent of man-made intervention. At Cornell in particular, as described in Section One, physical qualities of the University property played a primary role in shaping the form of the campus and those physical qualities continue to have a powerful presence and influence.

The Fall Creek and Cascadilla Creek gorges are defining features of Cornell and have largely determined the boundaries of central campus, bordering it, conveniently, within a walkable radius. They are unique scenic resources in their own rights and crossing them on a daily basis is a significant experience for many in the Cornell community. They give access to a powerful image of wilderness within an increasingly developed landscape. Among the many images associated with Cornell, certainly they are most memorable and uniquely identified with this university. The essence of the gorges lies in their wildness, their freedom from manipulation. It is important that they be understood as systems and that their continuity is maintained in a natural state. They should also be maintained as accessible and inviting to the campus community.



Access to the gorges provides for dramatically different experiences of environment within very short distances. This photograph was taken within a hundred feet of dense and busy Collegetown.

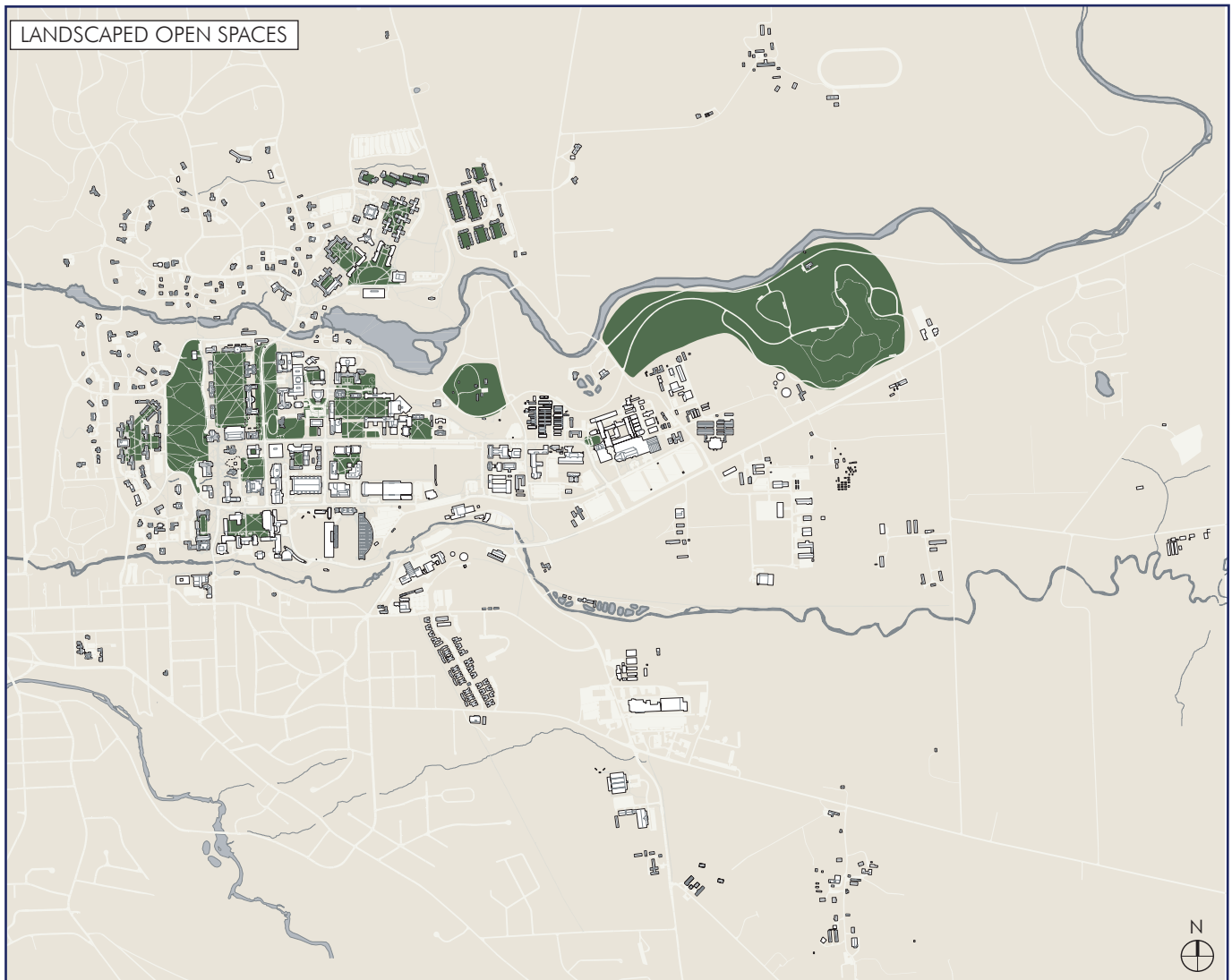
The sharp relief of the gorge topography gives them precise delineation and thus makes them easy to appreciate, demarcate, and protect. While not as dramatic, the more subtle relief of campus topography also has qualities that contribute to the character of the campus. Cornell has, in general, shown restraint in manipulating groundforms. For example, in constructing Kroch Library underground. Our tradition has been to maintain the continuity and gentle transitions of groundform that are characteristic of this region and to avoid unnecessary leveling or engineering of slopes.

While the gorges contain the north and south boundaries of the academic core of campus, Libe Slope and the East Avenue slope have the effect of containing the campus to the west. The terraced topography that steps down from east to west contributes a continuous, almost subliminal geo-referencing to the west and the Cayuga Lake Valley for people on campus.

One long-standing landscape idea relating to natural areas at Cornell is to cultivate a greenway that runs more or less diagonally from the southwest corner of Libe Slope through Willard Straight Rock Garden, Wee Stinky Glen and A.D. White Garden to Plantations via Belkin Plaza in front of Martha Van Rensselaer Hall. The purpose of this greenway is to introduce, in less dramatic fashion than the gorges, a vein of natural area accessible on a daily basis as relief from the surrounding urban pattern. There is reason to maintain some undeveloped natural areas on campus such as Wee Stinky Glen which give physical recall to the origins of Cornell.



Wee Stinky Glen is one of the internal campus open spaces that has not been leveled and therefore provides reference to the original landforms that were characteristic of the area before Cornell was established.



Open space map: The map above locates significant landscaped open spaces at Cornell. Although the map is not comprehensive, it shows an extensive and complex system, particularly in Central Campus, the culmination of a century and a half of maturation.



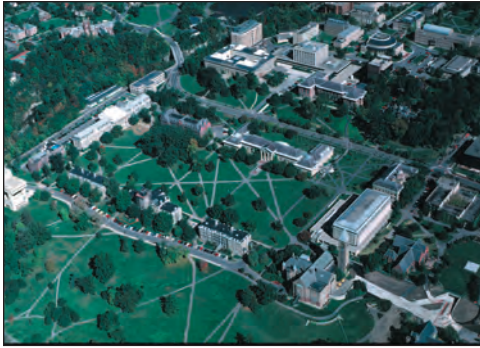
This aerial view gives an idea of the richness of open space networks in Central Campus.



East Campus, in contrast, appears crowded and fragmented even though it is less dense than most of Central Campus.

2

THE HIERARCHY OF OPEN SPACE CONTRIBUTES ORDER AND CHARACTER TO THE CAMPUS.



Simply ornamented, but majestic in scale, the Arts Quad is one of America's premier university open spaces. It is the center of gravity for Cornell life.



The Myron Taylor Courtyard is as quiet and hidden as the Arts Quad is grand and public. There are many similar small courts at Cornell that provide counterpoint to the quads.

