Campus Master Plan


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College Facilities Approach

Introduction

Becoming a college of distinction is no small task. The lofty goals of Chestnut Hill College's strategic plan require a great deal of effort and commitment from administrators, faculty, and staff. It is the people who will provide the knowledge and develop the academic richness that creates the community of intentional learners at Chestnut Hill College.

This reinvigorated community demands a strong sense of place and identity. When educational choices increasingly allow expedient and economical virtual learning opportunities, students are still seeking a richer shared learning experience at Chestnut Hill College and its beautiful residential campus. How will an historically strong sense of place be preserved, updated, and enhanced when it serves more than double the population, encompasses nearly twice the acreage, uses almost three times the floor space, and intensifies the daily comings and goings? This master plan offers the following strategies in response to this charge:

Fulfill space needs for strategic enrollment levels

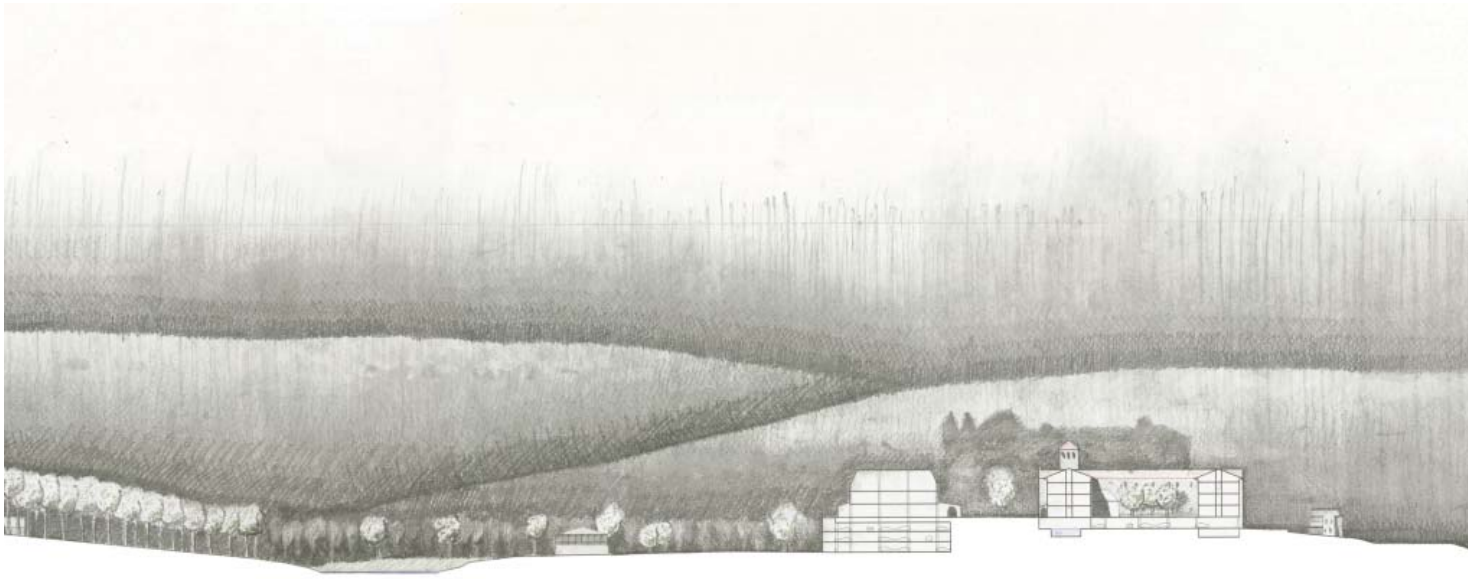
1. Identify and locate new functional spaces in accordance with space needs projections.
2. Identify potential continued uses for existing historic buildings as new buildings are constructed.
3. Identify supporting infrastructure for new and existing space such as parking structures and physical plant facilities.
4. Remain aware of land acquisition opportunities and seize them whenever possible to alleviate the constraints of an environmentally challenging site, and especially to support College athletics programs.
5. Respond to shifting priorities and availability of resources.

Promote development of an academic community of intentional learners

1. All components of the residential campus should complement and support student learning; residence halls, dining facilities, study space, formal and informal social spaces, library, and outdoor public settings will support an interrelated learning experience.
2. Honor historic building assets and existing functional arrangements.
3. Create new space that is flexible and adaptable, incorporating technology, to support multiple new and traditional formats for learning.
4. Create legible progressions from shared public spaces to spaces of private solitude.

Maximize limited building sites

1. Introduce structured parking.
2. Use top of structured parking for building sites.
3. Incorporate green roofs.



Fulfill space needs for strategic enrollment levels

Given recent increases in enrollment over consecutive years in all three schools at Chestnut Hill College, and the desire to continue to grow, the need for new and improved facilities is immediate. The term for implementation of this master plan is not based upon a time scale, but rather is based upon the ability to provide the minimum required space for selected target enrollment levels. In order to project future needs, the plan uses Fall 2006 enrollment levels as a benchmark, the completed semester prior to the commencement of the space needs studies. The term for the master plan is then set out on a scale of target student enrollments prescribed in the College's strategic plan, culminating in an ideal operating enrollment - Target C (table 3.1).

Fall 2006	Target Enrollment A	Target Enrollment B	Target Enrollment C
Student Headcount = 1,892	**Student Headcount = 2,274**	**Student Headcount = 2,531**	**Student Headcount = 2,841**
Staff Headcount = 240	**Staff Headcount = 287**	**Staff Headcount = 382**	**Staff Headcount = 433**
Detail:	Target Enrollment A:	Target Enrollment B:	Target Enrollment C:
	1,024 undergraduate headcount students	1,250 undergraduate headcount students	1,500 undergraduate headcount students
	800 graduate headcount students	831 graduate headcount students	864 graduate headcount students
	450 continuing studies headcount students	450 continuing studies headcount students	450 continuing studies headcount students
	102 faculty	173 faculty	197 faculty

Table 3.1 - Target Enrollment Intervals

The Utilization and Space Needs Analysis (see appendix) determined assignable square feet surpluses and deficits for each space type category based upon these enrollment targets. The amount of new construction for Chestnut Hill College is derived first by determining the differential between the projected space need and the existing space available for continued utilization (see Table 3.2). The projections first indicate that the College currently operates in a severely diminished capacity. Into the future, the College will need to increase the size of its facilities more than twofold to serve the ultimate enrollment targets. More than half of the newly constructed space is devoted to student housing and student life spaces. This is the result of strategic plan intentions for student housing; principally that 80% of undergraduate students will live in on-campus housing and that much of the new housing should be intended for upperclassmen, constructed as apartment or suite type units with 21st century amenities. Future updates of this master plan may change to include graduate student housing.

Additionally, requirements for new construction were also a considered response to the inadequacies in existing space to serve a 21st century college. Deferred maintenance and advances in education and technology require bold enhancements to facilities that new construction will provide. Historic buildings will be preserved, renovated and adapted for continued academic and student life uses while intensive uses such as science laboratories and food service facilities are intended for efficient new buildings.

