

Developing a Campus Master Plan

In 1986, the Trustees of the University of Pennsylvania charged the Senior Vice President with initiating a planning process aimed at producing a comprehensive development plan for the campus, assigning the task to the Center for Environmental Design and Planning, and the Office of Facilities Planning.

When completed, the Master Plan will provide direction on a wide range of immediate and short range problems, but it will also serve a longer range purpose by offering a vision of Penn's future, of a campus capable of encompassing growth and change. Priorities and assumptions may change in the future; specific designs and solutions can only be illustrative of the concepts and recommendations contained in the plan. Like the plans which have preceded it, this plan should be seen as part of a continuing process, which provides a framework for development as it remains responsive to the real needs of the community it is to serve.

The Master Plan must address both the needs for space in which to live and work, and the more abstract needs for a sense of community and identifiable image. The University is a diverse and complex community with a population of approximately 30,000. The physical plan for this community, if it is to be truly useful, must address the varied needs of all its members, while recognizing that their various pursuits are interrelated.

The process for generating a Master Plan involves identifying and affirming the values and objectives of the University, developing alternative strategies for achieving its goals and presenting their implications, and, lastly, incorporating the final recommendations into a comprehensive and unified final plan for the campus.

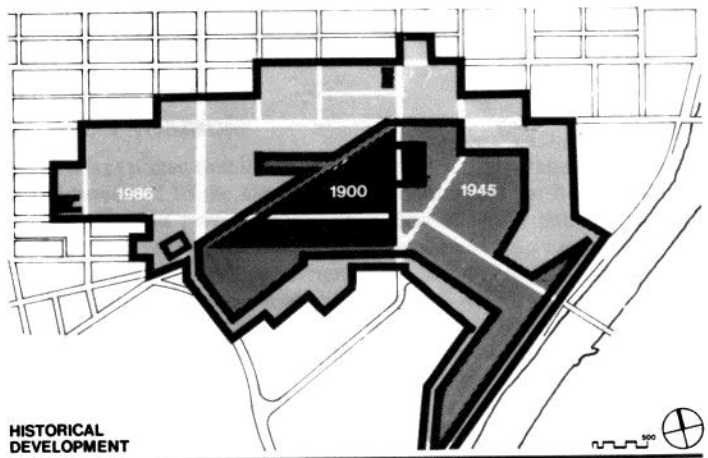
A Brief History of Campus Planning at Penn

Penn has a long tradition of campus planning. From the time of its move to West Philadelphia in 1879 until 1913, the campus grew without any formal development scheme. Buildings were sited in groups in accordance with the topography and the street grid. The result was a campus "without organic arrangement," according to Paul Philippe Cret, Penn's first planner. Cret went on to say that there was a need for "the creation of a comprehensive and carefully organized plan of growth" which would improve and redefine the campus image. The plan and report prepared in 1913 by Cret guided the image and growth of the University for the following three decades. One of Cret's central concepts was that "open spaces [should be] enclosed by buildings and not employed to surround them." In 1936, Harbeson and Hough of Cret's office redesigned this plan, making changes which strengthened its direction and guiding principles.

In 1948 a new plan was developed by Sydney E. Martin which treated the campus as an integral part of the city and favored buildings designed as free standing objects in a landscaped setting. This plan ruled out "conservation" as a guiding principle and followed the standards set by the newly formed City Planning Commission. It initiated use of the superblock and recommended extensive street closings, and was incorporated into the Urban Renewal Plan for the University City area in 1950. Martin's plan also established the east-west axis along Locust Walk, going so far as to suggest the partial demolition of the Furness building to reinforce this idea.

In 1962 and 1965 two campus plans were developed to direct the dynamic growth associated with the Urban Renewal process which took place in the 1960's. These plans implemented the earlier recommendations for the pedestrian-oriented superblocks in the central and western sections of the campus.

The Landscape Development Plan (LAMP) of 1975 addressed the need to improve the space between buildings and many of the most memorable places on today's campus, such as Blanche Levy Park, resulted from that plan.



The historical growth of the campus. Note the major growth after 1945 due to urban renewal in University City.

Davis, Brody and Associates developed a master plan in 1980 which was intended to guide the completion of unfinished projects and integrate the individual components built during the sixties boom into a more cohesive and logical framework.

Between 1980 and 1985, the University focused its planning efforts on topic- and site-specific studies. Although these plans were aimed at current projects and problems, the intention was to build on them to create guidelines for the future development of the entire campus.

The current master planning process, which is part of this planning tradition, was initiated in 1986. It will build on the past, and aims at an expression of the values and priorities of today and a view into the future.