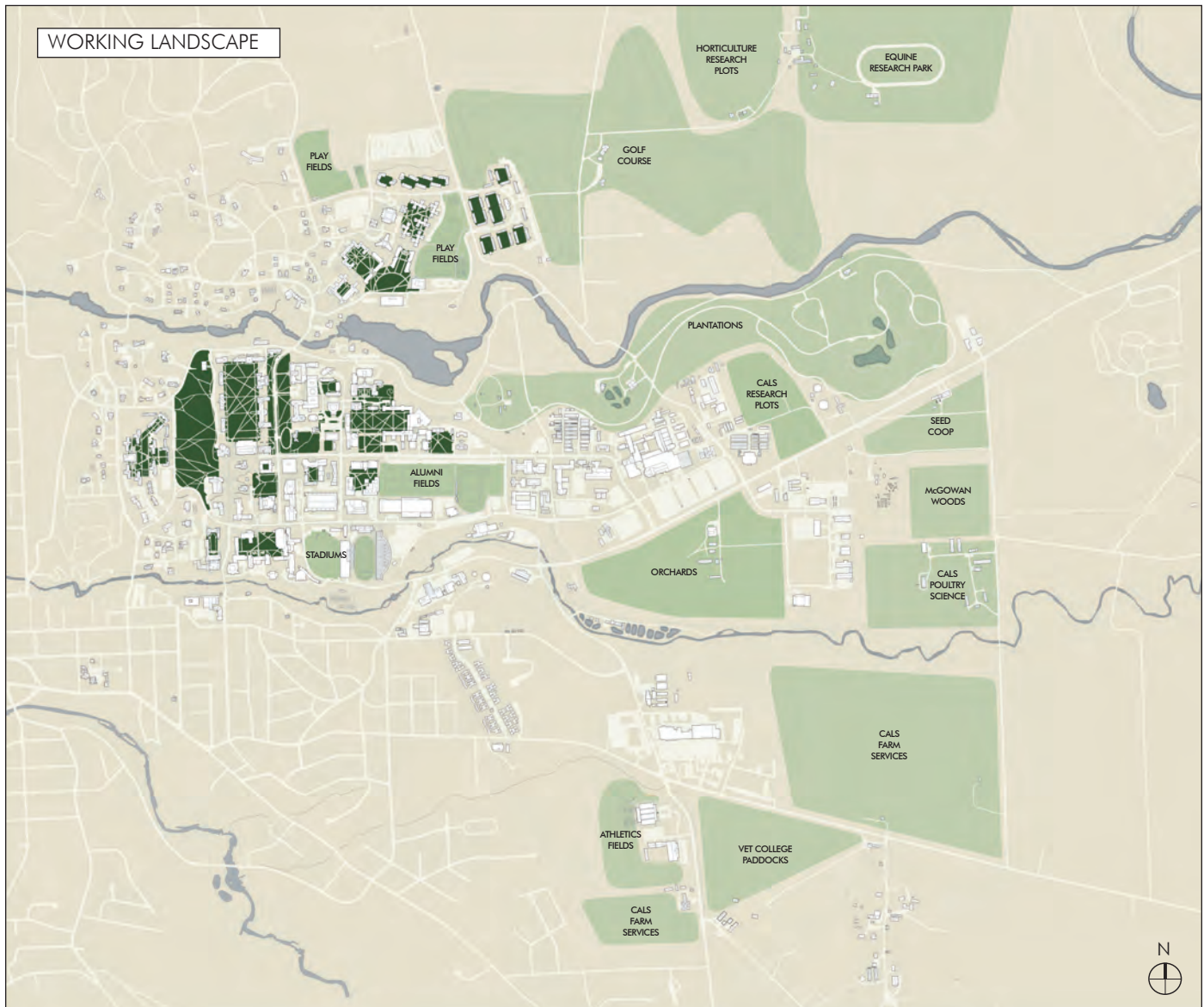
Cornell's landscaped open spaces, at their most fundamental, functional level are outdoor living rooms, places that support activities and social interaction and that are shared by the entire University. They are also places for reflection, inspiration, study, and contemplation. They clearly serve a role in Cornell's educational mission.

Just as important, the shape, character and distribution of landscaped open spaces give identity to Cornell. The campus has great variety of open space types and is memorable not only for the vast Arts Quad, but also for its intimate formal courtyards and busy plazas.

The variety and richness and the sheer number of open space experiences that exist at Cornell bear witness to the University's commitment to landscape as a resource. The Myron Taylor Courtyard is cloistered, formal and private as is the ILR Courtyard. The Willard Straight Rock Garden is a secluded and almost secret delight. Rawlings Green, in contrast, is wide open and expansive. Beebe Lake, another type of open space, is peaceful and protected. Indeed, as the campus continues to densify and the quantity of open space declines, the number of quality open spaces needs to increase and the contribution that they make to ordering the campus needs to increase as well.

There are areas of campus where siting of buildings has been done without particular attention to the surrounding open space order. One such area is east of Wing Drive. It lacks any ordered landscape system other than the Tower Road and Wing Drive streetscapes. The result is a collection of buildings that feel crowded around service areas. Pedestrian circulation is interrupted with parking lots and there is little shared green space for building residents even though the density of development is actually lower than in most other areas of campus.

As the university develops lands farther to the east and southeast, in the orchards, East Hill, and Snyder Hill, there will be opportunities to integrate individual projects into a coherent open space framework tied back to the university campus yet particular to their individual precincts.



Cornell's working landscapes serve programmatic needs for research, recreation, education, academic support, etc.

3

LAND SERVES THE UNIVERSITY IN DIVERSE WAYS.



The orchards, south of Route 366, provide for teaching, research and production within walking distance of campus. Their visual exposure along Route 366 also communicates to approaching traffic that Cornell has an agricultural foundation.



Horticulture field research plots on Bluegrass Lane.



Athletics fields and facilities meet programmatic needs for recreation and competition but also provide open space relief and green in a crowded campus.

There are three predominant categories of open space at Cornell: 1- Managed Landscape (quads, lawns, courts, and other structured public spaces), 2- Natural Areas (undisturbed or recovering woodlands), and 3 - Working Landscapes (athletics fields, agricultural fields, research plots and other land that serves particular programs).

As shown on the map on page 34, much of Cornell's landscape, over 1000 acres within the campus precincts alone, is in this "Working Landscape" category devoted to program support of various kinds. Some of the largest tracts of Cornell land are devoted to agriculture and agricultural research such as at Caldwell Field, the Cornell Orchards, and the Horticulture Field Research Plots on Bluegrass Lane. Cornell Plantations manages natural areas including the gorges and Beebe Lake, the Newman Arboretum, outlying wildlife sanctuaries and special gardens. The athletics fields occupy substantial land area in central campus and outlying zones such as the golf course, Jessup Field, and the equitation facility.

These lands are crucial to the educational mission of the university and the way they are used and accessed, their size, location and management are important.

In addition to the purely functional roles that they fill, Cornell's working landscapes have visual presence and iconic qualities as well. These are not inconsequential. Each of these landscapes delivers visual cues that contribute to one's understanding of the campus milieu. For example, the visitor gets a great deal of information about Cornell through the window of the car as he or she approaches campus from the east on Route 366 with Plantations to the right and the farm plots and McGowan Woods to the left. The presence of well-managed agriculture fields and orchards to the east of campus expresses the centrality of agriculture and the land grant mission to this university.

Farm plots and other working landscapes provide stable viewsheds and are valued for this by the larger community. Athletic fields also do double duty as visual open space systems. The Robert Trent Jones Golf Course, for example, is a beautiful landscape to golfers and non-golfers alike and the athletic fields in central campus provide open space relief in crowded circumstances even though they are not accessible to non-athletes. Certainly all landscapes are part of the visual experience of campus. How they present themselves to view, how they set up views and how they interface (hard edge or soft edge) are all worthy of consideration when shaping the campus.



The diagram above delineates the primary pedestrian path system through campus. Blue lines are sidewalks associated with roadways. Paths independent of vehicular traffic are marked in deep green. Red lines mark opportunities for improvement.

4

LINEAR LANDSCAPE CORRIDORS LINK OPEN SPACES AND MAKE MOVEMENT PLEASANT AND EFFICIENT.



The bridges over the gorges concentrate traffic to and from campus. They set up conditions for social interaction. (Thurston Avenue Bridge)



At class change time cars, pedestrians and cyclists compete for the same space. (East Avenue)

"The view of Triphammer Falls in Fall Creek Gorge at Cornell is utopia as it really is in vision. It was the river on campus that affected us most. I walked across it every day on a suspension bridge. I realize as I make this speech, thirty years later, that the image I saw of stratified rock, of color, has affected not only my life, but it has affected my work. The image of falling water, those great falls, that gorge, and their life-giving quality profoundly affected me and my work all these years."

