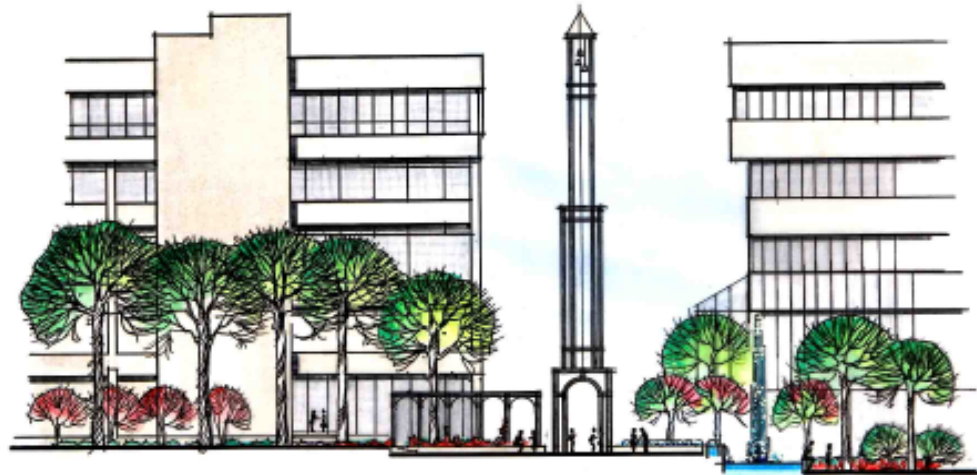




Master Plan 2009

Northern Kentucky University



A Guide to a Residential, Student Focused Learning Community

Prepared by
The Campus Studio
Vivian Llambi & Associates
KLH Engineers

Master Plan 2009

Northern Kentucky University

*A Guide to Growth and a Residential
Student Focused Learning Community*

March 11, 2009

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Table of Contents

Section 1	Undertaking the Plan	1	Section 4	Campus Wide Patterns	33
	A. Master Plan Components	2		A. Land Use Patterns	35
	1. Student Friendly Environment	3		1. Academic Core	37
	2. Enrollment Growth	4		2. Housing	38
	3. Residential University	5		3. Athletics and Recreation	41
	B. Planning Approach	6		4. Maintenance and Service	45
				5. Faith Village	46
Section 2	Background Information	9		6. Town Center	47
	A. NKU's Planning Heritage	10		7. Preservation and Sustainability	48
	1. Image of the American University	10		B. Building Patterns	51
	2. Planning at NKU	12		C. Open Space Patterns	53
	B. Existing Conditions	14		1. Open Space Components	54
	1. Statistical Summary	15		2. Organizational Patterns	55
	2. Priority Issues and Concerns	16		3. Important Open Spaces	57
Section 3	Alternative Master Plan	25		D. Pedestrian Circulation Patterns	58
	A. Alternative Concepts (3 options)	27		1. Major Corridors	59
	1. Alternative 1	28		2. Elevated Walkways	61
	2. Alternative 2	29		3. Secondary Walks	62
	3. Alternative 3	30		E. Vehicular Circulation	63
	B. Preferred Directions	31		1. Road Descriptions	64
				2. Overview	66
				3. Arrival and Entry Points	68
				4. Loop Road	
				5. Access Roads	69
				6. Emergency and Service Access	70
				F. Parking Patterns	71
				1. Demand	71
				2. Proposed Strategy	
				G. Bicycle Patterns	74
				1. Central Loop	76
				2. Perimeter Linkages	76
				H. Utility Patterns	78
				1. Production	78
				2. Distribution	80



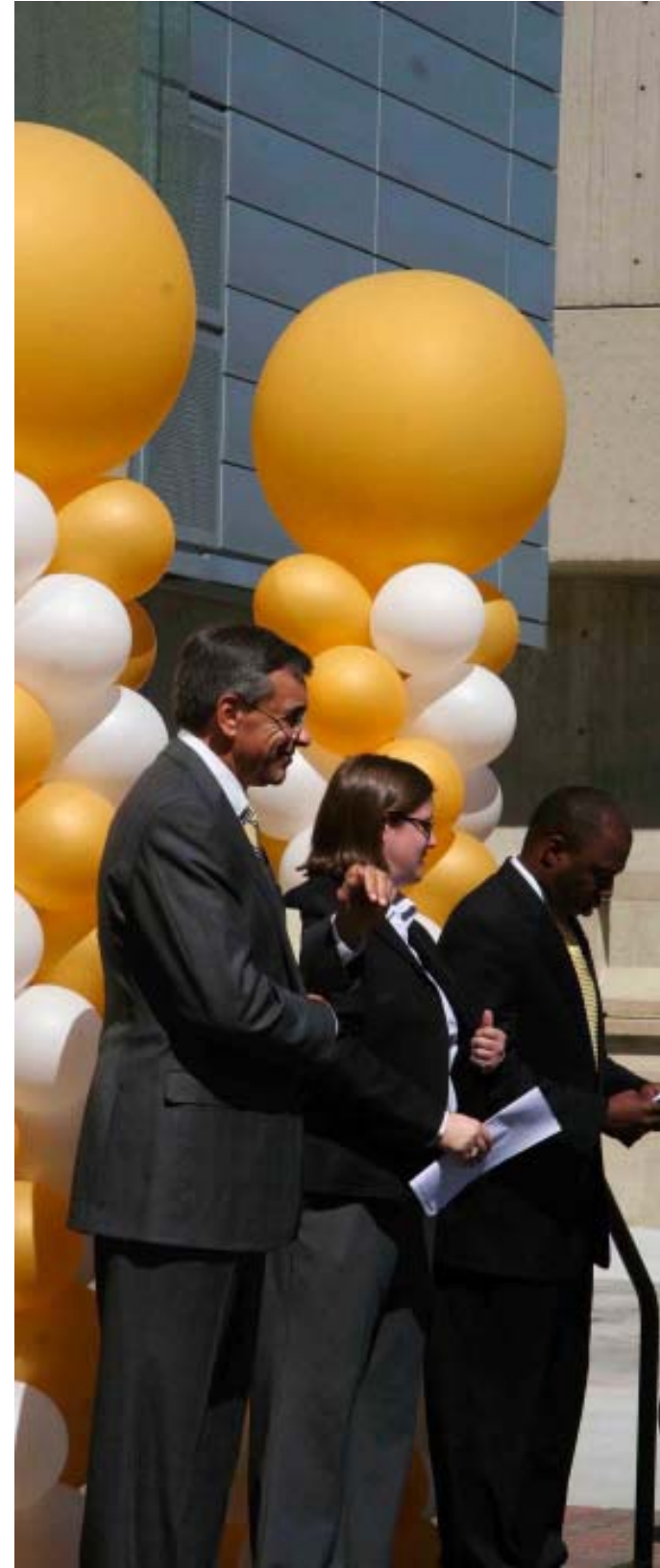
Section 5	District Plans	85	Section 8	Implementation	119
	A. West District	87		A. Design Guidelines	122
	B. North District	89		1. Open Space	122
	C. Northeast District	90		2. Landscaping	123
	D. East District	91		3. Building Consistency	124
	E. South District	92		4. Site Efficiency	125
	F. South Campus District	93		5. Site Grading	125
	G. South Connector Road District	94		6. Safety and Lighting	125
	1. Development Patterns	95		7. Wayfinding	126
	2. Connections	97		8. Universal Access	126
Section 6	Capacity Projections	99		9. Bicycles	126
	A. Campus Wide Targets	100		10. Pedestrian Connectivity	127
	B. Building Capacities	102		11. Campus Housing	127
	1. Residential Capacities	103		12. Athletic Facilities	128
	2. General Academic Capacities	104		13. Parking Lots and Garages	128
Section 7	Central Plaza Design	107		14. Stewardship and Sustainability	129
	A. Basic Issues and Recommendations	110		15. Neighborhood Gateways/Portals	129
	1. Major Activity Areas	110		16. Public Art	129
	2. Ground Plane Treatments	111		B. Acquisition Strategy	130
	3. Accessibility	112	Section 9	Acknowledgements	133
	B. Specific Area Recommendations	113		A. Board of Regents	136
	1. South Area	113		B. Executive Committee	136
	2. North Area	114		C. Master Plan Advisory Committee	136
	3. Tower Area	116		D. Leadership Committee	136
				E. Community Participation	137
				F. Consultant Team	137
			Section 10	Master Plan Illustrations	139
				A. Campus Wide Plans	141
				1. South Connector Road Plan	141
				2. Master Plan Illustration and Detail	142
				B. Central Plaza	144
				1. Perspective Sketch and Plan	144
				2. Tower Area Elevation and Plan	146
				C. Aerial Photographs (5)	148



Section 1 Undertaking the Plan

A. Master Plan Components

B. Planning Approach



Section 1: Undertaking the Plan

A. Master Plan Components

Due to campus complexities, the master plan is comprised of a number of different components. Together, these elements provide a comprehensive framework for achieving the proposed objectives and patterns illustrated by the plan. It is important to keep in mind that it is the ideas that are conveyed by the plan, not the drawings, that constitute the master plan. The master plan illustration conveys these concepts as physical patterns, providing an underlying structure to the campus that is oriented toward making it a distinctive and desirable learning environment with ample future physical growth capacity.

The NKU Master Plan encompasses the following topics:

- Goals
- Planning Principles
- Master Plan Illustration
- System Plans including
 - Open Space and Pedestrian Circulation
 - Building Placement and Massing
 - Vehicular Circulation and Parking
 - Utility Production and Distribution
- Space Needs and Capacity Study (separate report)
- Capacity Projections
- District Plans
- Central Plaza Renovation Plan and Related Sketches
- Campus Design Guidelines and Acquisition Strategy



Campus-wide Master Plan



District Plans



Central Plaza Design Plan



Special Graphics



Design Guidelines

This master plan reflects the Commonwealth of Kentucky's commitment to higher education planning and the institution's desire to be well positioned to meet or exceed the Commonwealth's directive to double enrollment by 2020. This physical master plan is an integral part of the university's comprehensive planning process. It acknowledges and builds upon the objectives identified in Northern Kentucky University 2007 Strategic Plan; the university's 2008 Business Plan, It's All About Talent!; the 2008 Space Inventory and Need Assessment Study; and, the recently completed 2009 Parking Study.

Northern Kentucky University will be confronted with diverse and demanding needs over the next two decades. Three fundamental planning objectives establish parameters for shaping and testing the conceptual framework defined by this master plan.



West Entry to Student Union

1. Student Friendly Environment



The first of these objectives is the creation of a "student centered" environment for learning. While significant progress has been realized in recent years in this arena, a new commitment has been affirmed to more aggressively pursue this objective. In addition to the

institution's increased commitment to students' academic success, this goal is reflected by the emphasis placed on moving to an increased number of residence hall beds, a renewed commitment to a walkable campus and assisting with the creation of a conveniently located campus/town retail center easily accessed from the campus.



In many aspects, NKU has made significant progress toward creating a more student friendly environment. Its academic programs are tailored to meet students' intellectual and career needs. A wide array of student organizations and extracurricular activities enrich the

student experience. The university has an ongoing commitment to expand the amount and quality of housing and recreation/athletic facilities, which will result in a more meaningful and diverse on-campus experience and lifestyle for students. To attain a truly student centered campus, however, the university needs to pursue further initiatives oriented toward the goal of a welcoming, comfortable and nurturing physical setting and environment.

2. Enrollment Growth

The second major challenge facing the university is the commonwealth's mandate to double enrollment by 2020. Part of the state's long range strategy for higher education, this ambitious goal considers statewide progress in higher education, as evidenced by the key indicators of enrollment growth and degree completion, as vital to future economic strength. The Kentucky Council on Postsecondary Education's 2007 Facility Condition Assessment and Space Adequacy Study defines current space deficiencies and future needs. Achieving this goal depends upon significant new financial resources for both operating and capital investments. While NKU has a tradition of utilizing limited resources wisely, this growth scenario presents remarkable opportunities and significant challenges. With a vision based upon recent planning efforts, the university is well-positioned to work toward phased realization of this comprehensive growth scenario.

Doubling enrollment places a significant financial demand on the university while requiring many campus adjustments in terms of faculty, staff, programs, support services and, of course, facilities.



Central Plaza Walkway



Projected new facilities will have a tremendous impact on the physical character of the campus. Such growth can enhance and enrich the physical environment or it can lead to disorganization. A key master plan concern relates to preserving and strengthening components of the campus fabric which set NKU apart, while reinforcing the desire to make the campus setting better than ever.

3. Residential University



The third significant challenge facing the university is the desire to transition from an exclusively commuter institution, as originally conceived, to a campus with a significant on-campus student life component. This transition requires the addition of residential facilities, improved

recreation and athletic facilities and the creation of a vibrant campus community which is attractive to students, faculty and staff. It also requires additional on-campus activities such as concerts, plays, lectures, recitals, sporting events, student clubs, and other extracurricular activities, as well as off-campus amenities such as shopping, coffee houses, movies, restaurants, video and convenience stores and other outlets found in typical "college-town" areas located proximate to many American college campuses. The university recognizes the need for such facilities convenient to the campus and places a high priority on achieving this objective.

Challenges of this nature are not unique to NKU. Many campuses founded in the 1960's and 1970's, as the exploding baby-boomer generation reached college age, reacted to their phenomenal growth situation by placing primary emphasis on creating as much instructional space as possible, as quickly as possible. Other aspects of campus development were often given a lower priority. As a result, many of these campuses today, including NKU, continue to present a somewhat incomplete and impersonal image due to a lack of mature landscape and other campus amenities considered integral to the traditional American college campus.



In the 1970's and early 1980's, new buildings were opened at NKU at the rate of approximately one a year, with the priority to build as many square feet as possible to meet burgeoning enrollments - there was little money for extras, either inside the buildings, or outside. It is no surprise, then, that the university suffers from a lack of "campus" quality, the amenities which would make the campus complete.



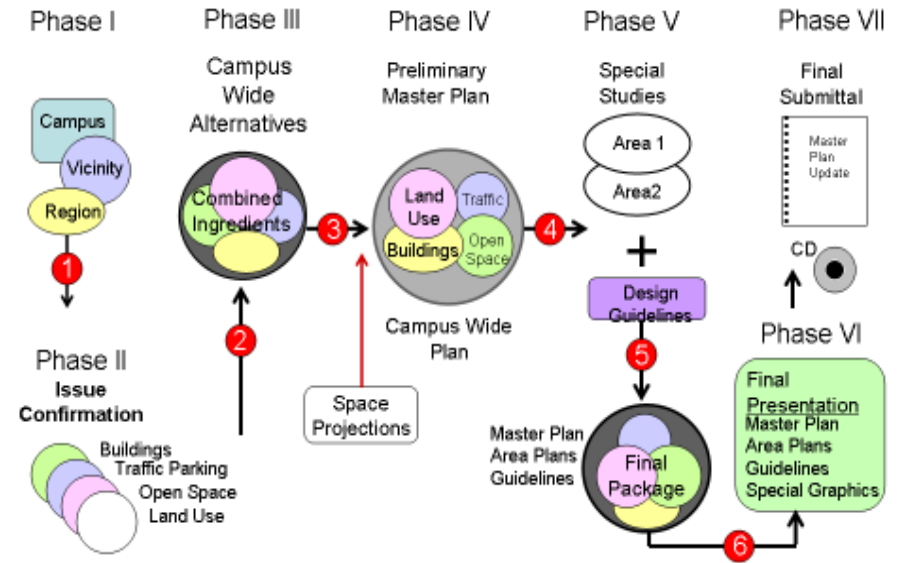
It is the aim of this Master Plan to recommend the most appropriate ways to accomplish the university's goals; to propose a series of specific projects which will help solve current problems; and, to recommend a strategy to guide future growth, resulting in a memorable campus in which faculty, staff, students and alumni can take pride.

B. Planning Approach

A 16 month planning process was utilized for preparing the physical master plan. During this period, a six step process was implemented. Campus and community input was emphasized throughout the process. The consultants participated in six formal campus visits, ranging from two to three days in duration, interacting with numerous committees.

- Leadership Team

This group, comprised of Larry Blake, Mary Paula Schuh, Dick Rigerink, and Vivian Llambi, convened at the end of each visit to confirm and mutually agree on directions the consultant team and university representatives were to pursue. Five sessions were conducted.



Approach Summary



Utilizing a Wide Range of Interactive Formats

- Master Plan Committee



Representing the full spectrum of the campus community (students, faculty, staff, and administration), the broader community (city and county representatives) as well as special interest areas (parking, student life, and facilities) they assisted in

generating and evaluating ideas and recommending alternative directions. Six sessions were conducted.

- Master Plan Executive Committee



Comprised of the university's top leadership, this group assumed responsibility for guiding development of the master plan with a particular emphasis on defining long range policies. They, in conjunction with the President and Board of Regents,

served as the final authority in the planning process. Six sessions were conducted.

- Campus Sessions



Open sessions were conducted during which students, faculty, administrators, and staff were invited to participate. These sessions occurred during five of the campus visits. Nine (9) sessions were conducted.

- Board of Regents



Regental reviews were conducted during five campus visits. During these discussions, the consultants shared critical concepts and directions. The Regents shared ideas and assisted in resolving key issues.

- Town Hall Sessions



Community sessions provided an opportunity to share current planning ideas and concepts with neighbors, interested community members, and city and county representatives. Open discussion sessions followed the presentations. Three sessions were conducted.

- One-on-One/Small Group Interviews



Small group sessions were conducted to share concepts and to agree on preferred directions. These included sessions with faith, disability, residential life and student affairs representatives. Fifteen sessions were conducted.

More than 45 campus and community review and focus group sessions were conducted.

Section 2 Background Information

- A. NKU's Planning Heritage
 - 1. Image of the American University
 - 2. Planning at NKU

- B. Existing Conditions
 - 1. Statistical Summary
 - 2. Priority Issues and Concerns



Section 2 Background Information

A. NKU's Planning Heritage

1. The Image of the American University

The idea of a “campus” as a setting for higher education is a uniquely American concept. The typical European university was housed in a series of often elegant buildings scattered throughout the city. In the new world, the resources to erect such grand structures were often lacking but one thing was abundant – land. As a result, smaller scaled buildings were grouped together on a single, unifying parcel of land which became known as the campus.



The image of the American university campus has evolved slowly over the course of almost 400 years. It has incorporated a number of design prototypes, including the quadrangle as symbolized by Harvard Yard, the collegiate row at Yale, Jefferson’s axial mall at the University of Virginia,

and the great open courts of MIT and the Naval Academy. These forms have been used singularly or in combination to form the campuses of the great universities of this country; their impact has solidified as the widely held image of the ideal campus. This ideal is a balanced composition of architecture and landscape arranged within an overall pattern of order. Today’s most admired campuses possess all three of these elements—architecture, landscape, and a perceivable sense of order. These elements are usually treated and positioned in such a manner as to make the individual campus unique and visually distinctive.



As campuses develop, they often pass through several stages. In the first stage, the overwhelming need is to construct space to meet the academic requirements of the new institution. Architecture tends to dominate and the other elements are given lower priority; in some cases, the great need for space will result in shortchanging the site development and/or utility systems. In the second stage, as the institution continues to grow and develop, the emphasis is focused upon achieving a balance among the elements and creating a satisfying and mature campus environment. In the mature phase, the challenge is to preserve a quality environment while providing for the continual growth and evolution of the institution.



Looking South to the Academic Core

NKU is now in the midst of the second phase of development. In the first phase, concrete was chosen as the architectural material for the buildings. It offers the advantage of strength, lower cost, durability, and the ability to be easily molded into a variety of shapes and forms. However, it lacks the natural color and warmth of materials such as wood or stone or the human scaled modularity of brick or stone. Some concrete buildings of this era were designed to emphasize the muscularity of the structure and roughness of the concrete. They ignored human scale and refined detail and hence were dubbed "Brutalist". It is not accurate to call all concrete buildings of this era "Brutalist". Many, such as those at NKU, are clearly modernist in style, but not brutal. NKU's concrete buildings have created an architectural unity and harmony on the campus that many other schools lack. In fact, the image created by concrete structures set in the midst of a rich, green landscape can be both striking and beautiful.

Unfortunately, during the first phase of NKU's growth, landscaping and site development were not given the same emphasis as the buildings. Even today, the view of the campus is of a rather raw complex of buildings lacking the warmth and welcoming qualities conferred by elements such as gateway features, landscape (particularly mature trees), attractive paving, site furnishings, fountains, public art, etc. The impression of a hard and impersonal environment prevails primarily due to the lack of soft open space treatments (grass and trees) and the dominance of concrete – both in buildings and in horizontal surface treatments. As a result, the campus today faces the major challenge of defining and implementing a series of projects to establish an appropriate balance between landscape and buildings.

A second legacy of the first phase of campus growth relates to the perception of a sense of order in the layout of the campus. The early plans for the development of the NKU campus established a pattern of order for the campus based upon the placement of buildings so as to form a series of irregularly shaped outdoor spaces. This was probably wise since the natural terrain was conducive to this approach and a strict rectilinear layout of concrete buildings could have easily resulted in a rather "industrial" image. However, since these spaces do not conform to the traditionally recognized pattern of quadrangles, courts, malls, etc., it is more difficult to understand and appreciate the pattern of order being created. Both the 1987 and 2000 plans suggested introducing some of the more traditional spatial forms as the campus grows beyond the original core. Also suggested was the completion of some of the original spaces which are presently not completely enclosed. In this way, while providing logic to placement of new buildings and outdoor spaces, the future development of the campus helps to improve the perception of balance and order in existing areas of campus. Establishing an appropriate balance between architecture, landscape, and a sense of order is one of the major challenges facing the university as it moves forward.

2. Planning at NKU



In the course of its evolution, it is normal for an institution to develop a series of campus master plans, each with its own specific goals and objectives. The initial plan is usually developed to establish a basic layout for buildings, roads, open spaces, circulation systems, etc. for a new campus on an undeveloped site or one that has not previously been used for higher education. Emphasis is placed on creating a pattern of campus land uses and circulation systems based upon a careful analysis

of the natural and manmade features of the site. Since great emphasis at this stage of development is placed on new buildings, these plans are commonly prepared by architects who are often retained to design the initial buildings. As might be expected, great emphasis is placed on architectural treatments and the precise placement of buildings. These original plans normally serve to effectively guide the first phase of campus development, establishing many of the fundamental patterns which endure throughout the long term development of the campus.

As the initial phase of development moves forward and projects are completed, some concepts prove successful and others do not, academic philosophies and technical equipment are altered, key personnel at the institution and consulting firms change, student tastes and interests become redirected, and it becomes clear that new thinking and directions are required. This pattern is evident at NKU. The original plan was prepared in 1971 and revised several times during the first decade. Major revisions were undertaken in 1979, 1987, and 2000. Each plan is reflective of the issues facing the university at the time as well as the principles of good physical planning and design.

Campus History

The origins of Northern Kentucky University date back to 1948 when the University of Kentucky established a two year extension center in the City of Covington known as Northern Community College (NCC). It was housed in an elementary school, a high school and the YMCA. In 1962, a new building was erected for NCC in the Park Hills area of Covington. In 1968, the Kentucky General Assembly authorized creation of a four year college (Northern Kentucky State College). A Board of Regents and a Site Selection Committee were appointed and work began to develop a program for the new institution. In 1969, the selection of the Highland Heights site, the current NKU location, was announced. In 1970, the General Assembly separated NCC from the University of Kentucky and merged it with Northern Kentucky State College. In 1972, the Salmon P. Chase Law School merged with Northern Kentucky State College and the first building on the new campus (Nunn Hall) opened. In 1976, the General Assembly granted university status to NKSC, thereby creating the institution known today as Northern Kentucky University.

During its first decade of development, new buildings were opened on the NKU campus at an astounding rate: 1972 – Nunn Hall, 1973 – Regents Hall, 1974 – the Natural Science Center (now known as Founders Hall), 1975 – the W. Frank Steely Library, 1976 – the Charles O. Landrum Academic Center, the Maintenance



1980 View

Building, the Central Power Plant and Electrical Substation, 1977 – the Fine Arts Center and the University Center and in 1978 ground was broken for the Business Education Psychology Center.

The university is fortunate to have a credible history of master planning. The first master plan was prepared in 1970 by the Taylor, Leiberfeld & Heldman, Inc firm of New York. A second facilities plan was developed in 1971, and a 1979 plan was designed to accommodate space needs of the early 1980's. These plans were coordinated by Fisk Rinehart Keltch Meyer (FRKM), a noted Northern Kentucky firm. In 1987, a major master plan update was completed by Sasaki Associates of Watertown, Massachusetts, in association with Burgess and Niple, a Cincinnati firm that had absorbed FRKM. In 2000, NBBJ Design of Columbus, Ohio completed a major master plan update. Throughout these years, this reliance on master planning has served the university well.

The original campus plan was a highly integrated architectural scheme – almost a mega-building. Such concepts, while capable of producing dramatic visual results, often lack flexibility to adjust to changes in academic philosophy and educational technology. As a result, numerous revisions to the plan were made, including a major effort in 1979. This early planning phase is clearly evident today, demonstrating the significance of these early efforts in terms of the fundamental character of the campus. It established the location of the academic core and defined basic land use patterns; created the basic circulation system and the architectural style and choice of building material; identified natural areas to be preserved; and, guided the development of several of the man-made open spaces.

Since approval of the 1987 master plan, the university has focused on property acquisition to accommodate campus growth not anticipated by the 1970's master plans; the Taylor, Leiberfeld and Heldman, Inc plan projected a campus of only 5,000 students at maturity. The university's land holdings have increased from 239 acres in 1990 to 404 acres today, and this Plan recommends another major investment in land. The targeted, prioritized acquisition outlined in this Plan ensures that the university has room to grow.



1970 Taylor Leiberfeld & Heldman, Inc



1971 Fisk Rinehart Keltch Meyer
Core Area Plan



1979 Fisk Rinehart Keltch Meyer



1987 Sasaki Associates



2000 NBBJ Design

B. Existing Conditions



The objective of the analysis phase is to develop an understanding of key issues which will impact and guide future development and identify those impact areas of campus where growth can be used to resolve current problems and deficiencies. To develop an effective solution, it is

necessary to first understand the nature of the problem. For this reason, the planning process normally begins with a careful analysis of the natural and man-made elements which will influence development. With established campuses, more attention is given to man-made elements. The natural setting is still important, particularly in this era of great concern for sustainability, but the stronger emphasis is on growth. Features given particular focus include the character, use, condition, and capacity of university buildings; amount, location and adequacy of university parking; adequacy of circulation systems (vehicular, pedestrian, bicycle, service vehicles); location and adequacy of utilities; and, open space commitments (natural areas, campus plazas and quadrangles and athletic and recreation areas, etc.).

It is customary in traditional plan reports to include a detailed description of the analysis process. This information, while interesting to some, is not of critical importance to most readers. They wish to focus on the outcomes of the analysis process and the plans being proposed. Therefore, this report has condensed the description of the analysis phase to the critical outcomes. Those wishing to explore this phase of the study in greater detail can find the information in the supplemental PowerPoint presentations.