SPACE CATEGORY	Fall 2006 Student Headcount = 1,892 Staff Headcount = 240 Existing ASF	*Guide-line ASF*	Surplus (Deficit)	Target Enrollment A Student Headcount = 2,274 Staff Headcount = 287 Existing ASF	*Guide-line ASF*	Surplus (Deficit)	Target Enrollment B Student Headcount = 2,531 Staff Headcount = 382 Existing ASF	*Guide-line ASF*	Surplus (Deficit)	Target Enrollment C Student Headcount = 2,841 Staff Headcount = 433 Existing ASF	*Guide-line ASF*	Surplus (Deficit)	NEW GSF
Academic Space													
Classroom & Service	20,548	*19,393*	**1,155**	20,548	*25,843*	**(5,295)**	20,548	*31,136*	**(10,588)**	20,548	*36,647*	(16,099)	**24,768**
Teaching Labs & Service	18,228	*14,512*	**3,716**	18,228	*19,814*	**(1,586)**	18,228	*24,179*	**(5,951)**	18,228	*28,701*	(10,473)	**16,112**
Open Labs & Service	7,143	*7,569*	**(426)**	7,143	*9,096*	**(1,953)**	7,143	*11,390*	**(4,247)**	7,143	*12,785*	(5,642)	**8,680**
Academic Offices & Service	15,890	*22,650*	**(6,760)**	15,890	*28,245*	**(12,355)**	15,890	*33,840*	**(17,950)**	15,890	*39,540*	(23,650)	**36,385**
Other Academic Dept.	2,512	*3,785*	**(1,273)**	2,512	*4,548*	**(2,036)**	2,512	*5,062*	**(2,550)**	2,512	*5,683*	(3,171)	**4,878**
Academic Subtotal	64,321	*67,909*	**(3,588)**	64,321	*87,546*	**(23,225)**	64,321	*105,607*	**(41,286)**	64,321	*123,356*	(59,035)	**90,823**
Academic Support Space													
Admin Offices & Service	17,657	*26,725*	**(9,068)**	14,203	*28,580*	**(14,377)**	14,203	*29,095*	**(14,892)**	14,203	*33,415*	(19,212)	**29,557**
Library	21,466	*27,032*	**(5,566)**	21,466	*32,776*	**(11,310)**	21,466	*34,770*	**(13,304)**	21,466	*36,916*	(15,450)	**23,769**
PE/Recreation/Athletics	24,344	*33,960*	**(9,616)**	24,344	*35,870*	**(11,526)**	24,344	*37,155*	**(12,811)**	24,344	*38,706*	(14,362)	**22,095**
Assembly & Exhibit	17,128	*16,000*	**1,128**	17,128	*16,000*	**1,128**	17,128	*16,000*	**1,128**	17,128	*16,000*	1,128	
Chapel	1,333	*2,500*	**(1,167)**	1,333	*2,500*	**(1,167)**	1,333	*2,500*	**(1,167)**	1,333	*2,500*	(1,167)	**1,795**
Physical Plant	2,910	*11,360*	**(8,450)**	2,910	*17,226*	**(14,316)**	2,910	*19,968*	**(17,058)**	2,910	*23,079*	(20,169)	**31,029**
Other Admin Dept Space	1,798	*5,676*	**(3,878)**	1,798	*6,823*	**(5,025)**	1,798	*7,593*	**(5,795)**	1,798	*8,524*	(6,726)	**10,348**
Academic Support Subtotal	86,636	*123,253*	**(36,617)**	83,182	*139,775*	**(56,593)**	83,182	*147,081*	**(63,899)**	83,182	*159,140*	(75,958)	**116,858**
Student Life Space													
Student Center	9,850	*18,920*	**(9,070)**	9,850	*22,741*	**(12,891)**	9,850	*25,310*	**(15,460)**	9,850	*28,410*	(18,560)	**28,554**
Residence Life: Housing	88,502	*111,825*	**(23,323)**	88,502	*184,320*	**(95,818)**	88,502	*225,000*	**(136,498)**	88,502	*270,000*	(181,498)	**279,228**
Residence Life: Dining	11,326	*6,461*	**4,865**	11,326	*10,650*	**676**	11,326	*13,000*	**(1,674)**	11,326	*15,600*	(4,274)	**6,575**
Student Health Facilities	1,396	*2,365*	**(969)**	1,396	*2,843*	**(1,447)**	1,396	*3,164*	**(1,768)**	1,396	*3,551*	(2,155)	**3,315**
Student Life Subtotal	111,074	*139,571*	**-28,497**	111,074	*220,554*	**(109,480)**	111,074	*266,474*	**(155,400)**	111,074	*317,561*	(206,487)	**317,672**
CAMPUS TOTAL ASF	262,031	*330,733*	**(68,702)**	258,577	*447,875*	**(189,298)**	258,577	*519,162*	**(260,585)**	258,577	*600,057*	(341,480)	
SSJ Facilities (Rogers)	24,884			6,863			6,863			6,863			
	existing		**NEW**	*existing*		**NEW**	*existing*		**NEW**	existing		**NEW**	
Gross Square Feet =ASF /.65	455,784		**105,695**	387,082		**291,228**	387,082		**400,900**	387,082		**525,354**	

Table 3.2 - Space Needs Projections

The facilities plan on the following pages identifies and locates new functional spaces in accordance with space needs projections. It is the result of the synthesis of the space needs and the College's educational goals with site restrictions and planned landscape enhancements. New supporting infrastructure such as roadways, athletic fields, parking lots, and structured parking is also shown.

The plan shows a complete implementation to the highest target enrollments. In chapter four a gradual progressive approach to the master plan implementation is suggested with a description of each project component. The phased implementation attempts to limit the need for a strict sequence of prerequisite projects. But given the scale of some projects, the initial need for key infrastructure is unavoidable. For future updates of this plan, the suggested sequence for implementation will likely change to respond to shifting priorities, changes in enrollments, and availability of resources.

	2008	Target A	Target B	Target C
Undergraduate Enrollment		1,024	1,200	1,500
Beds at 80%		820	1,000	1,200
Existing Beds (incl. Lodge)	*560*	*560*	*407*	*407*
Beds to construct		**260**	**593**	**793**

Table 3.3 - Projected Residential Beds

Master Plan

Map Legend

Chestnut Hill

1. SSJ Chapel
2. Sisters of Saint Joseph
3. Rogers Center
4. Physical Plant
5. DeSales Center
6. Saint Joseph's Hall
7. Martino Hall
8. Fournier Hall
9. Clement Hall
10. Neumann Hall (President's residence)
11. Fontbonne Hall
12. Logue Library
13. Fitzsimmons Hall
14. Grotto
15. Summerhouse (relocated)
16. Guardhouse
17. Well House
18. College Center
19. Library Expansion & Technology and Science Building
20. Fournier Additions
21. Parking Structure (below)