Campus Master Planning Process

In order to develop a working Master Plan, a clear understanding of the needs, problems, and opportunities which face the University is needed. Given the complexity of the situation at Penn, the master planning process will involve four interrelated paths of exploration, or tracks, advanced simultaneously. This approach ensures the timely production of working plans and reports, but more importantly, enables the planning team to raise questions and develop answers early in the process. Each track will inform the others, maintaining a necessary balance between competing goals.

The four interrelated tracks can be described as:

1. Informational—the Planning Context: focusing on the presentation of the existing campus and its surroundings as the context for all planning decisions.

2. Programmatic Needs: issues of what, how much, and in what operational relationships.

3. Physical Design Concepts and Problems: plans for completing, improving, and reinforcing the strong qualities inherent in the existing campus environment.

4. Development Resources and Opportunities: studies of the potential for new development, building reassignment, and campus expansion; questions concerning how best to use existing building and land resources, and how and where to expand the campus to accommodate future growth.

The final long range campus Master Plan will be composed of elements developed from these four tracks.

- A written and graphic description of the organizational and physical structure of the existing campus.
- Plans for program areas such as parking, research facilities, and student life.
- Detailed plans to guide in the development of selected areas of the campus.
- Guidelines for the future growth of the campus.

Track One: Informational—The Planning Context

The existing campus has a strong physical and organizational structure, which has evolved over the last 100 years in response to a variety of internal and external factors. This structure, composed of buildings and open spaces, movement networks, and functional relationships, provides a solid foundation for the long range development of the campus. The relationship between the campus and its surroundings has also evolved from its original suburban character to a dense urban center immediately adjoining a rapidly growing city center. In the context of the City, of West Philadelphia, and of the complex of institutions which forms its immediate environment, Penn is only one part of the total picture, but clearly the largest and one of the most influential components of this section of the City.

The Penn campus of today is strongly oriented along a series of east/west axes. This major shift from the original north/south orientation emerged slowly as the natural outcome of growth along the major streets which extended west and southwest when the rapid expansion of the 1960's began. Numerous cross streets were closed to traffic and Locust Street became Locust Walk, the central spine of the campus. Between the eastern edge of the campus at 31st Street (along the railroad tracks) and 40th Street on the west, this major pedestrian walkway is interrupted only at 33rd and 34th Streets, creating a core of tree lined walks, courts and landscaped spaces surrounded by academic, residential and community buildings. To the south, the quadrangle dormitories, medical center and other related facilities create a second pedestrian dominated zone. Hamilton Walk parallels Locust Walk and structures this area. The most recent expansion of the campus has been to the north along Walnut and parts of Chestnut Streets, the two major thoroughfares connecting the center of Philadelphia to the campus. In this area the block pattern remains intact. University buildings mix with non-University buildings and the character is clearly urban, busy, and active,

as new development incorporates uses which contribute to life along the street. Sansom Street offers the possibility of a secondary, more pedestrian oriented axis through this area. The potential exists for a unique integration of campus and city, a balance between the quiet of college greens and walks, and the excitement of busy city streets filled with shops and restaurants. The imminent development of Walnut and Chestnut Streets will have much to do with the eventual character of the northern area of the campus.

The functional relationships built into the campus structure are clear and ordered. The academic core which defines the center of the campus is amazingly compact. Approximately three blocks wide by five blocks long, with some special outlying components like the Dental School, Law School, and the Medical Center, it fosters interaction between departments. The facilities which house the various schools and major academic departments within the University are generally grouped around compatible disciplines. The physical sciences and Engineering School are east of 34th Street; the social sciences, including the Schools of Social Work and Education, are between 37th and 38th Streets, and the biological sciences, Nursing and Veterinary Schools, adjoin the growing medical center to the south. The Wharton School spans from 36th to 38th Streets south of Locust Walk. The School of Communications and the Annenberg Theaters are north of Locust Walk between 36th and 37th Streets, while the School of Fine Arts and the Music Department are along 34th Street. The many diverse departments of the School of Arts and Sciences are, appropriately, directed from the very center of the campus, College Hall.

A continuous band of housing and support facilities surround the academic core. Student residences, both graduate and undergraduate, surround the core on its north, south, and west sides. Major parking facilities are distributed within this band, forming a ring around the central campus. A growing network of shopping facilities are also located within this band of services. To the east, where the largest open land areas exist, a concentration of athletic buildings and facilities complete the campus' surroundings.

The structure of Penn's campus suggests actions which will enhance the existing patterns and correct deficiencies, rather than dramatically alter that structure.

The campus must also be understood in relation to the many peer institutions which share this part of West Philadelphia. Penn directly abuts Drexel University to the east and north, the University City Science Center to the north, and Children's Hospital and Veteran's Hospital to the south, and the City's convention center to the southeast. Due east, the railroad tracks and Post Office land occupy the flood plain along the banks of the Schuylkill River.

