

Communities of Opportunity: Smart Growth Strategies for Colleges and Universities

I. Introduction

The Challenge

“We express our values by what we build.” - Chancellor James Moeser, the University of North Carolina at Chapel Hill¹

Each college and university prides itself on its unique traits of identity, culture, and core mission. An institution’s campus and, in many instances, the surrounding college town are typically the physical representation of these characteristics. Quads, walks, greens, or, more specifically, places like Bascom Hill in Madison, Wisconsin, the Corner in Charlottesville, Virginia, or Morningside Heights in Manhattan, and countless other places are as indicative of a college or university as the array of majors and courses and faculty members. In an era of growing enrollments, the need for additional research facilities, opportunities to partner with the public and private sector to support economic development, and the increasing community service roles, most institutions know they need to grow. Institutions are increasingly recognizing the degree to which the continued growth of campus facilities – when done well – can strengthen efforts to recruit and retain the highest caliber of students, faculty, and staff. One significant challenge at this time is figuring out how to grow in a way that respects the best qualities of the institution, uses resources efficiently, provides students, faculty, staff, and community members increased choice in how to get around, where to live, work and shop, and even address environmental concerns that often accompany growth and development. Smart growth strategies can help colleges and universities address these challenges.

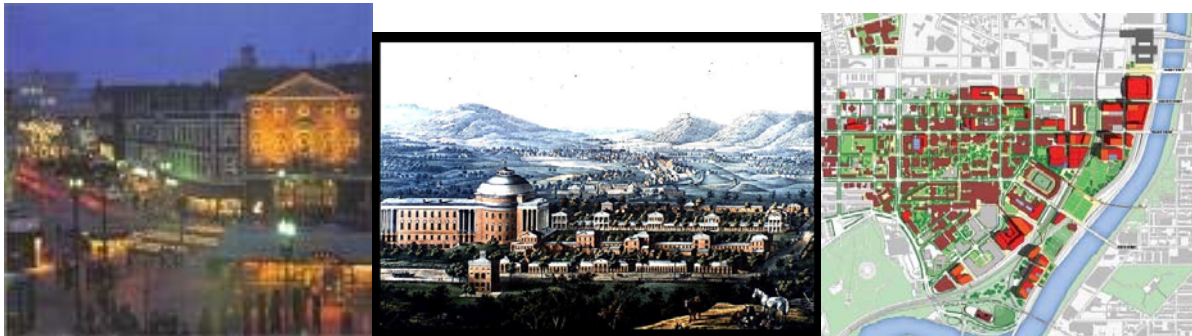


Figure 1: Historically campuses in the United States have been tied to their places and their landscapes – Harvard to Cambridge, the University of Virginia to the foothills of the Blue Ridge Mountains, and the University of Pennsylvania to Philadelphia.

Industry analysts estimate that 40% of all colleges and universities are engaged in new construction, renovations, and retrofitting projects on and near campus. In 2006 alone, the value of this construction was approximately \$14.4 billion.² As campus administrators know well, numerous factors contribute to the constant need for updating and constructing campus facilities. In the face of such needs, many schools have replaced the question, “Should the campus grow?” with “How will we grow to meet future needs?” and “How can we grow to compete with our peers?” To meet the challenges, institutions are looking better ways to grow and opportunities to

collaborate with communities immediately adjacent to campus as a way to ensure growth is beneficial to all stakeholders.

Smart growth approaches to growth offers multiple benefits to both campuses and their adjacent communities. New development on and off campus typically presents challenges related to traffic, parking, mobility, and the environment. New growth can also strain the financial resources of the institution and the surrounding community. Smart growth approaches, however, can help colleges and universities to accommodate growth by creating great places, promoting positive environmental outcomes by enhancing transportation choices, fiscal responsibility through the re-use of existing infrastructure and underused properties, and economic development and job creation by supporting mixed-use and joint venture projects. This publication will show how smart growth strategies can help:

1. **Create enduring, vibrant places** that improve both campus and community quality of life with each increment of growth. This in turn helps boost student, faculty, and staff recruitment and retention and ensures the college or university can remain competitive with peer institutions.
2. **Realize fiscal benefits** by maximizing dollars spent through efficient use of existing space and existing infrastructure, increasing transportation options, creating mixed-use live-work-play developments on or near campus, and, where appropriate, partnering with private and public sector entities to make the most effective use of investment dollars.
3. **Foster greater cooperation between the institution and the community** by working to ensure that growth can help meet multiple challenges across the traditional divide of “town vs. gown.” Smart growth approaches can help institutions and communities address issues such as housing affordability, transportation choice, revitalization, community connectivity, and increased economic opportunities in a collaborative way.
4. **Contribute to a healthy, sustainable campuses and communities** through the preservation, restoration, and enhancement of the environment. By supporting a mix of uses and compact building design, smart growth approaches can increase transportation choices, reduce reliance on the automobile, and decrease emissions. Environmental benefits are compounded when additional strategies are used such as green building techniques and purchasing renewable energy.

II. What is smart growth?

Smart growth development strategies support multiple economic, community, public health and environmental outcomes in the creation of new places. These strategies help create attractive, safe and healthy new neighborhoods and to maintain existing ones. Ultimately they hope to facilitate development that encourages social, civic, and physical activity by creating interconnected, mixed-use, compact, and walkable neighborhoods. The Smart Growth Network, a national partnership of over 35 business, government, and civic organizations, supports and educates communities on the implementation of smart growth development principles.³

The Smart Growth Principles could be a box
Smart Growth Principles

1. **Mix of Land Uses** – By mixing housing, shops, offices, schools and other land uses in the same neighborhood, communities can encourage alternatives to driving, such as walking or biking.
2. **Take Advantage of Compact Building Design** – When growth is accommodated in compact development patterns, communities can preserve open space, minimize infrastructure costs, and support transportation choices.
3. **Create a Range of Housing Opportunities and Choices** – New development can increase the number of homes available in a community. Zoning and development policies can be adapted to ensure that a variety of home types are available – small homes to large, rental and homes for purchase.
4. **Create Walkable Neighborhoods** – Walkable neighborhoods enable a variety of transportation options and provide opportunities for everyday physical activity.
5. **Foster Distinctive, Attractive Communities with a Strong Sense of Place** – Development should represent the values and unique history, culture and geography of a community.
6. **Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas** – Farmland, pastures, forests, and other undeveloped land are key to the local and national economy and to a healthy environment.
7. **Strengthen and Direct Development Towards Existing Communities** – Development that invests in existing neighborhoods take advantage of the infrastructure and resources already in place thereby maintaining and increasing the value of public and private investment.
8. **Provide a Variety of Transportation Choices** – A balanced transportation system that incorporates many means of travel and is supported by land-use patterns increases choices for moving around a community.
9. **Make Development Decisions Predictable, Fair, and Cost Effective** – Governments have the opportunity to create a more attractive investment climate; this can be done with clear codes and regulations as well as the ability to make decisions quickly, cost-effectively and predictably.
10. **Encourage Community and Stakeholder Collaboration in Development Decisions** – Growth can create great places to live, work and play when it involves residents, businesses, and all other stakeholders early and often to define and implement the community's vision and goals.

See www.smartgrowth.org



Figure 2: The Cotton District in Starkville, Mississippi, home to Mississippi State University, is a great place for faculty, students, and staff to live, work, and play only a short walk away from campus. (Photo credit: EPA)

Environmental Benefits of Smart Growth Development Practices

Growth and development impacts our environment. Direct impacts of development include water runoff due to increased impervious surfaces when natural land, for instance, is turned into a new subdivision, to wildlife habitat fragmentation and wetland destruction resulting from the conversion of forest to a new office park. Indirect impacts include increased automobile trips and increased emissions because of low density, single-use development that doesn't support transit or alternative transportation choices. Not all development affects the environment equally, however. Development on infill sites and vacant properties is better for the environment. Smart growth strategies support development patterns that are better for the environment, such as:

- **Compact development** that lessens the demand for the conversion of undeveloped land and thereby helps to protect working lands and habitat;
- **Mixed-use development** that increases transportation choices and decreases automobile trip generation;
- **Re-using existing properties** such as brownfields and underused sites that yield multiple environmental benefits including cleanup of contaminated sites (or potentially contaminated sites) and reduced demand for greenfield development.

For a more in depth, technical discussion of the environmental impacts of development patterns see:

Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality available at www.epa.gov/smartgrowth



Figure 3: Rams Head Common at the University of North Carolina in Chapel Hill used to be a surface parking lot. It now has a 3 story parking structure topped by a “green” roof. At the roof level students access a dining hall and recreation center. (Photo credit: Dan Sears, University of North Carolina)

Make this a box with the image above

Getting Better Environmental Results.

The University of North Carolina Chapel Hill is aiming to accommodate new growth on infill sites. By taking advantage of topography, the UNC was able to convert a surface parking lot to a three story parking garage, convert the roof into a plaza that allows students, faculty, and staff to access a new dining hall and recreation center. The vegetated or “green” roof absorbs some of the rainwater that falls in the plaza. This site level strategy reduces the overall amount of water that must be accommodated in the stormwater system.⁴

End Box

Smart Growth On and Off Campus

Most of our best-loved universities and their surrounding towns have naturally used development strategies that we would call smart growth to create connected, compact, and coherent campuses. In addition some of the best known college towns have exhibited the same type of development patterns for generations. The constituency served by these places – students, faculty, staff, and community members – fulfill many of their daily needs in and around the institution, allowing for a lower number of automobile trips. Since colleges and universities do not typically pick up and move their historical campus – as many corporations and industries

moved since the mid part of the twentieth century – sorting out issues that come with growing in place has been a prominent challenge for both the institution and the college town.

American colleges traditionally separated the intellectual pursuits of the college or university from the surrounding community. The term “campus” evokes this separation. However, recent developments across the United States suggest this separation has begun to break down, and the edges are blurring. University districts in many communities are integral to the social and economic health of the local institution and vice versa. In addition, the expanded needs of campuses and surrounding communities, and the arrival of innovative real estate financing options, have led to a greater integration of community and college.⁵

On- and off-campus development is trending towards more efficient use of land through increasing densities and a mix of land uses. On-campus this may mean seeking out infill opportunities for redevelopment such as surface parking lots or underused facilities to take full advantage of existing space and mixing previously segregated uses such as residential, classroom, and administrative uses new buildings or sets of buildings. The increased densities and mix of uses not only efficiently uses the infill spaces, it helps to solve transportation problems by allowing students, faculty, and staff to get around without having to use an automobile. Since campuses and their surrounding towns or precincts are interrelated to varying degrees, the prevalence of compact mixed-use development off-campus is also gaining momentum. Development adjacent to campuses often includes dining and shopping options, administrative office or academic support spaces, as well as housing options for staff, students, or the community. Entertainment venues, limited parking, and connections to mass transit naturally follow. Other new developments outside of traditional campus boundaries are also including such uses as research facilities, academic space, or “incubator” facilities to promote public/private partnerships for research and development. In each case, the pattern creates growth and development to serve multiple purposes and is a successful addition to an institution’s assets.



Figure 4: Eastman Theatre at the Eastman School of Music of the University of Rochester in Rochester, New York (Photo Credit: University of Rochester)

In the recently published book *The University as Developer*, editors David C. Perry and Wim Wiewel, argue that development plans for colleges and universities have increased impacts on the local community as a whole.⁶ Local policy and the participation of higher educational institutions in community-wide planning efforts are paramount. Experience shows that collaboration between institutions and local

stakeholders increases fairness and predictability, leads to better places, and ensures that the development pattern addresses and helps to solve multiple challenges.

The Initiative for a Competitive Inner City (ICIC) and CEOs for Cities recently documented that over half of all colleges and universities are located in core urban areas and most of these institutions are land locked.⁷ Unlike private sector businesses, many colleges and universities have great physical and institutional investments in their campus and are not likely to move to the metropolitan edge to accommodate growth. Learning to accommodate growth within a constricted development context is essential for such campuses.

Colleges and universities offer unique strengths and benefits to struggling communities. A 2004 *Planning* magazine article reports on the increased role colleges and universities are playing in urban community revitalization. The article quotes David Perry, one of the editors of *The University as Developer* and the director of the Great Cities Institute at the University of Illinois at Chicago, on the increasing the role of colleges and universities as developers, especially in light of the recent history of corporations abandoning cities. Specifically, Perry argues that colleges and universities need “to be a signature element of a city's cultural and aesthetic direction. They also have an obligation to be a good neighbor and to buffer their impact on the people who live next door.”⁸ More recently, *The Chronicle of Higher Education* reported on a number of colleges and universities stepping into the void created by the changing global economy, especially in traditional manufacturing communities. Writer Karin Fischer reports, “as traditional manufacturing economies in many parts of the country decline, universities are being asked to play a greater economic role in their local communities.”⁹ Cities from Akron, Ohio to Bethlehem, Pa. to Rochester, N.Y. are cited as benefiting from both the economic opportunities nurtured by higher education institutions in these places, as well as the renewed spirit of cooperation and collaboration between the communities and these colleges and universities.