Currently, the basic land use pattern of the campus is logical and provides room for some future growth. A compact academic core promotes the development of a vibrant campus center. Good regional access is available and will be significantly enhanced with the implementation of road improvement projects currently in design. Reasonable campus systems for pedestrian and vehicular circulation and parking are in place. A respectful relationship with the natural environment has been maintained, and the university is committed to enhancing its relationship with the surrounding community. These and other assets are beneficial to the campus as it strives to create the kind of physical environment which will be both expressive of the university's mission and goals and an active contributor to carrying them out.



Campus Center

1. Statistical Summary 2008

Campus Size (acres)	404
Existing Gross Square Feet	3,200,000

Population

Full Time Equivalent students	11,820
FTE Faculty and Staff	1,704
Full time equivalent (FTE) campus population	13,524
Student head count	15,109

<u>University Housing</u> (beds)	1,849
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Parking

Parking spaces	8,240
Deck spaces (3 decks)	1,796
Surface spaces (37 lots)	6,444

Student Profile

60% first generation college graduates
 90% work: 66% more than half time
 44% on campus less than 4 hours/week
 55% traditional age
 61% women
 67% graduate in less than 6 years
 82% of campus population drives alone to campus
 3% use public transportation

Favorite Places

Library coffee shop
 University Center/Student Union
 Loch Norse
 South end of Central Plaza

The following section identifies a series of conclusions and related observations which were derived as a part of this planning effort.

The issues presented in this section are derived from three primary sources:

- Assessment of factual data
- Campus impressions expressed by various university officials and committee members representing both campus and community interests, revealing a valuable perspective related to the unique traditions, attitudes, and priorities of Northern Kentucky University.
- Consultant observations of the NKU campus and considerations of comparable institutions.



2009 Campus Map

2. Priority Issues and Concerns



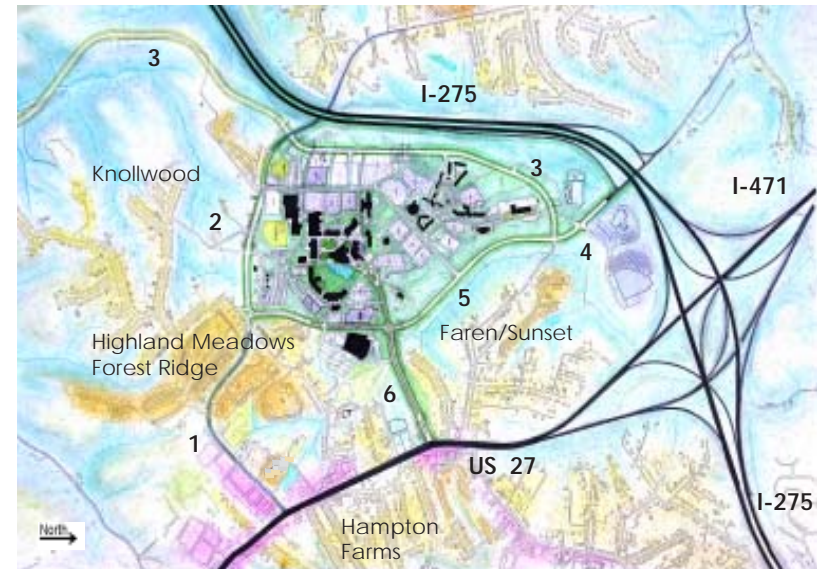
The following summaries offer insight into critical “form givers”. These elements have assumed a critical role in shaping and structuring the campus as we know it today and will continue to have a major impact on defining future development patterns.

Acquisition Strategy

Accommodating and managing explosive growth has been the major physical development focus since the first building was completed on the new campus in 1972. Enrollment quickly increased from 1,662 students in the fall of 1970 to 6,041 in 1975. After gaining university status in 1976, enrollment grew rapidly to slightly more than 12,000 in fall 2000. By fall 2008, enrollment exceeded 15,000. The university’s 2020 Business Plan, It’s All About Talent!, projects an enrollment of 26,920 as well as a near doubling of campus facilities. The major focus of this master plan has been the formidable challenge to accommodate all aspects of this ambitious plan for growth, particularly given that the university has a current space shortage compared to its Kentucky peers. Northern Kentucky University has only 79 Educational and General square feet per student compared to the Kentucky comprehensive university average of 134 square feet per student (excluding Kentucky State University), a difference of 55 square feet per student.

In terms of providing additional campus space, limited relief can be achieved through infill opportunities within the existing academic core, supplemented with modest benefits derived from the replacement of small and inefficiently configured facilities which consume relatively large land areas. These techniques, while appropriate and desirable, account for a very modest increase in space; it is clear that a significant number of property acquisitions will be needed to accommodate facilities required to meet current, as well as 2020 student enrollments.

Opportunities to nearly double the size of the current campus (404 existing acres) in areas that can be effectively integrated into the existing campus fabric are challenging, as US 27 on the east and Interstate 275 on the west are major physical barriers to growth. Established residential areas on the north and south provide potential acquisition areas, but will be controversial wherever expansion occurs.



Current Land Use Patterns

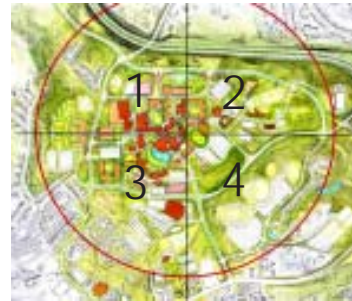
- | | |
|-----------------------------|--------------------|
| 1 Martha Layne Collins Blvd | 4 Three Mile Road |
| 2 Johns Hill Road | 5 University Drive |
| 3 Future Connector Road | 6 Nunn Drive |

Over the last decade, the university has focused much of its attention on acquiring land south of Johns Hill Road, in the area that leads toward AA Highway. The value of this property will significantly increase as the new Connector Road improves accessibility. The area's extreme topography, which will be modified as a result of cut-and-fill operations for the road project, as well as the area's linear configuration, appear to limit its value to the university. Because its final topographical status is unknown pending start and completion of the road project, the best future use of this property should be carefully studied upon completion of the road project.



The primary mission of the university is education. The need to double enrollment places a high priority on adding (nearly doubling) academic facilities (classrooms, offices, and student related research, etc.) that are fundamental to this mission. Because much of the area south of Johns Hill Road exceeds a reasonable walking distance from the existing academic core (significantly more than 15 minutes), it does not offer realistic academic expansion opportunities.

Without a shuttle system to move students and faculty to and from classes as well as an increase in the class interval time, the linear nature of this land area combined with its topography dictates a development pattern more conducive to isolated and independent programs and not clusters of buildings for highly interactive teaching and learning.



A far more useful expansion area can be created if the university concentrates its land acquisition strategy in the area to the northeast of the existing academic core (the Faren and Sunset residential areas). Acquisition of parcels in this area will promote the development of a concentrated student oriented campus, encompassing areas which

can be used for expansion of the academic core (within the critical 10 minute class change radius) as well as less "class change" related uses such as housing, athletics, support services, shopping, etc. In addition, due to the extended common boundary this land area shares with current university property, it can easily be integrated into the campus fabric. It is clear, therefore, if the university is to grow while maintaining a highly efficient and accessible campus, acquisition of land areas to the northeast is essential.



Looking East to Faren and Sunset Residential Areas

Student Friendly Campus Environment



While it is difficult to define “student friendly”, it is relatively easy to engage students in how the campus can be improved. Indeed, the following comments show clear direction as students, faculty and staff shared their perceptions of campus. Many of the following comments were

voiced by more than one of the groups invited to participate. Resolving these issues was given a high priority during the planning process.

General Impressions

- Initial impression is of concrete: too much concrete
- Buildings are overpowering
- Campus lacks campus spirit
- Great views to downtown Cincinnati
- Need to create a theme or vision
- Most residential students go home on the weekends
- Strength is compact, walkable campus

Facility Needs

- Lacks campus town (retail facilities)
 - No place to go or things to do
 - No place to eat
- Need for additional outdoor recreation facilities (variety and number)
 - Illumination needed at night
 - More athletic events and teams
- Insufficient campus housing is available

Transportation and Parking

- Easy to find the campus but difficult to enter – entries are a long distance from arrival points
- Need for more parking – place parking on the edge of campus (out of core)
- Commuter students need adequate parking
- Discourage student parking in non-student residential neighborhoods
- Make parking lots more attractive – add trees
- Vehicular access problems – emergency access and traffic congestion on Kenton Drive
- Would use bikes if there were paths
- Improve vehicular access into and within the campus
- Nearly impossible to drive across campus during peak times



Natural Science Center

Pedestrian Circulation

- Major pedestrian/vehicle conflicts – Kenton Drive
- Not user or student friendly – walks don't lead where we need to go, need better lighting and more ADA accessible
- Wayfinding is a problem
- Walking the campus in winter is windy and uninviting
- Needs paths/trails through the surrounding woods



Student Input

Open Spaces

- Soften the campus and create people spaces
- Unify the campus and make it unique
- Beautify the campus – add trees, color
- Integrate residence halls with academic areas
- Few student gathering spaces
- Favorite quiet spaces are off campus
- Need to improve campus entries
- Few favorite outdoor places
- Make the campus green
- Distant views to campus are appealing
- Loch Norse is great
- Amphitheater works well
- Develop campus edges and link them to the core
- Center on a vision



Looking Northeast to Loch Norse

Topography



Terrain could have been an obstacle to development but instead has become key to the way the NKU academic core has evolved, underpinning all perceptions of the campus. An early NKU master planner compared the NKU hilltop site to a medieval hill town. From a

distance, the academic core conveys an image reminiscent of a tower of learning. As one moves closer, the topography becomes more rugged and the tower becomes a collection of large buildings.

Because the hilltop offered the advantage of desirable views, it was selected as the primary building area and played a major role in shaping the original campus layout. Fortunately, ongoing planning has focused on creation of a walkable, concentrated campus.

The terrain of the NKU campus often complicates siting of new buildings, presenting significant challenges for designers. As the core expands in the coming years, grades will continue to influence development patterns. However, several relatively level development opportunities exist on the west and north sides of the campus core area, making expansion in these directions a priority. Because building placement plays a critical role in defining a sense of structure and order, it is important that future buildings are clustered to form districts or neighborhoods and that these relate not only to the terrain but also to the building configurations that define the Central Plaza.

The road network surrounding campus has also been impacted by the topography. On the north, west and east, important university access roads follow lower elevations. University Drive on the east side of campus transitions to higher ground. As Johns Hill Road moves along the south side of campus, it passes above (higher elevation) the core. The commonwealth is in the process of upgrading this roadway segment. The project includes significant re-grading and as a result the potential developable area located south of Johns Hill Road will greatly expand, providing an opportunity for a major cluster of new buildings.



Looking East from I-275

Vehicular Circulation

The road system is critical to the university as nearly 90% of students commute to campus. A careful analysis of existing traffic counts reveals that the road network has adequate capacity to accommodate current traffic volumes, although Kenton Drive is a significant problem due to students driving to and from the west parking lots. While peak period back-ups occur along US 27 at Nunn Drive, these are as much a result of regional traffic levels as the impact of campus traffic.

The commonwealth is currently preparing construction documents for three road improvement projects that will increase the capacities of roads leading to and from the campus. These include the new Connector Road (Three Mile to AA Highway); extension of University Drive and the creation of a new roundabout at the intersection of University Drive, Johns Hill Road and Martha Layne Collins Boulevard; and, the widening and realignment of Johns Hill Road. Based upon these proposed improvements, road capacities should keep pace with anticipated campus expansion.



Planned Road Improvements

- 1 Connector Road
- 2 University Drive Extension
- 3 University Drive, Johns Hill Road and Martha Layne Collins Blvd Roundabout
- 4 Johns Hill Road Improvements

Northern Kentucky University has partnered with the Transit Authority of Northern Kentucky (TANK) to establish U-PASS, which is a free, unlimited pass provided to all students, faculty and staff allowing free ridership on all TANK routes. TANK route 25/26 serves the NKU campus on 30 to 35 minute headways during peak morning and peak afternoon time periods, typically arriving between 6:30 and 8 am and departing between 4:30 and 6 pm. The primary NKU route, Number 11, serves the NKU campus on 30 to 60 minute headways with arrivals starting at 7 am and running to 7:30 pm on weekdays. Although TANK would like to increase service and accessibility, lack of funding will likely preclude service expansion in the near future.

NKU conducted a campus commuting survey in spring 2008. The results are summarized as follows:

- The average one-way distance from a respondent's home to campus is 15.46 miles.
- The average one-way travel time from a respondent's home to campus is 22.20 minutes.
- Those traveling to campus average 4.21 trips per week during the spring and fall semesters (2.23 times per week during the summer).
- Eighty two percent (82%) of respondents drive alone to campus and 3% ride a TANK bus.
- Of those who drive to campus, 70.6% drive either a small or medium car.
- Almost half (49%) indicated that they would be more likely to carpool to campus if reduced parking fees were offered to carpoolers.
- Nearly twenty seven percent (27%) of respondents were not interested in carpooling.

- 74% of respondents were aware of the U-PASS program.
- Only 14.9% of respondents indicated that they would be more likely to ride a TANK bus to campus if incentives (10 free temporary parking permits per year) were offered.
- Nearly 43% of respondents would be more likely to ride a TANK bus to campus if more direct service to campus from their home was available.
- Twenty nine percent (29%) of respondents are not interested in riding the bus.



The survey results indicate that there may be room for increased use of the TANK system if a responsive travel demand management program can be implemented.

Parking Conditions

Current parking patterns reflect NKU's heritage and the continued importance the institution places on serving commuter students as well as faculty and staff. Large open surface lots surround much of the academic core, making a strong, if unintended, visual statement about campus needs and priorities. Currently, the university has a total of 8,192 surface and deck parking spaces; approximately 6,377 spaces, or 78%, are located in 37 surface lots. The remaining 1,815 spaces, or 22%, are located in three parking decks. The newest of these is the Welcome Center Garage, which opened in Fall 2008.

Surface parking areas used most intensively are located immediately north of the academic core. These lots are accessed via US 27 and Nunn Drive from the east and University and Kenton Drives on the north. The majority of surface parking spaces, however, are located on the west side of the campus between I - 275 and the academic core. The spaces in these lots are partly unpaved, generally unattractive, difficult and time consuming to access due to road congestion on Kenton Drive, and perceived to be less well illuminated than those on other sides of campus; as a result, they are less popular than other parking options. Separated from the center of campus by Kenton Drive, users of these parking areas must cross this heavily traveled roadway to reach academic areas, creating pedestrian-vehicular conflicts and resulting in almost constant congestion on Kenton Drive.



Looking
North along
Kenton Drive



Welcome Center Garage and, a little farther south, the University Drive Parking Garage, are located immediately west of the Bank of Kentucky Center. These decks are accessed from University Drive. The third deck is conveniently sited west of the new Student Union, with easy access from Kenton Drive.

In Fall 2007, the campus population included 13,133 full time equivalent (FTE) students, faculty and staff. Of this number, 11,502 were students and 1,631 were faculty and staff. In order to quantify and better understand future campus parking needs, university staff conducted a peak period occupancy count during the Fall Semester 2007/2008, at which time the number of open or unused spaces were counted. Based upon the 2,409 unused and 5,783 occupied spaces, an occupancy rate of 71% was identified. This ratio, applied to the growth horizons identified in the NKU Business Plan, provides a basis for identifying accessibility and parking needs. These targets are described in the recommendations section of this report.

Existing parking structures reflect the university's increasing concern for the limited availability of land and the commitment to providing direct and convenient pedestrian access to major destinations. The three existing structures are located on the east and west sides of campus; two, the

Section 3 Alternative Master Plans

- A. Alternative Concepts (3 options)
 - 1. Alternative One
 - 2. Alternative Two
 - 3. Alternative Three

- B. Preferred Directions





Looking South to the Nunn Drive Entrance and Loch Norse Open Space

Section 3 Alternative Master Plan Layouts

A. Alternative Concepts

The process of plan development began with the assimilation, evaluation and distillation of project goals. Comments shared by university and community representatives and the information gathered during Phase 1 were also important drivers for development of three distinct alternative master plan concepts.

These alternatives, or campus layouts, challenged the status quo, offering new ideas and ways of thinking about the future. Each alternative embodied a unique approach designed to address campus priorities and objectives in particular ways. It was understood that no alternative was perfect; each contained concepts and ideas that the consultant team and university representatives did not totally endorse. The alternatives generated valuable discussion, provoking thoughtful and sustained dialog with all stakeholders about the growth of the campus. As a result, the process generated consensus, allowing the university to identify which elements had value for further consideration. The consultant team was able to prepare a final scheme which not only meets the technical requirements of the institution, but also reflects its unique attitudes, traditions, and philosophy.



Alternative One



Alternative Two



Alternative Three

1. Alternative One

This option proposes a radial expansion of the academic core with the existing central core remaining much as it exists today, with new academic development occurring at the campus periphery – to the west, north, and southeast of the existing core. New housing is shown distributed on the northwest, southeast and south of Johns Hill Road. Athletics and recreation are concentrated south of Johns Hill Road as presented in the 2005 Athletic and Recreation Master Plan.

The principal features of this option are:

- Concentrated academic core
- New West Quad has a north/south orientation
- Major academic concentration at intersection of Johns Hill Road and University Drive
- Major reliance on surface parking
- Recreation (distant) and athletics as proposed by 2005 plan
- Foundation property used to help create “campus town”



Looking East from AA Highway/I-275 Intersection



2. Alternative Two

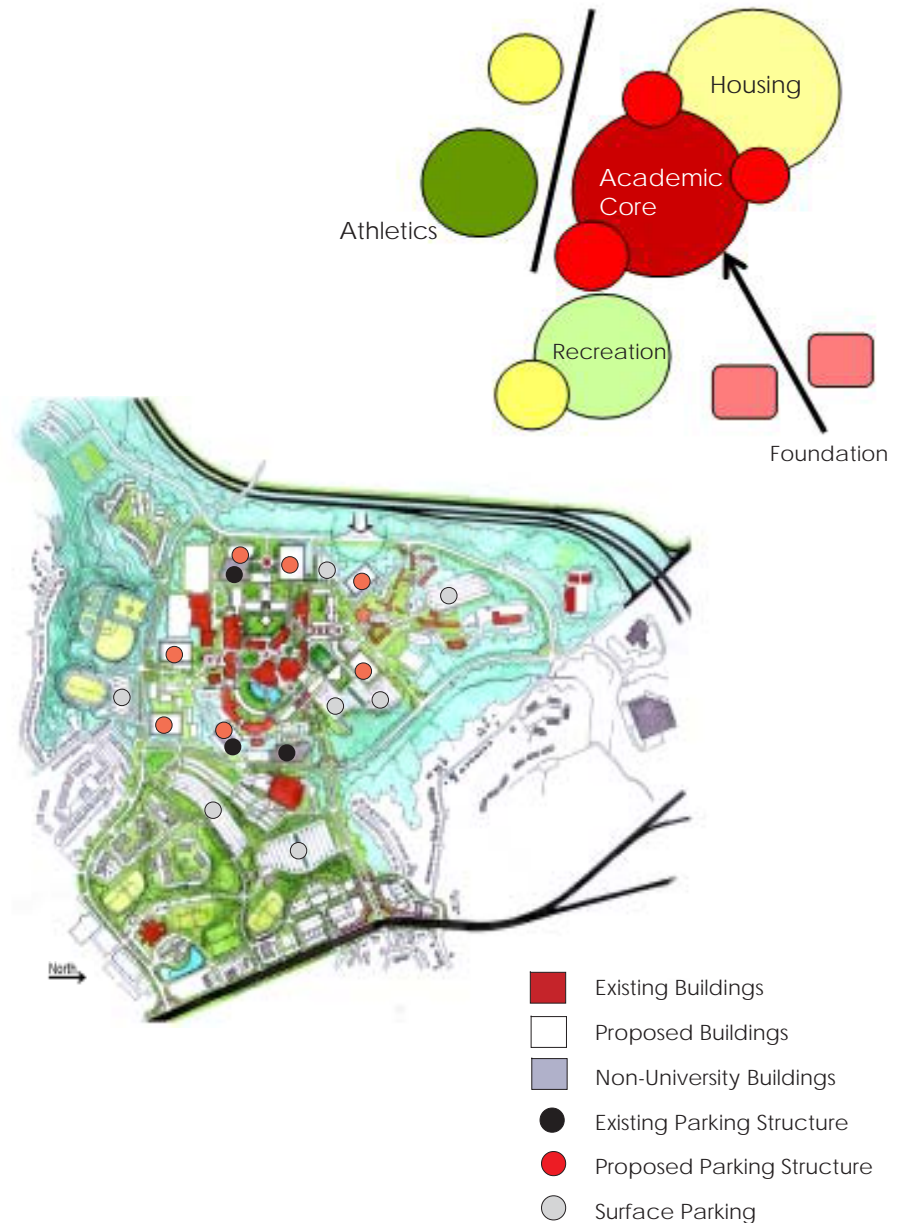
This option illustrates a combination of infill and significant growth of the academic core. Infill occurs primarily in the area of Loch Norse while new academic concentrations are created to the west and north of the existing core. New housing is shown in the north, southeast and south of Johns Hill Road. Recreation is provided in the southeast zone and athletics is located south of Johns Hill Road.

The principal features of this option are:

- a. Combined infill and peripheral expansion of academic core
- b. Numerous small open space areas
- c. Grid pedestrian circulation pattern
- d. New West quad is oriented north/south
- e. Recreation sited east of University Drive
- f. Foundation development creates a gateway
- g. Buildings are linked
- h. Athletics south of Johns Hill Road
- i. Increased use of parking decks



Looking South from University Drive Parking Garage



3. Alternative Three

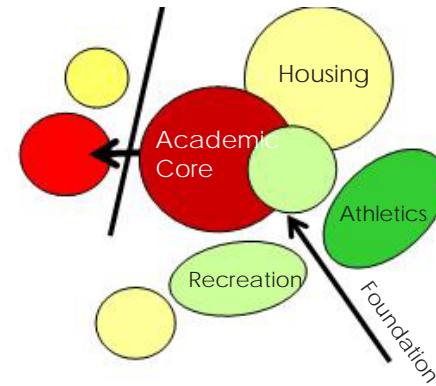
This option shows academic expansion primarily to the west and south of the existing academic core. Also, the campus recreation (Albright Health Center) building is relocated from its present site to the northeast sector. For the first time, academic development is extended into the area south of Johns Hill Road. Housing is proposed in the northern and southeastern sector as well as the area south of Johns Hill Road. Recreation is provided in the southeastern sector, and athletics is located south of Johns Hill Road in a more remote location.

The principal features of this option are:

- a. Academic expansion to west and south across Johns Hill Road
- b. Health building relocated to northeast
- c. Major north/south pedestrian corridor includes elevated walkway over Johns Hill Road
- d. New West Quad is oriented east/west
- e. Mixed deck and surface parking approach
- f. Athletic stadiums off AA Highway near I-275
- g. A major town center development is shown at Nunn Drive and US 27 encompassing both the foundation property and adjacent private land



Looking East from Kenton Drive



- Existing Buildings
- Proposed Buildings
- Non-University Buildings
- Existing Parking Structure
- Proposed Parking Structure
- Surface Parking

B. Preferred Directions



The alternatives were presented to a broad cross-section of university and community representatives using an interactive workshop format. Considerable feedback was received; some ideas, such as the infill building near Loch Norse, attracted little support. Other ideas, such as the expansion of the academic core south of Johns Hill Road, were quite popular.

It was determined that Alternative C offered the best potential for overall consensus, assuming that certain components from the other two options were incorporated. The concepts which are listed below were highlighted as critical issues. The consultant team proceeded to incorporate these ideas and to reconcile these changes within the principles of sound planning and design.

1. Assist the city in achieving a joint city and university village center contiguous to the Nunn Drive/US 27 intersection.
2. Acquire properties to the north of Nunn Drive (the Faren and Sunset neighborhood) and to the east of University Drive, between Nunn Drive and Martha Layne Collins Blvd.
3. Maintain a concentrated campus core by infilling and interconnecting the buildings with enclosed walkways.
4. Protect and enhance the campus grid (placing buildings along a north/south and east/west axis).
5. Create an academic quadrangle south of Johns Hill road.
6. Provide parking at a distance of a 5 minute walk from the campus center (does not apply to visitors, disabled or service).

7. Retain the Albright Health Center at its current location. Locate the sports complex near campus – next to the Arena and north of Nunn Drive (Faren and Sunset area). Concentrate recreation facilities.
8. Distribute housing on university property across campus; do not rely on purchase of existing private apartment complexes.
9. Create an east/west orientation to the proposed West Quad.
10. Preserve Honors Woods because it is the most sensitive natural habitat on campus.

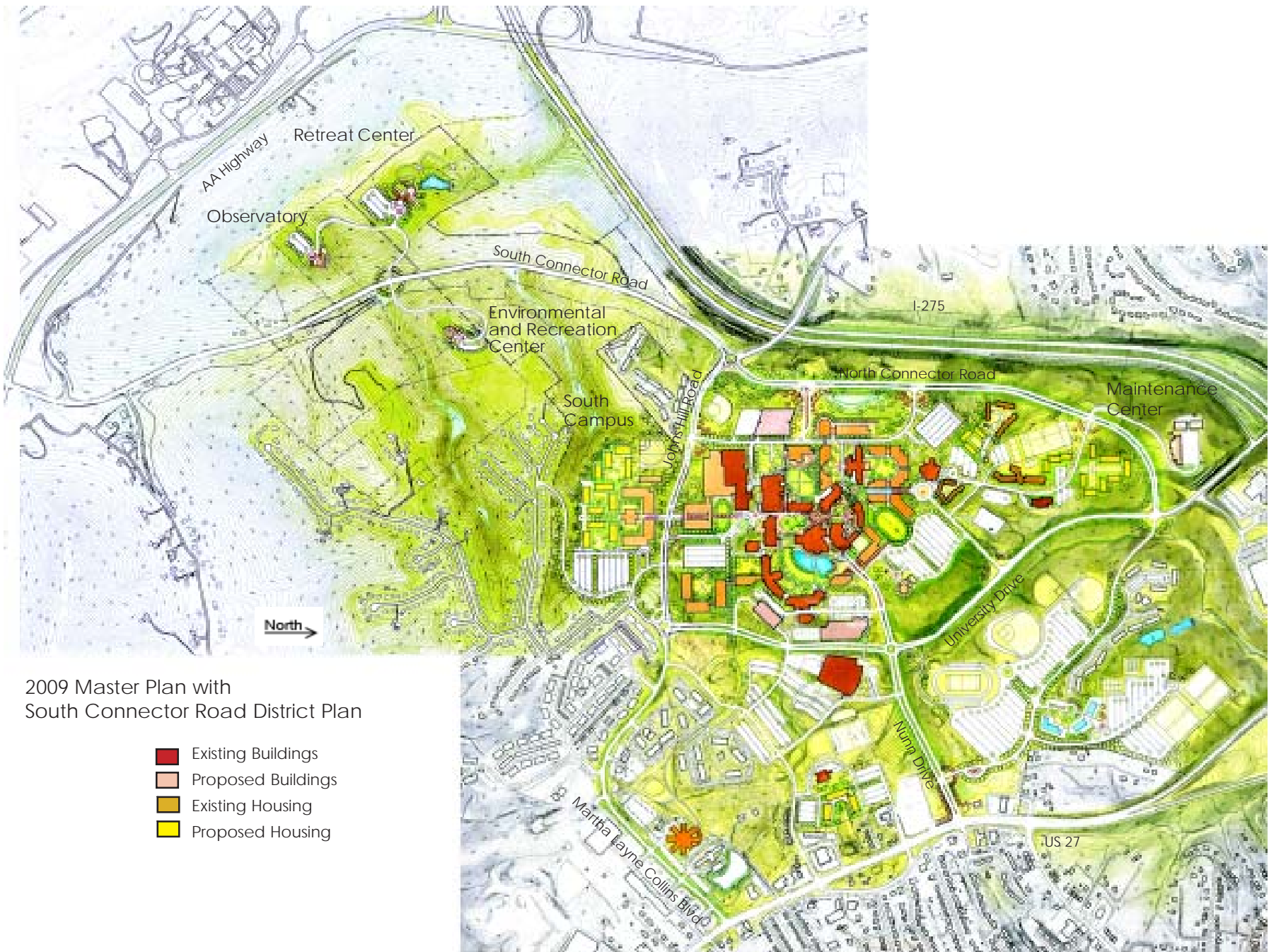


Community Review and Input

Section 4 Campus Wide Patterns

- A. Land Use Patterns
 - 1. Academic Core
 - 2. Housing
 - 3. Athletics and Recreation
 - 4. Maintenance and Service
 - 5. Faith Village
 - 6. Town Center
 - 7. Connection to AA Highway
- B. Building Patterns
- C. Open Space Patterns
 - 1. Open Space Components
 - 2. Organizational Patterns
 - 3. Important Open Spaces
- D. Pedestrian Patterns
 - 1. Major Corridors
 - 2. Elevated Walkways
 - 3. Secondary Walks
- E. Vehicular and Parking Patterns
 - 1. Road Descriptions
 - 2. Overview
 - 3. Loop Road
 - 4. Arrival and Entry Points
 - 5. Access Roads
 - 6. Emergency and Service Access
- F. Parking Patterns
 - 1. Demand
 - 2. Proposed Strategy
- G. Bicycle Patterns
 - 1. Central Loop
 - 2. Perimeter Linkages
- H. Utility Patterns
 - 1. Production
 - 2. Distribution





2009 Master Plan with South Connector Road District Plan

- Existing Buildings
- Proposed Buildings
- Existing Housing
- Proposed Housing

A. Land Use Patterns

To achieve a more desirable living and working environment, most campuses today concentrate similar uses in common areas, thus insuring compatibility and accessibility within and between contiguous districts.