Lawrence Halprin

In an address to the Conference on Conservation of Campus Resources, Berkeley, CA, 1980



The narrow Class of '35 Walk is one of the primary links between the Arts Quad and the Ag Quad

The transportation system that links buildings and neighborhoods has its own open space characteristics. If one thinks of Quads as outdoor living rooms, the linking roads and walkways are the hallways. Together they comprise the integrated transportation network. Their primary purpose is to make travel efficient, comfortable and safe. On a college campus they are particularly important and have unique demands in that pedestrian movement is the predominant mode of travel and it occurs in surges during class change intervals. As landscape features they can enrich the experience of moving from place to place. In fact, because of the extraordinary quality of some landscape features at Cornell, people are often invited to take the "road less traveled" and choose to meander rather than to commute.

While many open space links serve both vehicles and pedestrians, there are several important pedestrian-only spines that enable crossing campus independently from the danger, noise and interference of vehicular traffic. Most of these are intact but there are opportunities to strengthen or fill gaps as shown in the map on the facing page.

In addition, Cornell has an extensive trail system that is intended more for recreation and observation than for transportation. The trail systems tend to be related to the gorges and natural areas and thus are under management of Cornell Plantations.

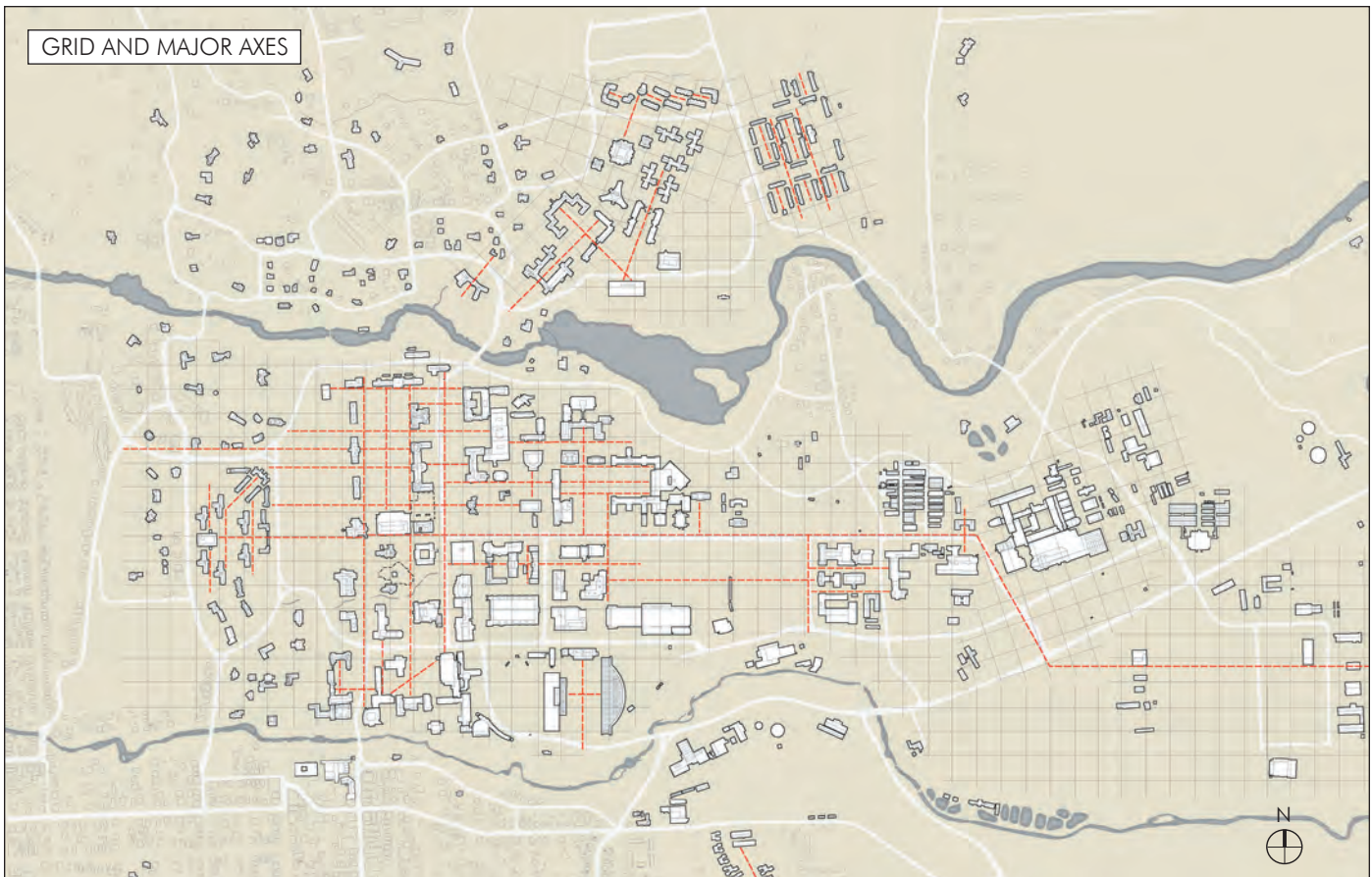
One of the driving factors in densification of central campus is the desire to locate core facilities within a comfortable walking radius. Cornell continues to plan and think of itself as a pedestrian-oriented campus. Beyond their purely functional role of getting people from here to there, walkways provide "value-added" service to Cornell. They set up conditions for social and professional connections and provide a pleasant and, one hopes, stimulating experience for the traveler.

When the open space links are logically laid out and well-designed they add to the legibility of the campus. This is important for wayfinding and for people's comfort level in navigating the campus.

There are a couple of unusual, if not unique, features of the Cornell open space links network. The gorges at the north and south edges of the academic core restrict the north/south movement of students, faculty, and staff to a limited number of bridge crossings. This introduces two important almost daily experiences. One is a passage across a dramatic inspiring landscape that marks arrival to and departure from the campus. The other is the concentration of travelers, which promotes meeting and social interaction. There is good reason to support and encourage these dynamics when designing systems that cross the gorges.

When cars and bicycles frequently share the same travel corridors with pedestrians, safety is a significant concern. During class change surges when students are in large groups and in a hurry to get from one class to another, the potential for collisions is high. Separating vehicles from pedestrians and controlling speed and visibility are particularly important in central campus.

The challenge at Cornell is to think about and design for these corridors holistically. Campus environments provide unique opportunities in this regard. Since all lands are under single ownership it is possible to manage walkway design at a campus-wide scale.



The above map shows how buildings tend to conform to an orthogonal grid throughout campus, usually in a north/south orientation but sometimes slightly rotated. The grid spacing is arbitrary but the orientation is not. Insofar as the gorges tend to run east/west and the topographical breaks in landform tend to run north/south, the orthogonal grid reinforces natural landform. The dashed lines highlight some of the many visual axes that are organizing features of the open space system.

5

BUILDING ORIENTATION AND DISTRIBUTION ON CAMPUS GENERALLY CONFORMS TO AN ORTHOGONAL GRID.

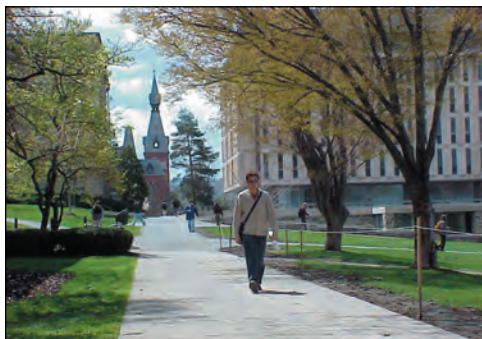


When I.M. Pei designed the Johnson Art Museum in 1972, he anchored the architecture of the building to this east-west sidewalk on the Arts Quad. The sidewalk aligns precisely with a transparent slot through the building.

The organization and shapes both of buildings and open spaces at Cornell are strongly tied to a rectilinear grid. This grid tends to conform to a north/south orthogonal orientation but in some places twists in order to respond to some local condition. The grid in turn is contained by and juxtaposed with two irregular linear natural areas, Fall Creek Gorge and Cascadilla Creek Gorge. The grid contributes order and legibility to the working campus and the natural areas contribute relief from it.