A good example of a university partnering with a municipal government, adjacent neighborhoods, and other research organizations interested in seeing their resources leveraged for positive economic benefit of the entire community is the University of Buffalo's participation in the Buffalo Niagara Medical Campus (BNMC). BNMC is a non-profit community economic development corporation in downtown Buffalo, New York that coordinates activities related to planning, development and enhancement within the medical campus; addresses issues of common concern to its member institutions; cultivates a sense of place within its 100-acre footprint; and promotes an awareness of community among its members and with the surrounding neighborhoods. Its mission is “to cultivate a world-class urban medical center by facilitating collaboration among the region's major health care and research-related institutions located on the campus.” BNMC carries out its mission by implementing the strategic plan adopted 2003. The guiding principles for the plan are:

- Establish a common campus address
- Improve physical integration between campus and neighborhoods
- Foster community and economic development
- Enhance the open space network.

BNMC is run by a board consisting of 20 members and a professional staff of five. The annual operating budget is approximately \$600,000 per year. A trustees council of about 40

neighborhood organizations, local businesses, and partner institutions serves in an advisory role and helps BNMC carry out its mission. The district as a whole is approximately 100 acres, exclusive of two residential neighborhoods adjacent to the district that participate in BNMC activities and services. The organization is funded by its member organizations. Its programming comes from a variety of sources including direct governmental appropriations, grants, cooperative agreements, and charitable contributions. Each year, the area sees approximately \$600 million in expenditures and an additional \$300 million annual economic impact. There are 8,000 jobs in the district, including 500 MDs and 200 PhDs.¹⁰

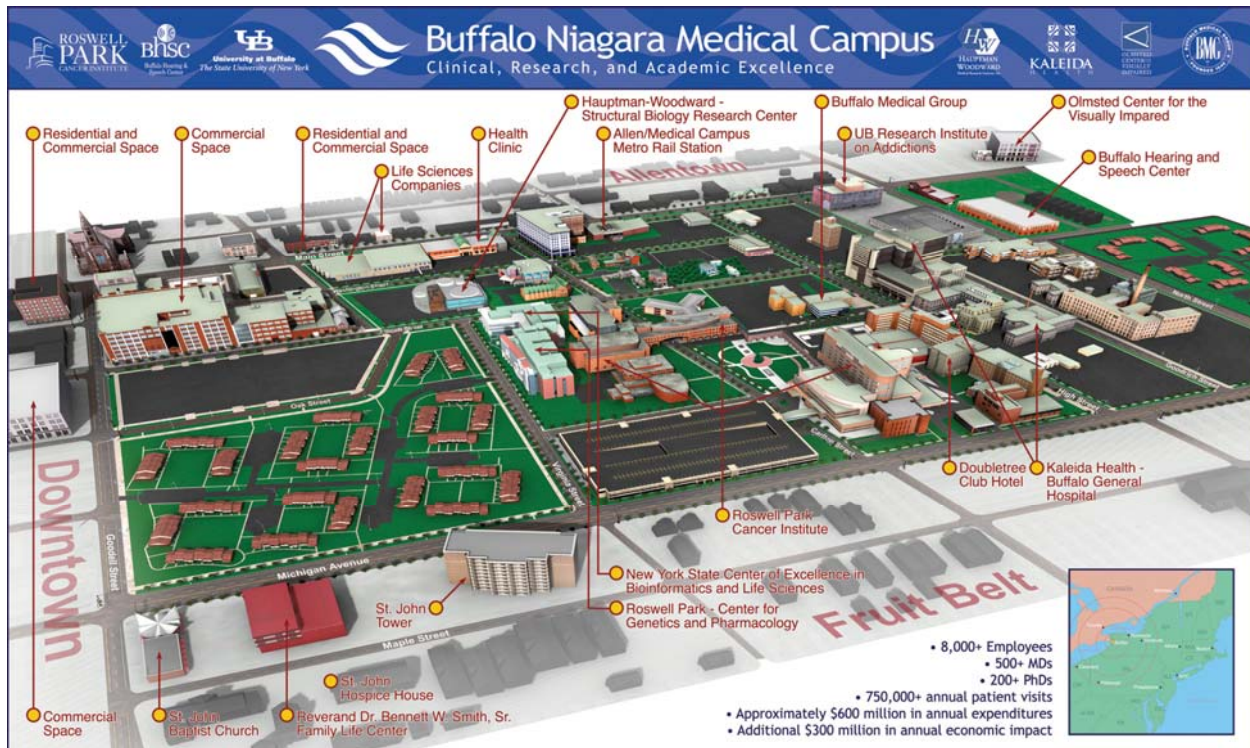


Figure 5: Buffalo Niagara Medical Campus showing the member organizations and the campus's place in the community (Image Credit: BNMC. Permission to use has been granted by BNMC).

The leaders of BNMC are trying to leverage the growth of their member organizations to create a downtown campus where residents, employees of the institutions, and university faculty and staff feel safe, have convenient access to stores, places to live and work, and have a positive impact on surrounding neighborhoods. This type of mixed-use growth and development can help to reduce commute times, revitalize a portion of the city that had previously seen large scale disinvestment, and create a place where people really want to be – an increasingly important component of recruiting high level students, faculty, and staff.

III. Benefits of smart growth development strategies

There are numerous benefits for colleges and universities to adopt smart growth strategies as they seek to accommodate growth. These strategies can help institutions meet their core missions more efficiently, allowing growth and development to be beneficial for a range of priorities. The section that follows discusses these benefits.

1. Creates enduring, vibrant, accessible places

Colleges and universities are growing at a significant rate in the effort to meet demands of increasing enrollment, research, and infrastructure needs. Institutions have a choice in how to physically accommodate such growth. They can chose to pursue a program to build enduring, memorable places that seek to meet multiple institutional goals or, alternatively, they can chose to build facilities meant to meet the most basic, necessary functions and goals of the individual building and program.

It is clear that prospective students and faculty desire institutions that provide not only the highest quality education and facilities, but also a vibrant and active campus life. The physical campus and its interface with the surrounding community is often an important part of these prospective constituents' final choice. Thus, creating enduring, vibrant places both on and off campus is becoming more recognized as a critical part of any recruiting effort. Further, while enrollments are expected rise through 2010, such increases are expected to level off shortly thereafter. With high school graduation rates expected to decline beginning in 2009, any increase in enrollments will be made up of more non-traditional college students.¹¹ Meeting increased expectations and this more competitive recruiting climate may be a challenge to even the most well planned recruiting efforts.

Buildings as well as the physical space between buildings – streets, sidewalks, plazas, parks or greens – contribute greatly toward what makes campuses, cities and towns memorable throughout the world. Design principles that colleges and universities should adopt to create such enduring, vibrant places include:

- **Form:** Well-defined out-door “rooms” or “corridors” should add to the existing campus and the surrounding community
- **Unity:** New development should physically connect to and strengthen existing campus forms
- **Completing the Existing:** Infill buildings on difficult sites should complete outdoor spaces. Completion of such spaces supports the campus as an expression of the colleges identity
- **Re-use Old Buildings:** The combination of old and new add vibrancy and interest to the campus
- **Mixed-Use Building:** Buildings which support a variety of uses create vibrant places, can help connect campus and community, and help solve transportation challenges.

- **Interconnections:** As appropriate, the campus should provide for connections with surrounding communities
- **Uniqueness of Place:** New construction should acknowledge and build upon attributes such as materials and building forms that make the campus unique and recognizable
- **Compactness:** Campus should develop at densities and with a mix of uses that add to campus life and provide environmental benefit by preserving natural areas
- **Mobility:** Campuses are unique in their ability to accommodate pedestrian and bike circulation as a means to contribute toward the resolution of transportation challenges. Access to transit and shuttle services help relieve pressure to accommodate the automobile
- **Sustainability:** Institutions should take advantage of sustainable building technology and siting, as exemplified by the LEED Rating system

The following examples illustrate recent efforts by universities to ensure future growth creates such enduring, vibrant places:

The College of William and Mary in Williamsburg, VA, has a vision for design that is both simple and straight forward. Seeking to ensure future campus development meets its vision of unifying the campus' architectural and landscape character, the college adopted four plain, yet powerful, guiding principles:

1. *The architectural configuration and character of the Old Campus should be preserved.*
2. *New public spaces on campus should be created and connected by clearly articulated pedestrian circulation paths. New buildings should create and frame new public spaces wherever possible.*
3. *Existing barriers to unifying the campus, such as roads and parking, should be removed (or at least minimized) wherever possible.*
4. *The unique naturalistic attributes of the Ravine intervening within the campus landscape should be preserved and enhanced.*¹²

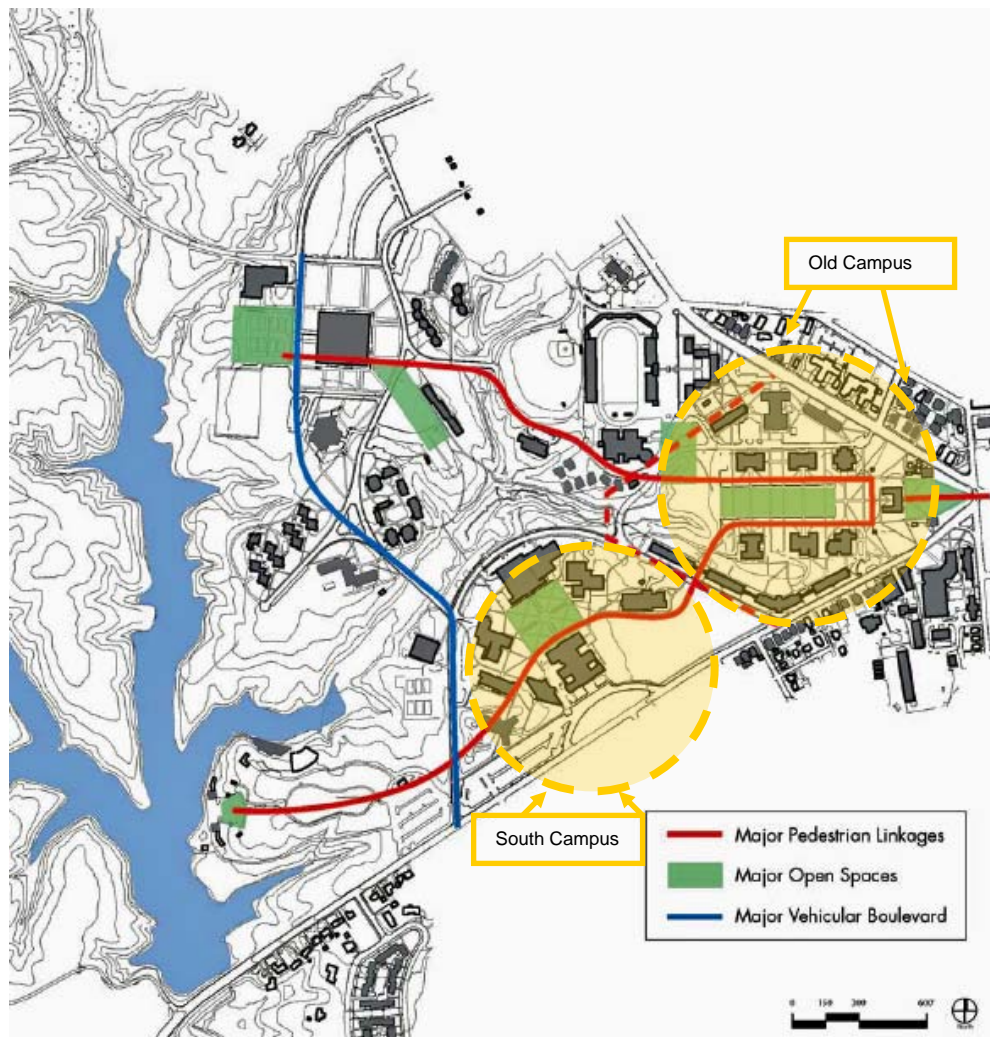


Figure 6: College of William and Mary campus in 2002 showing existing buildings, open spaces, and pedestrian and car circulation in the South Campus and the Historic Campus (Image Credit: [This is from the W&M website.](#) No permission to use at this point)

The design guidelines are influencing the form new development takes as William and Mary grows. Figure 6 shows the College of William and Mary as it existed in 2002 and highlights two areas within the campus – the South Campus and the Old Campus. Much of the South Campus was built in the 1960s and 1970s. It is principally an academic area; dormitories and other uses are absent. In contrast, the Old Campus, dating to the end of the 17th century, has always been mixed use. Residence halls, academic buildings, and administration buildings all existed in that area. In showing how the campus could grow, the vision for the expansion of the College’s facilities used the design guidelines to show how new buildings on the South Campus could be sited (a portion of this vision is shown in Figure 8).¹³ These new proposed buildings help to create spaces in the South Campus that are more formal, reflect the traditional development pattern of the Old Campus, the proposed mix of residence halls and academic buildings will create a more vibrant place, while also beginning to knit together the old and the new portions of the entire William and Mary campus.