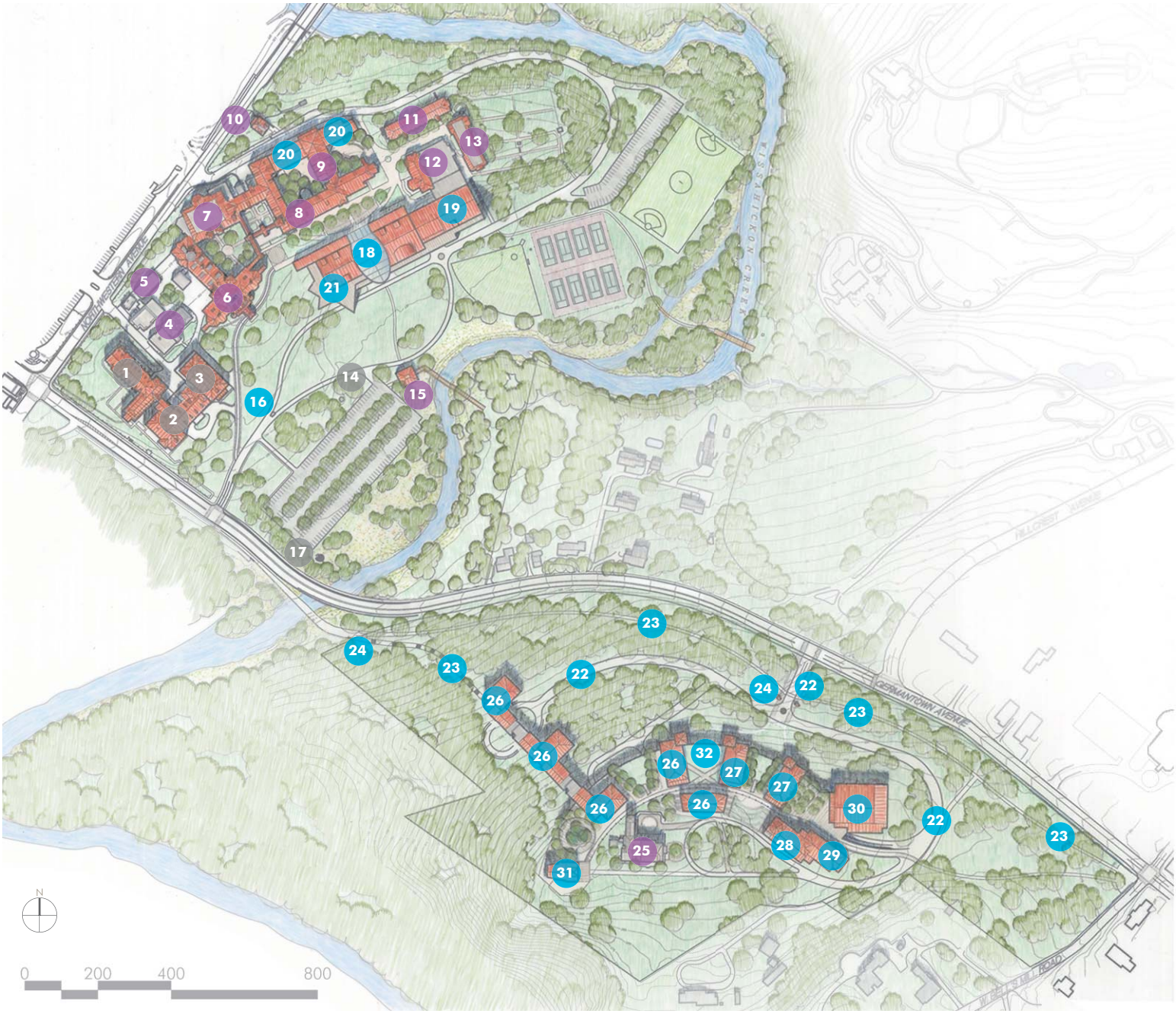
SugarLoaf Hill

22. New Entrance and Roadways
23. New Pedestrian Boardwalk
24. Guardhouse
25. Greenfield Mansion
26. Residence Hall
27. Living/Learning Residence
28. Academic Building
29. Graduate and Continuing Studies Center
30. Performance Hall & Arts Programs
31. Chapel
32. Parking Structure (below)

Existing/Renovated

New Construction

Sisters of Saint Joseph Facility



Chestnut Hill College Master Plan

Glass walls allow a visual connection to a student services activities lounge from a classroom building corridor to encourage student participation in programmed activities. (Cabrini College)

A dining hall space utilizes movable dividing walls to create 'eat-in' seminar rooms for communicating and sharing knowledge. (Cornell University)

Integrated multi-media technology increases flexibility in delivering knowledge in a traditional lecture setting. (University of Pennsylvania)

PROMOTE DEVELOPMENT OF AN ACADEMIC COMMUNITY OF INTENTIONAL LEARNERS

All components of the residential campus should complement and support student learning; residence halls, dining facilities, study space, formal and informal social spaces, library, and outdoor public settings will support an interrelated learning experience. Given recent understanding that much of what is learned in the college environment takes place outside the traditional classroom, the design of all realms of the college campus should foster greater and more varied communication between students and their professors, student and residence life staff, college administrators, and, not least, their peers. Interdisciplinary curricula, undergraduate research projects, and service learning are examples of new forms of delivering, applying, creating, and communicating knowledge that require facilities that encourage engagement through formal or traditional means as well as informal or serendipitous encounters. Further, recognizing that educational peers encompass undergraduate, graduate, continuing studies and life-long learning students, as well as residents, commuters, visiting students, virtual students, and students abroad, a place where comfort zones can be breached and the college community further unified is imperative.

This is accomplished by dismantling architectural expectations; spaces formerly seen as sacred and quiet such as libraries have been claimed for group study, collaborative projects, and information-sharing centers. Residence halls have been transformed into living/learning environments and include academic support centers. Classes are now in the dining hall where a literature, language, or nutrition class can center on food and socialization. New types of education spaces that are flexible and adaptable, incorporating technology, will be important to support multiple new and traditional formats for learning.

An open workspace for applying or creating knowledge may exemplify a library information commons, a computer lab, or student organization offices. (Duke University)

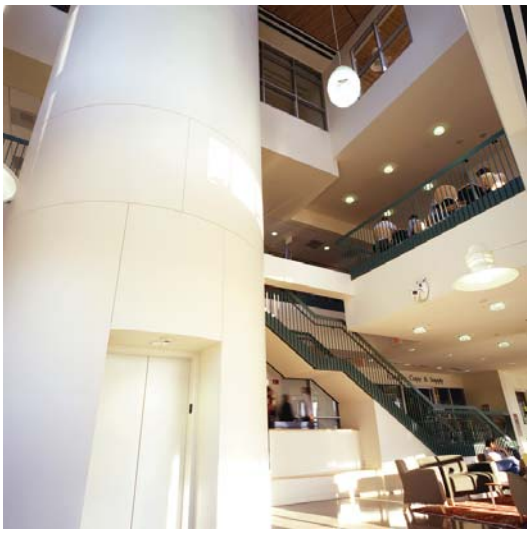
Nooks and other 'found' spaces in residence halls allow privacy as an alternative to in-room study. (Ursinus College)

Another 'found' space in a public corridor is claimed for personal use. (Oberlin College)

Oversized alcove benches in a classroom corridor encourage informal after-class discussion. (University of Pennsylvania)

To See and Be Seen

A sense of campus community is further amplified when there are spaces in which to "see and be seen". Taking a cue from historic Chestnut Hill buildings and their existing mixed-use arrangements, new buildings can adopt the dense contiguous building arrangement which promotes the ready availability of all the College has to offer. Nothing ever seems that far away, and traversing the domestic scaled corridors, grand parlors, and stone arcades turns a mere walk into an experiential journey. New structures can recreate and magnify this experience with multi-story overlooks, pocket lounges, and courtyards.



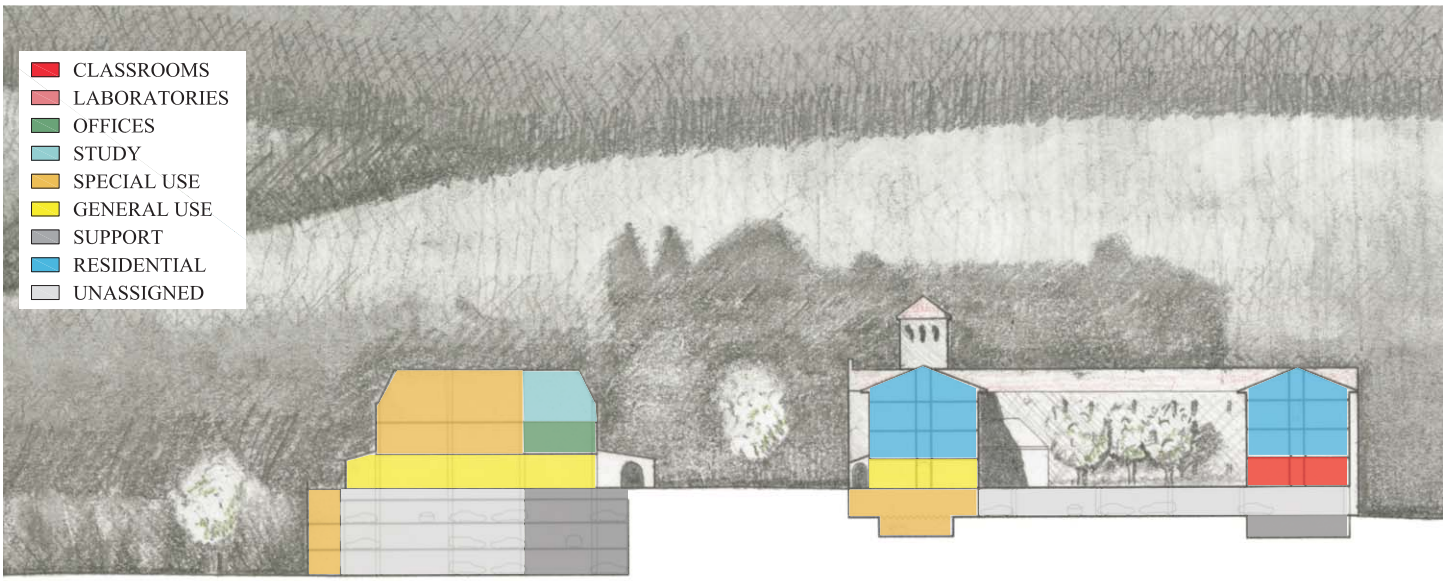
Visually connected multi-story circulation and lobby space with accessory lounges are spaces to in which to "see and be seen". (Lehigh University above; Cornell University below)

St. Joseph Hall's Rotunda is the precedent for future community oriented circulation spaces.

