

CAMPUS MASTER PLAN

CONCORDIA UNIVERSITY AT AUSTIN



CAMPUS MASTER PLAN

CONCORDIA UNIVERSITY AT AUSTIN

Spring 2007

Campus Master Plan Steering Committee

Barnes Gromatzky Kosarek Architects, Inc.

ACKNOWLEDGMENTS

Board of Regents Concordia University at Austin

Mr. David Beringer - Tomball, Texas
Mrs. Patricia Bokenkamp - Tomball, Texas
Dr. Clarence Dockweiler (Secretary)- College Station, Texas
Mr. Donald L. Graf (Chair) - Lubbock, Texas
Rev. Kenneth M. Hennings - Austin, Texas
Rev. Glenn Huebel - North Richland Hills, Texas
Mrs. Melissa Knippa - Austin, Texas
Mr. Ed Moerbe - Dallas, Texas
Rev. Dr. Richard Noack - Spring, Texas
Mr. Daniel Schaefer - Lincoln, Texas
Mrs. Peggy Turnipseed - Georgetown, Texas
Mr. Keith Weiser - Midland, Texas
Mr. Alan Werchan (Vice Chair) - Austin, Texas

*Former members on the Board of Regents at the beginning
of the relocation process:*

Rev. James Linderman - Austin, Texas
Mr. Curtis Riske - Coppell, Texas

Campus Master Plan Steering Committee Concordia University at Austin

Rev. Dr. David Kluth, Chair
Mr. Don Adam
Dr. Thomas Cedel
Dr. William Driskill
Rev. Dr. Joel Heck
Ms. Kristi Kirk
Mr. David Kroft
Mrs. Pamela Lee
Mr. DeWayne Mangan
Ms. Terri Mathews
Dr. Laurence Meissner
Ms. Tracey Officer
Mr. Ron Petty
Mr. Alan Werchan
Mr. Chris Winkler

Project Managers

HS&A - Austin, Texas

Lead Master Planners

Barnes Gromatzky Kosarek Architects - Austin, Texas
N. Thomas Kosarek, AIA
Lauren Goldberg, AIA, LEED AP

Consultants

The Bommarito Group - Austin, Texas
Bury+Partners - Austin, Texas
Jackson Galloway Associates - Austin, Texas
TBG Partners - Austin, Texas

TABLE OF CONTENTS

Letter from the President
Letter from the Vice President

I. INTRODUCTION

Relationship of Campus Planning to Strategic Planning
Purpose of the Plan
Goals of the Plan
Community and the Campus Master Plan
Campus Design

II. ANALYSIS

Existing Campus Overview
Positive Attributes of the Site
Negative Attributes of the Site

III. CAMPUS PLAN

Overview and Analysis
Major Recommendations and Components
The Architectural Plan, Principles and Guidelines
Site Design Criteria and Guidelines

IV. PROCESS

Introduction
Project Definition and Feasibility
Design Control





1
FIGURE 1
Dr. Thomas Cedel, President.

FIGURE 2
Chapel on downtown campus.

LETTER FROM THE PRESIDENT

Greetings in the name of our Lord and Savior Jesus Christ!

This booklet illustrates a vision for the future of the main campus of Concordia University. The vision began in February 2005 when the Board of Regents was presented an option for relocating the campus. After a significant amount of study and prayer, the Board decided in May 2005 to relocate and initiated a selection process involving over 30 potential sites. During this time, we also began a review of our strategic plan to address not only the relocation but other aspects of Concordia’s future. The end result of these efforts was a decision in May 2006 to sell the current campus and purchase the former Schlumberger research campus.

Campus relocation is part of our larger vision for Concordia that involves four additional strategic directions: academic excellence, increased partnerships, improved work environment and financial stability. Taken together these directions provide a framework to accomplish and sustain Concordia’s mission to develop Christian leaders. The outcome of this mission is that our students will be courageously engaged in the world serving their communities and churches as lay leaders or professional church workers.

Ultimately, the relocation is about our students and their collegiate experience. We want them to have access to an excellent Christian education, be involved in an active campus life and develop as Christian leaders. The relocation is also about improving service to our church and community. We feel that moving to a site that provides better facilities and more space for our students, faculty and staff will enable us to improve current programs and provide an unprecedented opportunity for expansion and growth.

We invite you to dream with us as you read through this booklet and see the future of Concordia University at Austin. We ask for your prayers as we move forward in our mission to develop Christian leaders and our vision to be recognized as an institution of integrity, academic excellence and Lutheran ethos.

Dr. Thomas Cedel
President
Concordia University
Austin, Texas



2



3

LETTER FROM THE VICE PRESIDENT

Dear friends:

Moving can often be an adventure. While some people might be excited to change their residence, many find packing and unpacking disruptive and exhausting. You can see these mixed emotions in the lives of our college students each fall and spring as they move in and out of campus housing lugging boxes, clothes and suitcases.

Now imagine the emotions and challenges involved with moving an entire university. How do you literally pack Concordia's bags after 80 years and seamlessly move the school down the road with minimal disruption? What will it be like to live and work at the new location? How will the move change the school?

After a comprehensive multi-year study on managing enrollment growth, the Board of Regents of Concordia University took a visionary step of faith in May 2005 and authorized moving the campus. The decision sets before the school a host of challenges and opportunities. While exciting, relocation requires visionary planning and coordination to succeed.

Concordia's new home will provide a unique opportunity to strengthen its mission and ministry—developing Christian leaders. New facilities will enable the school to expand programs and grow the residential population. Additional land will give the school more

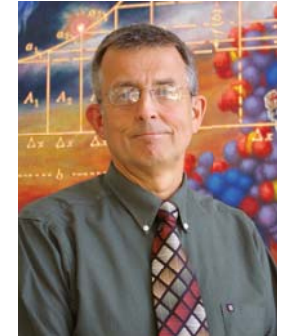
flexibility in the future to add programs and services. This is an unprecedented opportunity to reshape Concordia and position it to thrive.

The master site plan presented in this booklet represents a physical vision for Concordia University over the next 30-40 years. It is the result of extensive research and planning by a skilled team of professionals. The plan is designed to make the most effective and efficient use of the land the Lord is providing to the school at the new location, while preserving its inherent beauty and environmental integrity.

I believe as you explore the master site plan you will catch the dynamic vision for Concordia University and the optimism we have that the relocation will strategically position the school for unparalleled growth and success. The Lord has truly blessed Concordia University in the past 80 years and is opening to us an exciting and exhilarating new chapter in the school's history!

Rev. Dr. David Kluth

*Vice president – University Services
Head of Relocation
Concordia University
Austin, Texas*



4

FIGURE 3

Former cruciform from Concordia Lutheran College era.

FIGURE 4

*Rev. Dr. David Kluth,
Vice President — University Services*

I. INTRODUCTION

FIGURE 1 RELATIONSHIP OF CAMPUS PLANNING TO STRATEGIC PLANNING

Aerial view of the existing Austin Hill Country Reserve Site (formerly Schlumberger Austin)

Campus planning and strategic planning express the aspirations of the University in concrete terms. Both provide a vision for the institution; while one relates specifically to the quality of the physical environment, the other relates to the quality of the institution as a whole and seeks to:

- *Establish goals for the University;*
- *Enhance the institution's stature; and*
- *Define the basis and demonstrate a need for a capital campaign to support the campus plan and the strategic plan.*

These thoughts could be applied to either campus planning or strategic planning. The important distinction is that the intent of the Campus Master Plan is to support the strategic plan. Practically speaking, the campus plan should be a representation of the strategic plan in its physical environment.

Concordia University has set forth its intent to develop Christian leaders and to be recognized for academic excellence through its strategic plan, *Toward 2010*. To attain its goals, the University will utilize not only the institutional strategic plan but also an effective campus plan. *Toward 2010* develops the mission and vision as follows:

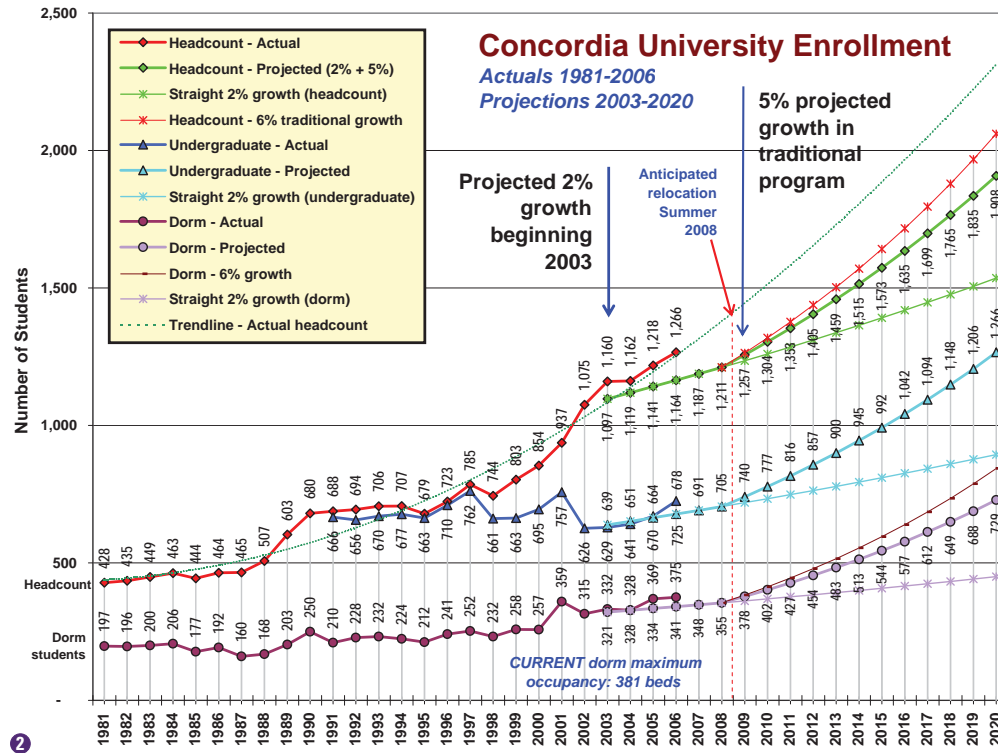
The Vision of Concordia University:

1. *Concordia understands clearly that our students, graduates and alumni are the key to accomplishing our mission and vision.*
2. *Concordia will be an institution that models integrity.*
3. *Concordia will be a university that prizes academic excellence based on student learning.*
4. *Concordia's Lutheran ethos frames its view of its mission and the world.*

The Mission of Concordia University:

1. *Developing and teaching a curriculum designed to accomplish our mission.*
2. *Modeling Christian leadership as a faculty, staff and administration.*
3. *Providing opportunities for our students to practice Christian leadership.*
4. *Recognizing Christian leadership.*





2

The Campus Master Plan most directly affects those goals that relate to the enhancement of the quality of the physical environment. The question, then, is how can a campus plan support the other goals of the Strategic Plan?

The ability to attract and retain faculty depends on many factors. The opportunity to engage in faculty-to-faculty and faculty-to-student scholarly exchange in a variety of settings—in short, the sense of an academic community—is a major consideration. Such exchanges take place in classrooms and labs, but they also frequently take place in the indoor and outdoor public spaces that describe the true nature of the campus community. It is these public areas in

conjunction with the physical proximity of different academic areas that begin to make interdisciplinary teaching and research possible on campus. The public realm is the portion of campus most effectively addressed by the Campus Master Plan. The goal is to create a teaching and learning environment that enhances opportunities for academic excellence.

The relationship between Concordia and the surrounding community plays a role not only in the recruiting and retaining of faculty and students, but in the ability to enhance their experience at the university as well. Because Concordia University will physically be distancing itself from downtown Austin on its new site, the University must develop that sense

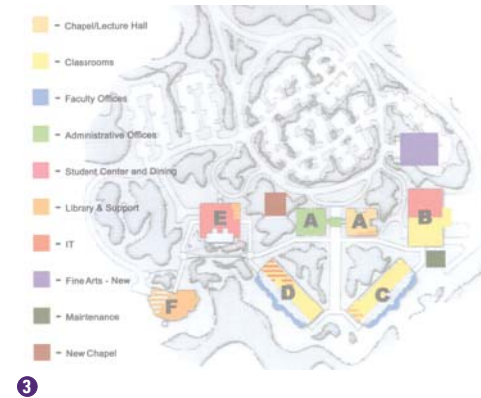


FIGURE 2
 Concordia University's enrollment projections through 2020.

FIGURE 3
 Preliminary Campus Plan (from the Due Diligence Report).

of community within itself. The Campus Master Plan explores opportunities to reinforce the sense of community both on the campus and through its physical relationship to the surrounding community.

The quality of the campus environment, its relationship with its surrounding community, and the effectiveness of its teaching facilities all have a direct link to the strategic vision of an institution. The Campus Master Plan is a manifestation of that vision reflected in its physical environment. Perhaps the greatest attribute that a university must have to enable the Campus Master Plan to fully support its Strategic Plan is *leadership*: leadership that understands the vision of both plans and how they are related, as well as a commitment to developing a process that will ensure the success of both the Campus Master Plan and Strategic Plan.

FIGURE 1 PURPOSE OF THE PLAN

Kilian Hall on the downtown campus

FIGURE 2

Monument sign on the downtown campus.

The Campus Master Plan is intended as a strategic and tactical guide for the physical development of the campus over the next thirty to forty years. The plan recommends a campus development policy that brings the physical environment into alignment with the academic and social mission of the University. It is a framework that will need further development over time. The plan is intended to enhance the quality of campus life at the new location.

Planning Process

A Strategic Planning Committee was formed in 2002 to develop a vision and strategic plan to accomplish Concordia’s mission—*developing Christian leaders*. The committee meets annually to review and update the school’s strategic plan. In 2005, a Cost Analysis Task Force concluded that the best option would be to sell the existing campus and use the proceeds to build a new facility. Later that year, a Site Selection Committee was formed to review potential properties and make recommendations. After an extensive search, they recommended a site known as the *Austin Hill Country Reserve*, formerly owned by Schlumberger. In July 2006, Concordia hired HS&A to provide project management services. A due diligence report was produced, verifying the site as appropriate, affordable and cost effective for the relocation of the university. Concordia and HS&A determined that a Campus Master Plan was a wise investment of time, providing a thoughtful guideline for all future development on this site. The due diligence report and Concordia

documents: *Toward 2010, Beyond 2010* and *Toward 2015*, were referenced in the production of this plan.

GOALS OF THE PLAN

During the campus planning process, a series of goals were articulated by the planning committee. The first priority was to achieve an immediate presence for Concordia while adapting the new site to the functions and needs of a college campus. The governing principal for the new site and facilities is *stewardship*. In practical terms, this concept informs the Master Plan with an approach to protect, strengthen and enhance what is existing as well as informing future development.



1

1. Establish campus identity

There are several steps required to assure that in 2008 the site will become Concordia University in more than name. A symbolic reinforcement of the main entrance at the intersection of Concordia University Drive and RM 620 would welcome new visitors. Iconographic elements brought from the downtown campus to the site will be welcome reminders of the University’s rich history. Architectural and site design guidelines which inform the development of building and site will re-



2

inforce a recognizable character of place.

2. Establish campus community

The physical setting should reinforce the sense of community desired for a college campus. Proximity and connectivity are important to facilitate that feeling of community. The campus should be a compact, cohesive environment, which maintains a deep regard for the rural character and natural setting of the site.



3

3. Establish connectivity

Already introduced as a component of community, connectivity needs to be established between academic, student life, athletic and residential areas as well as between the campus and the community-at-large. Architectural cues can reinforce the feeling of a campus connected—a dynamic pedestrian environment, consistently used materials and clear signage contribute

toward a unified campus.