Sometimes the grid asserts itself over the landform and sometimes, as at the interface with Libe Slope and the gorges, the grid is interrupted by the landform. This counterpoint, between two distinct organizational frameworks, one an imposed geometric order, the other a natural physiographic order, contributes special qualities to the Cornell campus.

The grid tends to be reinforced by linear axes or sightlines. There are axes of symmetry, axes of movement, axes of framing. Axes are lines of balance or reference in open spaces. The interrelationship of more than one axis in turn contributes structure to the campus organization. An example is Tower Road, where buildings and movement systems relate to it and it in turn relates to McGraw Tower.



The combination of path alignment, tree allee, and landmark tower at Sage Hall all reinforce one another as expression of strong north/south geometry in front of Goldwin Smith Hall.

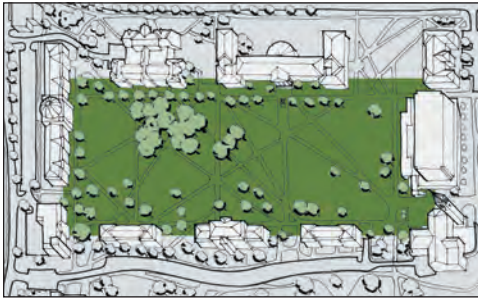


6

ARCHITECTURE IS INTEGRAL TO CAMPUS LANDSCAPE.

"(A university should): provide a place where standards are exacted - standards in literature, standards in the quality of scholarship, and standards in the artistic expression of its own physical components."

William J. Rewak



Although buildings continue to be built around the Arts Quad, most recently in 1999 with the Lincoln Hall addition, the essential form of the quad was established a century and a half ago.



Buildings arrayed along a street or pathway. There is clear differentiation between front and back.



In this model the building-to-open space relationship is somewhat ambiguous. Each building is independent of its neighboring buildings and the adjacent open space.

Orientation, distribution, and physical expression of individual buildings alone or in ensemble has great influence on shaping open space at Cornell. And the nature of the interface between buildings and their immediate surroundings has a subtle but important effect on how neighboring open space is experienced and used. Clustering building groups around quads, courts, or other types of open space contributes to collegiality and to the legibility of the campus by subdividing its large expanse into neighborhoods.

There are three basic organizational models of building/open space relationship at Cornell. Each has very distinct characteristics that affect how we experience landscape and find order in the environment:

Quadrangle

The quadrangle is the signature form that sets a college campus apart from other civic urban forms. The three main quads at Cornell are the Arts Quad, the Engineering Quad and the College of Agriculture and Life Sciences Quad (Ag Quad). These are in essence rooms of open space surrounded by buildings and are self-sustaining by virtue of their simple universally understood geometry. The Arts Quad, conceived by the founders in 1868 has, building by building, taken form over a span of one hundred and fifty years.

Streetscape

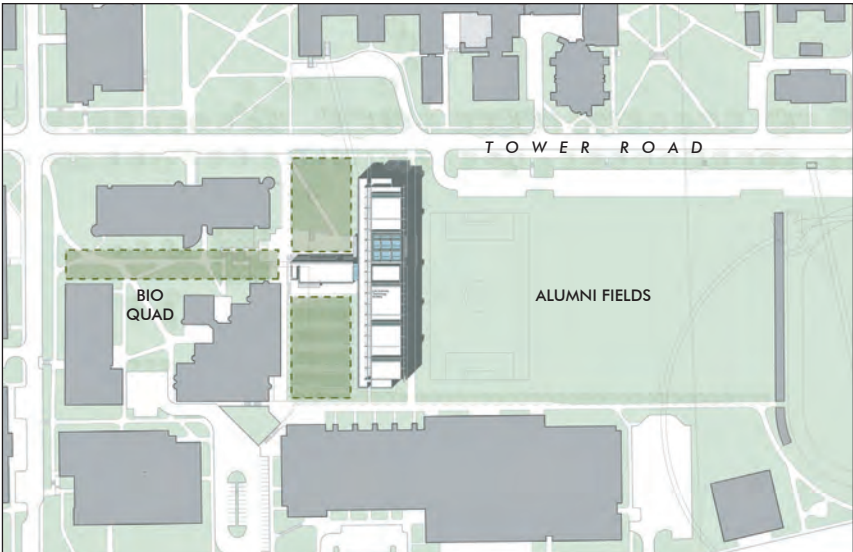
This is a traditional civic form where buildings front onto a street or linear movement corridor. This form exists most prominently at Cornell along Ho Plaza. The vitality of Tower Road as Cornell's "Main Street" could be enhanced if new construction along its length was designed to engage the street.

Building on Lawn

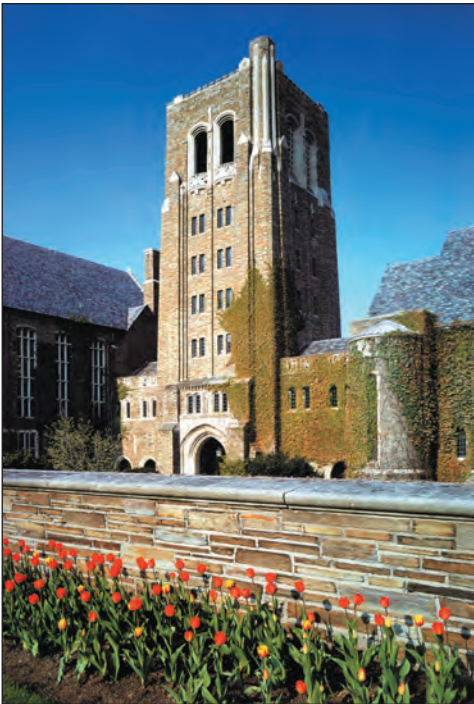
Some Cornell buildings are designed to stand alone as more or less independent features on the land. This is the model that Frederick Law Olmsted advocated for Cornell in the early 1870's and is to be seen in the siting of Sage Hall, Sage Chapel and Barnes Hall and more contemporaneously in the Johnson Art Museum. While the quad and streetscape are easily understood forms that accommodate growth without strain, the building on lawn model does not accommodate neighboring development as comfortably. A case in point is seen where Olin Chemical Engineering makes an awkward liaison with Sage Hall, occupying the broad lawn that had been important to the setting for the older building.



Balch Hall with its graceful courtyard and sally port on the route of student traffic to and from campus is a graceful expression of passage for their daily trek.



The Life Sciences Technology Building design provides an example of how architecture can contribute to landscape. It creates two new distinctive courtyards and establishes a strong visual connection to the Biology Quad to the west. Placing a dining facility in the small bar building in the center will provide a community resource that enlivens the enclosed courts.



The collegiate gothic style such as this at Myron Taylor Hall is symbolic of traditional college architecture.



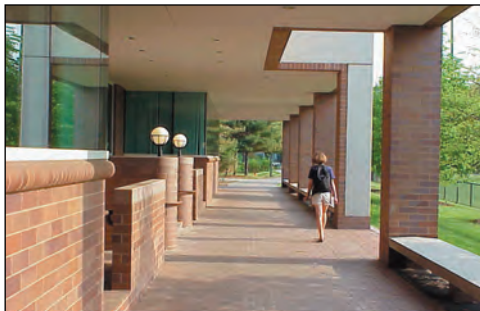
The night-time presence of a building often enriches the campus in a very different way from its daytime presence. This is Bartels Field House facing onto Alumni Fields.

"It seems that almost any significant event inspired White to inscribe an appropriate memorial in stone, and Cornell was always richer for it."

K.C. Parsons
The Cornell Campus

"In my view, America's colleges and universities -- and especially their physical planners -- need three things to become better architectural patrons. One is a campus architecture. A second is an unswerving devotion to human scale. The third is a sense of the uncommon and particular aesthetic -- the delight -- that a college or university campus demands."

Werner Sensbach
Planning for Higher Education, Fall 1991



The Biotech building has a very lively and open interface between the building interior and the exterior.



Sculpture and memorials such as the Sheldon Sundial provide punctuation points in the open space system. They also deliver messages of many kinds and many ways about tradition, history, values, etc.