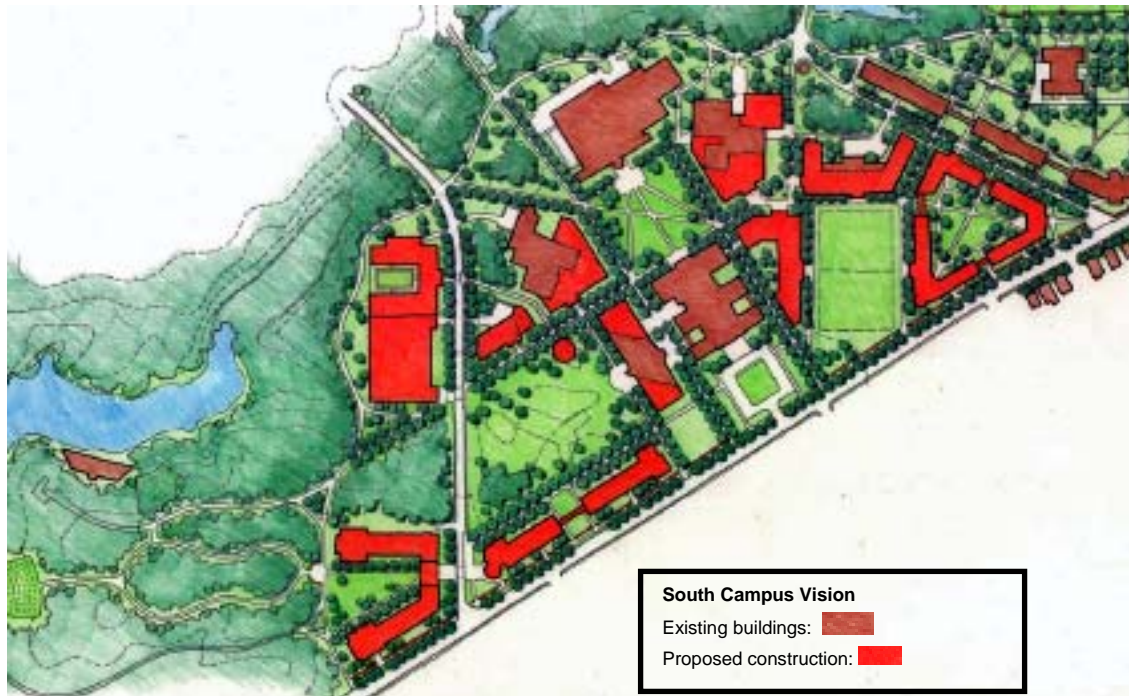


Figure 7: William and Mary's vision for future growth and expansion of the South Campus (2002). (No permission to use this yet. MD added the text boxes...) Also, check, the colors in the graphic

As of 2006, the new dormitories – Jamestown North and South – have been built on the South Campus across the street from the Old Campus (see Figure 8 and 9). These new residence halls respect the integrity of the Old Campus, help to define the open space adjacent to the building site, and helps to restructure the South Campus by bringing student living into the previously single-use campus.

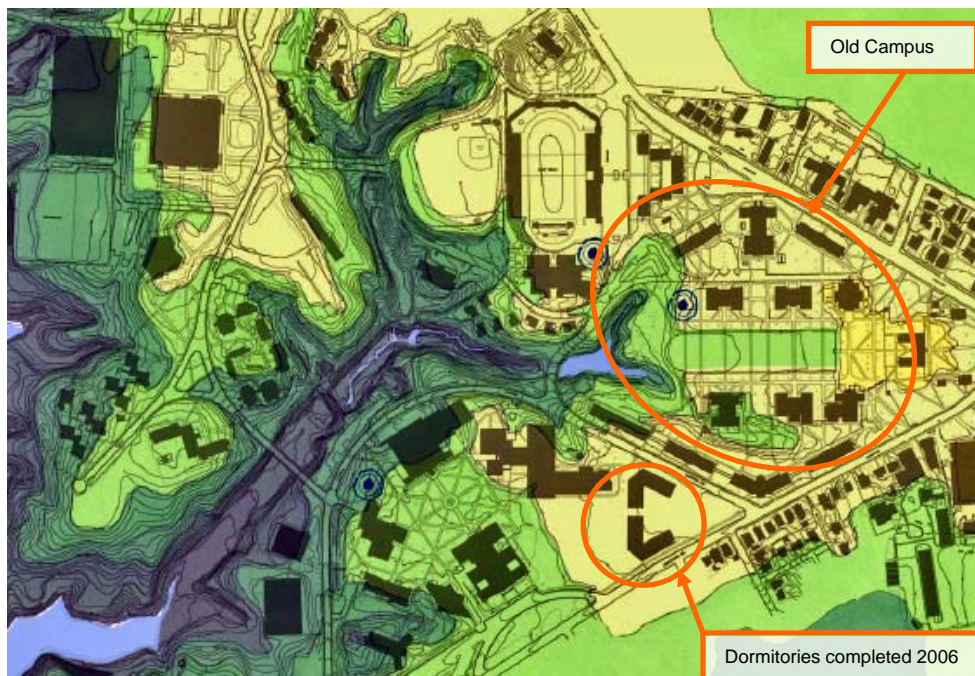


Figure 8: New dormitories – Jamestown North and South – completed in 2006 on the South Campus (Image Credit: this came from Dave Bagnoli at Cunningham I Quill. I don't know if it is their figure ground or if it is a William and Mary figure ground. Need permission to use)



Figure 9: Aerial view of Jamestown North and South (looking east). (Photo Credit: College of William and Mary? No permission to use yet)

Kevin thinks this needs a better transition...

Jackson State University (JSU) in Jackson, Mississippi is another example of how a university is using the need to grow and accommodate enrollment increases as a mechanism to create a vibrant campus and help to revitalize the adjacent neighborhoods. In 2000, early in his tenure as president of JSU, Ronald Mason, Jr. recognized that the first impression of the campus needed to be improved if the university was going to be able to compete for the best students, faculty, and staff. The need to expand the existing campus facilities to accommodate growing enrollments and research production allowed JSU to retrofit some of the existing facilities and build new facilities with the aim of improving the way the campus looked, felt, and performed. With Mason leading a revamping of the entire campus master plan, JSU looked to accommodate and

focus growth on its western edge, proposing creation of a series of open spaces connected by well landscaped pedestrian and vehicular thoroughfares. The new master plan (Figure 9) defines a main east-west pedestrian street that bisects campus, and proposes two north-south quadrangles to establish pedestrian places with a human scale pedestrian for faculty, staff and prospective students.



Figure 9: Jackson State University Campus Master Plan showing growth occurring on the west side of campus and the formalization of the pedestrian walk through the campus. [The image we use will have to point out where the new campus buildings are ... This will be clear in the file that Michele sent to Donna](Image Credit: Permission to use the master plan image has been granted by Troy Stovall at JSU. Use the file that Michele gave to Donna Klinger)

Box

“The overarching goal of the \$200 million in construction projects is simply to build a living and learning community deserving of the students, faculty, staff and alumni who make Jackson State great. As we continue to build our nation’s leaders, we must make sure that they get the best education possible. The facilities and their varied resources and are very important to that end.”

-- Ronald Mason, Jr., President of Jackson State University.¹⁴

End Box

JSU has also recognized that growth and development off campus can, and should, yield multiple benefits, including creating a vibrant, thriving place for students, faculty, staff, and residents in the adjacent communities. This meshes not only with the current academic and research mission of Jackson State, but its historic mission as a Historically Black College/University (HBCU) to serve the local community. Jackson State, through the JSU Foundation, is beginning to redevelop a 50 acre parcel just to the east of the campus, adjacent to downtown Jackson. Over the past 30 years or so, this area has seen disinvestment in businesses, infrastructure, and housing

stock. The desire to reinvest in the area is strong, however, from the both university and community's perspective. The redevelopment strategy calls for the construction of neighborhood shops and restaurants, as well as homes ranging from single-family detached to townhomes and student residences. The JSU Foundation is also working to revitalize a second neighborhood just to the south of the campus. These revitalization efforts will help transform declining communities into places where residents will have choices in where to live, shop, work, and play. For Jackson State, the additional supply of homes will mean that faculty, students, and staff will have the choice of living near campus and downtown, and have the opportunity to walk to class or an office, restaurant or shopping.

Box

While growth rates vary by institution, facilities renewal and expansion is a continual process for all colleges and universities. To build successfully while safeguarding a university's mission as outlined in a strategic plan, growth should be guided by a campus master plan, typically updated every ten years with more frequent reviews for compliance to respond to changing conditions. Such a planning process should study near-term academic and physical plant needs as well as additional "beyond the horizon" needs, and to objectively consider the responsible capacity of campus land to accommodate such needs. A key element of the Master Plan should be the consideration of how the plan can reflect and facilitate the institution's core academic mission and institutional values. Master Plans, or a separate planning process, should also take into account how the campus interacts with the surrounding community and what goals exist to improve the campus and community in concert. The final product should provide a road map guiding immediate additions and renovations to the campus' buildings, grounds, and infrastructure, as well as anticipated long-term campus growth.

End Box

Another fine example is a 1993 Master plan for the University of Southern California. Revisions to the existing campus sought to create connected places within the existing fabric. The illustration below shows the "before" and "after" views. Notable is the elimination of a major diagonal street that divided the campus and the addition of appropriate scaled open spaces, created by the addition of much needed facilities. The primary goal of the Master Plan was to determine the optimum capacity of the University Park Campus. Tasks involved identifying buildings and open spaces that could be reprogrammed to create a more unified campus. Once opportunities were identified, the second phase of the Master Plan focused on developing a vision statement and design guideline for future growth and development. The goal was to unify and integrate future campus development. The guidelines and the plan put into place specific measures to describe the design and spatial capacity of the campus while adhering to the character of a compact redevelopment. The plan illustrates a coherent, unified campus that integrates new and old spaces in a seamlessly.¹⁵

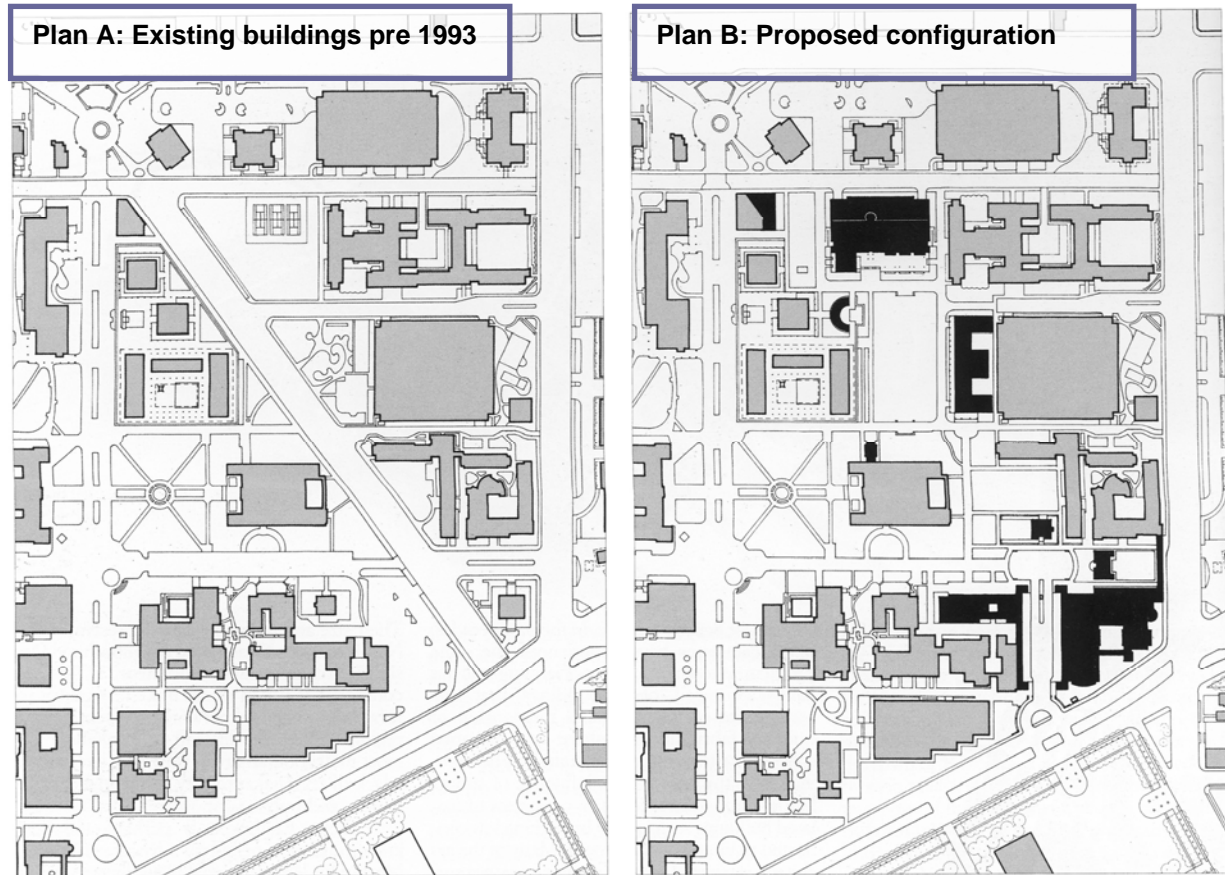


Figure 10: Section of the campus plan of the University of Southern California. Plan A shows existing buildings and street network prior to 1993. Plan B shows the proposed configuration of new buildings that would lead to the elimination of the diagonal road through the middle and the creation of a series of quadrangles within the existing campus. (Image Credit: Michael Dennis Associates. Need permission to use. Go through Dave Bagnoli).

2. Fiscal Benefits for both the institution and the community

Compact, walkable, mixed-use development that takes advantage of infill sites and existing infrastructure can yield numerous benefits to both a university and the surrounding community. In addition, when colleges and universities leverage their existing resources in partnership with the adjacent community they both maximize investments. The institution gets the facilities it needs and the community, as a partner in creating these facilities, can help to ensure the new development also serves community needs.