In earlier years, campuses, due to their smaller size and simpler needs, sometimes utilized a mixed use approach, with a single building housing academic space on the first floor and residential spaces on upper levels. As the campus grew, academic buildings were often placed next to dormitories, the gymnasium, and even service buildings. As campuses became more complex, frequently encompassing hundreds of acres, key proximities (and separations) were employed for functional reasons, with the most critical of these being the need to maintain academic buildings within a ten minute walk of one another.



Student Union East Entry



Facilities which were less dependent on academic proximities and consumed large land areas, such as residence halls and recreation areas, were located at a greater distance from the academic buildings. For other facilities, such as heating plants and maintenance buildings,

access to a railroad siding or major truck access routes were more important than proximity to specific campus buildings. Other places such as natural areas, steep slope reserves, wetlands, buffer areas, ponds, etc. are a result of environmental conditions rather than man-made relationships. Thus, a pattern of different land use precincts has come to characterize the modern campus. The mixture of compatible uses still takes place, but the contemporary campus is often characterized by a series of different precincts each with its own basic land use character. This is clearly the case with the NKU plan.

This master plan identifies use patterns in terms of general categories. These groupings are recognized because they each affect physical development patterns in terms of building configuration and sitings, proximities and capacity recommendations.



Looking North from Johns Hill Road

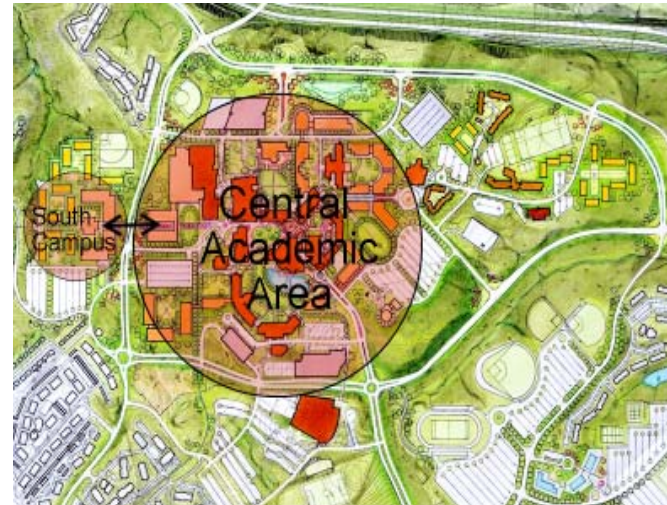
1. Academic Core

This 34 acre area is the most densely developed part of campus, encompassing the academic related facilities – classrooms, teaching labs, offices, library, union and related open spaces. The institution strongly endorses its long-held tradition and preference for being a pedestrian scaled campus as reflected by its compact academic precinct. The proposed expansion illustrated in the master plan depicts a new configuration of the academic area – one that spirals outward from the Central Plaza. The existing core area, which is oriented north/south, can be expanded outward in three directions - to the north, west, and south; the greatest concentration of new facilities is proposed to the north and the west, consuming approximately 62 acres of land, all within a seven minute walk of the center of campus.

The expansion of the academic core to the south side of Johns Hill Road is a new feature of this plan. The proposed South Campus emphasizes the north/south academic axis, providing space for future academic growth that is somewhat remote from the existing academic core. Assuming an elevated foot bridge is constructed to provide safe pedestrian access across Johns Hill Road, (which is destined to become an important regional collector road), the South Campus would be about a ten minute walk from the campus center. The new South Campus, as conceived on the plan, accommodates academic, residential and recreational uses. It encompasses 23 acres, of which 5.5 are dedicated to academic related uses. This area should be developed after the other academic quadrangles on main campus are built-out; or, it should accommodate an academic unit which can function effectively in this more remote location.



Looking West to the Academic Core



Academic Areas

2. Housing

Currently, with completion of the 461 bed Callahan Hall residential facility in fall 2008, the university is able to accommodate about 16% of FTE enrollment in campus housing. Looking forward, it seeks to increase this ratio to a more balanced residential campus environment, with about 20% of students housed on campus. A total of 1,849 on-campus beds exist today; in keeping with enrollment growth projections, a target of 4,000 beds is proposed. To accomplish this goal, additional land will be needed and new facilities will be constructed. Including the proposed demolition of Kentucky and Commonwealth residence halls (a loss of about 400 beds), approximately 2,550 additional beds will be needed.

Until recently, on-campus housing has been concentrated at a single location, on the north side of campus. The renovation of Callahan Hall has created a housing presence on the southeast side of campus. A strategy is proposed to distribute housing across campus, offering a variety of housing venues and site related attributes (natural or town locations). These areas are less formally organized in order to take advantage of the natural features (terrain, outdoor recreation options and attractive views) and to create a less formal student life experience.

Three (3) proposed campus housing districts are located within a 15 minute walk of the academic core. These include the North, East, and South Villages.



The North Housing Village proposes to replace older buildings while integrating new facilities to upgrade and augment the existing residential community at this location. With the relocation of the existing Maintenance Building, additional land will become available to add nearly 1,000 additional beds. Residential clusters are connected to the academic core via the major north/south pedestrian corridor.



North Village

- Existing Housing
- Proposed Housing
- Existing Academic
- Proposed Academic
- Proposed Recreation
- Proposed Garage
- Surface Parking
- M Proposed Maintenance
- S Electrical Substation



- Proposed Demolition
 - Commonwealth Hall
 - Kentucky Hall

Looking North to Commonwealth and Kentucky Halls

The East Housing Village (east of University Drive) is comprised of two separate locations – Callahan Hall and a new housing cluster sited immediately east of the former Highland Heights Civic Center. Acquisition of a number of existing residential properties must occur to consolidate the seven acre parcel needed to support this development. These new units will serve as a transition between the denser campus core and the adjacent retail areas, offering a more urban living experience.



East Village

- Existing Housing
- Proposed Housing
- Athletic Area
- Recreation Area



Looking Southwest to Callahan Hall

The South Housing Village is located within South Campus on undeveloped property. The housing units shown in this area provide direct access to the core academic area, which is only a 10 minute walk to the north; a proposed elevated walkway will provide easy and safe access across Johns Hill Road. It is interesting that these residential units are actually closer to the academic core than a number of the existing or proposed North Village units. A ravine walk provides viewing opportunities along the edge of the housing area as well as views from the proposed residential units. Trails leading southward offer interesting views as well as passive recreational opportunities. It is suggested that indigenous landscape treatments be used within the Village in order to emphasize this natural setting.

The housing units, because of their smaller scale and lower densities, serve as an appropriate transition between the campus and adjacent private residential areas. Hilltop Drive is realigned to the east, passing south of the proposed development.



South Village

- Proposed Housing
- Existing Academic
- Proposed Academic
- Proposed Recreation
- Proposed Garage
- Surface Parking
- Elevated Walkway



Athletic Facilities

- 1 South Athletic Area
 - A Softball Field
 - B Health Center
- 2 East Athletic Area
 - C Bank of Kentucky Center
 - D Soccer Stadium
- 3 North Athletic Area
 - E North Athletic Area Entrances
 - F Stadium
 - G Baseball Stadium
 - H Softball Fields (2)
 - I Swimming Pools
 - J Tennis Courts
 - K Volleyball Courts
 - L Surface Parking

Recreation Facilities

- North Residential Village
- South Residential Village
- East Residential Village

Athletic and Recreation Components

3. Athletics and Recreation



NKU students are quick to lament the lack of outdoor recreational facilities. Because few playing fields or outdoor volleyball and basketball facilities exist, this is an area of considerable concern. This plan defines a comprehensive strategy for dealing with long range needs. It not only responds to current needs, but also to the recreational and athletic needs of the future campus community.

Transitioning to increased on-campus housing will increase the need for convenient recreation and athletic facilities. These expectations are clearly defined in the program for the Athletic Master Plan Study completed in 2005. All identified needs are included in the 2009 Master Plan.



Athletic Master Plan 2005

Prepared by GBBN Architects

Needs List

NKU Recreation and Athletic Master Plan

- Baseball Stadium – 1 field
- Basketball Courts – 5 courts
- Multiple Use Fields (football/soccer) - 8 fields
- Sand Volleyball Courts – 3 courts
- Soccer Stadium and Practice Fields – 1 soccer and 2 practice fields
- Softball – 7 fields
- Swimming Facility – 3 pools
- Tennis - 8 Indoor courts
- Tennis - 8 outdoor courts
- Track Indoor - 1
- Track and Field Stadium – 1 track and 1 field



Looking East to Faren and Sunset Residential Areas and US 27

a. Athletics

Intercollegiate Athletics is concentrated in three major areas.

The North Athletic Area (North of Nunn Drive, between University Drive and the City's proposed Gateway West project) is the largest of the three areas, accommodating the track and field stadium; baseball stadium; swimming facilities; indoor and outdoor tennis courts; and, recreation fields. It is convenient to both the academic core and the North Housing Area. Property acquisition will be necessary; about 180 privately owned homes are currently located in this area.



Looking Northeast to the Intersection of Nunn and University Drives, and toward the future North Athletic Area

The South Athletic Area is located between Johns Hill Road and the new Student Union and is focused on the Health Center and the Softball Complex; and, on an interim basis, the Tennis Complex and the temporary baseball field complex located south of Regents Hall.



Looking North to the South Athletic Area

The East Athletic Area contains the arena and soccer stadium. This area is conveniently located to both the academic core and the East Housing Area. Students living in the North or South residential areas will cross a major surface street – either University Drive or Johns Hill Road, to reach the East Athletic Area.



Looking Southeast to Highland Heights Civic Center and East Athletic Area

b. Recreation Facilities



Recreation activities include informal “pick-up games” as well as formal activities related to club and intramural events. Because many students participate in recreational activities, these facilities are typically placed in strategic locations across the campus. The university has endorsed an approach which responds to the needs for organized events as well as informal activities. Formal game oriented facilities such as softball and multiple

purpose fields (soccer, rugby, and football) are located at the North Athletic Area. Other facilities, including sand volleyball, basketball, and a few multiple-use fields, are conveniently located in the student housing areas to encourage the spontaneous activity that has traditionally proven to be critical to successful on-campus residential complexes.

This development strategy involves a long term approach. The land identified for the North Athletic Area currently supports a residential neighborhood; it will require considerable time to purchase the many privately owned parcels in this area. Until this acquisition can be accomplished, a short term, interim strategy may be needed. Construction of the new Connector Road will result in considerable re-grading along the west side of campus. Because the Connector parking structure shown on the plan will not be needed in the short term, it is recommended that this site be temporarily utilized for recreation fields.



East Village



North Village



South Village

4. Maintenance and Service



The existing Maintenance Building is located inside the proposed loop road (Connector Road and University Drive) at the extreme north end. Continually expanding enrollment requires an increase in on-campus housing. Because of limited expansion options and the need to

keep as much housing as possible inside the loop road, relocation of the Maintenance Building and associated service areas to the existing Gateway Community College site (now known as Campbell Hall) is proposed. The university currently has an agreement in place to purchase this 12.02 acre parcel, and is leasing part of the building prior to the acquisition.



Looking West to North Village, Existing Maintenance Facility and Campbell Hall

This relocation allows the Maintenance facility direct off-site access (truck) as well as convenient access to campus via the proposed Campbell Drive extension and the Connector Road. The existing building is suitably configured and with modest renovation, can accommodate maintenance needs. This site has easy access to campus, is visually separated from the campus yet is screened from and compatible with surrounding land uses.



Proposed Maintenance Facility
(former Gateway Community College)

5. Faith Village



A Faith Village is proposed to be located on university property at the intersection of Martha Layne Collins Boulevard and University Drive. These relatively small support facilities are appropriately located on the edge of the academic core. The site is in close proximity to one of the largest

concentrations of university and privately owned student housing on and near the campus. The Faith Village is easily accessed as students traverse a major pedestrian walkway which connects Callahan Hall and the many privately owned residential units directly to the academic core. Vehicular access can be accommodated from the contiguous roads.





Looking Northwest to the Faith Village Site

The undeveloped, hilly and somewhat wooded site conveys a pastoral setting well suited to accommodate these smaller more individualized facilities. The Village accommodates a collection of multiple faiths. It is anticipated that the various organizations will share a larger, common building while benefitting from smaller independent facilities specifically oriented to their individual needs.



Faith Village Site

-  Future Development Area
-  Important Pedestrian Corridor

6. Town Center



In discussions with campus representatives, particularly students, there is strong support for creation of a student-oriented retail area within walking distance of the campus. Most do not feel that the existing US 27 commercial development is responsive to their needs. This is a

shared need for both the university and the community, as the community of Highland Heights is a suburban area which has only recently begun to feel the pressures of urban development. Highland Heights has no “downtown” in the traditional sense of the word. At the same time, the university, because it is a new campus built in a suburban area, lacks the town/gown ambiance normally provided by the typical “college town” area adjacent to many campuses. Such areas have become an integral and desirable part of student life. The lack of such an area at NKU detracts from the quality of student life on campus and student recruiting suffers accordingly.

A unique opportunity exists at the southwest corner of Nunn Drive and US 27 to create such a college town area. The property is primarily owned by the Foundation and private owners; the Foundation has an option to purchase a contiguous parcel from the university. Discussions among the various stakeholders in the context of this master plan indicate strong mutual interest in moving forward to create an identifiable, well-planned, and pedestrian oriented town center. The Highland Heights Comprehensive Plan recommends a similar development in this area. This pedestrian-friendly retail/commercial center will be in direct contrast to the strip development pattern that has evolved along the US 27 corridor.

The difficulties in accomplishing a truly successful project of this nature should not be underestimated. The most obvious problem is multiple land owners, each with their own objectives. A single, pedestrian oriented development concept will be necessary if this objective is to be successfully executed; in contrast, a series of small unrelated commercial buildings will result in creation of a typical strip mall. It is hoped the Foundation’s development efforts will stimulate the necessary interest and shared incentives for all groups to move forward together.

Another concern is the need to create a true community oriented center which reflects local community interests as well as the students’ desire for a “college town”. A detailed site plan for the “town village” will be needed, incorporating aspects of the “new urbanist” approach to town planning – a relatively high density, pedestrian oriented environment that exhibits a strong sense of place. Efforts to create such a place and vision should be initiated as quickly as practical.

The following layout was prepared as a part of the alternative planning process, described in Section 3.



7. Preservation and Sustainability

An ever-increasing emphasis on sustainability and green design is impacting all campuses, and NKU is no exception. In such an environment, it is crucial that major land use strategies stress the creation of an open space network, the preservation of high quality natural areas and the formation of a comprehensive campus storm water management system. These priority concerns, while demonstrating the university's commitment to green design, are fundamental to good management and effective use of resources. Because these elements require large land areas to be effective, they must be carefully planned and sited.

a. Preservation and Natural Areas

Northern Kentucky University recently inspected and evaluated the natural areas found on university property as well as within the potential acquisition areas defined by the 2000 and 2009 master plans. Three levels of forest quality were identified - high, medium, and low. Of the eleven areas rated high or medium, most are located south of Johns Hill Road. Only one high quality and three medium quality areas were identified to the north. Honors Woods, a moderate quality area, offers the greatest use potential due to its location in the core of campus; the other northern areas are located along the I-275 corridor and north of the Highland Ridge apartment complex.

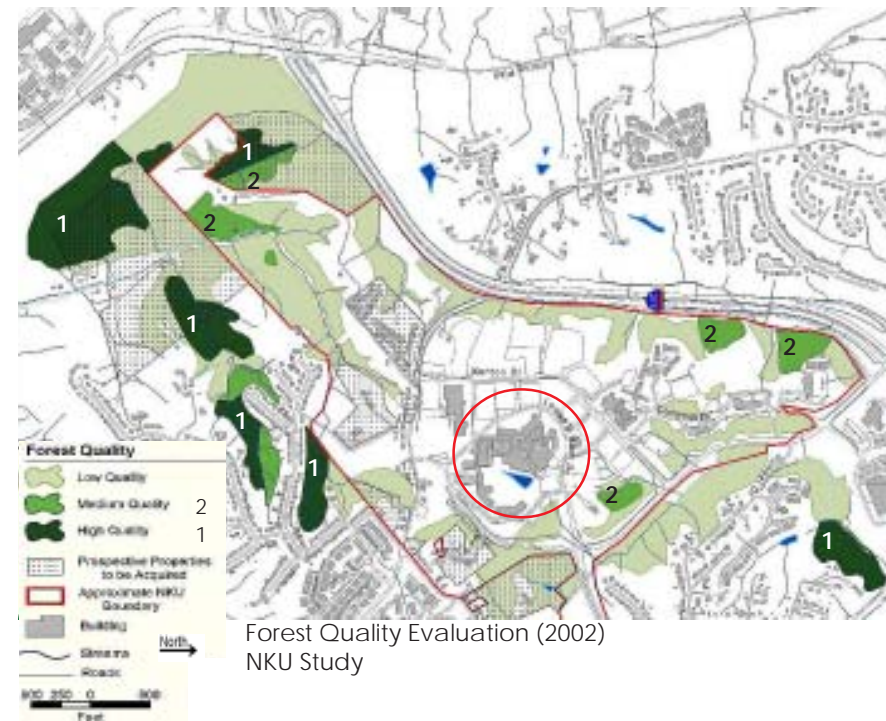


The master plan acknowledges the unique value of these areas. The comprehensive open space network includes areas that serve as buffers or setbacks, preservation areas, and sensitive habitat areas. They are proposed to be protected, appropriately managed and utilized in a manner that acknowledges their unique value. Typical uses include meandering paths and trails and interpretive facilities (signage and informational displays). In the south and

accessed from the new South Connector Road are two facilities dedicated to environmental education and appreciation - an environmental center and university meeting or retreat center.

These facilities are proposed to be sensitively scaled and appropriately sited to emphasize and respect these sensitive areas.

Natural plantings offer important alternatives to high maintenance lawns. Many institutions rely too heavily on the use of grass. While appropriate in highly visible or special use areas, natural plantings diminish reliance on fertilizers and other chemicals, reduce maintenance costs, slow surface run-off and contribute to a more natural appearance. These plantings can be used effectively in buffer and setback areas as well as preservation areas.



b. Storm Water Management



Storm water management has the potential to play a critical role in the university's comprehensive environmental program. As the campus grows and the amount of hard surfacing increases, less land is available to contain and absorb rain water; implementation of measures to delay surface run-off in order to reduce potential flooding is important. A significant amount of land is set aside and appropriately located in the master plan to





accommodate rain water run-off. To maximize these opportunities, an interconnected pattern of surface drainage ways or swales, rain gardens, and retention basins are recommended.

Retention or storm water areas are designed as natural ponds and wetlands. Distributed across the campus, they are sited in low areas to collect run-off.

Rain gardens are special absorption areas designed to retain run-off and feature unique below grade treatments to encourage rain water penetration.

Swales, typically located along road edges and parking lots, are grass lined linear channels that collect, slow, absorb and filter storm water run-off. They are functionally effective, considerably less expensive and more environmentally sound than traditional underground storm sewers and curb and gutter systems.



-  Retention and Storm Water Areas
-  Rain Gardens
-  Swales
-  Preserves



Academic Core

- | | | |
|---|--|---|
| Existing Buildings | Important Open Spaces | Proposed Parking Garages |
| Proposed Buildings | Major Water Feature | Surface Parking |
| Existing Housing | Elevated Pedestrian Crossings | Major Vehicular Entries |
| Proposed Housing | | |

B. Building Patterns

Campus buildings are the most visible and functionally significant component of the development plan. More than any other physical element, buildings can create harmony, or make a harmonious campus difficult to achieve.

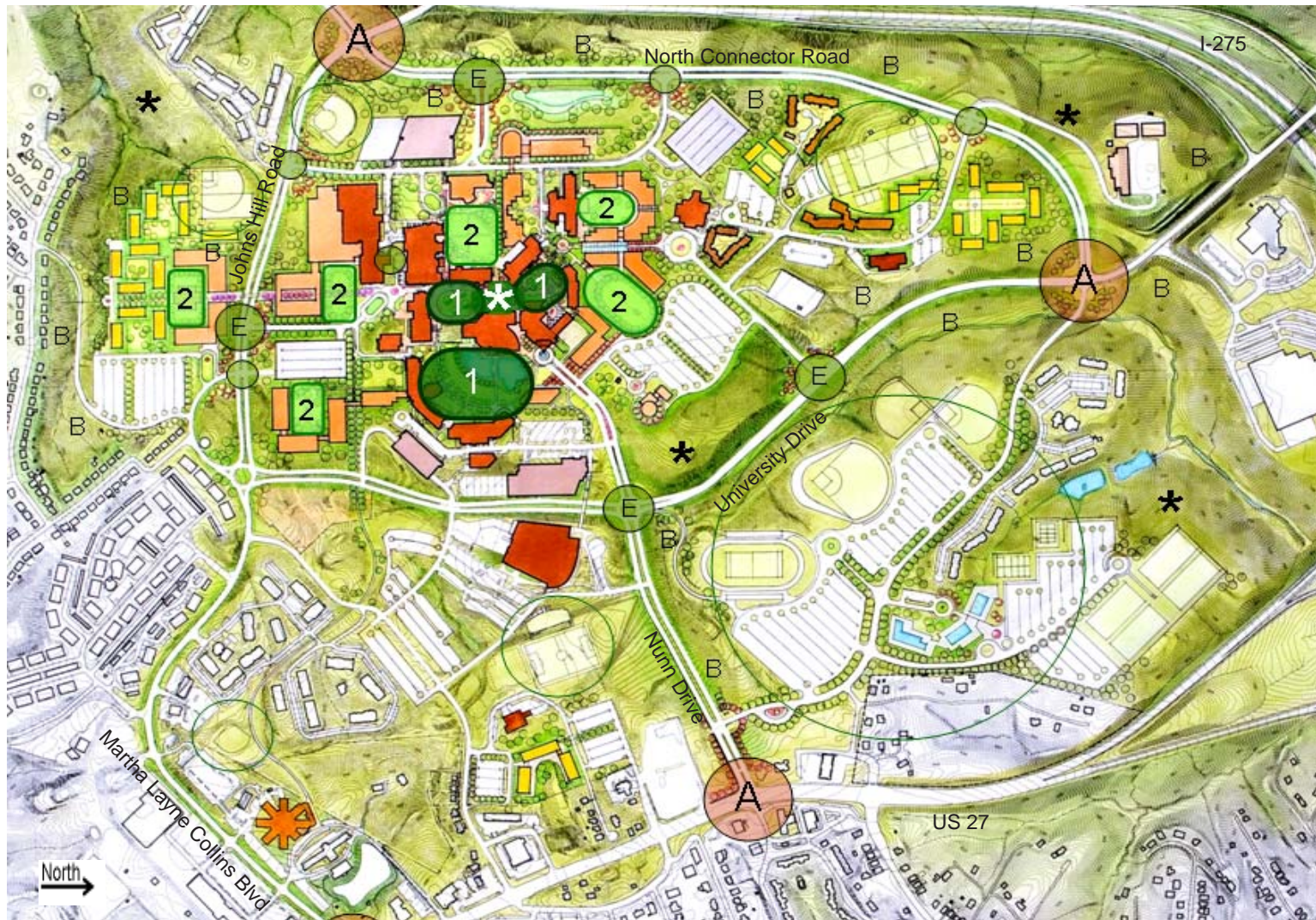
While the architect plays a critical role in determining the character of a new building, the most successful campuses are those where the basic framework is set prior to selection of the architectural consultant. The master plan defines the massing and basic relationships that need to be achieved; hopefully, the university staff has the expertise and support of the campus leadership to guide the design process in conformance with the master plan.

When undertaking the consultant selection process for a building project, the university needs to assess the consultant's "commitment to the architectural harmony of the campus". Architectural harmony is not the imposition of a single "style" or material or some other dogmatic formula; it does acknowledge that the new building needs to fit into and contribute to the overall fabric of the campus. Fortunately, the architects of the original campus buildings adhered to a single modernist approach to building design and a dominant material (concrete), which impart a certain harmony and unity to the academic core. Future buildings should respect and capitalize upon this harmony.



During campus visits, numerous concerns were expressed about the perceived overpowering appearance of the older buildings. The Master Planning Team has emphasized that this is not so much the result of the building design as it is the treatment of the ground plane; the lack of plant materials and humanly scaled site elements is evident in many areas of campus. It would be unfortunate should the campus abandon the original unifying elements and strike out in new and unrelated directions. Of course, other materials can be judiciously employed in the design of new buildings, but it should be done in a way that is respectful of the existing architecture, not contemptuous of it. Designing a new building which functions well, meets the budget, is an expression of the architect's creativity and at the same time harmonizes with, and in fact enhances, the overall character and quality of the campus as a whole is not an easy task, but it should be the goal of each new building project.