Cornell has been and will probably continue to be characterized architecturally by a broad representation of styles, forms, and materials. Some campuses such as Stanford and Rice have long traditions of clearly identifiable campus architecture styles and materials. While there is some appeal to the notion of administering strict controls that will yield uniformity as well as excellence in architecture, it is difficult to imagine consensus at Cornell on what those controls might be.

Cornell's identity springs from its setting more than from its architecture. Architecture is at its best at Cornell when it actively engages the landscape locally and campus-wide.

There are important ways that an individual building's design can contribute to a larger campus landscape design vision for Cornell. For example:

When a new building is brought to campus it should be integrated with its neighbors in such qualities as scale, materials, fenestration, cornice line, etc. The interrelationships between itself and surrounding buildings should be recognizable in the design. This contributes to a sense of unity among equals in the context of "university".

A building should also be somewhat transparent, meaning that it should not place visual or unnecessary physical barriers between itself and the life of the campus that surrounds it. Visual access enables better connections between the community within and the community without.

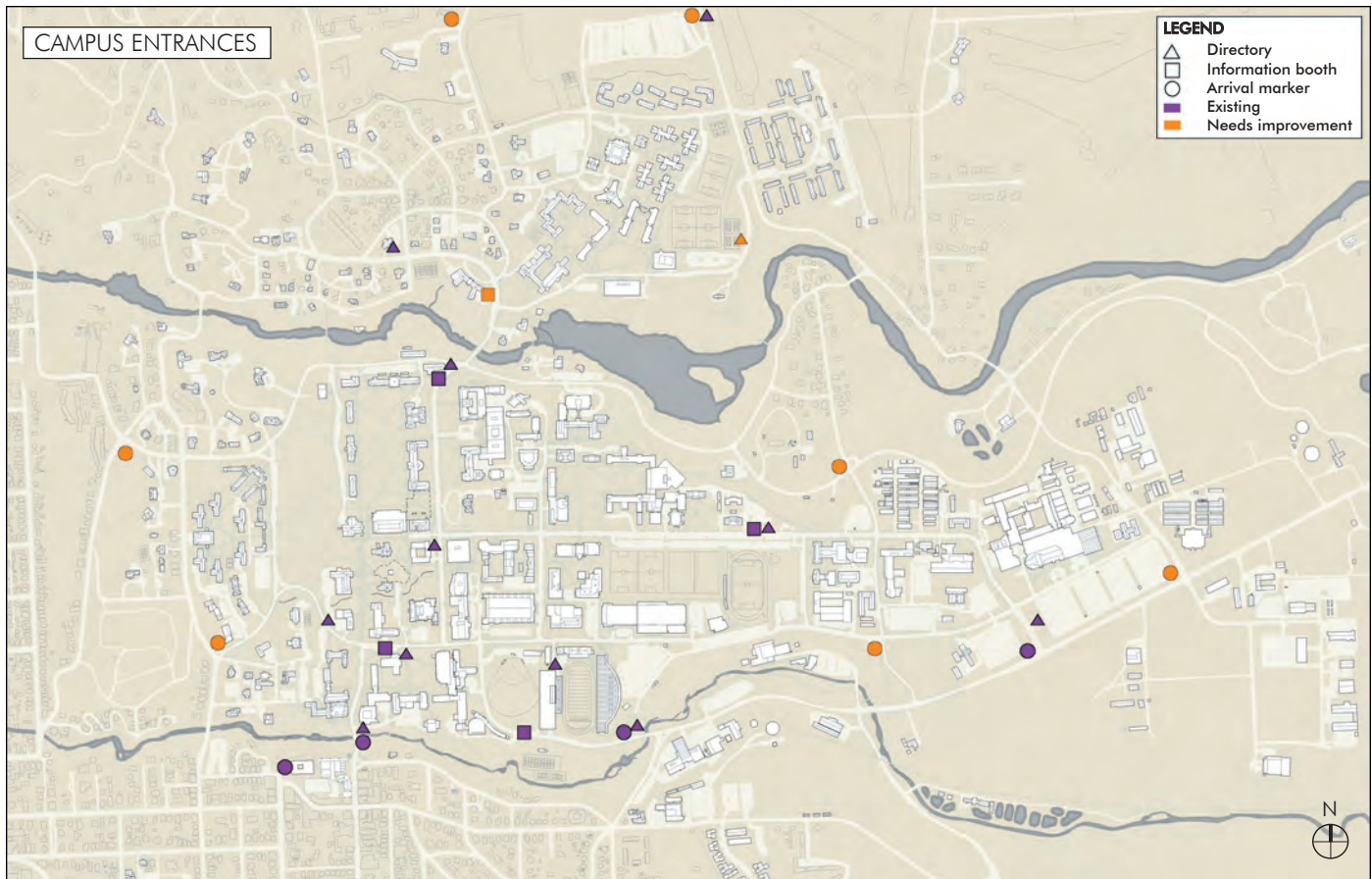
While building styles at Cornell may be eclectic and of their time and place, landscapes associated with new construction must be integrated into the extended fabric of campus. Street furniture such as lights and benches, bike racks and trash receptacles should be consistent across campus. Landscape is the unifier.



This Venetian wellhead at Sage Chapel was brought to the University by Andrew Dickson White.

Sculpture and Art

Sculpture is in fact architecture and contributes points of reference in the landscape as well as meaning, narrative, and inspiration. Andrew Dickson White encouraged placement of such markers and indeed financed many, such as Eddy Gate and the A.D. White Bench.



The map above shows locations of major arrival points to campus, where they are strong and where they are weak or absent.



At most arrival points to campus there is a marker or monument that announces the campus as this one does in Collegetown.

7

THE VISUAL QUALITIES OF THE CAMPUS CAN ENHANCE OR CONFUSE NAVIGATING.



Eddy Street Gate marks a once busy arrival point to Cornell.



Directories are placed at key locations on campus to help in wayfinding. Liberal use of maps and directories helps minimize reliance on free-standing signs.

"I remember my first visit to Cornell, looking up in awe at this university that seemed to be in the sky. I remember thinking, before ever setting foot on the campus, that this was where I wanted to go to school."

Student

This topic is about orientation and, in the current vernacular, wayfinding, about the comfort level one has in getting to and through the campus. It is also about how people feel about the university given the first visual cues they receive as they arrive here.