Colleges and universities are beginning to recognize the tremendous market demands they can bring to bear on the development process in adjacent precincts. Many factors point toward the need for increased campus development that is financially efficient, ecologically-responsible, and creates excellent social spaces that serve the university and the community.

Colleges and universities are major economic engines.

Urban colleges and universities alone employ more than two million workers who bring a demand for housing, retail, transportation, and leisure services near their place of employment. More than 1,900 urban universities spent \$136 billion on salaries, goods, and services in the mid-1990s. Many municipalities would like to capture that power to benefit the local economy.¹⁶ Cities and even states across the country are beginning to recognize the economic value and vitality associated with colleges and universities, especially when compared to the single industries that were the economic lifeblood of many older US cities. According to *The Chronicle of Higher Education*, so called “Rust Belt” cities and their respective regions are teaming up with local higher education institutions to nurture job growth based on much of the intellectual and entrepreneurial activity evolving from campus. Further national studies show that population growth trends are favoring regions with college towns and cities over regions without them.¹⁷

Growing more efficiently

With more than two billion gross square feet of existing campus space dating from 1970, a tremendous amount of renovation and replacement is anticipated to occur on campuses to meet current needs and future expectations. Many older campuses may be considered to be near their responsible capacity, making new development outside of the traditional campus core the only choice for growth. Such a choice, coupled with the rising costs of energy and infrastructure improvements, demands efficient land uses and sensitive designs that maximize the value of every dollar spent. Fiscally sound decisions for campus expansion need to start with assessing existing assets, resources and opportunities for maximizing the development potential of current land uses and improving campus systems efficiencies.

Schools can inventory their campuses to assess where the greatest potential for additional development and a mix of uses exist. This might reveal sites on campus that are appropriate for additional buildings, expanded complexes or reconfiguration to accommodate more residences or classrooms. Furthermore, a master plan might suggest an innovative or adaptive reuse of some part of campus that would offset the need to build off campus.

Efficient land use decisions do not always need to be based the amount and type of buildings but can focus on land use resources such parking or street right-of-way. When these land uses are efficiently redeveloped to their highest use, existing infrastructure can be maximized and costs can be minimized.

For instance, by providing additional surface parking to address transportation challenges, colleges and universities are heading down a path of spending scarce resources on projects that serve limited goals. By replacing surface parking with structured parking, valuable, and in the long term potentially scarce, amounts of land are left available for other uses more directly related to the core mission. Colleges and universities should look more broadly at parking challenges and consider increasing mobility in and around campus. Efforts to solve campus mobility issues by mixing uses and building more compactly result in more efficient use of land and ultimately dollars.

Creating mixed-use places on and adjacent to campus with a range of residential types, academic and administrative space, retail and commercial opportunities, and transit connections, reduces overall trip generation and thus the demand for more parking. The reality is that colleges and universities and their adjacent communities often have the infrastructure, development pattern, and tradition to solve broad transportation problems by providing a range of use options to students, faculty, staff, and the community. By taking advantage of existing assets and treating parking not as the sole answer to a transportation challenge, institutions and communities may adopt development policies and practices that allow for scarce resources to be spent on educating students rather than financing parking spaces.¹⁸

Consider making this a BOX

BruinGo at UCLA: Addressing the parking problem by increasing mobility choice

The University of California, Los Angeles has undertaken an innovative approach to reducing costs and protecting the environment. By using Transportation Demand Management (TDM) strategies to help address mobility demand to and from campus, the University has been able to maintain and even reduce traffic levels since 2001. UCLA's TDM approaches include vanpools, carpools, transit pass subsidies, and encouraging faculty, staff, and students to walk or ride a bicycle to campus. Incentivizing these alternative modes so that they compete with the demand for parking has enabled UCLA to both enjoy better relations with its adjacent communities, and continue to grow its academic and research programs. It is estimated that over 1.3 million annual trips to and from campus are eliminated through UCLA's TDM programs. Another half million are saved through provision of on-campus student housing, which the campus has significantly expanded in the past years.

One such program is the BruinGo! transit subsidy. UCLA has partnered with Big Blue Bus, the city of Santa Monica's transit provider, and Culver CityBus, to provide a subsidy for students, staff, and faculty. The subsidy means that UCLA riders can swipe their Bruin ID cards, drop a 25¢ co-pay into the farebox, and ride the bus. (The campus has also developed a subsidized pass program with LA's Metro and DOT transit, providing transit and rail access throughout the metropolitan region.) While the program costs are not insignificant, the benefits reaped include reduced demand to build costly parking on campus, less automobile traffic to and from campus, and environmental quality enhancements. Early studies showed a benefit to cost ratio of about

2.4 to 1. Other external environmental benefits, such as reduced vehicle emissions and decreased single-occupancy-vehicle commutes to campus are not part of the calculation.

At universities where TDM strategies are part of the mobility solution, parking demand has shrunk and students have more transportation options, yielding greater environmental and economic benefits. The effect at UCLA has been a dramatic reduction in parking demand—the wait list for a student parking permit has shrunk from a historical high of 4,000 to zero over the last few years, eliminating a long-standing parking problem. Other schools with similar programs to UCLA’s include the University of Illinois and the University of North Carolina, among others.¹⁹

Box would end here

Box [Either this one or the UCLA one should perhaps not be a box]

The University of Puerto Rico (UPR) in San Juan, Puerto Rico has a transportation challenge – there’s not enough parking on campus to satisfy demand. Sites for future parking, surface lots or structured parking, are either limited or construction costs are prohibitive. In 2003, a new metro transit stop opened near the main entrance to the university. Officials at UPR were skeptical that the new access to rail transit would help to solve the broader transportation challenge. In preliminary research completed by UPR professor Gabriel Moreno-Viqueira, public transportation ridership to UPR has risen from 8% in 2003 (when the only choice was bus) to 22% in 2007. Public transportation usage by first year students is up from 2% in 2003 to 31% in 2007. Approximately one-third of all trips to the campus are now walking or public transportation trips. The opening of the metro station can now allow UPR to make decisions about how and where to grow the campus with the knowledge that public transportation can actually lower the demand for parking on campus. That is, as new facilities are brought on line, the need to provide parking spaces for the users of the facilities will be less than it had been prior to the opening of the metro. This new transportation choice can help UPR shift resources away from the construction of parking spaces and towards other facilities that better represent its core mission.²⁰

Box

Faculty, students, and staff come with increasing expectations

Today’s administrators know that to recruitment of the best faculty and staff includes the ability to offer up-to-date facilities in the right location, with a high quality of life. Furthermore, today’s students come with higher expectations for quality of facilities and leisure opportunities than in the past. With rising costs of tuition and debt, students today place tremendous weight on the high quality facilities. Additionally, with the increase of non-student residential communities on or adjacent to campus (e.g. alumni condominiums and retirement communities) on the increase, older, sophisticated residents bring significant disposable income and a desire to live where daily needs of retail and culture are met within walking distance.

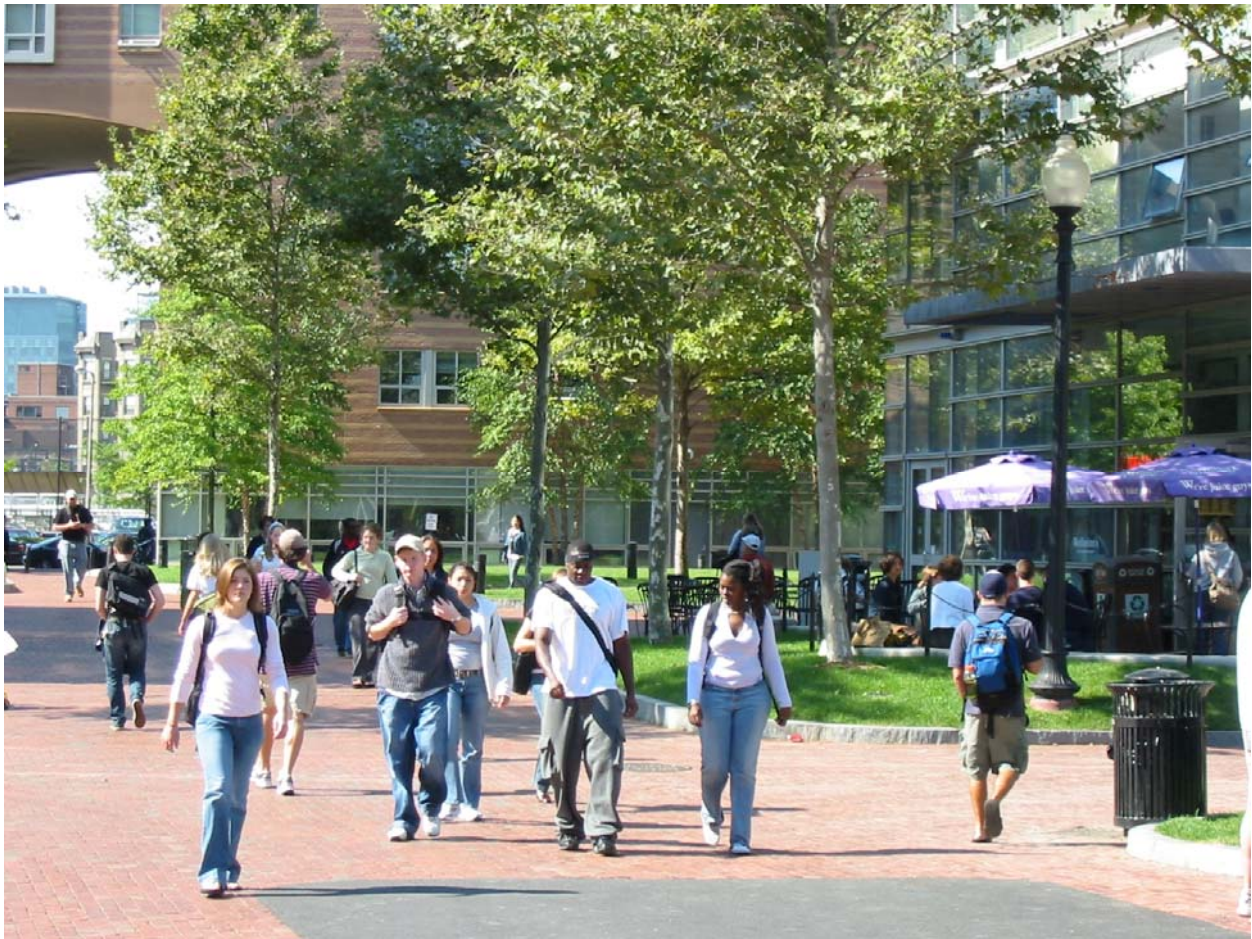


Figure 11: Northeastern University (Image Credit: David Bagnoli)

To meet such rising market demands, many campuses are turning to the creation of new mixed-use developments off campus in nearby areas. These projects may include retail, student or market-rate housing, academic space, commercial/office space, or other ‘back of house’ departments for the university. Benefits to the town include retail that adds to the local tax base, housing within walking distance of a major employer), additional parking, and a lively pedestrian-friendly destination. Proper balance of these uses may consequently reduce traffic congestion and pollution.

One example is the University of California, Davis. U-C Davis is working with a private partner to build a mixed-use community to provide affordable ownership housing opportunities for faculty and staff, and additional housing for students. The plan encompasses approximately 205 acres of university-owned land immediately west of the core campus and south of the Davis city limits. Existing residential neighborhoods border the site to the north.

The university's Board of Regents approved the project in November, 2006, and groundbreaking could be as early as fall 2007, with first occupancy as early as spring 2009. The first-phase plan of West Village calls for 312 to 343 homes for employees and apartment-style housing for 3,000 students. The project is oriented around a village square surrounded by commercial services that will serve as the heart of the community. The plan also creates a site for the Davis Center of the

Los Rios Community College District and a small day-care or pre-school facility. The plan includes a generous network of connected open spaces with bicycle and pedestrian paths. West Village is designed to contribute to the vitality of the university and the Davis communities, reduce regional traffic on roads and highways, and offer high quality and sustainable environmental design.

With prices about 30 percent below market in Davis, the West Village homes are seen as a major tool for recruiting and retaining top faculty and staff. Already, about 1,400 people have expressed interest. To maintain affordability over time, the price of homes at the time of resale is tied to the faculty salary index or cost-of-living index, whichever is greater. In this manner, future housing prices will more closely match the ability of future generations of faculty and staff to pay, rather than fluctuate with the local housing market, which has recently experienced double-digit annual percentage increases.