There is always some risk involved in trying to determine the site for specific buildings before a program is established, approvals obtained and a budget is finalized. However, with a few high priority projects, some clear siting opportunities seem to be available. In the case of the Center for Informatics, the program and budget have been set and the architect chosen, so a precise site recommendation is appropriate. The soccer stadium is well along in the planning process and agreement on a site is not a problem. Still others, such as the Observatory and Environmental Education Center, have specific physical requirements which make it possible to determine the appropriate site without much likelihood of opposition. A summary of the major siting opportunities is included on the district plans.



Open Space Patterns

- | | | | |
|--|----------------------------|--|--------------------------|
| | Campus Image Space | | Athletic/Recreation Area |
| | Major Quadrangles | | Secondary Entrances |
| | Image Marker | | Campus Entries |
| | Preservation/Natural Areas | | Campus Arrivals |
| | | | Landscape Buffer |

C. Open Space Patterns



As described in Section 2 of this report “The image of the American University”, three elements are essential to the creation of a successful campus image: buildings, landscape, and a discernable pattern of order. In the

competition for scarce resources, it is site development and landscape that often gets short changed. This is certainly the history of NKU. Without ‘campus’ quality site development and landscaping the result is merely a collection of individual buildings. Open space is the binder: it is the element of continuity and consistency which links individual buildings together, fusing the image of the campus as a discernible and distinct whole. It is a unified composition and place. Successful open space is the single most important element in creating a campus.

Open space communicates the character, distinctiveness, and quality of the campus. It plays a major role in conveying a sense of structure and order to the campus, maintaining the sensitive balance between landscape and buildings by offering relief from large concentrations of massive buildings. It also allows for the preservation of sensitive natural features, the careful integration of natural and man-made landscapes, and the development of a sustainable campus.



In addition to the formal open spaces in the academic core area, other types of open space are identified in the master plan. These areas should not be as rigidly structured as those in the core area; however, each must relate to the overall development framework established in the master

plan. These spaces include image areas such as campus entries and setbacks intended to create a positive, welcoming image for the campus; environmentally sensitive areas such as natural and buffer areas; storm water retention areas, which should be designed to meet sustainability guidelines; and, housing and recreation areas which have been created for a specific functional purpose, but whose open space elements must also become a part of the overall open space system of the campus.

University decision makers should recognize that open space and landscaping are vital to achieving an appealing campus image and a positive, nurturing, student-centered environment. The primacy of open space should be continually emphasized as building projects proceed through critical design phases and as annual investments in campus development and maintenance are considered.

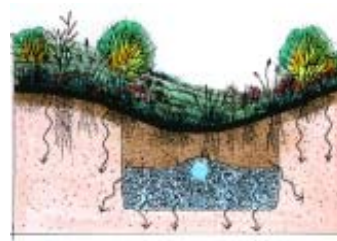


University of Southern Indiana
Central Image Space

1. Open Space Components



Major open spaces typically play a key role in communicating how the campus is organized. The primary open space is the single most important area on campus and sets the institutional tone, often becoming a “sacred space” and institutional symbol. The Central Plaza serves this role at NKU.



Storm water management areas are needed to control and direct surface runoff; to minimize flooding; and, to achieve environmentally sensitive solutions to campus storm water and runoff issues. Rain gardens and storm water retention areas are distributed across the campus, providing aesthetic, functional and environmental benefits.



Secondary spaces, such as major quadrangles, are defined by surrounding buildings; together, they form a cluster of facilities, giving a sense of character and uniqueness to that area of campus. Six proposed open spaces serve this function.



Athletic and recreation fields serve the needs of participants and spectators. Large expanses of playing fields also visually reinforce the campus setting. The placement of playing fields along Nunn Drive and at the Johns Hill Road/Connector Road intersection reflect such an approach.



Buffers and setbacks are needed in order to achieve an appropriate setting for campus facilities. They provide an effective separation between the campus and surrounding non-university uses as well as the screening of visually disruptive facilities within the campus proper.

Preservation of the natural valley between the South Campus development, which is located south of Johns Hill Road, and the neighborhood to the south is a good example.



Natural areas and preserves conserve and protect environmentally sensitive areas within the university’s landholdings. Honors Woods is a good example of a sensitive natural area warranting preservation.



Major pedestrian corridors are primarily intended to serve the pedestrian. However, because these corridors pass through important areas of campus and are such strong visual elements, they also assume an open space character.

2. Organizational Patterns

The organization of buildings and landscape into orderly, functionally appropriate and attractive patterns is a critical master plan responsibility and the essence of campus planning. Historically, campus planners and architects have developed a vocabulary of physical forms which are used to structure campus growth. These consist of:

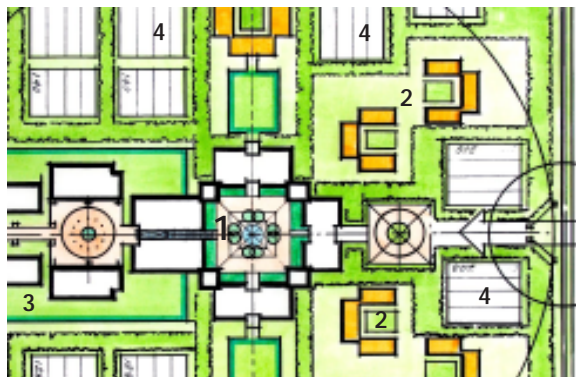
Quadrangle (first used at Harvard and derived from the older English prototype) with buildings enclosing a central open space, usually configured as a four-sided layout. A quadrangle is not always a rectangle. It can be a circle, square, pentagon or even an irregularly configured layout.

Court is a three-sided open quadrangle normally used at entries or to preserve a view of some outstanding feature.

Linear Row (originated at Yale) - typically allowed smaller institutions to align their buildings along a common edge, but this configuration proved inefficient as the college experienced significant growth.

The Axial Mall (as employed at the University of Virginia by Thomas Jefferson) - combines architecture with open space effectively, but works best on relatively flat terrain.

Open or "Romantic" (championed by Frederick Law Olmstead) has proven ineffective because of its inability to create the concentrated academic core so vital to a modern university. This beautiful landscape form is rarely used today, except in the case of small schools or demanding topographical conditions.



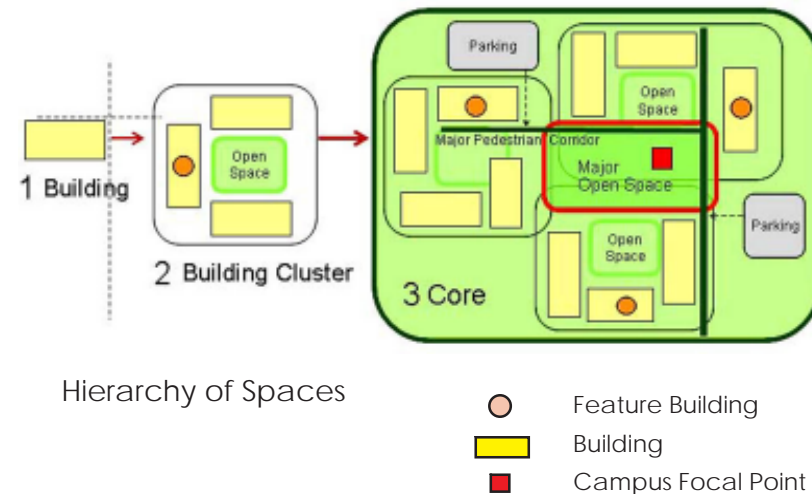
- 1 Quadrangle
- 2 Court
- 3 Linear Row
- 4 Surface Parking

Planners often combine these forms to accommodate growth while preserving the quality and character of the existing campus; in fact, the prevailing approach clusters individual buildings so that they acknowledge each other and create spaces. Often, there is a single focal building which serves as an identifying landmark for the space while the landscaped open space holds the group of buildings together. A hierarchy usually prevails, with individual buildings arranged into clusters (around an open space), and the clusters in turn are grouped together to form districts. These districts taken together form the academic core.

A number of these developmental patterns have been utilized on the Northern Kentucky University campus. The first campus plan created a group of buildings arranged to form an architecturally defined, although somewhat irregularly shaped academic quadrangle. This configuration still defines the academic center of the campus. NKU's subsequent master plans have called for the creation of additional academic quadrangles, as does this plan. One district space (the Loch Norse area) and several individual building spaces such as the library coffee shop area and the Walk of Honor at the Business Education and Psychology Center have been developed. As these quadrangles are upgraded and future ones are created, they should adhere to certain basic planning guidelines.

Campus spaces should be bold, simply configured, and easily understood.

- Most (90%) campus buildings should be background buildings. They should convey similarity in materials, design, and massing.
- Only one building should dominate a building cluster. The featured building should be the most important building within the grouping in terms of use and number of users.
- Building placement should reinforce and relate to the dominant open space – the Central Plaza.
- Buildings should be sited so as to define open spaces or reinforce existing spaces.
- A hierarchy of spaces needs to be achieved.
- Spaces should be connected via the campus walkway system.



3. Important Open Spaces

The open space components previously identified should be employed across the entire campus. Due to higher development densities, the more structured open spaces (quadrangles and courtyards) are typically found in “center of campus” areas. While each open space conveys its own design character, all should rely heavily on the use of native plant materials - large shade trees and grassy lawns.

Focal Spaces assume campus wide significance and play a major role in making the campus distinctive. There are two important open spaces on campus.

The Central Plaza, because of its location, relationship with the large buildings which define it, and the considerable number of pedestrians who pass through it, is an important campus focal area. It has an appropriate urban quality; conceptual design plans for renovating this plaza appear in Section 7 of this report.

Loch Norse is the second focal open space. It is dominated by Loch Norse, the two acre lake after which it is named. In this area, an arboretum of trees transition from the surrounding buildings to a large open space which slopes downward to the lake promenade and water. Much needed shade will be achieved once the recently planted promenade trees achieve significant height. These two spaces relate well with one another, with the more natural lake area providing an appropriate counterpoint to the Central Plaza’s urban open space.



NKU Central Plaza
and Loch Norse
Open Spaces

District or quadrangle spaces are proposed. These spaces contribute to the unique character of the campus and serve as an organizing element for each building cluster. These important spaces are interconnected by major pedestrian corridors (linear parks) which jointly form a continuous open space system. Each of these areas is described in greater detail in the section devoted to the District Plans.

Honors Woods is the most sensitive natural habitat in the central campus area. Located between the Honors House (proposed to be replaced with a recital or concert hall) and University Drive, this area is identified as a protected “Preservation Area”. Nature trails encourage passive recreational activities, and informational signage makes walking the paths an educational experience for both campus and community participants.



Stormwater management areas are an important component of the university’s commitment to sustainability. Use of permeable paving materials and creation of stormwater storage areas are important components of this green strategy. Rain gardens and retention

basins are identified on the plan at the following locations. These areas are proposed to be located in “natural” depressions in order to minimize cost:

- East side of the Connector Road from Johns Hill Road north to University Drive
- Major ravine southwest of the South Campus Area
- Contiguous to the proposed Soccer Stadium
- North end of the North Athletic and Recreation Area

D. Pedestrian Circulation Patterns



The pedestrian walkway system is another important planning element. It allows those who walk or are disabled to move efficiently and safely from one campus destination to another. It also contributes to the sense of structure and order that facilitates campus wayfinding and accessibility.

For NKU to achieve its goal of being a student oriented campus, it must maintain a walkable academic core that can be traversed within 10 minutes. Thus, the academic core should be a predominantly pedestrian zone, with all required facilities located within the 10 minute class change perimeter. In addition, travel between housing, recreation areas, and the academic core should be primarily pedestrian in nature if a coherent and workable campus is to be achieved. Large parking areas should be placed on the outer edges of the core campus to minimize pedestrian and vehicular conflicts and to protect important linkages between campus districts and major campus destinations.



In planning the campus walkway system, certain principles were applied.

- A coordinated system of walks should reflect a hierarchy of importance, connecting all major destinations in a simple and direct manner.
- The walkway system should be given preference over vehicular travel routes.
- Place a high priority upon pedestrian safety by achieving appropriate illumination levels in the evening hours.
- Walkways should be accessible to all and easily maintained, even in the winter months. Preference should be given to providing elevated connectors between buildings which lead to specially designed interior corridors.
- Major walkways are needed to connect the academic core with more distant university athletic and housing areas and the US 27 commercial area.
- Whenever possible, the walks should reinforce the grid layout clearly exhibited in the building layout.



Campus Entry - Combined Pedestrian and Vehicular

1. Major Corridors



The walkway system is comprised of four levels of walks: major corridors, secondary walks, building sidewalks and paths. Major pedestrian corridors are an important land use; they serve as both walkways and linear parks. Because their width encourages use by large numbers of pedestrians,

pedestrian corridors improve personal security in the evening hours and serve the dual purpose of also accommodating emergency vehicles. These corridors should be 10-12 feet wide and incorporate special paving materials, reflecting high quality design. Provide benches, pedestrian lights, banners and other site furnishings along these corridors. At NKU, there is a need to extend these major walkways to recently developed areas. A number of existing 16 foot wide major corridors need to be reduced in width because the width is not justified by anticipated pedestrian volumes. The extra width also contributes to the "concrete experience" which is a point of concern.



There are two major pedestrian corridors or routes which extend across the campus, connecting peripheral areas to the core. Typically, these corridors are enhancements and extensions of existing walks. The north/south route connects the North Residential Village with the South Campus (south of Johns Hill Road). The east/west route begins at the Kenton Drive parking deck, passes through the academic core and Loch Norse connecting to the Welcome Deck and Arena, ultimately terminating at the US 27 commercial area.



- 1 Primary Corridors
- 2 Secondary Corridors



Center, Health Center and Administrative Center, ultimately intersecting at the Central Plaza.

Because these corridors serve a campus wide function, they are given priority over support facilities such as parking lots and service areas. They are visually distinctive and play an important role in guiding visitors and students to major destinations such as the Student Union, Library, University



University of Toronto

Walking times from the center of campus (Central Plaza) to major destinations are listed below.

A	North Deck	6 minutes
B	South Campus	8 minutes
C	Bank of Kentucky Arena	10 minutes
D	North Athletic Area/Shuttle lot	14 minutes
E	North Residential Village	14 minutes
F	US 27	17 minutes
G	Callahan Hall	18 minutes



Walking Times

2. Elevated Walkways

The pedestrian network is comprised of not only exterior surface walks but also elevated connectors that link existing and proposed buildings. These connectors ease the movement of students between classes, promote interdisciplinary interaction and provide all weather protection. It is important that a coordinated approach be used in order to achieve orderly and consistent walk elevations that avoid unnecessary vertical movements and confusion.



Student Union/University Center Connector

These corridors, totally separated from campus roads, are given a high priority in terms of design and alignment. To improve pedestrian safety, Kenton Drive, between Norse Commons and the proposed Connector Road parking deck on the west side of campus, has been removed. Elevated walkways bridge Kenton Drive, University Drive and Johns Hill Road. The crossovers at Kenton Drive and University Drive are already in place. Because of extensive re-grading to be required for the realignment of Johns Hill Road, both sides of the new road will be at approximately the same elevation. On the north side, a ramp is proposed to provide the height necessary to span above the road. On the south side, the elevated walkway ties to the second floor of the gateway building located immediately south of the road. A continuous internal second level connector walk system is proposed to link all of the South Campus academic buildings.



- Existing Elevated Road Crossing
- Proposed Elevated Road Crossing
- Elevated Building Connection
- At Grade Covered Building Connection

3. Secondary Walks

Secondary walks connect major building clusters and campus areas. They should be 8 to 10 feet wide, more informally designed and feature more modest treatments. A single north/south connector extends from the Natural Science Building on the north, connects with the Informatics Building as it extends southward and terminates at the Health Center. Two east/west connectors parallel each other and form important gathering places where they intersect with the major corridors. On the north, the walk extends from the Connector Road eastward to Nunn Hall. The other east/west connector begins at Regents Hall, connects to the proposed deck (lot T) and the new East Village which extends along both sides of University Drive, passes through the Faith Village, ultimately terminating at Callahan Hall.



University Center South Entry



Landrum Walk

Numerous smaller walks and paths access individual buildings and facilities. These are typically 8 feet wide concrete walks. Paths in natural areas are recommended to be 5 feet wide and comprised of wood chip surfacing.

The pedestrian system should not be considered as a fixed but rather as a dynamic element. As buildings are removed and new ones added, pedestrian destinations and travel routes are altered. As changes occur, obsolete walks need to be removed and underutilized hard surfacing replaced with grass and trees.

E. Vehicular Circulation



US 27 Looking South

Since the middle of the twentieth century when the private automobile became the dominant means of transportation in this country, vehicular circulation and parking have become a major component of any campus plan. The first master plan for the NKU campus created a close-in loop road surrounding the original academic buildings, consisting of Nunn Drive and a portion of University Drive, emphasizing the separation of vehicles and pedestrian traffic. As the campus grew over the years, the southwest portion of Nunn Drive was eliminated to make room for new academic buildings and a new loop was developed

consisting of University Drive, Three Mile Road, Kenton Drive, and Johns Hill Road. Nunn Drive became an access road to the academic core and Campbell Drive, an access road, provides a route to the residential village. As the campus continues to grow, the perimeter loop road continues to move outward accordingly.



Existing Road Patterns

1. Road Issues

Currently, the campus roadway system has several significant capacity issues. Many students use Kenton Drive to access parking lots located along the west edge of campus, causing severe congestion at many hours of the day, both in entering and exiting the campus. With the exception of the peak commute periods, US 27, I-275 and I-471, which are the major feeders to the campus roadway system, provide an acceptable level of service. Currently, most campus-bound traffic uses either Nunn, via I-471 or US 27, or the Three Mile exit at I-275 to access campus. Projected increases in campus population will exacerbate traffic congestion on Kenton Drive, Nunn Drive and Three Mile Road/University Drive unless other transportation and access solutions are implemented. In keeping with the major recommendations of its 2000 Master Plan, and with the support of the Campbell County Transportation Plan and regional transportation planners, the university has proactively advocated over the past several years, for three significant transportation improvements that will provide relief for Kenton Drive and other campus traffic congestion conditions:

- Completion of the University Drive extension;
- Reconstruction/widening of Johns Hill Road from east of I-275 through the intersection with Martha Layne Collins Boulevard;
- Construction of the Connector Road from Three Mile/Sunset Drive extending south to the AA Highway.



US 27 Looking North

University Drive will be realigned from its current route under the University Drive garage and will intersect with Johns Hill Road near the Johns Hill and Martha Layne Collins intersection, terminating at



Looking South to University Drive Deck and Lot T

a proposed roundabout intersection. The new alignment will complete the southerly extension of University Drive from the Welcome Center garage south to Johns Hill Road. The 2030 projected Average Daily Trips (ADT) is approximately 10,000 vehicles.

Johns Hill Road is designed as a typical roadway section incorporating two 12-foot travel lanes, two six-foot bicycle lanes, and a 14-foot median. The typical right-of-way varies from 65 to 77 feet and also accommodates separate pedestrian sidewalks in each direction. The median will be grass except when required for left turn storage and turn requirements. A roundabout



Johns Hill Road Looking West

intersection is proposed at its intersection with Martha Layne Collins Boulevard and University Drive. The 2030 design year ADT is projected as 9,700 vehicles south of University Drive and 12,900 vehicles north of University Drive.

The Connector Road, depending on final design traffic and funding availability, is a three to five-lane roadway incorporating a left-turn lane/median and one or two travel lanes in each direction. The full alignment runs from Pooles Creek north to a proposed roundabout intersection with Johns Hill Road and continues north/northeast to the intersection with Three Mile Road/Sunset Drive. The construction of the Connector Road may be phased as an initial three-lane section in sufficient right of way to accommodate an expansion to a five-lane section. Bicycle lanes in both directions are recommended within the right-of-way but outside the curb lanes. Acceleration and deceleration lanes, left-turn median lanes and other necessary traffic controls should be provided at potential conflict points such as the proposed West Entry and entrances to the proposed parking garage located to the north.



Looking South to Johns Hill Road

The ability to provide access alternatives to avoid US 27 and the interstate system during peak commute periods is critical to providing an acceptable level of service on the campus area roadway network in the future. This is particularly important given the location and proposed expansion of the Kenton Drive garage, the anticipated new garage Site E, the north area surface parking lots and the southbound traffic parked in the North Athletic Area surface parking lots.

The 2030 design year ADT is projected as 18,400 to 18,900 vehicles south of Johns Hill Road and between 16,700 and 15,100 vehicles north of Johns Hill Road to Three Mile Road/Sunset Drive.



Road Improvements

- | | | | |
|---------|------------------|---|------------------------------|
| — | Proposed Roads | 1 | Connector Road |
| - - - - | Improved Roadway | 2 | Johns Hill Road Improvements |
| | | 3 | University Drive Extension |

2. Overview

Other than traffic congestion on Kenton Drive, which is a significant problem but will be relieved upon completion of the Connector Road, the existing roadway and parking system serving NKU provides reasonable access and capacity with little congestion or deficiencies occurring that are within the control of NKU. Traffic volumes are expected to increase on US 27 and continue to create congestion and queuing at the Nunn Drive and Johns Hill Road intersections. To effectively address this issue, the university should develop new access routes leading to parking and campus destinations; these new routes should not rely on use of US 27 during peak commute periods. This approach will likely alleviate peak hour congestion caused by vehicles using the Three Mile Road interchange with I-275 to reach University and Kenton Drives. In addition, an organized and efficient parking system will reduce the number of circulating vehicles and help minimize traffic flow on and around campus roads. The parking plan depicted in the Master Plan will provide the basis for building a management program that can achieve this goal.



The interstate system is undergoing a long-term rehabilitation and capacity expansion program that will maximize the efficiency of I-275 and I-471 and benefit NKU-bound traffic. The congestion experienced on US 27 is a larger issue; however, projects which NKU supports will mitigate

congestion by creating opportunities to redistribute traffic from US 27 to other routes. To accomplish this goal, transportation planners will need to maximize the effectiveness and efficiency of the adjacent transportation and parking system.

This includes the following:

Creating alternative north/south circulation on the west side of campus to redistribute some campus bound traffic away from US 27. This goal can be accomplished through construction of the Connector Road as proposed by OKI and KYTC. The Connector Road provides access to parking facilities and academic centers (as identified in the Master Plan) by providing an alternative route into the campus and away from the interstate system and US 27.

The effectiveness of the Connector Road is greatly increased by constructing the improvements programmed for Johns Hill Road. The reconstruction of Johns Hill Road also creates an improved circulation system for pedestrians and those bicycling to campus.

Expand and resupply parking, as shown in the Master Plan, to sites that are served by significant campus roadways and in a way that provides a balanced geographical distribution of parking capacity. Providing at least two access locations to the proposed new garages will also help to reduce “point-loading” and spread-out traffic demand.

This approach will serve to provide circulation and access alternatives for drivers during the most congested periods of the day.

Roadway Summary Table

Roadway	Type of Roadway	Typical Section	Access Control ¹	Average Existing ADT ⁴	24 Hour Capacity ²	Existing ADT	Average 2030 ADT	Highest 2030 ADT	Service Range	
US 27	urban principle arterial	6LD	Low	49,000	60,000	C	54,200	54,200	E	E
Nunn Drive	urban collector street	2LD	Moderate	10,000	15,000	C	13,000	13,000	D	D
Three Mile Rd/Sunset Dr.	urban collector street	2LU	Moderate	7,500	10,000	C	15,000	19,800	F	F
University Drive	urban collector street	2LU/2LD	Moderate	7,100	10,000	C	8,000	10,000	D	D
Johns Hill Road³	urban local roadway	2LD	Low	6,200	15,000	C	9,700	12,900	C	D
Kenton Drive	rural local roadway	2LU	Low	3,300	10,000	C	5,500	7,500	B	C
Connector Road - 2L	urban collector roadway	2LD	High	n/a	15,000	n/a	15,100	18,900	F	F
Connector Road - 4L	urban collector roadway	4LD	High	n/a	30,000	n/a	15,100	18,900	C	C
Note 1 -	Note 2 - 24-HOUR CAPACITY based on Highway Capacity manual averages									
XL = Total no. of travel lanes	Note 3 - Johns Hill Road Improvement in-place									
D = Divided w ith median	Note 4 -2003 ADT from CKTC									
U = No median										



Looking from the Nunn Drive and US 27 Intersection toward I-471

3. Arrival and Entry Points

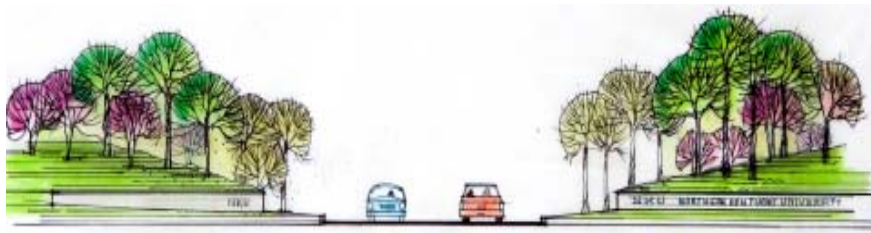


Campus arrival points and entries make a visual statement to travelers indicating arrival and welcome. Because of campus size and variations in site topography, the plan distinguishes between campus arrival points and campus entries. Arrival points announce that the visitor has

arrived at the campus. They should reflect a quality level which is institutionally appropriate, allowing the campus to visually distinguish itself from surrounding non-university settings. There are four (4) such arrival points:

- Nunn Drive and US 27
- Martha Layne Collins Boulevard and US 27
- Johns Hill Road and the Connector Road,
- University Drive (Three Mile Road) and the Connector Road

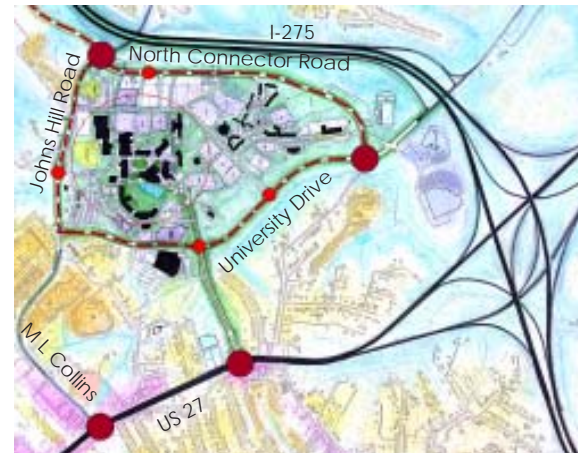
Once on campus, guiding the visitor to a specific area of campus is the next step in the arrival sequence. The proposed campus loop road (University Drive, Johns Hill Road, and the Connector Road) leads the visitor to one of four (4) major entries and related drop offs. The loop road and related entries are an important component of the circulation plan. These entries encourage travelers to move around the campus core rather than through it. As a result, pedestrian/vehicular conflicts are minimized, travel times are reduced and wayfinding is simplified.