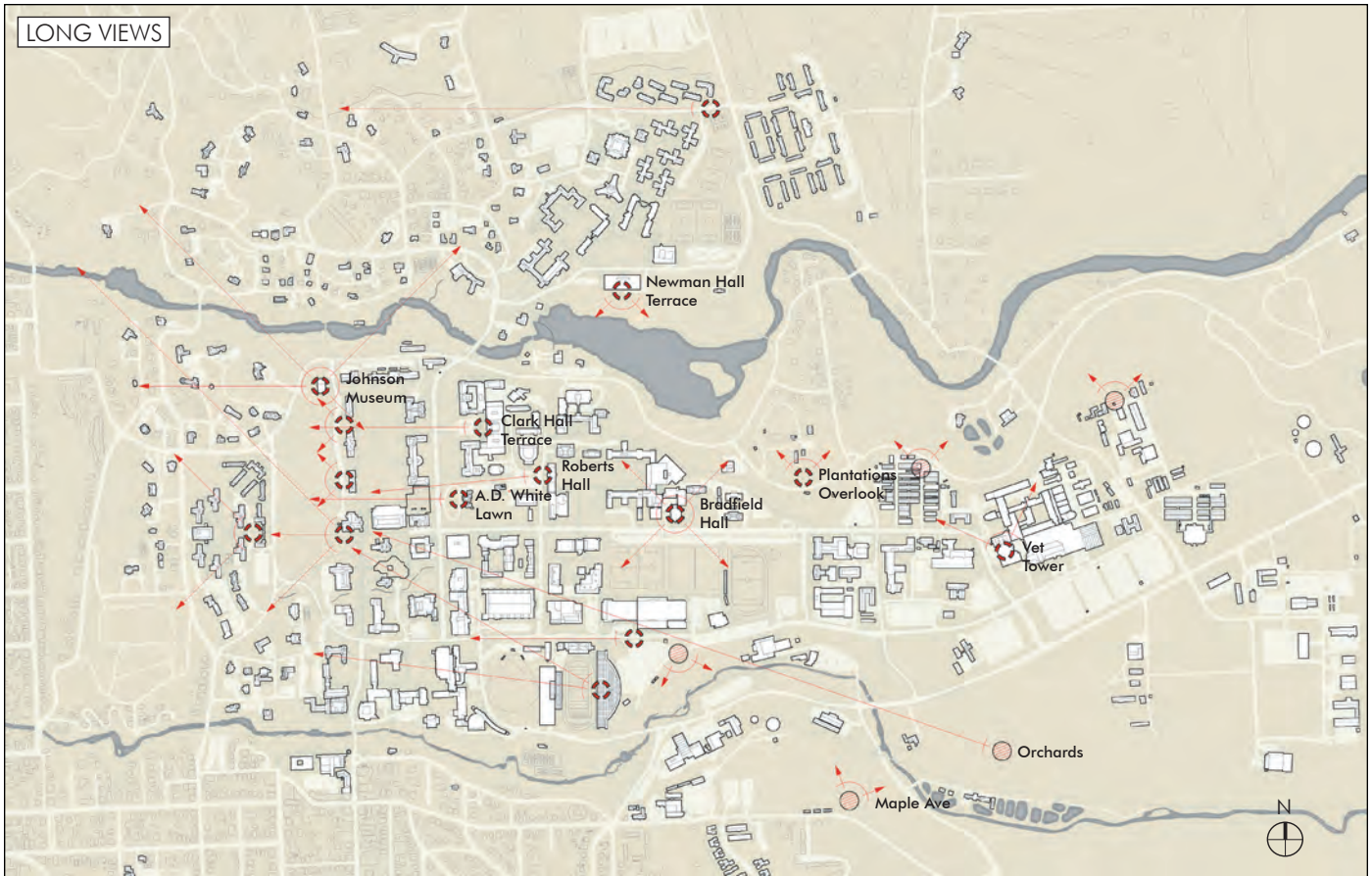
There is a great deal more to this than simply providing signage and a directory at each approach point to campus. The campus itself is an entire semiotic system that provides continuous feedback to people finding their way around. For example, Schoellkopf Stadium is highly visible from long distances, day or night, and easily identifiable as Cornell's stadium. Unintentionally, it serves as a beacon and orientation device for people approaching campus from miles away.

Since Cornell covers a large geographic area, one "arrives" in increments. Some have reached their destination when they arrive at the Vet College from the east on Route 366; others are not where they want to be until they are inside Day Hall. Marking arrival with gateways at the edges of campus is desirable but elusive since edges are constantly changing, being absorbed or being shifted. The first level of attention to facilitating wayfinding is to maintain a clear organizational structure of paths, open spaces and buildings as suggested in virtually every other section of this notebook.

The next level is to provide access to information through use of signs, maps, gateways and directories. Again, to minimize ambiguity and confusion, these features should be considered holistically and systematically. Cornell has sign design standards that are adequate but in need of update. It also has directory maps and gateway features at many of its primary access points but these also are due for refreshing. The sign program is administered by the Transportation Department with input from the University Planner and University Architect.



Some approaches to campus such as this announce arrival so dramatically that signs would only be a distraction.



The spots identified in this map offer unusually fine long views from campus.

8

CORNELL'S TOPOGRAPHY AND REGIONAL LOCATION PROVIDE UNIQUE OPPORTUNITIES FOR INSPIRING LONG VIEWS.

Long views from the campus to the surrounding countryside give people a sense of connection to the region. They also provide a feeling of openness and relief from the containment experienced in most of the rest of the campus. When students were surveyed in 1999 and asked to identify and describe a place or space on campus that has special meaning to them, more of them mentioned Libe Slope than the Arts Quad.

Cornell is blessed by virtue of its location with commanding long views from many vantage points on campus. It makes sense to take these into account and either preserve or enhance them when considering new development on campus. It is also important that new buildings be designed to take full advantage of this resource and afford views for their occupants.

As with landmarks, it is difficult to evaluate vistas and views in quantitative terms since they are experienced in such a variety of ways and in such dynamic circumstances. For example, placing a structure, whether building, tree or whatever within a view shed may be obstruction from one vantage point but may lend frame and scale to a view from another vantage point. Suffice to say that particular attention should be given to this quality when considering physical change in such sensitive areas.

The map on page 46 identifies the more obvious and widely recognized view sheds at Cornell and some less obvious ones.



The view southwest from the Overlook on Libe Slope.



Looking west from a path down Libe Slope.



9

USE OF A COORDINATED LANDSCAPE VOCABULARY OF PLANT MATERIALS, PAVING, LIGHTING, AND OTHER CONSTRUCTION DETAILS HELPS TO UNIFY THE CAMPUS.

The term, campus "landscape", refers to all features of the physical presence of campus including natural areas, buildings, roads, walks, etc. This segment of the Campus Landscape Notebook, Landscape Vocabulary, addresses what is often referred to as "greenscape" (the biological landscape- plants) and "hardscape" (paving, walls, site furniture, etc.) These are the components that a designer can place and configure to achieve program objectives for the campus.

Consistency in landscape treatment serves to unify and order the campus "look". This is particularly important at Cornell where building styles are so architecturally diverse. The primary palette of plants used at Cornell is trees and lawn. Application of this simple vocabulary is used to achieve desired campus spatial qualities. Selection of species enables other types of expression such as seasonal change, special textural qualities, regional ecology or symbolic meaning.

While shrubs and herbaceous materials have support roles in campus landscape, they are secondary to trees in fixing the basic three-dimensional form of campus.

There is a tendency, with development, to formalize landscape. This is suitable in many cases but since much of the power and charm of the Cornell landscape has been and continues to be in its natural history we need to be cautious about unnecessary conversion of unmanaged lands to a manicured state. In fact it is appropriate, in some parts of campus to reclaim some managed space and return it to a wild state. This yields benefits in two ways -- it improves visual qualities and it reduces maintenance requirements.



Until the 1960's when Dutch Elm disease killed virtually every American Elm on campus the elms lined magnificent avenues through campus as can be seen in this ~1920 view north to McGraw Tower.

Growth and Change

The green landscape continuously changes as plants mature. So, while Cornell has always been verdant it has been through several transitions of appearance. The open sweeps of farm field in 1868 were planted with avenues of Elms that grew to majestic size by the 1950's. When they died (we lost about 1200) it took about thirty years for new plantings to mature but we now have a quite different landscape model. There is greater diversity of tree species, more informally arranged. The grand arching shape of the American Elm that is unique to that tree is gone for now.

On the other hand, while it is constantly evolving, a campus landscape is still more stable than just about any other landscape that will go through frequent changes in ownership. This enables investment in landscape for long-term effect.

DESIGN CONSIDERATIONS

Trees are not simple, single objects to be randomly placed in the landscape. They are used to order the spatial character of campus and to contribute to a larger pattern for the whole body of the campus.

Trees give form to campus space in a variety of ways:



Specimen Planting (a single tree) serves to ground a space or composition. It is static, focal, bringing the eye to rest.

Specimen Planting

In this application a tree stands alone as a singular feature. The purpose for planting a specimen should be to either display the tree for its special qualities or to create a point of reference in a space. This device, obviously, is most effective when the specimen is indeed singular and not simply one of many. Avoid the tendency to overplant specimens on the basis that if one is good, more must be better.



Allée planting is dynamic, drawing the eye through or along an avenue such as the oaks along Tower Road do.

Linear Allée

In this application a row of trees flanks a path or line of sight. The row of Red Oaks on Tower Road is the most powerful example of allée planting on today's Cornell campus. By its linear nature and three dimensional qualities it helps channel views and movement patterns. The rhythm of placement of matched trees helps us sense perspective, scale, and order across a long distance. There are two things that are problematic with planting allées at Cornell:

- vulnerability of single species tree plantings to being wiped out by a disease.
- difficulty of overcoming conflicts with underground utilities.

Nevertheless, there are situations such as along Ho Plaza or East Avenue where an allée planting is called for in spite of the risks.



Grouping trees in a large mass gives them some of the qualities of singularity but at a grand scale as exemplified by the oak grove in the Arts Quad .