The campus engaged in an extensive community outreach process, including more than 30 public meetings and workshops and a Web site. The faculty and staff newspaper runs regular updates, and the communications office issues news releases. The university also prepared a video for use in the approval process.²¹

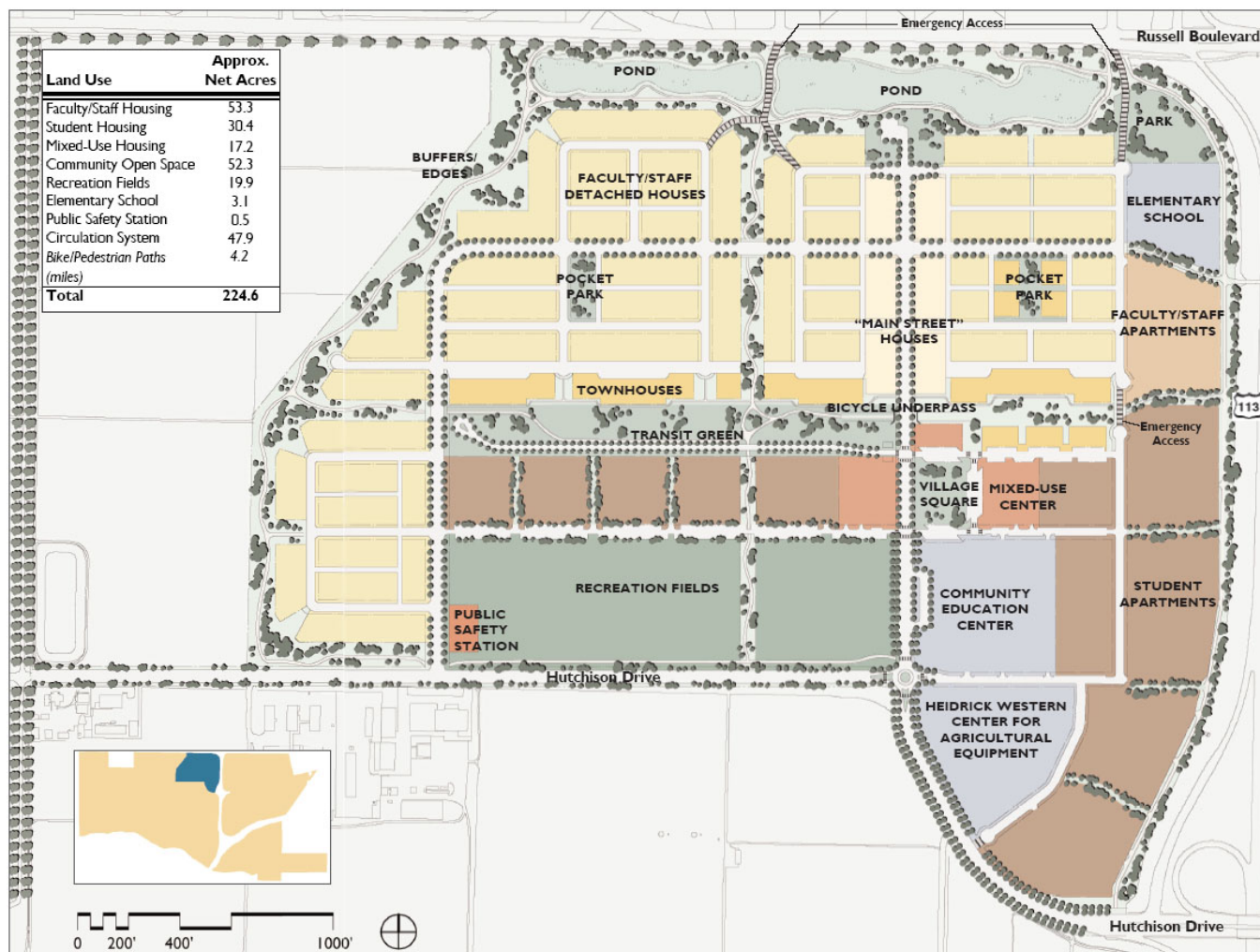


Figure 12: University of California, Davis, land use plan for the West Village project (Image Credit: UC Davis)

Matt to get permission from Julia Ann Easley

Financing options

Options abound for the financing of these new college town developments, including conventional campus financing as a means to maintain control, or, where private sector developers can build more efficiently, long term land leases. Additional options might consider mixed financing with other joint venture partners. In some cases, colleges have combined efforts to benefit both the institution and the municipality.

The University of Maryland, College Park has recently pursued new strategy to use private funds for traditional campus services such as housing. With this approach, the university establishes a separate nonprofit foundation to own the buildings and obtain tax-exempt financing. The university leases the land to the foundation. A developer is selected to construct the facility, and may be hired to manage the buildings, earning 5% - 6% of revenues. The foundation sends any excess profit back to the institution. After the lease expires, the school takes ownership of the property.

In the College Park example, the University is seeking a private sector developer to redevelop a 38 acre parcel on the eastern edge of campus. The project will create an exciting mixed-use environment comprised of office, retail, hotel/conference, residential, structured parking facilities, and will provide inviting open spaces and connectivity to the main campus and the City of College Park. A developers session hosted by the University to gauge interest in September 2006 attracted over 200 participants.²²



Figure 13: Sketch of the University of Maryland College Park East Campus development plan (Image Credit: University of Maryland) **Permission to use is not yet granted**

In the University of California, Davis example above, the university will retain ownership of the land, but it will enter into ground leases with a private developer who will design, finance and construct the on-site infrastructure and buildings, then sell units to faculty and staff, and rent housing to students.²³

Another example is the Ohio State University which, in 1995, collaborated with the City of Columbus and a number of neighborhood associations and civic groups to establish Campus Partners for Community Urban Redevelopment as a non-profit organization to develop a comprehensive revitalization plan for the neighborhoods around the university and to work with the university, city, and neighborhoods to implement improvements outlined in the plan. Working with a master developer for portions of the University District, Campus Partners successfully led the community based planning effort that resulted in the development of the Campus South Gateway project. The project includes a wide mix of uses, as well as:

- 250,000 square feet of community and university serving retail;
- 88,000 square feet of office space, the majority of which was occupied by the University;
- 190 market rate apartments;
- 1,200 space parking garage, and;
- Eight-screen cinema.

In order to accomplish such a broad scope of change, Ohio State sounded out financing and partnership strategies that would include support from multiple sources:

- The University's Board of Trustees authorized investment of \$20 million from the school's endowment to finance the land acquisition.
- The City of Columbus helped Campus Partners acquire the necessary land, committed \$6 million for infrastructure improvements, approved a tax-increment financing district to support the garage, and permitted Campus Partners to manage the design and construction of these improvements to meet city specifications.
- The State of Ohio appropriated \$4.5 million in capital funds to help subsidize the parking garage.
- Campus Partners received an allocation of \$35 million in federal New Markets Tax Credits to help finance the retail portion of the project.
- The University issued tax-exempt bonds to finance the housing, office space and parking garage.²⁴

Public institutions with cumbersome procurement processes and smaller schools with little internal design and construction management expertise may find it useful to collaborate in this way with the private sector. However, universities and colleges may want to exercise caution with this strategy as bond-rating agencies consider such projects to have a higher risk of default. The result may drive up the costs of borrowing, maintaining a higher bond rating, and, consequently, rents on the property.

Note, there had been two other examples here, Johns Hopkins and Dartmouth. They are dropped for two reasons: 1, they did not get to the financing issue, and 2, we have not heard back from either re: what we wrote.

3. Foster greater cooperation between the institution and the community

Many communities know that colleges and universities bring communities vibrancy and economic stability through their support of cultural, commercial and residential uses adjacent to campus. One need look no farther than Harvard University and its community of Cambridge centered about Harvard Square, or Dartmouth College and the quintessential New England town of Hanover, New Hampshire, to understand that the most beloved college towns have a direct, physical connection between the life of the campus and the life of the town. The growth of colleges and universities can provide many opportunities for faculty, students, staff, and citizens in the surrounding communities. This growth can also lead to many challenges for the institution and the campus. Meeting these challenges in an open, transparent, and collaborative way helps to foster good will between the colleges and universities and the surrounding community. A good place to start is by showing that growth can be beneficial to all stakeholders, especially when there is cooperation on how and where that growth occurs.

Overcoming Suspicion

As college and universities are using development projects to improve the physical connections to adjacent communities, opportunities and challenges arise. Given the manner many campuses have grown over the past 50 years, communities are often distrustful, if not outright fearful, of local institutions. Colleges and universities for their part are often faced with conveying a genuine interest in improving the life of their surrounding communities as a means to maintain a competitive edge while frequently having to defend a history of independent planning and growth. Overcoming such suspicions requires determination and commitment from the highest levels of an institution and may involve some of a school's most tangible assets, including both land and access to funds. An example of this dynamic is the University of St. Francis (USF) in Joliet, Ill. As reported in *University Business*, USF faced a skeptical community – one resident wondered why the university couldn't just move away and “leave the neighborhood alone” – as it began to plan for and implement an expansion agenda. Despite USF working closely with the community to develop expansion plans, it took support from residents to convince community skeptics that the university could and would respect community members' involvement in the expansion plans. One commitment that helped to build trust between the institution and the community was USF's commitment to grow in place and not move to land it owned on the outskirts of Joliet. Ultimately, USF worked closely with the neighborhood association, listened to the concerns of the community, and relied on citizen support for its expansion plans, which includes the doubling of its on campus residence halls to a total of 750 beds between 2006 and 2021.²⁵



Figure 14: Community residents and students at Jackson State University in Jackson, Mississippi at a community meeting discussing a road project that affected both campus and community in 2002. (Image Credit: Wes Harp)

With both town and gown's vested interests in seeing economically stable and culturally vibrant neighborhoods adjacent to local schools it is important to recognize the contributions each brings to the relationship. Colleges and universities quite often have procured land in adjacent communities and are, of necessity, often committed to betterment of the surrounding community. For their part cities and towns provide the framework within which a local institution can grow to meet market demands. Too often faced with the significant loss of substantial commercial and middle-class residential tax base to the suburbs, these cities and towns can benefit from increased interest and investment by local schools.

Following a concerted effort to capitalize on such assets as a physical place in the community, economic development opportunities, and its historic mission as an educational institution, Trinity College in Hartford, Connecticut has increased enrollment by 77 percent over a decade earlier. In 1996, Trinity set out to be a partner in revitalizing the neighborhoods around the college, creating a vibrant, viable, and safe community that would take advantage of existing educational, health center, and economic development resources. One of the signature projects has been the Learning Corridor, a 16 acre site adjacent to the campus. This site includes a magnet middle school, high school level resource centers, a Boys and Girls Club, an arts center, and an early childhood education center. This is just one of a number of initiatives whereby Trinity engages with the local community to advance not only its own mission of academic excellence and civic engagement, but to partner with the surrounding community to grow opportunities from within.²⁶ Such efforts point the way toward how colleges and universities can become an effective catalyst for revitalization that meets a community's long term planning needs. Thus colleges and universities, inextricably linked to their surroundings, may provide a major impetus for growth otherwise unavailable to a town or city.

Noting that the consequences and the need to solve problems that arise due to population growth such as increased traffic volume, the provision of services, and the need for forward looking strategies to accommodate growth, the University of Maryland teamed with the City of College Park to address transportation and development challenges that have accompanied expansion and economic growth. Collaboration to address this issue occurred through the College Park City-University Partnership. City and University officials understood that the US Route 1 corridor, the main gateway into the community, provided the best opportunity for accommodating new expansion, yet the street design and land use codes did not allow a development pattern consistent with minimizing automobile traffic. Through a series of initiatives, including technical assistance provided by the US EPA, the Partnership worked with the County and other stakeholders to develop and apply a transportation demand management study for the corridor.²⁷

A Non-Traditional Growth Model

As institutions venture “off-campus” they must recognize that unlike traditional campus growth the development of off-campus cultural, commercial and residential space may not align with the traditional model for growth met by the office of a university architect or facilities office. Such challenges have been met by a partnership with the private development community or in some cases a school's sanctioned real estate office. Such an approach ensures that the goals of the institution are being met while being kept independent of 501(c) restrictions that might preclude profit-driven, mixed-use development.

Off campus improvements such as new construction on infill sites, brownfields, and vacant or underutilized properties, rehabilitation of existing structures, and the complementary expansion of a local economy can yield invaluable results in college towns or precincts. These opportunities, however, are often unachievable because of the challenges associated with land acquisition and the securing of appropriate investment resources. As place based institutions, with long term views, the ability to acquire both land and financing to develop it, colleges and universities have much to offer communities interested in seeing these types of properties redeveloped. In some cases though, institutions may not be staffed to work through some of the challenges that typically accompany redevelopment of these sites. Colleges and universities should look to partner with organizations that do this well. Numerous experienced brownfield and infill developers exist across the country. As a first step, institutions interested in initiating an infill project should identify the developers of excellent similar projects on or near other campuses and begin see about partnering with those firms. The partnership will allow the institution to concentrate on its core mission, allow the developer to do what it does best, and share both the risks and rewards inherent in such projects.

In addition to partnering with experienced developers of infill sites, colleges and universities should try to break out of the traditional financing model and tap into the breadth of its alumni and other supporters by introducing investment opportunities for small investors. The introduction of non traditional funding sources as well as the provision of a built-in market, institutions bring to the table a ready mix of success that can provide for such uses as incubator office or laboratory space, as well as residential options for faculty, staff and graduate students, topped off with a healthy balance of retail. This in turn can provide the community with a more attractive quality of life for non-institutional workers and residents and, perhaps most important, a vastly improved tax base.

4. Contribute to a healthy and sustainable campus

A sustainability focus requires that we as a society focus simultaneously on systematic solution for building healthy, economically strong, and secure thriving communities.” “Sustainability is not one more issue that higher education must deal with – like computer literacy. It really is central to an institution’s mission and function.

– Tony Cortese, *Second Nature*²⁸

Adopting smart growth strategies can create new neighborhoods and maintain existing ones that are attractive, convenient, safe and healthy. Smart growth strategies can also help to improve the “environmental footprint” of a campus.