The character of the areas to the west of the campus is very different. In contrast to the larger institutional buildings and settings in University City, it is residential in scale. The West Philadelphia community, a large area of homes and apartment houses, begins beyond 40th Street. This

collection of neighborhoods extends to the limits of the city two and a half miles away. Those neighborhoods which are nearest the campus are strongly associated with Penn, being the place where many students and faculty live.

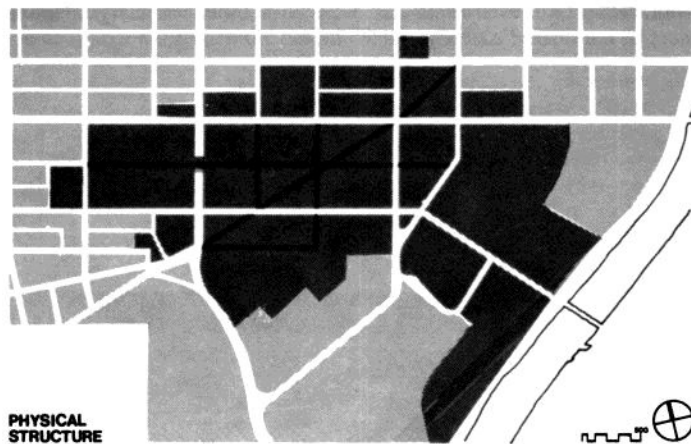
University City, in the midst of this dense area, contains some sites which are still available for development, but it is important to recognize that that amount of land, though considerable in area, is small relative to the existing campus. Further, the major axes and patterns of development are fairly well established and serve the campus very well. The directions now being taken in the development of the City have steadily closed the gap between the campus and the core of the downtown, which could affect plans for future expansion. Recent proposals for the development of 30th Street Station and the east bank of the Schuylkill River practically extend center city to Penn's boundaries.

Track Two: Programmatic Needs

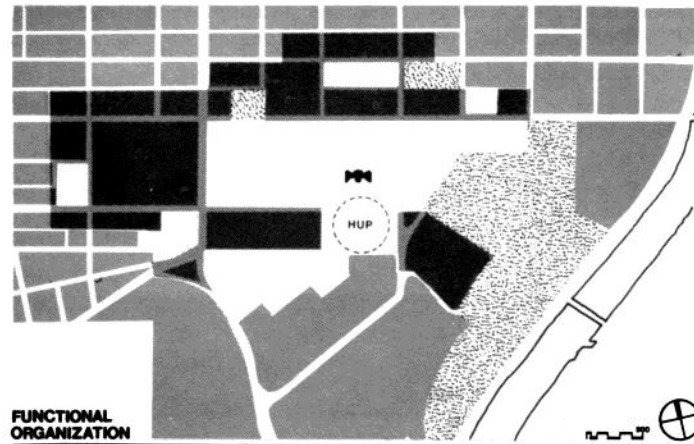
The definition of current needs is complex, and forecasting needs for the future is even more problematic. In many cases the need for new facilities is well defined in some of the Five Year Plans developed by the schools, resource centers, and administrative units of the university. In almost every case, however, these plans identify long range needs rather than specifying amount, type and location of proposed facilities, their impact on other goals and on available resources.

The master plan will address some of the following key programmatic issues:

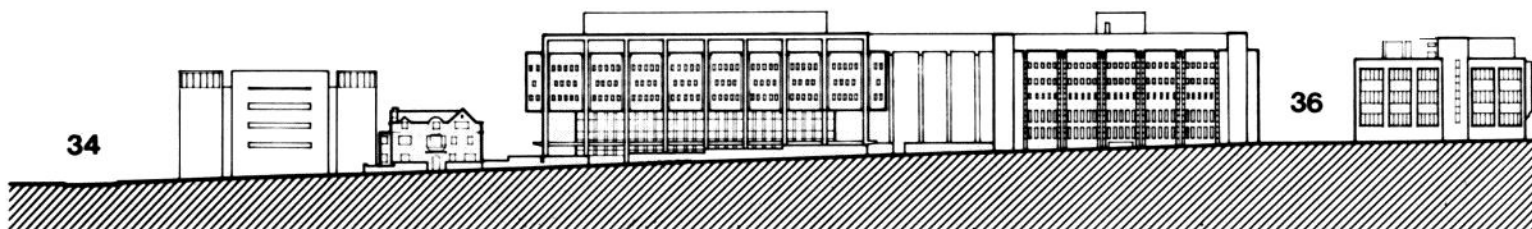
Faculty Housing—The University's policy is to encourage faculty to live near the campus. This is viewed as an important way to enrich the intellectual and social life of the University community, by fostering interchange outside the classroom between students and faculty, and among faculty. A considerable number of the faculty already live on or near the campus, but the majority do not. A recent analysis of faculty addresses by the University's Office of Institutional Research reveals that more than 30% of the standing faculty teaching in the undergraduate program live within the neighborhoods immediately surrounding the campus, including the Center City communities to the east. This figure is even higher (40%) for undergraduate faculty under forty. However, when all of the standing faculty, including those teaching in graduate programs and professional schools, are combined only 21.2 % live in these same neighborhoods. The rest live throughout the Philadelphia region with significant concentrations on the Main Line, the Media/West Chester area, and Germantown/Chestnut Hill. There are obvious reasons for this which are associated with the quality and accessibility of many residential areas of the region. Responding to this very same issue in the 1917 Master Plan, Paul Cret wrote, "A socially compact community formed by students and instructors is certainly desirable, although perhaps difficult of attainment, in a university placed in a great city."