4. Create architecture that contributes positively to the campus community

The University inherits a building complex of well-executed, quality buildings that can be readily converted to academic use. These buildings establish a design language—materials, glazing patterns, proportions, walkways and siting approaches—for new construction. The Master Plan recommends the commitment to the site to extend and complement what is positive about the existing buildings, using a palette of compatible materials and approaches.

5. Promote open space to define Concordia’s initial campus identity

Landscape development can be a cost-effective means to create edges and boundaries to define open spaces which will help establish and define the campus image and legibility. These open spaces will also determine the character of various parts of the University.



5

FIGURE 3

Concordia University students gathering informally.

FIGURE 4

View toward Nelson Plaza from the Beto Math and Science Center.

FIGURE 5

Procession at the downtown campus.

6. Establish an accessible, pedestrian campus

Initially a majority of the campus population will commute by car (until public transportation is available along RM 620 and additional campus housing can be built). The goal is to rationalize the circulation patterns, keep private cars behind vegetative screening, and make the campus accessible and pedestrian-friendly.

7. Promote sustainability

The campus, while generous in size, has finite usable land and resources. The goal is to promote sustainability by teaching, planning and acting in an environmentally sustainable manner—to demonstrate *stewardship* as a fundamental principle of Concordia University.

8. Develop a supportive process

The aim is to develop a process that enables the attainment of the above goals in a transparent, inclusive



4

FIGURE 1 COMMUNITY AND THE CAMPUS MASTER PLAN

View across the pond in the nature preserve

The development of a campus master plan is an important event in the life of any institution. The Campus Master Plan for Concordia University is especially so, coming as it does at the milestone transition between a downtown urban campus and a new location at a site formerly known as the “Austin Hill Country Reserve”.

In fulfillment of its Strategic Plan, the decision and commitment of Concordia University to move from its historic home in central Austin to the western edge of the city is an extraordinary and courageous undertaking. Supporting this decision, the Due Diligence Report confirmed the reasonable adaptation of the existing buildings to current requirements of classroom, faculty and administrative use. Not only does the site offer expansion capability, it offers possibilities for less tangible, but no less valuable, new attributes to the University.

Everyone who visits the site is taken with its exceptional natural beauty and character. In fact, a significant portion of the acreage (250 acres) is secured in a native habitat preserve, viewed by the University as an asset to its mission. Although it brings restrictions to the development of the site, it serves as a backdrop to the campus and as a living classroom with potential curriculum opportunities to explore.

While these circumstances are inherently favorable, the University must proceed with caution while trans-



1

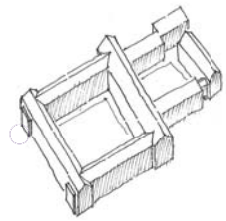
forming the buildable site into a working academic campus. At first glance, there would appear to be potential conflict between the future use and the natural rural character and attributes of the site.

The development of parking, athletic facilities, future buildings and roadways must be scrupulously planned in concert with established guidelines in order to maintain and preserve the very characteristics that impart to the site its special character.

This is the power of a Master Plan: *to facilitate and articulate a vision for the future of the campus and provide the way to achieve its full potential while staying*

true to its existing principles—to protect and preserve the environment and the site.

Concordia University is also part of a larger context of American educational institutions. Indeed, there is a long tradition of both American campuses and American campus planning, and it is useful to consider Concordia within the context of that larger framework.

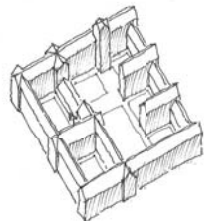


2

CAMPUS DESIGN

Campus design is the design and management of the public realm rather than the private realm of individual buildings. Therefore, the most important lesson of campus planning is that precise control of public space which allows flexibility and change in individual buildings is the principal instrument of physical planning. In other words, it is the pattern of campus open spaces—plazas, courtyards, greens, walks and streets—that provides the civic setting for individual buildings and for our most evocative memories of campus life.

Our best campuses are neither purely urban nor purely pastoral, but a rich blend of buildings, landscape and civic space. However, the location of a university relative to the surrounding community can affect the major form its civic structure takes. Urban campuses tend to have dense, formal arrangements of large buildings, and exterior spaces, both of which are often determined by or determine the alignment of city streets. Semi-rural or suburban campuses are often less confined by their environment and are typically less dense, but may still

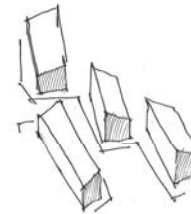


3

retain the formality of symmetry and axial arrangement. Rural campuses such as Concordia's new campus, are usually the least dense and at times the least formal, allowing the character and features of the site to greatly determine building size, placement and the configuration of outdoor spaces.

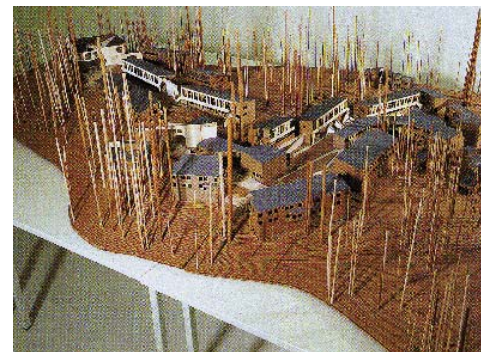
In relocating to the Austin Hill Country Reserve, Concordia University has the opportunity to develop a variety of campus experiences for its students and faculty. The Campus Master Plan indicates four distinct districts—academic, student life, residential and athletic. Each of the districts is comprised of open space and buildings which define its nature and personality.

The plan recognizes the more formal pattern of existing buildings in the new academic district and develops a variation on the traditional academic quadrangle in the 'green' between those and future classroom buildings. The siting of the original buildings on the ravine edge allows that formality to progressively diminish as new



4

buildings and public spaces are added to the south in an organic yet organized composition creating a pattern of outdoor spaces—the public realm. Consequently, the residential district, as the terminus of this progression, will resemble a village of smaller buildings established around more intimate common spaces.



5

FIGURE 2

Diagram of a residential college in an urban setting, characterized by higher densities and highly formal arrangements of larger buildings.

FIGURE 3

Diagram of a residential college in a semi-rural or suburban campus setting characterized by less density and some formal symmetry.

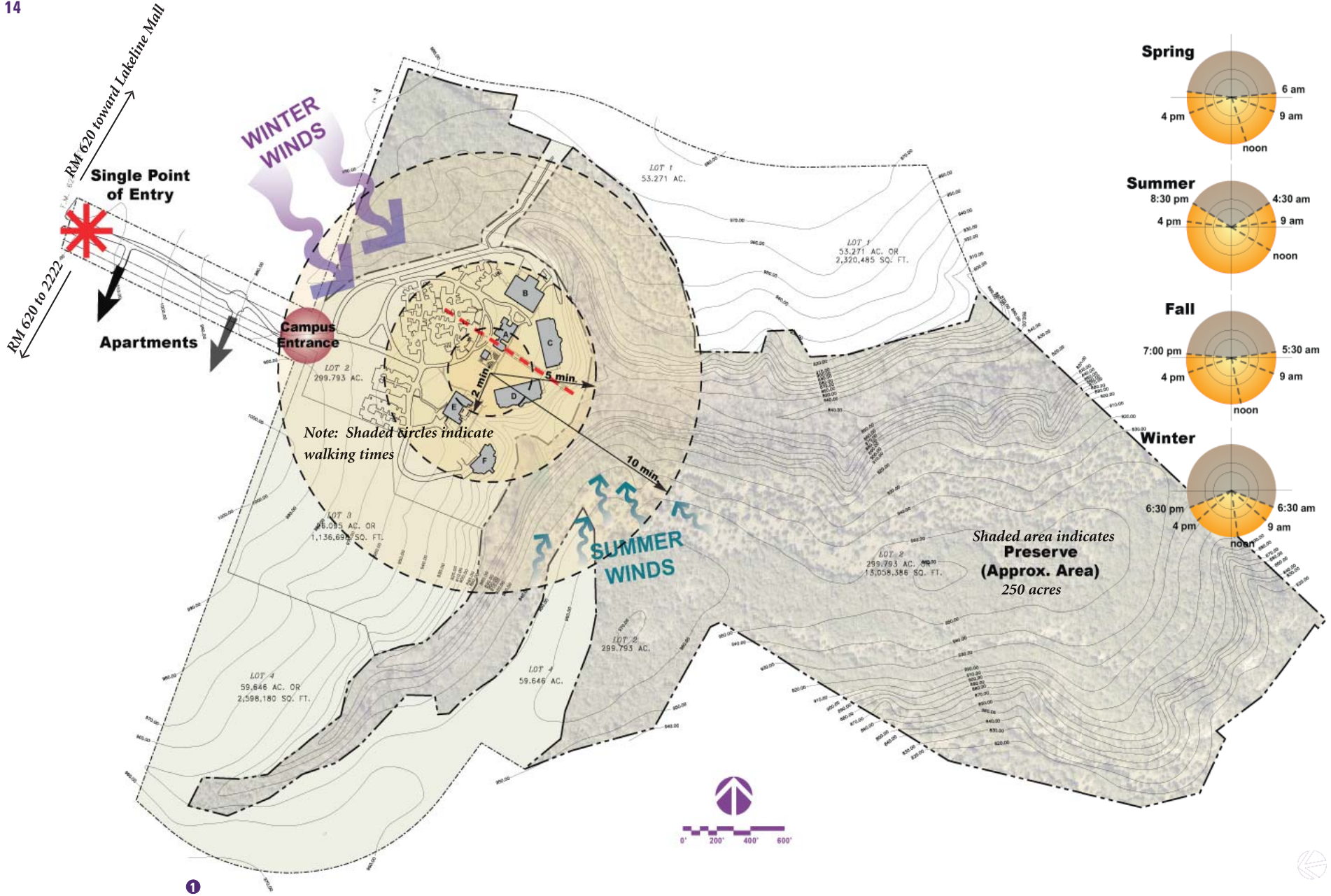
FIGURE 4

Diagram of a residential college in a rural setting characterized by its informality and organic siting of buildings. This diagram most relates to the Concordia Hill Country Reserve campus.

(Figures 2, 3 & 4 reference drawings by William Rawlin in his book [Architecture for the Public Realm](#).)

FIGURE 5

Model of Kresge College at University of California - Santa Cruz by Charles Moore - a campus informally arranged on a sloped site.



II. ANALYSIS

OVERVIEW

The Schlumberger Austin Systems Center was a forward-thinking corporate facility designed for a natural setting. It manifests considerable sensitivity to the native landscape and helped forge a new sensibility in site development for corporate facilities. The design is environmentally responsible—occupying just twenty acres of a 438 acre site.

The existing buildings were placed deep into the site to create a crucial buffer between the outside world and the corporate environment. The main body of the site is approached by a long access road from RM 620 that provides no hint of building type or location. Their campus was not a place for the public, but rather a corporate setting.

The site itself is typical of the Texas Hill Country. The main developed portion sits on the west side of a ravine. Cedar coverage is ubiquitous, hiding some specimen live oaks. The ground is rough with limestone bedrock out-



2

3

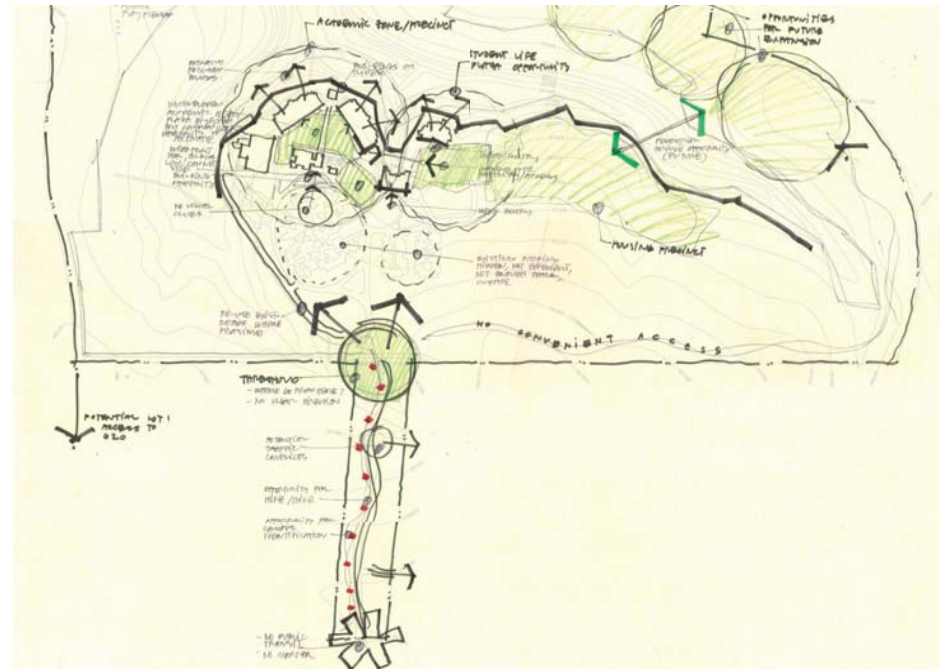


FIGURE 1

Site analysis studying physical characteristics and natural features.

FIGURE 2

View of existing site.

FIGURE 3

Preliminary sketch studying characteristics of the existing site.

croppings covered with native grasses.

The complex is comprised of buildings that are crisp symmetrical box-like volumes with long and low proportions. They have flat roofs with parapet walls which silhouette a series of gabled metal roof penthouses and skylight monitors. The fenestration has very little depth, placing emphasis on the wall surface.

A series of covered walkways and porches add scale to the buildings. Access to the facilities and site was highly controlled. A central covered walkway bisects the main open

space between structures. The impression is that the site was to be viewed from the buildings and not experienced on the ground. The existing connections between buildings are underdeveloped.

The site offers enormous challenges and opportunities for transformation from a corporate environment to a collegiate environment. Its many assets point the way for future use and redevelopment.



FIGURE 1

The bell which used to hang in the Kilian tower, brought by the Wends in 1854, stands in front of the Chapel on the downtown campus.

FIGURE 2

The mature landscape of the new campus is an integral part of the rustic quality and beauty of the new campus.

FIGURE 3

Plan of the existing downtown campus overlaid on the Austin Hill Country Reserve site.

1

THE NEW CAMPUS

Concordia University is beginning a unique relocation and expansion process within higher education. Many American campuses find themselves with a need for significant new expansion, but have finite, nonexpandable boundaries and large areas of incoherent buildings and spaces. Rather than try to create more space at its current, confined location, Concordia University has chosen to move its entire campus to the relative openness of the Austin Hill Country Reserve site. This Campus Master Plan is intended to reinforce the positive aspects and correct the negative aspects of the existing campus based on the conditions found on the new site.



2



3

Positive attributes of the existing Austin Hill Country Reserve site:

1. Existing buildings are carefully sited along a ridge to take advantage of the views to the nature preserve.
2. There is an architectural legacy on which to build and from which to draw inspiration.
3. There is substantial undeveloped open space.
4. There is a clear foliage screen around existing parking that can be expanded and developed.
5. There are numerous places on the new campus that people may find peaceful and beautiful.



4

Negative attributes of the existing Austin Hill Country Reserve site:

1. *There is a disconnect between the pathways and the site. People are not encouraged to engage with the site or step off the path.*
2. *Mechanical yards have been located in open spaces. They are unsightly and loud.*
3. *Existing building entrances do not encourage interaction with the site.*
4. *Wayfinding is difficult. There are no vertical features to orient visitors to the site.*



5



6



7

FIGURE 4

Buildings are sited to take advantage of views to the ravine and nature preserve.