Colleges and universities across North America have significant impact on the built and natural environment. Many are growing in efficient ways that have lessens growth’s environmental impact; others are working to address environmental issues associated with energy, transportation, waste management, and relationships with local communities. In addition to adopting smart growth strategies in planning and siting development projects, yielding better environmental outcomes by reusing land and new vehicle trip generation, colleges and universities can also seek to pursue site specific strategies to increase sustainability on and off campus. Sustainable practices not only provide beneficial environmental outcomes, they can be cost efficient, and, in an increasingly competitive recruiting environment, colleges and universities are finding that campus sustainability initiatives can provide an edge.²⁹

According to *Second Nature*, creating a healthy and environmentally sustainable campus requires a systematic approach that integrates sustainability into every aspect of campus life: addressing “How, When, Where of campus growth”; identifying compliance requirements and implementation of sustainable practices; and realizing fiscal benefits.³⁰ These components already exist individually, but schools should do more to take a holistic view of their campus, and work together to grow in a more sustainable manner and improve their overall environmental performance. Achieving sustainability requires changes in policy and practices at all levels of the University community, and requires action from individual students, staff and faculty members through to the administrative level.



Figure 15: The second Smart and Sustainable Campuses Conference held at the University of Maryland in April 2007 brought together 350 participants representing nearly 160 schools to discuss innovative ways to improve environmental performance on campuses across the country. (Image Credit: NACUBO)

Colleges and universities can begin to “green” their campuses and take a leadership role among their peers by implementing a number of different initiatives, including:

- Using land in a way that allows for transportation choice, balancing the demands of pedestrians, cyclists, and vehicles in transportation management
- Incorporating environmental considerations in the planning and design decision-making process of proposed projects, programs, and activities, including property acquisition, transfer, and leasing
- Conserving, protecting, restoring, and enhancing the natural and cultural landscapes that contribute to a balanced comprehensive open space system on campus
- Preserving historically significant resources and commit to a comprehensive understanding of its place in the broader cultural/historical fabric of the region
- Protecting and improving indoor and outdoor air quality and minimize atmospheric pollution
- Minimizing water consumption through efficient resource use and the implementation of conservation programs and initiatives.
- Reducing the quantity of wastewater it produces, improve wastewater quality, and reduce the quantity and improve the quality of storm water runoff that drains from outdoor surfaces

- Reducing energy consumption, implement energy conservation programs, and promote energy efficiency
- Implementing pollution prevention practices or waste minimization programs to reduce the amount of hazardous and solid waste generated on campus.
- Purchasing products that consider environmental impacts in addition to quality and cost
- Promoting environmental awareness, education and training for the University community regarding their responsibilities as citizens
- Measuring and monitoring progress in achieving the environmental principles, goals, and objectives

Box

University of New Hampshire Earns First EPA ENERGY STAR Rating for Dormitories:

Three residence halls at University of New Hampshire have received the U.S. EPA's ENERGY STAR rating. According to the U.S. EPA, the residence halls are the first residence halls to receive this rating. Recent extensive upgrades in these residence halls, part of a campus-wide Climate Education Initiative to conserve energy and lower greenhouse gas emissions, are saving UNH nearly \$80,000 per year compared to an average dorm in the United States.³¹

Box ends

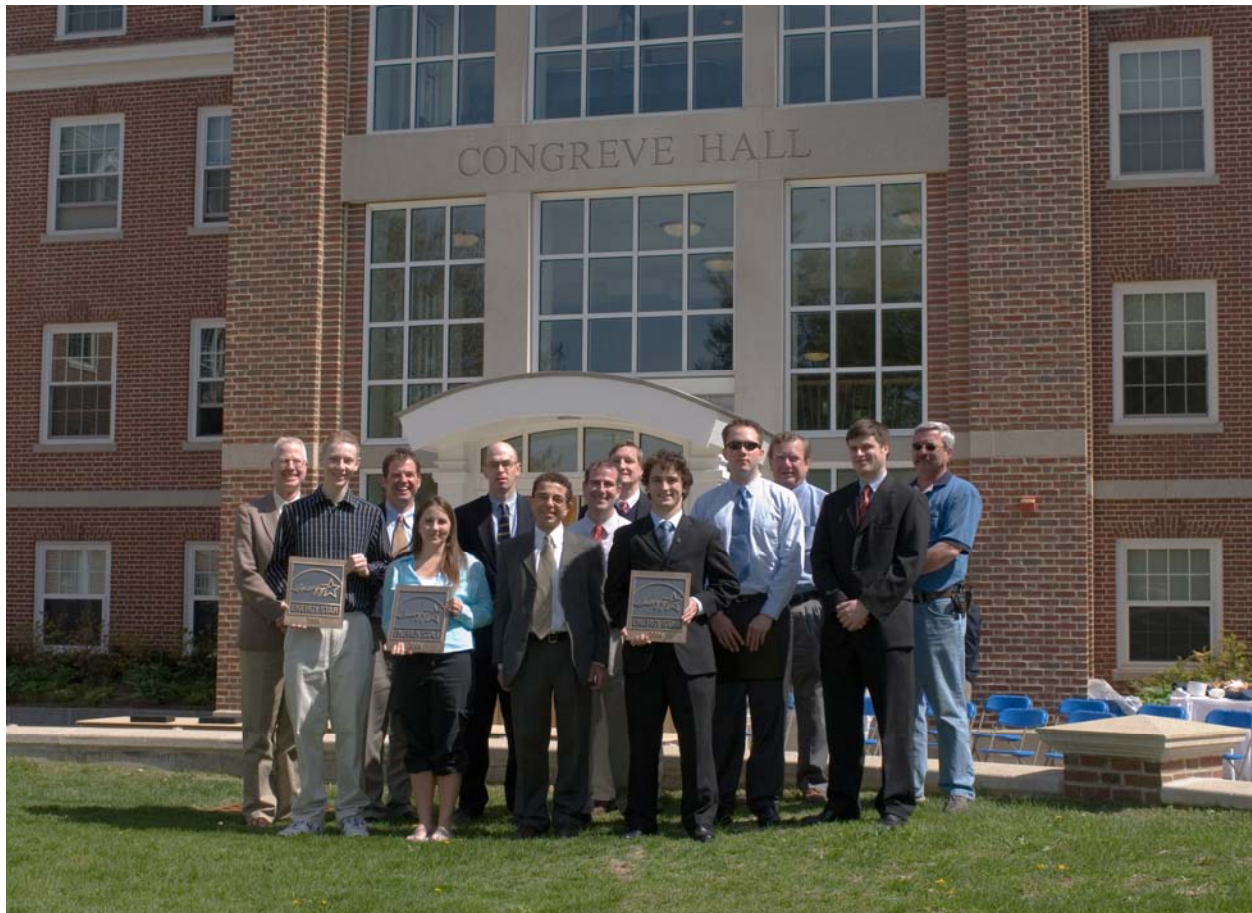


Figure 15: University of New Hampshire received an Energy Star Award from the U.S. EPA in 2006 (Image Credit: University of New Hampshire)

Colleges and universities have taken steps to minimize their environmental footprint: from tackling energy efficiency to reducing green house gas emissions to developing their campuses in a “smart and sustainable” manner. Contributing to a healthy environment ensures colleges and universities become a leader on sustainability by increasing their competitive edge with other colleges and universities on the social, economic, and environmental impacts among students, faculty, and staff who rank their top choices for recruitment and retention. It also increases potential profit by reducing the environmental impacts from operations and maintenance budget. Examples of these activities include: maximizing environmental efficiency, conserving natural resources, extending life cycles of buildings and equipment; avoiding potential fines and penalties; and improving public health.

IV. What do we do now?

Many campuses go through strategic planning processes which typically include work groups for academics, research, student life/campus life, finance, outreach and service, and campus facilities. Strategic planning efforts in these areas can and should evolve into a vision for future campus development. As discussed above, while campus development is about accommodating growth in new or renovated facilities, the resulting development pattern can have an impact across campus functions. In following the path towards a new development pattern – one that serves multiple goals – colleges and universities should use as broad a vision as possible. A strategic planning process often provides a start for such a vision.

Once a campus understands the rationale for developing in a compact sustainable manner, college and university leaders chart a course and provide the resources for how they will move towards better development patterns on and off campus. That said, what are the steps for implementation and who should be involved to ensure acceptance of a project and the support it needs to ensure success? Here are some steps to consider:

1. **Make an environmental assessment and survey the current situation** – Ask the question, will the current plan and structure allow the university to meet its mission?;
2. **Understand the historic growth** of students, faculty, staff, and funding to have a better understanding of future needs;
3. **Communicate the need for change** in the status quo – a better development pattern means a better institution;
4. **Establish a broad coalition to help guide change** including the board of trustees, students, faculty, staff from all departments, community members, alumni, etc;
5. **Develop or revise the vision for the institution**; make sure it's an accurate reflection of where the institution wants to go; constantly communicate that vision;
6. **Create a strategic plan that can be implemented**; include the academic mission and its physical manifestation, the campus.
7. **Write or revise the master plan** based on the strategic plan and vision;
8. **Engage the local leaders** on the interconnection between campus and the community;
9. **Help ensure success** by implementing catalytic projects first; build on successes.³²

Beyond establishing the process for creating and implementing a development process on and off campus, decisions must be made with a broader focus so that impacts from the entire community can be assessed. Assets and resources such as students, faculty and community residents can contribute to direction of a smart and Sustainable plan. Keeping the best interests of these groups in mind will help in decision making and prioritization of strategies that can be used to enhance campus and the development process.

V. Profiles

Waiting for response from UCincinnati

Planning for the Future: Place Making to Inspire A New Generation of On and Off Campus Interaction

Institution: University of Cincinnati

Location: Cincinnati, Ohio

Type of Institution: Large Urban Public

Total Student Enrollment: 35,000 (Fall 2006)

Tools and Resources: <http://www.magazine.uc.edu/0798/contents.htm>

Administrators at The University of Cincinnati (UC) understand that in order to flourish in the 21st century, colleges and universities must take bold steps to define themselves as innovators, leaders and trailblazers. To be recognized as exceptional is a goal the University has had throughout its history, however, in the past five years the school has a focused investment into building a campus that draws students to live on campus. School administrators realized that to make their campus more attractive to students, staff and faculty, there was a need to focus efforts on the creation of a place. In other words, buildings and open space need to interact in a way that frame public areas and invite people to use them. On campus this is done by creating pedestrian corridors, bringing buildings to the street, and mixing land uses so that activity can occur throughout the day. Yet, improving the physical structure of campus is only half of the puzzle for a school like University of Cincinnati. As with many public research oriented schools, another motivating factor is the academic status of its programs. Increasing entrance standards and making coursework more rigorous is a theme that administrators have been seeking for years. While many schools address these factors separately, Cincinnati has made it a goal to do it simultaneous with the physical improvement of the campus.

The event that sparked the rejuvenation of the University of Cincinnati campus was the culmination of campus built-out to match academic achievement. First, academic goals were articulated in UC/21, a strategic plan for charting the academic course on the university. Secondly, on-campus development has recently taken shape with the implementation of the UC Campus Master Plan. This multi-year effort has been nationally recognized for articulating a strategy for redefining the university through renovating buildings, constructing mixed-use structures and establishing the Main Street district of campus where students, staff and faculty can gather, work and interact. While it was important for the campus to control and enhance its own resources, it was clear that improvements right off campus were also necessary to complete the transformation.

The neighborhoods surrounding campus are home to many of the city's great institutions and parks, but have not been connected directly to the university. The University and members of the University Consortium that include some of the areas largest employers realized that a strong and vital neighborhood was essential for preserving and bolstering the strength of the existing assets like the campus of the university. The University worked with a local nonprofits and neighborhood associations to assess the opportunities for investment and improvements. The

results have come in the form of public-private investment, which the university has provided some of the development costs, primarily in the form of low-interest loans and gap financing. Products range from housing at all income levels, especially for students who wish to live near campus to space for businesses in new and renovated buildings. New mixed-use development has been constructed opposite to the University on Calhoun Street in the Clifton Heights neighborhood. Included uses are restaurants as well as fashion and specialty shops, international food retail, salons, and retail for books, sporting goods, furniture and home accessories as well as cafes and bistros; all ideal uses to serve the nexus of college students and the neighborhood population surrounding campus. These are just examples of the investment spurred through the strategic master planning of the university. With each successive project, new investment has transformed additional neighborhoods. To date, six neighborhoods surrounding the campus have been positively influenced by this inertia. To this end, since all of the partners are focused on a building a better community, their collaboration has shown that creating places that people desire enhances both the university and the community it serves.



Revitalizing Notre Dame Avenue: A Founder's Vision

Waiting for a response from ND

Institution: University of Notre Dame College Town

Location: South Bend, IN

Type of Institution: Large Private

Total Student Enrollment: 11,500 (Fall 2006)

Tools and Resources: <http://architect.nd.edu/> and

<http://www.asg-architects.com/expertise/campusPlanning/und/index.htm>

Notre Dame Avenue provides a ceremonial approach to the Golden Dome of the Main Building and was originally envisioned as a grand avenue flanked by a double row of tightly spaced trees. Over the years the urban fabric along the Avenue has degraded. Rental properties and demolition by neglect created many vacant parcels and a sense of insecurity. The University recently purchased a number of these vacant parcels and has since been acting as developer to infill homes, restoring the visual quality of this historic axis.