The campus has a strong central pedestrian core defined by Locust Walk, but is more urban along its northern and western edges.



A functional diagram of the campus indicates a ring of housing and support services surrounding the central academic core.



Elevations of Walnut Street indicate the importance new buildings will have in defining the scale and character of the campus.

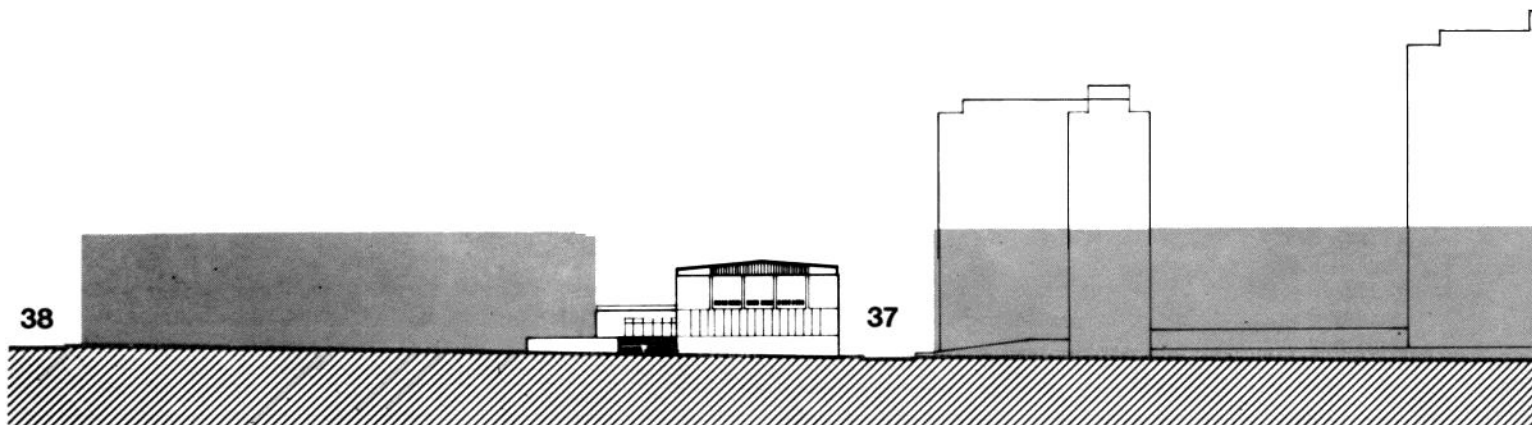
Could more faculty be encouraged to move on campus or into the nearby neighborhoods of West Philadelphia? What incentives are necessary? More to the point of the campus Master Plan, is the construction of new faculty housing required to achieve these objectives, or should the planning strategies focus more on economic or social incentives such as the University's Guaranteed Mortgage Program? The quality of the public schools are an important concern for faculty with school age children. How could this concern be addressed? Given the rapidly growing interest in the existing housing stock of West Philadelphia (with its price implications), and plans by private developers to construct new apartment buildings along Chestnut Street, a range of housing types will be available to interested faculty.

Student Housing—Students at Penn follow a pattern common to most major research universities. 70.3% of Penn undergraduates live on campus. However, while 99.1% of freshmen live in University housing, only 31.7% of seniors live on campus. Graduate students are even less likely to live on campus if alternatives are available. Only 10% of the University's graduate and professional students live on campus. There are currently vacancies in most types of on-campus housing. Off-campus housing offers Penn students competitive rents, some recently renovated units, and housing types, such as shared houses, unavailable on campus. In this context, the University must become more competitive. Renovations aimed at improving the University's competitive position are already under way throughout the campus. Given the intellectual and social benefits of increased on-campus living, should more student housing be built in the future? Can more units be supported? Or should the University extend its interest into the community, working with the private system to provide safe and affordable alternatives for its students? Three factors support investing in University residences in the future. One factor is the value of real estate in University City, which will raise rents. The second is the University's commitment to improve the quality of on campus housing which will improve its competitive position. Third,