FIGURE 5

A substantial wooded buffer exists to shield the main drive from the parking area.

FIGURE 6

Existing parking is circuitous and obscured creating security concerns.

FIGURE 7

Mechanical equipment enclosure is located in the center of a major open space. It is large, unsightly and loud.

FIGURE 1

Wisteria, while beautiful, has weakened the trellis-covered walkway structures.

FIGURE 2

The entry to Building E does not have an appropriate pedestrian connection to the rest of the campus.

FIGURE 3

There is no existing visible presence on RM 620.



1



3



2

Site Observations:

1. There is an opportunity to establish a University identity at RM 620.
2. Due to the length of the entry drive, visual cues (e.g. appropriately spaced stanchions with University banners) should be installed to continue the entry sequence from RM 620 to the main body of the campus.
3. A new clear loop road system should be part of the campus development since the existing road system is disorienting for visitors.
4. With the number of cars anticipated to be on campus, the existing parking area will require a more efficient configuration and additional spaces.
5. In order for the open space between Buildings C and D to serve as an academic green, cedars and brush should be cleared.

Building Observations

1. Given Building A's new use as an admissions center, some foliage should be cleared in order for it to become more visible.
2. Since Building B is to house the Student Center, there is an opportunity to activate its south face with covered walks and new fenestration.
3. To promote activity in the academic green, more paths between Buildings A, C and D should be provided.
4. Building E is to continue as a food service facility. However, it is expected to receive many more users from multiple directions. It is recommended that all entrances be welcoming and accessible and the utility area screened.
5. Because Building F is slated to become the library, a clear legible entry from the southwest should be developed. This will enhance the pedestrian activity on the Student Life Plaza. Additionally, there is an adjacent, noisy mechanical enclosure that should be relocated.



4



5



6



7

FIGURE 4

Pedestrians are not encouraged to engage the site.

FIGURE 5

Building A is hidden by significant overgrowth.

FIGURE 6

The 'back' of Building F will become a major public face.

FIGURE 7

Rooftop and mechanical equipment is poorly located and screened.

FIGURE 1 REGULATORY INFORMATION
The existing plan with Critical Environmental Features and Water Quality setbacks noted.

Planned Development Agreement

A Planned Development Agreement (PDA) with the City of Austin has been recently amended to allow for college use. It addresses:

- Building heights are restricted to 60 feet; buildings taller than 40 feet must be at least 300 feet from residential units.
- All signs must comply with City of Austin code. All signs must be berm or monument signs and constructed of materials compatible with the surrounding environment. Signs must not be located within 100 feet of a residential lot, on posts, poles or buildings or internally lit.
- Impervious cover is limited to 50% in areas having a slope gradient of 15% or less. Impervious cover is prohibited in areas with slope gradients greater than 15%.
- Building setbacks must be 100 feet along the entire property line.
- Floor-to-area ratio for the entire site must not exceed 0.25 to 1 and calculations do not include parking garages.
- Parking must comply with City of Austin codes.

Parking

The Lake Austin Watershed Ordinance prohibits the construction of roadways on slopes over 25%, except to provide access to an area with slopes of less than 25%. Roadway locations are also expected to maximize preservation of natural topography to the greatest extent possible, and minimize cut and fill.

Water Quality

The areas surrounding the Highland Lakes and the Edwards Aquifer have always held a special place within the Central Texas community. The Concordia campus is situated near the Highland Lakes system near the headwaters for Bull Creek. Bull Creek is a particularly beautiful natural area, which has been protected over the years by stringent water quality regulations and endangered species preserves. Much of this campus and the land downstream to Bull Creek's confluence with the Colorado River is preserve area. This makes protecting this site and the downstream area critical.

Water quality can be handled in many ways including physical, *structural* facilities or through *passive* (non-structural) techniques. Water quality strategies are constantly evolving, which will allow future phases of construction to utilize the most advanced methods feasible while protecting the environment, water quality, vegetation and the natural beauty of the campus.

Each phase of development will have its own constraints—slopes, large trees, view corridors, and adjacent housing, e.g. The design team must reevaluate the drainage area and sub-area each phase to determine the best, most practical and feasible water quality practices.

Current water quality options include: vegetative filter strips, sedimentation/filtration, re-irrigation, bio-filtration, extended detention and wet ponds. Care should be taken to not just meet, but to exceed the applicable regulations where feasible. View corridors, safety and long term maintenance will also be factors in determining the best water quality option. The design team should strive

to recommend the best solution for the environment and for Concordia, its faculty and students.

Utility Corridors

Various utilities will be required to service relatively unseen needs, such as domestic and fire water supply, wastewater, storm drainage, natural gas/heating, electric service, phone, cable, and internet. These utilities provide critical support for the daily operation and life of the campus. If well planned and constructed, they will rarely be noticed (or modified) once installed.

Utility corridors should follow permanent roadways and vehicular access areas that are not designated for future vertical construction. This will minimize future re-alignment and allow convenient access and maintenance.

The location and size of each utility should be discussed in detail with Concordia representatives, project managers and architects to assure the needs of current and future phases are being met. Utilities should be located to minimize disturbance of significant existing natural features and vegetation that add significant value and character to the campus.

Phase I

Due to the limited new construction and modifications to existing parking areas and buildings planned for Phase I, the use of *passive* systems for water quality should be considered. Potential passive systems include berms, swales, vegetative buffers and infiltration trenches. They would eliminate the need for *structural* systems until future phases are proposed and campus needs increase, reducing the cost and environmental impact to Phase I.

FIGURE 1

The Campus Master Plan is seen as a series of interconnected open areas including:

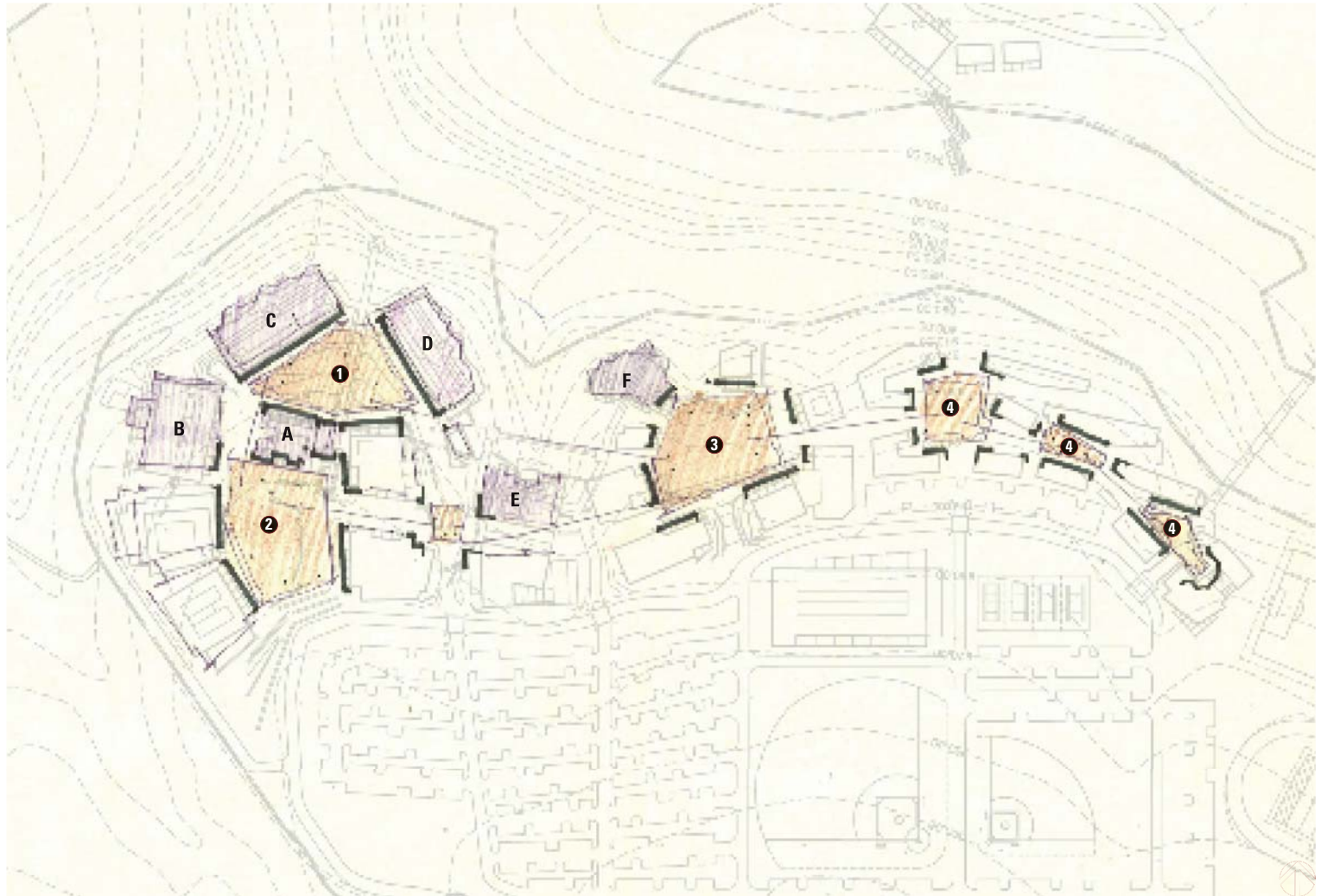
Academic green (1)

Entry green (2)

Student life plaza (3)

Residential courtyards (4)

The academic green and the entry green are part of the learning district. Existing buildings A, B, C and D are a part of this district. Existing building F is a part of the student life plaza. The heavy black lines indicate the 'build-to' lines—essential to maintain the specific shape and character of each open space.

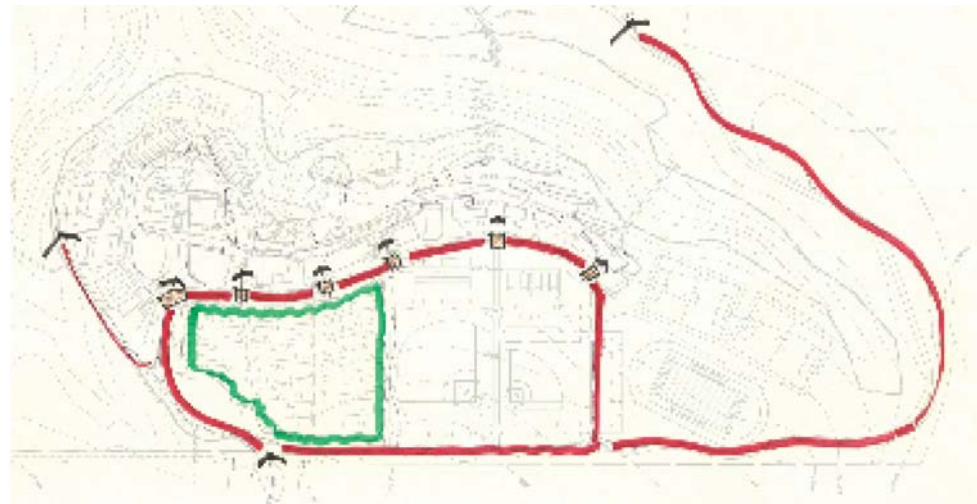


III. CAMPUS PLAN

OVERVIEW AND ANALYSIS

The main components of the Campus Master Plan are: major recommendations and components, the architectural plan, principles and guidelines, and the site design criteria and guidelines.

The campus was studied in several ways. The overall *parti*, or organizational principle for the plan, is to continue working with the original concept for the site, placing buildings carefully along the ridge. Different districts were identified to provide order and organization to the campus as it grows. A series of differentiated open spaces were designed which will provide a variety of experiences traversing the campus. Pedestrian and vehicular circulation routes were studied and the determination made to develop a loop road for vehicles and to keep the pedestrian area of the campus separated, as much as possible.



4

FIGURE 2

The site 'parti'—buildings along the ridge.

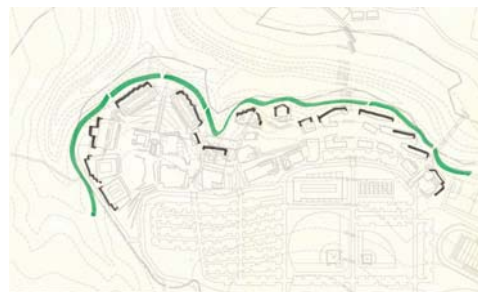
FIGURE 3

The campus is organized into four distinctive districts:

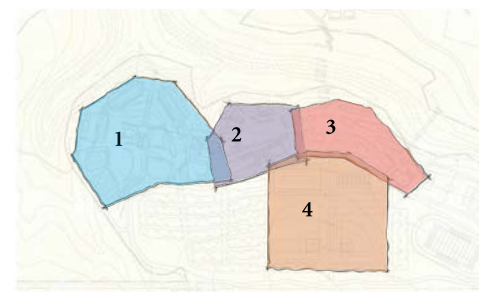
- (1) Learning
- (2) Student Life
- (3) Residential
- (4) Athletic

FIGURE 4

A loop vehicular road (in red) with specific nodes for crossing into the pedestrian zone. A green zone of trees is indicated around the parking for screening purposes.



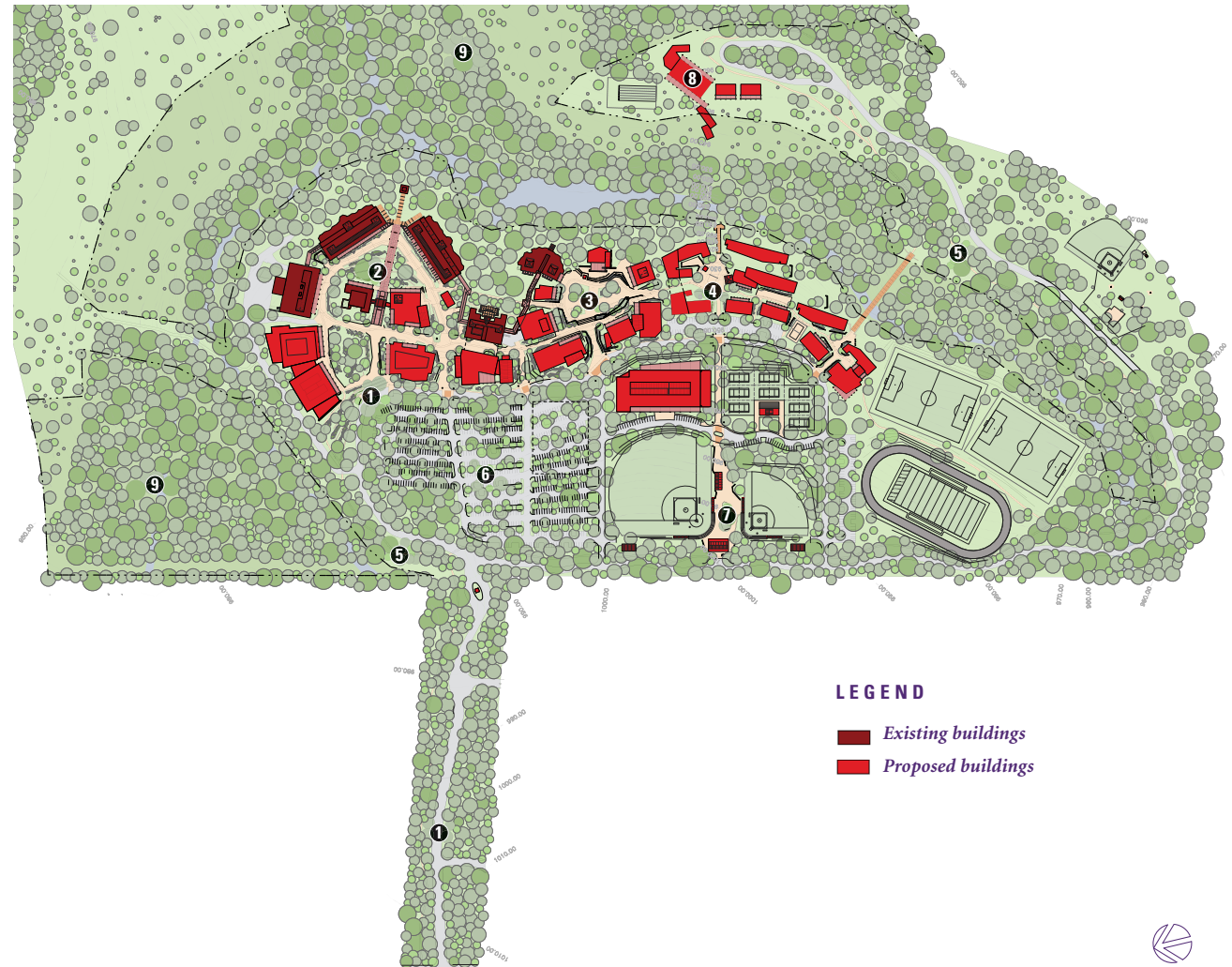
2



3

MAJOR RECOMMENDATIONS OF THE PLAN:

- *Preserve, enhance and extend the best qualities of the existing buildings and landscape.*
- *Control the configuration and future development of the academic portion of the campus.*
- *Transform the corporate campus into an academic campus by strategically defining open spaces between existing and proposed buildings.*
- *Establish building development districts and potential density.*
- *Differentiate vehicular and pedestrian circulation.*
- *Develop desirable surface parking configuration and capacity while preserving the character of the native landscape.*
- *Minimize the environmental impact of the athletic district and playing fields.*
- *Establish a presence of Concordia University at RM 620.*



LEGEND

Existing buildings

Proposed buildings



MAJOR COMPONENTS OF THE PLAN

1. New main drive and entry green;
2. The learning district and green;
3. Chapel and Student Life Plaza;
4. Residence halls and residential courtyards;
5. Pedestrian walks—hike and bike trail
6. Parking
7. The Athletic District and playing fields
8. The Retreat Center
9. The nature preserve

1. New Main Drive and Entry Green.

The intent is to provide an appropriate ceremonial main entry to the new Campus.