The “University of Notre Dame College Town Feasibility Study” is a revitalization plan for 82 acres of the surrounding community adjacent to the campus in South Bend, Indiana. The plan advocates affordable housing options and the creation of a pedestrian-friendly environment. The University provides home ownership incentives to encourage faculty and staff to live within walking distance of the campus.

The Study includes a master plan as well as urban and architectural design guidelines shaping the development of Notre Dame Avenue and the Sorinville neighborhood. The revitalization includes residential, retail, dining, and commercial developments, as well as vehicular and pedestrian connections linking the campus to the neighborhood. Open spaces are recommended to further reinforce the connection and to create an identifiable figural place within the city fabric.

The Architectural Guidelines for Notre Dame Avenue will aid the design, development, and residential character of new houses to be built on the Avenue. The Guidelines discuss placement of the house on its lot, size and massing of the house, the selection of architectural elements, details, color selection and landscape choices. All of these efforts aim to restore the original vision of Father Edward Sorin, the University's founder, as a grand, processional approach to the University while giving the faculty a welcoming community in which to live nearby.





Reaping the Benefits of Investing in Good Neighbor Relations

Institution: University of Pennsylvania

Location: Philadelphia, PA

Type of Institution: Large Urban Private

Total Student Enrollment: 23,704 (Fall 2005)

Tools and Resources: <http://www.upenn.edu/ccp/index.shtml>

Over the course of many years, the University of Pennsylvania had separated itself from its neighbors in West Philadelphia. As with many institutions in similar situations, the Penn recognized a need to make changes or contend with eroding neighborhood conditions and impacts upon its own vitality. Disinvestment in the neighborhood, blighted buildings, and decreasing property values collectively were creating a perception that the university was not safe for students, faculty, and staff.

Motivated to improve this perception and invest in the surrounding neighborhood, leaders of the university decided that a wholesale initiative to use its knowledge, resources, and students to improve the physical and psychological make-up of West Philadelphia would not only help revitalize the neighborhood, but would also allow the university to grow and share with its neighbors the opportunities that come along with that growth. Beginning in the mid-1990s the university initiated a revitalization strategy through applied learning activities and direct investment to make West Philadelphia a better place. Penn's leaders also understood that in order to be effective, they had to present a comprehensive strategy for addressing revitalization and reinvestment in West Philadelphia. This process had to be open, transparent, and yield results. The strategy, called the West Philadelphia Initiative (WPI), included strong stakeholder involvement, participation from the highest levels of the university's leadership, and a commitment to addressing issues as they arose. Results have been strong and quantifiable. WPI has yielded 350,000 square feet of new retail space, more than 500 new homeowners, the addition of 500 new apartments in the area, and more than \$300 million in private investment since the mid-1990s.³³

In addition to the WPI, since 1997 Penn has been part of the University City District (UCD), the Business Improvement District in Penn neighborhood. UCD is a non-profit community improvement association run by a coalition of 11 partner organizations. Within its 2.2 square-mile service area, its mission is to build "effective partnerships to maintain a clean and safe environment and to promote, plan, and advocate for University City's diverse, urban community."³⁴ Each of the partner organizations support the UCD's operations. UCD employs 40 "safety ambassadors," maintains open space, is a partner in providing transit service through the district, manages planning and capital improvement initiatives, and provides marketing and promotional support for activities in the district.³⁵ Results have included a decrease in crime and an increase in population as well as an increase in tax revenues as new business locates in the area.



*Figure 21: Revitalization in the University City District near the University of Pennsylvania
(Image Credit: David Bagnoli)*



*Figure 22: Revitalization in the University City District near the University of Pennsylvania
(Image Credit: David Bagnoli)*

The university and private developers invested hundreds of millions of dollars over the past decade in security, retail, schools, the local housing market and what Penn refers to as "economic inclusion" -- making sure the community and minority companies share in the success. The results have been monumental. Penn has become a model for campus-community relations and return on investment. The mixed-use transitions between the campus and West Philadelphia include a range of commercial and housing options as well as increased services. Penn is now the beneficiary of increased national rankings and applications for admissions – both harbinger of success.

On campus, university buildings have been re-faced to open out toward the streets and West Philadelphia, and all new buildings have ample windows facing the street, making the school appear welcoming. Penn has provided additional lighting on the streets for safety. As these efforts were gaining momentum, the university worked on formalizing its focus on campus planning and articulating its commitment to the community. In 2001 the University's "Development Plan" was released, and updated in 2006, illustrating how the campus would physically integrate with West Philadelphia and extend east toward Center City. The goals of the plan include strengthening the identity of the pedestrian core as well as upgrading the building stock and infrastructure on campus. The plan calls for creating a coherent identity throughout campus while considering the needs of the community by stabilizing residential housing stock and creating more student housing options on campus. This balance will also be enhanced by fostering mixed-use development achieved through public private partnerships.³⁶

Investments in a downtown satellite campus supports multiple community goals

Institution: University System of Maryland at Hagerstown

Location: Hagerstown, MD

Type of Institution: Regional Higher Education Center

Total Student Enrollment: 400 (Fall 2005)

Tools and Resources: <http://hagerstown.usmd.edu/renovation.aspx>

Colleges and universities often accommodate growth by building satellite campuses. In other instances, new campuses serve institutional needs or are built for educational opportunities beyond traditional campus experiences. Colleges and universities should ensure that the development of new campuses serve multiple needs of their constituents – students, faculty, and staff – as well as the surrounding community by providing transportation choice, creating vibrant places, mixing uses, and involving numerous stakeholders in development decision making. When the University System of Maryland decided to open a regional higher education center in the western Maryland city of Hagerstown, the initial plan was to place the campus on the outskirts of town near a major interstate highway. But when an abandoned hotel – Baldwin House – and department store in the heart of the city was offered as an alternative location, controversy arose over which location was in the long-term best interests of both the university and the city. Ultimately, the decision was made by then-Maryland Governor Parris Glendening to renovate the building downtown rather than build outside of town. The City of Hagerstown sold the building to the State for \$1, and by the fall of 2005, the Hagerstown campus enrolled approximately 400 students in the downtown site. The center is funded through state budget appropriations to the University System of Maryland.

Box

I've seen in the last 16 months [since January 2005] an energy for redeveloping downtown that I've never witnessed before. The university center is a big part of that. I was initially opposed to the downtown location. Now that I'm here, and seeing what is happening, I see the wisdom.

–David Warner III, Executive Director, University System of Maryland at Hagerstown

End Box

By siting the new education center in downtown Hagerstown, more students began coming into downtown in the afternoon and evenings. As a result, new businesses began locating downtown and foot traffic increased. The existing parking garage that had been empty at night was soon put to further use. An adjacent outdoor courtyard created a location for day and evening community events, establishing the downtown as a destination. The decision to site the camps in downtown Hagerstown has caused University officials – from the Chancellor and university presidents down to facilities' managers – to become more aware of the impact their facilities have on surrounding communities and revitalization efforts. Similarly, City officials – and the public – became more aware of the importance of placing or keeping key institutions downtown rather than on the fringe. Well-thought-through decisions provide both tangible and intangible benefits.

Lessons Learned

- Site selection for a university campus is important beyond the interests of the university itself;

- In selecting a site, be clear about the motives behind competing agendas.
- There is no substitute for strong leadership from the top;
- Direct capital costs should not be the only consideration.
- The right site selection can have multiple and lasting benefits.³⁷



Figure 23: Downtown Hagerstown showing the site of the University System of Maryland at Hagerstown

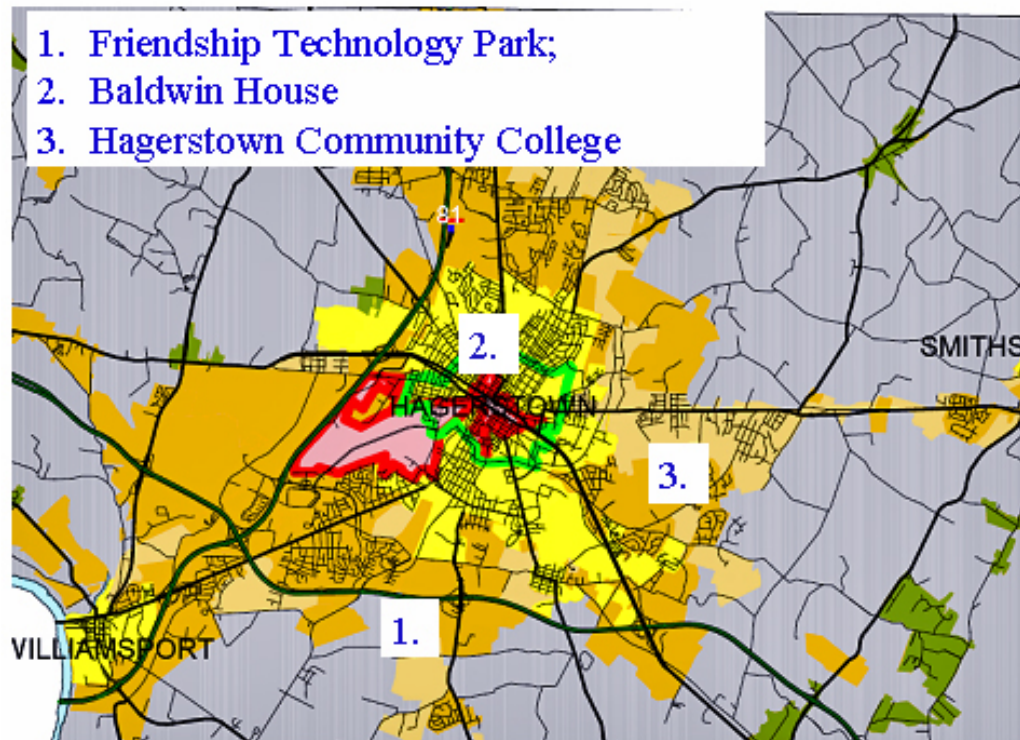


Figure 24: Map of the Hagerstown, Maryland, area showing three possible sites for the new University System of Maryland at Hagerstown. Maryland chose site 2., Baldwin House, in downtown Hagerstown rather than the other two sites outside of downtown.

Producing What You Need: A Sustainable Campus that Works

Institution: Berea College

Location: Berea, Kentucky

Type of Institution: Small Rural Private

Total Student Enrollment: 1,514 (Fall 2006)

Tools and Resources: <http://www.berea.edu/buildings/ecovillage/default.asp>

Berea College was founded in 1855 as the first interracial and coeducational college in the South. The College provides a high quality, liberal arts and professional education to students from Appalachia and beyond. The College promotes understanding and kinship among all people, service to communities in the region, and sustainable living practices, which set an example of new ways to conserve our limited natural resources. Based on this philosophy, administrators and college leaders believe that the campus and community should be integrated, with specific attention paid to resources the school uses for energy consumption and other aspects affecting the college's ecological footprint. Decisions are made with the understanding that goals of the school should incorporate the confluence of ecology, economics, society, and technology. Berea College is motivated to be a sustainable campus both in policy and in action. As such, the entire collegiate experience for students is designed as a holistic experience. All students are required to work for the school at least 10 hours per week. Doing so, they gain an appreciation for the dignity of all types of labor, earn money for their room, board, and books, and provide needed assistance to the College's operations. .

The College's strategic plan called "*Being and Becoming: Berea College in the 21 st Century*" focuses on key operational and academic issues. Growing out of the strategic plan, the College reviewed institutional policies and practices to ensure environmental responsibility and sustainability in all its operations. This included adopting a Land Use Plan addressing the College's holdings of campus, forest, and farmlands. It also included a stringent Energy Master Plan to significantly reduce energy consumption as well as design standards with minimal ecological impact for building construction and renovations. Some of the key elements include renovating buildings to increase efficiency energy and water use, while improving comfort and functionality; construction of student residences and teaching facilities; campus operations such as heating and lighting systems, recycling, purchasing practices, grounds maintenance, and sustainable management of the College farms and forest; and ecological design that encourages the participation of all members of the community in the design process. With this commitment to sustainability and holistic ecological function of the campus, the College established a Campus Environmental Policy Committee. The Committee monitors the progress of Berea College toward ecological sustainability--- the ability to meet current needs without degrading the natural systems and resources required to meet future needs--- and recommends policies and actions that will promote progress toward ecological sustainability.

Broadening the conversation from sustainability to smart growth, the College notes that its practices regarding master planning, design and land consumption and management can and should be hand-in-hand with practices for ecological and environmental stewardship. For instance, Berea its land holdings to retain green space, increase recreational opportunities, protect wildlife habitat and stream corridors, and encourage conservation of "production" land

use (agriculture, wildlife, forestry, etc.). Berea College is committed to land use policies that promote no net loss of ecological function where possible and pursues, to the greatest practical extent, placement of permanent conservation easements on portions of farm and forest land.

To institutionalize the commitment to land use conservation and sustainability, the College offers a Sustainability and Environmental Studies program in which students can focus on working with staff and faculty to develop several directives on the topic. These directives include Campus Sustainability Indicators, the Green Steps Program, Sustainability Initiatives and the Local Food Initiatives. For instance, the Campus Sustainability Indicators lists 24 areas in which the college identifies opportunities for improvement in energy, water, materials, and environmental literacy.