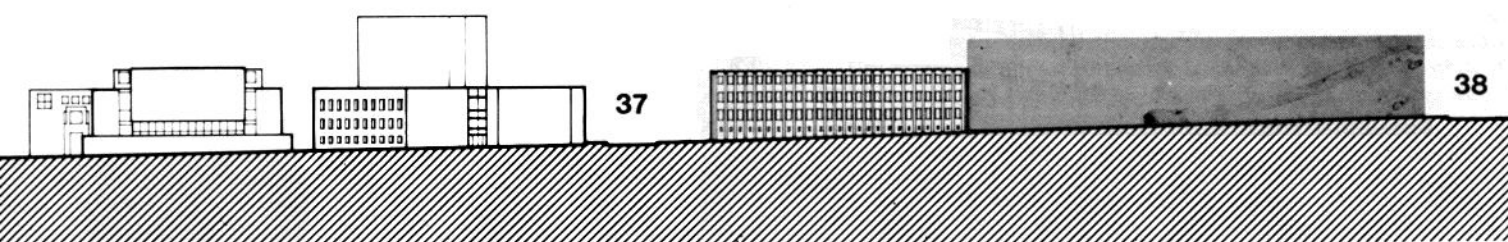
given the large numbers of students living off-campus, (approximately 13,000), it should be possible to increase the number of students in on-campus housing. In the past, campus planners have proposed adding low-rise housing in the superblock, not only as a way of adding more units but to improve the character of this residential precinct. Limited development, particularly along the 40th Street edge, combined with recreational uses is an alternative option.

Athletics and Recreation—Penn has an extremely active recreation program. Clubs and intramural teams are scheduled for competition throughout the school year and on every available court and ball field. As a result the ball fields and athletic facilities are severely taxed, and the needs of both the recreation program and intercollegiate athletic program are often compromised. More ball fields are needed along with more tennis courts and other facilities. A field house has been programmed and studied and is viewed as a priority.

Penn is, however, an urban university, and the large open areas required for these facilities are few. Penn may have to lease or acquire land for ball fields off campus to meet its requirements. The available sites are also prime targets for other much needed facilities. The location of the field house, for example, remains a difficult question. Proximity to the majority of students and the needs of the intercollegiate athletic program are two separate criteria, but they are not necessarily in opposition. Combining the field house with existing facilities has many operational advantages but restricts alternatives. One alternative, which connects it to Gimbel Gymnasium, places the field house closer to the center of student housing and the needs of the recreation program. Another possibility would be to join the field house to Hutchinson Gymnasium, adjacent to existing athletic facilities. Other possible alternative sites have their own advantages and disadvantages. Solving the need for recreation facilities on this densely built up campus calls for creative planning; every available surface, even roofs and decks over other necessary facilities, must be considered a potential site.



NORTH ELEVATION



SOUTH ELEVATION

Academic and Research Facilities—Some statements about needed facilities have been clearly set out in the Five Year Plans published in *Almanac* to date. Others are in preparation. In some instances, the location of these facilities is also clearly given but in most cases the question of where, and to some extent, the question of exactly how much, is still open to study. The needs for expansion of on-campus facilities can be met using sites within the campus proper.

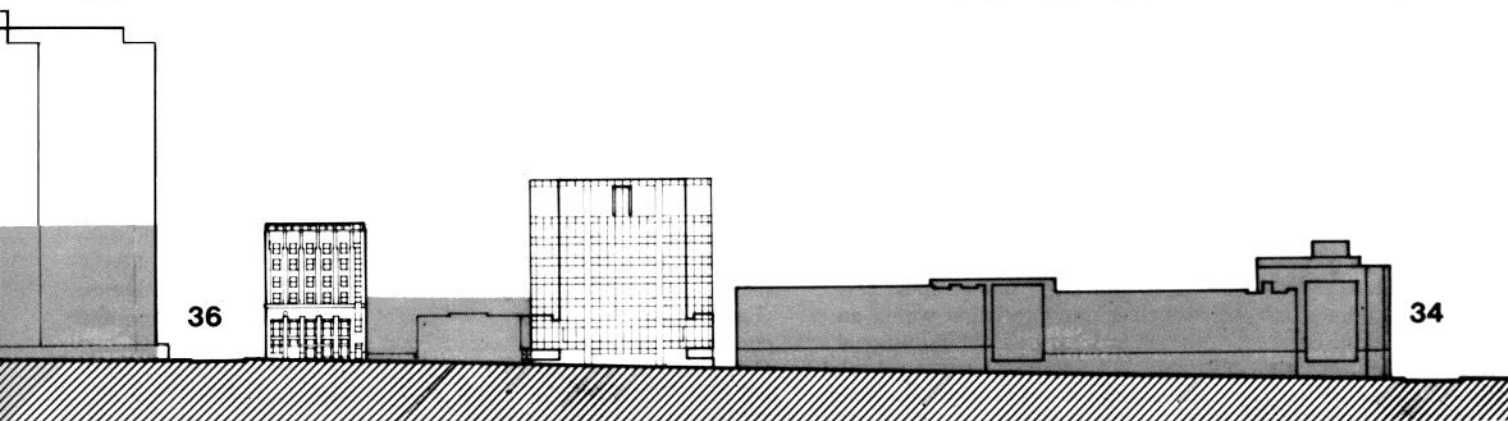
The plan for the campus would be enhanced by supporting natural academic ties in the location of new facilities and maintenance of the climate which fosters scholarly interchange. This sometimes results in competition between schools and conflicts with other priorities and other planning values, such as the preservation of the few remaining historic buildings and the character of older portions of the campus.