A multi-story indoor passageway with views to Wissahickon Park connects upper and lower levels of SugarLoaf Hill through residence halls and beyond to Germantown Avenue and Chestnut Hill

Public stairs revealed to the outdors exposes the inner workings of residence halls. (Cabrini College)

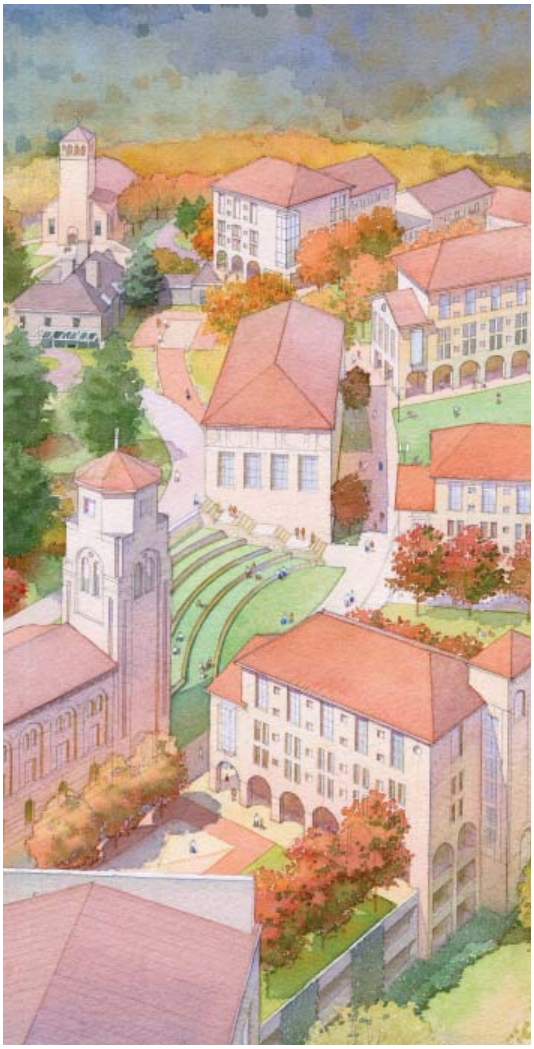
Indoor/ outdoor visual connections and occupied courts at a building entrances create greater opportunity for serendipitous meetings. (Duke University)



The mixed-use arrangement of Fournier and Clement Halls with lower level academic and student life space and upper level residences can inform the functional zoning of new living/ learning buildings.

The new College Center atrium is the Campus front door.

A concept for the 'Hilltown Piazza' between Fournier and the College Center



On SugarLoaf Hill the circulation path is anchored on its ends by the Performance Hall and the Chapel with academic and residential buildings in between.

Create a Legible Progression and Hierarchy of Space

The sense of safety and nurturing relies upon the creation of legible progressions from shared public spaces to spaces of private solitude. This experience begins at Chestnut Hill College with the establishment of a new Campus 'front door' by creating an arrival atrium in the proposed College Center. Ascending through the atrium and exiting on top of Chestnut Hill, one arrives in the new 'Hilltown Piazza facing the entrance to Fournier Hall. From there the progression through lobbies, corridors, and parlors leads to a further string of Romanesque cloisters and courtyards described in the following pages. Private spaces such as faculty offices or residential suites each have an identity and address taken from the adjacent courtyard or landscape it views.

While Chestnut Hill is entered centrally through the College Center, the plan for SugaLoaf Hill is anchored on its ends. To the east, the Performance Hall gestures its public amenities toward the neighbors and the business district, and to the west a Chapel sits aloft overlooking the Wissahickon Valley below.

The master plan creates a unified residential campus with the variety of integrated spaces required for richer learning interactions where faculty and staff 'coaches' can work with students in intensive learning experience that cannot be duplicated virtually.

Iconic architecture creates anchor point destinations along the path through the 'hilltown' on SugarLoaf Hill.

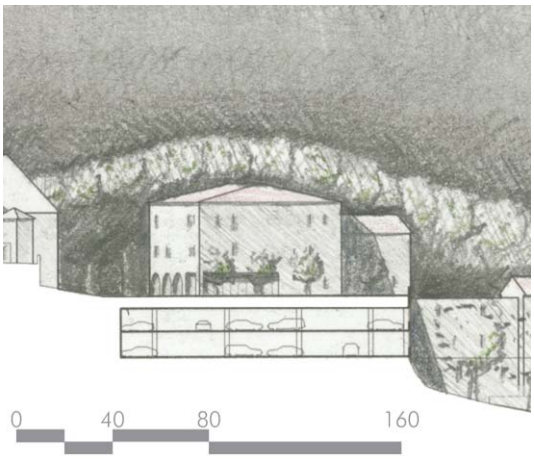
Maximize limited building sites

At Chestnut Hill College environmental constraints render much of the property unsuitable for building. Once floodplain, steep slope, and protected areas are eliminated as viable building sites, limited space is available for needed buildings and parking spaces. In fact, if the College were to cap its enrollments at today's levels, parking would remain a significant problem. Even if there were sufficient supply to meet demand, existing parking lots are remote, insufficiently lit, and subject to frequent flooding. More and improved parking is a first priority. Into the future parking spaces will be competing with floor space and athletics fields for land (see Table 3.4). The master plan calls for 1,200 parking spaces located throughout the campus in locations where it will be most safe and efficiently utilized. The greatest portion of this parking is accommodated in two significant parking structures; one located on Chestnut Hill and the other on SugarLoaf Hill. The remainder is provided in surface lots where remaining flat land is available convenient to College destinations.

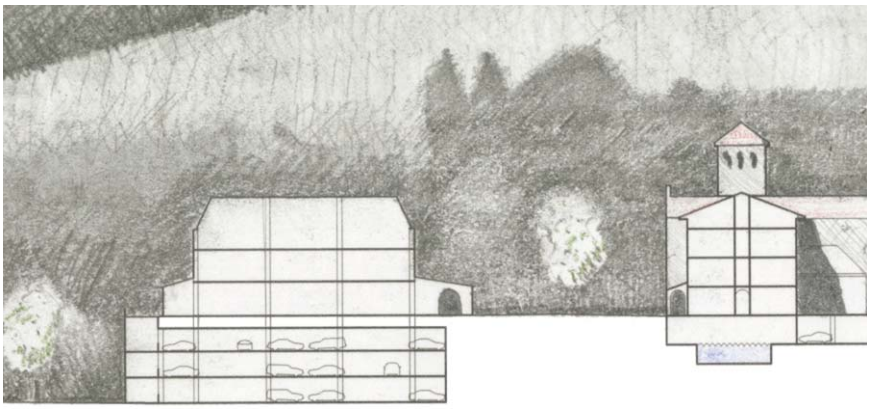
	Spring 2007	Target Enrollment A	Target Enrollment B	Target Enrollment C
Peak Parking Demand (exg supply: 468 spaces)	**506 evening**	**855 evening**	**999 day**	**1,182 day**

Table 3.4 - Parking Space Needs

To further conserve land, the garage construction will take advantage of the existing hillsides already significantly retained. Utilizing the top of the garages for green roofs and building construction allows the adjacent hilltops to be extended, creating new campus 'ground planes'.