It is recommended for this area to utilize a series of architectural and site design components which are intended to be not only functional and ceremonial, but also appropriate for a collegiate environment. These components should be introduced at the RM 620 intersection and track through the campus as identifying markers in the landscape. They could take the form of lighting/signage stanchions and lighting bollards alongside a hike and bike trail.

At the highway intersection, a major sign for Concordia and a small transit pavilion (for Capital Metro) are proposed to support the visual identifi-

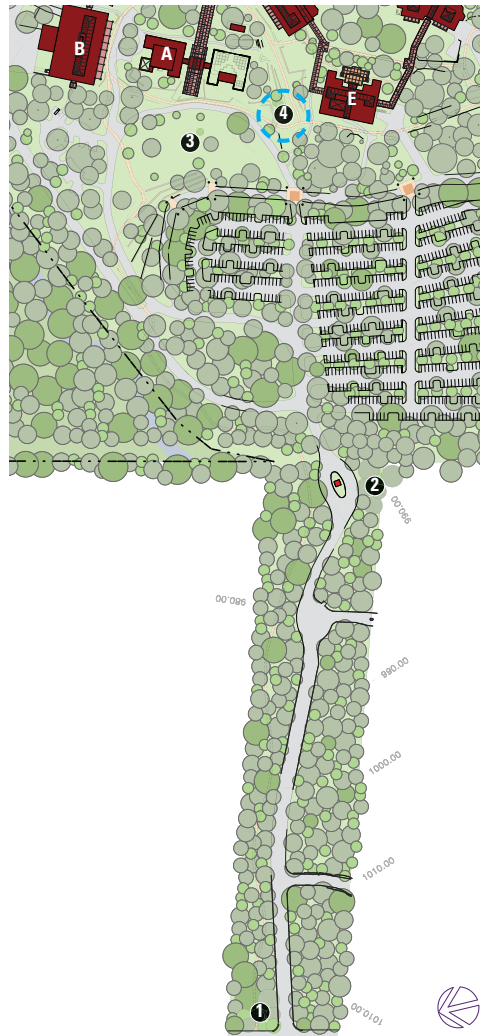


FIGURE 1

Long range campus plan with the major components indicated.

FIGURE 2

Enlarged plan of Phase I improvements to the entry drive and front entry green.

- (1) Location for entry sign and future transit stop.
- (2) Location for Welcome Center/ Security Center
- (3) Entry green
- (4) Site for the relocation of the statue of Martin Luther, currently at the downtown campus.

FIGURE 3

Sketch of the front entry drive at RM 620.

FIGURE 4

Conceptual sketch of signage and lighting bollards

FIGURE 5

Aerial sketch of the entry and academic greens.

FIGURE 1
Enlarged plan view of the Entry green and administration buildings in the Phase I plan.

FIGURE 2
Enlarged plan view of the entry green and administration buildings in the long range plan.

FIGURE 3
Aerial sketch of the proposed entry and academic greens.

LEGEND
 Existing buildings
 Proposed buildings

cation of the campus. At the junction of the entry road and the main body of the campus, a welcome center/ security center is proposed. The design and construction of each of these components should be consistent with the architectural and site design criteria guidelines and enhance the rural character of the site.



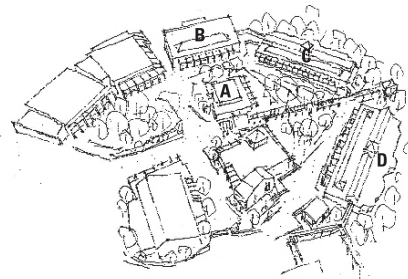
The intent of the entry green is to clarify and strengthen the arrival sequence to the campus. This central open space at the northwest corner of the learning district

concludes the main entrance vehicular approach and serves as an organizing element and future principal hub to the campus. Initially this green will be quite large and open. Over time the size of the green will get smaller as new buildings are constructed. Regardless of its size, the green will be the *front yard* to the university opening views to the administration building(s) and providing a visual connection to the main entrance, currently obscured and difficult to locate.

2. The Academic Buildings & Green.

In the long range plan, the administration building expands on the south side with an addition facing the entry green. The adjacent buildings will be the first seen when arriving—their position at the entry makes them important future projects.

The existing buildings will house the majority of



classroom, student life, faculty and administration requirements in the Phase I development which will be a considerable expansion of use from its previ-

ous life. There is also potential for an intense activity and interaction to occur in the open space between these buildings (the academic green). Consequently, connections between these buildings should be conceived as an outdoor room assuming the role of a campus quad which supports and promotes a vibrant pedestrian experience. The development of this open space is one of the most important initiatives available to transform the existing complex into the new Concordia University campus.

Photographs of this space taken during the opening of the Schlumberger complex indicate it was intended to be pastoral—featuring specimen live oaks with broad areas of field grass. Subsequent unchecked cedar growth has now cut off sunlight to the field grasses creating a dense thicket. This condition restricts pedestrian traffic across the area. The center trellised walk divides the open space and tends to limit the outdoor experience and circulation between buildings to its confines. Even initially, it is imperative that this space serve the needs of students for convenient access to the academic and administration buildings. It should be crossed with pathways and should have places to pause between classes and enjoy the character of the site.

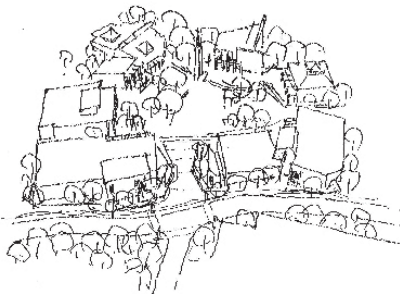
Existing trellis structures along the inner side of buildings 'C' and 'D' are underutilized. They should be completed into actual walkways which would provide access to classrooms and faculty offices. The trellised walkways are elements that could potentially be expanded throughout the campus.

The Academic Green connects to the Entry Green on its north end. On the south end of the Green, pedestrian walks lead to student dining, the library, the future Student Life Plaza and chapel.

The space, as it becomes redeveloped, will have the potential to become one of the iconographic images of Concordia University—suggesting the quality and nature of its community and its vibrant life in the new setting.

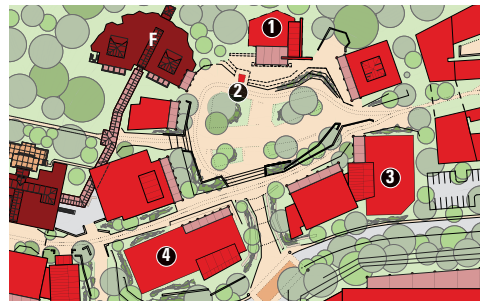
3. Chapel and Student Life Plaza.

This proposed plaza is seen as the principal student gathering space on campus. Therefore, it should have a higher percentage of hard surfaces than other open areas. Further, there is potential to develop the natural terrain on the eastern edge into an amphitheater facing the main façade of the chapel. The shape of the space is a critical design element that responds to the natural terrain and informal Hill Country setting and



is defined by the surrounding buildings.

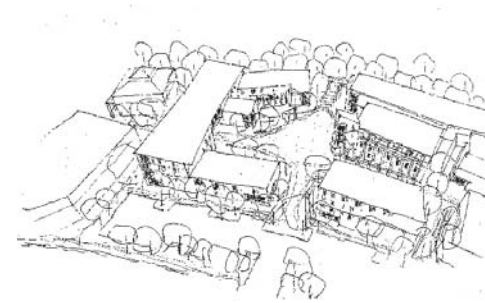
A free-standing bell tower is proposed for the Student Life Plaza to provide a key vertical orienting feature and to signify the importance of this plaza—the spiritual and religious heart of the campus. The proposed buildings to the north would receive porches and would define a plaza edge roughly in line with Building F, the library. The library’s exterior will require renovation to address its new function and position on campus. A more prominent entrance is recommended.



The main pedestrian route emerges between two proposed buildings on the north end of the plaza and continues toward the residential district to the south. On the west, a gateway between two buildings provides access to the inner campus drive and the athletic district beyond. The east side of the plaza opens to a view of the native landscape and preserve, with the exception of the chapel. This allows the chapel to stand apart as one of the most significant buildings on campus, framed by the natural landscape.

4. Residence Halls and the Residential Courtyards.

There is a scale change in both buildings and open spaces as you go from the academic green, through the Student Life Plaza, to the residential courtyards. One aspect of this change is a more intimate and domestic scale for the residential courtyards and buildings. The three courtyards within the residential district each have distinct characteristics and may be phased for independent development.



The main courtyard is approached through large residential building blocks on the north. It contains a cross axis leading to an overlook on the east and the athletic district on the west.

The middle courtyard is simply a widening in the main pedestrian path defined by buildings on the east and west. It creates a very different spatial experience than the larger, more dynamic courtyard to the north.

FIGURE 3
Aerial drawing of the Student Life Plaza.

FIGURE 4
Enlarged plan drawing of the Student Life Plaza with major components identified as:

- (1) Chapel
- (2) Bell tower
- (3) Student center
- (4) Performing arts center
- (F) Library

FIGURE 5
Aerial drawing of the Student Life Plaza.

FIGURE 1

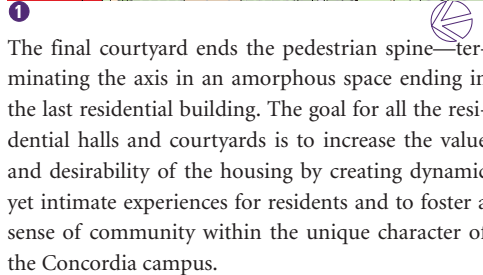
Enlarged plan of the residential courtyards and proposed pedestrian bridge.



FIGURE 2

Enlarged plan of the inner campus drive loop with pedestrian crossings indicated.

(1) Proposed location for a structured parking.



The final courtyard ends the pedestrian spine—terminating the axis in an amorphous space ending in the last residential building. The goal for all the residential halls and courtyards is to increase the value and desirability of the housing by creating dynamic yet intimate experiences for residents and to foster a sense of community within the unique character of the Concordia campus.

5. Pedestrian Walks and a Hike and Bike Trail

A majority of the walkways on campus are designed to be dedicated to foot traffic, while meeting all emergency access requirements. These walks enliven the pedestrian experience by varying narrow paths with broad, bright open spaces and further reinforce the character and nature of the campus.

A hike and bike trail would provide a valuable asset to the new campus. The circuit meanders through the existing complex and the future expansion areas of campus, connecting facilities to each other and



the surrounding nature preserve. The materials may vary from macadam/asphalt to decomposed granite, depending on location and conditions. It would be a cost effective, low impact, yet highly visible and desirable component to the infrastructure of the campus.

6. Parking and the Inner Campus Drive Loop

The campus is planned for future development towards the south following the ridge line. For the first phase, a portion of the existing road can be used and extended to create the inner campus drive with

an interim termination at the athletic district. In the future the drive is planned to link with a new road on the western edge of the site which loops around the complete athletic complex back to the entry drive. A spur heads south and east to the future Retreat Center site across the ravine.

The expanded parking area takes up the northern end of the loop drive while the eastern edge of the loop road is defined by buildings. It is recommended to leave a substantial wall of existing trees around the entire parking district that will screen the parking from the drive. Periodically located along the



3

eastern drive are designated pedestrian crossings. The buildings along the eastern edge reinforce these punctuations with points of access to the Student Life Plaza and the residential courtyards. The loop road is designed to reinforce the concept of a pedestrian academic village nestled informally along the ridge. Further analysis and design guidelines for streetscape standards should be developed.

The expansion of parking is one of the most critical design issues in the development of the University campus. The expanded parking could potentially depreciate or obliterate the desired experience of the natural setting and instead create an impression of further suburban sprawl. The materials, layout, lighting and construction details should be scrupulously reviewed for environmental impact. Opportunities exist for the parking surface to play a role in water quality measures and requirements. Lighting design should be thoroughly researched and developed to meet security requirements, yet prevent light pollution. All required site clearing and construction should be designed to reduce site disturbance, conserve existing natural areas and restore any damaged areas.

7. The Athletic District and Playing Fields

The design and implementation of the athletic facilities presents an opportunity to demonstrate sustainable design in site development. The footprints of the gym/fieldhouse, athletic fields and tennis courts represent a major intervention in the natural landscape that will drastically alter the ecology, geography and character of a large portion of the Austin Hill Country Reserve. The master plan suggests placing of

the largest footprints parallel to the natural topography to minimize these effects. Other measures to be considered in planning and implementation include devising a strategy for the conservation of native ground cover and foliage during construction and investigating various water quality strategies that utilize the athletic fields.

The master plan proposes a close proximity between the residential district and the athletic district, which becomes an amenity for residential students. A major east-west axis runs between the baseball and softball fields past the fieldhouse and tennis courts to the primary residential courtyard. The residential courtyards should provide sand volleyball courts and other intramural recreational opportunities.