Major Vehicular Arrival Treatment

These multiple entries and drop-offs will also reduce traffic backups by distributing traffic more evenly around the campus. The four entries are as follows:

- East Entry and Drop-off (Nunn Drive)
- West Entry and Drop-off (Connector Road at the Informatics Building) - The west entry connects the Connector Road with the Informatics Building, the Kenton Drive Garage, and the Student Union drop off. This will be an important entry point due to the large volume of campus bound traffic utilizing the Connector Road. Rain gardens and stormwater retention are proposed along this section of the Connector Road creating a visually distinctive "natural" edge and entry image.
- South Entry and Drop-off (Nunn Drive at the Administrative Center)
- South Campus Entry and Drop-off (south of Johns Hill Road) Significant growth is proposed for the area south of Johns Hill Road, including new academic buildings and campus housing. Vehicular access to this area is proposed to occur from the new roundabout located at the intersection of University Drive and Johns Hill Road/Martha Layne Collins Boulevard.



- Entries
- Arrivals
- Loop Road

4. Loop Road

The Kentucky Department of Transportation is undertaking several major improvements on the western and southern sides of the campus which will greatly assist in distributing vehicular traffic more evenly. These improvements include a new Connector Road on the western edge of the campus which extends from the



AA highway on the south to University Drive (Three Mile Road) on the north. The new roadway, in combination with University Drive and Johns Hill Road, forms a new perimeter loop road. With the proposed realignment and widening of Johns Hill Road and the extension of University Drive

southward to intersect with Johns Hill Road at a proposed roundabout, vehicles which arrive at the campus from multiple directions can travel around the perimeter to access the campus at the most convenient entry. This will significantly reduce cut-through traffic.



5. Access Roads

Secondary access points will provide faculty, staff and students—those who know the campus well—with access routes that lead to more specific destinations and parking areas:

Connector Road at the proposed Garage (West of Norse Commons) and at the Maintenance/Service area and Campbell Extension (West)

Kenton Drive will no longer be part of the perimeter travel corridor. On the northwest side of campus, a segment of Kenton Drive from Norse Commons to the Natural Science Center is removed, eliminating the most dangerous pedestrian/vehicular conflict point on campus. To the south, Kenton Drive at Johns Hill Road serves as a secondary campus entry leading to the Kenton Drive Garage and the Student Union drop off. A second important Connector Road entry point provides access to the proposed parking structure located further to the north. This entry drive then connects to the existing Kenton Drive alignment, providing service access to the existing docks at Founders Hall, the Science Center and the new Informatics Building.

Hilltop Drive currently leads directly from Johns Hill Road to the Knollwood subdivision further to the south. This important local route will be retained, but is reconfigured to connect with the proposed Johns Hill Road roundabout, moves around the east side of the new South Campus development and crosses the ravine to enter the subdivision at its current location.

Campbell Drive is extended to the north, forming an indirect link to the new Connector Road. This road provides convenient access to the North Village residential units, recreation fields, Ceramics Building and surface parking lots.

6. Emergency and Service/Maintenance Access



An important aspect of the campus circulation system is the provision for emergency vehicles and the delivery of goods required to operate and maintain the campus. As the campus grows and new buildings are added, the service access system must expand accordingly. Each new

building requires some level of service and therefore the access system is a continuously evolving element. Certain basic principles are needed to guide the evolution of this system as well as the placement of major service facilities.

- Major pedestrian corridors can be used to accommodate emergency vehicles.
- Electric carts rather than pickup trucks should be used whenever possible.
- A single dock should be used to serve a group of buildings.
- Discourage the use of semi-trucks as delivery vehicles.
- Service vehicles should park in designated areas and not in major campus open spaces or along pedestrian corridors.
- Service docks should not be located along major pedestrian corridors due to odoriferous and visual concerns as well as safety issues.

F. Parking Patterns



Parking on most university campuses consumes large areas of developable land located in close proximity to the central academic area. As a result, it is important to understand future needs (demand) and to define a parking strategy that reflects institutional priorities, expectations and

resources. Using these calculations as a guide, appropriately sized parking areas are incorporated in the master plan.

The following strategy identifies the number of parking spaces that will likely be needed to accommodate the future development conveyed by the master plan. Once demand targets were agreed upon, a long term parking plan was developed.

As the campus grows, university staff should carefully monitor parking availability and demand; loss of existing parking spaces; change in full-time equivalent (FTE) population levels; parking utilization; and, multimodal ridership levels.

The university undertook an independent and considerably more detailed parking demand and implementation study. This document was prepared by the Lansing Melborne Group of East Lansing, Michigan.



Lot F Looking West to Residential Village

1. Demand

Based on best practice methodologies, techniques have been employed to estimate future parking needs. This approach includes an evaluation of current use levels and expectations; tracking future FTE population levels; adjusting for multimodal ridership levels and changing demand levels; and, estimating spaces lost due to building expansion. To achieve the objectives depicted on the master plan, including the elimination of 4,642 existing spaces to allow for future construction, a total of 7,600 new spaces will be needed, for a total recommended master plan parking capacity of 11,150 spaces, representing an increase of 2,958 spaces or 36% above the existing parking supply of 8,192 spaces.

The following assumptions have been applied when identifying future parking needs.

- a. As new buildings are brought on line and former parking areas are utilized as building sites, all displaced parking spaces will be reconstructed at other locations. The master plan assumes a loss of a total of 4,642 spaces.
- b. Future demand levels are assumed to follow existing transportation and parking patterns. As documented in Section 2 Background Information of this report, there are currently 8,142 existing parking spaces available on campus. During a peak use inventory completed in Fall 2007, 5,783 spaces were occupied.
- c. The 2007 faculty, staff and student FTE population was 13,133. A peak period demand ratio is determined by relating the current campus population to the actual spaces utilized during peak use periods. For NKU, this results in a peak period demand ratio of 0.440.

- d. There is growing support for reducing dependence on the single occupancy private automobile. Travel demand management strategies such as car pooling, transit utilization, cycling, and travel by foot for those living near or on campus can significantly lower on-campus parking demand and achieve a “greener” campus. Currently, approximately 3% of the FTE campus population utilizes alternative travel modes. In projecting future demand, it has been assumed that demand levels can be further reduced by an additional 6% (total of 9%) as the transit system is expanded, commuting costs increase and the university becomes more of a residential campus.
- e. NKU identified an occupancy target of 90 percent during the peak period, assuming that during all other periods of the day, the occupancy will be less than 90 percent. The approximate number of parking spaces necessary to service the future FTE at 90 percent occupancy during the peak period totals 11,150.
- f. Special surge period demands have also been included. These additional spaces are needed during the first 2-3 weeks of each semester, for large events at the BOK or when BOK events and NKU activities coincide. These spaces can be located at some distance from the academic core and can also accommodate commuters who are willing to ride a shuttle to reach their destinations. These additional 1,150 spaces can be sited at the “North Athletic Area” as shown on the master plan.

Demand Summary Table

Campus Population	Future FTE	No. of Spaces/FTE	No. of Spaces
F/S	2,901		
Students	<u>22,283</u>		
Total	25,184	0.435	10,970
Reduction in Parking Demand due to Travel Demand Management		6.0%	<u>(700)</u>
		Subtotal	10,270
90 % Target Occupancy Adjustment (approx)			1,027
Approximate No. of Spaces at 90% Occupancy			11,300
No. of Spaces for Surge and Special Events			1,250
Total No. of Spaces Required for 2020 Growth			12,550
No. of Current Spaces			8,192
Surface spaces lost to Future Buildings			4,642
Net No. of Deck and Surface Spaces Retained			3,550
Net New Spaces to be Constructed			9,000

2. Proposed Parking Strategy



As the campus grows in size and the university population doubles, a more creative and diversified parking approach will be needed. The university is currently in the process of implementing a strategy that includes more than doubling the number of

structured (deck) parking spaces, creation of a number of new surface lots as well as adding a major perimeter commuter/shuttle surface lot, improved transit service, a campus wide bicycle network and improved pedestrian corridor system.

It is anticipated that approximately 11,150 total on-campus parking spaces will be needed to support the projected building additions and expansions shown on the master plan illustration. Of the 11,150 spaces proposed to be provided, approximately 4,515 or 41% will be housed in parking garages and 6,635 or 59% will be located in surface lots.



Today, three existing parking garages, located on the east and west sides of campus, provide approximately 22% of all parking spaces. The master plan recommends the university work to achieve a parking system characterized by a better geographic

distribution of parking capacity; for example, the addition of two (2) new decks is recommended, one on the northeast, immediately west of Norse Commons, and the other is directly south of the Lucas Administrative Center. The existing Kenton Drive Garage is proposed to be significantly enlarged by expanding the footprint southward and building vertically.

The parking deck system is supplemented by the reconfiguration/addition of four (4) major surface lots. These facilities include the consolidation and expansion of four existing lots located on the northeast side of campus (currently lots E, F, I and W); the creation of a new lot south of Johns Hill Road; two additional facilities located southeast of the Bank of Kentucky Center; and, creation of the university's largest proposed surface lot in the area identified as the North Athletic Area (located east of University Drive and north of Nunn Drive).

The Bank of Kentucky and North Athletic Area surface lots are designated as future shuttle lots. Located more than a 10 minute walk from the proposed academic core, these lots will be served by shuttle buses providing efficient access to key locations around the campus core. These parking facilities will also provide much needed parking capacity during athletic events and special events when overflow parking is needed.



- Existing Garages
- Proposed Garages
- Surface Parking
- Proposed Shuttle Lots

G. Bicycle Patterns



As campus complexities increase, the campus core expands and greater land efficiencies are achieved, interest in alternative modes of travel should be encouraged. Based on campus surveys and comments shared during master plan and subsequent discussions, it is apparent that bicycles are an important alternative mode of travel.

To encourage this interest, the university needs to work with regional agencies to define safe bicycle routes that link major off-campus areas to campus. A system of bike paths connecting the academic core with peripheral

areas such as housing, athletics and recreation, the town center, and the Faith Village is essential. Appropriate and secure bicycle storage will be needed, including traditional bike racks as well as all weather storage facilities - interior or covered shelters as well as individual storage boxes.

As on-campus biking becomes more popular, the rider's responsibility to travel safely will become increasingly important. With the topographic conditions found on the campus and current technologies, bicycles can reach speeds comparable to the automobile. Potential rider/pedestrian conflicts need to be closely monitored and regulated accordingly. "Walk only zones" will need to be appropriately identified and enforced along heavily traveled pedestrian corridors and within major gathering areas and plazas. Storage facilities will need to be located so as to provide convenient access; however, placement should be a distance from major building entries to avoid blocking pedestrian movement or creating visual issues.



The comprehensive on-campus bicycle system is comprised of three types of paths. These may include the following.

- Independent paths are designed exclusively for bicycle usage. They are not related to existing roads or major walks and are situated to take full advantage of grade changes and scenic opportunities.



Independent Bicycle Path

These routes are only proposed in areas where significant travel volumes warrant this treatment. No such routes are proposed at this time, but could be considered as usage increases.

- Integrated pedestrian and bicycle paths are used on most campuses. While they are physically combined as a single path, they are divided into separate walking and riding zones. These are typically the highest level of bicycle paths provided.



Integrated Pedestrian Walk and Bicycle Corridor

- Integrated automobile and bicycle paths are designed with the rider traveling within a visually identifiable bicycle lane along the road shoulder. This configuration is the least appealing (to both drivers and riders) due to safety concerns – variation in travel speed and automobiles turning in front of bicyclists. However, this configuration is most frequently used due to restricted right-of-ways as well as reduced construction costs, and minimal maintenance (snow removal). This configuration should be used as a last resort. If the bicycle path needs to be integrated within the road right-of-way, it is recommended that the bicycle path be located next to the road shoulder away from moving traffic or on the other side of the curb, where the sidewalk is typically located.



Integrated Road and Bicycle Corridor



The on-campus bicycle system connects major destinations, responds to the terrain and proposes to utilize an integrated pedestrian/bicycle configuration as much as possible. The system is comprised of a central loop with individual spurs that connect specific perimeter locations.

1. Central Loop

The 1.3 mile central loop surrounds the academic core and benefits from relatively level terrain. The alignment follows existing Kenton Drive on the west, former Nunn Drive alignment north of the Natural Science and Landrum Hall, and between the existing parking decks and Applied Science and Technology, Business Education and Psychology Center, and Administrative Center on the east. It then parallels Johns Hill Road to its intersection with the Connector Road.

2. Perimeter Linkages

The following linkage routes are proposed to connect perimeter destinations to the central bicycle loop.

North Residential Village route is less than ½ mile long. It begins at the academic loop path and extends the length of the Village terminating at the Connector Road path.

Athletic and Recreation route (1.3 miles) begins at the northwest corner of the academic loop, and traverses the North Athletic Area, basically following the existing Sunset Drive alignment; from there it connects with the bicycle path at the Foundation property, at US 27 and Nunn Drive, and turns westward toward the core area of campus.



Bicycle Plan

- Bicycle Walk Only Zone
 - Central Loop
 - Perimeter Linkages
- | | |
|-----------------------------------|-------------------------|
| A North Residential Village Route | D Town Center Route |
| B Athletic and Recreation Route | E Johns Hill Road Route |
| C Callahan Route | F South Connector Route |

The Callahan Route is just over a ½ mile long. It connects Callahan Hall with the existing Lot T surface parking lot. This alignment includes a path segment which traverses a private apartment complex as well as property recently purchased by the City from the Methodist Church.

The Town Center Route is just over 1/3 mile long (it may seem longer due to the steep terrain) and connects the foundation property located along US 27 with the central bicycle loop at the new Welcome Center. It is aligned to take advantage of the new elevated walkway that links The Bank of Kentucky Center (Arena) with the academic core.

Johns Hill Road Route is ½ mile long. It parallels the road ultimately connecting the South Campus area with US 27.

US 27 Alternative Bicycle Route (not shown) offers an exciting opportunity to connect and provide visibility to retail facilities located to the rear of the retail properties that line US 27. This route would connect the Extension Center park at Martha Layne Collins Boulevard/US 27 with the Foundation development at Nunn Drive to the north.

Southern Route follows the proposed Connector Road from Johns Hill Road to AA Highway. This 2 mile long alignment passes through steep terrain. It intersects with the proposed academic loop path at the west campus entrance.

H. Utility Patterns



No campus can function without an effective system of utilities to heat, air condition, light, and power its facilities. The evaluation and design of these systems is a highly technical and complex undertaking well beyond the scope of a comprehensive master plan. At the master plan level, it is important to establish a system of utility corridors throughout the campus. Such corridors allow for the appropriate placement of underground distribution lines needed to service existing and new buildings, without conflicting with the sites needed

to accommodate the buildings themselves. The failure to accomplish effective coordination between building planning and utilities planning can prove both costly and disruptive to the desired future pattern of campus development.

1. Production

Chilled Water Production – The university's steam and chilled water originates from the power plant located on the east side of campus near University Drive. The existing chilled water plant, after two new cooling towers are installed in the summer of 2009, will have a gross cooling capacity of 5,500 tons. This capacity is generated by two 2,500 ton and one 1,500 ton machines, but the overall chilled water capacity is limited by cooling tower capacity, which by the end of 2009 will be only 5,500 tons.

This capacity compares to the current maximum campus cooling load of 4,500 tons (including The Bank of Kentucky Center and Student Union). The net available additional cooling capacity is 1,000 tons (if two additional cooling towers could be added, this would increase to 2,000 tons), assuming no standby or backup capacity is taken into account. With a power plant of this size, it is recommended that the gross capacity be one machine more than the maximum load. Therefore, if one 2,500 ton machine fails, only 4,000 tons would be available. This would place the university in an uncomfortable situation because they would be below the threshold capability of existing operational machines - (i.e. they would be 500 tons short of this number).

Since the university has already placed itself in a position of not having full backup capacity, it is recommended that demand not exceed 5,000 tons without adding an additional chiller. This would allow the two 2,500 ton machines to run while the 1,500 ton machine is being repaired. Operating above this level would deprive the university of back-up capability.

It is estimated that 150,000 square feet of additional building could be brought on line before reaching the 5,000 ton practical limit. This limit will be reached when the Informatics building is brought on line.

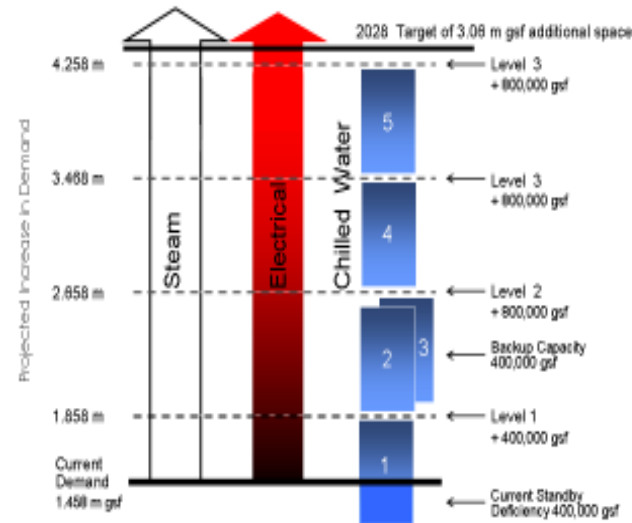
Therefore, it is proposed that additional chiller capacity be brought on line as soon as possible. It likewise would be prudent to consider shifting some capacity away from the current chilled water plant, as piping systems and tunnels are nearing maximum capacity near the existing power plant.

The existing power plant has space allocated for an additional 2,500 ton chiller; however it has roof space for only two of the four cooling towers that would be needed. Additional cooling towers would have to be placed on grade, or an additional structure built. However, further study may result in a conclusion that two, rather than four, cooling towers could function with an acceptable operating risk.

Steam Production - The existing steam (heating) plant has more than adequate capacity to accommodate the 2.1 million of additional gross square feet anticipated in the master plan.

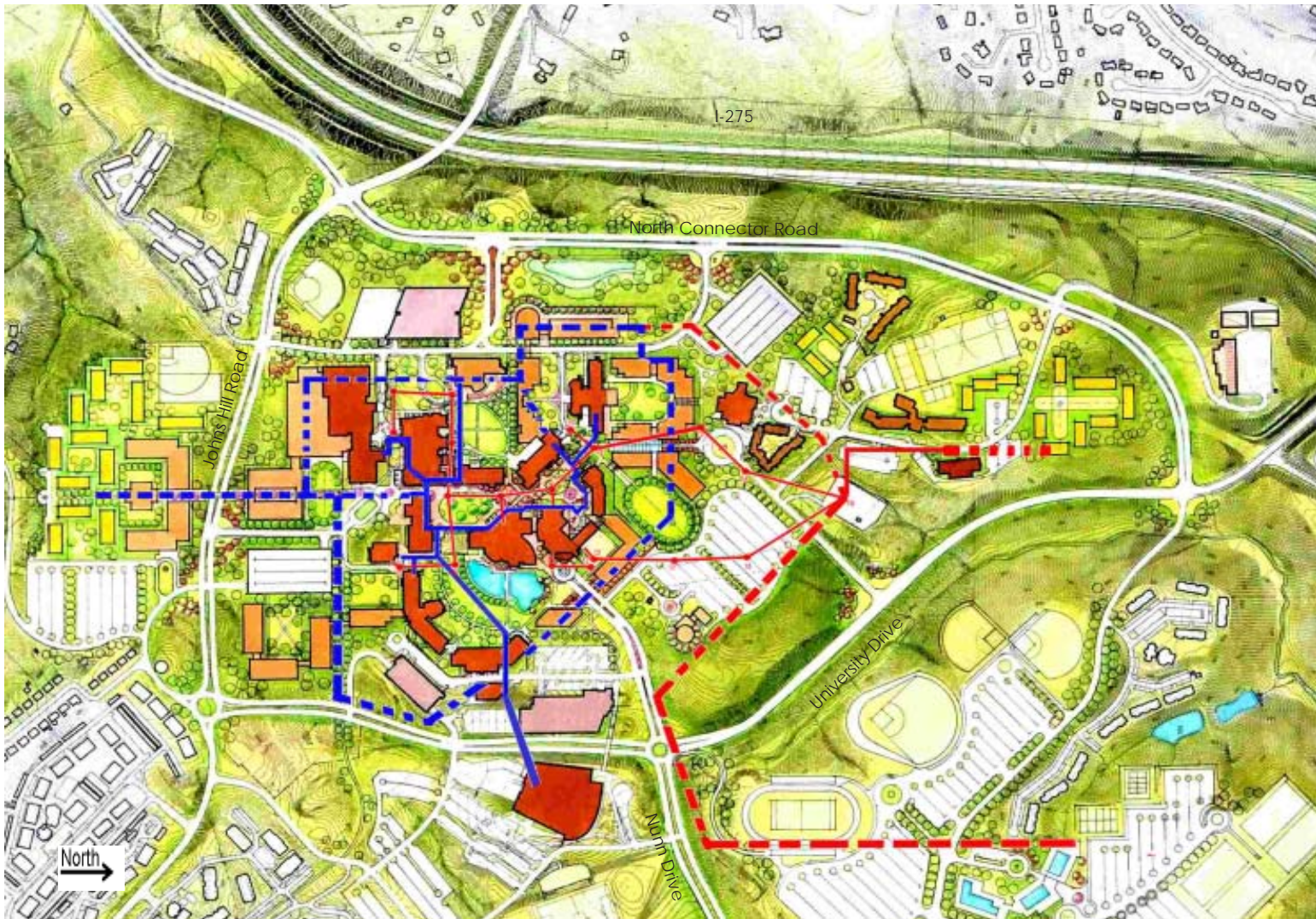


Existing Power Plant



These two illustrations define utility thresholds that limit campus expansion.





Utility Distribution Plan

- Existing Steam & Chilled Water
- - - Proposed Steam & Chilled Water
- Existing Primary Electric
- - - Proposed Primary Electric

2. Distribution

Chilled Water Distribution - Current chilled water distribution is primarily located in the campus tunnel system. It is anticipated that the distribution network has adequate capacity to accommodate future demand. The 24 inch main, which serves the entire campus, has a capacity of about 7,500 tons and a current load of 4,500 tons. The remaining 3,000 tons of capacity is equivalent to about six - 150,000 gross square foot buildings.

The main 24 inch line tees into two 16 inch lines, each having a capacity of about 3,500 tons. Assuming that the current load is split equally with a current load of 2,250 tons per 16" line, there remains about 1,300 tons of future capacity in each line. Therefore, each line has the capacity to support about three buildings at 150,000 gross square feet each. Because it is unlikely that both 16 inch lines will be equally loaded, additional flexibility is needed. This can be achieved by creating additional loops within the chilled water distribution system. This will allow uneven loading to be leveled out, so that the university can achieve nearly full capacity of the distribution system. The accompanying master plan utilities distribution drawing illustrates these additional distribution loops.

As additional buildings are brought on line, their impact on the overall distribution system needs to be carefully assessed, to ensure the load is balanced. As noted previously, for any significant load added to the chilled water loop after completion of the Informatics building, an additional chiller will need to be added at the plant. If the additional cooling capacity is provided at the main chiller plant, then distribution capacity will become the limiting factor. The campus has a current real production capacity of about 5,000 tons, and a distribution capacity of about 7,500 tons. Thus, when a 2,500 ton chiller is added to the current plant, the real capacity will equal distribution capacity.

When needed, care should be taken in selecting the location for future new chillers, beyond the one mentioned above. For the existing plant to house a second new chiller, an addition to the building would be required; however, the entire distribution system is a more significant concern, as it will need to be upgraded (the 24" and 16" will have to be replaced with larger lines) if a second chiller is added. This is a costly approach. If the second new chiller is located in a new plant, significant benefits can be realized; an expanded distribution system with multi-directional chilled water management capabilities (serving the campus from two different directions) would provide the campus with adequate chilled water capacity for many years to come. Thus, this plan recommends construction of a new chiller plant serving the campus from either the south or southwest; such a plant will reduce infrastructure costs. This scenario falls within the 10-20 year time horizon considered by this master plan; timing depends upon the pace of funding for new projects.

Steam Distribution - The steam plant capacity will be adequate for many years, (double that of the chilled water system). However, the sizes of the steam lines are significantly smaller than chilled water, 8" versus 16"/24". Therefore the infrastructure costs are different. It is proposed that new buildings be designed to minimize energy use, and existing buildings be retrofitted to reduce their consumption, thereby reducing the campus wide steam load even though square footage is increasing. The steam distribution system will need a number of loops in order to reduce peak usage in any particular line. However, there is no need to develop an additional steam plant within the time horizon of this master plan.



Electrical Distribution - The Master Plan Study assumes that the high tension corridor remains in its current alignment. The university's electric service originates from a Duke Energy substation located on the north side of campus on Kenton Drive in the vicinity of the North Village residential area. The

university's switchgear is located just outside the limits of that substation.



The university's primary electric service switchgear was recently replaced (early 2009). The new switchgear is rated at 600 amps at 13.2 kV, which is equivalent to approximately 12 MW (megawatts). The historical maximum demand on the existing switchgear is 8.08 MW.

As new square footage comes on line, additional distribution loops will be required, including additional switchgear and an underground duct and manhole system. Four new loops

will be required and should be configured as listed below. Half of these loops should be fed from independent switchgear line-ups that do not presently exist.

- Loop 1 to serve the West District
- Loop 2 to accommodate the North and Northeast Districts
- Loop 3 to serve the South District and South Campus and
- Loop 4 to serve the Northeast Athletic Complex

Domestic Water Distribution - The campus domestic water loop is fed from three sources. Each provides 70 psi pressure. Because these service points are fed from mains that serve NKWD (Northern Kentucky Water District) residential customers, NKWD is unable to increase the pressure. NKU buildings served from the campus loop see a pressure of approximately 50 psi since the water has passed through two PRV's. NKU has installed booster pumps at each building to increase the pressure to 70 psi.

As more square footage is brought on-line, it is recommended that the campus loop be fed via an extension of the 24" NKWD water main that exists at the intersection of Nunn Drive and US 27.

Natural Gas Distribution - A high pressure natural gas main was extended into campus when the power plant was constructed. This main is a direct tap from a Duke Energy transmission main and has more than adequate capacity to serve the projected needs of NKU. When a second chilled water facility is constructed on the southwest side of campus, this gas main will need to be extended.

Utility Production and Distribution Needs and Recommendations

	<u>Existing Capacity (N-1)</u>	<u>Existing Demand</u>	<u>plus 150,000</u>	<u>150,000 to 400,000 s.f.</u>	<u>400,000 to 800,000 s.f.</u>	<u>800,000 to 1.6 mil s.f.</u>	<u>1.6 mil to 2.4 mil s.f.</u>
Chilled Water	6500	4500 (1)	OK	Add 2500 ton chiller	OK	Add 2500 ton chiller	Add 2500 ton chiller
Cooling Towers			Add 2 towers (2)	Add 2500 ton towers	OK	Add 2500 ton towers	Add 2500 ton towers
Power Plant			Build footprint for towers			Expand power plant	
Distribution 24"	6500	3900					
Distribution 16"	3250				Loop 16" dist system	Expand distribution	
Steam	102,000 lbs/hr	20,000	OK	OK	OK	OK	

(1) includes BOK and SU

(2) assumes two towers added 2009

Assumptions:

300 s.f. per ton for classrooms

100 s.f. per ton for labs

400 s.f. per ton for residential facilities

Section 5

District Plans

- A. West District
- B. North District
- C. Northeast District
- D. East District
- E. South District
- F. South Campus District
- G. South Connector Road District



Section 5 District Plans

To fully illustrate the application of the basic planning principles set forth in this study, the campus wide master plan is presented as a series of detailed district plans. At this stage, it is important to show an appropriate balance between buildings and open space. District Plans demonstrate how new buildings should be positioned to create open spaces, the character of the open spaces, relationships to the walkway system and other infrastructure systems as well as the relationship to and relative importance of existing and future buildings. Capacity targets for each area are also identified.