Mass Planting

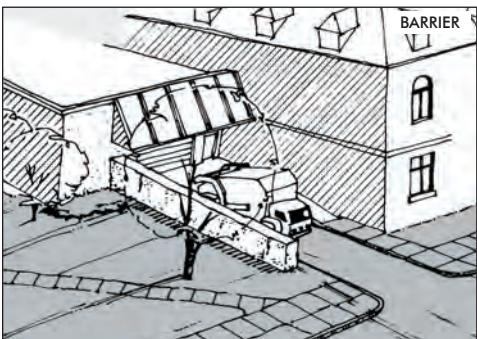
Many trees planted together to create a grove or solid vegetative form. The oak grove in the Arts Quad is a superb example of this. No single tree demands attention but collectively they have a majestic presence that is one of the defining features of the Quad. In fact, while the individual specimens scattered around the Quad struggle to make their presences felt in this vast space, only the oak grove has the stature to comfortably hold its own.



Some tree species such as the elm, oak or locust are particularly well suited to providing overhead enclosure, the ceiling for an outdoor room.

Ceiling or Canopy Planting

Certain tree species branch out close the ground while others such as the Elm or Locust branch high and create enclosure overhead. Again, the oak grove on the Arts Quad provides an excellent example of canopy type trees creating a grand outdoor room with branches and leaves for ceiling.



Interrupt a view towards service or parking with low branching species.

Barrier Planting

Trees or shrubs with low-branching habits such as Linden or Beech can serve as walls to contain or interrupt views or traffic. While barriers are frequently needed on campus to screen unsightly service or parking functions, over-use of such screening interferes with the continuity of the open space through campus.

This pair of photographs show how simply allowing vines to cover a featureless concrete retaining wall on the Campus Store created a verdant courtyard.



In Wee Stinky Glen, by covering the outfalls that are the source of the creek under a Llenroc lintel, at least the illusion of a more natural headwaters is created.



The south side of Uris Hall in 1982 on the left and in 2000 on the right. Curbing protects the beds from erosion and the presence of trees along the walk cast pleasing shadows on the pavement.



The investment in Ho Plaza was substantial but still relatively modest and it grows in value year after year.



When compared with other Cornell infrastructure, landscape improvements have a high benefit to cost ratio. The before-after photograph pairs on the facing page show how modest interventions can make a major difference to the quality of a landscape. And while added plantings on campus adds some maintenance burden, as plantings mature they increase in value rather than depreciate.

As noted on page 49 the predominant plant vocabulary for the Cornell campus is trees and lawn. There are a number of reasons for this: simplicity, consistency across campus, appropriateness of scale, ease and cost of maintenance and economies of standardization. The theme of trees and lawn is punctuated with special landscape features that contribute unique properties where appropriate:

Vines

The sight of ivy covered walls is strongly associated with the idealized image of academia. Indeed, an otherwise featureless wall takes on a special character and texture when it carries a vine. It communicates age and stability and continuity. On the negative side, vines are capable of consuming architecture, obscuring details and damaging woodwork. They are expensive to maintain in check. In many cases the positives outweigh the negatives but we need to be quite intentional about where vines are clearly desirable versus where they contribute nothing by their presence.

Gardens

Gardens with flower beds and large numbers of specimen plantings are labor intensive to maintain. However, there are places on campus where the introduction of exuberant color and intimate scale are called for such as is the case at the Andrew Dickson White House and the Lua Minns Garden at the Plant Sciences Building.

Plazas

As human impact on the landscape becomes concentrated in certain areas, softscape (grass, trees and shrubs) must be replaced with pavement to support foot traffic. This need not require compromise of landscape quality. Two landscaped plazas have been developed at Cornell in the past ten years. One is Ho Plaza on old Central Avenue and another is the Plaza at the end of Tower Road at the Vet College. Similar investment could lead to substantial improvement to Bailey Plaza and to Library Plaza between Uris Library and Olin Library.



The Andrew Dickson White House garden introduces a splash of color in a quiet corner of campus.



10

CORNELL HAS MANY SIGNATURE FEATURES THAT MAKE IT A MEMORABLE PLACE.

"The Tower was here before I arrived and will be here long after I am gone. It is the symbol that will always embody Cornell for me."

Student



The topmost section of the Sage Hall tower was lost many years ago but was restored in 1998 when the Johnson School of Management rebuilt Sage Hall.



The tower on Schwartz Center for the Performing Arts is a modern interpretation of the Collegiate Gothic style as seen at Myron Taylor Hall in the background.

Certain architectural or natural features of the campus, because of their singularity or particular power stand out among neighbors and contribute not only to the character of their immediate sites but to the character and identity of the campus as a whole. McGraw Tower is the most obvious example. Another is the Johnson Art Museum.

There is an abundance of towers on the Cornell campus and the university takes good care of them. Towers are seldom put on a building to meet a program requirement but they certainly contribute to the quality of delight that Werner Sensbach considers vital in campus design (page 43). It is worth noting that between 1990 and 2000 Cornell rebuilt or restored four towers, including McGraw Hall Tower, McGraw bell tower, Sage Hall tower and Tjaden Hall tower.

These landmarks need to be understood as parts of a system. An overabundance of unique features becomes clutter and confusion so it is important to orchestrate new development to complement existing landmarks and create new ones when appropriate.

The skyline of Cornell as observed from across the Cayuga Lake valley is of real consequence and the impact of proposed new construction on it should be considered during the design process.

The accompanying map (on pages 56 and 57) locates existing significant landmarks on the Cornell campus. It is not comprehensive but, once again, demonstrates that Cornell is well-endowed with signature features that contribute to the overall experience of landscape.



The image of Cornell from a distance is its skyline profile.