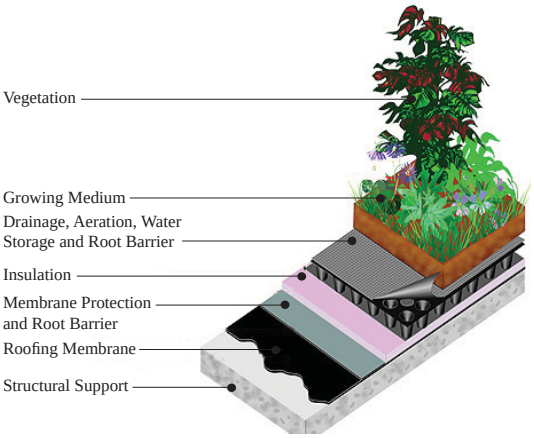
2 level Garage at SugarLoaf Hill with Residence Halls and courtyards on the roof



3 level garage at Chestnut Hill with new College Center above

Green Roof entry plaza over parking structure, Rams Head Dining Hall, University of North Carolina

Green Roof yard above resident parking, Graduate Student Housing at Garden 29, Harvard University



Green Roof Construction

Green Roof Advantages

In its basic definition, a green roof is a rooftop that is vegetated. Green roofs are emerging as a very effective means of addressing many of the environmental concerns that exist in today's developed areas. In studies, they have shown great promise in reducing the heat island effect of cities, improving air and water quality, and increasing the amount of plant life in a developed area.

Educational facilities, more than nearly any other kind of institution, are in a position to benefit from planted roofing. Maintaining the natural wooded character at SugarLoaf Hill will prove difficult, but the insertion of the garage and new buildings can be mitigated by the addition of green roofs. Chestnut Hill College stands to save money in the long term and add beauty and utility to the campus by green roofing a new garage structure set into this hillside. Additionally, other new structures constructed elsewhere with green roofs can provide the following benefits to the College:

1. Extends life of roof from 10-20 years to 40 years
2. Energy efficiency: green roofs slow the process of heat gain and loss in buildings. Heat loss due to wind can be reduced by 50%, and heat gain in summer is reduced through screening and evaporation
3. Stormwater run-off is reduced 10-50%. Rain is held in place, which buffers the impact on storm drains, while part is returned to the atmosphere through the transpiration of the plants
4. Reducing stormwater runoff reduces pollution otherwise added to streams and rivers
5. Reducing stormwater reduces the expense and construction of sewers, and will be a necessary component of a stormwater management plan to meet City of Philadelphia regulations
6. Extends small animal habitats
7. Reduces noise levels
8. Improves views from above

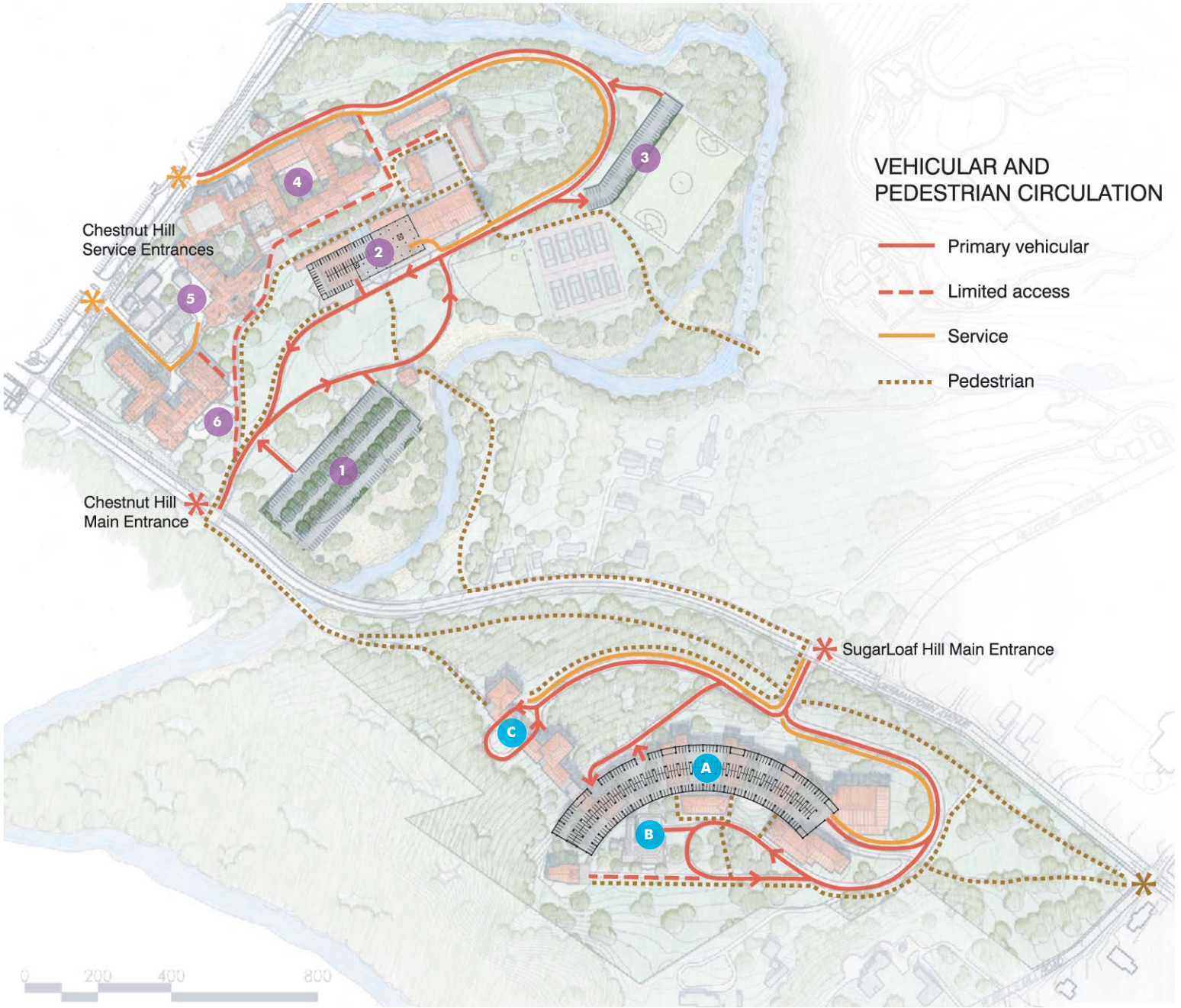
The diagram at left describes the basic construction of green roofs. Green roofs have been used throughout history and, in their contemporary forms, can be found worldwide. Examples of these are pictured here of Chicago's City Hall and the Fencing Academy of Philadelphia. Paths, garden furniture, and water features are all relatively modest options, and even trees could be included with a deeper layer of soil.

Parking and Traffic Circulation

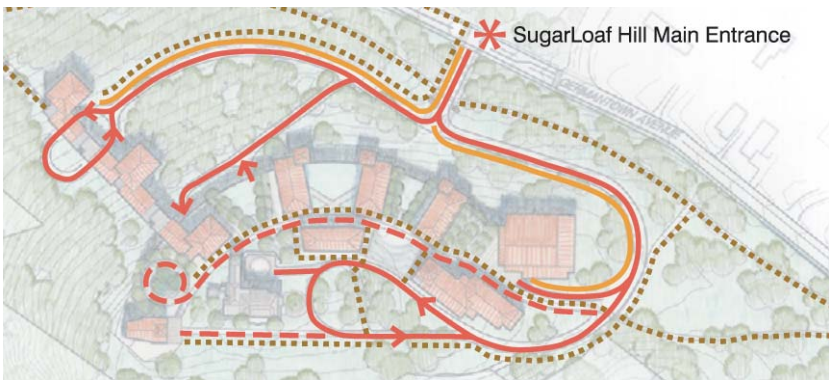
Table 3.4 on the previous page indicates the projected peak demand for parking, and the diagram at right indicates how that parking is distributed. The diagram also shows vehicular and pedestrian circulations patterns. New pedestrian routes are proposed to improve the physical connection between the two hills. A revamped offset intersection at Germantown Avenue and Hillcrest Road allows improved and safer access with the addition of turning lanes and traffic lights.

PARKING SPACE DISTRIBUTION

Chestnut Hill			
1	SURFACE LOT		200
2	COLLEGE CENTER GARAGE		280
3	SURFACE LOT		100
4	FOURNIER (under courtyard)		18
5	PHYSICAL PLANT		21
6	SSJ DRIVES		45
		sub-total	**664**
SugarLoaf Hill			
A	SUGARLOAF GARAGE		580
B	GREENFIELD COURT		6
C	RESIDENCE DRIVES		20
		sub-total	**606**
		TOTAL	**1270**



Above: Parking and Traffic Circulation Plan
Inset Right: Plan atop SugarLoaf Garage



Landscape Approach

Introduction

The new challenge for Chestnut Hill College is to design a campus on two hills. The central landscape question of this master plan is then 'how does a campus disconnected by a creek and a busy road become connected?' The plan considers three routes to answering this question: through physical and implied connections, and by redefining Wissahickon Creek as the heart of the campus.