The majority of anticipated growth is proposed to occur in seven districts within the academic core; descriptions are provided for each cluster recommended in the plan.



- | | |
|-----------------------|----------------------------------|
| W West District | S South District |
| N North District | SC South Campus District |
| NE Northeast District | CR South Connector Road District |
| E East District | |

A. West District



This district is defined by Nunn Hall on the east, the Student Union on the south, the Informatics building on the west and a future building on the north. The oval configuration of West Quad makes this central open space distinctive.

This area presents an institutional image and academic presence to those traveling the Connector Road, which defines the West Campus arrival experience. The west entry drive, in combination with the Johns Hill entry road (a remnant of Kenton Drive), leads to the Student Union drop off, providing convenient access to the Student Union and other nearby buildings.



Looking North to West District

The proposed buildings to the north (two to three potential building projects) enclose the central space, functioning as an extension of Founders Hall. Because these facilities are contiguous to the academic core, they provide significant and easily accessible opportunities for academic expansion. The linear building shown west of the Natural Science Center is sited at this location to emphasize the academic character of the campus and to highlight the West entry drive.



- | | | |
|-------------------------|-----------------------|-----------------------|
| Existing Buildings | Quadrangle Open Space | A Retention Basin |
| Proposed Buildings | Major Water Feature | B Major Walk Corridor |
| Existing Parking Garage | Major Campus Entry | C Elevated Walkway |
| | | D Major Drop-off |
| | | E Service Access |

The West Quad, a two acre open space, serves as the primary organizing element for the surrounding buildings. The recently completed Student Union, one of the most important and intensively used facilities on campus, is the focus building of this grouping. Because of the importance of the quad, renovation of the surrounding existing buildings is warranted. Major building entries should open onto the quad, providing direct and welcoming pedestrian access.



West Quad is conceived as a student oriented open space, encouraging restive contemplation, small group interaction, and informal activities such as playing catch, throwing frisbees, and people watching. The center of the space is an open lawn area for sunning and play. Walks crisscross the lawn area connecting major pedestrian destinations. Tall canopy trees shade the perimeter walks and reinforce the human scale. Small flowering trees and shrubs as well

as ground covers and flowers create a transition from the building to the walks and accentuate important building entrances. Use of special construction techniques encourage permeability of storm water run off.



Because this is a major campus destination, a strong emphasis is placed on accessibility. The major east/west pedestrian corridor passes along the north face of the Student Union terminating at the Kenton Drive Garage to the west. A second important walkway passes along the northern edge of the open space connecting the building proposed to be sited west of Kenton Drive with an important north/south walkway which connects the Natural Science Center and the Health Center. Due to the importance of the West Entry (Connector Road) and the need to accommodate east/west pedestrian traffic, the existing pedestrian bridge connecting to the Kenton Drive garage is an important element. A second Kenton Drive elevated pedestrian bridge is shown to the north, connecting two major buildings.

The anticipated increase in parking demand can be accommodated by expanding the Kenton Drive Garage – both vertically and horizontally. The proposed drop off at the Student Union is conveniently accessed from both the south and the west, which should appeal to bus riders.

B. North District

This district extends northward from the Natural Science Center and includes three new buildings as well as an addition to the Natural Science building. These buildings define a new centrally located North Quad open space.



The proposed buildings are on axis with and appear as an extension of the Natural Science Center. The u-shaped configuration of the North Quad contributes to the district's distinctive character. This area has the potential to become a future science quadrangle. Because the

north building is not only the largest in this grouping and on axis with the Science Center, it demonstrates an interesting configuration and is highly visible from the surrounding roads. It is the most visually dominant building within the group.

All weather, elevated walkways connect the buildings, providing convenient access and opportunities for interaction and information exchange. The siting of the buildings and use of elevated walks to connect them results in a strong sense of identify and belonging.



Looking Southwest to Landrum and Natural Science

This district is contiguous to the major north/south pedestrian corridor which connects the North Residential Village with the academic core. It is also a short walk from the proposed West Parking Garage.

A proposed major parking garage is located between the academic core and the North Residential Village, west of Norse Commons. It is conveniently sited in close proximity to the academic core. The deck is accessed by a separate drive that feeds two deck entrances; this access route also provides service and maintenance vehicle access to buildings located on the north side of the West Quad as well as the west side of the North Quad.



- | | | |
|--------------------|---------------------------|---------------------|
| Existing Buildings | Quadrangle Open Space | Retention Basin |
| Proposed Buildings | Major Water Feature | Major Walk Corridor |
| Existing Housing | Proposed Parking Garage | Major Drop-off |
| Proposed Housing | Surface Parking | Glass Arcade |
| | Secondary Vehicular Entry | |

C. Northeast District



The Northeast District is defined by the Landrum Academic Center on the south, the major north/south pedestrian corridor on the west and the large existing surface lot (Lot I) on the northeast. Development of this area requires the removal of the Baptist Student Union facility; it would be relocated to the new Faith Village proposed to be located at the intersection of University Drive and Johns Hill Road.

This district is comprised of six new buildings, four of which form a single cluster which is located north of Landrum Hall. The remaining buildings are sited near Loch Norse and on the former Honors House site. The main building cluster is connected to the existing academic core via Landrum Hall. Placement of these buildings is influenced by the need to connect with Landrum and the Central Plaza, the opportunity to screen the existing service dock from those approaching the campus along Nunn Drive, and to strengthen the sense of enclosure at the lake area.



Looking Southwest to the Library and Central Receiving

Separated from the other buildings is a smaller building housing a recital or concert hall. The facility benefits from a pastoral setting which reflects views northward to Honors Woods, a proposed nature preserve, and distant views eastward along Nunn Drive to the US 27 intersection.

The large existing surface parking lot proposed to serve this area is accessed from Nunn Drive or Kenton Drive and appropriately occupies the utility easement (high tension towers and overhead lines). Today, this is the most heavily used parking area on campus.

Interior corridors and outdoor walkways connect the proposed buildings. A linear plaza is recommended where the exterior walks intersect at the west end of Landrum Hall.



- | | | |
|-----------------------|-------------------------|-------------------------|
| Existing Buildings | Quadrangle Open Space | A Preservation Area |
| Proposed Buildings | Major Water Feature | B Major Walk Corridor |
| Existing Housing | Existing Parking Garage | C Electrical Substation |
| Proposed Glass Arcade | Surface Parking | D High Tension Corridor |
| | Major Campus Entries | |

D. East District



The East District includes four new buildings and the proposed South parking structure. It is defined by the Business Education and Psychology Center on the north, Johns Hill Road on the south, University Drive on the east, and the south drop

off drive (a remnant of original Nunn Drive) on the west. Most of the proposed development occurs on parking Lot T and H, existing lots that encompass a series of terraced parking bays.

This district occupies a prominent site at the Johns Hill Road/Martha Layne Collins/University Drive roundabout. A new building oriented along a north/south axis extends southward from the Business-Education-Psychology Center. It is proposed that the new building be connected to the existing one in order to provide ease of access. The footprint of the new building is basically comparable to the west wing of the existing facility. The new building screens views of the University Drive Parking Garage and forms a southward facing courtyard.









Looking Northwest to the Academic Core

Three new buildings are envisioned east of the proposed South entry drive and parking structure. Due to the steep north facing slope, these buildings will need to be cut into the hillside. By serving as retaining walls, a level central open space can be realized.

A major new parking structure is proposed for this area, providing convenient parking for those working, studying, and using recreation facilities in the South and Southeast Districts. Access is proposed from Johns Hill Road and the drop off access drive.

This District is bisected by an important walkway which extends east from the Health Center, passes through the Faith Village and terminates at Callahan Hall.



- | | | | | | |
|---|--------------------|---|-------------------------|---|---------------------|
|  | Existing Buildings |  | Quadrangle Space | A | Major Drop-off |
|  | Proposed Buildings |  | Major Campus Entry | B | Major Walk Corridor |
| | |  | Existing Parking Garage | | |
| | |  | Proposed Parking Garage | | |

E. South District



The South District includes a major addition to the Health Center and two additional buildings which extend eastward and face across an open space toward Regents Hall.

The proposed Health Center expansion reflects the square footage identified in the Athletic and Recreation Master Plan. The addition's low profile translates to a large footprint but a relatively small amount of space; the university is encouraged to work toward a maximum site accommodation, that is, a more dense building with multiple levels to maximize site density opportunities.



Looking West to the Health Center

Two other proposed buildings are sited between the Health Center addition on the west and the existing South Campus drop off drive (the unnamed remnant of Nunn Drive) on the east. These buildings are configured to provide a significant amount of growth potential for this area. The buildings are positioned in a relatively "tight" configuration to accommodate a pedestrian corridor, serving as a gateway for the footbridge as it ramps up to gain adequate vertical height to cross Johns Hill Road (approximately 16 feet).



- | | | |
|--------------------|-------------------------|------------------------|
| Existing Buildings | Quadrangle Open Space | A Major Drop-off |
| Proposed Buildings | Existing Parking Garage | B Major Walk Corridors |
| Proposed Housing | Proposed Parking Garage | C Elevated Walkway |
| | Major Campus Entry | D Athletic Field |
| | Secondary Campus Entry | |

F. South Campus District



The South Campus District is defined by Johns Hill Road on the north, a major ravine on the south, the relocated Hilltop Drive on the east and the Meadowview Apartments on the west.

This mixed use academic and residential development consumes 23 acres of land. The academic

buildings, utilizing 5.5 acres of the developed area, are sited to achieve a relatively dense core with residential buildings aligning with the open ravine. These residential buildings separate university development from the private subdivision located across the ravine. The smaller scaled residential buildings provide a less obtrusive transition than the academic buildings. A large surface parking lot and recreational facilities are also provided. A pedestrian promenade parallels the ravine, offering distant views across and into this natural buffer and open space.



Looking Southwest to Proposed South Connector Road



- | | | |
|--------------------|------------------|------------------------------|
| Proposed Buildings | Major Open Space | A Major Drop-off |
| Proposed Housing | Proposed Garage | B Recreation Fields |
| | Surface Parking | C Elevated Walkway |
| | Primary Entry | D Existing Water Tower |
| | Secondary Entry | E Reconfigured Hilltop Drive |
| | | F Ravine Overlooks |



An elevated pedestrian bridge is proposed to facilitate safe pedestrian movement across Johns Hill Road. This is likely to be needed due to the significant increase in traffic flow projected on Johns Hill Road.

Designers at the Kentucky Department of Transportation propose to significantly lower the existing highpoint of Johns Hill Road. As a result, both sides of the new roadway will be at approximately the same elevation. Because the elevated walkway must be accessible by the disabled, considerable ramping is required. Adequate distance is available on the north side of the road to achieve the desired elevation. Within the academic buildings on South Campus, a continuous second floor circulation level is proposed. Interior building elevators and stairways will provide for vertical movement with minimal loss of land area and cost.

While this campus area is within a 10 minute walk of the center of campus, it is recommended that a relatively independent department or group be located here to minimize pedestrian travel. This parcel is highly visible from surrounding off-campus areas, is easy to find, and offers convenient access and egress.

G. South Connector Road District

Extending southward from Johns Hill Road to the AA Highway and originally designated for acquisition in the University's 2000 Master Plan, this undeveloped area is comprised of rolling fields, steep terrain, tall trees, meandering creeks and several high quality environmental areas. The district includes land currently owned by the university as well as areas identified for future acquisition, representing an opportunity for creating a wonderful campus and community resource. This area can support education-related pursuits including the university's green programs and related research programs; can function as an important campus open space, serving as a major interpretive, recreational and open space destination; helps balance the comparatively high density of development proposed for the main academic campus; and, promotes a strong visual experience for the Interstate I-275 and Connector Road view corridors.



Looking North along the Proposed Connector Road Alignment



1. Development Patterns

Due to the quality and diversity of the natural setting, the primary focus for development within this district is preservation, interpretation and non-obtrusive environmental research. Two of the three most environmentally valuable areas on or near campus are located within this district. As a result, most of the area is reserved for park, preserve/preservation, and interpretive uses.

The proposed South Connector Road will have a major impact on access to campus by distributing NKU bound traffic more evenly around the campus while also improving overall community accessibility within the larger area. It is important that the university prepare for this eventuality before construction is initiated.

The South Connector alignment shown on the accompanying plan reflects the revised alignment developed in late 2009. This simplified alignment, which shifts the roadway eastward and away from its earlier route closer to the I-275 corridor, now splits the proposed district into an eastern and western parcel, forming two areas of roughly equal size. The new alignment reduces the amount of grading that will be required for road construction and places the roadway at a lower elevation. As a result, future development would need to be accommodated on the surrounding hilltops, making vehicular access to the limited number of relatively level development sites more challenging.



A single major intersection is proposed midway along the South Connector Road. By locating both the east and west access roads off a single intersection, wayfinding is enhanced and the side roads are positioned to take advantage of the more gradual grades currently found at this location. Because the South Connector Road alignment is preliminary, engineered grading plans have not yet been prepared. The exact location of the proposed intersection and final grading for surrounding areas will need to be confirmed once this information becomes available. It is important that this intersection be appropriately constructed in order to emphasize this important decision point. Signage, lighting, and potentially stone walls or other accent features can be used to communicate that these are university facilities and to reflect an appropriate level of significance.



South Connector Road District Plan

- A Retention Areas and Rain Gardens
- B Drainage Swales
- Existing Campus Property Line
- - - Existing Property Lines



Steep topography severely limits the number of development sites which can be accommodated within this district, although three important development areas are proposed.

These include an environmental and

recreation center, a campus retreat facility, and the proposed observatory. The observatory and the retreat center are shown on the west side and the environmental and recreation center is proposed to be sited on the east side of the Connector Road.



The environmental and recreation center includes educational classrooms, an interpretive facility as well as an outdoor play area, demonstration areas and parking. The center is the hub for numerous nature trails which lead into the surrounding areas for walkers to experience the diversified and special habitats that surround the facility.

The retreat center is located in a relatively more isolated area. Intended to accommodate university and possibly community groups, the facility and its

surroundings provide a quieter, more pastoral setting for group interactions. Meeting rooms, an eating area, simple kitchen, restrooms and lounge are envisioned. Outdoor facilities include an amphitheater, interpretive displays, and parking.



The observatory is shown west of the Connector Road. It is centrally located – well away from the interstate, above (higher elevation) the Connector Road, and away from the residential area located further to the east. This location is recommended in order to minimize light pollution, to take advantage of the relatively level hilltop which can accommodate the proposed facility, parking and access drive. The shared entry point/ intersection with the retreat center and environmental recreation facilities will hopefully encourage day time visitors.

2. Connections



The master plan proposes to visually, physically and functionally link the South Connector Road area with the main campus. In addition to the proposed connector road, a roadside bicycle route extends the full length of the new roadway. Walks, trails, and open space corridors connect

the campus pedestrian and green space network (buffers, preservation areas, linear corridors and quadrangles) with the proposed natural district to the south, encouraging the campus community to experience the special features of the South Connector Road District. These opportunities will be critical as the campus expands, increases in density and places greater emphasis on being a residential campus.

It is also recommended that the proposed district be set within a regional network of walking trails, bicycle paths and open space corridors. Such a network encourages non-automobile regional access. It will also help establish interconnected and more beneficial wildlife corridors and areas.

Section 6 Capacity Projections

A. Campus Wide Targets

B. Building Capacities

1. General Academic Capacities
2. Residential Capacities



Section 6 Capacity Projections

A. Campus Wide Targets

In 2007, the Kentucky Council on Postsecondary Education completed the Facility Condition Assessment and Space Adequacy Study. This study recommended that NKU construct approximately 1.86 million gsf of additional building space. Currently, there is 3,200,000 gsf. A more detailed Space Analysis and Utilization Master Plan Study has been undertaken as a part of this two step master planning process by Comprehensive Facility Planning, a space planning firm. While this Land Use Master Plan and the Space Analysis and Utilization Plan are presented as separate reports, critical information has been shared between team members during the course of the planning effort.

The proposed space targets identified are challenging both in terms of site availability, integration with existing facilities, and resources needed. To insure a wise investment in buildings, land and required infrastructure, a highly efficient layout is recommended. The institution needs to carefully monitor the design and implementation process utilizing two basic criteria.



The first criterion is the high priority that should be placed on achieving the densities identified on the accompanying plans. On other campuses, in situations where sites have been under-developed due to limited budgets or the need for quick action, long term and complex problems result, such as undesirable sprawl, expensive utility extensions and upgrades, increasing the time needed to traverse the academic core, and reduction in future site opportunities.

The second criterion relates to the need to initiate a strong renovation and infill approach. Before new perimeter sites are developed, there are significant advantages to gradually moving outward from the core. Jumping to isolated sites should typically be questioned and avoided.



B. Building Capacities

The Master Plan demonstrates how both academic and residential growth targets can be achieved. The figures which appear in the following table assume that academic buildings are at least four stories above grade while residential buildings are 3.5 stories in height. The academic buildings shown on the plan include classrooms, teaching labs, offices, research and support spaces.

University Buildings to be Removed

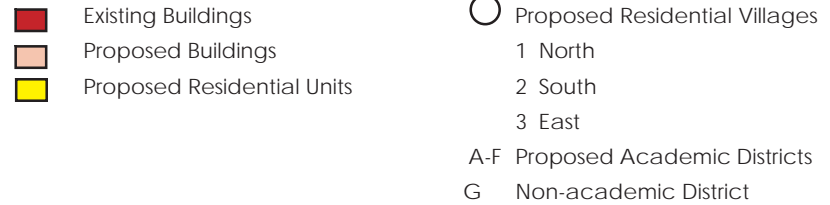
• Commonwealth Hall	36,584 gsf
• Kentucky Hall	38,416 gsf
• Maintenance Building	15,392 gsf
• Honors House	6,678 gsf

Distribution of Total Residential Beds

1. North Village	1,957 total beds
2. South Village	896 total beds
3. East Village	1,181 total beds

Distribution of New Academic Space

A. West District (Student Union Area)	403,000 gsf (16%)
B. North District (Natural Science)	245,000 gsf (12%)
C. Northeast District (Landrum)	348,000 gsf (17%)
D. East District (Parking Lot T)	390,000 gsf (19%)
E. South District (Regents Hall)	462,000 gsf (22%)
F. South Campus (South of Johns Hill Road)	315,000 gsf (15%)
G. South Connector Road District	N/A



1. Residential Capacities

New housing is proposed to be concentrated at three locations across the campus - North, East and South Residential Villages. This strategy requires the removal of the existing Maintenance Building and the Kentucky and Commonwealth residence halls (loss of 400 beds). Additional residential buildings are proposed for undeveloped university land south of Johns Hill Road and on proposed acquisition parcels located east of the recently acquired Civic Center property.

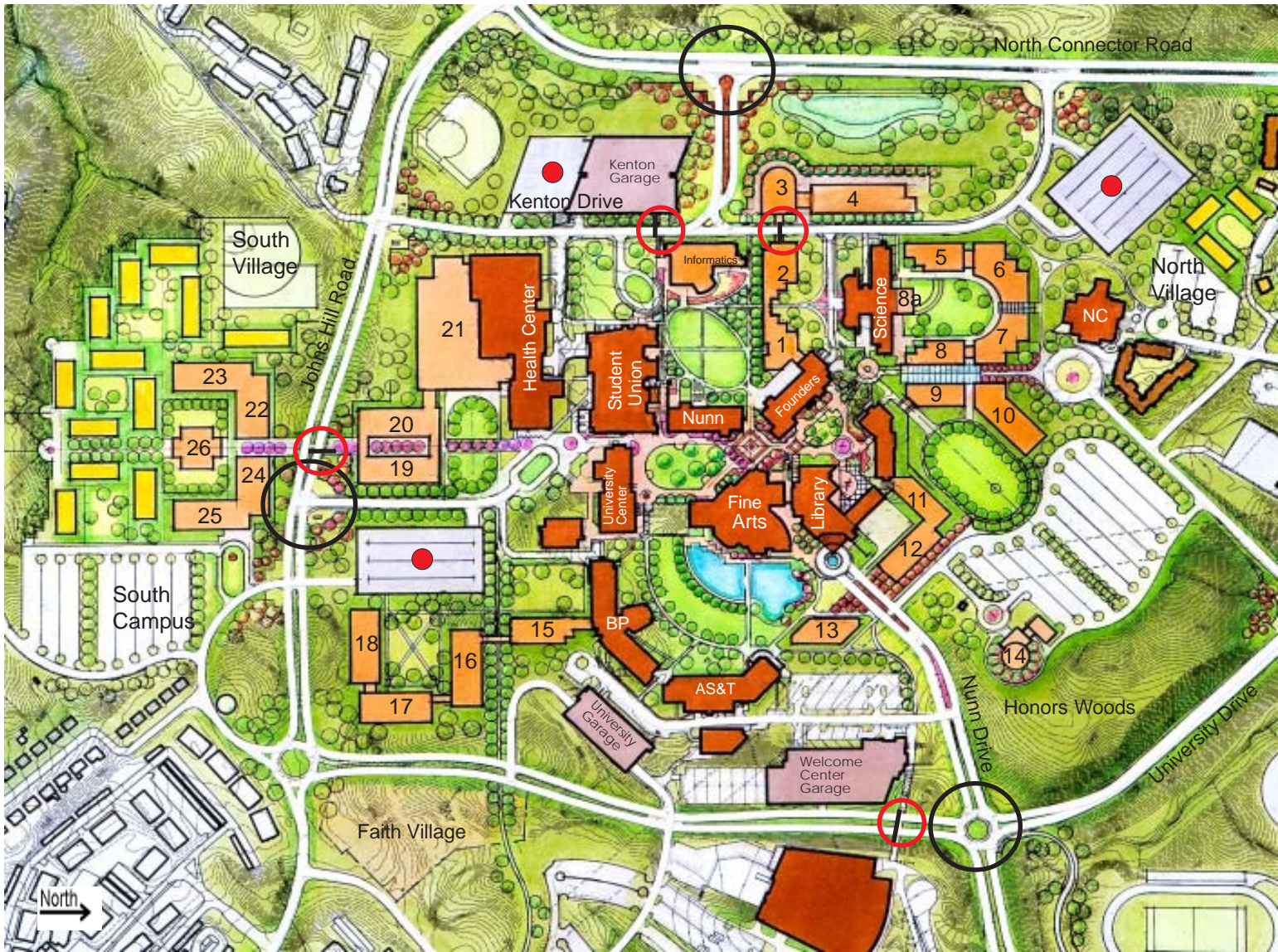


Current student housing accommodates 16% of FTE enrollment in units ranging from 189 gsf to 312 gsf per bed. A per-bed unit of 325 gsf per bed, a commonly accepted standard today, was used to determine future square feet requirements. The 2007 NKU Business Plan sets a target housing ratio at 20% of FTE students in 2020, representing a total bed count of 4,034. This total translates to a net increase of 2,581 beds or 118%, including

replacement of Kentucky and Commonwealth residence halls. The following table summarizes the number of beds proposed for each housing area.

Location	Existing Beds	Proposed Beds	Existing plus Proposed Beds	Minus Beds Through Demolition	Total Beds	% of Total Beds
North Village	1,393	964	2,357	- 400	1,957	49%
South Village	0	1,181	1,181	0	1,181	29%
East Village (Callahan)	460	436	896	0	896	22%
Total	1,853	2,581	4,434	- 400	4,034	100%

Residential Capacity Summary Table



Building Placement and Capacities

- Existing Buildings
- Proposed Buildings
- Existing Housing
- Proposed Housing
- Proposed Parking Garages
- Elevated Pedestrian Crossings
- Major Vehicular Entries

2. General Academic Capacities

The following information describes potential capacities for the individual building floor plates illustrated on the master plan drawing. Individual buildings are numbered to facilitate communication, and do not reflect phasing priorities.

Area and Building Number		GSF
West Area		
	Informatics	134,000
	1	50,000
	2	60,000
	3	46,000
	4	<u>113,000</u>
Sub-total		403,000
North Area		
	5	54,000
	6	64,000
	7	64,000
	8	44,000
	8a	<u>19,000</u>
Sub-total		245,000
Northeast		
	9	46,000
	10	80,000
	11	46,000
	12	64,000
	13	54,000
	14	<u>58,000</u>
Sub-total		348,000

Area and Building Number		GSF
East		
	15	61,000
	16	80,000
	17	169,000
	18	<u>80,000</u>
Sub-total		390,000
South		
	19	87,000
	20	87,000
	21	<u>288,000</u>
Sub-total		462,000
South Campus		
	22	55,000
	23	80,000
	24	58,000
	25	80,000
	26	<u>42,000</u>
Sub-total		315,000
Total GSF		2,163,000

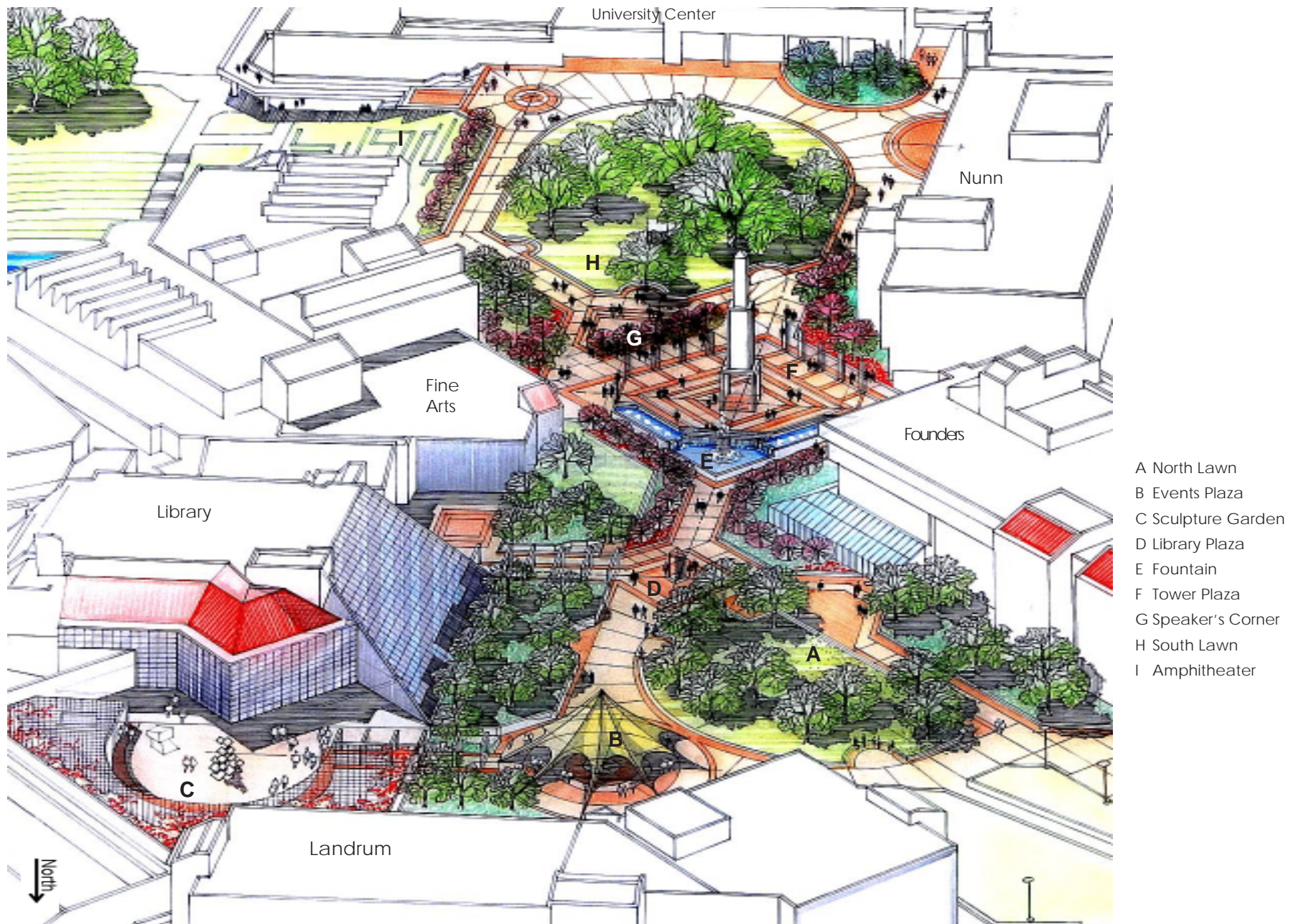


Section 7 Central Plaza Design

- A. Basic Issues and Recommendations
 - 1. Major Activity Areas
 - 2. Ground Plane Treatments
 - 3. Accessibility

- B. Specific Area Recommendations
 - 1. South Area
 - 2. North Area
 - 3. Tower Area





Central Plaza Design Aerial Perspective - Looking South

Section 7 Central Plaza Design

The Central Plaza is considered a “sacred” open space. It is a one-of-a-kind resource which needs to be protected and enhanced accordingly.