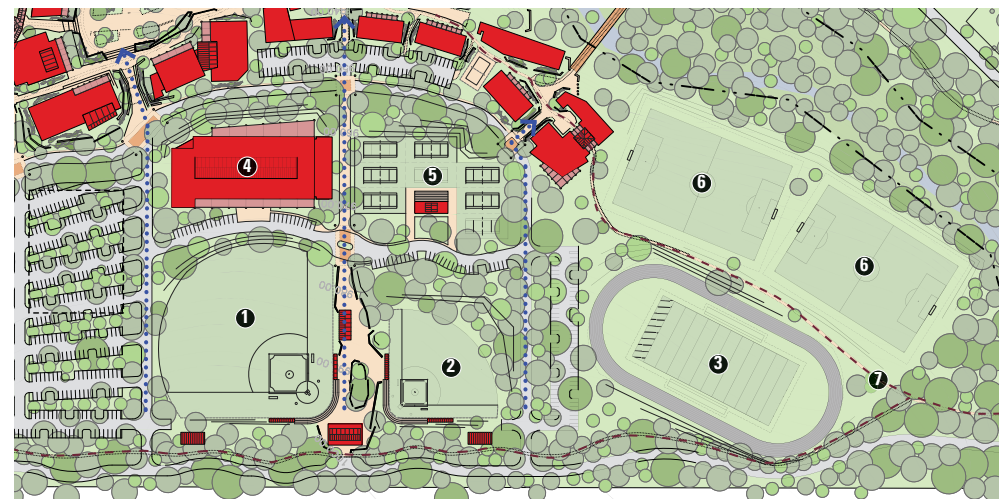
FIGURE 3

East-west section through the parking area indicating proposed terracing and screening.

FIGURE 4

Enlarged plan of the athletic district indicating circulation paths to the residential courtyards. Components of the athletic district include:

- (1) Baseball field
- (2) Softball field
- (3) Football and track
- (4) Field house
- (5) Tennis
- (6) Soccer fields
- (7) Hike-and-bike trail



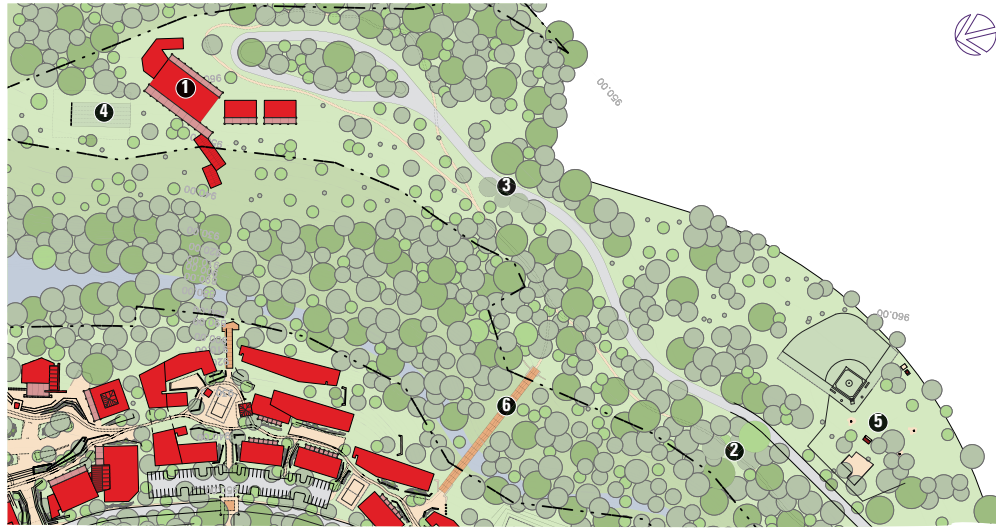
4



FIGURE 1

Enlarged plan drawing of:

- (1) Retreat Center
- (2) Hike and bike trail
- (3) Roadway extension
- (4) Archery range
- (5) Existing recreational area
- (6) Pedestrian bridge across the nature preserve



1
8. The Retreat Center

Located on Lot 4, directly across the ravine from the main residential courtyard, the proposed Retreat Center will appear somewhat isolated from the main campus. Although in reality it is quite close, the physical barrier of the ravine and pond, as well as the length of the service drive required to provide access, will make the location seem quite private—a true ‘get-away’.

There is an opportunity for the Retreat Center to visually connect with both the pond and the nature preserve. The siting and architectural expression of the Retreat Center should reinforce its function as

a ‘gateway’ to the nature preserve. An element of its architecture may also define the axial view from the main campus. This location for the Retreat Center will allow it to fulfill its program as a secluded, contemplative part of the Concordia experience. It will be physically connected to the hike and bike trail and service access is by an extension of the loop road.

As part of the University’s commitment to sustainable practices and leadership, the Retreat Center could be considered a demonstration project for utility service ‘off-the-grid’. The production of some or all of its utility needs would be a rare opportunity to use the building itself as an environmental and energy management teaching tool.

9. The Nature Preserve

One of the most spectacular and significant features of the new campus is a 250-acre nature preserve. The land was set aside by Schlumberger in the 1990’s to provide habitat protection for a number of rare and endangered plant and animal species. Above ground are beautiful woodlands, rock formations and several wetlands. Below ground is a honeycomb network of caves, sinkholes and springs containing highly specialized animals adapted to these unique environments.

The preserve is part of a larger conservation effort on the northwest side of Austin known as the Balcones Canyonlands Preserve (BCP). The BCP is a series of preserves managed under the terms and conditions of a regional permit issued under section 10(a) of the Endangered Species Act by the U.S. Fish and Wildlife Services and jointly held by the City of Austin and Travis County. A number of cooperating partners own and manage land within the BCP – this will now include Concordia University. The City and County have acquired approximately 27,000 acres for the BCP, ultimately working to secure 30,000 acres to make it one of the largest urban preserves in the nation.

As a land owner within the BCP, Concordia University is restricted from developing any portion of the 250-acre nature preserve. It will remain in its natural state in perpetuity. Access to the preserve will be restricted to the science program and will become a living classroom for the school providing students with a unique opportunity to study and play a leadership role in urban environmentalism.

THE ARCHITECTURAL PLAN

The plan illustrates the location, configuration and intention of future buildings. It provides functionality and legibility to the Concordia campus by arranging buildings so as to reinforce the campus civic structure of *village greens*. The plan will guide the growth of the campus by establishing its open spaces, long-range density, coverage and building capacity.

The Phase I plan illustrates the current understanding of what the campus will look like when Concordia moves in Summer 2008. It addresses the top campus priorities for new construction. Those priorities include the first phase of the residence halls, the field house, as well as parking and sitework.

The architectural plan depicts specific shapes for building footprints. However, as it is impossible to precisely predict future functional and area needs, the uses and configurations of individual buildings must be able to change without destroying the larger continuity of the plan. In other words, the building shapes are only illustrative.

The primary building facades are fixed and must adhere to the build-to lines illustrated in the long range plan. This is to help ensure that each building fulfills its public role by defining public space and relating to the larger community of buildings. As buildings are designed they may deviate in small ways from the plan, but they may not significantly alter the spatial configuration of the civic structure.

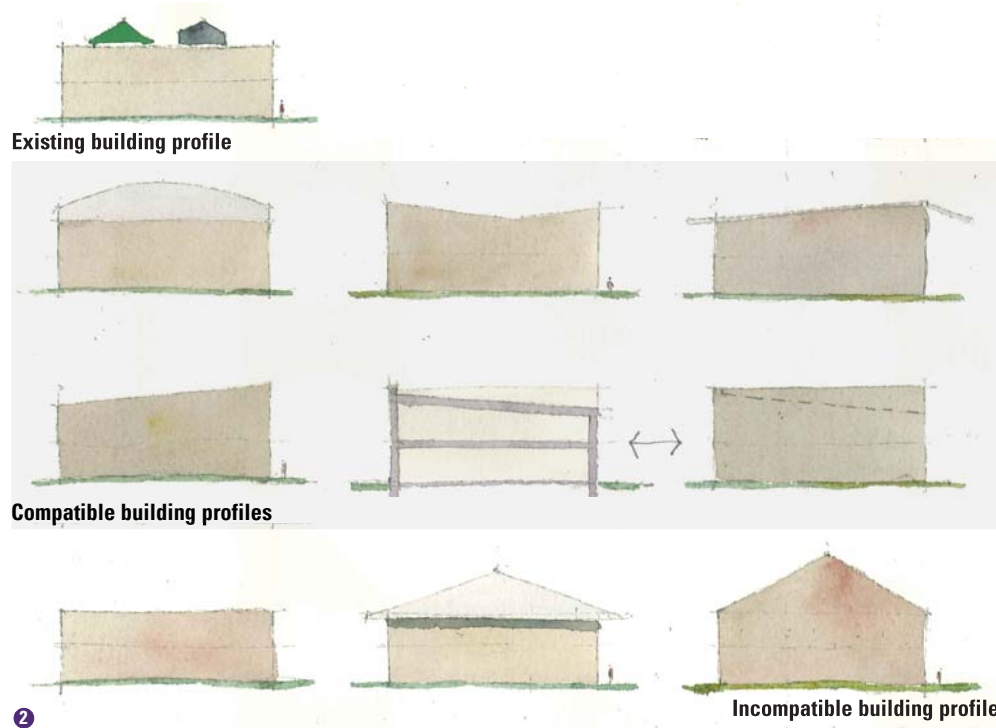


FIGURE 2
Iconic building shapes illustrate development on the new campus.
The top sketch represents the existing profile of buildings on campus.
The next two rows illustrate desirable profiles for new development.
However, to attain a cohesive architectural vocabulary, the profiles shown in the bottom seem incompatible for new development on this campus.

The existing buildings have approximately 200,000 square feet to accommodate Concordia's program upon move-in. The total proposed long range plan build-out of academic and student life buildings is over 600,000 square feet. This is approximate since specific functions have not been assigned to all individual buildings. The presumed capacity will accommodate more than thirty years of campus growth at an average rate of four percent per year, as indicated in the analysis in *Beyond 2010*.

The plan and square footage figures above are based on the assumption that new buildings will be in the range of 2 to 4 floors in height. Buildings of this height will be compatible with the existing buildings and will generate the appropriate density. They will produce a better physical environment than one story buildings or high-rises—an environment that will reflect the mission of the University while preserving open space.

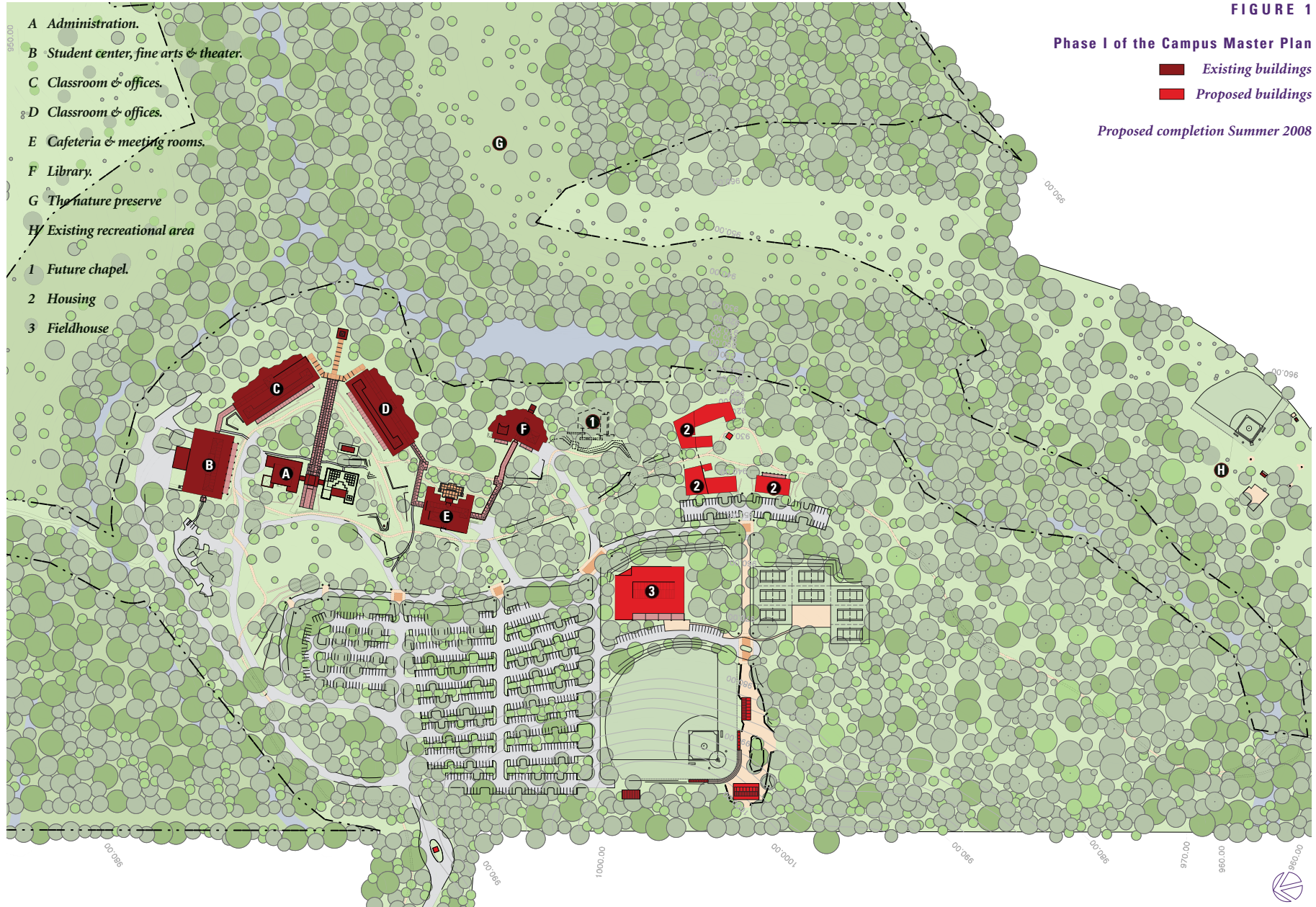
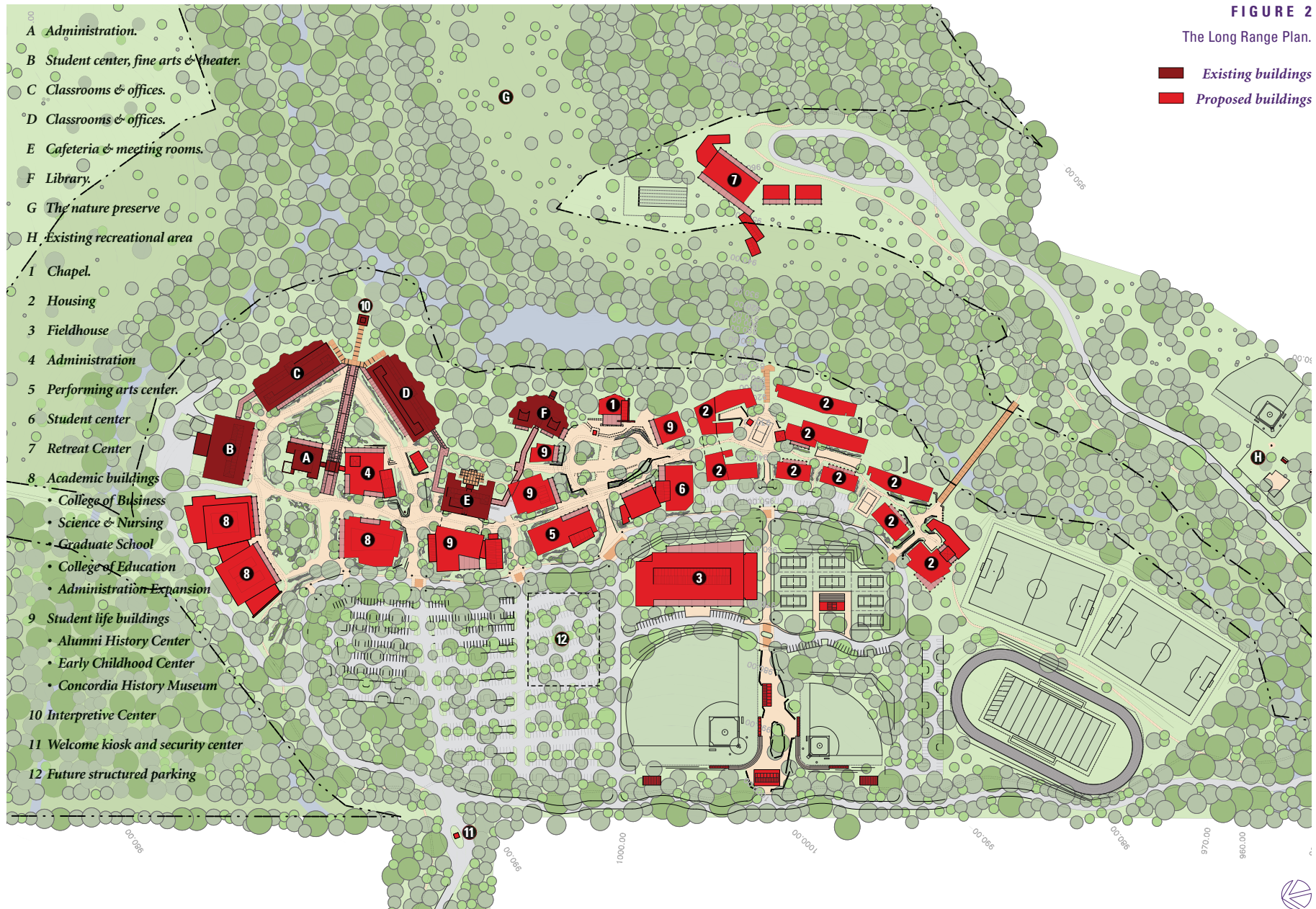


FIGURE 2

The Long Range Plan.