Student Activities and Performing Arts Facilities—An important goal of the comprehensive plan for the Penn campus is the provision of facilities for accommodating student activities and the performing arts as one strategy for enhancing the quality of campus life. The activities range from musical and dramatic performances to club activities and call for a variety of space types from offices and meeting rooms to auditoriums and theaters. Most of these activities are now housed in existing buildings but questions have been raised concerning the adequacy of the existing facilities and their location. The issue of centralizing many student activities into a new facility—a new student union—has been actively discussed and debated in *Almanac* and *The Daily Pennsylvanian*. The issue of a performing arts facility and the impact of plans for conversion of Irvine Auditorium were topics of campus-wide debate. The importance of the relationship between student activities and retail development—the BookStore, restaurants and shops—must also be recognized. The problem of how to accommodate these diverse student activities on the campus, given limited resources, is very complex. It must be carefully considered in the final master plan because of its symbolic as well as functional role in the design of the campus.

Parking is an important service with considerable impact on the form of the University campus. It is also one of the most often discussed within the University community. Half of the available parking is on surface lots, the majority of which are valuable land resources for development of academic, recreational and campus services, including parking. This means that surface parking will have to be replaced with more costly structured parking and that sites for parking structures must be found which accommodate the needs of the University community while not displacing other uses or disturbing other critical functional relationships. Visitor and transient parking will be severely affected by these developments, and special attention should be paid to this matter. The amount of parking to be provided by the University, and its preferred location, are difficult questions to answer, as they affect plans for available development sites as well as the character of the campus environment.

Maintaining both the current ratios of parking to building area, and preserving high accessibility, will become increasingly more difficult as the campus builds more buildings on existing surface parking lots. The alternatives include the construction of a series of major parking garages along the edge of the central campus; a major remote parking facility combined with less in-close structured parking; or the acceptance of lower parking ratios. The viability of either of the first two alternatives is dependent on land availability and other University development priorities just as the possibility for reducing parking ratios must be evaluated in terms of the quality and availability of other transportation services. The answer may lie in a combination of two or all three alternatives.

A Retail Development Plan was developed and presented in 1986 and will be incorporated into the Master Plan. It recognizes two types of retail activity. One, convenience retail, which includes eating establishments and shops which are used on a frequent basis by all parts of the University community; the other, major retail concentrations. The plan recommends that convenience retail uses be distributed to maximize access from all areas of the campus and that new development should attempt





Proposed landscape improvement for Walnut Street showing a walkway into the campus beside the Van Pelt Library.

to accommodate convenience retail uses. It further recommends that two major retail concentrations be developed to create a sense of "place" and appropriately mix retail and other uses. One focus should be to strengthen the 40th Street retail corridor. The second focus should be to create a new eastern core between 34th and 37th Streets, and Walnut and Chestnut Streets, incorporating Sansom Street's restaurants. The new building under construction at 34th and Walnut Streets is designed to support this plan with shops and restaurants on the ground level. The result should be a major center of activity, close to the core of the University. Combined, these two areas should provide a wide range of shopping opportunities serving both the University City community and drawing on a variety of outside markets as well.

Track Three: Physical Planning Issues

The majority of these issues are commonly felt but difficult to define, and there are certainly differences of opinion on their relative importance to the campus environment. They include such campus design issues as:

Campus Boundaries—There is a need to identify the boundaries of the campus as a means of strengthening its image. The concept of a boundary or "edge" implies differentiation between what is on campus and what is not. In this context, an "edge" is not viewed as a barrier. Some edges of the campus, such as the Quadrangle and the central precinct of the campus, are sharply delineated. In other areas, such as Penn's western boundary, the edge is a broad zone of interaction or use integration. Depending on their direction and mode of travel, people may perceive a given location as a boundary or a zone of activity (such as a shopping street), but in either case, campus edges help to define that "place" which is the University of Pennsylvania.

Gateways—One way to strengthen a boundary is to more sharply delineate entrances and gateways (symbolic and real) to the campus. Another is to deal with the character and form of the edge in a consistent manner. In some places, sites provide opportunities to build new facilities which can be designed to help mark the point of arrival at the campus (for example, along Walnut Street near 32nd Street, and along 40th Street).