This centrally located area serves the entire campus. It is the single most important open space on the campus and as such, serves as the predominant image maker. It also sets the quality standard for the entire campus in terms of design, material selection, construction, implementation, and maintenance levels.



Looking South from Landrum



Although the space has the potential to be an exciting and positive symbol of the entire NKU campus, it does not achieve this level of success today nor does it meet the current needs of the campus population. Significant change is needed if this space is to become the premier student

gathering place on campus – a place where students want to go, to mingle and to interact. The Central Plaza needs to make a visual statement which demonstrates the institution’s commitment to excellence. Indeed, this area needs to become the heart and soul of the entire campus.

The Central Plaza was selected by the university for special master planning attention due to its importance, high visibility, concern for its present configuration, donor potential, and opportunities for stimulating enduring campus interest in the master plan. As a result, a series of central plaza projects are recommended for implementation.



A. Basic Issues and Recommendations



There was general consensus among master plan participants that major renovation of the Central Plaza should be a priority. The Central Plaza is an irregularly shaped, 300 foot long space defined by eight imposing concrete buildings. The Plaza was created incrementally, as each

building project abutting it was completed. To be successful, this space needs to be treated as a single, unified area. Softer, more humanly scaled site treatments and furnishings should be utilized to unify the area and accentuate important entry points to the buildings defining its edges.

Because the space is defined by large, bold architecture, similarly bold site treatments are needed. It is suggested that architectural gateways be provided at all major entries to the plaza, emphasizing the sense of arrival and departure. Because of the long linear character of the plaza, the proposed layout is configured to make the pedestrian experience pleasant but also to add interest. A variety of landscape treatments and special use areas are proposed, thereby minimizing the apparent length of the walkway.



Looking West

1. Major Activity Areas

The space today suffers from huge expanses of concrete paving. To correct this situation, large lawn areas and simple yet striking landscape treatments are proposed at the north and south ends of the plaza. A centrally located space containing a bell tower and large water feature is recommended to achieve vertical interest and a sense of movement and excitement. The scale of the Tower Plaza elements contributes visual dominance to the area when viewed from within the plaza or at a distance from across the campus.

Three major activity centers are proposed within the overall space: the Central Tower Plaza area and the South and North Lawns. The Central Tower Plaza is a centrally located activity area that accommodates informal student gatherings, speaker presentations and informational displays. The large lawn areas, located north and south of the Central Tower Plaza, promote a softer, more natural image with the dominant character being large shade trees and open grassy areas.

In transitional zones adjacent to buildings, medium sized flowering trees, understory plantings (shrubs), ground covers and flowers accentuate important building entrances and provide a sense of human scale for pedestrians.

2. Ground Plane Treatments

As currently configured, the Central Plaza primarily emphasizes ground plane elements, with less attention paid to design opportunities related to eye level and overhead canopy treatments. The proposed plan places a strong emphasis on all three components. These treatments include a variety of strategies, including small accent trees, tall canopy trees, lush mid-level plantings, ground covers and lawn. Other elements include various surface materials, fountains, sitting areas, sculpture, lighting, banners, kiosks, waste receptacles, flags, and signage.

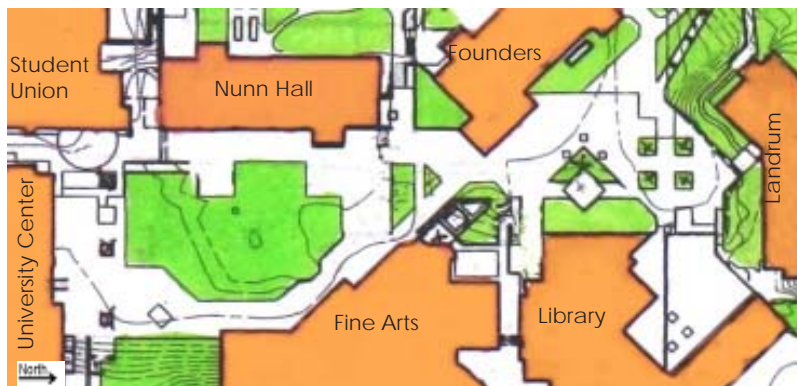
The primary intent of the renovation plan is to replace large expanses of concrete (paving, steps, walls and benches) with softer natural materials (grass and trees) and more appropriately scaled site finishes. Currently, almost 80% (3.5 acres) of the 4.5 acre open space area is comprised of paving. The new plan proposes to increase the amount of grass and related landscaping by two acres – a reduction in pavement by almost one third. The accompanying diagram and related overlay compare existing and future landscape and paved areas.

The transformation from hard surfacing not only contributes to the visual impression conveyed by the plaza but also makes significant sustainability contributions. It is recommended that permeable paving materials be utilized to reduce runoff and to encourage absorption.



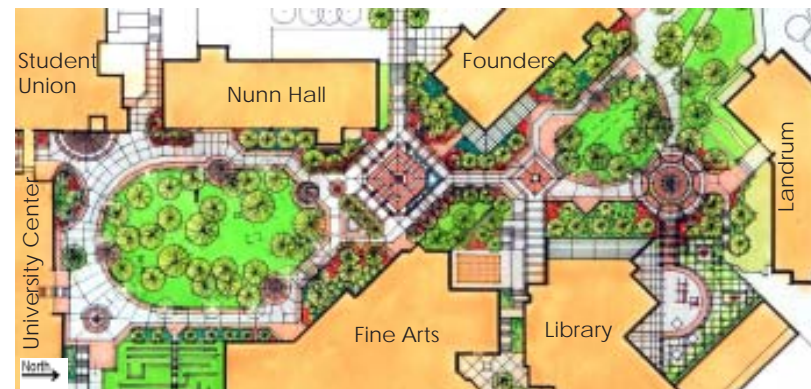
Major changes are also recommended in areas where paving is proposed to remain. It is suggested that much of the existing concrete paving be replaced with multi-colored pavers. These pavers can delineate bold visual patterns that define pedestrian routes, add interest, and emphasize human scale. Such

treatments are proposed at important gathering and special use areas as well as at building entrances. These treatments contrast with the plainness of the surrounding buildings, reduce the apparent size of these areas and encourage playful interaction. The applications of special paving materials are illustrated on the accompanying drawing by the reddish-brown color.



Existing Ground Plane Treatments

- Existing Buildings
- Hard Surfacing
- Landscape Areas



Proposed Ground Plane Treatments

- Existing Buildings
- Hard Surfacing
- Landscape Areas
- Special Paving

If the Central Plaza is to function as the primary campus gathering place, seating needs to be enhanced both in terms of number, comfort level and quality. Currently concrete slabs and above-grade seat walls provide most of the seating, thereby contributing to the overpowering impression of the concrete. The new plan suggests the use of black wire mesh seats with backs. These are not only more comfortable, but they dry quickly following rain and snow, are easier on clothing, durable, less obtrusive and easier to integrate into the landscape.

Students are highly proficient at finding the most direct travel routes. Some universities attempt to guide pedestrian movements by utilizing posts and chains. Throughout the Central Plaza, concrete landscape curbs (6 inches tall by 12 inches wide) are recommended to define and separate landscape and pedestrian areas and to discourage cut-through pedestrian traffic. Many institutions have found this to be a highly successful alternative. It is also suggested that the university avoid adding walks unless absolutely necessary – where unsightly, muddy, and deep and/or significantly wide paths have been created. While some students



Existing South Lawn

may be tempted to cut across the large lawn panels proposed to be created, healthy and well maintained grass is not only more sustainable but also able to accommodate other uses as well as withstand considerable foot traffic.

3. Accessibility



proposed to replace a number of the other existing stairs with ramps, at the southeast corner of Nunn Hall and at the proposed tower/fountain plaza. For future projects, if a ramp is provided, the university is advised to avoid constructing steps at the same location.

The plan, as presented, avoids the use of steps throughout the Central Plaza except for the existing walkway which leads from the plaza on the south side of the library down to the Nunn Drive drop off and on the north side of Nunn Hall down to the West Quad. It is



special use areas. Other types of lighting are also recommended, including accent lights (up lights, down lights) as well as architectural accent units to articulate building facades and entrances, towers and fountains, sculptural pieces, tall trees and special landscaping.

Universities are 24 hour institutions. Illumination is necessary not only to provide for personal safety but also to delineate major pedestrian corridors. Pedestrian lights are proposed to illuminate the major walkway areas throughout the Central Plaza as well as the

B. Specific Area Recommendations

1. South Area

The South Area is defined by the University Center, the Student Union, Nunn Hall, the south end of the Fine Arts Center and the Amphitheater. The existing south lawn and large canopy trees dominate this area. These trees and the related lawn area are the most important existing visual elements within the entire Central Plaza. The large canopy trees and slightly rising lawn area add interest and contrast (texture, color) with the surrounding man made materials and therefore need to be protected, emphasized, and expanded.



The new Student Union has significantly diminished the importance of the University Center, which previously served as the student union. As a result, pedestrian patterns, volumes and open space activities just outside the University Center's plaza entry have been altered. The large number of students who previously

gathered here and entered the University Center using the convenient north entry has now shifted westward, where students gather in large numbers immediately contiguous to the east entrance to the new Student Union. Hence, the zone adjacent to the University Center is now underutilized and can be down-sized accordingly. The excess area can be absorbed into the south lawn area.



There are five conversational pockets proposed within the South Area. Four of these are located along the edge of the central lawn area. The fifth seating area serves as the terminus of the existing elevated pedestrian bridge located east of the University Center. Each of these

conversational pockets is comprised of 16 seats and configured in a semi-circle. This layout accommodates not only individuals, but also small groups. The campus population is encouraged to informally utilize the south lawn by lounging on the grass under tall



shade trees or interacting in other ways such as playing catch, enjoying the sun, or watching the constant stream of pedestrians passing by.

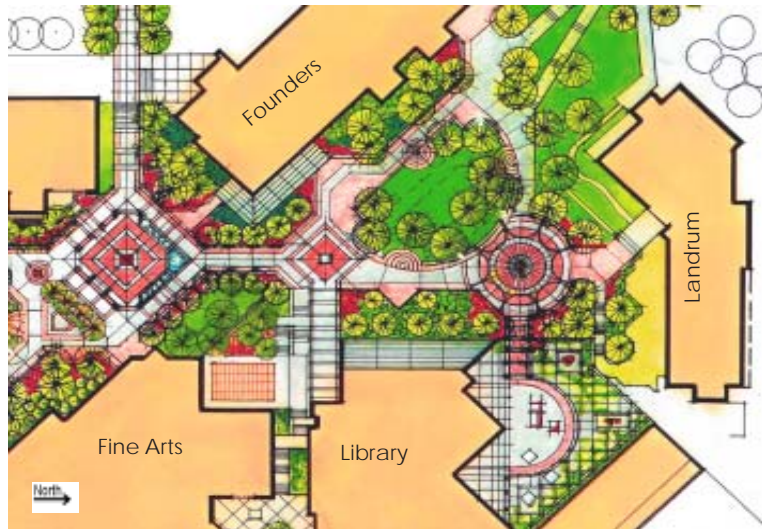
2. North Area



The North Area is defined by Founders Hall, Natural Science, Landrum, and the library. A new lawn area (North Lawn), in combination with the existing Landrum lawn and the Natural Science Center lawn, replaces the

largest area of concrete paving within the Central Plaza. An area of comparable size and character to the existing South Lawn, the North Lawn will significantly improve the visual impression of this area. This modification, which is relatively modest in cost, offers a remarkable opportunity to alter the visual character, scale and appearance of the area. The proposed North Lawn displaces the four small landscaped squares which are currently located directly south of Landrum Hall as well as the wedge-shaped planting island located west of the library.

In an effort to distribute uses more evenly throughout the plaza, a number of seating areas and activity zones are proposed. These include the library plaza, the events plaza, and the sculpture garden.



The library plaza is proposed to be located directly across from and on axis with the library and Founders Hall entrances. Its square shape reflects the geometry of the contiguous buildings and the walkway which connects to the lower level east entry plaza. Special paving and seating areas are proposed. The primary focal point on the plaza is an electronic kiosk which communicates special events and activities. It can also serve as an ATM.



The events plaza is a circular layout, accommodating multi-directional pedestrian patterns while emphasizing important building entrances. The curvilinear character of the events plaza reflects the size and layout of the Natural Science Plaza. The events plaza and the sculpture garden are closely related due to proximity and the similarity in form.



Looking West to Founders Hall



A sculpture garden is proposed immediately north of the library (the roof of the Central Receiving facility). The current rooftop facility is infrequently used because of temperature extremes and its barren appearance. A sculpture garden and landscape trellis will create a more student

friendly, visually interesting and appropriate outdoor eating and meeting area. A series of archways delineate the connecting walkway between the events plaza and the sculpture garden. This gateway is smaller than, but similar in character to the gateway used at the main plaza entrance to the library.

Approximately half of the roof top area is proposed to be shaded by a trellis covered with ivy. This relatively lightweight design approach is required due to the structural limitations of the Central Receiving roof. Holes in the trellis accommodate and emphasize sculpture pieces. Colorful umbrellas and outdoor tables and chairs can contribute to the festive character. Sculptural pieces need to be carefully selected to stimulate student interest and should include informational displays. Outdoor art will provide educational opportunities and add interest.

Throughout the academic year, there are numerous events and gatherings that occur on campus. Activities such as student orientation sessions, informal student presentations, student organization activities, etc. are proposed to occur in the events plaza. To add visual interest and protection from the sun and rain, use of a tensile structure is suggested. This colorful tent-like structure can be used effectively through the spring, summer and fall seasons.



Looking South to the Sculpture Garden and the Events Plaza

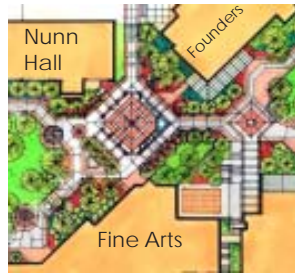


Sculpture Garden



Looking South to Library

3. Tower Area



The Tower Area is centrally located and defined by Nunn Hall, Founders Hall, Fine Arts Center, and the South Lawn. This area is proposed to be the primary NKU image marker, serving as the campus symbol. Other institutions have successfully used sculpture, fountains, plaza areas, towers and buildings to achieve this function. Visitors to campus

should associate this symbol with the NKU campus. It would also be a popular photographic point for visitors as well as proud parents on graduation day.

The most intensively developed area of the Central Plaza, it is intended to be the heart of the entire campus as well as its primary gathering spot. Thus, a high level of design and detailing are proposed. At the center of the Tower Area is a vertical element proposed to be the tallest structure on campus (approximately 70+ feet). This tower not only terminates an important pedestrian corridor, but will also be visible from key viewing areas across the campus. Distinctively illuminated at night, this element can serve as a regional beacon. The Tower is envisioned as a metal frame with clearly visible carillon bells. The accompanying photograph conveys many of the characteristics proposed for the NKU bell tower. The base of the tower is proposed to be open so that pedestrians can move freely through the structure. The carillon would toll the hour and be used to commemorate special events and times. Special pavers are used to



denote a geometric pattern around the base of the tower. Surrounding the tower are vertical columns approximately 12' high and 18 to 24 inches in diameter. Major archways are formed by cross lintels at the corners.



Looking West to Nunn and Founders Halls - Future Tower Site



- A Fountain
- B Plaza
- C Column Enclosure
- D Tower
- E Speaker's Corner
- F South Lawn
- G Kiosk
- H Sitting Area
- I Ramp



Almost all college campuses have a special gathering place where speakers present their ideas and unique points of view as students informally pass or chose to pause to listen (some view such opportunities as a critical part of the collegiate experience). Such a place is not available on

campus today. An interaction and “speaker’s corner” is proposed along the southeast side of the Tower Plaza. While centrally located, this multiple use space is separated from major travel routes yet easily seen and accessed if desired. Special paving, shade trees, seating pockets, and potential use of the main lawn area make this an attractive place.



Ramps along both the east and west sides of the tower plaza accommodate a three foot (3') change in grade (existing steps are removed). At the north end or apex of tower plaza is a major fountain. Pools with bubblers parallel the edges of the plaza with water cascading 3' from the tower level to the lower level on the north side. A massive jet of water approximately 10' high is located at the intersection of these extensions. The fountain forms a strong

visual element as the movement and sound of splashing water contrasts with its surroundings. This stream of water can be experienced from the upper plaza level or by viewing it at its base along the edge of the lower walkway. The fountain would be illuminated at night, providing a 24 hour per day attraction. The fountain basin needs to be appropriately sized to avoid spillage during windy periods. Generous landscaping, including small flowering trees and shrubs as well as annuals and perennials, defines the plaza’s edge. Seating areas are conveniently located along the plaza edge.



Tower Plaza Elevation - Looking West



- A Fountain
- B Plaza
- C Column Enclosures
- D Tower
- E Speaker’s Corner
- F South Lawn

Looking South to Tower Plaza

Section 8 Implementation

A. Design Guidelines

1. Open Space
2. Landscaping
3. Building Consistency
4. Site Efficiency
5. Site Grading
6. Safety and Lighting
7. Wayfinding
8. Universal Access
9. Bicycles
10. Pedestrian Connectivity
11. Campus Housing
12. Athletic Facilities
13. Parking Lots and Garages
14. Stewardship and Sustainability
15. Gateways
16. Public Art

B. Acquisition Strategy



Section 8 Implementation

Implementation is a critical master plan concern. It has proven beneficial to include information in the master plan that translates broad planning concepts into more detailed and specific design recommendations. As future programs are more clearly defined and a variety of new staff and design consultants come to campus, such concepts will be invaluable.

It is helpful to recall that the successful campus is one that conveys a hierarchy of interrelated components that work together. Because master plans are typically implemented one project at a time, it is essential that the big picture is vividly retained in our mind's eye. A potentially brilliant idea for one small area of campus may not benefit or compliment the overall campus. Architectural elements that stand alone or convey their own visual identity are of necessity few and far between. A campus is successful because the pieces work together to achieve a sense of continuity (materials, massing, and design). Unless this is achieved, the campus quickly deteriorates into a series of relatively unrelated pieces each of which "does its own thing".



Looking East from I-275

It is proposed that a carefully developed and stringently monitored review process be implemented which encourages compliance with the master plan. Typically, this involves formal project review by an individual designated as the "Keeper of the Master Plan"; this person must be knowledgeable about the concepts and intent of the document and can provide a relatively unbiased evaluation of individual design projects. This written evaluation of consistency usually becomes part of the Regental review process. Before individual architectural and major site design projects are officially approved, the fundamental question "does this project conform and complement the master plan" is asked.

In order to communicate more detailed information related to key areas of the campus, the Master Plan includes a collection of Design Guidelines and a potential acquisition plan.

Design Guidelines are specific recommendations intended to carry out the overall strategies defined by the Planning Principles. For example, "orient building entrances to major campus open spaces and pedestrian walkways" or "Provide nighttime campus illumination of at least 1 foot candle on walkways and 0.5 foot candles in all other areas".

A. Design Guidelines

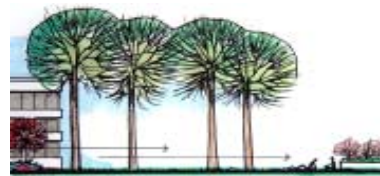
As a relatively young institution, Northern Kentucky University is striving to build a sustainable tradition of educational excellence expressed throughout the whole of the campus environment and architecture. The overall goal is to create buildings and a campus landscape that are timeless; are respectful of, in context with, and build upon the university's unique design history; contribute to the quality of the campus as a place; and, help create a memorable environment with engaging, vibrant places for interaction and socialization, contributing to the collegiality of the campus. Campus Design Guidelines, which are based upon the Master Plan Principles, will be fundamental to creating an exemplary campus setting, reflective of university priorities and a commitment to students, faculty and staff. The following guidelines, which should be interpreted in concert with the university's Design and Construction Standards document, provide for an integrated implementation program to guide the growth and transformation of the campus including: architectural layout; open space and pedestrian circulation; transportation and parking; and, utility improvements.



Potential Site Treatments

1. Open Space

- Where possible, buildings should be clustered around a major open space with connecting pedestrian pathways placed in a manner that maximizes green space and encourages social interaction.
- Primary open spaces should preferably be 2 acres but not less than 1 1/2 acres in size.
- Spaces should reflect the scale of the buildings which define them. The width of a major space should be equal to or greater than 1/2 the height of the tallest contiguous building.
- All buildings should have a primary entrance fronting on a major open space.
- Buildings should include secondary entrances where necessary to accommodate open space and building-to-building pedestrian patterns. These entrances could be at grade and/or at an upper or lower level; where feasible, these entrances are to be accessible to the disabled.
- Open spaces should foster a sense of campus and community: they should be memorable and comfortable.
- Most buildings in the Plan should be sited to support the creation of outdoor rooms. Other buildings are focal points for long vistas or serve as the terminus of an outdoor space.



2. Landscaping



- Create a sustainable campus.
- Site improvements are to be a part of all building projects and budgets.
- Use landscaping to increase the sense of place, to assist wayfinding and to create comfortable yet safe outdoor rooms.

- Landscapes should result in simple bold patterns, creating large patterns of color.
- Use hardy, low-maintenance and proven native plant species capable of withstanding the ph, soils, exposure, and climactic conditions of Northern Kentucky, and more specifically the microclimate and exposure surrounding buildings.



- Utilize appropriately placed, hardy plant materials to enhance and define spaces, provide shade, and control views.



- Use a variety of evergreen, deciduous, and flowering plant materials. Employ grasses and perennials in areas requiring additional interest.



- For security purposes, shrubbery or other opaque materials more than 2' in height at maturity should be set back a minimum of 15' from any pedestrian walkway, bike racks, and building entrances.

- To balance an abundance of existing concrete, hardscape design should include colorful pavers.
- Concrete walls should be carefully designed to minimize their impact on the campus environment; avoid using concrete walls unless needed for functional reasons.



Looking North at Central Plaza

3. Building Consistency



- Buildings should be sited to create exterior public spaces.
- There should be consistency of building form, architectural style, and materials throughout campus.
- New buildings and building additions should be sympathetic in color and materials to existing buildings, while being expressive of current architectural styles.
- New buildings should be designed with qualities of permanence, welcome-ness and vibrancy, creating places of energy and interest.
- Building projects, regardless of size, should be constructed of quality, enduring materials that are easy to maintain.
- Designs should be responsive to the needs of a building's specific users, but also to the needs and requirements of the university as a whole, and in addition, the design must be adaptable over time to changes in the function and operation of the building.



Looking East to the Library

- Design decisions should be based upon the best long-term value; generally, this implies that the least expensive solution is not always the best solution.
- Energy efficient systems and building components are a priority. Designs should consider all aspects of environmental impact, both on campus and in terms of from where materials are acquired.



Elevated Walkway Linking Business-Education-Psychology Center and University Center

4. Site Efficiency

- New buildings should average 4 or more stories above grade.
- Loading zones; short term and handicapped parking; and, drop-off drives should be sited to serve multiple buildings.

5. Site Grading

- Use grading to enhance or disguise views.
- Minimize grading disturbance in areas with existing vegetation.
- Gently grade areas and avoid the use of steps when possible.
- Concrete walls should be carefully designed to minimize their impact on the campus environment; avoid using concrete walls unless needed to resolve grading problems or other functional reasons.



6. Safety and Lighting



- Install lighting at all building entrances, pedestrian routes and parking lots.
- Light areas beyond sidewalks for safety.

- Dense vegetation, walls, and other obstructions inhibiting visibility must be no closer than 15' from pedestrian pathways and building entrances.



- Carefully locate light fixtures to allow for even distribution and consistency of lighting. Avoid creation of dark areas and hot spots.
- Select high quality pedestrian-scaled fixtures.
- Light fixtures should be appropriate for their intended use and aesthetically pleasing.

- Strive for a pedestrian-safe campus by maintaining vehicular traffic on the edge of campus.

7. Wayfinding



- Establish intuitive wayfinding with consistency of signage, materials, lighting, and site furnishings.
- Include critical information along pedestrian routes and building entries in Braille.
- The university's signage standards should govern all signage installations.

8. Universal Access

- Adopt a "universal access" strategy.
- Provide equal access into buildings from major vehicular and pedestrian routes; use noticeable pavement changes at cross walks, steps, and building entries.



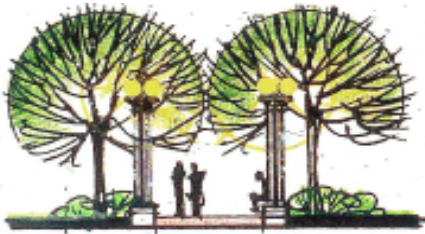
9. Bicycles



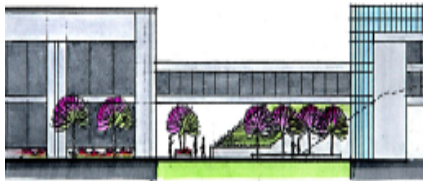
- Encourage bicycle use by providing bike racks; locate racks an appropriate distance from building entries.
- Provide screening around bicycle racks.
- Clearly designate bike paths with signage and striping.
- Where possible, separate bicycle traffic from pedestrians by providing separate paved paths.
- When combined paths for bicycles and pedestrians cannot be avoided, dedicated (striped) bike lanes should be delineated and the combined path should be 10' or more in width.
- Restrict bicycles in highly-used pedestrian areas such as the Central Plaza. It is proposed that the Central Plaza and other areas where large numbers of students gather be identified as "walk only areas".