The Green Steps Program outlines areas to affect and improve the physical orientation of the campus. This relates to the campus master plan and how students, faculty, and staff will be using living space, classrooms, and other gathering areas.

One of the major hallmarks of the Berea model is that students can live in an Ecovillage, which provides them with the experience of understanding how their energy and material consumption affects ecology and the environment of campus and the broader community. The 32 Ecovillage apartments and Child Development Lab are comfortable living and learning spaces that provide education through living. A Sustainability House seeks carbon neutrality as a home for up to six Berea students assisting in the village's sustainability efforts. Through programming, building design, and gardening, residents learn sustainable practices both indoors and out. Residents recycle and select projects from a menu of options, which includes composting, carpooling, gardening, making green cleaning supplies, facilitating educational programs, and serving as a member of the Ecovillage Association and children learn from an early age, the value of living a sustainable life.

Berea is an example of how an institution can offer its students a holistic learning and living experience that attempts to improve the environmental footprint of a campus. The residents of the Ecovillage and student residence halls provide lessons and connections between how a holistic education can be achieved and a college's relationship to the community and its impacts upon the surrounding environment.



Figure 24: Berea College's Ecovillage learning complex

Accommodating growth through revitalization: University of Kentucky College Town

Waiting for a response from UK

Institution: University of Kentucky

Location: Lexington, KY

Type of Institution: Large Public

Total Student Enrollment: 26,260 (Fall 2003)

Tools and Resources:

http://www.uky.edu/EVPFA/Facilities/FacilitiesPlanningUnit/Campus_Plan_Update/ and

<http://www.asg-architects.com/expertise/townPlanning/lexington/index.htm>

The “University of Kentucky College Town Feasibility Study” is a revitalization plan for a 77 acre neighborhood in Lexington, Kentucky. The site is advantageously located between the downtown core and a large land-grant institution. The urban design strives to revitalize this area after years of abandonment and/or uncontrolled infill retail. The goal is to improve the quality of life for the city's residents and the university community by providing an area that is a vibrant place where students, faculty, and residents will meet, live, work, shop, play, dine and walk.

To show quick results, the institution implemented recommendations which included streetscape improvements such as tree planting and sidewalk repair. To tackle bigger issues, the University hired specialized consultant groups to examine the potential for increased retail and residential development. Based on recommendations from market data and analysis, the team prepared schemes for eight multi-family residential projects to be developed on vacant or underutilized lots.

Substantive research on university-community partnerships and employer-assisted home ownership initiatives led to a recommendation for a program to foster home ownership. The university provided a housing ownership stipend to those who would relinquish their parking permits near the campus. This program reduced traffic, created more pedestrian activity round-the-clock, led developers to be less speculative about residential development, and advanced a stronger sense of community through ownership.

This urban design initiative generated substantial interest allowing the city to move forward with their goals. The city issued requests for proposals to developers for housing projects on city-owned land, and the university is building projects within the study area as proposed by the design. Shared goals, such as structured parking for the neighborhood's institutions and retail, increased retail development, and increased home ownership is creating a foundation for revitalization and genuine community. The public and private partnership has resulted in progressive development which is positive and complementary to both entities.

To-date \$65 million have been invested in the study area, and an additional \$85 million is proposed for new building projects.

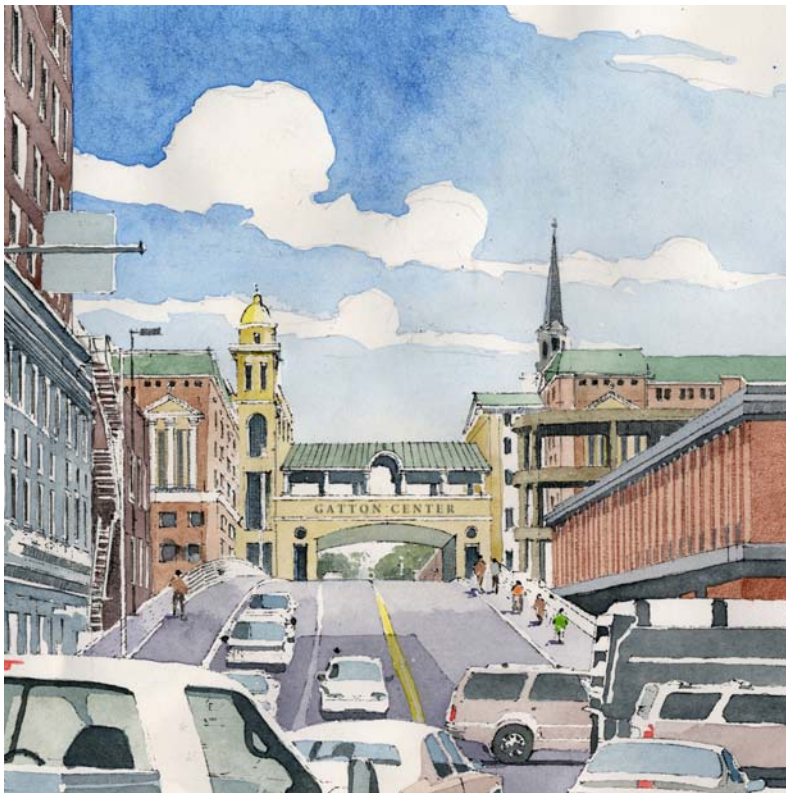


Figure ??: ASG images. (Waiting for a response from UKY)

Growing Green: Master Planning for an Enhanced Campus Footprint

Waiting to hear from Lewis and Clark

Institution: Lewis and Clark College

Location: Portland, OR

Type of Institution: Small Urban Private

Total Student Enrollment: 3,433

Tools & Resources: <http://www.lclark.edu/dept/public/howardpressroom.html>

Lewis and Clark College has made a commitment to integrate environmentally responsible development practices into its construction program and campus master planning. Motivation for this decision comes from recognizing the existing commitment to sustainability and smart growth that is prevalent across the City of Portland. Furthermore, campus administrators and decision makers understand the beneficial position of being a leader and model for campus planning. Their actions and directives can motivate other campuses around Portland, the northwest and throughout the country to invest their schools to achieve environmental results. President Tom Hochstettler believes “that sustainable development concepts, applied to the design, construction, operation, renovation, and demolition of our buildings and landscape, can enhance the economic well being and environmental health of the College.” (LC website, downloaded 5-24-06) “Lewis & Clark’s commitment to sustainability is not just talk; we model our sustainable efforts to the community at large,” said President Tom Hochstettler. “We are proud to put our ‘green’ face forward.”

Lewis and Clark College has established a thorough array of program and initiatives that focus on campus planning and construction that implements goals and objectives of smart growth through decisions it makes about how the campus is going to function – both internally and as it projects itself out to the community around it. These areas of investment include: green building, campus master planning and sustainable development. The school is committed to green building and green architecture which implies a development methodology that stresses solving the needs of the present, without diminishing the resources necessary to solve the needs of the future. In building construction, this is normally accomplished by creating architecture that minimizes use of natural resources; energy; toxic materials and waste; and emissions of pollutants and maximize the use of recycled materials.

Lewis & Clark College received a LEED Gold Certification for the John R. Howard Hall for environmentally friendly design by the U.S. Green Building Council. “The systems, materials and construction practices that went into Howard Hall make it a model of sustainable design and operation. In very practical ways, Howard Hall does not just sustain the environment—it transforms it. What it does for our natural environment, it also does for Lewis & Clark’s academic environment.” As of Spring 2005, Howard Hall joined approximately 40 other comparably rated buildings across the country. These building standards, guided by the U.S. Green Building Council, are becoming a standard that colleges and universities understand that green buildings can help the bottom line and promote the creation of livable, sustainable communities. J.R. Howard Hall is expected to consume 40 percent less energy than a typical

building of the same size, thanks in large part to raised-floor displacement ventilation and night cooling systems. The elevator operates with 40 percent less electricity than standard elevators and does not use hydraulic fluid. The new building's interiors feature exposed steel, unpainted concrete blocks, and polished concrete floors. The new building has a smaller footprint than the structures it replaced, but it brings a net gain of 25 offices and 14 classrooms to the campus. Contractors recycled more than 95 percent of construction debris and used low-toxicity adhesives, carpet and composite wood products throughout the building. The building design and construction was accomplished through a campus-wide initiative that coalesced with three applied learning classes in environmental studies to educate the campus and community about the benefits of green building.

While this project has been a specific catalyst for campus sustainability, it fits into the broad sustainability framework established on campus in the form of a campus master plan (see picture). The Master Plan has three objectives: The accommodation of a wide array of facilities that will enhance the academic, social, and residential resources of the campus; enrichment and restoration of Lewis & Clark's unique open space environment; and spatial integration and ordering of the disparate areas of the campus. As the campus grows and expands, college planners expects that an array of infill development, shifting automobile movement and parking to the periphery and siting buildings in a manner to create places, these objectives can be achieved.



Images courtesy of Lewis and Clark College, KMN to get permission

Becoming Socially and Physically Embedded: Arizona State University's Downtown Campus

Institution: Arizona State University

Location: Phoenix, AZ (Downtown Campus); Tempe, AZ (Main Campus)

Type of Institution: Large Urban Public

Enrollment: 6,200 (Fall 2006 for the Downtown Campus), 15,000 (projected Fall 2020)

Tools and Resources: <http://www.asu.edu/downtownphoenix/>

Growth in the Southwest has kept at a steady pace for the past two decades, culminating with a burgeoning city in Phoenix and a state population, which grew by 60% from 1990 to 2005 (US Census). The addition of 2.3 million people in that timeframe has spurred construction of towns and cities as well as increased the need for services. Demand for higher education added to the complexity for accommodating growth in the state. Arizona State University (ASU), located in Tempe, just outside of Phoenix currently has over 50,000 students. While university administrators realized that this main campus would continue to flourish and add students, they also understood an opportunity that existed in another location – downtown Phoenix.

In 2004, university leaders began talking through the logistics of planning and developing a downtown campus. While not completely new to the urban sites (ASU had one building downtown, in which to expand upon), much work needed to go into preparing the downtown for growth. Being downtown would help ASU connect both socially and physically with city residents and downtown workers. This would enable better coordination and interaction between community partners and faculty, staff and students. Establishing a new campus would require a master plan and a delicate balance between existing and new building stock.

The most important event for the development of ASU's Downtown Campus was the citizens of the City of Phoenix approving a \$223 million bond initiative in March, 2006. This bond provided funding for land acquisition and construction of ASU's campus – a state institution. The August 2006 campus opening was the culmination of the Herculean effort required to bring the campus into being. The Downtown Campus will provide urban amenities that are not currently available at to students on the Tempe campus. Located in the area bounded by Van Buren and Filmore, 1st Avenue and Third Street in Phoenix, students will be able to interact with downtown employers and vice versa. This campus is adaptively reusing existing buildings combined with new construction. An elaborate conceptualization and master planning process will guide the multiyear development of the mixed-use academic/artistic/commercial/residential campus plan. The campus will be convenient to light rail service and other transportation systems connecting with commercial, cultural, and entertainment venues, including the Main Campus in Tempe. Adjacent to potential residential and community development, the campus will be a sub-district of downtown, lending critical mass to other educational and cultural institutions, including the Arizona Biomedical Collaborative (ABC), University of Arizona Medical School in collaboration with ASU and the Translational Genomics Research Institute (TGen). Businesses throughout downtown are excited about the campus and have adjusted their hours and services to accommodate this institution.

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- ⁶ See Perry and Wiewel, eds.
- ⁷ Initiative for a Competitive Inner City (ICIC)/CEOs for Cities, *Leveraging colleges and universities for urban economic development: an action agenda*, CEOs for Cities, 2002, p. 7.
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- ¹² See www.wm.edu/construction/vision.php.
- ¹³ For a full understanding of how the design guidelines and vision for future growth work, see: <http://www.wm.edu/construction/photos%20for%20web.pdf>.
- ¹⁴ Ronald Mason, Jr. quote via email on April 11, 2007 from Troy Stovall, Senior V.P. for Finance and Operations, Jackson State University.
- ¹⁵ See <http://www.michaeldennis.com/>
- ¹⁶ ICIC/CEOs for Cities.
- ¹⁷ Fischer, "The University as Economic Savior."
- ¹⁸ For a good discussion of the parking and mobility, see U.S. EPA *Parking Spaces/Community Places* <http://www.epa.gov/dced/pdf/EPAParkingSpaces06.pdf>.
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- ²¹ Email correspondence with Julia Ann Easley, UC Davis News Service April 13, 2007; see also University of California – Davis West Village, <http://www.westvillage.ucdavis.edu/community/index.html>.
- ²² University of Maryland, East Campus Redevelopment Initiative, <http://www.eastcampus.umd.edu/ProjScope.cfm>
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³⁷ John Frece, "Cow Pasture or Downtown: University of Maryland Campus in Hagerstown, Maryland," presentation at the First Smart and Sustainable Campuses Conference, November 3, 2007; email correspondence with Erin Harman, Director of Marketing and Public Relations, University System of Maryland, April 23, 2007.

³⁸ Email correspondence with Mernoy E. Harrison, Jr., Vice President and Executive Vice Provost, ASU at the Downtown Phoenix Campus, April 30, 2007; see also Ayers/Saint/Gross, "Planning for a new American University," *Creating: The Magazine*, no date, http://www.asg-architects.com/research/creating/vol1_no2/10.pdf, accessed May 4, 2007.