- Existing buildings
- Proposed buildings



- A Administration.
- B Student center, fine arts & theater.
- C Classrooms & offices.
- D Classrooms & offices.
- E Cafeteria & meeting rooms.
- F Library.
- G The nature preserve
- H Existing recreational area
- 1 Chapel.
- 2 Housing
- 3 Fieldhouse
- 4 Administration
- 5 Performing arts center.
- 6 Student center
- 7 Retreat Center
- 8 Academic buildings
 - College of Business
 - Science & Nursing
 - Graduate School
 - College of Education
 - Administration Expansion
- 9 Student life buildings
 - Alumni History Center
 - Early Childhood Center
 - Concordia History Museum
- 10 Interpretive Center
- 11 Welcome kiosk and security center
- 12 Future structured parking



FIGURE 1
Buildings A, C and D have the beginnings of a framework to support and extend the civic structure of the campus.

ARCHITECTURAL PRINCIPLES & GUIDELINES

Introduction

Campus buildings are formal public statements of a university’s aspirations to excellence. They are permanent expressions of a university’s commitment to the quality of the public realm in which education occurs. They are representations of what that public realm is and ought to be like.



1

The existing core of buildings was built in 1987 and was, by design, a corporate complex that existed as a closed system. Only employees and those with specific invitation were welcome in the security-conscious corporate environment.

Over time, the Concordia Campus Master Plan will assist the University in addressing and enhancing the existing facilities as they transform the site from corporate to a collegiate environment.

The existing buildings establish an architectural character and quality and a simple language of architectural elements that makes them memorable. Their sensitive siting and massing, as well as their minimal palette of materials and colors, create a community of buildings and set the basic palette for the future campus.

The architectural vocabulary of new buildings should be compatible with the existing buildings. The elements of this language include masonry construction, vertical punched windows, loggias and arcades. Entrances and lobbies should be legible and inventive and provide places for people to connect.

Each building on campus should have its own identity, but should also contribute to the larger community by incorporating shared architectural and urban conventions. Architectural style is the least important characteristic of buildings. Architectural type and compatibility of materials and colors are far more important.

The architectural principles, and the more detailed guidelines that follow them, are not meant to limit an architect’s invention, but rather to guide it—reminding future architects that buildings have a responsibility to the campus and the University as well as to building users.

The Architectural Principles

The architectural principles are the guiding ethic that underlies the plan. The intent of the principles is to produce buildings that support the civic structure of the campus by defining and engaging outdoor public spaces—buildings that complement and reinforce the spatial framework provided by the *site design principles and guidelines*. Adherence to the principles will guide future development of the campus.

The principles are intended to be general—on the level of the architectural plan with the architectural guidelines providing more detail. The principles and the guidelines are meant to give the campus a harmonious scale and character, to reestablish a positive relationship between its architecture and its landscape design and to enrich its sense of place.

The principles primarily pertain to all architecture on campus, but are particularly keyed to academic, administration and student life buildings. Other building types—parking garages, student housing, physical plant and support buildings, etc.—are further discussed in Principle 10.

The architectural principles convey the general intent of the Master Plan. Possible variations for specific projects on specific sites should be discussed as part of a regular design review process and should be evaluated in terms of their contributions to the project and to the campus as a whole.

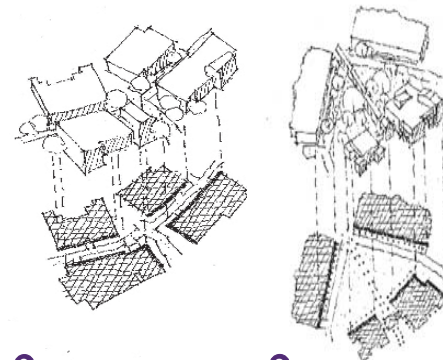
Architectural Principle 1: Urban Buildings
Buildings are to be “urban buildings,” designed in support of the civic structure of the campus.

Urban Building Guidelines

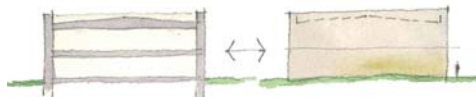
It is necessary for a campus community to have proximity and density. Buildings must engage and define the streets, greens, courtyards and plazas of the campus. This requirement affects the siting, massing and typology of buildings, the alignment of facades relative to outdoor spaces and other buildings, the composition of facades and the location and form of entrances. Existing buildings that do not engage and support outdoor space should be transformed.

The alignment of facades or build-to-lines are indicated on page 22. There must be sufficient continuity of a building facade to give visual definition to outdoor open space. This is a fundamental guideline intended to develop, through phased construction, a series of *outdoor rooms*. The most striking parts of the campus will be formed by buildings, therefore adherence to this guideline is imperative.

Buildings facades address campus open spaces. To establish a clear relationship between the building and

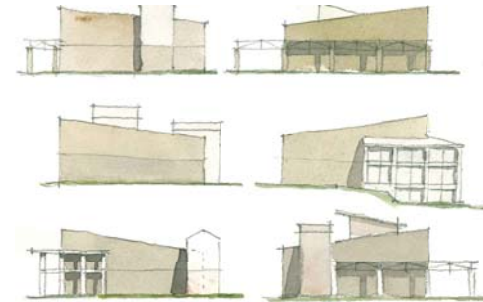


the outdoor space before it, a building’s facade should generally be nominally rectangular and planar. A building’s facade, in conjunction with those of neighboring buildings and campus landscaping, defines the volume of outdoor space, similar to how the wall of an interior room defines its volume. Facades are to incorporate primary or symbolic building entrances.



The majority of the existing buildings are characterized by simple, straight-forward volumes and crisp lines and edges. The precise nature of this architecture stands in contrast with the rugged natural site. The horizontal lines of the buildings are expressed

through low overall building heights, roofs hidden by parapets, linear stone coursing and window and arbor treatments. The existing parapets screen extremely low sloping roofs, which can be problematic for construction and maintenance.



In order to create a cohesive architectural and collegial quality to the campus, the Master Plan recommends maintaining the character of the existing while adopting pitched roofs or a minimum pitch to all low-sloping roofs (1/4”/foot or greater). No flat roofs should be constructed for maintenance reasons.

Buildings are to incorporate loggias, colonnades and porticos. They are amenities for users and create a transition between the scale of the campus and the building interiors. They may be integral to the building—either carved into its volume or projected in front, or they may be freestanding elements that provide shelter and define space (such as the trellis between buildings C and D).

FIGURE 2
A path, defined by buildings and their facades located according to build-to lines.

FIGURE 3
A plaza, defined by buildings and their facades located according to build-to lines.

FIGURE 4
The existing building are flat roofs with parapets.

FIGURE 5
Sketch illustrating suggested building typologies.

FIGURE 1

Sketch of the existing terrace behind buildings C & D revamped to a more active, useful space.



FIGURE 2

Loggias may be integral or applied.

FIGURE 3

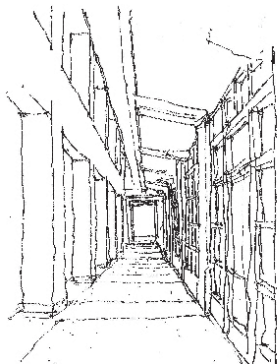
Buildings may enclose courtyards, such as this proposed building at the end of the residential district..

FIGURE 4

Enlarged plan drawing of the last residential courtyard.

FIGURE 5

Porter College at University of California - Santa Cruz.



1

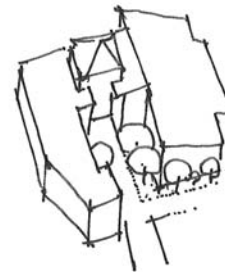
In addition to providing shelter, they help to activate the edges between buildings and open spaces as circulation routes.

2

As facade elements, they create depth and shadow and often are the most detailed and expressive element of the facade. The figural qualities of columns human-

ize a facade and give it scale. Building sides utilizing loggias should be glazed.

Where possible, buildings are to enclose courtyards. Courtyards provide shade, create a semi public/semiprivate communal place for users of buildings and provide an extended transitional space between indoors and outdoors.



3

Courtyards may be defined by buildings and loggias; they may be open on one side or enclosed on all four sides. They may be framed by a single building or by a group of buildings that are sufficiently related in form and appearance. A height-to-width ratio in the range of 1:1.5 to 1:2.5 is preferred. If they are taller than 1:1.5 they become more like lightwells than courtyards. If they are wider than 1:2.5 they lose their intimate room-like quality.

Existing buildings that, as a result of their form and appearance, do not have a positive relationship to outdoor space should be transformed by architec-

tural and landscape additions. Transformation of these buildings will involve the addition of entire buildings, designed and positioned to define new and desirable outdoor spaces. In some cases the redesign of landscape may provide the missing spatial order and definition.



4



5

Architectural Principle 2: Building Heights

Buildings are to be compatible in height with existing buildings.

Building Height Guidelines

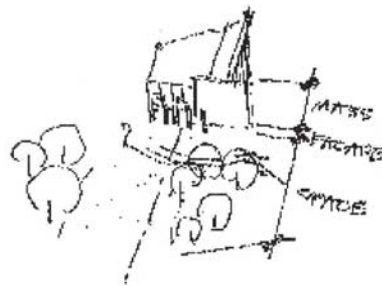
To adequately define the public spaces of the campus, maximize building site opportunities and preserve the quality of outdoor spaces, buildings should generally be no less than two stories and no more than four stories in height. This “standard” height gives consistency to the campus, fosters relationships between buildings and creates a rough correspondence between building height and the height of tree canopies. Slender towers and other picturesque elements may breach the height limit and create a more varied skyline.



5

If greater enclosed volume is needed than can be accommodated in four floors, any additional upper floors should be set back from the building’s primary faces and their facades should be treated as penthouse or roofscape elements, differentiated from the design of the primary facade below.

Taller exceptional elements—including towers and other roofscape elements—should be designed and located in response to particular circumstances of the campus civic structure. These elements will serve as points of reference and emphasis in the campus plan. They will mark axes, articulate corners of buildings and serve as visual foci for outdoor spaces. In some cases, they may be freestanding elements, but more typically are articulated components of a building’s massing and form.



6

Architectural Principle 3: Facades

Building facades are to be articulated into constituent parts in order to: mediate between the pedestrian scale and the scale of the building; provide visual continuity with neighboring buildings; and engage the adjacent open spaces.

Guidelines for Facades

To clarify the form and scale of outdoor space and to strengthen relationships between neighboring buildings, facades are to be articulated into elemental

parts. Repetitive bays establish a relationship between the building as a whole and the large scale of primary campus spaces, while singular facade elements relate to the specifics of circulation routes and details of the campus plan. Building entrances should be emphasized or differentiated from the typical repetitive bays. An articulate ground floor reinforces the building’s connection with the street or plaza on which it fronts.

Facades should incorporate repetitive facade bays in response to their siting and scale. The specific design of repetitive bays and the optimum balance between those bays and unique or special elements is derived from an analysis of the building’s program and characteristics of its site.

The existing buildings of the new Concordia campus utilize various strategies for the design of repetitive bays within wall surfaces: single windows may be centered in each bay; windows may be grouped in each bay, in pairs or in larger groups; the wall surface may be simple and planar.

Repetitive bays should be vertical in proportion with some expression of the building structure obvious on the facade. The building’s structural columns should be depicted through the presence of masonry piers, by the articulation of the wall plane, or through the rhythm of openings that correspond to the building’s structure. It is recommended that this strategy be maintained—that facades mediate between the dimensions to the building’s structural bays and the smaller human scale.

FIGURE 5

A sketch indicating a three story building set into a hill.

FIGURE 6

A facade should address and define outdoor space.

FIGURE 1

Clarity of entrance is important.

FIGURE 2

Plan of Building A has a symmetrical entrance.

FIGURE 3

Well-defined entrance to Arlington Hall at UT Arlington

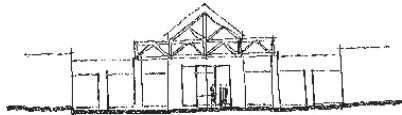
FIGURE 4

Building A has large, undifferentiated windows.

FIGURE 5A

Sketch indicating deeper-set windows with mullions for Building A

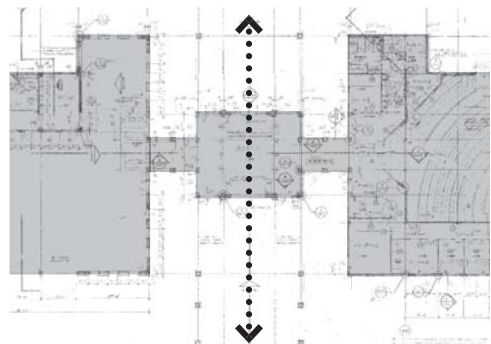
Architectural Principle 4: Building Entrances
Building entrances are to be places to meet and rest, as well as graceful transitions between outdoors and indoors.



1

Building Entrance Guidelines

A building's entrance consists not only of the doorway or portal itself but also of the larger assemblage of elements that provide environmental and social amenities. These include steps, ramps, railings and balustrades, site walls, benches, sidewalks and paving, planting, lighting and the architectural elements of the facade that frame and embellish the portal.



2

Entrances should be clear, prominent and aligned to the outdoor space upon which the building fronts. A building's entrance is one of the primary ways the building addresses the public realm of the campus. The entrance is a literal and symbolic connection between outdoor space and the building interior and is an important element in the composition of the facade.



3

Architectural Principle 5: Identity and Variety
The identity of the campus and of individual buildings should be reinforced by expressive architectural detail.