Physical Connections:

1. Create visual linkage across the hilltops.
2. Emphasize pedestrian connections such as bridges, sidewalks, and paths to make one walkable campus.

Implied Connections:

1. Emphasize hilltop campus design and the similarities of the three-tiered campus structure.
2. Unify the hilltop experience through like materials, similar spatial scales, and similar open space programming.
3. Design for the same environment: a consistent approach to environmental forces and the attention to microclimate will unify the look and experience of the two campuses.
4. Keep both campuses grounded in a Catholic design tradition with regular architectural references such as chapels and other religious iconography.

The Creek as Heart of the Campus:

1. Make the creek experience powerful and unique.
2. Make the creek the highlight of the walk across campus.
3. Encourage multiple uses of the creek and creek side: recreation, education, research, habitat, community, aesthetics.
4. Design to accommodate expansion within the regulated zone of the floodplain.

Overall Site Plan

The existing view of St. Joseph's can be made more dramatic with the selective clearing of overgrown, dead, and dying riparian trees.

Visual communication across the two hilltops is made possible by dramatic topography

Creating Physical Connections

Create visual linkage across the hilltops. Roof lines and bell towers have played an important role in shaping the experience of the campus, particularly in announcing the campus to arriving visitors. Unified terra-cotta roofs present a cogent, collected, and powerful image across the horizon.

It is, therefore, very important to preserve views to Chestnut Hill and to create new ones. The diagram at right shows several key viewsheds that are important to the visitor experience. All of the views looking north from Germantown Avenue are framed by vegetation. It is important to maintain the growth of riverbank and floodplain vegetation over the seasons to insure that these viewsheds are preserved.

New architecture on SugarLoaf will also have terra-cotta roof lines and will similarly emulate the romanesque style. Creating views to the new campus from Chestnut Hill and from points north will strengthen the College's presence and sense of ownership across Germantown Avenue. Opening viewsheds to the hilltop is more difficult because views are obscured by a deeper forest along steeper slopes. Views into SugarLoaf from the intersection of Bell's Mill Road and Germantown Avenue offer the best vantage point for visitors to the college. As the clearing of forest for view corridors may be unpopular with neighbors, the prioritization of sight lines becomes very important.

Linking views between the campuses is another objective of this landscape master plan. The roofs and bell towers of the Chestnut Hill Campus are echoed in the design of SugarLoaf buildings. Views from Chestnut Hill to SugarLoaf Hill will be easy to manage. As shown in the left column, SugarLoaf Hill's bell towers and roof peaks will appear through a thickly wooded curtain. But looking back from SugarLoaf Hill on to Chestnut Hill will require careful field work and management.
Slicing through wooded canopy will create narrow windows or brief moments when the viewer is reminded of the Chestnut Hill Campus. Opening wider swaths of forest would be impractical and would invite larger site problems such as erosion and invasives management.

Views from Chestnut Hill are generally wider in scope because of the relative openness of the campus. Views from SugarLoaf Hill are more limited because of dense vegetation, but topography (high points) offer some strategic spots for views out.

A proposed boardwalk on SugarLoaf can provide connections between the campuses, Fairmount Park, and Chestnut Hill

A bridge from Chestnut Hill College to Morris Arboretum can engage the educational missions of both institutions. (Image: Seneca Rocks Visitor Center)

A proposed grand staircase on the SugarLoaf hillside (Image: Buttermilk Falls in Ithaca, NY)

Creating Physical Connections

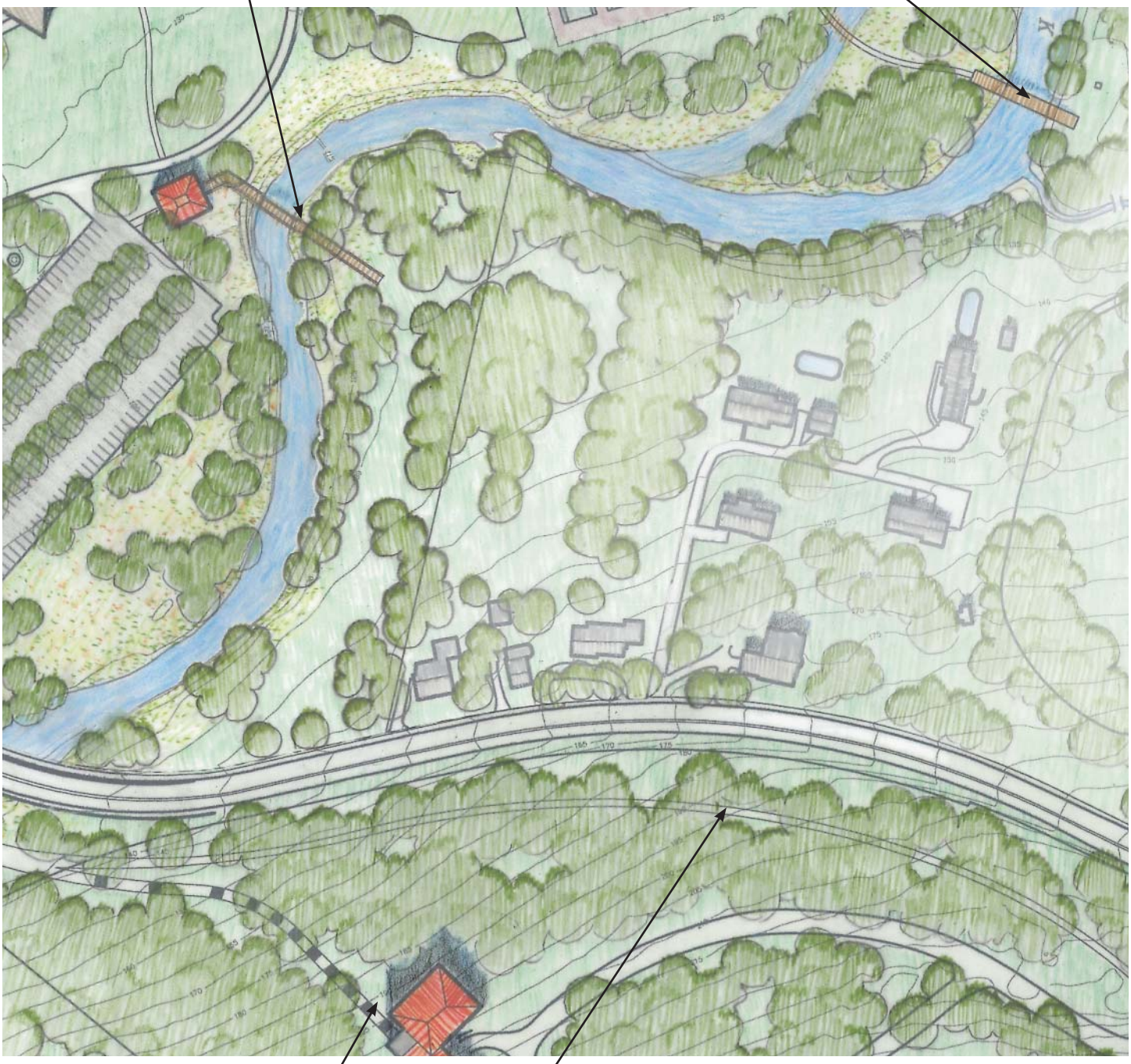
Emphasize pedestrian connections such as bridges, sidewalks, and paths to make one walkable campus. Whereas the present-day campus has numerous examples of sidewalks that abruptly end, this master plan emphasizes the need for processional paths with logical embarkation and destinations. A coordinated approach to structures such as bridges, sidewalks, pathways, and staircases can unify the pedestrian campus under one design vocabulary.