10. Pedestrian Connectivity

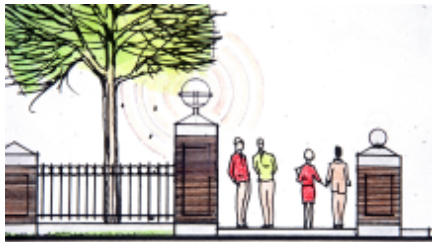


- Develop a comprehensive pedestrian corridor system linking all campus destinations.
- Create nodes at pedestrian intersections to encourage social interaction.
- When transitioning grade levels, avoid designs that require stairs.



- Consider elevated walkways to ensure pedestrian safety at busy intersections and roadways and to overcome elevation challenges between buildings.

- Provide strong pedestrian connections between the campus and nearby services, transportation and commercial destinations.
- Consider tree-lined pedestrian corridors to provide shade, scale and campus continuity.



Special area gateways



11. Campus Housing



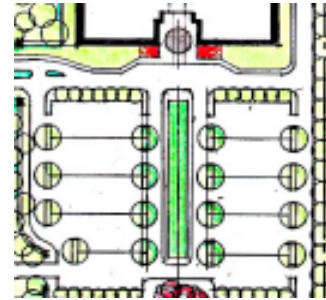
- Work with developers and the community to increase housing opportunities.
- Select sites that provide a variety of open spaces for gathering and recreational use.
- Provide safe pedestrian connections to campus.
- Planting in the residential areas should reinforce a sense of community while creating a more intimate scale.

12. Athletic Facilities

- Locate athletic facilities in areas that are within walking distance of student housing.
- Choose sites that are accessible for community use.
- Facilities with large anticipated spectator attendance should be within easy access to and from major campus vehicular access routes.
- Design athletic facilities to minimize traffic impact on neighboring residential land uses.
- Mitigate lighting spillover to adjacent residential neighborhoods.
- Provide buffers along residential edges.

13. Parking Lots and Garages

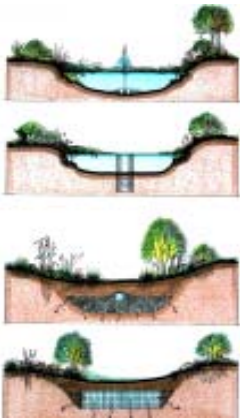
- Locate parking facilities within a 10-minute walk to major campus destinations.
- Construct large, remote parking lots and begin a shuttle system to the center of campus.



- Provide connections to a minimum of 2 access roads in order to distribute traffic.
- Incorporate safe crosswalks.
- Create parking lot pods with a maximum capacity of 250 vehicles. Separate parking pods with 20' wide landscaped areas.
- Include parking for car-poolers, as well as alternative fuel re-fueling station for low-emission/fuel efficient vehicles.
- Provide visitor parking within a 5-minute walk of major destinations.
- Design parking garages to blend with surrounding buildings.
- Maximize natural ventilation in garages by locating in sloped areas.
- Encourage efforts that reduce on-campus parking demand, and provide convenient drop-off areas for mass transit.

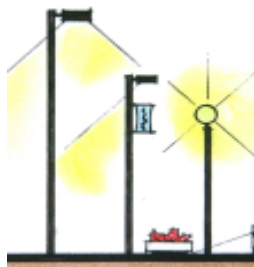
14. Stewardship and Sustainability

- All new buildings shall be LEED certifiable.
- All construction projects, including renovations, shall incorporate sustainable practices.
- Preserve natural vegetation on building sites, where possible
- Consider less destructive options such as terracing, and reducing building footprint.



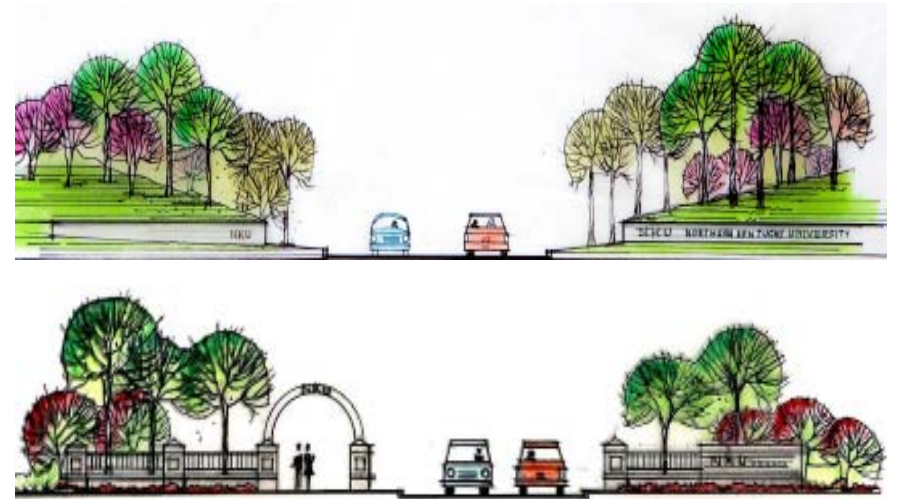
- Utilize Best Management Practices (BMP's) to reduce storm water runoff by incorporating green roofs, rain gardens and bio-swales into construction projects to reduce use of potable water for irrigation by harvesting roof water.
- Incorporate permeable pavement technologies in future hard surface areas, both vehicular and pedestrian.

- Efforts should be made to avoid light pollution (over-lighting).
- Select energy-efficient fixtures.



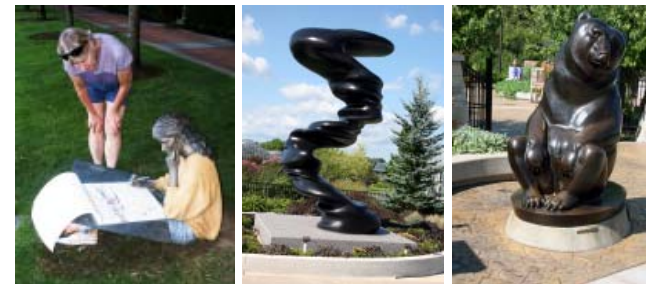
15. Neighborhood Gateways/ Campus Portals

- Provide a hierarchy of campus entrance/gateways designed to promote a strong campus identity, creating a sense of welcome for students and visitors.



16. Public Art

- Find opportunities to thoughtfully integrate art into the university's living and learning environment.
- Select pieces which are visually appealing as well as artistically appropriate.





Land Acquisition Map

B. Acquisition Strategy

Northern Kentucky University is one of eight senior level (bachelor's and doctoral granting) institutions providing public higher education in the Commonwealth of Kentucky. The Kentucky Council on Postsecondary Education (CPE) oversees and guides member institutions in directions it deems to be in the best interest of the residents of Kentucky. A primary future goal of the commonwealth, and thus of the CPE, is a dramatic increase in the number of bachelor's degrees granted in the state. To accomplish this goal, which has significant potential for statewide economic impact, CPE developed a bold strategic initiative in 2007 to double the enrollment in the state's higher education system. NKU, in its 2007 strategic plan and its 2008 business plan, *It's All about Talent!*, proposes to double NKU's enrollment, become more of a residential campus (increase on-campus housing) and upgrade and widen its program offerings. It is within this context that NKU's long range master plan is being prepared.

In developing this Master Plan, the consultant team worked closely with university and community representatives to examine a wide range of alternative ways to meet these objectives. All involved have arrived at the same conclusion: the existing 404 acre campus cannot accommodate the enrollment and space targets identified in the commonwealth's plan without the acquisition of additional land. This acquisition plan identifies the areas where growth can best be accommodated.

Most institutions choose not to publically share their acquisition strategies. In 1990, NKU made a commitment to "go public" with its acquisition priorities in order to be open and helpful to the community and adjacent land owners. The university continues this approach by sharing the following information.

The 2009 Land Acquisition Plan identifies the acquisition of land in four general areas: to the north of University Drive, in the Faren and Sunset neighborhood; to the east of the current Highland Heights Civic Center; along Johns Hill Road in areas proximate to current university land holdings; and, in areas south of Johns Hill Road. These areas amount to slightly more than 200 parcels and about 300 acres.

Because a significant number of properties are identified for acquisition, the university is unable to pursue acquisition of all properties in a near-term time frame. Financial considerations necessitate a phased approach to acquisition. At the same time, the university wants to be fair to residents. Property owners knowledgeable about institutional plans are in a better position to make decisions regarding their property. Generally, the university would seek to focus resources on purchase of properties on a first notification basis. That is, the university will set aside funds for property acquisitions each year, and when that year's funds are depleted, a waiting list will be started. The university will utilize publicly approved acquisition procedures for acquiring property.

The university remains committed to open communication with citizens and property owners and welcomes discussion of acquisition progress.



Section 9 Acknowledgements

- A. Board of Regents
- B. Executive Committee
- C. Master Plan Advisory Committee
- D. Leadership Committee
- E. Community Participation
- F. Consultant Team



Section 9 Acknowledgements

This is an exciting time at NKU. Looking back, we see an institution that has made significant strides as it has successfully moved through the evolutionary process beginning as a community college, transitioning to a commuter university and finally achieving the status of a mature, well-grounded regional institution.

Northern Kentucky University is now poised to take a giant leap forward. By nearly doubling its enrollment and its facilities over the next twenty years, it will achieve a status few universities attain – becoming a major, full service, public, residential institution. As depicted in this plan the future is both bright and challenging. While this planning effort provides the rationale and conceptual framework for achieving this objective, its ultimate success will depend upon its people: its institutional leadership, the campus community, alumni and supporters as well as the surrounding residents working hand in glove with the commonwealth. This planning effort is a demonstration of the success these groups can accomplish when they work together to achieve common objectives.



Open Campus Review Session

This is the university's plan. It has been achieved by implementing an unusually interactive planning process which brought a wide spectrum of interested parties together to consider, to debate, to struggle and to dream. Because of this approach, the plan's recommendations reflect the combined ideas offered not just by the Consultant Team, but also by the many faculty, students, and staff representatives as well as local residents and community representatives who participated in this effort.

While special recognition is due many, those listed were especially helpful. They gave freely of their time, their experiences and their creative skills, to not only make things right, but also to insure that the plan fits the NKU persona.

While some consider their job complete, we would observe that their time is just beginning. Due to their comprehensive and in-depth knowledge of the process and range of ideas considered, they are in a position to help implement this plan and to make NKU all it should be. It is only in this way that NKU can achieve its full potential.

Particularly noteworthy have been the efforts of Ken Ramey, Larry Blake and Mary Paula Schuh who have committed two years of their careers to this planning effort. Their institutional knowledge, skill and commitment are reflected by the endless time and considerable energy they have invested.



Ken Ramey



Larry Blake



Mary Paula Schuh



Dr. Votruba and the Executive Committee

Appreciation is also warranted in terms of the positive environment within which we worked and the excitement brought to the work sessions by President Votruba who came with a gleam in his eye and a willingness to consider new and different ideas and directions. While change is always difficult, particularly at public institutions, dynamic leadership permeates all levels and makes looking to the future an exciting and interactive experience.

A. Board of Regents

Anna Dale Pyles
Nancy A. Barone
Denise H. McClelland
Charles H. Brown
Martin C. Butler
Gabriel W. Cronon
Peggy A. DeJaco
Frank K. Downing
Joyce E. Griffin
Terry L. Mann
Steven M. Weiss



B. Executive Committee

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Gail Wells
Ken Ramey
Sue Hodges Moore
Gerry St. Amand
Sara Sidebottom
Joe Wind
Zeb Davenport
Kim Luse
Martin Butler
Anna Dale Pyles
Gabe Cronon
Larry Blake
Mary Paula Schuh
Steve Nienaber



C. Master Plan Advisory Committee

Ken Ramey
Steve Pendery
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Greg Meyers
Steve Crawford
Phil Moberg
Jenny Wagner
Tony Gulla
Mike Tobergta
Doug Perry
Ken Jones
Denise Robinson
Karen Zerhusen Kruer
Deidra Fajack
Sandi Gillilan
Jane Meier
Jeffrey Waple
Lisa Besnoy
Steve Nienaber
Wally Welch
Harold Todd
Andy Meeks
Larry Blake
Mary Paula Schuh



D. Leadership Committee

Ken Ramey
Larry Blake
Mary Paula Schuh
Dick Riggerink
Vivian Llambi

E. Community Participation

When universities grow, they often impact their neighbors - those who live and work in close proximity to the campus. This is a concern to the community, the residents, and the institution.

NKU and the community have benefitted from a positive long term relationship. The master plan will require significant change for both the institution and their neighbors. If the plan is to be successful, the university and the community will need to continue their effective working relationship.

The community sessions offered a format for a free exchange of ideas. In all instances, local participants shared their concerns in an appropriate and helpful manner. They proved to be critical team players throughout the process.



F. Consultant Team

The 2009 Master Plan effort was undertaken by two interrelated groups. The physical master plan (documented in this report) team included the four firms listed below. The Space Utilization and Needs Report, prepared and submitted as a separate report, by Comprehensive Facilities Planning.

Consultant team members who played critical roles on the physical land use master plan project include the following:

The Campus Studio, Ann Arbor, Michigan

Dick Rigterink

Jim Christman

Chris Luz (Lansing Melbourne Group)

Fred Mayer

George Sass

Vivian Llambi and Associates, Cincinnati, Ohio

Vivian Llambi

Ken O'Dea

KLH Engineers, Ft. Thomas, Kentucky

Bob Heil

Joe Kohrs



Note: Aerial photographs shown in this report were taken in spring 2008

Section 10 Master Plan Illustrations

- A. Campus Wide Plans
- B. Central Plaza
- C. Aerial Photographs (1-5)



Section 10 Master Plan Illustrations

This section contains all of the major illustrations utilized to illustrate and explain the Master Plan. While they appear throughout the report, they are provided together in this one location to facilitate easy access.

The following photographs and drawings are provided:

A. Campus Wide Master Plan

1. South Connector Road Area Plan
2. Master Plan Illustration
3. Academic Core Plan (enlargement of the master plan)

B. District Plans

1. Academic Core Detail Plans
 - a. West District
 - b. North District
 - c. Northeast District
 - d. East District
 - e. South District
 - f. South Campus District
2. South Connector Road District

C. Central Plaza Materials

1. Aerial Base Perspective Sketch and Plan
2. Central Plaza Overall Design Plan
3. Tower Area Elevation
4. Tower Area Detail Plan

D. Aerial Photographs

1. Looking Southwest along Nunn Drive
2. Looking Northwest to the Academic Core
3. Looking North from Hilltop Drive
4. Looking East from I-275
5. Looking South from Campbell Drive



South Connector Road District Plan

- A Retention Areas and Rain Gardens
- B Drainage Swales
- Existing Campus Property Line
- - - Existing Property Lines



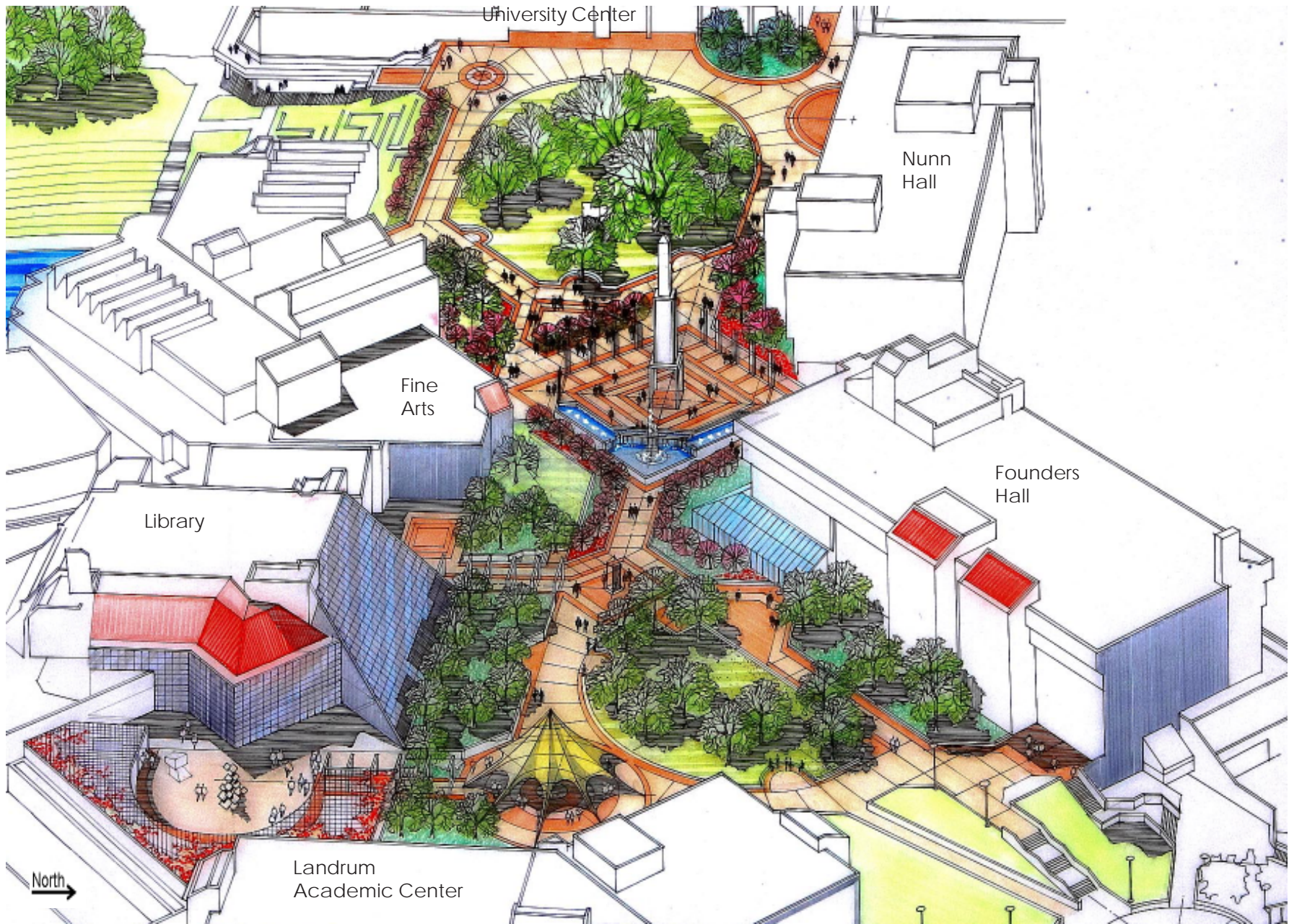
NKU 2009 Master Plan

- Existing Buildings
- Proposed Buildings
- Existing Housing
- Proposed Housing
- Major Campus Arrivals



Academic Core Plan

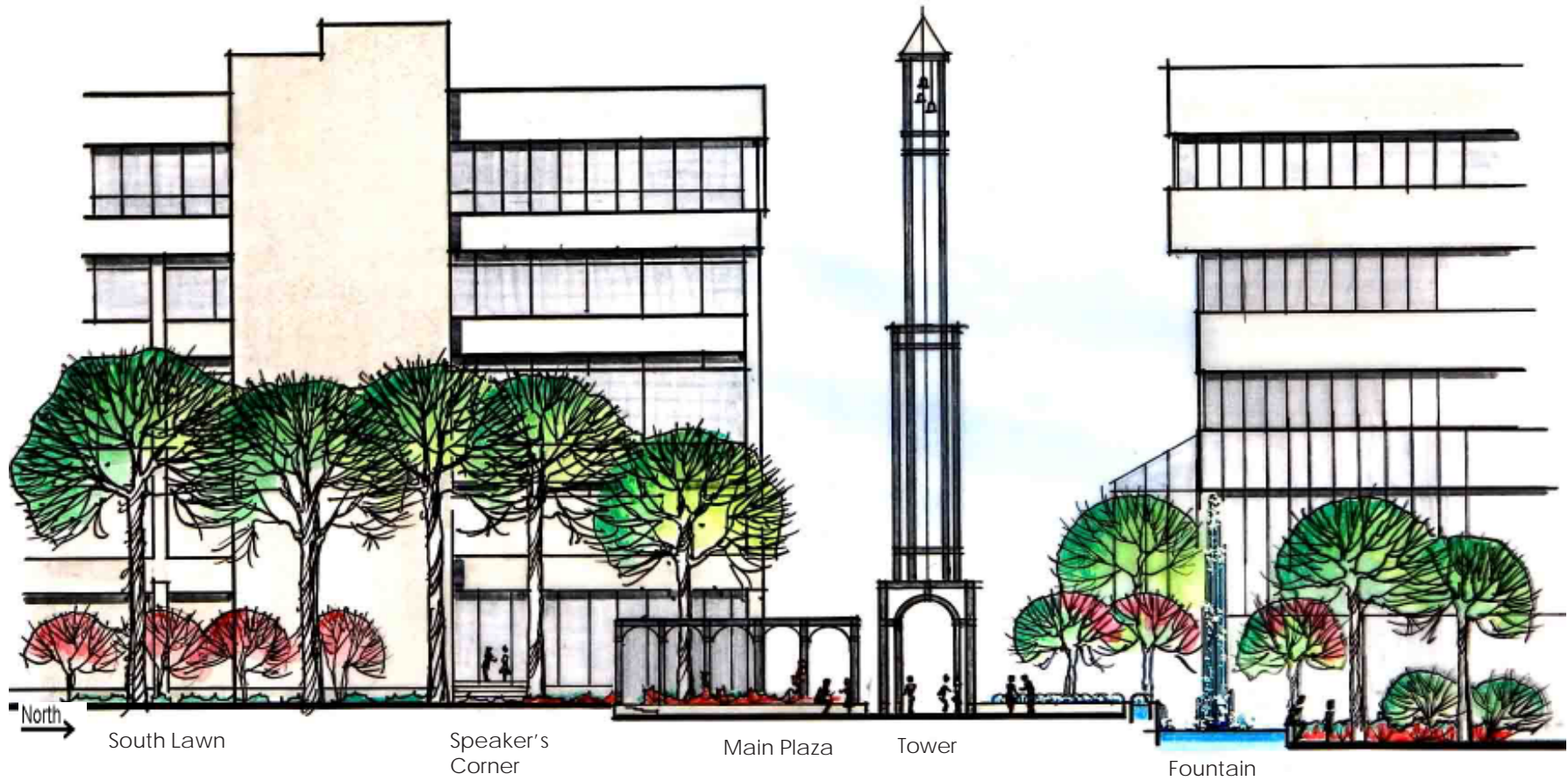
- | | | |
|--------------------|-------------------------------|--------------------------|
| Existing Buildings | Important Open Spaces | Proposed Parking Garages |
| Proposed Buildings | Major Water Features | Surface Parking |
| Existing Housing | Elevated Pedestrian Crossings | Major Vehicular Entries |
| Proposed Housing | | |



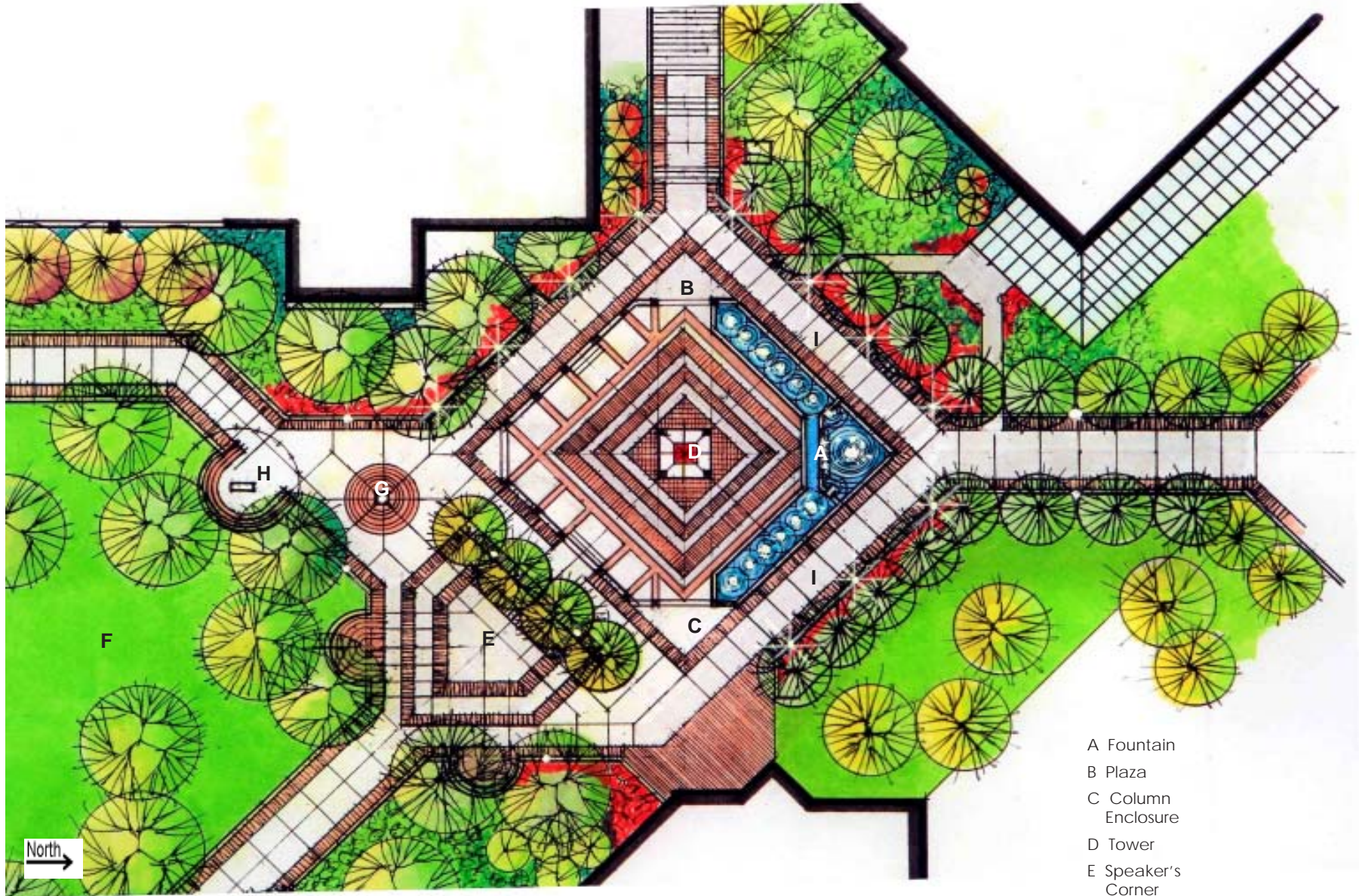
Central Plaza illustrative Sketch



Central Plaza Design Plan



Tower Plaza Cross Section - Looking West to Nunn and Founders Halls



- A Fountain
- B Plaza
- C Column Enclosure
- D Tower
- E Speaker's Corner
- F South Lawn
- G Kiosk
- H Sitting Area
- I Ramp

Central Plaza Detail Design Plan



Looking Southwest along Nunn Drive



Looking Northwest to the Academic Core



Looking North from Hilltop Drive



Looking East from I-275



Looking South from Campbell Drive