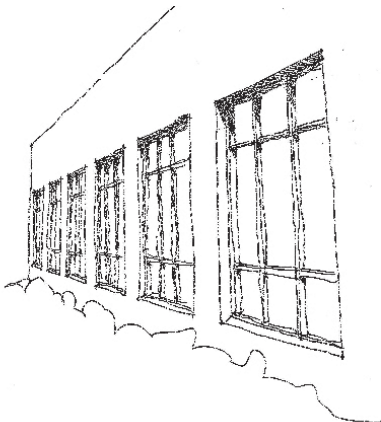
Guidelines for Architectural Identity and Variety

Mullion patterns and framing elements of windows should enrich the reading of the facade. Window mullions are arranged to create a secondary pattern in the design of the facade, a pattern that interlaces with the primary pattern established by the size and position of window openings. Window mullions are not used on the campus now, however the Master Plan



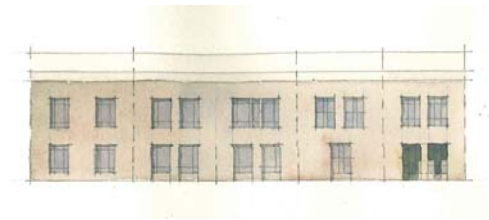
4

recommends that glazed areas be subdivided by true mullions for all new construction. Window mullions occur in a hierarchy of varied widths, visually enriching the facade. The heaviest mullions subdivide windows into smaller components. Thinner mullions further break down the scale of the window and add visual interest.



5

Window-framing elements modulate the solid wall, visually expanding the size and importance of the window. The patterns created by mullions and frames enhance the repetition of typical facade bays and give windows a more complex relationship to the solid wall than would be created by minimal rectangular voids of undivided glass.



6

Typical windows are to be punched—individual rectangular openings in the masonry walls—and are to be vertical in proportion, set deep within the thickness of the wall, not flush with its outer surface. The shadows thereby created improve thermal performance by reducing solar gain to the interior, give the facade visual depth and impart a sense not only of solidity and permanence, but also of permeability and openness.

Larger areas of glazing, where they occur, are to consist of grouped windows, not undifferentiated curtain walls and should be located to express aspects of the building’s circulation system—lobbies, stairs, major public rooms, etc. Total window area is to be in the range of 20 to 50 percent of the wall area of a given facade or elevation.



7

Architectural Principle 6: Building Materials
Academic buildings are to be predominantly masonry construction. Materials and colors are to be compatible with existing buildings.

Building Materials Guidelines

Because the existing buildings were developed concurrently, they drew from a common palette of materials, most notably the soft-colored blend of igneous adoquin stone used as exterior cladding. This type of consistency is rare for a university campus and should be respected and referenced as an important precedent since it has created a recognizable identity and a strong sense of order.

In order to maintain a cohesive material language the Campus Master Plan recommends carefully building on what exists by using adoquin stone in concert with other compatible materials (limited to burnished concrete masonry units (CMU), split face adoquin, wood and zinc or galvalume panels). It is not recommended to fully clad future buildings in adoquin, but to allow the ratio to vary based on building type, location and design. Special academic buildings, for



8

example, may have a higher percentage of stone while the student life and residential districts may have lower percentages. When adoquin is used, however, it should only be used as wall cladding.

Glazing should be operable, when possible. Glass should be as clear as possible, not overly tinted or reflective, while meeting all energy requirements for glazing systems. Mullions should match the color of existing buildings.

Sloped roofs are to be of standing seam zinc or galvalume metal. At the appropriate time for replacing the existing green metal roofs, standing seam zinc or galvalume metal, should be used. Low-sloping roofs may be built-up, membrane or flat-seamed zinc or galvalume metal.

FIGURES 6 & 7
Sketches indicating repetitive window rhythms.

FIGURE 8
Adoquin stone column.

FIGURE 1

The Building F roof is full of unscreened mechanical equipment.



1

Architectural Principle 7: *Building Additions*

Additions are to be compatible with existing buildings and are intended to transform buildings that suffer from weak relationships to outdoor public space.

Guidelines for Additions to Buildings

Where the original building follows the principles of urban design indicated in the above guidelines, any addition should be compatible with it in height, massing, material, color, etc. It need not be identical.

Where the intent is to visually link with the existing building so as to frame a courtyard, the facades and elevations of the addition should be similar enough in height, massing, material, color, etc. to those of the existing building to create visual cohesion.

Architectural Principle 8: *Building Services*

Mechanical equipment and loading docks are to be hidden from pedestrian view.

Guidelines for Building Services

Mechanical equipment is to be out of sight and treated acoustically to limit sound transmission. For new construction, mechanical equipment should not be located on rooftops or located on exterior grade except in concealed service yards. It is recommended that mechanical equipment be within the footprint of the building it serves.

Service entries are to be as unobtrusive as possible. Loading docks are to be located in service courtyards or pulled within the volume of the building and concealed by doors or landscaping.

Architectural Principle 9: *Sustainability*

Buildings are to be designed with environmentally sustainable features to lessen the environmental impact caused by their construction as well as to minimize operational energy use.

Guidelines for Sustainability

Most college and university conservation efforts actually improve both environmental performance and the financial bottom line. In theory and in practice the compatibility of a healthy environment with sound economic decisions is essential for a sustainable future. Conservation efforts often defer the need to purchase expensive plant equipment and infrastructure upgrades and results in maintenance

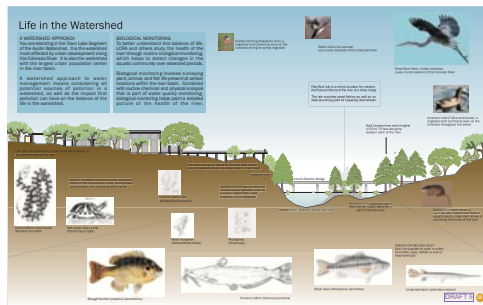
savings with improved quality of the indoor environment.

Whenever possible new campus buildings should be designed to qualify for a LEED Silver Rating. Each new building project should consider:

- A collaborative, integrated team design approach. (Owners, facility managers, users, designers and construction professionals work together cooperatively from the project inception).
- Contextual issues such as climate and orientation.
- The life-cycle costs of products and systems (costs associated with the manufacture, operation, maintenance and disposal).
- The project's impact on the local and regional environment.
- Opportunities for interaction with the natural environment.
- Efficient use of resources and preference toward the use of local building materials.
- Responsible handling of construction and demolition waste.
- Energy and resource efficiency.
- Future reconfiguration and reuse.
- Healthy indoor environments.
- The comfort, health and well-being of building occupants and visitors.
- An environmentally sound operations and maintenance regimen.
- An educational program for building occupants and users explaining the philosophies, strategies, and controls included in the design, construction and maintenance of the building.

Specific strategies may include:

- Renewable building materials
- Materials with recyclable content
- Nonhazardous (low VOC) interior materials
- Native landscaping
- Environmentally safe transportation systems
- Recycling
- Energy reclamation
- Photovoltaic energy generation
- Thermal insulation
- Minimizing light pollution
- Sun shading
- Rainwater collection
- Groundwater recharge
- Wastewater management



2 Campus conservation efforts will yield significant educational opportunities on the new campus. The new site will provide curriculum opportunities not available at the current downtown location. Classes can be built around preferred environmental techniques with campus landscaping and buildings providing the prime exhibits. Sustainable strategies will

afford Concordia the opportunity to market their *green* credentials as a campus amenity. Success will lead to free publicity and will be useful as a recruitment tool.

Architectural Principle 10: Non-academic Buildings

Non-academic buildings, such as parking garages, physical plant buildings, residence halls, etc., are to adhere to these principles and guidelines as appropriate to their function and location on campus.

Guidelines for Non-academic Buildings

On-campus housing influences the quality and experience of campus life. Housing that is well-executed will attract and retain students, while substandard housing will have a negative affect both on recruitment and retention of students living on campus.

Residence halls are more private than academic buildings and their facades should express their domestic scale and function, while recognizing that are within the institutional context of the University. Expensive construction methods are not required; however, appropriate design commensurate with a collegiate environment is critical. Materials should correspond to those utilized on the academic buildings, though the forms and to some degree the materials used on the residence halls should be distinguishable from the academic buildings.

To encourage gathering and socializing, indoor common areas should be located close to student rooms. Housing should have exterior landscaped areas,

including courtyards and informal green areas, for use by student residents.

When parking garages are built, they should be designed as buildings and have facades whenever visible from a distance. Although the cost-per-car for structured parking is higher than surface parking, Concordia will need to consider garages to preserve open space and the natural environment as the campus grows. The limited buildable site area and the desire to protect and restore open space will encourage the University to consider structured parking in the future.

Parking garages should incorporate office or academic programs on ground floors that face public streets or walks. They should be masked for their full height by a zone of space suitable for office or academic uses where they face larger open spaces. In less prominent locations screens or louvers should be used to block cars from view. Parking garages may be built into the existing slope to reduce their scale and provide multiple entrance levels with reduced ramping requirements.

Support buildings located in areas of the campus used by its general population should follow the above principles and guidelines. Those in less-frequented areas, however, may exhibit greater freedom of materials, including metal and transparent screening.

FIGURE 2
Interpretive panels positioned strategically along pathways can educate campus users and visitors about the environment.

FIGURE 1 SITE DESIGN CRITERIA AND GUIDELINES

View of the academic green from the existing main walkway. A palette of mostly native landscaping was used for the original development.

FIGURE 2

Native Texas bluebonnets line some walkways.

FIGURE 3

View of the campus from the existing pond below Building F.

The pattern of landscape and open space is the most important component of the campus plan. *It will do more to improve the campus environment than any other single element.* It provides specific parameters for the development of the open space structure, circulation and environmental character of the campus.

The site design and the architectural plan are intended to be consistent and complementary, but there are fundamental differences between them. Because future building uses, sizes and configurations are impossible to predict, the architectural plan relies heavily on principles and guidelines to ensure appropriate architectural development rather than relying on specific building recommendations and configurations. In contrast, the site design criteria—augmented and extended by principles and guidelines—provides a stable, precise configuration within which architecture can vary and change.

Major parts of the site design criteria could be implemented as soon as funding is available, to be infilled by buildings and developed in more detail over time. In this sense, it is a bridge between Phase I work and the long range campus plan—identifying the boundaries of future open spaces and circulation routes before the buildings themselves are able to define them.

The Regional Context

The original Schlumberger campus at the Austin Hill Country Reserve was designed by *Barnstone Architects* from Houston with *Robert Jackson Architects* in Austin. The site follows along the edge of a narrow limestone canyon on a 438-acre site in the hills of northwest Austin. The architects responded to the site by carefully siting the buildings along the ridge and providing amenities like jogging trails, seating areas set amongst the trees and extensive views (from all the buildings) that take advantage of the natural setting.

Major Recommendations

The campus Master Site Plan encourages connections between districts, provides continuity, helps to define open spaces and complements the architectural form of the campus using the following recommendations:

1. *Create new and reinforce existing tree-lined streets and pedestrian pathways*
2. *Create a hierarchy of open spaces*
3. *Improve and expand the naturalistic park-like spaces*



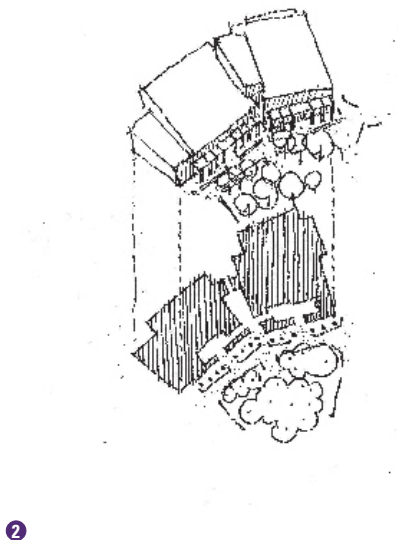
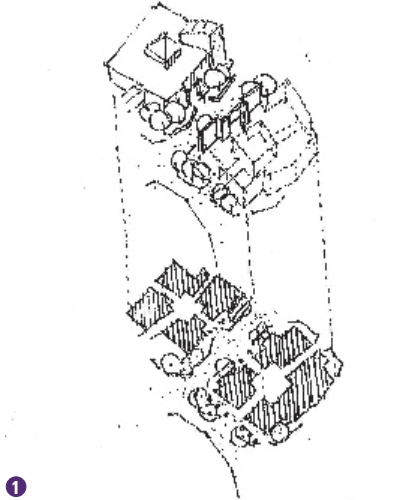
1



2



FIGURES 1 & 2
Diagram of how the campus works as an interconnected matrix of public spaces, defined by both architecture and landscape.



SITE DESIGN PRINCIPLES

Introduction

Site design principles are the guiding ethic underlying site design. The intent of the principles is to produce landscape design that supports the structure of the campus by defining outdoor public spaces (i.e., landscape design that complements and reinforces the spatial framework of the architectural plan). Adherence to the principles will guide the completion of the established landscape pattern on the campus.

The collegiate experience will be enhanced by a sense the campus environment is fundamentally continuous. Public outdoor spaces and interiors of buildings are differentiated parts of a larger whole rather than separate, isolated realms. This feeling of permeability and interconnectedness makes the experience of being on campus rich and varied and encourages social interaction. The campus may be conceived as a porous matrix of interconnected spaces of varying size, shape, character and use. These interconnections ensure the campus is both literally and symbolically accessible. They are fundamental to the way a campus promotes its academic, social and cultural missions.

It is the combination of these two complementary themes—differentiation and interconnectedness—that supports a progression of common spaces which become increasingly more private (or more public depending on the direction of travel). This progression will give the campus much of its experiential

and spiritual richness and allow it to accommodate many different users.

The goal of a differentiated, but more or less continuous, fabric of both outdoor and indoor public space has profound implications for the design of campus landscape and buildings. It affects the:

- Pattern of pedestrian and vehicular circulation;
- Distribution of open spaces at various scales throughout the campus—streets, plazas, courtyards and greens;
- Specific landscape design of these spaces;
- Overall form of buildings and their arrangement as related groups to define outdoor spaces;
- Design of building facades;
- Design of interior and exterior spaces to gracefully accommodate formal and informal meeting and exchange; and
- Landscape and architectural design of building entrances.

Site Design Principles

Site design principles are general and the guidelines that flow from them are intended to promote an extended and gracious public realm of harmonious scale and character and to establish a positive relationship between landscape and architecture. Variants for specific projects may be discussed as part of the design review process and will be evaluated in terms of their contributions to the project and to the University as a whole.

Site Design Principle 1: Campus Circulation

Campus circulation patterns should be improved and extended by creating new tree-lined streets and pedestrian ways.

The preservation of existing trees to line streets and walks is a priority and includes the foliage buffer between the parking and athletic districts



3

and the loop road. However, where existing trees are removed to accommodate plazas, roadways and walkways, replacement trees should be planted to maintain an appropriate border. This will strengthen the pedestrian and vehicular connections between campus spaces and buildings and help unite the campus as it grows.



4

Site Design Principle 2: Campus Edges

Connection between the campus and RM 620 should provide transition and identity to the University.

The entrance drive should be an introduction to Concordia University and should provide continuity to and from the campus. It should be expressed as simply as possible, using native grasses and landscaping materials originally found in Hill Country landscapes and used throughout the project.



5

Site Design Principle 3: Campus Elements

Civic structure should be supported by deliberate use of spacial and material elements such as: open spaces, vegetation, grading, drainage, pavements, curbing, site furnishings, site lighting and signage.

Open Spaces

The existing green between Buildings A, C and D should be conserved and renovated and new greens should be created. Courtyards and plazas should be especially encouraged. Overgrowth should be cleared to return to the original landscaping intent featuring specimen native trees and field grasses.

Vegetation

Plant selection should vary based on specific location and conditions. In most cases it should be arranged informally. The planting palette should include a high percentage of native species and should consist of canopy trees, evergreens, understory trees, shrubs, meadow wildflowers/grasses and perennial planting.

FIGURE 3

View along existing road into campus.

FIGURE 4

View of the existing entrance along RM 620.