Materials are important to creating an appealing walkway and one that conveys a special sense of place. For instance, pathways and steps can tell the story of the unique geology of the campus. Stone pathways and staircases in Ithaca, New York are crafted from the same bedrock that they overlay. Fossils become part of the detailing of stonework and tell the natural history of the place. Chestnut Hill College can use both the colorful schist and the harder granite to create evocative spaces for daily walks and formal processions.

Pedestrian circulation must be made accessible and safe for all users. Site designs must consider adequate lighting and long sight lines, especially down in the floodplain to make sure that the path system feels safe and inviting during all seasons and times of day. Direct ADA accessible pathways up to SugarLoaf Hill are difficult. Shuttles must be used to accommodate ADA compliance.

The College should endeavor to minimize the need to drive between the two campuses. A simple and effective approach to crossing Germantown Avenue will further strengthen the walkability of the campus and will tie each campus into regional SEPTA bus routes. In planning connections between the two campuses, every attempt should be made to also engage the College's adjacent neighbors. A proposed boardwalk along the edge of SugarLoaf Hill will connect the College to Chestnut Hill and Fairmount Park. Morris Arboretum has expressed the desire to engage the educational mission of Chestnut Hill College by allowing access to students via a proposed bridge across Wissahickon Creek. The Arboretum is also interested in creating a SEPTA bus stop at the corner of Hillcrest and Germantown Avenue.

Steps appear like natural outcrops at Buttermilk Falls, Ithaca, NY


Proposed bridge over Wissahickon Creek from relocated Summer House
Potential connection to Morris Arboretum
Proposed staircase rising through the forest to Sugarloaf Campus
Proposed boardwalk path connecting both campuses to Fairmount Park and Chestnut Hill

Fine stone detailing at Germantown entry gates

The arcade at Fournier is exemplary of a hilltop spatial scale. This is also an example of how architectural detailing affects the quality of adjacent outdoor spaces.

Consistency in lighting and signage creates an identity that should be common to both campuses.

Creating Implied Connections

Emphasize hilltop campus design and the similarities of the three-tiered campus structure. The campuses will be more likely to evolve together just by constricting development to the flatter, less-regulated hilltop zones. The campuses have a number of fundamentally common design parameters largely driven by the environment such as the needs for level ground, circulation and servicing of buildings and spaces. These forces lend themselves toward high density buildings, well-designed open spaces, and mulit-functional path and road systems.

Unify the hill top experience by defining:

- A common palette of materials,
- Similar spatial scales, and
- Similar variety of space programming.

A well-planned network of small open space corridors and rooms is necessary to the quality of life within a densely built area on the hilltops. As most open spaces will be defined in large part by architecture, the building materials and architectural detailing are important to crafting a common thread across the campuses. Prescribing and adhering to building height and proportion guidelines will also keep campus hilltop spaces feeling as part of a hilltop community. Landscape details such as paving, lighting, plants, benches, and litter receptacles should also have a common reference point (see materials discussion in next chapter). But it is important to point out that both the buildings and landscape designs should be allowed some leeway for idiosyncrasies and individuality to emerge. Each building and space should have some of its own unique character to create a diversity of experiences and a more navigable campus. Strive for a thematic similarity and not a literal one.

Programmatically, the open spaces of Chestnut Hill Campus lack diversity. Open spaces are not differentiated between student uses and more formal uses. Consequently, none are effectively occupied. This master plan suggests clearer delineations of open space 'ownership' that will help enliven the campus and better segregate casual uses from more sacred or academic ones (see diagram page after next). As a residential college, the campus must also provide for outdoor spaces that encourage both daytime and evening uses. In addition, Residence Halls facing onto common courtyard spaces must be given the necessary screening for privacy at the ground floor. More specific visions for these spaces are described in the following chapter.

The back lawn of Greenfield Mansion has a warm southern exposure.

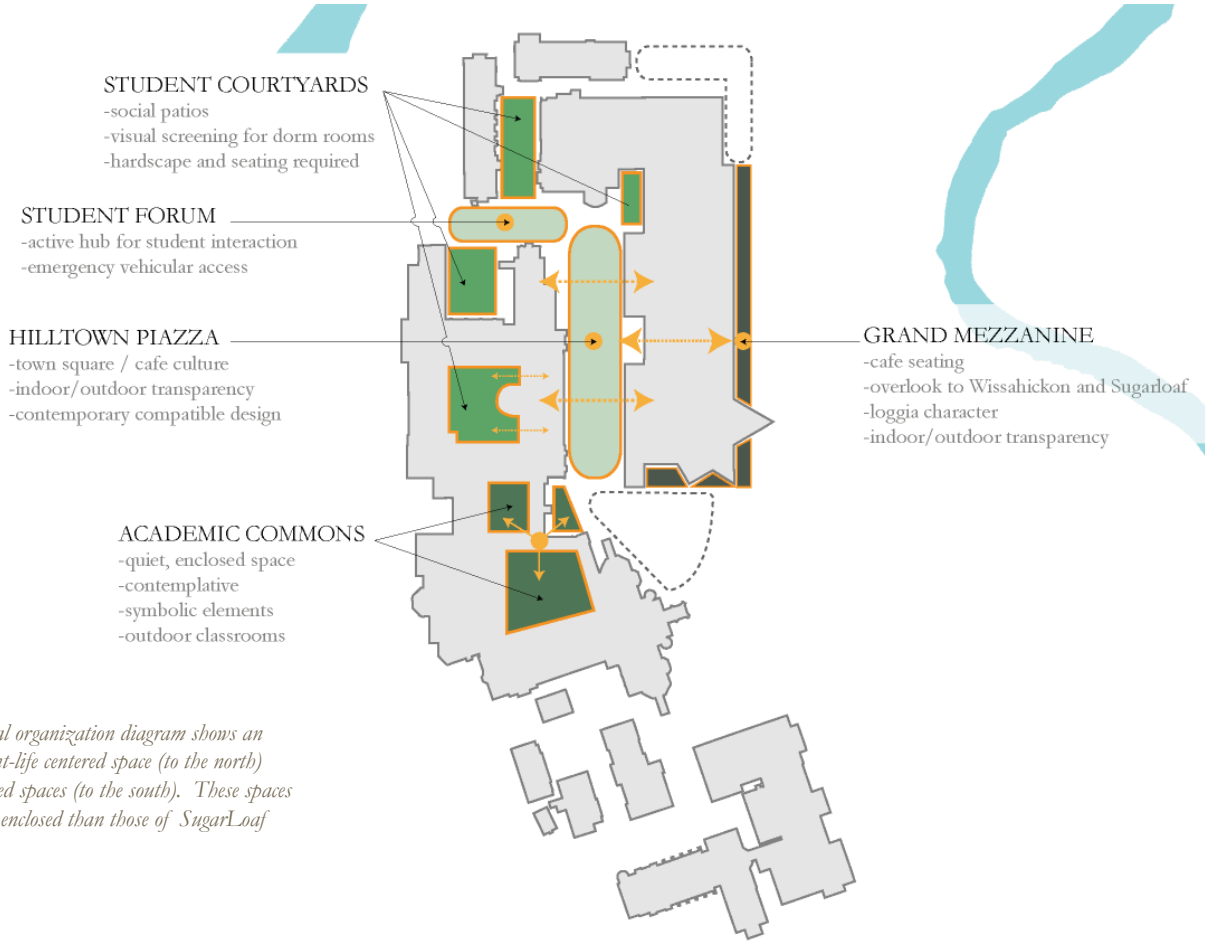
The greensward of Main Campus is of a similar scale and aspect to the Greenfield back lawn.

The microclimate of enclosed courtyards can guide design for optimal thermal comfort.