Campus Precincts—Associated with the question of boundaries is the prevalent image of the campus as the sum of its precincts, each with a different character expressive of the buildings and programs located there, each with its own "edge" but all part of the one campus. This provides for a plan which fosters richness and variation within an identifiable campus, breaking down the scale of the large institutional environment into understandable units. This approach reinforces the reality of the existing campus. It also places a strong emphasis on these factors which tie the overall plan together, the connecting open space and movement systems, and the consistency of architectural materials.



System of walks and open space should be extended into new developments.

The Character and Scale of New Development—Different sites and contexts require different treatment, but buildings on campus should also manifest consistency. The master plan will suggest ways of establishing an architectural unity without restricting imagination and creativity. A consistent set of materials—red brick and white limestone (or, more recently, concrete)—has helped to distinguish buildings on Penn's campus from adjoining structures of comparable size on Drexel's campus. Penn's best architecture maintains a scale and a level of detail which expresses the human quality of the institution.

Reinforcing the Axes of the Campus—The physical structure of the campus is made legible by the axes and dominant movement paths such as Locust Walk and the cross walkways at 36th and 37th Streets. Other elements of this system, having various levels of importance, require reinforcement in terms of landscape improvements and design modifications, including the distribution of supportive uses. The manner in which buildings are sited along these key walkways contributes to the activity of the campus.

One axis, the diagonal which recalls Woodland Avenue, remains important to the plan of the campus in spite of its absorption into the superblock pattern. This importance derives from the positioning of many older buildings along this diagonal and the extension of that axis northeast through the Drexel Campus to 30th Street Station. A problem exists at the crucial intersection of this diagonal and the intersection of 33rd and Chestnut Streets, a very visible gateway to the campus. The axis is hardly recognized as it wanders through a parking lot and along a dirt path toward the center of the campus.

Continuing the Work of the Landscape Development Plan—The changes which have occurred with the landscape improvements to College Green and Locust Walk demonstrate the importance of the quality of the space between buildings in defining the image of the campus. The work which began in 1975 with the Landscape Development Plan is still in progress. The Master Plan will incorporate guidelines from the landscape plan, extending them to new areas and making the modifications necessary to update the recommendations. The importance of this part of the plan cannot be overemphasized.

Conserving the Past—The conservation of the few remaining historic buildings and building groupings on the campus is an important physical planning issue. Such buildings as College Hall, the original library (Furness), and the Quadrangle are part of the memories of all alumni and contribute to the unique image of Penn. Areas such as Smith Walk and College Green are ensembles of buildings and spaces which are important to the quality of the campus environment and are irreplaceable. Where change is required, great care must be exercised in conserving the scale and ambience of these areas.

Track Four: Development Resources and Opportunities

Many sites within the campus offer opportunities for development. There are the obvious vacant sites along Walnut and Chestnut Streets, part of the redevelopment activity of the 1960's; and the University could take advantage of many opportunities to build among existing buildings on campus.

Potential development sites on campus include:

- Infill sites in the High Rise Block
- Walnut Street east of 33rd Street, north and southsides, next to LRSM and behind DRL
- Hill Field and its parking lot
- Walnut Street at 36th, 38th and 40th Streets
- The temporary shops along 38th Street between Locust and Walnut Streets (current bookstore site)

Penn must also carefully monitor developments taking place beyond the boundaries of the current campus. These developments may present opportunities for future growth and for solutions to some of the critical needs for space. Even where they offer no development opportunities for Penn, they may affect the University's plans for the campus.