FIGURE 5

Existing building meets grade.

FIGURE 1 Grading

Campuses need quiet places.

FIGURE 2

Native Hill Country vegetation.

The Texas Accessibility Standards and the Americans with Disabilities Act guidelines should be followed in all new construction projects. The existing campus environment has been analyzed for compliance with the above-mentioned standards as part of the Due Diligence Report.

All walks and paths should fall below a five percent gradient where possible to avoid the necessity of railings in the landscape. Where slopes are steeper, accessible ramps may be included. The University must be accessible to disabled individuals. Ramps and sloped walks will be incorporated such that all buildings and significant landscapes are accessible.

A wide variety of slopes will exist in the surrounding natural landscape. Adjacent in steeply sloped areas, protection against erosion will be required.

Drainage

The best overall strategy for water quality and stormwater detention for the site is still being determined.

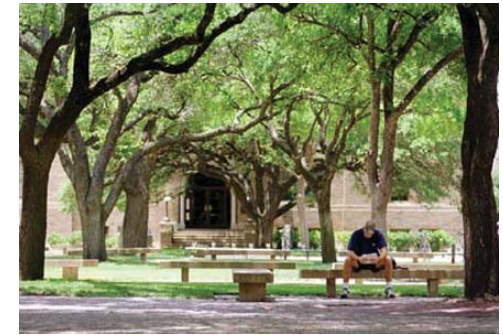
In the areas adjacent to buildings the drainage system should consist of a network of catch basins and subsurface drainage in the roadways. In less traveled areas and in the surrounding natural landscape, alternative methods of site drainage should be employed, such as bioretention areas or vegetated swales.

On-site retention of stormwater should be a goal, contributing to improved water quality in both per-

manent and intermittent streams. Yearly maintenance of all drainage systems will be necessary.

Pavements

Along the main pedestrian spine and in areas adjacent to buildings pedestrian pavements should consist of poured-in-place concrete detailed to withstand vehicular loads, such as maintenance and emergency vehicles. Courtyards and gardens may incorporate concrete unit pavers set on a concrete slab where nec-



1



2

essary to withstand occasional vehicular load. In limited areas (some courtyards, gardens, hike and bike trails) stone dust paving, decomposed granite, bark mulch or limestone fines may be used. Accessibility should be a priority.

Wherever possible vehicular pavement should be of porous material such as gravel, crushed stone or consist of paver systems with open joints to allow water to infiltrate to the soil below.

Curbing

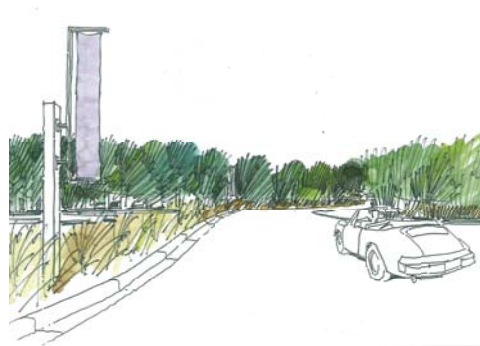
Integral concrete curbs and gutters should be used for most drives and streets on campus. The future road to the Retreat Center may not need to be curbed.

Site Furnishings

Site furnishings should be of compatible design throughout campus. Standards will be established to create a palette of site furnishings to help unify the campus environment. Furnishings include, but are not limited to, benches, seatwalls, trash receptacles, recycling bins, bicycle racks, emergency call boxes, bollards, fences and gates, light standards and informational kiosks.

Site Lighting

Proper lighting design provides a level of safety important to students, faculty and staff alike. A metal halide lamp with its superior color rendition is preferred for all campus lighting. The light source should be concealed to reduce glare. The dark-sky concept should be adhered to (concentrate light where needed—not allowing it to escape into the night sky



3

or adjacent properties). Pedestrian lighting should be a consistent height and style with post-top cut-off luminaries in open spaces. A consistent style of lighted bollards should be included in the lighting design for courtyards and walkways. Roadway and parking lighting should be a consistent height and style.

Lighting in the surrounding natural areas will be kept to a minimum and should be included only in the most highly traveled areas or where the University feels it is needed for security purposes.

Signage and Wayfinding

Throughout the campus an identifiable signage system of uniform design should be apparent. Parking designations, street/path names, service and loading areas, building names, etc. should be included. Signage or markers for less traveled ways or trails should be included as well as interpretive signage and signage for other culturally or ecologically significant places.

Site Design Principle 4: Architectural Connections

The landscape structure of streets, courtyards and plazas should complement and reinforce the spatial intentions of the architecture.

In addition to the pattern of major spaces and landscape transitions, connections need to be made to the buildings—especially entrances and ground floor public spaces. The space immediately outside the building entrance is often a significant meeting and socializing place.

Site Design Principle 5: Native Landscape

The connection between the campus and surrounding local landscape should be reinforced.

The idea is for the campus to complement the picturesque rural landscape. Plants which are found growing naturally in the Central Texas region will generally thrive without much additional watering.

FIGURE 3

Sketch of entry drive with proposed banner stanchion.

FIGURE 4

There are many choices for native and adapted landscape plants, as illustrated in this page from a guide published by GrowGreen, the City of Austin and the Texas Cooperative Extension.



4

FIGURE 1

The use of native and adapted plants should be strongly encouraged.

FIGURE 2

Well designed landscaping will require less maintenance and promote soil stability and stormwater control.

Additionally, they are well suited to informal landscapes and can provide year-round color and design interest.

Site Design Principle 6: Identity and Variety
Identity of the campus should be reinforced and emphasized by an extensive variety of open spaces, planting, paving and sculpture.



1

Strong traditions exist on the downtown campus and should be celebrated by relocating the physical manifestation of these ceremonial spaces. Contemplative areas that feature historical artifacts from the original campus should be featured.

Site Design Principle 7: Ecological Constraints

An understanding of campus soil, vegetation, and hydrology constraints should be incorporated into campus landscape design to improve the environment.

Information regarding campus conditions are included in the Due Diligence Report.

Site Design Principle 8: Resource Efficiency

A sustainable, water and energy efficient landscape should be promoted by incorporating diverse vegetation with an emphasis on native and adapted plants.

Nurturing the existing native landscape and developing a compatible, sustainable plan for future growth will result in a landscape that will require less water, less maintenance and will have a reduced need for chemical fertilizers and pest control. It will also promote soil stability, stormwater control and the retention of indigenous wildlife.

In order to be successful the landscaping plan should:

- Consider informal designs
- Improve the soil
- Use mulch
- Limit lawn areas
- Select low-water use plants
- Choose an efficient irrigation strategy
- Undertake good maintenance practices

Site Design Principle 9: Maintenance

While the need for landscape care will be reduced due to the implementation of resource efficient vegetation, the maintenance strategy should concentrate its effort around the most developed areas and preserve as much of the natural setting as possible.



2

Playing fields, courtyards, plazas and the immediate spaces around buildings should receive the major attention, with regular and frequent watering, mowing, pruning, weeding, feeding and pest control. Landscaping around parking areas, streetscapes and paths should receive secondary attention, with regular but less frequent implementation of the same maintenance procedures. Outlying areas should be left in their idyllic, natural state, blending into the more manicured campus at its fringes.

IV. PROCESS

INTRODUCTION

There is a strong relationship between the quality of an institution's physical environment and its mission. The intent of the Concordia Campus Master Plan is to bring the school into alignment with the University's mission through growth management and an improved physical environment. Achievement of this goal will require an enlightened and effective process for campus planning, design and management.

To be effective any process must address both public and private interests. A good master plan consists of a plan, guidelines for implementation and a process for compliance oversight. This section addresses the process for enforcement and management of the Campus Master Plan.

There are three major process issues: (1) architect selection; (2) project definition and feasibility; and (3) design control.

ARCHITECT SELECTION

The architect for each project might be selected before or after programming is complete and the project is clearly defined. Each architect working on the campus should have a complete understanding of both the Campus Master Plan and the University's goals for each project.

Special effort should be made to solicit good architects and the actual selection should be made by

qualified people. User representatives should play a role in the selection process, but the decision should not be made by them alone.

The terms of the architect-institution relationship are also crucial to success. The key factors are: a clearly expressed vision; reasonable fees; appropriate budget and schedules; and a cooperative, supportive process.

PROJECT DEFINITION AND FEASIBILITY

This is the most important phase of any project: the definition of the proposed facility program, site, guidelines, budget and design concept. Project feasibility is determined during this phase. Because of its fundamental nature this phase also determines whether the future project will be successful or whether it will fail. As such it should be careful, considered and rational. Time and care should be devoted to this effort.

The University should begin with a cohesive and realistic plan. Project management should be clearly defined, both within the University and externally. Programming, site selection, project-specific guidelines, budget/cost estimating and conceptual design are interrelated activities and should be developed in an integral and cyclical manner—rather than as a linear sequence of independent tasks—in order to achieve a balance of value.

An adequate process should be developed to allow a balance to be achieved between *cost*, *size* and *value*. The work of this phase may be done *in-house* or

by outside consultants working as a team with the University.

Site Selection

In reference to the long range plan, each potential building site should be studied for its characteristics and capacity before any specific program is identified for it. The major development guidelines may then be identified and made part of whatever program is identified for the site. The specific program can then be developed and tested.

Site requirements are as important as functional requirements in the development of a facility program if the contribution of an individual building to a good physical environment is to be achieved. **A building's civic role should be a fundamental part of the facility program and should not be reduced in order to enhance user requirements.** For each new project a siting study should be done, not only to determine feasibility, but to determine the guidelines for the public role that should be written into the building program.

Program

The program should be developed prior to the start of design to ensure greatest efficiency for the design process. It is used primarily during the conceptual design and schematic design phases but is referenced throughout design and into construction. Because of this longevity it is imperative that the program provide the necessary information regarding standards, space allocation, adjacencies and individual room data in a concise, organized and accessible manner.

A good program should incorporate the priorities for the facility (including guidelines that address the civic role of a building) and the intent of the owner and should provide the design team enough latitude for creativity while staying within the defined parameters.

Programs typically itemize requirements for occupied and unoccupied spaces (e.g. classrooms and mechanical rooms, respectively), but rarely include specific circulation area requirements or allowances for public spaces other than the use of a net-to-gross multiplier. On this campus the ability for students and faculty to gather and interact with each other is a priority and should be reflected with the inclusion of space allocation specifically designed to foster this interaction.

The process for producing a program may vary depending on the type of facility needed (small and simple projects may be programmed quickly with a limited number of participants while a large and complex project may require extensive research, multiple reviews and often many people contributing). Typically a campus programming committee directs this process and may assign primary responsibility to a project manager, the design architect, or a specialized programming consultant (or some combination of these). The responsibility for researching and preparing the document is then reviewed by the appointed members of the University. Each project must be evaluated for its impact on the Master Plan.

Conceptual Design

The Campus Master Plan recommends that a conceptual design be developed for each new project before final site selection.

A conceptual design does several things: it tests the program's ability to perform a civic as well as a private role; it enables more accurate budgeting; and it tests the functional implications of the site. A conceptual design is a useful tool. It should be used to match the program to the budget and to develop the building design as well as demonstrate the potential for the building's civic role.

Budget

If buildings are to fulfill their civic role as described in the Campus Master Plan, both the programming and funding must accommodate this by including landscape and public space requirements in a proposed building program and budget. It is crucial that the budget also account for:

- **Sitework (including off-site site improvements)**
- **Equipment (e.g. MEP, telecommunications, network, security, elevators and food service)**
- **Design contingency (on a sliding scale related to design phase)**
- **Escalation (on a sliding scale related to the length of the design process)**

Cost estimating is a combination of evaluating and measuring. In the beginning of a project it is largely assumptions. Toward the end of documentation there

is more measuring (quantification), but there are still some assumptions. Contingencies and contingency management are crucial to cost control. Conventional wisdom holds that the first time the construction cost of a building can be predicted accurately is at the end of the preliminary design phase, as this is the first time the project can reasonably be accurately quantified. Some useful budget projection guidelines during programming include:

- **Use of a generous net-to-gross multiplier to estimate the gross area of the building (1.65 or better).**
- **Use of a realistic but generous value per gross square foot (indexed to a year of construction) to arrive at the projected building construction cost.**
- **Use of a generous allowance for site work.**
- **Use of an adequate multiplier for construction-to-project cost (typically about 1.33).**
- **Include adequate contingencies.**
- **Set a budget you can adhere to during design and through construction.**

A good system is to include site development guidelines as part of the program, do a conceptual design and then do a "take-off" estimate with proper contingencies (20% for site work, 15% for design). The 15% design contingency should be carried in the schematic design estimate as well. At the end of design development this can be reduced to 10%. Toward the end of construction documents, the design contingency can be reduced to 5 percent. These design contingencies are separate from any estimating, construction or owner reserve contingencies.

The best approach is to perform programming, site selection, budgeting and conceptual design as an integral process. The goal should be to make the best possible campus architecture. This means the exteriors and public spaces of buildings need to be appropriately funded.

DESIGN CONTROL

Strong design control is required to achieve a consistent high-quality campus environment and implement the intent of the Campus Master Plan.

To be effective any process must address both private and public interests. Users have a largely “private” agenda. They are primarily concerned with getting the most square feet possible and the best functional arrangement. This is especially true of technical facilities as opposed to more symbolic public buildings such as performing arts buildings. Every user group’s special requirements must be acknowledged, but their needs must also be put in the context of the larger whole—financially, formally and socially. For example, the exterior of the building and the site development should be subject to appropriate budgetary attention in order for the facility to fulfill responsibilities to the public realm.

The design authority of a university, in contrast to the users, has an almost completely “public” agenda. The design authority is concerned with the long-term viability of a project, but primarily is concerned with the promotion, development and maintenance of the quality of the public realm and with compliance with

the principles of the Campus Master Plan.

The design authority may be an individual, a group of individuals or a Design Review Committee (DRC). Its power or authority—and therefore its effectiveness—may be delegated from the top down or developed from the bottom up. Both are desirable, but without support from the top, the effectiveness of design control is drastically diminished.

Design Review Committee

The Design Review Committee (DRC) reviews project designs on behalf of the University with these primary goals:

- 1. Monitor and ensure all design projects comply with the intent of the Campus Master Plan;**
- 2. Interpret the plan and guidelines;**
- 3. Grant exceptions when appropriate;**
- 4. Recommend modification or development of the Campus Master Plan as required;**
- 5. Evaluate projects to ensure that they meet the highest qualitative standards.**

The DRC is the guardian of campus development and its recommendations to the administration should be followed.

Authority and Membership

To fulfill its mission the DRC must be granted responsibility and appropriate authority. The DRC members should be appointed by the president of the University and should be vested with the authority to review projects on behalf of the University and advise

the appropriate authorities. The president should appoint as DRC chair a person of professional judgment, diplomacy and conviction.

Procedures

Projects are presented for review and approval by the project committee and the design team. After every project review, clear instructions from the DRC’s deliberations should be provided. The sequence of actions/reviews should include, but are not limited to the following:

- 1. Review the Campus Master Plan with each design team and provide them with a copy of the relevant parts of the Campus Master Plan;**
- 2. Require an initial meeting with the design team to clarify the University’s intent;**
- 3. Require formal reviews at the level of programming, schematic design, design development, and construction documents; and**
- 4. Provide a postconstruction project assessment report.**

Project Review Criteria

All major planning, landscape and architectural projects should be reviewed against the intent of the Campus Master Plan. Smaller projects should also be considered for review, although the process could be abbreviated. The accumulation of small projects can add up to serious degradation of the physical environment. The basic criterion that triggers design review should be whether the project affects or changes the public spaces of the University.