7. McGraw Tower



8. Baker Tower



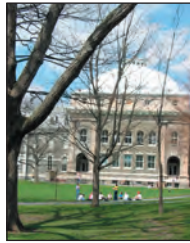
9. A. D. White House



10. McGraw Hall Tower



11. Johnson Museum



12. Sibley Hall Dome



13. Suspension Bridge



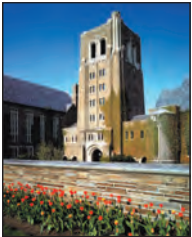
6. Grand White Oak



5. Wee Stinky Glen



4. Sage Hall Tower



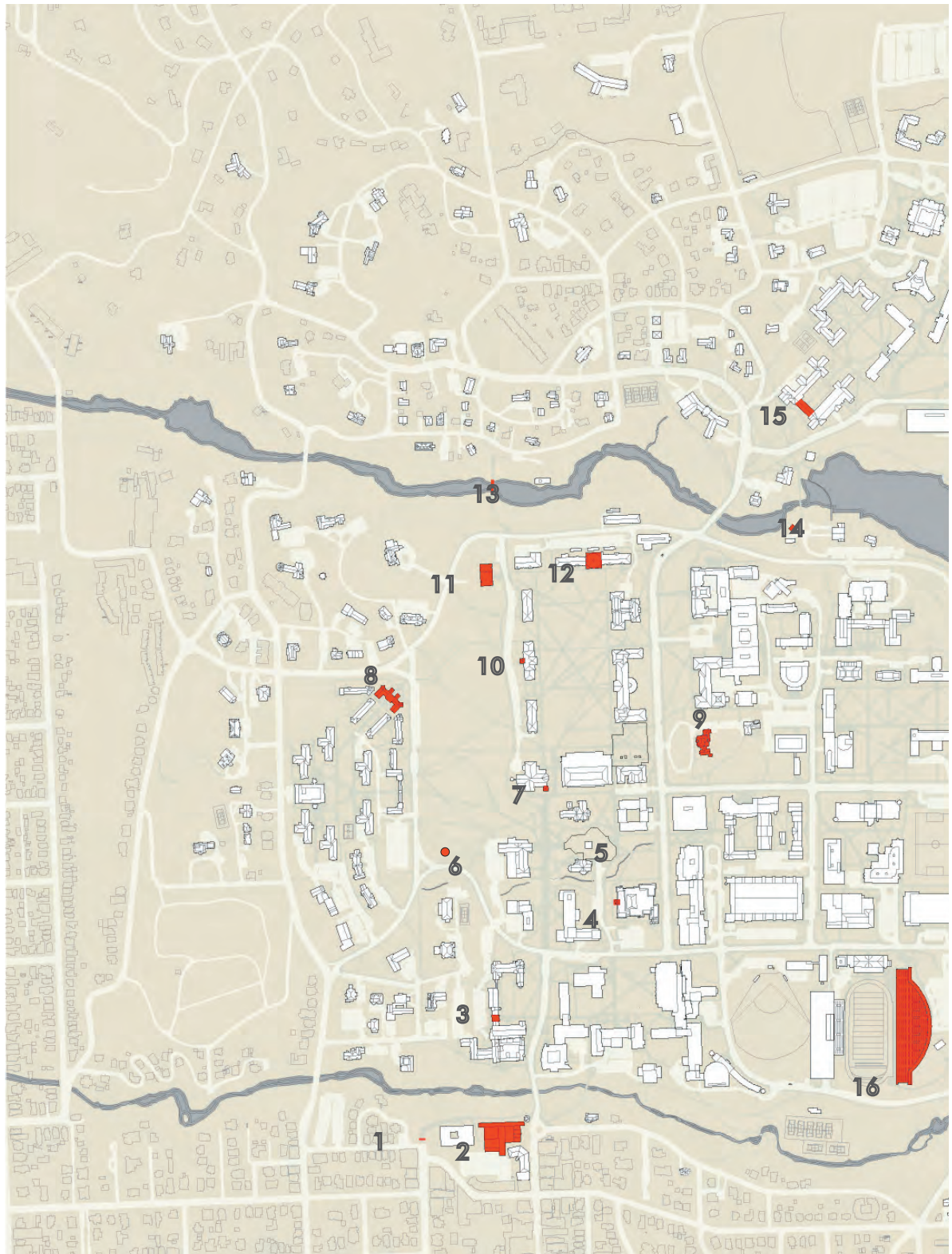
3. Myron Taylor Tower



2. Schwartz Center for Performing Arts

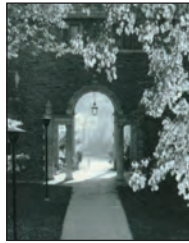


1. Eddy Gate





14. Hydraulics Lab



15. Balch Arch



16. Schoellkopf Crescent



17. Sackett Bridge



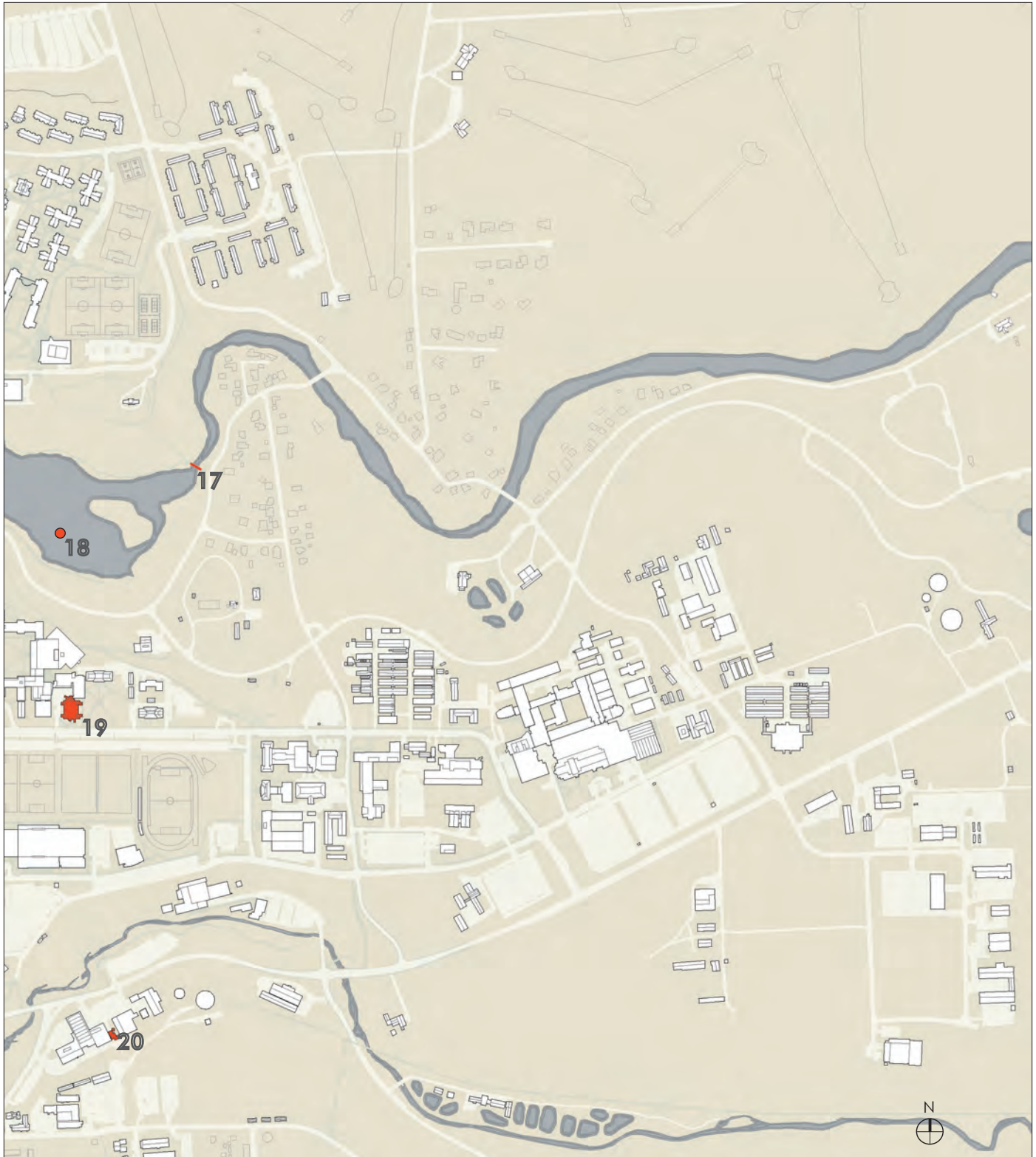
18. Beebe Lake



19. Bradfield Hall



20. Boiler Stacks



Some of many landmarks on the campus that make Cornell memorable.



The purpose of the Campus Landscape Notebook, Sections One and Two, has been to provide a foundation for thinking about the Cornell landscape as a university resource of immense value. Further, it is intended to describe the special qualities that are unique to this campus and provide a text that, while it might not be authoritative, is useful as a benchmark for reference as decisions are made relating to campus landscape.

The beauty of the Cornell campus comes to it almost too easily, a gift of its location. Managing the campus landscape to maintain its unique qualities requires attention to things that are in some ways obvious but perhaps worth restating because of that fact.

Gorges - The deep gorges are scenic resources that show up repeatedly in images of Cornell but, even more importantly, they are expressions of untamed wild nature accessible for sanctuary in the midst of a crowded and distracting urban settlement.

Topography - The rolling topography typical of upstate New York, perched at the edge of a broad deep valley, gives access to majestic long views and provides a platform for a distinctive campus skyline as viewed from a distance.

Water - The streams that cross campus and the lakes that are visible from campus are powerful symbols of interconnection, of ablution and geologic history.

Geometry - The logical network of roads and paths and the organization of buildings on campus and the visual axes that they create are crucial to the legibility of campus and the sense of comfort that one has in navigating the campus.

Grand spaces - The quads (Arts, Agriculture, and Engineering) provide clearings, home bases if you will, where one can pause physically and mentally in the passage across campus. They also provide points of reference and neighborhood identity in the layout of campus.

Landmarks - The hierarchy of the many special features of campus add character and complexity and make the campus more readable and memorable. McGraw Tower is of course the most prominent. It is only a slight exaggeration to say that McGraw Tower is to Cornell what the Eiffel Tower is to Paris and it deserves special respect in terms of sightlines in any future development of campus.

There are few campuses in America that enjoy any one of these gifts, much less all of them. Cornell is in the enviable position of needing only to maintain and work with these resources not create them.

During its lifetime Cornell has devoted substantial energy and thought in developing its land resources in a coherent and responsible way. As it enters the twenty first century there is every opportunity to continue to add to the richness and meaning of this complex landscape.