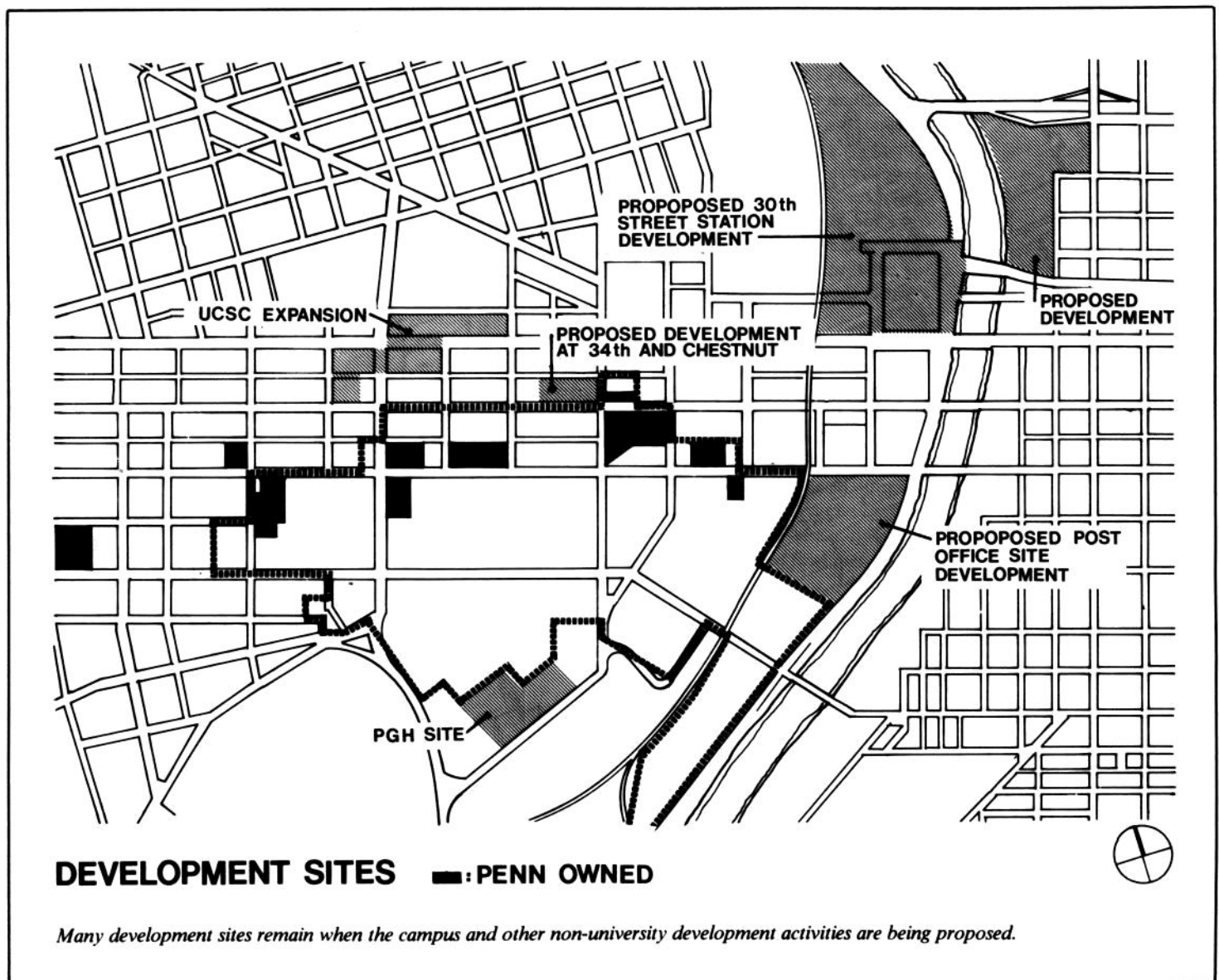
The redevelopment plan for the PGH site along University Avenue, south of the Medical School, has provided for growth in medical facilities.

The University is associated with the private residential development of the 34th and Chestnut Street site which will contribute new apartments, shops and offices, and new cooperative ventures are being explored between Penn and the University City Science Center.

To the east, the Post Office has been exploring ways of redeveloping the land occupied by its parking and maintenance facilities south of Walnut Street along the Delaware River. What is eventually built, and the extent of Penn's participation, will certainly affect the campus given the site's position along our eastern border. Many of the previous campus plans have shown the river's edge as a major area for campus expansion.

The master plan for Drexel's future (now in process), a master plan for the University City Science Center, and the grand scheme for the development of the air rights over the tracks at 30th Street Station, are also relevant to Penn's plan.

Other building and land resources and development opportunities may become available in the future, and Penn must be ready to take advantage of these. The Master Plan, by articulating a strategy for Penn's future development, will help to make the value of any off-campus development opportunities clear.



Current Status of the Planning Process

The process of collecting data and analyzing it is nearly complete, although new information continues to be gathered; the process remains open. The context of the campus, and its physical design and functional organization, have been documented as a reference for the planning process. Existing parking patterns, open space networks, and academic relationships have been diagrammed. Working papers on a variety of programmatic issues are in process. In addition, the already complete Campus Development Plan Reports prepared by the Center for Environmental Design and Planning over the last four years cover topics such as campus edges, building siting, parking, retail development, guidelines for development of Walnut Street, and studies focusing on the East Central Precinct (33rd to 34th and Spruce to Walnut Streets) and the Athletic Precinct.

The next steps will focus on synthesizing the material gathered, developing strategies, and testing alternatives to arrive at recommendations which will be illustrated graphically and in report form for presentation.

The Timetable

It is expected that in October, 1987, a first draft of the Master Plan will be presented to the University community and the Board of Trustees. Prior to that presentation a great deal of work remains to be done. During the spring the planning team will meet with a number of groups within the University community to elicit comments and suggestions. The information developed and translated, the variety of comments and ideas offered, will then be integrated into a comprehensive document setting forth plans for all programmatic areas and illustrating the implications of these designs.

*Comments on this report
may be sent to: the
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