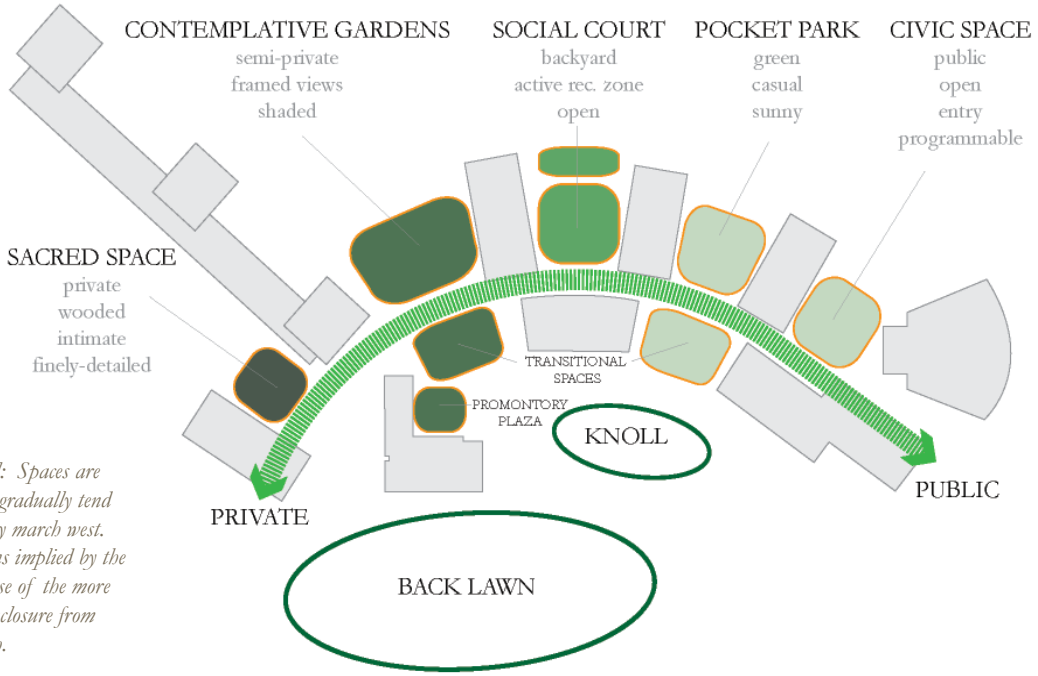
On SugarLoaf, the opportunities to define and locate program are far more open as most of the built form is yet to be realized. This plan suggests a deliberate graduation from civic to sacred spaces that is based upon a very specific entry sequence. The entry to the hilltop campus at SugarLoaf begins at the east side with academic and cultural buildings such as classrooms and a theater. These functions are also likely to be the most visible to the community as seen from the intersection of W. Bell's Mill Road and Germantown Avenue. Heading west, the architectural program shifts from academic to a more residential mixture, and culminates in religious and sacred spaces. This much more quiet and contemplative west end of the campus is further complemented by its adjacency to Fairmount Park and spectacular views across the Wissahickon Valley. At the peak of the SugarLoaf Hill is the Greenfield Mansion with its gracious back patio and sweeping lawn. The promontory quality of this space is analogous in scale and aspect to the greensward of Chestnut Hill, and similarly offers an open vista to the south. The preservation of this stately landscape is an important feature of the SugarLoaf Campus that should not be compromised.

Design for the same environment. A similar approach to environmental forces and the shaping of microclimate will unify the look and experience of the College. Courtyards on either campus will face very similar environmental parameters. If spaces are completely enclosed, the southern side of those spaces are more likely to be shady and cool or cold depending on the season. North sides are more apt to receive direct sunlight and will be warmer. This basic environmental knowledge can inform a common approach to planting and hardscape design that offers shelter from summer heat.

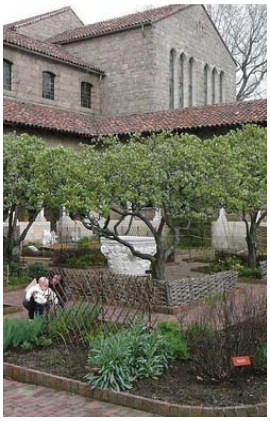
As mentioned above, both Chestnut Hill and Sugarloaf Hill have large promontory spaces with broad views across open south-facing slopes. In such cases, the area near the building has the potential to act as a generous veranda with outdoor seating. During winter months, the captured solar gain of the south-facing facade will be a benefit to the thermal comfort of both indoor and outdoor spaces.



Chestnut Hill Campus spatial organization diagram shows an implied gradation from student-life centered space (to the north) towards more academic oriented spaces (to the south). These spaces are generally larger and more enclosed than those of SugarLoaf Hill.



Spatial organization diagram of SugarLoaf Hill: Spaces are arranged along the arc of the parking garage and gradually tend toward more quiet and contemplative spaces as they march west. These spaces are smaller because of size limitations implied by the parking garage that supports them, but also because of the more steeply-sloped hilltop. Generally, they rely upon enclosure from adjacent buildings and from the woods to the north.

(Left) The Rose Garden is of a scale typical of the cloister model
(Right) The Cloisters, Metropolitan Museum of Art, NYC


Meditative and decorative garden labyrinths

The grotto downhill of the Greenfield Mansion on SugarLoaf Hill has the opportunity to become an important destination.

Keep both campuses grounded in a Catholic design tradition with regular architectural references such as chapels and other religious iconography. The re-evaluation of spaces gives the College a chance to re-focus the architectural message of the campus. Some traditional Christian open space include cloisters, labyrinths, and grottoes. The cloister model comes from medieval European tradition and was traditionally a sheltered place for growing herbs, medicinal plants, and fruits. Cloisters were essential to the monastic work ethic that emphasized simplicity and connection with nature. The enclosed quality of a cloister is a metaphor for heaven and the garden of Eden. Labyrinths are by no means the exclusive property of Christians, but they have played a strong role in the Catholic design tradition both indoors and out for many centuries. Grottoes in the landscape also offer opportunites to combine Christian traditions of walking prayer with meditation on the natural world. Both Chestnut Hill and SugarLoaf Hill already have places referred to as grottoes but the opportunity for reinvention and connection of the campuses along a meditative or prayerful path could be a strong connection between spirit and nature.

Former students of Chestnut Hill College canoeing on the creek

The historic oxbow is an opportunity to unite recreation, views, and circulation around the dynamic creek.

Current conditions reflect the extent of disturbance to the floodplain. Curent floodplain studies by the engineering firm Skelly and Loy emphasize the need for bank stabilization, and every attempt should be made to merge certain capital construction projects to riparian restoration projects. This would enable federal and state matching dollars to contribute heavily to donor/sponsor-driven capital campaigns.

The Creek as Heart of the Campus: Riparian Restoration

Designing to accommodate expansion within the heavily regulated zone of the floodplain is the third driver to landscape master planning. As discussed in the preceding chapter, regulatory and environmental concerns emphasize the need for dense build-out on the hilltops but also focus attention on well-defined environmental stewardship needs within the floodplain.

The programmatic possibilities of the floodplain landscape are limited by environmental factors such as anticipated higher rate of flooding, the specific locations of floodways, and frequently saturated soils. Immediate expansion needs of the college exert pressure on the floodplain to accommodate more parking and more athletic spaces. Regulations on impervious surface, structures that may present obstacles to the floodway, and difficult subsurface conditions all need to be accounted for.

Reinvent the creek as the heart of the campus. The Wissahickon should be the spine of outdoor educational and recreational experiences. The creek also defines the more rustic aesthetic of the campus, a necessary contrast to the formality and urbanity of the hilltops. Historic photos showing students canoeing on calm water identify the creek as a link to the College's past.

Currently, creekside experiences are hindered by a variety of factors - unkempt forest, debris, lack of paths, and temporary deer fencing - which prevent the potential for meaningful engagement. Because the creek is so hidden from view, it often goes forgotten until flood events. By opening up views in concert with riparian restoration efforts, the creek will once again be seen and engaged by the campus community in a more meaningful way. The historic oxbow is an opportunity to unite education, recreation, views, and circulation around the creek. The College can also promote itself as a good neighbor to the Chestnut Hill community by undertaking wetlands restoration near the bridge at Germantown Avenue.

The forested areas along the Wissahickon Creek comprise the most important natural areas in the region and are vital biological corridors for native plants and animals. The College should endeavor to preserve, manage, and restore the biodiversity and ecological integrity of the Wissahickon watershed with these goals in mind:

- Reduce impervious surface area and stormwater runoff
- Improve stream channel stability
- Decrease pollutants entering the creek
- Promote good watershed management through training and education
- Establish an invasive plant and animal management program

Flowers in a wet meadow restoration at Spring Creek, PA.